

Animal/Lab Studies by Name of Lead Author

Homeopathy. 2006 Jan;95(1):15-9.

Snake remedies and eosinophilic granuloma complex in cats.

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Abstract

Eosinophilic granuloma complex (EGC) is a syndrome occurring in cats, characterized by lesions affecting the skin and the oral cavity. Conventional treatment is mainly symptomatic and may have undesirable side effects. This paper summarizes homeopathic treatment with snake remedies of cats suffering from EGC. Snake remedies were chosen by individual repertorizations and administered in different dilutions. Reactions were mostly quick, leading to significant improvements, including complete recoveries.

Link to paper: <http://download.ebooks6.com/Snake-remedies-and-eosinophilic-granuloma-complex-in-cats-download-w27069.pdf>

J Ethnopharmacol. 2008 Sep 26;119(2):225-31. doi: 10.1016/j.jep.2008.06.024.

Epub 2008 Jun 28.

In vitro and in vivo trypanocidal effect of lipophilic extracts of medicinal plants from Mali and Burkina Faso.

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Abstract

AIM OF THE STUDY: To determine the in vitro and in vivo antitrypanosomal activity of extracts of traditionally used plants.

MATERIALS AND METHODS: 47 dichloromethane extracts were tested in vitro in the Long-term Viability Assay (LtVA) on *Trypanosoma brucei brucei*. The most active ones were also tested in vivo using a standardised mouse test.

RESULTS: 13 extracts (28%) were active in vitro with MIC-values \leq 100 microg/ml, 6 extracts showed MIC-values \leq 50 microg/ml. The root extract of *Securidaca longepedunculata* Fresen. (Polygalaceae) and the leaf extract of *Guiera senegalensis* J. F. Gmel. (Combretaceae) were able to reduce parasitaemia in mice, experimentally infected with *Trypanosoma brucei brucei* by 48 and 42% at the dose of 150 mg/kg b.w. intraperitoneally, two times daily for 3 days. The extract of *Acacia nilotica* Delile (Mimosaceae) stem bark showed immunosuppressive effect in vivo.

CONCLUSION: The results confirm an effect of the ethnobotanically used plants.

Further investigation is needed to optimize the effectiveness of the extracts.

Link to abstract/paper:

<http://www.ncbi.nlm.nih.gov/pubmed?term=clausen%20J%20extract>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:143-5.

Effect of antibodies to histamine in ultralow doses on production of allergen-specific antibodies.

[Agafonov VI](#), [Bel'skaya NV](#), [Danilets MG](#), [Bel'skii YB](#), [Trofimova ES](#), [Dugina YL](#), [Epstein OI](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences.

Abstract

We studied the effects of potentiated antibodies to histamine on production of IgE and IgG1 in response to 3-fold immunization of mice with ovalbumin in doses of 0.5, 10, and 100 microg. The course of treatment with antibodies to histamine suppressed production of allergen-specific IgE and IgG1 in mice 2-fold immunized with ovalbumin in doses of 100 and 0.5 microg, respectively. In mice immunized 3 times with ovalbumin in various doses the preparation suppressed production of IgE and IgG1.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949682>

Thromb Res. 2000 Nov 15;100(4):317-23.

Time related neutralization of two doses acetyl salicylic acid.

[Aguejouf O](#), [Malfatti E](#), [Belon P](#), [Doutremepuich C](#).

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Abstract

Aspirin has a well established role in the prevention of arterial thrombosis. Discussion on the efficacy and safety of aspirin in the treatment and prophylaxis of thrombosis has become an important issue. In fact, hemorrhage complications are often associated with its use. On the other hand, previous studies showed unexpected thrombotic potencies associated with the presence of this drug at ultra low doses (ULD) in the circulation. In this study, we aimed to evaluate the effect of aspirin at ULD, injected 1, 2, or 3 hours after the administration of aspirin at 100 mg/kg, on hemostasis and bleeding in rats. We used an experimental model of thrombosis induced by laser beams to evaluate these effects. Platelet aggregation was determined by Cardinal and Flower method. Results from this investigation demonstrate that the neutralizing effect of aspirin at ULD did not operate significantly 1 hour after the injection of aspirin at 100 mg/kg. This effect was observed 2 and 3 hours after. The use of aspirin at ULD to neutralize the side effects of aspirin at high doses will reduce the hemorrhagic risk during extra corporeal circulation. The therapeutic benefit and safety of aspirin therapy in the treatment of cardiovascular diseases can be obtained.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/11113275>

Altern Ther Health Med. 1999 Sep;5(5):64-8.

Homeopathy versus antibiotics in metaphylaxis of infectious diseases: a clinical study in pig fattening and its significance to consumers.

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Carstens Foundation, Essen, Germany.

Abstract

CONTEXT: Due to the conditions of modern industrial pig fattening in intensive livestock farms, 24% to 69% of the animals become ill. The antibiotic metaphylaxis that is routinely administered leads to several problems in animals, human health, and the environment.

OBJECTIVE: To investigate whether a homeopathic metaphylaxis is effective and potentially useful for replacing antibiotic metaphylaxis.

DESIGN: Animal subjects were divided into groups of 10 per pen, 2 pens sharing 1 trough. Twenty pigs were randomly assigned within a stall and were administered either antibiotics, homeopathy, or placebo.

SETTING: A typical intensive livestock farm in Northern Germany.

PARTICIPANTS: 1440 piglets.

INTERVENTION: Homeopathic metaphylaxis is compared with placebo, the routine low-dose antibiotic metaphylaxis, and an antibiotic metaphylaxis in therapeutic dosage.

MAIN OUTCOME MEASURES: Incidence of diseases in general and of diseases of the respiratory tract.

RESULTS: Homeopathic metaphylaxis is significantly effective compared with placebo and routine low-dose antibiotic metaphylaxis for incidence of disease and rate of disease of the respiratory tract among the animals studied. Only by increasing the dosage of antibiotics to a therapeutic level does antibiotic metaphylaxis surpass homeopathic metaphylaxis.

CONCLUSIONS: An unacceptably high percentage of pigs in modern livestock management become ill, suffering mainly from diseases of the respiratory tract. The routine antibiotic dosage of metaphylaxis is too low to be effective. As a result, the problems of resistance and danger to human health and the environment are increasing. To confirm whether antibiotic metaphylaxis may be replaced by homeopathic metaphylaxis, this study should be repeated independently.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/10484832>

Int J High Dilution Res. 2007 Jul-Sep;6(20):16-18.

Efeito do medicamento homeopático Arnica Montana 7CH no traumatismo mecânico em camundongos.

[Effect of the homeopathic remedy Arnica montana 7CH on mechanical trauma in mice].

[Article in Portuguese]

Alecu A, Alecu M, Cojocar A, Brezeanu R.

English Abstract

The present study aimed to evaluate the anti-traumatic effect of the homeopathic remedy Arnica montana 7CH, administered immediately after the induction of trauma

in experimentation animals. The remedy showed statistically significant effectiveness, when compared to a placebo, to reduce the diameter of the edema and the duration of trauma effects – edema, pain and mobility of the affected limb. Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/22/15>

Int J High Dilution Res. 2007 Jul-Sep;6(20):19-21.

Efeito dos medicamentos homeopáticos Arnica montana e Staphisagria no tempo de cicatrização de incisões cirúrgicas.

[Effect of the homeopathic remedies Arnica montana and Staphisagria on the time of healing of surgical wounds].

[Article in Portuguese]

Alecu A, Alecu M, Mârcuş G, Brezeanu R, Cojocar A.

English Abstract

The present study evaluates the effect of the homeopathic remedies Arnica montana and Staphisagria, in dynamizations 7CH and 30CH, on the speed of the cicatrization of surgical incisions in experimentation animals. The decrease of the number of days required for the complete cicatrization was statistically significant for both remedies, by comparison to a placebo. There was no significant difference between both remedies nor between both dynamizations.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/23/16>

Int J High Dilution Res. 2010;9(30):5-15.

Designs for research of the High Dilutions in animals models: an update.

Alecu A, Brezeanu R, Mârcuş G, Cojocar A, Alecu M.

Abstract

This article discusses the series of tests on animal experimental models carried out by our group to evaluate the effect of homeopathic preparations selected according to traditional criteria of pathogenetic similarity. Our overall experience indicates that it is not difficult to carry out experimental studies assaying homeopathic medicines in randomized placebo-controlled tests returning statistically analyzable results. The basic requirement for this purpose is to select validated experimental models. The simplest and most reliable ones are the ones arising from common daily clinical practice or those taken from classical pharmacological studies modified as to fit the goals of a homeopathic assay. By proceeding in this way it will be possible to build a sound body of evidence for the biological effects of high dilutions.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/379/414>

Int J High Dilution Res. 2011;10(35):80.

Designs for research of High Dilutions in animal models: an update.

Alecu A, BrezeanuR.

Abstract

This article discusses the series of tests on animal experimental models carried out by our group to evaluate the effect of homeopathic preparations selected according to traditional criteria of pathogenetic similarity. Our overall experience indicates that it is not difficult to carry out experimental studies assaying homeopathic medicines in randomized placebo-controlled tests returning statistically analyzable results. The basic requirement for this purpose is to select validated experimental models. The simplest and most reliable ones are the ones arising from common daily clinical practice or those taken from classical pharmacological studies modified as to fit the goals of a homeopathic assay. By proceeding in this way it will be possible to build a sound body of evidence for the biological effects of high dilutions.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/436/472>

Homeopathy. 2008 Apr;97(2):59-64. doi: 10.1016/j.homp.2008.02.003.

Changes of RAPD profile of *Trypanosoma cruzi* II with Canova and Benznidazole.

[Aleixo DL](#), [Ferraz FN](#), [de Melo CS](#), [Gomes ML](#), [Toledo MJ](#), [Kaneshima EN](#), [Bersani-Amado CA](#), [Araújo SM](#).

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Abstract

Chagas disease, caused by the protozoan *Trypanosoma cruzi*, involves immunomediated processes. Canova (CA) is a homeopathic treatment indicated in the diseases in which the immune system is depressed. This study evaluated the Random Amplification of Polymorphic DNA (RAPD) profile of *T. cruzi* under the influence of CA and Benznidazole (BZ). Mice infected with the genetic lineage of *T. cruzi* II (Y strain) were divided into 4 groups: Infected animals treated with saline solution (control group); treated with CA; treated with BZ; treated with CA and BZ combined. Treatment was given at the 5th-25th days of infection (D5-25). The parasites were isolated by haemoculture in Liver Infusion Tryptose (LIT) medium: at D5 (before treatment), D13, 15 and 25 (during treatment) and D55 and 295 (after treatment). DNA was extracted from the mass of parasites. RAPD was done with the primers λ gdgt11-F, M13F-40 and L15996, the amplified products were eletrophoresed through a 4% polyacrylamide gel. Data were analyzed by the coefficient of similarity using the DNA-POP program. 163 markers were identified, 5 of them monomorphic. CA did not act against the parasites when used alone. The RAPD profiles of parasites treated with BZ and CA+BZ were different from those in the control group and in the group treated with CA. The actions of the CA and BZ were different and the action of BZ was different from the action of CA+BZ. These data suggest that CA may interact with BZ. The differences in the RAPD profile of the Y strain of *T. cruzi* produced by BZ, CA+BZ and the natural course of the infection suggest selection/suppression of populations.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/18439965>

BMC Res Notes. 2012 Jul 11;5:352. doi: 10.1186/1756-0500-5-352.

Highly diluted medication reduces parasitemia and improves experimental infection evolution by *Trypanosoma cruzi*.

[Aleixo DL](#), [Ferraz FN](#), [Ferreira EC](#), [de Lana M](#), [Gomes ML](#), [de Abreu Filho BA](#), [de Araújo SM](#).

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Abstract

BACKGROUND: There is no published information about the use of different protocols to administer a highly diluted medication. Evaluate the effect of different protocols for treatment with biotherapeutic T. cruzi 17 dH (BIOT(Tc17dH)) on clinical/parasitological evolution of mice infected with T. cruzi-Y strain.

METHODS: A blind, randomized controlled trial was performed twice, using 60 28-day-old male Swiss mice infected with T. cruzi-Y strain, in five treatment groups: CI - treated with a 7% ethanol-water solution, diluted in water (10 µL/mL) ad libitum; BIOT(PI) - treated with BIOT(Tc17dH) in water (10 µL/mL) ad libitum during a period that started on the day of infection; BIOT(4DI) - treated with BIOT(Tc17dH) in water (10 µL/mL) ad libitum beginning on the 4th day of infection; BIOT(4-5-6) - treated with BIOT(Tc17dH) by gavage (0.2 mL/ animal/day) on the 4th, 5th and 6th days after infection; BIOT(7-8-9) - treated with BIOT(Tc17dH) by gavage (0.2 mL/ animal/day) on the 7th, 8th and 9th days after infection. We evaluated: parasitemia; total parasitemia (P(total)); maximum peak of parasites; prepatent period (PPP) - time from infection to detection of the parasite in blood; patent period (PP) - period when the parasitemia can be detected in blood; clinical aspects; and mortality.

RESULTS: Parasitological parameters in the BIOT(PI) and mainly in the BIOT(4PI) group showed better evolution of the infection compared to the control group (CI), with lower P(total), lower maximum peak of parasites, higher PPP, lower PP and longer survival times. These animals showed stable body temperature and higher weight gain and water consumption, with more animals having normal-appearing fur for longer periods. In contrast, groups BIOT(4-5-6) and BIOT(7-8-9) showed worse evolution of the infection compared to the control group, considering both parasitological and clinical parameters. The correlation analysis combined with the other data from this study indicated that the prepatent period is the best parameter to evaluate the effect of a medication in this model.

CONCLUSIONS: The BIOT(4DI) group showed the best clinical and parasitological evolution, with lower parasitemia and a trend toward lower mortality and a longer survival period. The prepatent period was the best parameter to evaluate the effect of a medication in this model.

Link to paper: <http://www.biomedcentral.com/1756-0500/5/352>

Int J High Dilution Res. 2011;10(36):134-137.

Biotherapeutic T. cruzi 17DH when continuously used clinically improves mice infected with *Trypanosoma cruzi*.

Aleixo DL, Ferreira EC, Braga CF, Lopes CR, Falkowski GJS, Sandri PF, de Araújo SM.

Abstract

Introduction: In *Trypanosoma cruzi* infection, the pathogenesis is the result of a rupture in the host - parasite relationship [1]. This rupture is related to the imbalance of the vital force of the host, expressed through signs and symptoms, defined by Hahnemann (1995)[2] as being the source of the disease. There is no research in the literature about the clinical evolution of mice experimentally infected with *T. cruzi* and treated in different ways using biotherapeutic. Therefore, this is an area to be studied in the future.

Aim: To evaluate the effect of different ways of treatment using biotherapeutic *T. cruzi* 17 DH on clinical evolution of mice experimentally infected with *T. cruzi*.

Materials and methods: A blind randomized controlled trial was performed, using 30 swiss male mice, aged 28 days, divided into groups according to the treatment: CONTROL - animals treated with 7% water-alcohol solution diluted in water given ad libitum in an amber bottle; GAVAGE – animals treated with medication highly diluted *T. cruzi* 17 DH from 4th to 9th day of infection by gavage; WATER -animals treated with highly diluted *T. cruzi* 17 DH in water ad libitum offered in an amber bottle until the end of the study period. The groups were infected with the Y strain of *T. cruzi*, intraperitoneal, 1400 blood trypomastigotes. The medicine was handled according to the Brazilian Homeopathic Pharmacopoeia [3] with microbiological test according to RDC n° 67 and in vivo biological risk. Parasitemic curve was determined by daily counting of the parasites [4]. Were measured temperature, weight, intake of water and feed, the ruffle fur and survival of mice. Statistical analysis was performed using the tests Fisher Exact and Log-Rank, with a significance of 5%. The experiment was approved under the protocol n° 030/2008 - Ethics in Animal Experimentation of the Universidade Estadual de Maringá.

Results: The mice under different treatment ways using biotherapeutic *T. cruzi* 17DH showed differences in the clinical evolution. The treatment using biotherapeutic diluted in water initially shows hypothermia, with subsequent recovery of normal temperature ($p=0.05$) (Fig1). The weight curve shows a better evolution in mice treated with water compared to control groups ($p=0.055$) and the groups treated by gavage ($p=0.0064$). Feed and water intake did not differ among the groups. While the mice that were treated with biotherapeutic diluted in water showed a slight level of ruffled fur, the mice in control groups and the ones treated by gavage showed a more intense level of ruffled fur ($p=0.00001$). The difference in the evolution of mortality among the groups was significant ($p=0.034$), while in the group treated with biotherapeutic diluted with water, the mortality rate started later, reaching the maximum of 90%. This group showed a better clinical result, expressed by the smaller extent of ruffled fur, a better evolution of the temperature curve and higher gain of weight. This is an important result because the Y strain of *T. cruzi* has a mortality rate of 100% in mice, showing once again the good performance of biotherapeutic in this model of infection.

Conclusion: The use of biotherapeutic *T. cruzi* 17DH for a long period causes clinical improvement of the infected mice with *Trypanosoma cruzi*. The clinical use of these results in human beings should consider the allometric medicine dosage which takes into account the metabolic rate of each organism.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/478/490>

Int J High Dilution Res. 2011;10(36):138-141.

Influence of age and ways of treatment in the parasitemia in mice infected with *Trypanosoma cruzi* treated with high potency biotherapy.

Aleixo DL, Braga CF, Moreira NM, Massini PF, Brustolin CF, Ferraz FN, de Araújo SM.

Abstract

Background: The infection of mice by *Trypanosoma cruzi* is well known, making this a good model for understanding the effect of highly diluted medications. Mice of different ages show different responses to biotherapeutic *T. cruzi* [1]. Other data from our laboratory using biotherapeutic treatment at low potencies show that long lasting treatment has a better effect in mice infected with *T. cruzi*. However, the use of high potency biotherapeutics in mice of different ages infected with *T. cruzi* has not been analysed yet.

Aim: To evaluate the effect of different ways of treatment using biotherapeutic 200 DH *T. cruzi* in the evolution of the curve of parasitemia of mice of different ages infected with *T. cruzi*.

Materials and methods: A blind randomized controlled trial was performed using 107 swiss male mice, aged 28, 35 and 56 days, divided into groups: CONTROL(C) – mice aged 28(C28), 38(C38) and 56(C56) days, treated with 7% water-alcohol solution diluted with water (1mL/100mL); ONE DAY(OD) – mice aged 28(OD28), 38(OD38) and 56(OD56) days, treated with highly diluted medication 200 DH *T. cruzi* in a single dose, diluted in water (10mL/100mL); EVERY DAY(ED) – mice aged 28(ED28), 38(ED38) and 56(ED56) days, treated with highly diluted medication 200DH *T.cruzi* until the end of the experiment, diluted in water(1mL/100mL). Amber bottle was used and the water was changed every two days. The groups were infected with strain Y-*T. cruzi*, intraperitoneal, 1400 blood trypomastigotes. Medicines were handled according to the Brazilian Homeopathic Pharmacopoeia [2], with microbiological testing according to RDC n° 67 and in vivo biological risk. We compared the parasitemia curve and total parasitemia, determined daily counting of the parasites [3], obtained using the tests Kruskal-Wallis and Wald-Wolfowitz, Statistica 8.0, 5% significance. Approved by the Ethics Committee for Animal Experimentation/ UEM - 030/2008.

Results: The animal age and the ways of treatment used influenced the evolution of the parasitemia curve. This evolution was different among different ages, and the youngest mice of the control group had higher averages of parasitemia (C28=1.4x10⁶/mL; C38= 1.3 x10⁶/mL and C56=1.0x10⁶/mL) (fig1). This evolution was not observed in the groups treated daily, in which 56 day-old mice presented a higher parasitemia compared to the other groups (ED28= 1.3x10⁶/mL; ED38=0.9x10⁶/mL and ED56=1.2x10⁶/mL)(fig1b).

For animals treated with a single dose, the energetic stimulus provided by biotherapeutic caused homogeneity of biological behavior, with significant elevation of parasitemia (OD28=1.8x10⁶/mL; OD38=1.3x10⁶/mL and OD56=1.5 x10⁶/mL) (fig1c). Likewise, the single dose treatment invariably resulted in an increase of parasitemia when compared to other treatments within the same age group (fig1d-f). The treatment performed daily in animals aged 28 and 38 days showed a decrease in parasitemia (fig1d-f). For 56 day-old mice this fall was not observed (fig1f). The meaning of this finding should be better explored considering the physiological maturity versus the vital energy of mice of different ages.

Conclusion: The age and the ways of treatment used are important factors to be considered when using a highly diluted medication. The clinical use of these results in humans, should take into consideration the allometric system of medication dosage which takes into account the metabolic rate of each organism.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/479/491>

Int J High Dilution Res. 2011;10(36):163-166.

Higher frequency of administration of biotherapeutic T. cruzi 17DH decreases parasitemia and increases survival in mice infected with Trypanosoma cruzi.

Aleixo DL, Ferreira EC, Braga CF, Brustolin CF, Gomes ML, Pupulin ART, de Araújo SM.

Abstract

Introduction: The study of the effect of different ways of treatment using highly diluted substances is rare in the literature. Some authors consider the dose irrelevant, justifying that the action of the medication highly diluted is qualitative [1-3]. Others emphasize the importance of quantity and frequency of administration of the highly diluted substance for a successful treatment [4,5]. The model of murine infection by T. cruzi is widely studied and it is an excellent tool to study the effect of highly diluted substances.

Aim: To evaluate, in vivo, the effect of different amounts and frequency of administration of the biotherapeutic 17 dH T. cruzi in the evolution of the parasitemia curve and survival of mice infected with Trypanosoma cruzi.

Materials and methods: A blind randomised controlled trial was performed, using 30 swiss male mice, aged 28 days, divided into groups according to treatment: CONTROL - mice treated with 7% water-alcohol solution diluted in water given ad libitum in an amber bottle; GAVAGE – mice treated with medication highly diluted 17 DH T. cruzi from 4 th to 9 th day of infection by gavage; WATER - mice treated with highly diluted medication 17 DH T. cruzi in water ad libitum offered in an amber bottle until the end of the study period. The groups were infected with the Y strain of T. cruzi, intraperitoneal, 1400 blood trypomastigotes. The medicines was handled according to the Brazilian Homeopathic Pharmacopoeia [6] with microbiological test according to RDC n°. 67 and in vivo biological risk. Parasitemic curve was determined by daily counting of the parasites [7], the total parasitemia, peak parasites and survival. Data were compared using the BioEstat 5.0, ANOVA, with significance of 5%. The experiment was approved under the protocol n° 030/2008 - Ethics in Animal Experimentation of the Universidade Estadual de Maringá.

Results: Animals treated with the medication highly diluted in water had lower level of total parasitemia and a lower peak of parasites compared to animals treated by gavage, or control group of infection ($p = 0.0103$ $p = 0.0008$). In the group treated by gavage both the total parasitemia and the peak of parasites were higher than the control group. Survival was greater in animals treated with biotherapeutic diluted with water ($p = 0.0003$) and by gavage ($p = 0.0016$) when compared with the control group. Among the different ways of treatment the use of medication diluted in water increased the survival of animals ($p = 0.0013$). The treatment by gavage once a day until the 9th day of infection increase the parasitemia and survival. The medication diluted in water showed better results with significant reduction of parasitemia and an

increase of survival. This result may be related to the frequency with which the medication diluted in water was ingested by each animal, and the lower stress that this form of administration provides the animals.

Conclusion: There is a difference in the effect of the medication highly diluted depending on the way of treatment used. For mice, the use of drug diluted in water offered frequently, results in better benefits. The clinical use of these results in humans, should consider the allometric system medication dosage which takes into account the metabolic rate of each organism.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/494/505>

Int J High Dilution Res. 2012;11(40):170-171.

Diluted benznidazole decreases side effects in animals infected by Trypanosoma cruzi and treated with benznidazole in ponderal dose.

Aleixo DL, Ferraz FN, Spack M, Falkowski GJ, Brustolin CF, Arns R, da Veiga FK, de Araújo SM.

Abstract

Background: The infection caused by the protozoan *Trypanosoma cruzi* affects millions of people around the world and the benznidazole is the only drug available for the etiological treatment, despite the fact that its adverse effect makes the adherence to treatment more difficult. Taking advantage of the antiparasitic effect of benznidazole and minimizing its side effects, without causing discomfort symptoms to the patient, would be an important progress in the health care of individuals infected with *T. cruzi*.

Aim: The aim of this study was to evaluate the effect of different treatment regimens using diluted and ponderal benznidazole, associated or not, in murine infection with *T. cruzi*.

Methodology: A hundred male Swiss mice 28 – year – old infected with 1400 blood trypomastigotes of the Y strain of *T. cruzi*, were used in the experiment, divided into groups according to the treatment: Control (CI) - infected animals treated orally with 7% hydroalcoholic solution (vehicle of product preparation highly diluted) (N = 20); BZp - infected animals treated with BZ in ponderal dose (100 mg/kg/20days) from the detection of the infection (N = 20); BZh - infected animals treated with BZ highly diluted (30x) from the detection of the infection (N = 20), BZp+h - infected animals treated with a combination of BZ highly diluted (30x) + BZ in ponderal dose (100 mg / kg), from the detection of the infection (n= 20); BZp+hT4A - infected animals treated with the association of BZ in ponderal dose (100 mg / kg) from the detection of the infection and BZ highly diluted (30x) four days after starting the treatment with BZp (N = 20). Clinical (body weight, water and food intake, amount of feces, temperature, aspect of the fur, mortality and survival time) and parasitological (total parasitemia and area under the parasitemia curve) parameters were evaluated.

Results: It was observed a reduction of side effects associated with clinical improvement of the animals treated with the combination of BZ in ponderal dose and highly diluted given 4 days after (BZp+hT4A) or concurrently (BZp+h) with the beginning of the treatment with benznidazole in ponderal dose, with results statistically better than those observed in groups BZp, BZh e CI (p<0.05). In these

groups, independent of the treatment schedule used (BZp+h, BZp+hT4A), the association of BZp with BZh did not alter significantly the suppressive effect of parasitemia observed in animals treated with BZp ($p > 0.05$). In the group treated only with the BZ ultradiluted (BZh) the parasitemia remained high, resulting in the death of all animals within a period of 20 days as observed in the CI.

Conclusions: The reduction of side effects, the improvement of the clinical evolution and non-compromising the parasiticide effect, show that the association of the benzimidazole medication in ponderal dose and highly diluted should be further explored.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/590/586>

Int J High Dilution Res. 2012;11(40):168-169.

Homeopathy in parasitic diseases.

Aleixo DL, Bonamin LV, de Araújo SM.

Abstract

Introduction: The use of homeopathic medicines has increased, once traditional medicines sometimes do not produce the desired effects and because side effects sometimes compromise the treatment. In recent years, research on homeopathy has clearly developed, both in the implementation of more consistent methodologies and in the description of the data and published methods, improvement are still required in these matters. The acknowledgment of homeopathy depends on the credibility of the groups researching this topic

Objective: list and criticize articles highlighting main effects, schedule of treatment and potencies used in different animals models.

Material and Methods: A review of articles published since 2000 in journals indexed in the PubMed/Scielo databases was performed. Keywords used were parasitosis/homeopathy and parasitosis/ultra-diluted, in English and Portuguese. Specialized journals such as Homeopathy, International Journal of High Dilution Research, and Brazilian Homeopathic Journal were also used. The contents of each issue of these journals were examined for the "Use of highly diluted medication in parasitic infections."

Results and Discussion: Thirty nine papers have been gathered. The methodology of the articles surveyed did not meet the requirements listed in the REHBaR[1]. Thirty seven reports have shown the benefits/effects of highly diluted medicine in the treatment of infectious diseases. In models where experimental conditions are carefully controlled, the conclusions follow the same pattern as those observed in the treatment of farm animals, where, even without completely controlled conditions, clinical result is positive. In fourteen reports using the same model, eight where animals were treated in a constant and prolonged way shown a better result, compared with six reports in which animals were treated for a short period of time, receiving a single daily dose. Several authors have conducted clinical trials using commercial formulas, which do not always provide their composition and/or dynamization, making it difficult to reproducing the experiment. In some of the articles, it was not mentioned if the experiments were repeated at least twice.

Conclusions: In parasitic infections, the effect of homeopathic medications is still controversial, and the experimental parameters for evaluation should be carefully

chosen to avoid isolated analyses of data. Researchers should consider results regarding environmental and sanitary conditions of the animal as a whole. The improvement of techniques and expansion of knowledge about highly diluted medicines may lead to a viable alternative to treat parasitic infections. Precise and detailed descriptions will contribute to advances in the use of homeopathy, so that the wider community can benefit, in practice, from these findings.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/589/585>

Int J High Dilution Res. 2013;12(44):107-108.

Highly diluted medication modifies parasitological, immunological and histopathological parameters of *Trypanosoma cruzi* infection.

Aleixo DL, da Veiga FK, Ciupa L, Portocarrero AR, Sandri FP, Ferraz FN, Benvenuti MJ, de Araújo SM.

Abstract

Background: The murine model of infection by *T. cruzi* progresses acutely with inflammation and tissue parasitism, mainly in the heart and the pattern of resistance or susceptibility are related to the type of cytokine produced [1].

Aims: Evaluate parasitological, histological and immunological parameters in animals infected by *T. cruzi*, treated with highly diluted medication (200DH *T. cruzi*-biotherapy) in different schedules.

Methodology: A blind randomized controlled trial was performed using swiss male mice, aged 56 days-old, divided into groups: NI- noninfected mice; infected mice treated with: CI- 7%water-alcohol solution; OD - 200 DH *T. cruzi* in a single day; ED - 200 DH *T. cruzi* from infection until the end of the experiment. The groups were infected with 1400 blood trypomastigotes Y strain-*T.cruzi*, intraperitoneal. Medicine was handled according to the Brazilian Homeopathic Pharmacopoeia, with microbiological testing (RDC n° 67-MSBrazil [2]) and in vivo biological test negative. Medicine was administrated diluted in water (1mL/100mL). Parasitological parameters and mortality were evaluated daily. Organs and serum was collected at 0, 4th, 8th and 12 th days of infection. Cytokine profile was assessed using BD Cytometric Bead Array Mouse Th1/Th2/Th17-Cytokine Kit and histopatological parameters were evaluated in histological sections (hematoxilian-eosin). The data were compared using Statistica 8.0, 5% significance. Approved by the Ethics Committee for Animal/UEM.

Results: The use of the highly diluted medication *T.cruzi* 200dH increased total parasitemia and the number of nests of amastigotes. The increase was significant ($p < 0.05$), on the 12th day of infection, in liver and spleen to the ED group and heart, intestine, liver and spleen to the OD group, compared with the CI group. There was no significant difference between groups ED and OD. In group OD observe an attempt to contain the inflammation in the assessment of inflammatory foci, with fewer fields with diffuse inflammation overall and a greater number of fields containing focal inflammation, especially in the cardiac tissue. In contrast, the ED group showed an increase in the number of fields with diffuse inflammation overall. In histopathological comparison OD group showed better performance compared with the ED group ($p < 0,05$). Considering cytokines analisys treated animals showed decreased production of INFgama, TNFa, IL-10, IL-17A, more accentuated in group

ED group. The imbalance of cytokines observed in these groups explains the increase of parasitemia and inflammation observed mainly in the ED group. Conclusion: Considering parasitological, immunological and histopathological aspects, this study confirms clinical practice, where medicines are not recommended at higher potencies, administered at daily doses for acute illnesses.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/671/653>

Fisioter Pesq. 2008 Aug-Sep;15(3):273-279.

Análise qualitativa dos efeitos da sonoforese com *Arnica montana* sobre o processo inflamatório agudo do músculo esquelético de ratos.

[Qualitative analysis of effects of phonophoresis with *Arnica montana* onto acute inflammatory process in rat skeletal muscles].

[Article in Portuguese]

Alfredo PP, Anaruma CA, Pião ACS, João SMA, Casarotto RA.

English Abstract

This study aimed at verifying the effects of phonophoresis associated to *Arnica montana* on the acute phase of an inflammatory muscle injury. Forty Wistar male rats of which the Tibialis Anterior muscle was surgically lesioned, were divided into 4 groups (n=10 each): control group received no treatment; the ultrasound group (US), treated with US; the US+A group was treated with arnica phonophoresis; and the arnica group (A) received massage with arnica gel. Treatment for the three groups started 24 h after surgical injury and lasted 3 days, being applied during 3 minutes once a day. On the 4th day after lesion animals were sacrificed and sections of the injured, inflamed muscle were removed for histological analysis. Results showed, in C group, an intense infiltrate of inflammatory cells and an only incipient regeneration process; in both US and US+A groups an advanced inflammatory process was noticed, with organized and thick conjunctive tissue. In A group a reduced number of ill-arranged inflammatory cells was detected, which might lead to delays in the regeneration process. Since both US and US+A groups showed similar acceleration of the acute inflammatory process, it may be inferred that arnica phonophoresis did not have extra healing effect, hence is ineffective when compared to ultrasound alone.

Link to paper: http://www.scielo.br/scielo.php?pid=S1809-29502008000300010&script=sci_arttext

Homeopathy. 2009 Apr;98(2):92-6.

Homeopathic treatment for bone regeneration: experimental study.

[Almeida JD](#), [Arisawa EA](#), [Balducci I](#), [da Rocha RF](#), [Carvalho YR](#).

Department of Bioscience and Oral Diagnosis, São Paulo State University-UNESP, São José dos Campos Dental School, São José dos Campos, São Paulo, Brazil.
janete@fosjc.unesp.br

Abstract

AIM AND METHOD: The objective of this research was to study the effect of homeopathic treatment with *Plumbum metallicum* (*Plumbum met.*) on mandibular bone repair in rats.

MATERIALS AND METHODS: We analyzed the mandibles of 60 male rats, approximately 3-month-old, randomly divided into three groups of 20 animals each: control, treated with calcitonin, and treated with a homeopathic medicine. A circumscribed bone defect measuring 4mm in diameter was made in the mandible and covered with a polytetrafluorethylene (PTFE) barrier. The group treated with calcitonin received 2IU/kg intramuscularly three times a week; the group treated with *Plumbum met.* 30c received three drops in water every day. The animals were sacrificed after 7, 14, 21 and 28 days. The mandibles were removed and submitted to histologic and histomorphometric analyses.

RESULTS: Data were analyzed statistically by two-way ANOVA and by the Tukey test. The interaction effect (ANOVA, $F_{df(6; 48)}=4.64$; $p=0.001<0.05$) indicated that the relationship between treatments was not the same at each time of sacrifice. Although statistical analysis of the histomorphometric data showed a similar results for the treated and control groups. But histological analysis showed complete filling of the surgical defect throughout its extent was only for the group treated with *Plumbum met.*

CONCLUSION: The study demonstrated that for repair of surgical defects in rat mandibles *Plumbum met.* 30c and control did not differ significantly in histomorphometric terms.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19358962>

Homeopathy. 2004 Jul;93(3):138-43.

The effect of fluorine and homeopathic medicines in rats fed cariogenic diet.

[Almeida NT](#), [Dalmeida V](#), [Pustiglione M](#).

Faculdade de Ciências da Saúde de São Paulo, Instituto Brasileiro de Estudos Homeopáticos, Rua Bartolomeu de Gusmão, 04111-02086 São Paulo, Brazil.

Abstract

Although some sectors of dentistry have benefited from technological advances, dental caries is still a major problem. Prevention and treatment of dental caries by fluorine is considered a major advance in public health. Nevertheless fluorosis, caused by ingestion of excessive amounts of fluorine during the period of teeth formation, is of great concern. In accordance with the homeopathic doctrine, minimum doses of fluorine and other substances could prevent and/or treat caries. In this experiment, we compared the preventive action of fluorine and evaluated the effect of homeopathic medicines on the teeth of rats fed a cariogenic diet. None of the groups included in this study developed caries. However, microscopy revealed the presence of precipitate and/or deposit in the groups treated with homeopathic medicines. This phenomenon might be due to deposit in the dental surface or precipitation of bacterial plaque or calcium salts. It was not possible to identify the composition of the deposit/precipitate due for technical reasons. In one of the groups treated with homeopathic medicines fur loss was observed in 40% of animals. These reactions might be caused due to the action of the homeopathic medicines.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15287433>

Int J High Dilution Res. 2009;8(26):33-39.

Homeopathic remedies in a semi-intensive alternative system of broiler production.

Amalcaburio R, Machado Filho LCP, Honorato LA, Menezes NA.

Abstract

This experiment had the objective of evaluating the influence of homeopathic remedies on the performance and health of broilers in a semi-intensive alternative system of production. Two groups of 90 Cobb strain broilers were randomly allocated, at 21 days of life, to three treatments: Control, *Calcarea carbonica* 12cH and *Calcarea phosphorica* 12cH, in a randomized block design in two stages. The medication was administered in the birds' drinking water with a 5% hydro-alcohol extract solution in 5 drops per bird daily during 28 days, beginning at 22 days of age. Each stage comprised three blocks, totalizing six replications per treatment. Each treatment group consisted of 10 broilers. Birds were weighed at 21 days and weekly thereon, up to slaughter at 49 days. After slaughtering, carcasses, hearts, livers, gizzards and feet were also weighed. Differences among stages in weight gain (Stage 1 = 2,576 ± 38 g; Stage 2 = 2,825 ± 38 g; P<0,0004) and in final weight (Stage 1 = 3,470 ± 38 g, Stage 2 = 3,348 ± 40 g; P<0.03) were noted. There were no differences between stages or treatments for the variables of carcass, feet and gizzard weights (P>0.40). The liver and heart, however, weighed significantly more in stage 2 (P<0.01), which may be interpreted as an indicator of greater metabolic activity of these organs coincident with greater weight gain within the same period. When compared to the other two treatments, liver weight proved lower (P<0.05) in the *Calcarea carbonica* treatment group, as expected and in accordance to reports of the materia medica of this medicine. In conclusion, there was no effect of homeopathy applied for the purpose of growth. Lower liver weights of the *Calcarea carbonica*-treated birds may be associated to a lower susceptibility to stress. This possibility, however, calls for new studies for verification.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/325/383>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:50-1.

Experimental study of antiblastic activity in potentiated antibodies to tumor necrosis factor-alpha.

[Amosova EN](#), [Zueva EP](#), [Razina TG](#), [Martyushev AV](#), [Epstein OI](#), [Krylova SG](#), [Shilova NV](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences.

Abstract

In mice with Lewis lung carcinoma and melanoma B-16 administration of potentiated antibodies to tumor necrosis factor-alpha started 1 day after transplantation of a small number of tumor cells (10⁶) produced an antiblastic effect.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949648>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:54-6.

Effect of potentiated antibodies to cyclophosphamide on the development of tumors and effectiveness of cytostatic therapy under experimental conditions.

[Amosova EN](#), [Zueva EP](#), [Razina TG](#), [Krylova SG](#), [Shilova NV](#), [Epstein OI](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences.

Abstract

Antibodies to cyclophosphamide obtained by homeopathic potentiation and administered in ultralow doses exhibit no antitumor activity and did not modulate the effectiveness of cyclophosphamide during antitumor therapy of animals with transplanted tumors (Lewis lung carcinoma and Ehrlich adenocarcinoma).

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949650>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:107-10.

Potentiated cyclophosphane: experimental study of the effect on tumor development and efficiency of cytostatic therapy.

[Amosova EN](#), [Zueva EP](#), [Razina TG](#), [Krylova SG](#), [Shilova NV](#), [Epstein OI](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences, Tomsk.

Abstract

Experiments on animals with transplanted tumors (Lewis lung carcinoma and carcinosarcoma Walker-256) showed that combination treatment with cyclophosphane and its homeopathically potentiated forms increases antitumor activity of the preparation.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949669>

AHZ. 1976;221(1):19-25.

Die entgiftende und regenerative Wirkung der beiden Regena-Präparate Nr. 6 und 510 a.

[The detoxifying and regenerative effect of the two preparations Regena No. 6 and 510a].

[Article in German]

an der Lan H.

Abstract

Regenwürmer gehen unter der Einwirkung des Insektizides 1-Naphthyl-N-methylcarbamat innerhalb von 4-6 Tagen alle zugrunde, und zwar durch Epithelwucherungen, die zum Aufplatzen des Epithels führen und damit ein

Verbluten einleiten. Die beiden angewendeten Regenaplex-Präparate Nr. 6 und 510 a, in einer Verdünnung von 4 Tropfen auf 250 ccm Wasser, bewirken eine rasche Entgiftung, so daß die überwiegende Mehrzahl der Tiere am Leben bleibt. Arbeitet man mit gleichartigen erwachsenen Tieren, so bleiben alle am Leben. Sind Jungtiere dabei, so geht ein Großteil dieser Tiere ein. Sie sind wesentlich empfindlicher als ausgewachsene Individuen. Die entgiftende Wirkung ist auf alle Fälle gegeben: Es ist gleichgültig, ob die Tiere von Anfang an unter Einfluß der angeführten Präparate stehen und erst einige Tage später mit dem Insektizid in Kontakt kamen oder ob die Tiere von Anfang an mit dem Insektizid behandelt wurden und erst im nachhinein die beiden Präparate Nr. 6 und 510 a Anwendung fanden. So oder so tritt eine Erholung ein. Interessanterweise ist die Erholung besser und augenfälliger, wenn die Mittel nach der Vergiftung angewendet werden. Eines steht mit Sicherheit fest: Das Präparat Nr. 510 a zeigt in allen Fällen die beste Wirkung. Schon nach wenigen Tagen zeigen die Versuchstiere eine vollkommen normale Aktivität. Die schwächste Wirkung zeigt das Präparat Nr. 6, doch geht auch mit diesem Mittel die entgiftende Wirkung so weit, daß die Tiere nicht zugrunde gehen, allerdings nicht die normale Aktivität erreichen. Beide Präparate kombiniert angewendet liegen in ihrer Wirkung zwischen Nr. 6 und 510 a. Dies würde bedeuten, daß die hervorragende Wirkung von Nr. 510 a durch das Mittel Nr. 6 in irgendeiner Form blockiert erscheint. Neben dieser klaren entgiftenden Wirkung der beiden Präparate Nr. 6 und 510 a, bewirken diese noch regenerative Prozesse, sodaß Epithelschäden, in Form von Epithelwucherungen, ausheilen.

Link to abstract/paper: <https://www.thieme-connect.com/ejournals/abstract/10.1055/s-2006-935770>

Tierarztl Umsch. 1997;52:407-412.

Untersuchungen über den Einsatz von homöopathischen Arzneimitteln bei der Behandlung und Prophylaxe subklinischer Mastitiden von Milchkühen.

[Studies on the use of homeopathic medicines in the treatment and prophylaxis of subclinical mastitis in dairy cows].

[Article in German]

Andersson R, Morcillo LL, Sommer H.

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:114-6.

Membranotropic effects of antibodies to S100 protein in ultralow doses.

[Andrianov VV](#), [Gainutdinov KhL](#), [Gainutdinova TKh](#), [Mukhamedshina DI](#), [Shtark MB](#), [Epstein OI](#).

Kazan Physicotechnical Institute, Russian Academy of Sciences.

Abstract

Two types of neurons exhibiting various reactions to application of antibodies against S100 protein in the washing solution were revealed in the nervous system of *Helix lucorum* snails. After treatment with antibodies against S100 protein the frequency of action potential generation decreased in spontaneously active B1, B3, B17, and PPa6 cells, but increased in B4 and B6 cells. The effect of antibodies against S100

was less pronounced in the solution of potentiated antibodies against this protein. After pre-exposure of ganglia in the solution of potentiated water the effect of antibodies against S100 protein decreased to a lesser extent. No significant changes were revealed in the membrane resting potential of cells. Combination treatment with antibodies and potentiated antibodies against S100 protein increased the threshold of action potential generation in B1 and B17 cells. Our results indicate that potentiated antibodies against S100 protein specifically modulate the activity of nerve cells.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949671>

Biol Tier. 1986;3(4):74-81.

**Die homöopathische Behandlung der Fruchtbarkeitsstörungen beim Nutztier.
[The homeopathic treatment of fertility disorders in farm animals].**

[Article in German]

Anetzhofer J.

Abstract

Es kann festgestellt werden, dass die homöopathische Behandlung von Anöstrie, Azyklie, Stiller Brunst und Hypoplasie der Ovarien mit Ovarium compositum (Heel) und Horneel (Heel) der klassischen hormonellen Behandlung ebenbürtig ist. Wichtig ist jedoch, dass die Diagnose eindeutig gestellt werden kann. Für die homöopathische Behandlung der Follikelzysten beim Rind stehen die Resultate der Dissertation „Follikelzysten beim Rind“ zur Verfügung. Tiere mit Follikelzysten, welche ausschließlich mit Ovarium compositum und Horneel behandelt wurden, weisen im Vergleich mit den klassisch behandelten Tieren eine wesentlich kürzere Serviceperiode auf. Die Indikationen für Ovarium compositum und Horneel bei Stuten sind verlängerte oder anovulatorische Rosse, verlängerte Brunst mit oder ohne Symptome der Nymphomanie, Auslösung der Ovulation, soweit die therapeutisch überhaupt möglich ist.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=263

Biol Tier. 1993;10(2):46-60.

**Echinacea compositum ad us. vet. in der Therapie von Infektionskrankheiten.
[Echinacea compositum ad us. vet. in the therapy of infectious diseases].**

[Article in German]

Anetzhofer J.

Abstract

Die Wirksamkeit des homöopathischen Kombinationspräparates Echinacea compositum ad us. vet. wurde unter Praxisbedingungen bei Groß- und Kleintieren geprüft. Das Präparat wurde bei zahlreichen verschiedenen infektiösen Erkrankungen eingesetzt. Die Aufteilung der Patienten erfolgte in drei Gruppen, die entweder nur mit einem Antibiotikum, nur mit dem homöopathischen Präparat oder kombiniert behandelt wurden. Die Ergebnisse belegen, dass vor allem die kombinierte Behandlung zu einer deutlich kürzeren Heildauer als nur antibiotische

Therapie bewirkt. In vielen Fällen von Infektionskrankheiten, bei denen ein Antibiotikum verzichtbar erscheint, kann mit Echinacea compositum ad us. vet. alleine erfolgreich behandelt werden.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=82

Int J High Dilution Res. 2006;5(16).

Efeitos de Ultradiluições de Dexametasona em Modelo Embriofetotóxico em Ratas: Estudo Histoquímico.

[Effects of ultradilutions of Dexamethasone in rat embriofetotoxic model: a Histochemical study].

[Article in Portuguese]

Andrade FS, Del Bianco V, Landi de Moraes C, Bonamin LV.

English Abstract

This study seeks to establish an experimental model to evaluate the impact of mother high dilutions (UHD) exposure upon the F1 generation, through the inflammation concept. Female pregnant rats were divided in 2 treatment groups: Dexamethasone 15CH (UHD) and control (water). Treatment was performed on mothers from day zero of gestation until 20 days after delivery. 12 male 60 daysold rats from each group were randomized and submitted to inoculation of cagedeanan into the footpad. For each pad, 200 mast cells were counted, with distinction of the degranulated ones. Results indicate that the chronic exposure of mothers to Dexamethasone 15CH significantly increased the mast cell degranulation percentage in the offspring (Chi-square, $p=0.0016$). The model, therefore, was useful to study the putative effects of high dilutions on second generation.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/205/217>

Obesity (Silver Spring). 2009 Dec;17(12):2127-33. doi: 10.1038/oby.2009.158. Epub 2009 May 14.

Antiobesity effects of yerba maté extract (*Ilex paraguariensis*) in high-fat diet-induced obese mice.

[Arçari DP](#), [Bartchewsky W](#), [dos Santos TW](#), [Oliveira KA](#), [Funck A](#), [Pedrazzoli J](#), [de Souza MF](#), [Saad MJ](#), [Bastos DH](#), [Gambero A](#), [Carvalho Pde O](#), [Ribeiro ML](#).

Unidade Integrada de Farmacologia e Gastroenterologia, Universidade São Francisco, Bragança Paulista, Brazil.

Abstract

Because the potential of yerba maté (*Ilex paraguariensis*) has been suggested in the management of obesity, the aim of the present study was to evaluate the effects of yerba maté extract on weight loss, obesity-related biochemical parameters, and the regulation of adipose tissue gene expression in high-fat diet-induced obesity in mice. Thirty animals were randomly assigned to three groups. The mice were introduced to standard or high-fat diets. After 12 weeks on a high-fat diet, mice were randomly

assigned according to the treatment (water or yerba maté extract 1.0 g/kg). After treatment intervention, plasma concentrations of total cholesterol, high-density lipoprotein cholesterol, triglyceride, low-density lipoprotein (LDL) cholesterol, and glucose were evaluated. Adipose tissue was examined to determine the mRNA levels of several genes such as tumor necrosis factor-alpha (TNF-alpha), leptin, interleukin-6 (IL-6), C-C motif chemokine ligand-2 (CCL2), CCL receptor-2 (CCR2), angiotensinogen, plasminogen activator inhibitor-1 (PAI-1), adiponectin, resistin, peroxisome proliferator-activated receptor-gamma(2) (PPAR-gamma(2)), uncoupling protein-1 (UCP1), and PPAR-gamma coactivator-1 alpha (PGC-1 alpha). The F4/80 levels were determined by immunoblotting. We found that obese mice treated with yerba maté exhibited marked attenuation of weight gain, adiposity, a decrease in epididymal fat-pad weight, and restoration of the serum levels of cholesterol, triglycerides, LDL cholesterol, and glucose. The gene and protein expression levels were directly regulated by the high-fat diet. After treatment with yerba maté extract, we observed a recovery of the expression levels. In conclusion, our data show that yerba maté extract has potent antiobesity activity in vivo. Additionally, we observed that the treatment had a modulatory effect on the expression of several genes related to obesity.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19444227>

J Dairy Sci. 2009 Oct;92(10):4945-53.

Efficacy of homeopathic remedies as prophylaxis of bovine endometritis.

[Arlt S](#), [Padberg W](#), [Drilllich M](#), [Heuwieser W](#).

Clinic for Animal Reproduction, Faculty of Veterinarian Medicine, Freie Universität Berlin, Königsweg 65, 14163 Berlin, Germany.

Abstract

The objective of this study was to evaluate the efficacy of 2 different homeopathic prophylactic strategies for the prevention of endometritis. The drugs used were Lachesis compositum (Lachesis), Carduus compositum (Carduus), and Traumeel LT (Traumeel). Each drug contained a mixed formula of homeopathic remedies. All 929 cows received the first treatment within 24 h postpartum. The second to fourth treatments were conducted at 7 to 13, 14 to 20, and 21 to 27 d in milk, respectively. In the first group, the 4 treatments were Traumeel, Lachesis, Carduus, and Carduus, respectively (n = 206). In the second group, Lachesis was administered 3 times, followed by 1 treatment with Carduus (n = 198). The control group received 4 injections of saline (n = 189). In the fourth week after calving, the prevalence of clinical endometritis, uterine involution, and ovarian activity was monitored by rectal palpation and by ultrasonography. To assess the resumption of ovarian activity, blood samples were taken to determine the concentration of serum progesterone. The concentrations of beta-hydroxybutyrate and nonesterified fatty acids in blood serum were examined to evaluate energy metabolism. The incidence of clinical endometritis at 21 to 27 d in milk did not differ between the groups (44.4, 44.8, and 36.9% in the Traumeel, Lachesis, Carduus, and Carduus group; the 3x Lachesis, followed by Carduus group; and the control group, respectively). The proportion of cows with cyclic activity at 21 to 27 d in milk and the proportion of cows above threshold values of progesterone, beta-hydroxybutyrate, and nonesterified fatty acids

did not differ significantly between groups. When reproductive performance data were analyzed, no significant differences were found between groups. Hence, the treatment protocols tested were not effective in preventing bovine endometritis or in enhancing reproductive performance in this study.

Link to paper: <http://download.journals.elsevierhealth.com/pdfs/journals/0022-0302/PIIS0022030209708252.pdf>

Homeopathy. 2007 Apr;96(2):132-133.

Homeopathy for Horses.

[Sue E Armstrong](#)

Link to abstract/paper: <http://www.homeopathyjournal.net/article/S1475-4916%2807%2900010-0/fulltext>

Wiener Tierärztliche Monatsschrift. 2000;87(12):359-362.

Verbesserung der postpartalen Fertilität von Kühen durch Pulsatilla miniplex.

[Improvement of postpartal fertility of cows by Pulsatilla miniplex®].

[Original Article in German]

[Aslan, S.](#) [Findik, M.](#) [Kalender, H.](#) [Celebi, M.](#) [Izgür, H.](#) [Handler, J.](#)

Abstract

We administered the homeopathic drug Pulsatilla miniplex® to 20 Holstein-Friesian cows 2 hours, 15, 25 and 35 days after delivery. All cows were clinically examined on days 15, 25, 35 and 45 after term and subsequently inseminated. Each cow that failed to conceive after the third insemination was classified as not pregnant. Another group of 12 cows in the same farm served as controls. Uterine regression took less time in treated animals: on day 25 clinical uterine involution was completed in 75% of the cows, compared with 50% of the control group. Treated cows showed better fertility results than controls: total pregnancy rate (75 vs. 58.3%), pregnancy rate following first insemination (53.8 vs. 28.6%), insemination index (1.5 vs. 2.3) and the average interval between term and subsequent pregnancy (84.8 vs. 120.1 days). The interval between parturition and time of first insemination was shorter in controls than in treated animals (55.7 vs. 68.2 days). By treating the cows with Pulsatilla miniplex® we were able to shorten postpartum uterine regression and to increase fertility (e. g. insemination index and interval between term and subsequent pregnancy) significantly.

Link to abstract/paper:

<http://www.cabdirect.org/abstracts/20013004063.html;jsessionid=50065C63DCE5C5946408D2B20A9BCF42>

Ann Homéop Fr. 1978;20(4):287-292.

Etude pharmacologique d'une association d'Apis 7 CH et de Calendula 4 CH vis-à-vis de l'erythème aux rayons U.V. chez le cobaye albinos.

[Pharmacological Study of Apis Association 7 CH and CH 4 Calendula vis-à-vis the UV erythema in albino guinea pigs].

[Article in French]

Aubin M, Baronnet S, Bastide P, Bastide JM.

Ann Homéop Fr. 1979;21(4):359-366.

Etude histoenzymologique de l'action de diverses dilutions de Phosphorus sur l'hépatite toxique du rat au tétrachlorure de carbone.

[Histoenzymological study of the action of various dilutions of Phosphorus on toxic hepatitis in rats triggered with carbon tetrachloride].

[Article in French]

Aubin M, Bildet J, Bergeon JJ, Dufour H.

Homéopathie Francaise. 1984;72(3/4):189-192.

Etude pharmacologique d'une preparation d'apis (7 CH) administree par voie oroperlinguale vis-a-vis de l'erytheme aux rayons U.V. chez le cobaye albinos.

[Pharmacological Study of preparation of apis (7 CH) administered vis-a-vis to the UV erythema in albino guinea pigs].

[Article in French]

Aubin M, Baronnet S, Bastide P.

Homéopathie Francaise. 1984;72(3/4):193-197.

Recherche de l'eventuel effet du sirop de menthe sur l'action anti-inflammatoire d'apis mellifica (7 CH) vis-a-vis de l'erytheme aux rayons U.V. chez le cobaye.

[Research into the eventual effect of mint syrup on the anti-inflammatory action of Apis mellifera (7 CH) vis-a-vis the UV erythema in guinea pigs].

[Article in French]

Aubin M, Baronnet S, Bastide P.

Homeopathy. 2013 Apr;102(2):139-144.

Early udder inflammation in dairy cows treated by a homeopathic medicine (Dolisovet®): a prospective observational pilot study.

[Eléonore Aubry](#), [Marie-Noëlle Issautier](#), [Didier Champomier](#), [Laurence Terzan](#).

Abstract

Background: Mammary inflammation in dairy cows is a widespread problem in dairy farming resulting in significant economic and welfare concerns. Dolisovet® (Belladonna 1dH, Calendula MT, Echinacea 1dH, Dulcamara 1cH) a homeopathic medicine, licensed in France and indicated for the restoration of mammary function in cows is presented as a 10 g tube of ointment for intramammary use.

Method: A prospective, uncontrolled, observational pilot study involving the collection and analysis of data from 31 udder quarters identified as being inflamed by an automated milking system (AMS) was conducted to evaluate the effect of Dolisovet® on selected parameters of mammary inflammation. Inflamed quarters were identified when milk quality started to deteriorate, via an alert generated by the AMS, on the basis of electrical conductivity (EC). Milk yield and EC were retrieved five to seven days prior to the AMS alert, on the day of and for the following seven days. Dolisovet® was administered twice daily for two consecutive days, commencing on the day of the AMS alert.

Results: A significant reduction in EC was observed 4–7 days following the first treatment. An increase in milk yield was also observed following the first treatment.

Conclusion: Dolisovet® may have a beneficial therapeutic effect in the early stages of udder inflammation and for restoring udder health and function. This medicine may be an effective first line treatment for sub-clinical bovine mastitis, reducing the need for antibiotics. Randomised, controlled studies should be undertaken to further investigate this possibility.

Link to abstract/paper: <http://www.homeopathyjournal.net/article/S1475-4916%2813%2900008-8/abstract>

J Ethnopharmacol. 2009 Sep 7;125(2):356-60. doi: 10.1016/j.jep.2009.02.041. Epub 2009 Mar 9.

Anti-inflammatory activity of *Albizia lebbek* Benth., an ethnomedicinal plant, in acute and chronic animal models of inflammation.

[Babu NP](#), [Pandikumar P](#), [Ignacimuthu S](#).

Division of Ethnopharmacology, Entomology Research Institute, Loyola College, Nungambakkam, Chennai 600 034, Tamil Nadu, India.

Abstract

AIM OF THE STUDY: *Albizia lebbek* Benth. is used both in Indian traditional system and folk medicine to treat several inflammatory pathologies such as asthma, arthritis and burns. The aim of the present study was to evaluate the scientific basis of anti-inflammatory activity of different organic solvent extracts of *Albizia lebbek*.

MATERIALS AND METHODS: The anti-inflammatory activity of *Albizia lebbek* was studied using the carrageenan, dextran, cotton pellet and Freund's complete adjuvant induced rat models. The extracts obtained using petroleum ether, chloroform and ethanol were administered at the concentrations of 100, 200 and 400mg/kg body weight.

RESULTS: The petroleum ether and ethanol extracts at 400mg/kg, showed maximum inhibition of inflammation induced by carrageenan (petroleum ether-48.6%; ethanol-59.57%), dextran (petroleum ether-45.99%; ethanol-52.93%), cotton pellet (petroleum ether-34.46%; ethanol-53.57%) and Freund's adjuvant (petroleum ether-64.97%; ethanol-68.57%).

CONCLUSION: The marked inhibitory effect on paw edema shows that *Albizia lebbek* possesses remarkable anti-inflammatory activity, supporting the folkloric usage of the plant to treat various inflammatory diseases.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19643557>

J Vector Borne Dis. 2012 Jun;49(2):72-7.

Antimalarial potential of Nosode 30 and 200 against Plasmodium berghei infection in BALB/c mice.

[Bagai U](#), [Rajan A](#), [Kaur S](#).

Parasitology Laboratory, Department of Zoology, Panjab University, Chandigarh, India.

Abstract

BACKGROUND & OBJECTIVES: Homeopathy is considered as an emerging area of alternative medicine which could be established for the global health care. One of the greatest objections to this science lies in its inability to explain the mechanism of action of the micro doses based on scientific experiments and proofs. The present study has been undertaken to screen in vivo antimalarial activity of Malaria Co Nosode 30 and Nosode 200 against Plasmodium berghei infection in BALB/c mice.

METHODS: Peter's 4-day test was used to evaluate the in vivo schizontocidal effect of Nosode 30 and Nosode 200. One month follow-up study was done to calculate the mean survival time of mice in each group. Biochemical analysis was carried out to assess the liver and kidney function tests using diagnostic kits.

RESULTS: Nosode 30 and 200 exhibited 87.02 and 37.97% chemosuppression on Day 7 and mean survival time (MST) of 18.5 ± 2.16 and 16.5 ± 1.37 days respectively, which were extremely statistically significant when compared to MST of infected control (8.55 ± 0.83 days). The safety of Nosode 30 was also confirmed by the comparable levels of ALP, SGOT, SGPT activities, concentration of bilirubin, urea and creatinine to CQ treated group.

CONCLUSION: Nosode 30 possesses considerable in vivo antiplasmodial activity against P. berghei infection as compared to Nosode 200 as evident from the chemosuppression obtained using Peter's 4-day test. Further, studies on the drug can be carried out to establish its antimalarial potential in monotherapy or in combination with other homeopathic drug formulations.

Link to paper: <http://www.mrcindia.org/journal/issues/492072.pdf>

Actes Soc Rhodan Homéopath. 1952;2:52–67.

Phénomènes d'antagonisme et de synergie entre diverses dilutions de Folliculine. Etude expérimentale et applications thérapeutiques.

Bagros M.

Cahiers de Biothérapie. 1985;22(88):15-18.

Mise en évidence de l'activité de dilutions homéopathiques de apis, poumon-histamine et histamine.

[**Highlighting the activity of homeopathic dilutions of Apis, lung histamine and histamine**].

[Article in French]

Bakri F, Huguet F, Binsard AM, Guillemain J, Thibault G, Narcisse G, Tétau M.

J Am Assoc Lab Anim Sci. 2007 Jan;46(1):58-65.

Effect of noise on microvascular integrity in laboratory rats.

[Baldwin AL](#), [Bell IR](#).

Department of Physiology, University of Arizona, Tucson, AZ, USA.
abaldwin@u.arizona.edu

Abstract

Housing rats in an environment with high personnel activity increases microvascular leakiness to albumin in the mesenteric microcirculation and causes mast cell degranulation. In this study, rats were exposed to daily 15-min episodes of 90-dB SPL noise to determine whether similar effects occurred and whether vitamin E with a-lipoic acid or Traumeel (a homeopathic anti-inflammatory-analgesic) reduced these effects. Groups of rats fed a control diet (1000 IU/kg vitamin E) only, the control diet with Traumeel, or a diet with 10,000 IU/kg vitamin E and 1.65 g/kg lipoic acid were exposed to daily noise for 3 to 5 wk; a fourth group of rats, fed control diet, was housed with no excess noise. The rats were anesthetized, the superior mesenteric artery cannulated, and a portion of the microvasculature perfused for 1 min with fluorescein isothiocyanate-albumin before fixing for microscopy. All groups exposed to excess noise had significantly more leaks per venule length and greater leak area per venule length than did the quiet group. However, the number and area of leaks in the rats that received Traumeel or vitamin E were significantly smaller than those in rats exposed to noise only. In addition, mast cell degranulation was significantly lower in rats given Traumeel. Thus exposure of rats to excessive noise produces structural damage in the mesenteric microvasculature that is significantly reduced by dietary supplements.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17203918>

J Vet Med A Physiol Pathol Clin Med. 2007 Sep;54(7):370-6.

A potentized homeopathic drug, Arsenicum Album 200, can ameliorate genotoxicity induced by repeated injections of arsenic trioxide in mice.

[Banerjee P](#), [Biswas SJ](#), [Belon P](#), [Khuda-Bukhsh AR](#).

Department of Zoology, University of Kalyani, Kalyani 741235, India.

Abstract

Groundwater arsenic contamination has become a menacing global problem. No drug is available until now to combat chronic arsenic poisoning. To examine if a potentized homeopathic remedy, Arsenicum Album-200, can effectively combat chronic arsenic toxicity induced by repeated injections of Arsenic trioxide in mice, the following experimental design was adopted. Mice (*Mus musculus*) were injected subcutaneously with 0.016% arsenic trioxide at the rate of 1 ml/100 g body weight, at an interval of 7 days until they were killed at day 30, 60, 90 or 120 and were divided

into three groups: (i) one receiving a daily dose of Arsenicum Album-200 through oral administration, (ii) one receiving the same dose of diluted succussed alcohol (Alcohol-200) and (iii) another receiving neither drug, nor succussed alcohol. The remedy or the placebo, as the case may be, was fed from the next day onwards after injection until the day before the next injection, and the cycle was repeated until the mice were killed. Two other control groups were also maintained: one receiving only normal diet, and the other receiving normal diet and succussed alcohol. Several toxicity assays, such as cytogenetical (chromosome aberrations, micronuclei, mitotic index, sperm head anomaly) and biochemical (acid and alkaline phosphatases, lipid peroxidation), were periodically made. Compared with controls, the drug fed mice showed reduced toxicity at statistically significant levels in respect of all the parameters studied, thereby indicating protective potentials of the homeopathic drug against chronic arsenic poisoning.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17718811>

Pathobiology. 2008;75(3):156-70.

Comparative efficacy of two microdoses of a potentized homeopathic drug, arsenicum album, to ameliorate toxicity induced by repeated sublethal injections of arsenic trioxide in mice.

[Banerjee P](#), [Bhattacharyya SS](#), [Pathak S](#), [Naoual B](#), [Belon P](#), [Khuda-Bukhsh AR](#).

Cytogenetics and Molecular Biology Laboratory, Department of Zoology, University of Kalyani, Kalyani, India.

Abstract

OBJECTIVES: To evaluate the efficacy of 2 potentized homeopathic remedies of Arsenicum Album (Ars Alb)--6C and 30C--in combating chronic arsenic toxicity induced by repeated sublethal injections in mice (*Mus musculus*).

METHODS: Mice were randomized and divided into sets: (1) normal (control 1); (2) normal + succussed alcohol (control 2); (3) As(2)O(3) (0.016%) injected at 1 ml/100 g body weight every 7 days (treated); (4) As(2)O(3) injected + succussed alcohol (positive control); (5) As(2)O(3) injected + Ars Alb 6C (drug-fed); (6) As(2)O(3) injected + Ars Alb 30C (drug-fed). Cytogenetical endpoints like chromosome aberrations, micronuclei, mitotic index, sperm head abnormality and biochemical protocols like acid and alkaline phosphatases, aspartate and alanine aminotransferases, reduced glutathione, lipid peroxidation, catalase and succinate dehydrogenase were studied at 30, 60, 90 and 120 days.

RESULTS: Compared to controls, chromosome aberrations, micronuclei, sperm head abnormality frequencies and activities of acid and alkaline phosphatases, aspartate and alanine aminotransferases and lipid peroxidation were reduced in both drug-fed series, while mitotic index and activities of glutathione, catalase and succinate dehydrogenase were increased. Ars Alb 30C showed marginally better efficacy than Ars Alb 6C.

CONCLUSION: Both remedies indicated potentials of use against arsenic intoxication.

Link to paper: <http://www.homeopathy.org/wp-content/uploads/downloads/2012/05/Pathobiologypaper.pdf>

Homeopathy. 2010 Jul;99(3):167-76.

Chelidonium majus 30C and 200C in induced hepato-toxicity in rats.

[Banerjee A](#), [Pathak S](#), [Biswas SJ](#), [Roy-Karmakar S](#), [Boujedaini N](#), [Belon P](#), [Khuda-Bukhsh AR](#).

Department of Zoology, Cytogenetics and Molecular Biology Laboratory, University of Kalyani, Kalyani-741235, West Bengal, India.

Abstract

INTRODUCTION: Homeopathy is a popular form of complementary and alternative medicine and is used to treat for certain liver ailments.

AIM: To analyze the efficacy of homeopathic Chelidonium majus (Chel) 30C and 200C in amelioration of experimentally induced hepato-toxicity in rats.

METHODS: Rats were randomized into six sub-groups: negative control; negative control+EtOH; positive control; positive control+EtOH group; Chel 30; Chel 200. Rats were sacrificed at day 30, 60, 90 and 120; various toxicity biomarkers and pathological parameters were evaluated. Gelatin zymography for determination of metalloproteinases activity and Western blot of p53 and Bcl-2 proteins were also employed. All analyses were observer blind.

RESULTS: Chronic feeding of p-dimethyl amino azo benzene (p-DAB) and phenobarbital (PB) elevated the levels of aspartate aminotransferase (AST), alanine aminotransferase (ALT), gamma glutamyl transferase (GGT), lactate dehydrogenase (LDH), triglyceride, cholesterol, creatinine and bilirubin and lowered the levels of glutathione (GSH), glucose-6-phosphate dehydrogenase (G-6-PD), catalase and HDL-cholesterol. There were statistically significant modulations of these parameters in the treated animals, compared to positive controls. In both treated groups, there was downregulation of metalloproteinases, p53 and Bcl-2 proteins compared to over-expression in the positive control groups.

CONCLUSION: Both the potencies of Chel exhibited anti-tumor and anti-oxidative stress potential against artificially induced hepatic tumors and hepato-toxicity in rats. More studies are warranted.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20674840>

Evid Based Complement Alternat Med. 2011;2011:391752. Epub 2011 Feb 14.

Evidences of protective potentials of microdoses of ultra-high diluted arsenic trioxide in mice receiving repeated injections of arsenic trioxide.

[Banerjee P](#), [Bhattacharyya SS](#), [Pathak S](#), [Boujedaini N](#), [Belon P](#), [Khuda-Bukhsh AR](#).

Department of Zoology, University of Kalyani, Kalyani-741235, India.

Abstract

The present study was undertaken to examine if microdoses of ultra-high diluted arsenic trioxide (a potentized homeopathic remedy, Arsenicum Album 200C, diluted 10(-400) times) have hepatoprotective potentials in mice subjected to repeated injections of arsenic trioxide. Arsenic intoxicated mice were divided into: (i) those receiving Arsenicum Album-200C daily, (ii) those receiving the same dose of diluted

succussed alcohol (Alc 200C) and (iii) another group receiving neither drug nor succussed alcohol. Two other control groups were also maintained: one fed normal diet only and the other receiving normal diet and Alc-200C. Toxicity biomarkers like aspartate and alanine aminotransferases, glutathione reductase, catalase, succinate dehydrogenase, superoxide dismutase and reduced glutathione contents were periodically assayed keeping the observer "blinded". Additionally, electron microscopic studies and gelatin zymography for matrix metalloproteinases of liver tissues were made at day 90 and 120. Blood glucose, hemoglobin, estradiol and testosterone contents were also studied. Compared to controls, Arsenicum Album-200C fed mice showed positive modulations of all parameters studied, thereby providing evidence of protective potentials of the homeopathic drug against chronic arsenic poisoning.

Link to paper: <http://www.homeopathy.org/wp-content/uploads/downloads/2012/05/nen090v1.pdf>

The Nucleus. 1996;49:28-35.

Alterations of cytogenetical and haematological effects by ultra-low doses of Ginseng in whole-body X-irradiated mice.

Banik S, Khuda-Bukhsh AR.

Ann Homéop Fr. 1965;7(8):621-628.

Essai de traitement de la leucémie aviaire (lymphomatose) par les dilutions homéopathiques de méthylcholanthrène, de pseudo-cantharidine et d'isosulfocyanate d'allyle.

[Test on avian leukemia (lymphomatosis) by homeopathic dilutions of methylcholanthrene, pseudo-cantharidin and isosulfocyanate allyl].

[Article in French]

Baranger P, Filer MK.

Ann Homéop Fr. 1967;9(2):131-136.

Contribution à l'étude de différents facteurs pouvant influencer sur l'efficacité des dilutions homéopathiques.

[Contribution to the study of various factors that may affect the effectiveness of homeopathic dilutions].

[Article in French]

Baranger P, Filer MK.

Ann Homéop Fr. 1968;10(3):797-802.

Contributions à l'étude de facteurs pouvant influencer sur l'efficacité thérapeutiques des dilutions homéopathiques.

[Contributions to the study of factors influencing the effectiveness of therapeutic homeopathic dilutions].

[Article in French]
Baranger P, Filer MK.

Ann Homéop Fr. 1969;11(10):797-802.

Comparaison des activités thérapeutiques des mêmes substances à doses allopathiques et homéopathiques.

[Comparison of therapeutic activities of the same substances in allopathic and homeopathic doses].

[Article in French]
Baranger P, Filer MK.

Ann Homéop Fr. 1971;13(7):561-569.

Contribution à l'étude des facteurs physiques pouvant influencer sur l'efficacité thérapeutiques des hautes dilutions de Géraniol.

[Contribution to the study of the physical factors that may affect therapeutic efficacy of high dilutions of Geraniol].

[Article in French]
Baranger P, Filer MK.

Vet Res Commun. 2001 Aug;25(6):437-47.

Immunopotential of a developed *Salmonella enterica* serotype enteritidis vaccine by thymulin and zinc in meat chicken breeders.

[Barbour EK](#), [Hamadeh SK](#), [Bejjani NE](#), [Faroon OM](#), [Eid A](#), [Sakr W](#), [Bouljihad M](#), [Spasojevic R](#), [Safieh-Garabedian B](#).

Animal Sciences Department, Faculty of Agricultural and Food Sciences, Centers for Disease Control, Atlanta, Georgia, USA. eb01@aub.edu.lb

Abstract

The humoral immunity, spleen and thymus weight indices, lymphocyte count in the thymus cortex, and granuloma diameter at vaccination sites were assessed in four differently immunopotential groups of meat chicken breeders. Breeders in the first two groups were given a killed *Salmonella enterica* serotype Enteritidis (SE) vaccine subcutaneously at 15 and 19 weeks of age. Breeders in the third and fourth groups were left unvaccinated. Breeders in the first group were further immunopotential with zinc and thymulin. Each bird in the first group was given the immunopotential intraperitoneally in a volume of 0.1 ml at intervals of 3 days for a period of 3 weeks, starting at 15 weeks of age. At each time, each bird in the first group received thymulin (10 ng) and ZnCl₂ (1 micromol/L), using a carboxymethyl cellulose carrier, totalling 90 ng thymulin and 9 micromol of ZnCl₂ per bird. Each bird in the first three groups was challenged orally with 6.7 x 10⁶ cfu/ml of highly virulent SE organisms, at an age of 22 weeks. The first group, which had received zinc and thymulin, had the earliest and highest humoral immune response to SE (p<0.05). This was observed at 2 and 4 weeks after the first vaccination. In addition, the first group had

the highest mean thymus weight index, and the highest mean lymphocyte count in the thymus cortex. No significant difference was observed between the first two vaccinated groups in the mean granuloma diameter developed at the two vaccination sites 48 h after administration of the vaccine ($p>0.05$).

Link to paper:

http://download.springer.com/static/pdf/273/art%253A10.1023%252FA%253A1010654818923.pdf?auth66=1353885989_329c6b8b659ad55638601317bb004371&ext=.pdf

Med Sci Monit. 2004 Aug;10(8):BR281-5. Epub 2004 Jul 23.

Evaluation of homeopathy in broiler chickens exposed to live viral vaccines and administered *Calendula officinalis* extract.

[Barbour EK](#), [Sagherian V](#), [Talhok S](#), [Talhok R](#), [Farran MT](#), [Sleiman FT](#), [Harakeh S](#).

Department of Animal Science, Faculty of Agricultural and Food Sciences (FAFS), American University of Beirut (AUB), Lebanon. eb01@aub.edu.lb

Abstract

BACKGROUND: In this study it was determined that a *Calendula officinalis* water extract can reduce the immune response to three different viruses in broiler chickens, associated with improvement in body weights.

MATERIAL/METHODS: The experiment was conducted on broiler chickens divided into two groups of 105 birds each. The first group received a *Calendula officinalis* water extract orally, while the second group received drinking water only. All birds in the two groups were similarly exposed to three different live vaccine viruses.

Quantitative assessment of humoral immunity to each of the 3 viruses and records of bursal and thymus weight indices were taken. Performance, as observed in weight records at 21 and 41 days of age, feed conversion, and % mortality up to market age, was also evaluated.

RESULTS: There was a reduction in immune response to IB virus at 42 days of age, to ND virus at 29 and 42 days of age, and to IBD virus at 14, 29, and 42 days of age in the *Calendula officinalis*-treated birds in comparison with controls. This immune reduction in *Calendula officinalis*-treated birds was associated with insignificant reduction in the bursal weight index at 42 days of age and an improvement in mean weights at 21 and 41 days of age; the feed conversion and mortality rates were similar in the two groups ($P>0.05$).

CONCLUSIONS: *Calendula officinalis* had an immunomodulation effect against three different live viruses in broiler chickens.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15277989>

Int J High Dilution Res. 2008;7(24):147-151.

Preliminary study of homeopathic treatment of subclinical mastitis evaluated through somatic cells count and California mastitis test.

Barzon C, de Medeiros F, Moraes RE, da Silva L, Massambani C, Takemura OS, Gazim ZC.

Abstract

The present paper presents the results of homeopathic treatment of 25 Holstein breed cows aged 3 to 8 years old diagnosed with subclinical mastitis through California Mastitis Test (CMT). Animals were divided into 3 groups according with infection level. A homeopathic complex was developed on the grounds of clinical aspects, including Phosphorus 30x, Phytolacca 30x, Silicea 30x, Sulphur 30x, Belladonna 30x, Bryonia alba 30x, Pulsatilla 30x, Calendula 30x and biotherapeutic of Staphylococcus aureus 200x. The remedy was added to salt and was administered to cattle 100g/cow/day for 75 days. CMT were carried out every 2 weeks to control incidence and severity of mastitis; somatic cells count (SCC) was performed at the beginning and the end of treatment. CMT showed significant improvement in regression of infection level all throughout the study; final SCC showed decrease in 82% of animals, signaling thus efficacy of the homeopathic treatment.

Link to paper: <http://www.audesapere.in/researchstudies/vet/v1.pdf>

Homéopathie Francaise. 1983;71(3):185-189.

Action immuno-pharmacologique des préparations de Thymus et d'hormone thymique utilisées à doses infinitésimales.

[Immuno-pharmacological action of preparations of thymus and thymic hormone used in infinitesimal doses].

[Article in French]

Bastide M, Doucet-Jaboeuf M.

Homéopathie Francaise. 1984;72(3/4):183-187.

Etude pharmacologique d'une préparation d'Apis (7 CH) vis-à-vis de l'erythème aux rayons U.V. chez le cobaye albinos.

[Pharmacological study of a preparation of Apis (7 CH) vis-à-vis the UV erythema in albino guinea pigs].

[Article in French]

Bastide P, Bastide J, Aubin M, Baronnet S.

Int. J. Immunotherapy. 1987;3:191-200.

Activite immunomodulatrice de tres faibles doses de thymuline chez la souris.

[Immunomodulatory activity of very low doses of thymulin in mice].

[Article in French]

Bastide M, Daurat V, Doucet-Jaboeuf M, Pelegrin A, Dorfman P.

Int J Vet Hom. 1987;2(1):8-12.

Cholesterol metabolism in cholesterol-fed rabbits treated with Chelidonium 3x(=D3).

Baumans V, Oude Luttikhuis WMT, Bol C, Visser JJ, Beynen AC.

Wien. Tierärztl. Mschr. 2008;95(11-12):263-268.

Effectiveness of *Thuja Occidentalis* and *Urtica Urens* in Pseudopregnant Bitches.

Beceriklisoy H, Eceriklisoy H, Özyurtlu N, Kaya D, Handler J, Aslan S.

Abstract

The aim of this study was to investigate the effectiveness of *Thuja occidentalis* and *Urtica urens* in pseudopregnant bitches. Clinically pseudopregnant bitches (n=38) were assigned per random to groups as follows: Group I: *Thuja occidentalis* D30 (8 globules, 3 times a day, per os, n=15); Group II: *Urtica urens* D6 (8 globules, 3 times a day, per os, n=15); Group III: Naloxone (Control group, 0.01 mg/kg, twice daily, s.c., n=8). Animals were classified as no, mild, moderate, and severe (score–, +, ++, and +++) according to the clinical signs of mammary glands and behavioural signs during the study. Bitches were examined at 3-5 days intervals by means of inspection and palpation until clinical signs resolved. Successful recovery rates (100%) were found in Group I and II. Application of naloxone was found to be successful in only 3 of 8 bitches (37.5%). Mean duration of treatments in Group I, II and III was 11.6±4.6 (min-max: 3-18) days, 13.5±3.7 (min-max: 6-19) days and 14.33±5.85 (min-max: 10-21) days, respectively. During treatments with *Thuja occidentalis* D30 and *Urtica urens* D6, the percentages of bitches with behavioural problems significantly decreased within 3-5 days from 33.3% to 6.7% and from 66.7% to 33.3% (p<0.05), respectively. All bitches treated with *Thuja occidentalis* D30 or *Urtica urens* D6 showed normal behaviours within 10 days after onset of treatments but two bitches in naloxone group kept showing behavioural signs until Days 15-20 of treatment. Concerning mammary gland scores, treatments yielded significantly higher success rates in Group I and Group II (100 % in both groups) compared to the success rate observed in Group III (37.5%; p<0.01). No side effects were observed during the study. In conclusion, homeopathic agents *Thuja occidentalis* D30 and *Urtica urens* D6 proved to be effective and safe in pseudopregnant bitches.

Link to paper:

http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0CDYQFjAC&url=http%3A%2F%2Fwww.veterinerhomoopati.org.tr%2FFileUpload%2Fds150361%2FFile%2Fyeni_microsoft_word_belgesi.doc&ei=ctakUJPNemD0QXrxICgAg&usg=AFQjCNHTGY5De7-aAOykkHRC8MVoamipFw

Indian J Exp Biol. 1994 Mar;32(3):192-5.

Effect of homeopathic drugs plumbum and opium on experimentally induced lead toxicity in rats.

[Begum R](#), [Koshy R](#), [Sengupta A](#).

Department of Biochemistry, Faculty of Science, M.S. University of Baroda, India.

Abstract

Homeopathic drugs plumbum 1M and Opium 30 were partially effective in the recovery of delta ALAD activity of the lead (150 mg% lead acetate) intoxicated rats. Plumbum 1M did not exhibit protective effect when dietary lead at high concentrations (> 25 mg% lead acetate) were given concurrently as assessed by blood delta ALAD activity and hemoglobin concentration. However it was partially effective in the recovery of delta ALAD activity and relieving anemia caused by chronic exposure of low doses of lead (below 15 mg% lead acetate).
Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/8070841>

Evid Based Complement Alternat Med. 2006 Jun;3(2):171–186. Epub May 2006.
Immunology and Homeopathy. 3. Experimental Studies on Animal Models.
Bellavite P, Ortolani R, Conforti A.

Abstract

A search of the literature and the experiments carried out by the authors of this review show that there are a number of animal models where the effect of homeopathic dilutions or the principles of homeopathic medicine have been tested. The results relate to the immunostimulation by ultralow doses of antigens, the immunological models of the 'simile', the regulation of acute or chronic inflammatory processes and the use of homeopathic medicines in farming. The models utilized by different research groups are extremely heterogeneous and differ as the test medicines, the dilutions and the outcomes are concerned. Some experimental lines, particularly those utilizing mice models of immunomodulation and anti-inflammatory effects of homeopathic complex formulations, give support to a real effect of homeopathic high dilutions in animals, but often these data are of preliminary nature and have not been independently replicated. The evidence emerging from animal models is supporting the traditional 'simile' rule, according to which ultralow doses of compounds, that in high doses are pathogenic, may have paradoxically a protective or curative effect. Despite a few encouraging observational studies, the effectiveness of the homeopathic prevention or therapy of infections in veterinary medicine is not sufficiently supported by randomized and controlled trials.

Link to paper: <http://europepmc.org/articles/PMC1475939/pdf/nel016.pdf>

Homeopathy. 2009 Oct;98(4):208-27.

Assays of homeopathic remedies in rodent behavioural and psychopathological models.

[Bellavite P](#), [Magnani P](#), [Marzotto M](#), [Conforti A](#).

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Abstract

The first part of this paper reviews the effects of homeopathic remedies on several models of anxiety-like behaviours developed and described in rodents. The existing literature in this field comprises some fifteen exploratory studies, often published in non-indexed and non-peer-reviewed journals. Only a few results have been

confirmed by multiple laboratories, and concern Ignatia, Gelsemium, Chamomilla (in homeopathic dilutions/potencies). Nevertheless, there are some interesting results pointing to the possible efficacy of other remedies, and confirming a statistically significant effect of high dilutions of neurotrophic molecules and antibodies. In the second part of this paper we report some recent results obtained in our laboratory, testing Aconitum, Nux vomica, Belladonna, Argentum nitricum, Tabacum (all 5CH potency) and Gelsemium (5, 7, 9 and 30CH potencies) on mice using ethological models of behaviour. The test was performed using coded drugs and controls in double blind (operations and calculations). After an initial screening that showed all the tested remedies (except for Belladonna) to have some effects on the behavioural parameters (light-dark test and open-field test), but with high experimental variability, we focused our study on Gelsemium, and carried out two complete series of experiments. The results showed that Gelsemium had several effects on the exploratory behaviour of mice, which in some models were highly statistically significant ($p < 0.001$), in all the dilutions/dynamizations used, but with complex differences according to the experimental conditions and test performed. Finally, some methodological issues of animal research in this field of homeopathy are discussed. The "Gelsemium model" - encompassing experimental studies in vitro and in vivo from different laboratories and with different methods, including significant effects of its major active principle gelsemine - may play a pivotal role for investigations on other homeopathic remedies.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19945676>

Evid Based Complement Alternat Med. 2011;2011:362517. Epub 2011 Feb 15.
Homeopathic Doses of Gelsemium sempervirens improve the Behavior of Mice in Response to Novel Environments.

[Bellavite P](#), [Magnani P](#), [Zanolin E](#), [Conforti A](#).

Department of Morphological Biomedical Sciences (Chemistry and Microscopy Section), University of Verona, Verona 37134, Italy.

Abstract

Gelsemium sempervirens is used in homeopathy for treating patients with anxiety related symptoms, however there have been few experimental studies evaluating its pharmacological activity. We have investigated the effects of homeopathic doses of G. sempervirens on mice, using validated behavioral models. Centesimal (CH) dilutions/dynamizations of G. sempervirens, the reference drug diazepam (1 mg/kg body weight) or a placebo (solvent vehicle) were intraperitoneally delivered to groups of mice of CD1 strain during 8 days, then the effects were assessed by the Light-Dark (LD) choice test and by the Open-Field (OF) exploration test, in a fully blind manner. In the LD test, the mean time spent in the illuminated area by control and placebo-treated animals was 15.98%, for mice treated with diazepam it increased to 19.91% ($P = .047$), while with G. sempervirens 5 CH it was 18.11% ($P = .341$, non-significant). The number of transitions between the two compartments increased with diazepam from 6.19 to 9.64 ($P < .001$) but not with G. Sempervirens. In the OF test, G. sempervirens 5 CH significantly increased the time spent and the distance traveled in the central zone ($P = .009$ and $P = .003$, resp.), while diazepam had no effect on these OF test parameters. In a subsequent series of experiments, G.

sempervirens 7 and 30 CH also significantly improved the behavioral responses of mice in the OF test ($P < .01$ for all tested variables). Neither dilutions of *G. sempervirens* affected the total distance traveled, indicating that the behavioral effect was not due to unspecific changes in locomotor activity. In conclusion, homeopathic doses of *G. sempervirens* influence the emotional responses of mice to novel environments, suggesting an improvement in exploratory behavior and a diminution of thigmotaxis or neophobia.

Link to paper: <http://europepmc.org/articles/PMC3135388?pdf=render>

Int J High Dilution Res. 2011;10(36):198-200.

Mice behavioural models with pooled data analysis of Gelsemium studies and new findings about Ignatia and Aconitum

Bellavite P, Magnani P, Marzotto M, Cristofolletti M, Zanolin M, Conforti A.

Abstract

Objective: We investigated the effects of three different homeopathic medicines in several dilutions/dynamizations on mice, using validated models which explore anxiety-like and emotional symptoms. Two complete series of investigations were performed in order to assess the activity of *Gelsemium sempervirens*; furthermore, we investigated *Ignatia amara* and *Aconitum napellus* in the same model systems. **Methods:** Mice of CD1 strain were randomized in different cages (minimum 8 mice per treated group in each experiment) and treatment solutions were coded in such a way that all protocols were carried out fully in blind. The indicated compounds at various centesimal dilutions/dynamizations, a control solution (the solvent vehicle of drugs, which was succussed before administration) or the reference drugs diazepam (1 mg/kg body weight) or buspirone (5 mg/kg body weight) diluted in the same succussed solvent were delivered intraperitoneally (0.3 ml/mice) for 9 days. A series of changes of animal behavior were assessed by the Light-Dark (LD) choice test and the Open-Field (OF) exploration test. Two series of studies with little technical differences, exploiting a total of 14 separate experiments, were carried out with *Gelsemium*, five complete experiments with *Ignatia* and four complete experiments with *Aconitum*. **Results:** In both series of experiments *Gelsemium* showed anxiolytic-like effects using both OF test (permanence and movement in centre area of field) and LD test (time spent in lit area and number of light-dark transitions). However, due to high variability of animal responses and possibly to some minor differences in protocols, those effects reached the threshold of statistical significance only in OF in the first series and only in LD in the second series. Cumulative analysis of the two series demonstrated a highly significant ($p < 0.0001$) effect of *Gelsemium* 5CH, 7CH, and 30CH in OF parameters and of *Gelsemium* 5CH, 9CH, and 30CH in LD parameters. In OF the effect of *Gelsemium* was evident at variance with the effect of the standard drugs diazepam and buspirone, suggesting an increase in exploratory behavior and a decrease in thigmotaxis or in neophobia, instead of a pure anxiolytic effect; in LD test the effects of *Gelsemium* were in the same direction as those of benzodiazepines. *Ignatia* showed statistically significant effects only in the LD test parameters (peak at 9CH dilution/dynamization), while *Aconitum* anxiolytic-like effects were evident only in one experiment where the basal anxiety level of mice was very high. In addition, we observed a tendency of *Ignatia* to decrease the number of urinations and of *Aconitum* to decrease the number of stools produced by

animals, an effect that was in the same direction as the activity of diazepam. Homeopathic medicines did not alter the general locomotion of mice in the OF, indicating that their effect was actually anxiolytic-like and not sedative, while buspirone significantly inhibited this parameter. Conclusions: Pharmacological effects of highly diluted/dynamized medicines on behavioural and emotional symptoms are clearly detectable also in experimental animals. Among the three tested remedies, in these model paradigms Gelsemium showed the highest activity, which was statistically significant as compared with pure solvent even in solutions diluted beyond the Avogadro constant. The effects of different medicines on the anxiety-like symptoms were qualitatively different and differed also from those of benzodiazepines and of serotonin partial agonists. These experiences raise some technical issues related to the animal models and to the possible translation to homeopathy in humans.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/523/536>

Int J High Dilution Res. 2011;10(37):325-337.

Effects of high-dilutions in behavioural models: a commentary on critical issues, from reproducibility to plausibility.

[Bellavite P](#), [Magnani P](#), [Conforti A](#), [Marzotto M](#), [Zanolin ME](#).

Abstract

As part of a rigorous investigation into the effects of Gelsemium sempervirens on laboratory mice, we performed two complete series of experiments and published three scientific papers. A recent commentary has, however, called into question the reproducibility and validity of these findings. In this article we discuss the major issues raised by this critique within the framework of methodological aspects and the interpretation of results of high-dilution and homeopathic research. The charge of non-reproducibility is shown to be unfounded, because a same homeopathic medicine displayed the same direction of effects in two well-validated models (light-dark and open-field), albeit with nonlinear patterns. The double-blind protocols and statistics by means of ANOVA were performed appropriately and the difference between dilutions of Gelsemium (5cH, 7cH, 9cH and 30cH with variations according to model) and placebo was statistically highly significant. Our investigations brought to light some problems related with the lack of activity of buspirone and diazepam (conventional anxiolytic drugs used as control) on some behavioural parameters, suggesting that Gelsemium may have broader action, and raising doubts as to the reliability of benzodiazepines as positive controls for homeopathic treatments.

Concerning the plausibility of experiments in this field, disputed on the grounds of alleged lack of dose-response effect, we note that the latter is not at all uncommon, and can be accounted for by a host of possible reasons. In conclusion, our research line showed reproducible and consistent effects of Gelsemium in laboratory mice.

Link to paper: http://www.paolobellavite.it/files/251_2011intjhdilrescommentary.pdf

Evid Based Complement Alternat Med. 2012;2012:954374. Epub 2012 Apr 4.

Testing homeopathy in mouse emotional response models: pooled data analysis of two series of studies.

[Bellavite P](#), [Conforti A](#), [Marzotto M](#), [Magnani P](#), [Cristofoletti M](#), [Oliosio D](#), [Zanolin ME](#).

Department of Pathology and Diagnostics, University of Verona, 37134 Verona, Italy.

Abstract

Two previous investigations were performed to assess the activity of *Gelsemium sempervirens* (*Gelsemium s.*) in mice, using emotional response models. These two series are pooled and analysed here. *Gelsemium s.* in various homeopathic centesimal dilutions/dynamizations (4C, 5C, 7C, 9C, and 30C), a placebo (solvent vehicle), and the reference drugs diazepam (1 mg/kg body weight) or buspirone (5 mg/kg body weight) were delivered intraperitoneally to groups of albino CD1 mice, and their effects on animal behaviour were assessed by the light-dark (LD) choice test and the open-field (OF) exploration test. Up to 14 separate replications were carried out in fully blind and randomised conditions. Pooled analysis demonstrated highly significant effects of *Gelsemium s.* 5C, 7C, and 30C on the OF parameter "time spent in central area" and of *Gelsemium s.* 5C, 9C, and 30C on the LD parameters "time spent in lit area" and "number of light-dark transitions," without any sedative action or adverse effects on locomotion. This pooled data analysis confirms and reinforces the evidence that *Gelsemium s.* regulates emotional responses and behaviour of laboratory mice in a nonlinear fashion with dilution/dynamization.

Link to paper: http://www.paolobellavite.it/files/254_2012_pooledanalysisecam.pdf

Thromb Res. 1998 Jun 1;90(5):215-21.

Combination of two doses of acetyl salicylic acid: experimental study of arterial thrombosis.

[Belougne-Malfatti E](#), [Aguiejouf O](#), [Doutremepuich F](#), [Belon P](#), [Doutremepuich C](#).

Laboratoire d'Hématologie, Faculté de Pharmacie, Bordeaux, France.

Abstract

The antithrombotic effect of high dose acetylsalicylic acid is well known, and recently, in vitro studies hinted the potent thrombotic effect of ultra-low dose of acetylsalicylic acid (<1mg/day) showing a significant decrease in bleeding time. In this study, we investigated the effect of a combination between a high and an ultra-low dosage (100 mg/kg+ 10(-30) mg/kg) on an arterial thrombosis induced by a laser beam. We used an intravital microscopic technique, allowing to evaluate (anti)-thromboembolic events at previously determined locations of microvasculature. Thrombus formation was induced by argon-laser shot. The instrumental test setup was completed with a video system, to select mesenteric arterioles with the same diameter (between 15 and 25 microm). The changes in platelet aggregability were determined by Cardinal and Flower method, and the concentration of acetylsalicylic acid in the plasma was measured by high pressure liquid chromatography. Antithrombotic effect of high dose (100 mg/kg) acetylsalicylic acid was confirmed in all results obtained. Asa injected at ultra-low dose (10(-30) mg/kg) had a potent thrombotic properties and decreased significantly the bleeding time. The subcutaneous administration of the combination of the two doses permitted to come

back to the control values, and the bleeding time was shortened compared to control group.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/9694243>

Int J High Dilution Res. 2003 Oct-Dec;2(5):71-72.

**Tratamento homeopático de melanoma maligno em cadela.
[Homeopathic treatment of malignant melanoma in a dog].**

[Article in Portuguese]

Benites NR, Melville PA.

English Abstract

Malignant melanoma is the most frequently diagnosed of canine's oral tumors. Conventional treatment's efficacy – surgical excision, radio and chemotherapy – is very low and the prognostics are very reserved. The present article presents a case of homeopathically treated malignant melanoma in a dog, with successful results. It may be concluded that following the guidelines suggested by Hahnemann for Psora cases might heal the homeopathic treatment of canine malignant melanoma.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/91/81>

Int J High Dilution Res. 2004 Jan-Mar;3(6):14-16.

**Utilização de Silicea em processos dermatológicos pós-vacinais.
[Use of Silicea in dermatological procedures post-vaccination].**

[Article in Portuguese]

Benites NR, Melville PA.

Abstract

As vacinas são substâncias utilizadas para induzir respostas imunes, cuja finalidade é a prevenção de uma doença infecciosa. Pode-se verificar todos os tipos de reações de hipersensibilidade após vacinações. O objetivo do presente estudo é relatar o tratamento homeopático de animais que apresentaram dermatites após vacinação. Foram tratados dois animais da espécie canina, um deles da raça Poodle, fêmea, de 12 anos, que apresentava dermatite com erupções no nariz, na cabeça e pescoço, e outro animal, macho, com sete meses de idade, que apresentava erupções crostosas por todo corpo. Em ambos os casos, verificou-se que os processos dermatológicos surgiram após a vacinação dos animais com vacinas polivalentes. Os animais foram tratados com Silicea 30 CH, pois na matéria Médica Pura de Hering verifica-se que a Silicea pode causar doenças por supressão após vacinação. Verificou-se regressão diária do processo até a cura completa em 30 dias.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/103/95>

Int J High Dilution Res. 2003;2(2):8-9.

Utilização da isoterapia (Plumbum em dinamização homeopática) no tratamento de saturnismo (intoxicação por chumbo) em aves.

[Use of isotherapy (homeopathic dynamization of lead) in the treatment of saturnism (lead intoxication) in fowl].

[Article in Portuguese]

Benez SM, Fernandes ME.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/69/53>

Am Soc Exp Biol J. 1994;8:A398.

Transfer of the molecular signal by electronic amplification.

Benveniste J, Aissa J, Litime MH, Tsangaris GT, Thomas Y.

European Federation of Animal Science. 2012;129:296-300.

Use of homeopathy in parasite control in a flock of Zerasca sheep.

[M. N. Benvenuti](#), [F. Pisseri](#), [J. Goracci](#), [L. Giuliotti](#), [F. Macchioni](#), [P. Verità](#), [G. Guidi](#)

Abstract

The control of gastrointestinal parasites in livestock relies almost exclusively on multiple and regular dosing with anthelmintics. This leads to problems linked with residues in food products and in the environment and has encouraged researchers to search for alternatives or new helminth control methods (Ketzis *et al.*, 2006). Among these methods, homeopathy could play a strategic role in solving health problems; however, at present, there is a lack of scientific results with validated techniques used on a large scale. The aim of this study was thus to investigate the feasibility of homeopathy in the control of the parasite burden in sheep. The study lasted 12 months and involved 30 Zerasca ewes divided into two groups. Sabadilla MK was administered twice. A faecal egg count (FEC) was performed of gastrointestinal strongyles and blood parameters were characterized. Statistical analysis was by ANOVA and relations between FEC and hematocrit (HCT) were estimated by Pearson's correlations. FEC was influenced by the sampling date, confirming seasonal fluctuation. On the whole, homeopathy did not influence the parasite burden, but a significant decrease ($P \leq 0.05$) in egg output was observed at the second and at the last sampling following the administration of the remedy. Data concerning blood parameters did not show appreciable differences between the two groups. FEC and HCT showed an inverse correlation even if mean values were within the normal range. The study revealed the advantages of monitoring parasites and the interest of homeopathy in the control of gastrointestinal nematodes.

Link to abstract/paper: http://link.springer.com/chapter/10.3920%2F978-90-8686-726-4_47

European Association for Animal Production. 2012 Jul;131(3):169-176.

Clinical, productive and welfare parameters in Zerasca sheep treated with homeopathy.

Benvenuti, M.N. Pisseri, F. Azzarello, B.M. Terracciano, G. Stefanelli, S. Cavallina, R. Lai, O. Giuliotti, L.

Abstract

Small ruminant extensive farming system guarantees the animals to express their behavioural pattern but exposes them to gastrointestinal parasitic infections. Chemical drugs are not able to solve the problem in the long time. Moreover, drugs cause degradation of environment and have worrying issues regarding food safety. In this view, homeopathy can be a very useful alternative or complementary tool in annihilating this downside. The aim of this study was to evaluate clinical, productive and welfare parameters in ewes treated with homeopathy to control gastrointestinal parasitic burden. Twenty-seven adult Zerasca sheep were randomly divided among three groups: untreated (Control); chemically treated (Drug) and homeopathically treated (Homeo). *Lachesis mutus* was prescribed according to the unicist method. Four faecal samplings and two blood samplings were collected from the ewes. McMaster Technique was performed to estimate the faecal egg count (FEC) of gastrointestinal nematodes. Blood samples were analysed for haematological, metabolic and immunological parameters. FAMACHA and body condition scores (BCS) were also recorded. The results indicate that homeopathy is able to reduce parasitic burden keeping animals below the threshold of FECs that can cause zotechnical damage (FEC = 387 ± 422.37 , 427 ± 440.69 and 509 ± 324.73 respectively for the 'H', 'D' and 'C' group). Parasitic burdens can indeed cause anaemic states and loss of blood proteins inducing a pathological state and associated detrimental effects. The immunological assay shows lysozyme values decrease in all three groups, therefore, a direct association of these immune cells and the state of disease has not been found. Fertility rate and BCS result satisfactory demonstrating resilient characteristics of this breed. Homeopathic medication can be used as a valid environmentally-friendly control method of control pasture contamination.

Link to abstract/paper: <http://nationalcenterforhomeopathy.org/content/clinical-productive-and-welfare-parameters-in-zerasca-sheep-treated-with-homeopathy>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:105-6.

Morphine and its potentiated form: effects on pain sensitivity in rats.

[Berchenko OG](#), [Vorob'eva TM](#), [Geiko VV](#).

Institute of Neurology, Psychiatry, and Narcology, Ukrainian Academy of Medical Sciences, Kharkov.

Abstract

We studied the effects of morphine and its potentiated form on nociceptive thresholds in rats with the morphine withdrawal syndrome. Repeated combination (bipathic) treatment with morphine and its potentiated form increased nociceptive threshold and, therefore, activated the nociceptive system in the brain.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949668>

Homeopathy. 2006 Apr;95(2):94-7.

Evaluation of isopathic treatment of *Salmonella enteritidis* in poultry.

[Berchieri A Jr](#), [Turco WC](#), [Paiva JB](#), [Oliveira GH](#), [Sterzo EV](#).

Faculdade de Ciências Agrárias e Veterinárias, Universidade Estadual Paulista, 14870-000 Jaboticabal, São Paulo, Brazil. berchier@fcav.unesp.br

Abstract

BACKGROUND: Salmonellosis is a common problem worldwide in commercially reared poultry. It is associated with human Salmonellosis. No fully satisfactory method of control is available.

METHOD: Nosodes to an antibiotic-resistant strain of *Salmonella enterica* serovar Enteritidis in D30 (30X) potency were prepared. One day old chicks (N = 180) were divided into four groups: two control and two different preparations of the nosode. Treatments were administered in drinking water for 10 days. The birds were challenged by a broth culture of the same *Salmonella*, by mouth, on day 17. Cloacal swabs were taken twice weekly for *Salmonella enterica* serovar Enteritidis.

RESULTS: Birds receiving active treatment were less likely to grow the strain of *Salmonella* from cloacal swabs compared to control.

CONCLUSION: Isopathy is low cost and non-toxic. It may have a role to play in the widespread problem of *Salmonella* in poultry. Further research should be conducted.

Link to paper: <http://www.iberhome.es/boletin/docs/salchick.pdf>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:26-8.

Effect of antibodies to morphine in ultralow doses on induction of long-term potentiation in hippocampal slices from rats with chronic morphine dependence.

[Beregovoi NA](#), [Sorokina NS](#), [Starostina MV](#), [Shtark MB](#), [Epstein OI](#).

Institute of Molecular Biology and Biophysics, Siberian Division of the Russian Academy of Medical Sciences, Novosibirsk.

Abstract

Antibodies to morphine produced after its chronic administration can contribute to changes in the central nervous system during opiate abuse. Facilitation of long-term posttetanic potentiation in mossy fibers of the hippocampus in rats with chronic morphine dependence can be reproduced in hippocampal slices from normal animals treated with antibodies to morphine. Incubation of hippocampal slices with ultralow doses of antibodies to morphine had no effect on control rats, but reduced facilitation of long-term potentiation in hippocampal slices from animals with chronic morphine dependence. This confirms the possibility of using ultralow doses of antibodies to morphine for therapeutic correction of mechanisms underlying the formation of drug abuse.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949639>

Biol Tier. 2010;27(2):50-52.

Behandlung eines Equinen Sarkoids bei einem Pferd.

[Treatment of equine sarcoid in a horse].

[Article in German]

Berger P.

Clin Tech Small Anim Pract. 2002 Feb;17(1):19-24.

Complementary and alternative veterinary medicine and gastrointestinal disease.

[Berschneider HM.](#)

Abstract

Gastrointestinal, hepatic, and pancreatic diseases provide a significant challenge to the veterinary practitioner. Specific causes and effective therapies can be elusive and sometimes frustrate both the animal caretaker and the veterinarian. The therapeutic options of a conventional veterinary practice are frequently limited and may come down to a decision of which is worse: the disease or the side effects of the treatment. This article provides information for the veterinary practitioner to consider for expanding his/her options. Acupuncture, herbal remedies, and homeopathy are not newly discovered modalities. They are old practices that are getting a fresh look from Western medicine as we seek new ways to better serve our patients and clients. The goal of this article is to provide the reader with many ideas and sufficient solid information to consider the use of these options. Specific therapies are suggested for numerous gastrointestinal and liver problems. Many of these may be used in conjunction with conventional therapies to aid in the healing process.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/11890123>

Br Homeopath J. 1999 Jul;88(3):101-5.

Dual effects of a homeopathic mineral complex on carrageenan-induced oedema in rats.

[Bertani S](#), [Lussignoli S](#), [Andrioli G](#), [Bellavite P](#), [Conforti A](#).

Istituto di Farmacologia, Università di Verona, Italy.

Abstract

Carrageenan oedema, a classical experimental model commonly used to test activity of anti-inflammatory drugs, was used to evaluate the therapeutic activity of a low-potency mineral complex (MC). The MC was administered in the right plantar surface of albino rats 60 min before, simultaneously and 30 min after injection of carrageenan, an irritant which causes a local, transitory increase of fluid volume. The administration of the MC 60 min before the injection of carrageenan primed the animal to enhanced inflammatory response to the irritant. The administration of MC contemporarily to carrageenan did not modify the kinetic and the extent of the oedema, while the administration of the MC 30 min after the induction of the oedema significantly reduced the early phase of the inflammatory reaction. This indicated that the therapeutic action of this MC is not due to conventional anti-inflammatory effect

but to activation of endogenous regulatory mechanisms, a phenomenon which may be regarded as a simple application of the 'similia rule'.

Link to paper:

http://www.paolobellavite.it/files/149_1999_dualeffectscomplexcarragenaan.pdf

Arq Bras Med Vet. 2011;63(5):1233-1236.

Composto homeopático reduz a liberação de ânion superóxido pelas células mononucleares de ema (Rhea americana).

Bertoldo WR, Franca JL, Fernandes LTO.

Biol Tier. 2010;27(2):39-46.

Behandlung der Konjunktivitis beim Tier mit einem biologischen Präparat - eine Praxiserhebung.

[Treatment of conjunctivitis in animals with a biological specimen - a practice survey].

[Article in German]

Beythien R.

Evid Based Complement Alternat Med. 2009 Mar;6(1):65-75. Epub 2007 Jun 19.

Amelioration of carcinogen-induced toxicity in mice by administration of a potentized homeopathic drug, natrum sulphuricum 200.

[Bhattacharjee N](#), [Pathak S](#), [Khuda-Bukhsh AR](#).

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prof_arkb@yahoo.co.in; khudabukhsh_48@rediffmail.com.

Abstract

To examine if a potentized homeopathic drug, Natrum Sulphuricum 200 (Nat Sulph-200) has protective potentials against hepatocarcinogenesis, liver tumors were induced in mice through chronic feeding of P-dimethylaminoazobenzene (p-DAB; initiator of hepatocarcinogenesis) and phenobarbital (PB; promoter). Mice were divided into five sub-groups: fed normal low protein diet (Gr. I, normal control); fed normal low protein plus alcohol-200 (vehicle of the homeopathic remedy) (Gr. II); fed diet mixed with 0.06% p-DAB plus 0.05% PB (Gr. III); fed diet and carcinogens like Gr.III, plus alcohol 200 (positive control for drug fed mice) (Gr. IV) and fed diet and carcinogens like Gr. III, plus Natrum Sulphuricum-200 (Gr. V; drug fed). Mice were sacrificed at day 7, 15, 30, 60, 90 and day 120 for study of cytogenetical endpoints like chromosome aberrations (CA), micronuclei (MN), mitotic index (MI) and sperm head anomaly (SHA) and biochemical toxicity parameters like aspartate amino transferase (AST), alanine amino transferase (ALT), acid (AcP) and alkaline (AlkP) phosphatases, lipid peroxidation (LPO) and reduced glutathione (GSH) content. Less number of liver tumors were observed in Gr. V (drug fed) mice. Administration of Nat Sulph 200 reduced genomic damage, activities of AcP, AlkP, AST, ALT, LPO and

increased GSH content. Therefore, independent replication of the study by others is encouraged.

Link to paper: <http://europepmc.org/articles/PMC2644277/pdf/nem067.pdf>

Indian J Biochem Biophys. 2009 Aug;46(4):307-18.

Homeopathic drugs Natrum sulphuricum and Carcinoin prevent azo dye-induced hepatocarcinogenesis in mice.

[Bhattacharjee N](#), [Banerjee P](#), [Anisur RK](#).

Cytogenetics and Molecular Biology Laboratory, Department of Zoology, University of Kalyani, Kalyani 741 235, India.

Abstract

The study was undertaken to examine whether Carcinoin-200 (Car-200) could provide additional ameliorative effect, if used intermittently with Natrum sulphuricum-30 (Nat Sulph-30) against hepatocarcinogenesis induced by chronic feeding of p-dimethylaminoazobenzene (p-DAB) and phenobarbital (PB) in mice (*Mus musculus*). Mice were randomly divided into seven sub-groups: (i) normal untreated; (ii) normal + succussed alcohol; (iii) p-DAB (0.06%) + PB (0.05%); (iv) p-DAB + PB + succussed alcohol, (v) p-DAB + PB + Nat Sulph-30, (vi) p-DAB + PB + Car-200, and (vii) p-DAB + PB + Nat Sulph-30 + Car-200. They were sacrificed at 30, 60, 90 and 120 days for assessment of genotoxicity through cytogenetical endpoints like chromosome aberrations, micronuclei, mitotic index and sperm head anomaly and cytotoxicity through assay of widely accepted biomarkers and pathophysiological parameters. Additionally, electron microscopic studies and gelatin zymography for matrix metalloproteinases (MMPs) were conducted in liver at 90 and 120 days. Results showed that administration of Nat Sulph-30 alone and in combination with Car-200 reduced the liver tumors with positive ultrastructural changes and in MMPs expression, genotoxic parameters, lipid peroxidation, gamma-glutamyl transferase, lactate dehydrogenase, blood glucose, bilirubin, creatinine, urea and increased GSH, glucose-6-phosphate dehydrogenase, superoxide dismutase, catalase, glutathione reductase activities and hemoglobin, cholesterol, and albumin levels. Thus, intermittent use of Car-200 along with Nat Sulph-30 yielded additional benefit against genotoxicity, cytotoxicity, hepatotoxicity and oxidative stress induced by the carcinogens during hepatocarcinogenesis.

Link to paper:

<http://nopr.niscair.res.in/bitstream/123456789/5799/1/IJBB%2046%284%29%20307-318.pdf>

J Acupunct Meridian Stud. 2012 Aug;5(4):166-75. doi: 10.1016/j.jams.2012.05.004. Epub 2012 Jun 8.

Two homeopathic remedies used intermittently provide additional protective effects against hepatotoxicity induced by carcinogens in mice.

[Bhattacharjee N](#), [Khuda-Bukhsh AR](#).

Cytogenetics and Molecular Biology Laboratory, Department of Zoology, University of Kalyani, Kalyani, India.

Abstract

The purpose of the study was to evaluate whether potentized cholesterinum (Chol) intermittently used with another homeopathic remedy, Natrum Sulphuricum (Nat Sulph) can provide additional benefits in combating hepatotoxicity generated by chronic feeding of carcinogens, p-dimethylaminoazobenzene (p-DAB), and phenobarbital (PB). Mice were categorized into subgroups: normal untreated (Gr-1); normal + alcohol "vehicle" (Alc) (Gr-2), 0.06% p-DAB +0.05% PB (Gr-3), p-DAB+PB+Alc (Gr-4), p-DAB+PB+Nat Sulph-30 (Gr-5), p-DAB+PB+Chol-200 (Gr-6), p-DAB+PB+Nat Sulph-30+Chol-200 (Gr-7), p-DAB+PB+Nat Sulph-200 (Gr-8), and DAB+PB+Nat Sulph-200+Chol-200 (Gr-9). Hepatotoxicity was assessed through biomarkers like aspartate and alanine aminotransferases (AST and ALT), acid and alkaline phosphatases (AcP and AlkP), reduced glutathione content (GSH), glucose 6-phosphate dehydrogenase (G6PD), gamma glutamyl transferase (GGT), lactate dehydrogenase (LDH), and analysis of lipid peroxidation (LPO) at 30, 60, 90, and 120 days and antioxidant biomarkers like superoxide dismutase (SOD), catalase (CAT), and glutathione reductase (GR) were assayed. Electron microscopic studies (scanning and transmission) and gelatin zymography for matrix metalloproteinases were conducted in liver. The feeding of the homeopathic drugs showed intervention in regard to the increased activities of AST, ALT, AcP, AlkP, GGT, LDH, and LPO and decreased activities of G6PD, SOD, CAT, GR, and GSH noted in the intoxicated mice, more appreciable in Groups 7 and 9. Thus, combined therapy provided additional antihepatotoxic and anticancer effects.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22898065>

European Journal of Pharmacology. 2009 Jul;614(1-3):128-136.

A synthetic coumarin (4-Methyl-7 hydroxy coumarin) has anti-cancer potentials against DMBA-induced skin cancer in mice.

[Soumya S. Bhattacharyya](#), [Saili Paul](#), [Sushil K. Mandal](#), [Antara Banerjee](#), [Naoual Boujedaini](#), [Anisur R. Khuda-Bukhsh](#).

Abstract

Scopoletin, an alkaloid separated from ethanolic extract of the medicinal plant, *Gelsemium sempervirens* (Fam: Loganiaceae) has been reported to have anti-cancer potentials. The synthetic coumarin (4-Methyl-7 hydroxy coumarin) derived from resorcinol and ethyl aceto-acetate in presence of concentrated sulphuric acid is structurally close to scopoletin, being a coumarin derivative. Whether this synthetic compound also has anti-cancer potentials has been evaluated *in vivo* on DMBA (7,12-Dimethylbenz[a]anthracene) induced skin cancer in mice by analyzing results of several cytogenetic endpoints, Comet assay, and fluorescence activated cell sorting (FACS). Further, expressions of signal proteins like Aryl hydrocarbon receptor, p53, PCNA, Akt, Bcl-2, Bcl-xL, Bad, Bax, NF-kB Apaf, IL-6, Cytochrome-c, Caspase-3 and Caspase-9 were studied by immunoblot analysis along with histology of skin and immuno-histochemical localization of Aryl hydrocarbon receptor and PCNA in DMBA treated mice vis-a-vis carcinogen treated synthetic coumarin fed mice. Feeding of this synthetic coumarin induced positive modulations in expression

of all biomarkers in DMBA administered mice, giving clues on its possible signaling pathway(s) - primarily through down-regulation of Aryl hydrocarbon receptor and PCNA and up-regulation of apoptotic proteins like Bax, Bad, Cytochrome c, Apaf, Caspase-3 and Caspase-9, resulting in an appreciable reduction in growth of papilloma in mice. Therefore, this synthetic coumarin shows promise for use in cancer therapy, particularly in skin cancer.

Link to abstract/paper: <http://europepmc.org/abstract/MED/19393233>

Zhong Xi Yi Jie He Xue Bao. 2010 Jul;8(7):645-54.

Anti-oncogenic potentials of a plant coumarin (7-hydroxy-6-methoxy coumarin) against 7,12-dimethylbenz [a] anthracene-induced skin papilloma in mice: the possible role of several key signal proteins.

[Bhattacharyya SS](#), [Paul S](#), [Dutta S](#), [Boujedaini N](#), [Khuda-Bukhsh AR](#).

Cytogenetics and Molecular Biology Laboratory, Department of Zoology, University of Kalyani, Kalyani 741235, India.

Abstract

OBJECTIVE: Anti-cancer potentials of scopoletin (7-hydroxy-6-methoxy coumarin) separated from plant extract (*Gelsemium sempervirens*) were demonstrated earlier from our in vitro studies. In the present study, its in vivo effects have been evaluated in mice.

METHODS: Mice were chronically administered 7,12-dimethylbenz [a] anthracene (DMBA) once a week and croton oil twice a week on their back, which resulted in the development of fully grown finger-like projections (papilloma) after 24 weeks. Two subgroups of mice (drug-treated) were treated with two doses of scopoletin (50 mg and 100 mg/kg body weight) respectively while control received 2% ethyl alcohol (the "vehicle" of scopoletin). After the 24-week drug administration, expressions of several key receptors such as aryl hydrocarbon receptor (AhR) and signal proteins like p53, cytochrome P450 1A1 (CYP1A1), proliferating cell nuclear antigen (PCNA), signal transducer and activator of transcription-3 (Stat-3), survivin, matrix metalloproteinase-2 (MMP-2), cyclin D1, c-myc, tissue inhibitor of matrix metalloproteinase-2 (TIMP-2) and caspase-3, and some anti-oxidant markers were studied. Lipid peroxidation, superoxide dismutase, catalase, glutathione peroxidase and glutathione-s-transferase in supernatant were also detected.

RESULTS: Carcinogens induced toxicity, and over-expression of AhR, CYP1A1, PCNA, Stat-3, survivin, MMP-2, cyclin D1 and c-myc and down-regulation of p53, caspase-3 and TIMP-2. In mice treated with scopoletin, the expressions of these proteins and toxicity biomarkers were reverted.

CONCLUSION: Since AhR is known to be ligand-activated by DMBA to release signals for several downstream proteins initiating reactive oxygen species generation, the down-regulation of AhR by scopoletin appeared to play a significant role in subsequent down-regulation of some key signal proteins. One possible mechanism of down-regulation of AhR may be through competitive inhibition by scopoletin. Mitogen-activated protein kinases may also have some critical role. This compound can be considered as a possible candidate for chemoprevention.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20619141>

Ann Homéop Fr. 1978;20(4):271-276.

Etude de l'action de diverses dilutions d'Amanita phalloides sur l'hépatite expérimentale du rat déclenchée par le tétrachlorure de carbone.

[Study of the action of various dilutions of Amanita phalloides in the rat experimental hepatitis triggered by carbon tetrachloride].

[Article in French]

Bildet J, Saurel J, Aubin M, Casahoursat L.

Ann Homéop Fr. 1978;20(4):277-287.

Etude de l'action de divers complexes sur l'hépatite expérimentale du rat au tétrachlorure de carbone.

[Study of the action of various complexes on experimental hepatitis in the rat, induced with tetrachloride carbon].

[Article in French]

Bildet J, Saurel J, Aubin M, Casahoursat L.

Homéopathie Francaise. 1984;23(3):79-90.

Resistance de la cellule hépatique du rat après une intoxication infinitésimale au tétrachlorure de carbone.

[Resistance of rat liver cell after a poisoning carbon tetrachloride at infinitesimal].

[Article in French]

Bildet J, Aubin M, Baronnet S, Berjon JJ, Gomez H, Manlhiot JL.

Homéopathie Francaise. 1984;72(3/4):199-204.

Etude de l'action de différentes dilutions des Phosphorus sur l'hépatite toxique du rat.

[Study of the action of different dilutions of Phosphorus on toxic hepatitis in rats].

[Article in French]

Bildet J, Guerre JM, Saurel J, Aubin M, Demarque D, Quilichini R.

Homéopathie Francaise. 1984;72(3/4):205-209

Etude de l'action préventive de différentes dilutions de Phosphorus sur l'hépatite toxique du rat.

[Study of the preventive action of different dilutions of Phosphorus on toxic hepatitis in rats].

[Article in French]

Bildet J, Guerre JM, Saurel J, Demarque D, Quilichini R.

Ann Pharm Fr. 1989;47(1):24-32.

L'effet de dilution des Apis mellifica et le virus Apium sur la lumière ultraviolette érythème induit dans le cochon de Guinée

[The effect of dilutions of Apis mellifica and Apium virus on ultraviolet light-induced erythema in the guinea pig].

[Article in French]

[Bildet J](#), [Guyot M](#), [Bonini F](#), [Grignon MC](#), [Poitevin B](#), [Quilichini R](#).

English Abstract

Dilutions of Apis mellifica (obtained from the whole bee) and Apium virus (obtained from bee venom) are used classically in homeopathy for inflammatory symptoms with edema, erythema and pruritus (Lewis triad). Using a method examining the evolution of UV induced erythema in the guinea pig, the authors show the following dilutions of Apis mellifica 7 CH(10(-14)), 9 CH(10(-18)) and of Apium virus 5 CH(10(-10)), 7 CH(10(-14)), 9 CH(10(-18)) exert an action on experimental erythema. The results are statistically significant for the dilutions at the 48th hour after irradiation.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/2627100>

Berlin Journal of Research in Homeopathy. 1990;1:28.

Demonstrating the Effects of Apis mellifica and Apium virus Dilutions on Erythema Induced by U.V. Radiation on Guinea Pigs.

Bildet J, Guyot M, Bonini F, Grignon MC, Poitevin B, Quilichini R.

Br Homeopath J. 1992 Apr;81(2):112.

Demonstrating the effects of apis mellifica and Apium virus dilutions on erythema induced U.V. radiation on guinea pigs.

[J. Bildet](#)

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brijh/article/S0007-0785%2805%2980531-9>

Indian J Exp Biol. 1993 May;31(5):482-4.

Control of citrinin caused nephrotoxicosis through aqueous leaf extract of Vitis vinifera L., mercurious corrossivus and cortisone.

[Bilgrami KS](#), [Jeswal P](#).

University Department of Botany, Bhagalpur University, India.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/8359859>

Ann Homéop Fr. 1978;20:313-321.

Étude psycho-pharmacologique de dilutions homéopathiques d'Ignatia.
[Psycho-pharmacological study of homeopathic Ignatia dilutions].

[Article in French]

Binsard AM.

Ann Homéop Fr. 1979;21:369-378.

Étude psycho-pharmacologique d'Ignatia et rapprochement avec un autre polychreste.

[Psycho-pharmacological study of Ignatia and combinations with another polychrest.]

[Article in French]

Binsard AM

Ann Homéop Fr. 1980;22:35-50.

Étude psychopharmacologique de dilution homéopathiques de Gelsemium et d'Ignatia.

[Psychopharmacological study of homeopathic dilution of Gelsemium and Ignatia.]

[Article in French]

Binsard AM, Guillemain J, Platel A, Savini EC, Tetau M.

BMC Complement Altern Med. 2002 Apr 10;2(4):1-12.

Effect of a homeopathic drug, Chelidonium, in amelioration of p-DAB induced hepatocarcinogenesis in mice.

[Biswas SJ](#), [Khuda-Bukhsh AR](#).

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Abstract

BACKGROUND: Crude extracts of *Chelidonium majus*, and also purified compounds derived from crude extracts of this plant, have been reported to exhibit anti-viral, anti-inflammatory, anti-tumor and anti-microbial properties both in vitro and in vivo.

Chelidonium is a homeopathic drug routinely used against various liver disorders including cancer in humans. Two potencies of *Chelidonium* (Ch-30, Ch-200) have been tested for their possible anti-tumor and enzyme modulating activities in liver and anti-clastogenic effects during p-DAB-induced hepatocarcinogenesis in mice compared to suitable controls.

METHODS: Several cytogenetic and enzymatic protocols were used at three fixation intervals; at 60 days, 90 days and 120 days of treatment. Different sets of healthy mice were fed: i) hepatocarcinogen, p-DAB plus phenobarbital (PB), ii) only PB, iii) neither p-DAB nor PB (normal control). One set of mice fed with p-DAB plus PB was

also fed Ch-30 (iv) and another set Ch-200 (v). All standard currently used methods were adopted for cytogenetical preparations and for the enzyme assays.

RESULTS: All group (i) mice developed tumors in liver at all fixation intervals, while none of group (ii) and (iii) mice developed any tumors. About 40% mice in group (iv) and group (v) did not show tumor nodules in their liver. Feeding of Chelidonium to group (iv) and (v) mice reduced genotoxic effects to a significant extent ($p < 0.05$ to $p < 0.001$).

CONCLUSION: The homeopathic drug Chelidonium exhibited anti-tumor and anti-genotoxic activities and also favorably modulated activities of some marker enzymes. Microdoses of Chelidonium may be effectively used in combating liver cancer.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC107841/>

Indian J Exp Biol. 2004 Jul;42(7):698-714.

Evaluation of protective potentials of a potentized homeopathic drug, Chelidonium majus, during azo dye induced hepatocarcinogenesis in mice.
[Biswas SJ](#), [Khuda-Bukhsh AR](#).

Department of Zoology, University of Kalyani, Kalyani 741 235, India.

Abstract

Several cytogenetical and enzymatic protocols were used to test if two microdoses of Chelidonium majus, namely Chelidonium-30 (Ch-30) and Chelidonium-200 (Ch-200), used as homeopathic drugs, showed anti-tumor activity and also favorably modulated genotoxic damages produced by an azo dye in mice at several intervals of fixation. Different sets of healthy mice were fed: (i) hepatocarcinogen, p-dimethylaminoazobenzene (p-DAB, initiator) + phenobarbital (PB, promoter), (ii) only p-DAB, (iii) only PB, and (iv) neither p-DAB nor PB (normal control). Mice fed with p-DAB + PB were divided into different sets that were also fed either Ch-30 (v) or Ch-200 (vi) or diluted alcohol (vii), the "vehicle" of the microdoses of Chelidonium. All mice of group (i), a few of group (ii) and group (vii) and none of groups (iii) and (iv) developed tumors in liver at the longer intervals of fixation. The frequencies of chromosome aberrations (CA), micronucleated erythrocytes (MN), mitotic index (MI) and sperm head abnormality (SHA) were much higher in groups (i) and (vii) mice than in groups (ii), (iii) and (iv) mice at all fixation intervals. However, in mice of both groups (v) and (vi), the frequencies of CA, MN, SHA were strikingly less than those of groups (i) and (vii), and moderately less than those of groups (ii) and (iii). Both Ch-30 and Ch-200 also modulated favourably some toxicity marker enzymes like acid and alkaline phosphatases, peroxidases, glutamate oxaloacetate and glutamate pyruvate transaminases in liver, kidney and spleen tissues of the carcinogen fed mice. The microdoses of Chelidonium having no visible ill effects of their own, may be strong candidates for use in delaying/protecting liver cancer.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15339035>

J Altern Complement Med. 2005 Oct;11(5):839-54.

Efficacy of the potentized homeopathic drug, Carcinosis 200, fed alone and in combination with another drug, Chelidonium 200, in amelioration of p-dimethylaminoazobenzene-induced hepatocarcinogenesis in mice.

[Biswas SJ](#), [Pathak S](#), [Bhattacharjee N](#), [Das JK](#), [Khuda-Bukhsh AR](#).

Cytogenetics Laboratory, Department of Zoology, University of Kalyani, West Bengal, India.

Abstract

OBJECTIVES: This study was conducted to examine whether the potentized homeopathic remedy Carcinosis 200, fed alone and in combination with Chelidonium 200, has differential protective effects against p-dimethylaminoazobenzene (p-DAB)-induced hepatocarcinogenesis in mice.

DESIGN: Liver tumors were induced in mice through chronic feeding of p-DAB (initiator) and phenobarbital (PB, promoter). The mice were divided into two subgroups: (1) one was fed potentized Alcohol 200 and served as controls; and (2) the other was fed Carcinosis 200 alone or in combination with Chelidonium 200 and divided into several sets. The relative efficacy of the two potentized remedies, alone or in combination, in combating hepatocarcinogenesis was assessed through several cytogenetical endpoints such as chromosome aberrations, induction of micronuclei, sperm head anomaly, and mitotic index at several intervals of fixation (days 7, 15, 30, 60, 90, and 120). Several toxicity biomarkers such as acid and alkaline phosphatases, glutamate oxaloacetate transaminase, glutamate pyruvate transaminase, and lipid peroxidation activity were also assayed in three organs of treated and control mice. In addition, recovery by the homeopathic drugs, if any, of tissue damage inflicted because of chronic feeding of p-DAB and PB was also assessed by optical, scanning, and transmission electron microscopies of liver done at days 60 and 120.

RESULTS: Both Carcinosis 200 and Chelidonium 200 when administered alone show considerable ameliorative effect against p-DAB-induced hepatocarcinogenesis in mice; but the conjoint feeding of these two drugs appears to have had a slightly greater protective effect.

CONCLUSIONS: These homeopathic remedies have the potential to be used as complementary and alternative medicine in liver cancer therapy, particularly as supporting palliative measures.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/16296917>

Food Chem Toxicol. 2008 May;46(5):1474-87. doi: 10.1016/j.fct.2007.12.009. Epub 2007 Dec 15.

Efficacy of a plant extract (Chelidonium majus L.) in combating induced hepatocarcinogenesis in mice.

[Biswas SJ](#), [Bhattacharjee N](#), [Khuda-Bukhsh AR](#).

Cytogenetics Laboratory, University of Kalyani, Kalyani, Nadia, West Bengal, India.

Abstract

Ethanollic whole plant extract of Chelidonium majus, extensively used in traditional systems of medicine against various liver ailments, has been tested for its possible

anti-tumor, hepato-protective and anti-genotoxic effects in p-dimethylaminoazobenzene (p-DAB) induced hepatocarcinogenesis in mice through multiple assays: cytogenetical, biochemical, histological and electron microscopical. Different sets of mice, 5 (for 7, 15 and 30 days' treatment) or 10 (for 60, 90 and 120 days) each, were chronically fed a diet suitably mixed with p-DAB and phenobarbital to develop liver tumors. One sub-group of carcinogen fed mice was also fed *C. majus* extract; 0.1 ml daily (drug-treated) while the other equal amount of dilute ethyl alcohol ("vehicle" of plant extract) (positive control). A separate group of mice was maintained with normal diet without any carcinogen treatment (negative control). Data of several cytogenetical endpoints and biochemical assay of some toxicity marker enzymes at all fixation intervals and histology of liver sections through ordinary, scanning and transmission electron microscopy at 60 and 120 days and that of spleen and kidney at 90 days were critically analyzed in the treated lots vis-a-vis controls. The results suggest anti-tumor, anti-genotoxic and hepato-protective effects of the plant extract, showing potentials for use in cancer therapy.
Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/18215450>

Actes Soc Rhod Homéopath. 1955;20(2):155-180.

Etude expérimentale de l'activité biologique de dilutions homéopathiques croissantes de Folliculine.

[Experimental study of the biological activity of homeopathic dilutions on follicle growing].

[Article in French]

Boiron H, Bagros M.

Ann Homéop Fr. 1962;4(10):789-795.

Elimination provoquée et spécificité d'action des dilutions infinitésimales d'éléments toxiques.

[Elimination provoked and specificity of action of infinitesimal dilutions of toxic elements].

[Article in French]

Boiron J, Cier A.

Ann Homéop Fr. 1962;4(10):796-800.

Recherches expérimentales d'une activité isopathique.

[Research experiments into isopathic activity].

[Article in French]

Boiron J, Cier A.

Ann Homéop Fr. 1968;10(3):187-196.

Effets de quelques facteurs physiques sur l'activité pharmacologiques de dilutions infinitésimales.

[Effects of some physical factors on the pharmacological activity of infinitesimal dilutions].

[Article in French]

Boiron J, Cier A, Vingert C.

Ann Homéop Fr. 1972;14(4):297-306.

Premières recherches sur l'inactivité des dilutions préparées sous Azote.

[Early research on the inactivity of dilutions prepared under nitrogen].

[Article in French]

Boiron J.

Ann Homéop Fr. 1979;(4):401-414.

Etude de l'action de dilutions Hahnemanniennes d'ADN et d'ARN sur l'évolution de carcinomes provoqués chez le rat.

[Study of the action of Hahnemannian dilutions of DNA and RNA on the development of carcinomas induced in rats].

[Article in French]

Boiron J, Roberfroids M, Jenaer M, Abecassis J, Lans M, Gerlache J.

Ann Hom Fr. 1973;15(2):121–128.

Etude pharmacodynamique d'un remède de l'asthénie et de la fatigue musculaire "sarcolactate de zinc".

[Pharmacodynamic study of a remedy for asthenia and muscle fatigue "zinc sarcolactate".]

[Article in French]

Boiron J, Maillot D.

Homeopathie. 1985 Sep-Oct;2(5):49-53.

Comparison de l'action d'arsenicum album 7CH normal et chauffe a 120 sur l'intoxication arsenicale provoquée.

[Comparison between the action of normal arsenicum album 7 CH and heated ARS.ALB. 7CH on the laboratorial intoxication by arsenic].

[Article in French]

Boiron J.

Abstract.

Les études de mobilisation d'un toxique par des dilutions hahnemanniennes de ce même toxique sont maintenant bien connues; les confirmations expérimentales obtenues ont permis de mobiliser ce phénomène pour l'appliquer à l'étude des conditions d'activité des dilutions hahnemanniennes. Pour ceux-là, ces modèles expérimentaux ont subi au cours des années deux grands types d'évolution: d'une part, il s'est agi d'obtenir une plus grande sensibilité des méthodes de dosages et de

realiser des protocoles d'une duree de plus en plus breve. Ces evolutions ont pu etre realisees par l'emploi de traceurs radioactifs, par le suivi de cinetiques sanguines. Au total on a pu obtenir une reponse de modeles animaux en un delai de 48 heures. Ce modele mis au point, on a pu experimenter l'effet de differents traitements physiques de dilutions hahnemanniennes; ceci a montre que le chauffage, par exemple, inhibait l'activite de ces dilutions.

Link to abstract/paper: <http://bases.bireme.br/cgi-bin/wxislind.exe/iah/online/?IsisScript=iah/iah.xis&src=google&base=HomeoIndex&lang=p&nextAction=Ink&exprSearch=3435&indexSearch=ID>

J. LMHI. 1987;4(1):27-29.

A homeopathic study of homeopathic solutions and the retention and mobilization of arsenic in rats.

Boiron J.

Biol Tier. 1994;11(2)44-49.

Einsatz der Homöopathika Lachesis compositum ad us. vet. bei puerperalen Uterusinfektionen und Ovarium compositum ad us. vet. bei Ovarialzysten beim Rind.

[Use of homeopathic Lachesis compositum ad us. vet. in puerperal uterine infections and ovarium compositum ad us. vet. with ovarian cysts in cattle].

[Article in German]

Boitor I, Bogdan ML, Ghitulescu C, Bogdan I.

Abstract

In zwei Versuchen wurde an Milchkühen die Wirksamkeit der homöopathischen Präparate Lachesis compositum ad us. vet. und Ovarium compositum ad us. vet. geprüft. In einem Milchrinderbetrieb A wurden 27 Tiere, die an Lochiometra und puerperaler Endometritis erkrankt waren (Häufigkeit der Erkrankungen 68 – 80%) mit je 10 ml Lachesis compositum ad us. vet. subkutan am 12., 15. und 18. Tag post partum behandelt. Vor und nach der Behandlung wurden Blut- und Lochialproben entnommen und mehrere Stoffwechsel- und immunologische Parameter bestimmt sowie bakteriologische Untersuchungen durchgeführt. Eine Kontrollgruppe wurde mit Oxytetracyclin i.u. behandelt. Bei den Versuchstieren war eine beschleunigte Uterusinvolution bzw. eine raschere Reduzierung des eitrigen Lochialflusses, der allmählich schleimigen Charakter annahm, sowie eine Förderung der Uterusabwehrkräfte zu verzeichnen. Die Zwischentragezeit betrug 85 Tage, der Besamungsindex 1,5. Bei den Kontrolltieren waren es 140 Tage bzw. BI = 2,2. Diese Unterschiede waren hochsignifikant. Im zweiten Versuch wurde im Betrieb B an 18 Tieren mit Ovarialzysten (10 mit Follikel-Theka-Zysten und 8 mit Follikel-Lutein-Zysten), diagnostiziert aufgrund von klinischen und echographischen Untersuchungen, das Homöopathikum Ovarium compositum ad us. vet. intramuskulär verabreicht (zweimal je 10 ml in 4tägigem Abstand). Nach 9 Tagen konnten 14 Tiere als geheilt angesehen werden. 13 Tiere davon wurden trächtig (72,2%). Der Heilprozeß bestand aus Resorption der Zystenflüssigkeit, luteinischer

Transformation der Zystenwand (bei Follikel-Theka-Zysten) und Abtragung des Luteingewebes.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=181

Br Homeopath J. 2001 Oct;90(4):198-203.

Very high dilutions of dexamethasone inhibit its pharmacological effects in vivo.

[Bonamin LV](#), [Martinho KS](#), [Nina AL](#), [Caviglia F](#), [Do Rio RG](#).

Faculty of Veterinary Medicine, University of Santo Amaro, São Paulo, Brazil.

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Abstract

We evaluated the interaction of dexamethasone 10(-17) and 10(-33) M (equivalent to 7cH and 15cH) with dexamethasone in pharmacological concentrations, using as experimental models: acute inflammation induced by carrageenan, Ehrlich ascitic tumour, and migration of tumour infiltrating leukocytes (TIL). Male adult BALB/c mice (n=7 per group) were used in all experiments. Carrageenan (1%) was injected into the footpad for oedema evaluation and into the peritoneal cavity (i.p.), for differential counting of inflammatory cells. Ehrlich ascitic tumour cells (10(7) viable cells/ml) were injected i.p. and tumour cells were counted after 6 days, by the Trypan blue exclusion method. The differential TIL was counted using smears stained by hematoxylin-eosin. Treatments were made immediately after carrageenan inoculation or once a day, during Ehrlich tumour development, until the animals were killed. Animals were treated with the following preparations: (1) phosphate buffer saline (PBS) solution; (2) dexamethasone (0.5 mg/kg for inflammation model or 4mg/kg for tumour model) mixed with dexamethasone 7cH or 15cH; (3) dexamethasone (same doses) mixed in PBS. Homeopathic dexamethasone partially blocked the anti-inflammatory effect of pharmacological dexamethasone with regard to paw oedema (two-way ANOVA, $P < 0.0008$) and polymorphonuclear cell migration (χ^2 , $P=0.0001$). No important differences were observed between experimental and control groups, in relation to Ehrlich tumour cells viability or count, or bodyweight, but potentised dexamethasone restored control levels of TIL viability, compared to mice treated with pharmacological doses of dexamethasone (χ^2 , $P < \text{or} = 0.001$). The results demonstrate that a potentised substance may change its own pharmacological effects and suggest that ultradilutions effects act mostly on host response.

Link to paper:

<http://www.altcancerweb.com/osteosarcoma/homeopathy/science/very-high-dilutions-homeopathy.pdf>

Int J High Dilution Res. 2009;8(29):146-154.

High Dilution of Dexamethasone in gestation and fetal development of mice.

Bonamin LV, Esposito CC, Martinho KS.

Abstract

Background: Recently, the use of homeopathy in veterinary medicine has grown significantly, mainly for farm animal practice, because of its usefulness in organic production and low cost. There is a wide range of veterinary products available in the market often used in females. However, the effect of these products in the litter and derived products for human consumption is completely unknown.

Aims: this study sought to develop an experimental model to study the putative effects of high diluted substances in newborns after chronic exposure of females.

Methods: based on previous studies, the chosen test substance was dexamethasone 15cH; adult female Balb/c mice were divided into 4 groups: a) treated with PBS (control); b) treated with dexamethasone 15 cH; c) treated with dexamethasone 15cH + dexamethasone 4 mg/kg and d) treated with dexamethasone 4 mg/kg. All medicines were administered subcutaneously, 3 times a week, in females from the first day of pregnancy up to the 20th day after parturition (end of lactation period). Development of the offspring was evaluated daily for 15 days after birth. Parameters evaluated were: female and offspring viability, number of newborns, time for eye opening, pinna opening, fur growth and postural reflex.

Results: the group treated with dexamethasone 15cH showed 39% increase in mortality rate 39 days after the beginning of treatment and 35% increase in fetal mortality at the end of gestation ($p=0.0049$). Females treated with dexamethasone 4mg/kg + dexamethasone 15cH showed 100% of fetal mortality. After parturition newborn survival in animals exposed to dexamethasone 4 mg/kg was higher than the control ($p=0.0002$). All other parameters of neonatal development were unchanged among groups.

Conclusions: these data point to adverse effect when using high diluted dexamethasone during gestation detectable by this experimental model in Balb/c mice.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/366/406>

Homeopathy. 2010 Jan;99(1):37-50.

Animal models for studying homeopathy and high dilutions: conceptual critical review.

[Bonamin LV](#), [Endler PC](#).

Abstract

INTRODUCTION: This is a systematic review of the animal models used in studies of high dilutions. The objectives are to analyze methodological quality of papers and reported results, and to highlight key conceptual aspects of high dilution to suggest clues concerning putative mechanisms of action.

METHODS: Papers for inclusion were identified systematically, from the Pubmed-Medline database, using 'Homeopathy' and 'Animal' as keywords. Only original full papers in English published between January 1999 and June 2009 were included, reviews, scientific reports, thesis, older papers, papers extracted from Medline using similar keywords, papers about mixed commercial formulas and books were also considered for discussion only. 31 papers describing 33 experiments were identified for the main analysis and a total of 89 items cited.

RESULTS: Systematic analysis of the selected papers yielded evidence of some important intrinsic features of high dilution studies performed in animal models: a)

methodological quality was generally adequate, some aspects could be improved; b) convergence between results and materia medica is seen in some studies, pointing toward the possibility of systematic study of the Similia principle c) both isopathic and Similia models seem useful to understand some complex biological phenomena, such as parasite-host interactions; d) the effects of high dilutions seem to stimulate restoration of a 'stable state', as seen in several experimental models from both descriptive and mathematical points of view.

Link to paper: <http://olikos.files.wordpress.com/2011/01/animal-models-for-studying-homeopathy-and-high-dilutions-conceptual-critical-review.pdf>

Evid Based Complement Alternat Med. 2013;2013:686018. doi: 10.1155/2013/686018. Epub 2013 Jan 28.

Immunomodulation of Homeopathic Thymulin 5CH in a BCG-Induced Granuloma Model.

[Bonamin LV](#), [Sato C](#), [Zalla Neto R](#), [Morante G](#), [Cardoso TN](#), [de Santana FR](#), [Coelho Cde P](#), [Osugui L](#), [Popi AF](#), [Hurtado EC](#), [Mariano M](#).

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Abstract

The present study analyzed the immune modulation mechanisms of thymulin 5CH in a granuloma experimental model. Male adult Balb/c mice were inoculated with BCG into the footpad to induce granuloma, which was quantitatively evaluated. The phenotypic characterization of phagocyte, T- and B-lymphocyte populations in the peritoneum, and local lymph node was done by flow cytometry. During all experimental periods, thymulin 5CH and vehicle (control) were given ad libitum to mice, diluted into the drinking water (1.6×10^{-17} M). After 7 days from inoculation, thymulin-treated mice presented reduction in the number of epithelioid cytochrome-positive cells ($P = 0.0001$) in the lesion, in relation to young phagocytes. After 21 days, the differentiation of B1 peritoneal stem cells into phagocytes reached the peak, being higher in thymulin-treated mice ($P = 0.0001$). Simultaneously, the score of infected phagocytes in the lesion decreased ($P = 0.001$), and the number of B1-derived phagocytes, CD4+ and CD8+ T lymphocytes in the local lymph node increased in relation to control ($P = 0.0001$). No difference was seen on the CD25+ Treg cells. The results show that thymulin 5CH treatment is able to improve the granuloma inflammatory process and the infection remission, by modulating local and systemic phagocyte differentiation.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/23431344>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:77-9.

Effect of ultralow doses of antibodies to erythropoietin on antenatal and postnatal development of the offspring.

[Borovskaya TG](#), [Loskutova OP](#), [Abramova EV](#), [Sergeeva SA](#), [Epstein OI](#), [Dygai AM](#), [Goldberg ED](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences.

Abstract

We studied the effects of ultralow doses of antibodies to erythropoietin on antenatal and postnatal development of rat offspring. Daily administration of the preparation on days 1-6, 6-16, and 16-19 of pregnancy did not increase embryonic mortality and was not associated with congenital malformations, fetal growth retardation, high incidence of pathological changes in fetal organs, and delayed ossification (compared to control and intact animals). For evaluation of their embryotoxic effect manifested in the postnatal period ultralow doses of antibodies to erythropoietin were administered throughout pregnancy. The offspring of treated and intact rats did not differ in physical development, appearance of sensory and locomotor reflexes, locomotor, exploratory, and emotional behavior, and learning and adaptive capacities.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949658>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:91-3.

Effects of ultralow doses of antibodies to prostate-specific antigen on morphological and functional state of rat prostate.

[Borovskaya TG](#), [Fomina TI](#), [Loskutova OP](#), [Baranova OV](#), [Sergeeva SA](#), [Martyushev AV](#), [Epstein OI](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences.

Abstract

Morphological and morphometric assays showed that administration of antibodies to the prostate-specific antigen in ultralow doses for 1.5 months delayed the development of atrophic and sclerotic processes in rats with chronic aseptic prostatitis. The concentration of zinc ions playing an important role in binding of androgens increased in the prostate of rats receiving the preparation. Studies of copulatory behavior showed that male rats with chronic prostatitis receiving antibodies to the prostate-specific antigen displayed increased sexual activity compared to control and intact animals.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949663>

Indian Vet J. 1969 Aug;46(8):735-6.

"Rhustox" (homeopathic drug) for foot and mouth disease.

[Bose PK](#).

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/5389563>

Dtsch Tierarztl Wochenschr. 1980;87:460-461.

Bericht über einen Praxisversuch zur Behandlung von Fruchtbarkeitsstörungen des Schweines mit homöopathischen Arzneimitteln.
[Report on an experiment in practice to treat fertility disturbances in swine with homeopathic preparations].

[Article in German]

Both G.

Abstract

In diesem Praxisversuch sollte orientierend geprüft werden, ob Hormonpräparate zur Zyklusstimulierung in der intensiven Sauenhaltung durch hormonfreie homöopathische Arzneimittel ersetzt werden können. Es wurden 41 Sauen mit Ovarium compositum (Heel, Baden-Baden) und 36 Sauen mit Aristolochia clematis-injeel forte (Heel, Baden-Baden) behandelt. In diesen beständen konnten die Fruchtbarkeitsstörungen auf das als normal zu bezeichnende Maß zurückgebracht werden. Es erscheint nach diesen Versuchsergebnissen sinnvoll, weitere Versuche an einer größeren Tierzahl durchzuführen, um eine gesicherte Aussage machen zu können.

Link to abstract/paper:

http://www.veition.de/oekovet/publikationen/artikel.cfm?artikel_id=146

Biol Tier. 1987;4:39-65.

Zur Prophylaxe und Therapie des Metritis-Mastitis-Agalactie (MMA)-Komplexes des Schweines mit biologischen Arzneimitteln.

[For prophylaxis and therapy of mastitis-metritis-Agalactie (MMA) complex of the pig with biological drugs].

[Article in German]

Both G.

Biol Tier. 1989;6(1):2-12.

Zur Prophylaxe und Therapie der Anöstrie des Schweines mit homöopathischen Arzneimitteln.

[Prophylaxis and therapy of anoestrus in the pig with homeopathic medicine].

[Article in German]

Both G.

Abstract

Es wird untersucht, ob es möglich und sinnvoll ist, die direkt in den Hormonhaushalt eingreifenden Präparate durch hormonfreie homöopathische Arzneimittel zu ersetzen. Die Versuche umfassen die Therapie von 217 anöstrischen Jungsauen, die bis zu einem Alter von 8 Monaten noch keine Rausche zeigten; die Prophylaxe an 525 primiparen und 421 multiparen Sauen in Problembeständen sowie die Therapie an 35 anöstrischen multiparen Sauen. Außerdem erfolgte eine Prüfung der Wirtschaftlichkeit einer Prophylaxe mit Homöopathika an 233 Sauen in einem

Betrieb, der frühabsetzt. Es wurde außerdem untersucht, ob mit einem regelmäßigen Einsatz homöopathischer Arzneimittel nach dem Absetzen der Ferkel die Gützeit verkürzt und die Wurfgröße verbessert werden kann. Es zeigte sich, daß die bislang zur Zyklusregulierung in Sauenbeständen verwendeten Hormonpräparate durch die geprüften Homöopathika ersetzt werden können. Erstere wirken zwar als Zykluseinleiter besser. Dies wird aber ausgeglichen durch die Anwendung von Horneel (Heel) oder Ovarium compositum (Heel) erreichte höhere Konzeptionsrate. Der regelmäßige prophylaktische Einsatz von Homöopathika führte zu einer Verkürzung der Gützeit und einer Verbesserung der Wurfgröße. Einige spezielle Problembestände werden abschließend erläutert.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=64

Collegium Veterinarium. 1989;20:102-109.

Prophylaxe und Therapie mit homöopathischen Arzneimitteln in großen Schweinebeständen.

[Prophylaxis and therapy with homeopathic medicines in large pig herds].

[Article in German]

Both G.

Abstract

In drei umfangreichen Praxisversuchen wurde geprüft, ob es sinnvoll ist, in der Prophylaxe und Therapie von Schweinekrankheiten Homöopathika an Stelle von Allopathika parenteral einzusetzen. Wie die Versuchsergebnisse zeigen, gelang es mit sehr gutem Erfolg, homöopathische Arzneimittel in der Prophylaxe und Therapie des MMA - Komplexes und der Anöstrie der Sauen zu verwenden. Hinsichtlich des sogenannten unspezifischen Durchfalles insbesondere der Ferkel war dies nur in der Therapie möglich. Eine Prophylaxe hatte keinen Erfolg. Weniger erfolgreich verliefen die Versuche in solchen Schweinebeständen, wo die Futtermittelqualität, die Futterzusammensetzung, die Hygiene oder das Management Mängel aufwiesen. In diesen Fällen hatten die verwendeten Homöopathika nicht die entsprechende Wirkung. Hier zeigt sich die Wirkung einer intensiven Diagnostik und, zumindest bei Problemfällen, einer genauen Analyse des Krankheitsgeschehens für das erfolgreiche Wirken gegen gesundheitliche Probleme eines größeren Sauenbestandes. Dies gilt aber auch in gleicher Weise hinsichtlich der Verwendung anderer als homöopathischer Arzneimittel.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=28

Biol Tier.1990;7(3):76-90.

Zur Prophylaxe und Therapie des Ferkeldurchfalles mit homöopathischen Arzneimitteln.

[Prophylaxis and therapy of piglet's diarrhoea with homeopathic medicine].

[Article in German]

Both G.

Int J High Dilution Res. 2012;11(40):150-151.

Summary of four scientific studies on Arsenicum album high dilution effect against Arsenic intoxication in mice.

Boujedaini N, Terzan L, Khuda-Bukhsh AR.

Abstract

Background: Groundwater arsenic affects millions of people in about 20 countries. In West Bengal (India) and Bangladesh alone over 100 million people are exposed. The arsenic concentration in contaminated groundwater in Bangladesh was above the maximum permissible level of 0.05 mg/l as recommended by WHO for developing countries [1]. Drinking water is not the only source of poisoning. In arsenic contaminated areas, crops, vegetables, cereals, poultry, cattle, etc, also contain traces of arsenic. Chronic arsenic intoxication has been associated with several diseases such as melanosis, leuco-melanosis, hyperkeratosis, oedema, skin cancer...

Cazin et al [2], have demonstrated the effect of high dilutions of arsenic compounds. They noted increased arsenic elimination from blood through urine and faeces in intoxicated rats. According to these research, the aim of Khuda Buksh studies [3-4-5] was to investigate whether high dilution Arsenicum album have any effect on arsenic accumulation in different tissues and to understand also how this high dilution could produce a protective effect on all the different organs.

Methodology: Firstly, the effect of Arsenicum album 30 cH on the amount of arsenic accumulation was determined by spectrophotometric analysis in four tissues namely liver, kidney and testis in mice intoxicated by arsenic. The protective effect in chronic and acute arsenic intoxicated mice of Arsenicum Album 6cH, 30cH and 200cH has been evaluated using not only the activities of enzymatic and biomarker toxicity (aspartate amino transferase (AST), alanine amino transferase (ALT), acid phosphatase (AcP), alkaline phosphatase (AlkP), lipid peroxidation (LPO) and reduced glutathione (GSH)) but also the cytogenetical parameters (chromosome aberrations (CA), mitotic index (MI), sperm head anomaly (SHA) etc.,). Because, it is well demonstrated that these enzymes biomarkers reflect the degree of hepatotoxicity and oxidative stress caused by arsenic intoxication.

Results: Compared to controls, Arsenicum album 30cH induced a significant decrease in accumulation of arsenic in 4 tissues namely liver, spleen, kidney and testis in intoxicated mice. In addition, both Arsenicum album 6cH, 30cH and 200cH reduced chromosome aberrations, sperm head abnormality frequencies and activities of acid and alkaline phosphatases, aspartate and alanine aminotransferases and lipid peroxidation, while mitotic index and activities of glutathione, catalase and succinate dehydrogenase were increased compared to controls.

Conclusion: Altogether, these results provide evidence of protective potentials of the Arsenicum album dilution against acute and chronic arsenic intoxication in mice. They also offer a new hypothesis that the mechanism of the homeopathic dilution could act through regulation of expression of certain genes. This explanation seems to be plausible because all biomarker tests are regulated by specific genetic regulatory mechanisms [6].

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/606/584>

J Ethnopharmacol. 2001 Mar 3;74(3):205-15.

Neurotropic, immunological and gastric effects of low doses of *Atropa belladonna* L., *Gelsemium sempervirens* L. and Poumon histamine in stressed mice.

[Bousta D](#), [Soulimani R](#), [Jarmouni I](#), [Belon P](#), [Falla J](#), [Froment N](#), [Younos C](#).

Laboratory of Pharmacology, University of Metz, 57000 Metz, France.

Abstract

Previous studies realized in the laboratory have indicated that application of experimental stress (such as unavoidable footshock) induced significant behavioral, gastric and immunological alterations in mice. The aim of this study was to evaluate effects of low doses of *Atropa belladonna* L., *Gelsemium sempervirens* L. and Poumon histamine on stress-induced behavioral, immunological and gastric alterations. Locomotor, postural and exploratory activities have been evaluated by two behavioral tests: light/dark box and staircase tests. Immunological studies were investigated to count white blood cells subpopulations (lymphocytes, neutrophils, monocytes and basophils) by coulter counter. The severity of gastric erosions was evaluated by microscopic technique in mice after experimental stress. The results have demonstrated that low doses of *G. sempervirens* L. and *A. belladonna* L. had a significant neurotropic and protective effects on behavioral and gastric alterations induced by experimental stress. The immunological protective effects observed were probably induced via their neurotropic effects. The P. histamine showed a significant immunoprotective and gastroprotective effect in mice exposed to experimental stress.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/11274819>

AHZ. 1933;181(3):197-219.

Pharmakologische Untersuchungen.

[Pharmacological studies]

[Article in German]

Boyd LJ, Husted HG, Lord SN.

AHZ. 1935;183(4):207-216.

Über Ancistrodon und Lachesis.

[About Ancistrodon and Lachesis].

[Article in German]

Boyd L.

Br Homeopath J. 1953 Jan;43(1):11-53.

The Application of a New Biological Heart-rate Recorder to the Study of the Action on the Frog Heart of Small Doses of Crataegus, Digitalis, Strophantus gratus and of Trace Doses of Strophantus sarmentosus.

Boyd WE.

Abstract

A recently developed electronic integrating heart-rate recorder for the exposed frog heart is described and its use illustrated. This recorder has the advantages that it is capable of dealing with low heart rates and of giving fine line recording instead of the usual broad line due to wide pointer swing at each beat. It has a wide scale and linear calibration allowing direct visual reading of very small rate variations. It is constant in action and can run continuously for several days. By using frequency selection of the e.c.g. harmonics A.C. interference is greatly reduced. Combined with this is apparatus for the simultaneous registration of the electrocardiogram and of the mechanical recording of the heart contraction in such a way as to avoid distortion of the e.c.g. by continued monophasic injury currents. The accuracy of the rate recorder and the registration of the e.c.g. with minimal distortion enables very small changes to be demonstrated.

The application of these electronic methods to a study of controls and of drug applications is discussed and illustrated. Criteria for assessing evidence of drug effects are arrived at by using varying doses of macerations of *Digitalis folium*, *Crataegus* berries and *Strophanthus gratus* seeds.

The use of the criteria in estimating the results of drug and control applications is also illustrated from records of the action of doses of water soluble extractive of *Strophanthus sarmentosus* seeds representing from 6 mgm. to 0.15 mgm. of the seeds in Ringer solution, and from "trace doses" in dilutions of the primary solutions of an order ranging from 10⁻⁶ to 10⁻¹¹ prepared in distilled water.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078553800402>

Homeopathy. 2013 Oct;102(4):233-41. doi: 10.1016/j.homp.2013.06.002.

Morpho-functional response of Nile tilapia (*Oreochromis niloticus*) to a homeopathic complex.

[Braccini GL](#), [Natali MR](#), [Ribeiro RP](#), [Mori RH](#), [Riggo R](#), [Oliveira CA](#), [Hildebrandt JF](#), [Vargas L](#).

Department of Animal Science, Universidade Estadual de Maringá, Maringá, PR, Brazil. Electronic address: gracielabh@ibest.com.br.

Abstract

BACKGROUND: This study evaluated the performance, prevalence of ectoparasites and morpho-functional response of the liver and the branchiae of Nile tilapia (*Oreochromis niloticus*) raised on fish meal with added of the homeopathic complex Homeopatila 100(®) at different concentrations.

METHODS: Post-reversed juvenile Nile tilapia (*O. niloticus*) of the GIFT (Genetic Improvement of Farmed Tilapia) strain were used in this study. The performance, ectoparasite prevalence and parasite load in the branchiae and skin as well as the liver and branchial histology. Fish were randomly assigned to receive one of four

treatments: control, 20 mL hydroalcoholic solution (alcohol 30° GL); 20 mL Homeopatila 100(®) per kg of meal; 40 mL Homeopatila 100(®) per kg of meal; or 60 mL of Homeopatila 100(®) per kg of meal, compared to control with out the addition of the complex. There were four replications per treatment type (16 experimental units total) at a density of 40 fish per m³ over a period of 57 days. The Kruskal-Wallis H test ($p < 0.05$) was employed to analyse the physical and chemical parameters of water as well as for parasite prevalence; whereas analysis of variance was used for liver performance. If the values were significant ($p < 0.05$), they were compared by Tukey's test. Multiple comparisons of averages were performed using Student's t test ($p < 0.05$).

RESULTS: There were no significant between the physical and chemical parameters of the water between the different groups at the end of the experiment. Significant differences ($p < 0.05$) in the mixed parasite conditions were found within the different Homeopatila 100(®) treatments. The hepatosomatic ratio of fish treated with Homeopatila 100(®) was significantly lower than that of fish from the control group. The best results in the liver and branchiae occurred in fish receiving Homeopatila 100(®) at 40 mL/kg in terms of the number of hepatocytes/mm², the intercellular glycogenic behaviour, the rates of histological changes (hyperplasia, lamella fusion and telangiectasia) and the percentage of neutral and acidic mucin-producing cells.

CONCLUSION: The addition of Homeopatila 100(®) at a concentration 40 mL per kg/meal to the diet of juvenile Nile tilapias resulted in improved hepatocytes and intracellular glycogen levels as well as the lowest mean rate of branchial histological changes with an increase in acidic mucin-producing cells compared to neutral mucin-producing cells, compared to control.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/24050768>

Int J High Dilution Res. 2011;10(36):147-151.

Effect of 7DH biotherapeutic of *Toxoplasma gondii* in mice infected with the protozoan.

Braga CF, Drozino RN, Moreira NM, Aleixo DL, de Araújo SM.

Abstract

Introduction: Toxoplasmosis is a zoonosis caused by *Toxoplasma gondii* worldwide distributed [1]. In both, men and animals, the infection with *T. gondii* can lead to important pathologies [2]. The study of alternative treatments is important to set new therapeutic protocols, especially for the prevention of congenital toxoplasmosis.

Aim: This study evaluated the effect of a biotherapeutic 7DH *T. gondii* in mice infected with *T. gondii*.

Material and methods: The study was approved by the Ethics Committee for Animal Experimentation of the Universidade Estadual de Maringá – Protocol n° 036/2009.

Fourteen mice were used – swiss male aged 57 days divided into two groups according to the treatment (or its diluent biotherapeutic): BIOT-200DH and Control (cereal alcohol-7%). The biotherapeutic was prepared with homogenized mouse brain (20 cysts of *T.gondii*/100µL-average 242 bradyzoites / cyst), according to the Brazilian Homeopathic Pharmacopoeia [3] in laminar flow. The experiment was performed as a blind randomized controlled trial. The animals were treated for 3 days immediately prior to infection. The oral treatment schedule was of 0.1mL/4x/day, on the first day, followed by 2x/day. Animals aged 57 – 59 days were treated

with biotherapeutic and were clinically evaluated. The animals were orally infected at the age of 60 days (20 cysts ME49-T. gondii). Within 18-21 days of infection the clinical parameters were evaluated. On the 55th day of infection the eye fundus was examined (Ophthalmoscope Welch Allyn®) and the intraocular pressure was measured (Tonometer TONO-PEN® XL). After 60 days of post-infection the animals were killed in a chamber saturated with halothane, the brains were homogenized and resuspended in 1 ml of saline solution. The cysts were counted according to a rate of 25 mL of suspension, covered with 24x24 mm glass, examined in its full length.

Results and discussion: The table 1 summarizes the clinical data. There was no significant difference among the groups for clinical parameters during treatment, although it was recorded the death of an animal in the biotherapeutic 7DH group. The dead animal presented distended stomach and liquid feces in the intestine. After the infection it was observed reduction of water consumption ($p < 0.01$) and a reduction in the amount of feces ($p = 0.052$) in the group treated with biotherapeutic 7DH compared to the control group. Mice treated with biotherapeutic 7DH developed ascites on the sixth day of post-infection, exacerbating the clinical symptoms. The number of brain cysts was compared among groups using Mann-Whitney test with 5% of significance. Although there was no significant difference among the groups ($p = 0.2943$), the results are interesting: the number of cysts - average \pm standard deviation - was of 26.7 ± 38.6 in group 7DH, and of 9.7 ± 12 , 8 in the control group. The high values for the standard deviations suggests large individual variation and the necessity of a higher number of samples for further analysis.

Regarding intraocular pressure, there was a reduction ($p < 0.05$) in the group 7DH (5.0 ± 1.0 mmHg) when compared with the infection control (8.9 ± 3.8) mmHg. Figure 2 summarizes the data for fundoscopy. Once more, the sample size makes it difficult to demonstrate statistical significance, although the biological effect is clear.

Conclusion: Mice pre-infection treated with biotherapeutic 7DH, presented bigger clinical alterations, which were measured visually and statistically compared to the control group. There was a biological effect of the biotherapeutic, with an increase in the number of cysts compared to the control group, without statistical significance. The group 7DH showed a significant reduction of intraocular pressure and fundoscopic analysis showed a larger number of animals without ocular changes, without statistical significance. The sample size should be reevaluated for better data interpretation and decision on the effects of the biotherapeutic 7DH T. gondii.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/484/497>

Int J High Dilution Res. 2011;10(36):158-162.

Biotherapeutic 200 DH reduces cerebral parasitism in mice infected with *Toxoplasma gondii*.

Braga CF, Falkowski GFS, Moreira NM, Aleixo DL, de Araújo SM.

Abstract

Introduction: Toxoplasmosis is a zoonosis that represents a serious public health problem, worldwide distributed. Pregnant women are part of the most risky group due to congenital sequels. The necessity of a preventive treatment for congenital infections is of great importance [1] Biotherapeutics, highly diluted medicines prepared with T. gondii according to the Brazilian Homeopathic Pharmacopoeia [2], is an

important prevention strategy, ensuring a safe and cheap approach to protozoan infections [3]. However, little is known about the effects of different potencies and treatment schedules.

Aim: To evaluate the effect of biotherapeutic 200DH in mice infected with *Toxoplasma gondii*.

Material and methods: The study was approved by the Ethics Committee for Animal Experimentation of the Universidade Estadual de Maringá – Protocol n° 036/2009. Fourteen mice were used – swiss male aged 57 days divided into two groups according to the treatment (or its diluent biotherapeutic): BIOT-200DH and Control (cereal alcohol-7%). The biotherapeutic was prepared with homogenized mouse brain (20 cysts of *T.gondii*/100µL-average 242 bradyzoites / cyst), according to the Brazilian Homeopathic Pharmacopoeia in laminar flow. The experiment was performed as a blind randomized controlled trial. The animals were treated for 3 days immediately prior to infection. The treatment schedule was of 0.1mL/single dose/ day, by gavage. Animals aged 57 – 59 days were treated with biotherapeutic and were clinically evaluated. The animals were orally infected at the age of 60 days (20 cysts ME49-*T. gondii*). Within 18-21 days of infection the clinical parameters were evaluated. On the 55th day of infection the eye fundus was Examined (Ophthalmoscope Welch Allyn ®) and the intraocular pressure was measured (Tonometer TONO-PEN ® XL). After 60 days of post-infection the animals were killed in a chamber saturated with halothane, the brains were homogenized and resuspended in 1 ml of saline solution. The cysts were counted according to a rate of 25 mL of suspension, covered with 24x24 mm glass, examined in its full length.

Results and discussion: The number of brain cysts was compared among groups using the Mann-Whitney test with 5% of significance. Although there was no significant difference among the groups ($p = 0.2943$), the results are interesting: the number of cysts - average \pm standard deviation –was of the 4.5 ± 3.3 in the BIOT-200DH group and of 9.7 ± 12.8 in the control group. It is necessary to emphasize the great variability within the control group expressed by the standard deviation. Likewise, there was no significant difference among the average of intraocular pressure observed in the control group (8.9 ± 3.8) and the group BIOT-200DH (8.0 ± 2.6). Regarding fundoscopy, the control group presented 57.14% of the animals without changes and 42.86% with discreet subretinal hemorrhage. While in the BIOT-200DH group, 50% of the animals showed no change and 50% showed discreet subretinal hemorrhage. Compared with the results from the use of other biotherapeutic *T. gondii* potencies [4], these results indicate that mice infected with the protozoan reacted better to the potency 200DH, Although mortality. This better response may be the chronic aspect of the infection and/ or the characteristics of host-parasite relationship in the infection with *T. gondii* that involves alterations in the central nervous system.

Conclusion: The highly diluted biotherapeutic 200DH *T. gondii* caused mortality in one animal in group however caused no significant difference other clinical and parasitological parameters evaluated although there was a decrease of parasitism brain of mice infected with the protozoan compared to control group.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/492/503>

Effect of medication produced with cysts of *Toxoplasma gondii* in mice infected with this protozoan.

Braga CF, Aleixo DL, Moreira NM, Drozino RN, de Sales FKDV, Lopes CR, Brustolin CF, Massini PF, de Araújo SM.

Abstract

Under test blind, controlled, randomized by draw, the effect of different potencies of *T. gondii* biotherapeutic were compared. Fifty-six male mice, Swiss, 60 days-old, were divided into groups according to the treatment: BIOT-TG7, BIOT-TG17, BIOT-TG30, TG60-BIOT, BIOT-TG100, TG200-BIOT, GCInf-infected control group treated with grain alcohol and BCM-7% - non treated and non infected. The biotherapeutics were produced according to the Brazilian Homeopathic Pharmacopoeia, with macerated mouse brain (20 cysts *T. gondii*/100 μ L). The animals were treated for three consecutive days prior to infection. Groups BIOT-TG7, BIOT-TG17, BIOT-TG30 and BIOT-TG60 and GCInf 0.1mL/4X/day received on the first day and 2X/day on the other days of treatment. For BIOT -TG100 and BIOT- TG200 were used 0.1mL/single dose / day. After 60 days the animals were infected (ME49 strain 20-*T. gondii* cysts), orally. Fundoscopy and ocular tonometry were conducted at 55 days post-infection. Sixty days after infection the number of cysts were counted and serum TGF- β (ELISA) were dosed . For statistical comparison were used the Kruskal-wallis test, 5% statistical significance and Effect Size Measures. In tonometry, there was no significant difference between the control group and the other groups. Regarding to ocular fundoscopy, it was found that 80% of group BIOT-TG100 did not present amendments and 20% presented mild subretinal hemorrhage surrounding the optic nerve differently from the other groups. In BIOT-TG200 group, 50% of the animals presented mild hemorrhage and 50% remained unchanged. The BIOT-TG200 presented a decrease in the number of cysts in the brain. There was no difference observed between the BIOT-TG100 and the control group. Animal group BIOT-TG100 presented higher ($p < 0.01$) concentrations of TGF- β in comparison to BIOT-TG200 group. The highest dilutions BIOT-TG100 and BIOT-TG200 provided more effective benefits, although the levels of TGF- β have changed in opposite ways in the two treatments. This result deserves further studies.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/672/658>

Small Ruminant Research. 2007 May;69(1):95-102.

Effect of grazing and homeopathy on milk production and immunity of Merino derived ewes.

[A. Braghieri](#), [C. Pacelli](#), [M. Verdone](#), [A. Girolami](#), [F. Napolitano](#)

Abstract

The effect of grazing and homeopathic therapy on sheep immune response and milk production was investigated on 40 multiparous Merino derived ewes. Twenty animals were housed in an indoor-bedded pen (P), whereas 20 others were allowed to graze on pasture for 9 h/d (G). P and G animals were fed an equivalent diet in terms of dry matter intake, crude protein percentage and energy concentration. In each group, 10 animals were subjected to unicistic homeopathic treatments (H), while 10 ewes were kept as a control and treated with conventional medicine when necessary (C). The

grazing rearing system had a marked positive effect on in vivo cellular immune response (delayed-type hypersensitivity to PHA, $P < 0.001$). Grazing animals produced more milk than the penned ones (1048.00 ± 75.61 kg versus 853.04 ± 67.78 kg, $P < 0.05$), with increased content of milk fat ($7.69 \pm 0.15\%$ versus $7.25 \pm 0.14\%$, $P < 0.05$). Accordingly, blood levels of triglycerides ($P < 0.01$), urea ($P < 0.001$) and alanine aminotransferase (ALT) ($P < 0.001$) were significantly higher in group G. The homeopathic treatments produced limited effects on the milk production and immune response. However, such treatments reduced the risk of contamination of the products with medicinal traces, as H group received no allopathic treatment.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0921448806000022>

Biol Tier. 2011;28(1):13-15.

Biologische Behandlung einer Zeheninfektion durch multiresistente *Pseudomonas aeruginosa* beim Hund – Fallbericht.

[Biological treatment of a toe infection by multi-resistant *Pseudomonas aeruginosa* in the dog - case report].

[Article in German]

Brandenburg U, Neumann S.

Int J High Dilution Res. 2012;11(40):138-139.

Evaluation of *Calcarea carbonica* derivative complex (M8) on milk parameters in the dairy cow.

Brandão A, Polo G, da Lozzo EJ, Buchi DF, de Olivera C, Weber SH, Ollhoff D.

Abstract

Background Any dairy herd that continually has a somatic cell count (SCC) above 200,000 cells/ml has an indication of mammary gland inflammation (mastitis). Routine use of antibiotics to prevent mastitis is prohibited by organic farming regulations. This limitation has lead researchers to focus on cows natural defense mechanisms [1]. *Calcarea carbonica* derivative complex (M8) is a complex high diluted medication comprised of comprised of *Calcarea carbonica* 16x, *Aconitum napellus* 20x, *Arsenicum album* 18x, *Asa foetida* 20x, *Conium maculatum* 17x, *Ipecacuanha* 13x, *Phosphorus* 20x, *Rhus toxicodendron* 17x, *Silicea* 20x, *Sulphur* 24x, and *Thuya occidentalis* 19x. Dilution procedures have followed standard methodology described at the Brazilian Homeopathic Pharmacopoeia. This medication has enhanced immune system responses both in vitro and in vivo in a murine model [2].

Aims: In the present study, we investigate the response of dairy cows after M8 treatment.

Methodology: The study was performed as a randomized, observer double-blinded and placebo-controlled trial, with a stratified design, using lactation number and SCC as stratification factors. The study sample consisted of 42 lactating dairy cows (Holstein) in one high producing dairy herd with 52 cows in milk in southern Brazil, divided into two experimental groups (n=21). Exclusion criteria were cows with

clinical mastitis or receiving any other medical treatment. Pre- and post-milking teat disinfection was practiced in the herd. All cows were clinically examined, with udder and milk samples being appraised according to Rosenberger (1990) [3]. During 3 months one group received daily M8 treatment, the other placebo. Oral administration of 5 ml/day/cow was performed using an automatic dosage dispenser. Monthly, milk production, SCC, fat and total protein content were carefully recorded for each animal by an official milk recording program. SCC were log transformed for analysis. ANOVA and Tukey test were used to compare the averages. The Bartlett's test was used for homogeneity of variance evaluation.

Results: There were no significant differences ($P=0.435$) among the groups in the initial evaluation (Values of SCC x103 : Placebo $67,37\pm 80,48$; Treatment $359,39\pm 677,02$). After 3 months, the M8 treated group showed a decrease ($134,00\pm 178,76$ $P= 0.047$) in SCC when compared with control group ($391,71\pm 686,60$). Fat and protein did not differ between groups and time analysed. Milk production decreased in the placebo group during time (Before: $34,97\pm 6,69$ kg; After: $28,69\pm 4,33$ kg), whereas the treatment group did not change total amount (Before: $28,7\pm 6,54$ kg; After: $26,39\pm 5,73$ kg; $P > 0.05$).

Conclusions: These results indicate that the M8 influenced positively SCC and suggest that it may be considered as a possible tool to promote bovine mastitis prophylaxis.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/593/581>

Tierärztliche Umschau. 2011;66(7-8):303-311.

Behandlung von puerperaler Septikämie und Toxämie (MMA) bei Zuchtsauen mit biologischer Therapie im Vergleich zu einer Standardbehandlung. [Treatment of puerperal septicemia and toxemia (MMA) in sows with biological therapy in comparison with a standard treatment].

[Article in German]

Braun G, Hellmann K, Reinhart E.

Int J Vet Hum. 1989;4(2):2-4.

The effect of Barium carbonicum LM II and the combination of Calcium carbonicum LM 1 and Calcium phosphoricum LM II on the weight of pigs with retarded growth.

Briones F.

Homeopathy. 2014 Jan;103(1):65.

Homeopathic research involving animals: the case for cutting edge ethics.

[Dely Britton](#)

Link to abstract/paper: <http://www.homeopathyjournal.net/article/S1475-4916%2813%2900100-8/fulltext>

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Veterinary dermatology and homeopathy.

[Cipollone Bruno](#)

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S1876382012007792>

Rev Med Vet. 1996;147(6):445-446.

The homeopathic cina does not reduce the egg output of digestive-tract nematodes in lambs.

Cabaret J.

Abstract

The aim of present work was to determine whether the homeopathic Cina (*Artemisia cina*) was able to reduce the egg output of digestive-tract nematodes in lambs. No significant differences were found between treated (at the 15 CH dilution) and control lambs with a mixed natural infection (*Teladorsagia*, *Trichostrongylus*, *Haemonchus*, *Chabertia* and *Oesophagostomum*). No significant differences were found in experimentally infected lambs (*Trichostrongylus vitrinus*, *Teladorsagia circumcincta*, *Chabertia ovina* or *Nematodirus filicollis*) before and after treatment with Cina at the 9 CH dilution. The use of Cina is not an alternative to classical anthelmintic control in our conditions of moderate infections.

Link to abstract/paper: <http://www.revmedvet.com/artdes-us.php?id=325>

Ann. Rev. Chronopharmacol. 1986;3:99-103.

Chronobiological approach of protective effect of *Mercurius corrosivus* against mercury induced nephrotoxicity.

Cal JC, Larue F, Guillemain J, Cambar J.

Bull Soc Pharmacol Bordeaux. 1983;122(1-2):30-38.

Influence de l'administration de dilutions infinitésimales de *Mercurius corrosivus* sur la mortalité induite par le chlorure mercurique chez la souris. [Protective effect of *Mercurius corrosivus* dilutions against mercuric chloride-induced lethal toxicity in mice].

[Article in French]

Cambar J, Desmoulière A, Cal JC, Guillemain J.

Link to abstract/paper: <http://cat.inist.fr/?aModele=afficheN&cpsidt=9696002>

Nephrologie. 1984;5:89.

Influence du prétraitement avec une diminution infinitésimale d'immunsérum antimembrane basale glomérulaire sur l'excrétion protéique urinaire induite par injection unique d'immunsérum ant-membrane basale glomérulaire chez la souris.

Cambar J, Malvaud V, Cal JC, Guillemain J.

Homéopathie française. 1985;73:255-260.

Mise en évidence de l'intérêt des rythmes biologiques circaseptiens en homéopathie.

[Highlighting the interest in biological circaseptiens rhythms in homeopathy].

[Article in French]

Cambar J, Cal JC, Desmoulière A, Guillemain J.

Homeopathy. 2010 Jan;99(1):57-62.

Homeopathy as replacement to antibiotics in the case of Escherichia coli diarrhoea in neonatal piglets.

[Camerlink I](#), [Ellinger L](#), [Bakker EJ](#), [Lantinga EA](#).

Biological Farming Systems Group, Wageningen University, Droevendaalsesteeg 1, 6708 PB Wageningen, The Netherlands. Irene.Camarlink@wur.nl

Abstract

BACKGROUND: The use of antibiotics in the livestock sector is increasing to such an extent that it threatens negative consequences for human health, animal health and the environment. Homeopathy might be an alternative to antibiotics. It has therefore been tested in a randomised placebo-controlled trial to prevent Escherichia coli diarrhoea in neonatal piglets.

METHOD: On a commercial pig farm 52 sows of different parities, in their last month of gestation, were treated twice a week with either the homeopathic agent Coli 30K or placebo. The 525 piglets born from these sows were scored for occurrence and duration of diarrhoea.

RESULTS: Piglets of the homeopathic treated group had significantly less E. coli diarrhoea than piglets in the placebo group ($P < .0001$). Especially piglets from first parity sows gave a good response to treatment with Coli 30K. The diarrhoea seemed to be less severe in the homeopathically treated litters, there was less transmission and duration appeared shorter.

Link to paper: <http://www.centaurea.nl/wp-content/uploads/2010/04/biggenstudie.pdf>

Int J High Dilution Res. 2011;10(35):70.

Inflammation in rats born to mothers treated with dexamethasone 15cH during pregnancy: an immunohistochemical study.

Cardoso TN, Bonamin LV.

Universidade Paulista- UNIP, São Paulo, Brazil

Abstract

In previous studies, we observed that rats born to mothers treated with dexamethasone 15CH (10-33M) had a higher level of mast cell degranulation and greater arteriolar dilation after the exposure of an inflammatory stimulus, suggesting the possibility of vertical transmission of the effects of ultra-diluted substances between mother and offspring. In this study, a more detailed assessment of the cellular events in acute inflammation was made using techniques of immunohistochemistry. The identification of adhesion molecules expression was made by the markers: anti-CD54 (ICAM-1) and anti-CD18 (β 2-Integrin). The identification of inflammatory cells was performed by the markers anti-MAC387 (mononuclear cells) and anti-CD163 (active macrophages). Polymorphonuclear cells were identified by hematoxylin-eosin staining. The number of labeled cells per field was recorded, except for the anti-CD54 marker, whose intensity of staining on the endothelial cells was defined by scores assigned by two independent observers. The results point toward to an up regulation of the whole inflammatory process in rats born to mothers treated with dexamethasone 15CH during pregnancy. This conclusion is justified by the following statistically significant ($p \leq 0.05$) findings: a) bigger mast cell degranulation and increased of arteriolar diameter; b) increased migration of polymorphonuclear cells in relation to the mononuclear cells; c) earlier expression of CD163 in monocytes, d) higher level of adhesion molecules expression.

Link to paper: <http://www.hindawi.com/journals/ecam/2012/710923/>

Int J High Dilution Res. 2013;12(44):118.

Evaluating the effectiveness of homeopathic anti-tumor protocols using ehrlich tumor model: use of carbo animalis.

Cardoso TN, Amaral JG, Santana FR, Hurtado EP, Assis LCT, da Fonseca MP, Bonamin LV.

Abstract

Neoplasms are the second leading cause of death in humans and the major public health problem. It is known that the immune system is directly related to cancer development. This study is part of a larger project, aiming to observe experimentally, the action of homeopathic drugs in Ehrlich tumor development. This project aims to elucidate, explain and illustrate more clearly the changes that may occur in tumors using ultra-dilutions as treatment and also observe the possible effects on improving the welfare and quality of life of cancer patients receiving homeopathic medicines. Therefore, we study the effects of Carbo animalis 30CH on Ehrlich tumor in Balb/c mice is under analysis, considering clinical, histopathological and immune features. In a first experiment, the Ehrlich tumor was inoculated intraperitoneally and during clinical parameters were evaluated, such as weight gain, temperature, food and water intake and survival. Animals treated with Carbo animalis 30 CH started dying later compared with the control. In both groups, the clinical features observed were lethargy, prostration, cyanosis of the skin, priapism, tachy-dyspnea, and bristle bristling. Only control animals showed erythema with edema together with priapism and loose stools. Only Carbo animalis group presented priapism with mucous

secretion. Furthermore, the control group showed less weight gain compared to treated group. In both groups, temperature decreased few days before death. These preliminary clinical data provide information to continue the study in the sense of histological and immune characterization.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/676/659>

Int J High Dilution Res. 2013;12(44):148-150.

Homeopathic treatment reduces parasitemia and protects colon myenteric neurons Wistar rats infected by *Trypanosoma cruzi*.

Brustolin CF, Moreira NM, Lopes CR, Braga CF, Massini PF, Falkowski GJS, Fontes CER, Aleixo DL, de Araújo SM.

Abstract

Background: Chagas disease etiological treatment is still a problem [1,2,3].

Aim: To evaluate homeopathic medicines effect on parasitological, quantitative and morphometric aspects of total myenteric neuronal population of Wistar rats infected by *T. cruzi* Y strain.

Material and Methods: In a blind, controlled and randomized study, 78 male Wistar rats, 8 weeks-old, were divided into groups: treated with Lycopodium (LY)-1:1026 dilution (n=25), treated with Phosphorus (PHOS)-1:1026 (n=26) and infected control (IC) (n=27) treated with medicines preparation vehicle (hydroalcoholic solution 7%). Medicines were prepared and administered 48 hours before infection and 48, 96 and 144 hours after infection. Medicines were offered diluted in water (1mL/100mL) ad libitum for 16 consecutive hours. Infection: 5,0x10⁶ blood trypomastigotes, *T. cruzi*-Y strain, i.p. Parasitemia was evaluated from 4th to 16th days after inoculation (dai). At 125th and 322nd dai myenteric neurons of total neuronal population from colon of three animals/group were quantified (120 fields-400X). Body and nucleus area of 100 proximal and distal colon neurons were measured. Statistics: ANOVA-Tukey, 5% significance and Effect size calculators test (<http://www.uccs.edu/~Lubecker/>). Study approved by Animal Ethics Committee/UEM.

Results: LY and PHOS tended ($p>0.05$) to decrease total parasitemia compared to CI group, with "great effect" (4.40 for LYxCI and 2.39 for CIxPHOS). At 322nd dai LY and PHOS showed, respectively, protection of 43.2% and 42.9% for distal colon neurons compared to CI group ($p<0.05$) (Fig. 2). At 125th dai there was no significant difference in number of myenteric neurons among groups LY, PHOS and CI. Regarding neuronal morphometry, at 125th dai either LY as PHOS provided neuronal body hypertrophy compared to CI ($p<0.05$), as a result of nuclear and cytoplasmic area increase in proximal and distal colon (Fig 3-A and 3-B). However, at 322nd dai LY was the treatment that caused the largest neurons size increase compared to IC ($p<0.05$) (Figure 3A and 3-B), suggesting increase on synthesis of important proteins for control of intestinal peristalsis maintenance [4].

Conclusion: LY and PHOS medicines provide benefits to rats experimentally infected by *T. cruzi*, with parasitemia decrease in acute phase, protection of total myenteric neuronal population and induction of neuronal hypertrophy (Fig 1A, 1B, 1C) meaning

better prognosis for the chronically infected animal. LY was more effective under the evaluated conditions.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/652/674>

Int J High Dilution Res. 2013;12(44):106.

Canine neurofibrosarcoma treatment with *Viscum album* in serial dilutions.

Carvalho AC, Porto E, Bonamin L.

Abstract

A 10 years old bitch (*Canis familiaris*), Labrador, was brought to the Natural Medicine section of UNIP Veterinary Hospital, diagnosed with recurrent malignant neurofibrosarcoma after chemotherapy. After immunohistochemistry, the histogenesis of the tumor was determined, being described a poorly differentiated morphology. Tumor was positive for vimentin and CD57 and negative for S100 protein, GFAP, AC4, Desmin, CD31. The U.S. examination revealed increase in liver mass. Adrenals revealed nodular hypercogenic areas of softened outlines. The treatment was performed with the commercial formula *Viscum Injectecenter*®, subcutaneously, in chord potencies, organized as follows: D3 + D6, D9 + D12, D30 + D3, D6 + D9, D12 + D30, D3 + D9, D12 + D6, D9 + D30, D12 + D3, D6 + D30 1x a day for a series of five days, being one day free of treatment between each series. The total time of treatment was 30 days. Up to this moment, the neoplasia stopped to growth and started to show a mild decrease of its dimensions, determined regularly by U.S. examination.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewArticle/664>

Homeopathy. 2012 Jul;101(3):147-53.

Effects of microcurrent application alone or in combination with topical *Hypericum perforatum* L. and *Arnica montana* L. on surgically induced wound healing in Wistar rats.

[Castro FC](#), [Magre A](#), [Cherpinski R](#), [Zelante PM](#), [Neves LM](#), [Esquisatto MA](#), [Mendonça FA](#), [Santos GM](#).

Herminio Ometto University Center, Araras, SP, Brazil.

Abstract

OBJECTIVES: This study evaluated the wound healing activity of microcurrent application alone or in combination with topical *Hypericum perforatum* L. and *Arnica montana* L. on skin surgical incision surgically induced on the back of Wistar rats. **DESIGN:** The animals were randomly divided into six groups: (1) no intervention (control group); (2) microcurrent application (10 μ A/2 min); (3) topical application of gel containing H. perforatum; (4) topical application of H. perforatum gel and microcurrent (10 μ A/2 min); (5) topical application of gel containing A. montana; (6) topical application of A. montana gel and microcurrent (10 μ A/2 min). Tissue

samples were obtained on the 2nd, 6th and 10th days after injury and submitted to structural and morphometric analysis.

RESULTS AND CONCLUSION: Differences in wound healing were observed between treatments when compared to the control group. Microcurrent application alone or combined with *H. perforatum* gel or *A. montana* gel exerted significant effects on wound healing in this experimental model in all of the study parameters ($P < 0.05$) when compared to the control group with positive effects seen regarding newly formed tissue, number of newly formed blood vessels and percentage of mature collagen fibers. The morphometric data confirmed the structural findings. In conclusion, application of *H. perforatum* or *A. montana* was effective on experimental wound healing when compared to control, but significant differences in the parameters studied were only observed when these treatments were combined with microcurrent application.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22818231>

Int J High Dilution Res. 2011;10(36):259-262.

Isotherapeutic of Culex on the biological cycle of the mosquito Culex sp.

Cavalca PAM, dos Santos CM, Reis B, Bonato CM.

State University of Maringá, Maringá, PR, Brazil

ABSTRACT

Introduction: *Culex* is an insect of the family Culicidae. It occurs in tropical and subtropical regions. It is known as the domestic mosquito. Their larvae develop in stagnant and dirty water, with plenty of organic matter. Some species of the insect such as *Culex quinquefasciatus* transmit the worms (helminths) called *Wuchereria bancrofti* filariasis or Elephantiasis.

Aims: Thus, the objective of this work was to evaluate the effect of isotherapeutic of *Culex* on the biological cycle of this insect.

Material and Method: The experiment was conducted at the Laboratory of Plant Physiology and Homeopathy at the State University of Maringá in the period from March 26 to December 31, 2007. Fifteen larvae of *Culex* sp. the same stage of development (Stage I) were used in the experiment with Isopathy of *Culex* sp. Was added 200 microliters of the dilutions of isotherapeutic 3, 6, 9, 12, 18, 24 and 30cH in each flask containing 30 mL of water and 15 larvae of *Culex* sp. The control consisted of 30 mL of water and 200 mL of 5% alcohol. The flasks were covered by tissue "toule"-type to prevent the dispersal of adult insects. The dilutions were produced according to the Brazilian Homeopathic Pharmacopoeia (1987) [1]. Were determined: average number of larvae, pupae and mosquitoes during the cycle of the insect.

Results and Discussion: The presence of *Culex* isotherapeutic in the growth solution presented complex responses. Some dilution caused positive responses (3, 6, 9, 12 and 18cH) in the average number of larvae (Figure 1). Dilution 18cH apparently caused a protective effect, and somehow minimized the negative influence of the environment, or protect the larvae from unfavorable abiotic conditions. Dilutions 6, 18 and 24 cH, instead, caused adverse effect on larval and pupa survival, but positive when we consider the objective of this work. There is an interesting phenomenon when evaluating the biological responses in living according to the dilution used. The

alternation of rises and falls in the physiological variables as a function of dilution were observed by several authors [2-5]. Its behavior is not explained by science, but it is believed to be related to the rhythmic nature movement [6,7] and also with the law of similarity occurring between dilution and the organism that receives it. Thus, the physiological function of the dilutions in the same drug are often cyclical and not linear.

Conclusion: The results of this experiment suggest that some dilution may be used in studies to control the mosquito *Culex* sp.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/513/527>

Hum Toxicol. 1987 Jul;6(4):315-20.

A study of the effect of decimal and centesimal dilutions of arsenic on the retention and mobilization of arsenic in the rat.

[Cazin JC](#), [Cazin M](#), [Gaborit JL](#), [Chaoui A](#), [Boiron J](#), [Belon P](#), [Cherruault Y](#), [Papapanayotou C](#).

Abstract

Having developed a pharmacokinetic method for studying the fate of orally administered arsenious anhydride by a radioactive tracer method, the influence of Hahnemannian dilutions of arsenicum album on the elimination and retention of this toxin in the rat was then investigated. The effects of centesimal (cH) and decimal (dH) dilutions were studied. All the dilutions studied were found to be active. The strongest effects were observed after the administration of dilutions corresponding to a concentration of 10(-14) (14dH and 7cH). Overall, the decimal dilutions augmented the elimination of arsenic more than the centesimals. The observed results were submitted to mathematical analysis. A mathematical model, which confirms that Hahnemannian dilutions have biological effects which are a direct function of the degree of dilution, was developed.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/3623577>

Evid Based Complement Alternat Med. 2011;2011:212459. doi: 10.1093/ecam/nep119. Epub 2011 Feb 17.

Treatment with at homeopathic complex medication modulates mononuclear bone marrow cell differentiation.

[Cesar B](#), [Abud AP](#), [de Oliveira CC](#), [Cardoso F](#), [Bernardi RP](#), [Guimarães FS](#), [Gabardo J](#), [de Freitas Buchi D](#).

Departamento de Biologia Celular, Setor de Ciências Biológicas, Universidade Federal do Paraná (UFPR), Curitiba, PR, Brazil.

Abstract

A homeopathic complex medication (HCM), with immunomodulatory properties, is recommended for patients with depressed immune systems. Previous studies demonstrated that the medication induces an increase in leukocyte number. The bone marrow microenvironment is composed of growth factors, stromal cells, an extracellular matrix and progenitor cells that differentiate into mature blood cells.

Mice were our biological model used in this research. We now report in vivo immunophenotyping of total bone marrow cells and ex vivo effects of the medication on mononuclear cell differentiation at different times. Cells were examined by light microscopy and cytokine levels were measured in vitro. After in vivo treatment with HCM, a pool of cells from the new marrow microenvironment was analyzed by flow cytometry to detect any trend in cell alteration. The results showed decreases, mainly, in CD11b and TER-119 markers compared with controls. Mononuclear cells were used to analyze the effects of ex vivo HCM treatment and the number of cells showing ring nuclei, niche cells and activated macrophages increased in culture, even in the absence of macrophage colony-stimulating factor. Cytokines favoring stromal cell survival and differentiation in culture were induced in vitro. Thus, we observe that HCM is immunomodulatory, either alone or in association with other products.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3095418/>

Braz J Vet Res Anim Sci. 2009;46(5):412-423.

Efeito de um complexo homeopático “Homeobase Convert H®” em ovinos sob condições de restrição alimentar.

[Effect of a homeopathic complex "Convert Homeobase H ®" in sheep under conditions of food restriction].

[Article in Portuguese]

Chabel JC, Van Onselen VJ, Morais MDG, Neto IMC, Tedeschi BP.

Abstract

Avaliou-se o efeito de um complexo homeopático em ovinos distribuídos em quatro grupos: sem homeopatia e com restrição alimentar (A1B2); com homeopatia e com restrição alimentar (A2B2); com homeopatia e sem restrição alimentar (A2B1) e sem homeopatia e sem restrição alimentar (A1B1). Com 30 dias de restrição alimentar o grupo A2B2 apresentou nível sérico de cortisol semelhante ($p > 0,05$) aos dos grupos A2B1 e A1B1, o que se observou no grupo A1B2 somente com 75 dias. Aos 15 dias após primovacinação todos os grupos possuíam anticorpos acima do nível mínimo de proteção de 0,5UI/mL. As concentrações médias de anticorpos atingiram níveis abaixo do mínimo de proteção aos 30 dias em alguns animais de todos os grupos e, somente o grupo A2B2 manteve a média acima deste nível durante os 90 dias de avaliação. O indicativo de diferença ($p = 0,054$) entre a média da titulação de anticorpos do grupo A2B2 e os demais grupos, seis dias pós-vacinação, sugere que a proteção neste grupo ocorreu em menor tempo do que nos demais grupos. Os modelos de regressão estimam concentrações séricas de anticorpos maiores para os grupos A2B1 e A2B2, em relação aos grupos A1B2 e A1B1, obtendo-se, aos 15; 30 e 45 dias pós-vacinação, indicativos de diferenças entre as suas médias ($p = 0,067$; $p = 0,091$ e $p < 0,05$ respectivamente). Conclui-se que complexo homeopático, ministrado a ovinos sob restrição alimentar, possui efeito sobre o estresse, reduzindo a concentração sérica de cortisol e promovendo uma maior concentração sérica de anticorpos.

Link to paper: <http://www.revistasusp.sibi.usp.br/pdf/bjvras/v46n5/a10v46n5.pdf>

Vet Parasitol. 2008 Jan 25;151(1):68-73. Epub 2007 Oct 10.

Anthelmintic efficacy of neem (*Azadirachta indica* A. Juss) and the homeopathic product Fator Vermes in Morada Nova sheep.

[Chagas AC](#), [Vieira LS](#), [Freitas AR](#), [Araújo MR](#), [Araújo-Filho JA](#), [Araguão WR](#), [Navarro AM](#).

Embrapa Pecuária Sudeste, Rod Washington Luiz, Km 234, Caixa Postal 339, 13560-970, São Carlos, São Paulo, Brazil. carolina@cnpse.embrapa.br

Abstract

Gastrointestinal nematodes are becoming increasingly resistant to the commercial products used to control them. The cost of routine vermifuge applications on herds and the problem of residues in animal products and the environment have prompted research on the anthelmintic activity of plant extracts. This work examines the anthelmintic action of neem and the homeopathic product Fator Vermes in sheep kept in a pasture for 18 months. Forty sheep of the Morada Nova breed were divided into four treatments and the control, according to the EPG. During the experiment, each animal received 100 g/day of shredded corn and did not receive protein supplementation. In treatment 1 (control), the animals received only shredded corn. Treatment 2 received 1.6 g/(animal day) of the homeopathic product mixed with the shredded corn, and treatments 3, 4 and 5 received, respectively, 12.5, 25.0 and 37.5 g/(animal day) of dried *Azadirachta indica* leaves mixed with the shredded corn. The neem was administered for alternating 15-day periods and the homeopathic product daily for 18 months. There were 39 fortnightly fecal collections made to count the EPG, and fecal cultures were performed monthly. The following genera, in percentage, were identified: *Haemonchus*: 65.58±3.27, *Trichostrongylus*: 15.92±7.38 and *Oesophagostomum*: 18.50±6.22. The treatments evaluated were not effective in controlling gastrointestinal nematodes ($P>0.05$), whose mean log(10) counts (EPG +1) and standard errors for treatments 1-5 were respectively 3.55±0.28; 3.48±0.31; 3.90±0.29; 2.78±0.29 and 3.48±0.30. A significant effect ($P<0.0001$) was observed of the periods of the year when the 39 collections occurred. Because of the diet deficient in raw protein, the sheep had higher average EPG counts, for all the treatments, at the end of the dry season, and the opposite occurred in the middle of the rainy season.

Link to paper:

<http://www.alice.cnptia.embrapa.br/bitstream/doc/533939/1/APIAnthelminticefficacyofneemAzadirachtaindicaAJuss.pdf>

Indian J Exp Biol. 2001 Dec;39(12):1235-42.

Cytogenetical effects of sonication in mice and their modulations by actinomycin D and a homeopathic drug, Arnica 30.

[Chakrabarti J](#), [Biswas SJ](#), [Khuda-Bukhsh AR](#).

Department of Zoology, University of Kalyani, Nadia, India.

Abstract

Experiments were designed to examine if Actinomycin D, an antibiotic, and Arnica 30, a homeopathic drug used against shock and injury, can ameliorate cytogenetic

damage induced by single or multiple exposures to ultrasonication. Separate sets of healthy mice were directly exposed to sonication for two minutes either once or they received multiple exposures at an interval of 20 days. The mice were then assessed at different intervals, against suitable controls, using parameters like chromosome aberrations (CA), mitotic index (MI), sperm head anomaly (SHA) and micronucleated erythrocytes (MNE). Separate groups of sonicated mice were either orally administered with Arnica 30 (alcohol 30 in control) or injected intramuscularly with Actinomycin-D (AMD). Elevated frequencies of CA, MI, MNE and SHA were noted in sonicated series. AMD had genotoxic effects of its own and also had additive effects on sonication induced genotoxicity. Sonicated mice fed with Arnica 30 showed appreciably reduced genotoxicity as against alcohol 30 and distilled water fed controls, thereby showing ameliorating effect which may have human application. Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12018517>

Toxicol Lett. 2012 Apr 5;210(1):34-43. doi: 10.1016/j.toxlet.2012.01.002. Epub 2012 Jan 10.

[6]-Gingerol isolated from ginger attenuates sodium arsenite induced oxidative stress and plays a corrective role in improving insulin signaling in mice.

[Chakraborty D](#), [Mukherjee A](#), [Sikdar S](#), [Paul A](#), [Ghosh S](#), [Khuda-Bukhsh AR](#).

Department of Zoology, University of Kalyani, Kalyani, West Bengal, India.

Abstract

Arsenic toxicity induces type 2 diabetes via stress mediated pathway. In this study, we attempt to reveal how sodium arsenite (iAs) could induce stress mediated impaired insulin signaling in mice and if an isolated active fraction of ginger, [6]-gingerol could attenuate the iAs intoxicated hyperglycemic condition of mice and bring about improvement in their impaired insulin signaling. [6]-Gingerol treatment reduced elevated blood glucose level and oxidative stress by enhancing activity of super oxide dismutase (SOD), catalase, glutathione peroxidase (GPx) and GSH. [6]-Gingerol also helped in increasing plasma insulin level, brought down after iAs exposure. iAs treatment to primary cell culture of β -cells and hepatocytes in vitro produced cyto-degenerative effect and accumulated reactive oxygen species (ROS) in pancreatic β -cells and hepatocytes of mice. [6]-Gingerol appeared to inhibit/intervene iAs induced cyto-degeneration of pancreatic β -cells and hepatocytes, helped in scavenging the free radicals. The over-expression of TNF α and IL6 in iAs intoxicated mice was down-regulated by [6]-gingerol treatment. iAs intoxication reduced expression levels of GLUT4, IRS-1, IRS-2, PI3K, AKT, PPAR γ signaling molecules; [6]-gingerol mediated its action through enhancing the expressions of these signaling molecules, both at protein and mRNA levels. Thus, our results suggest that [6]-gingerol possesses an anti-hyperglycemic property and can improve impaired insulin signaling in arsenic intoxicated mice.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22285432>

Int J High Dilution Res. 2012;11(40):208.

Nux Vomica 200 CH reduced acute hypnotic effect of alcohol in young toads.

Chakraborty I, Sukul A, Sukul NC.

Abstract

Potentized Nux Vomica has been reported to produce antialcoholic effect in mice, rats and toads. The effect relates to consumption of alcohol and alcohol-induced loss of righting reflex (RR). RR's maintain normal erect posture of an animal and are centrally controlled in the midbrain. In the present study young toads, *Duttaphrynus melanostictus* were first treated with Nux vomica 200 CH and then partially immersed in 209 mM ethanol solution in such a way that their head remained above the level of ethanol solution. Toadlets were removed from the ethanol solution every 10 min, tested for the loss of RR and returned to the ethanol solution. Toadlets were placed in a supine position on a dry flat surface. Failure to right within 60 sec was considered as the loss of RR. The experiment was repeated 10 times. Control toadlets were pretreated with 90% ethanol instead of Nux Vomica 200 CH. The percentages of toadlets showing loss of RR, both in the control as well as in the Nux-treated groups, were shown in graphs against the duration of exposure to ethanol solution. Differences in the percentage distribution between the control and the treatment groups losing RR were tested by χ^2 test. All the experiments were conducted at room temperature. The percentage of toadlets losing RR increased with time of exposure to ethanol solution. The increase was significantly higher with the control than with the Nux-treated group. Nux Vomica 200 CH might have influenced the mid-brain of toadlets thereby countering the hypnotic effect of ethanol in the toadlets.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/578/618>

Int J High Dilution Res. 2013;12(44):88-90.

A live toad serves as a medium for the inter-group transfer of anti-alcoholic effect of potentized Nux vomica.

Chakraborty I, Sukul NC, Sukul A, Chakravarty R.

Abstract

Background: A homeopathic potency above 12 CH is devoid of original drug molecules because it has crossed the Avogadro number. It has long been hypothesized that a homeopathic potency carries the imprint of original drug molecules in the form of three dimensional water structures preserved by ethanol. When a nursing mother takes a potency for her ailing baby it is cured. It is thought that the potency taken by the mother has converted the water structure in her body including her milk which in turn has cured the baby. In a series of experiments Sukul and his co-workers demonstrated that the effect of a potency could be transferred from one group of plants/animals to another through water in capillaries [1, 2, 3]. In the present study we have shown that the anti-alcoholic effect of Nux Vomica 200 CH is transferred through the body of a live toad to other toads as in the case of mother to baby. A homeopathic potency shows UV spectra distinct from its diluent medium of aqueous ethanol.

Objectives: To demonstrate that a potency effect can be transferred through the body of a live toad to other groups of toads connected through water to the live toad.

Further, we want to see whether the UV spectra of drug solution and of water connected to the drug are similar in nature.

Methods: A live toad was held vertically with one hind limb dipped in Nux vomica 200 CH solution in a beaker and another limb in distilled water in another beaker. The second beaker was connected by wet cotton threads encased in polythene tubes to 5 beakers, each of which contained adult toads in distilled water. The hind limbs of the toad were greased at the base with vaseline to prevent seepage of water from one beaker to another over the surface of the hind limbs. A batch of toads was directly treated with Nux vomica 200 CH. An equal number of toads in distilled water served as the untreated control. After 30 min the control and the two batches of treated toads were kept separately in 209 mM ethanol solution. Toads, that stopped movement, were placed in a supine position on a dry surface. Failure to assume a normal sitting posture within a cutoff time of 60 sec was regarded as loss of righting reflex (RR). The experiment was replicated using large number of toads. UV spectra of Nux vomica 200 CH solution and of water before and after connection with the drug were obtained. After the experiment all the toads were released into their natural environment.

Results: The percentage of toads losing RR in the three groups of toads increased with time of exposure to 209 mM ethanol solution. The loss of RR was significantly delayed with the direct treatment group ($P < 0.001$, chi square test) and the connected groups ($P < 0.01$, χ^2 test) as compared to the control. The two former groups did not differ from each other significantly. UV spectra (Perkin-Elmer Lambda35) of Nux vomica 200 CH solution were similar to that of water connected to the drug solution.

Discussion: The skin of the ventral surface and of the limbs of the toads partly immersed in the anesthetic solution absorbs the solution directly [4]. Ethanol, after absorption through the skin interacts non-specifically with phospho-lipid bilayers at the lipid water interface of cell membrane. It alters the orientation of lipid head groups, and modifies the function of many different proteins in the central nervous system membranes thereby producing acute changes in many different cells and organs. Besides their effect on lipid bilayers alcohol also interacts directly with integral membrane proteins [5]. The biological effect of alcohol including anesthesia may result from a combination of alcohol-induced changes in cell membrane as well as specific membrane protein alcohol interactions [6].

A homeopathic potency such as Nux vomica 200 CH is thought to be specifically structured water preserved by ethanol. It is assumed that this drug after absorption through the skin modifies the structured water at the lipid-water interface thereby reducing the anesthetic effect of alcohol [7]. After absorption through one hind limb of a live toad the potentized drug modifies the global molecular network (GMN) of water inside the body of the toad. Thus water in contact with the other hind limb in the second beaker gets specifically structured and behaves as the potentized drug. From the second beaker the message of the drug is transmitted through capillary water in wet threads to other beakers containing water and test animals. The toads in the connected containers thus get the treatment effect as observed in our earlier study [3].

Conclusion: The antialcoholic effect of Nux vomica 200 CH could be transferred through the body of a live toad to other groups of toads. The drug did not undergo denaturation during its passage through the living body. That water carries the information of original drug is further evidenced by the spectral properties of water connected to the drug solution through capillary water.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/657/644>

Pharm Dev Technol. 2009;14(4):435-41. doi: 10.1080/10837450902748396.

Evaluation of *Blatta orientalis* (Q) nasal gel formulation in milk aspiration induced eosinophilia.

[Chandrakant Nimgulkar C](#),, [Patil SD](#), [Chauk DS](#).

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Abstract

BACKGROUND: The purpose of the present study was to develop intranasal delivery systems of the homeopathic anti-asthmatic remedy *Blatta orientalis* mother tincture (Q) using thermoreversible polymer Pluronic F127 (PF127) and mucoadhesive polymer Carbopol 934P (C934P).

METHODS: Formulations were modulated so as to have a gelation temperature below 34 degrees C to ensure gelation at physiological temperature after intranasal administration. Its gelation temperature, mucoadhesive strength, viscosity and gel strength were studied. *B. orientalis* (Q) nasal gel was tested with recurrent milk aspiration to determine whether it produces changes in eosinophilia in a murine model of asthma.

RESULT: The gelation temperatures of the formulations and mucoadhesive strength, determined using sheep nasal mucosal membrane, increased by the addition of increasing concentrations of Carbopol. The results of milk aspiration induced eosinophilia, *B. orientalis* (Q) nasal gel significantly ($P < 0.001$), decreased eosinophil cell count as compared with toxicant by using in absolute eosinophilia count method. Finally, histopathological examination did not detect any damage during in vivo studies.

CONCLUSION: The PF127 gel formulation of *B. orientalis* (Q) with in situ gelling and mucoadhesive properties with increased permeation rate is promising for prolonging nasal residence time and thereby nasal absorption.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19552565>

Homeopathy. 2011 Jul;100(3):138-43.

Anti-asthmatic and anti-anaphylactic activities of *Blatta orientalis* mother tincture.

[Chandrakant Nimgulkar C](#), [Dattatray Patil S](#), [Dinesh Kumar B](#).

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Abstract

OBJECTIVES: To study the anti-asthmatic and anti-anaphylactic activities of *Blatta orientalis* mother tincture (*B. orientalis* MT), a homeopathic medicine, in experimental animal models.

METHODS: The anti-asthmatic activity of *B. orientalis* MT was studied in the bronchial hyperactivity models, acetylcholine and histamine induced bronchospasm, in guinea pigs. Anti-anaphylactic activity was tested by active and passive anaphylaxis models in rats, anti-eosinophilic activity was tested by milk-induced eosinophilia in mice.

RESULTS: Significant protection against acetylcholine and histamine aerosol-induced bronchospasm in *B. orientalis* MT treated guinea pigs was seen. In active and passive anaphylaxis albino rat models significant reduction in mesenteric mast cells degranulation, serum IgE level and eosinophil cell count was observed in the *B. orientalis* MT treated rat group when compared with the sensitized control rat group.

CONCLUSION: These results reveal broad activity of *B. orientalis* MT. It may have nonselective anti-asthmatic activity. The anti-anaphylactic activity of *B. orientalis* MT may be due to mast cell stabilization, suppression of IgE and eosinophil cell count.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21784330>

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A preliminary Study on Caulophyllum as an Implantation Interrupter.

Chandrasekhar K, Rao CV.

J Reprod Fert. 1974;38:236-237.

Observations on the Effect of Low and High Doses of Caulophyllum on the Ovaries and the Consequential Changes in the Uterus and Thyroids in Rats.

Chandrasekhar K, Sarma GHR.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/4842315>

J Reprod Fert. 1974;38:245-246.

Studies on the Effect of Caulophyllum on Implantation in Rats.

Chandrasekhar K, Rao CV.

Ind J Hom Zootomy. 1975;16:121-127.

Effect of Caulophyllum 200 and 10.000 Potencies on the Ovaries, the Uteri and the Thyroids of Rats.

Chandrasekhar K, Sarma GHR.

Ind J Hom Zootomy. 1975;16:199-204.

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Chandrasekhar K, Sarma GHR.

J Res Ind Med Hom. 1976;11:48-55.

Effect of Pulsatilla Nigra, a Homoeopathic Drug, on the Uteri and Estrus Cycles in Albino Rats.

Chandrasekhar K, Prasad S, Rao CV.

J Res Ind Med Hom. 1977;12:16-24.

Effect of Hypothalamic Extract of Ovariectomised and 200 and 10.000 Potencies of Caulophyllum administered Rats on the Pituitaries, the Thyroids, the Uteri, and the Ovaries of Normally Cycling Rats in Oestrus.

Chandrasekhar K, Rao CV, Kumar S, Prasad S.

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Morpho-Histological and Psychological Analysis of the Anti-Fertility Effects of Pulsatilla.

Chandersekhar K, Velicheti SH.

Homeopathy. 2011 Oct;100(4):270-4.

Homeopathic and integrative treatment for feline hyperthyroidism--four cases (2006-2010).

[Chapman SF.](#)

The Animal Medical Center of Watkins Park, Cheltenham, MD 20623, USA.

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Abstract

Hyperthyroidism is a frequent veterinary problem, particularly in elderly cats. Homeopathic treatment and other integrative modalities were provided for four hyperthyroid cats whose owners did not want conventional treatment. Symptomatic homeopathic treatment with Thyroidinum was helpful in one cat. All cats were prescribed an appropriate individualized homeopathic remedy. All four cats showed resolution of clinical signs; three attained normal thyroid hormone levels. Three cats later received acupuncture and/or herbal medicines; two cats later received symptomatic homeopathic remedies. Two cats are thriving after over 3.5 and 4.25 years of treatment; two were euthanized for unrelated problems after 3 and 4 years of treatment. Homeopathic and complementary therapies avoid the potential side effects of methimazole and surgical thyroidectomy, they are less costly than radioactive iodine treatment, and they provide an option for clients who decline conventional therapies.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21962203>

Homeopathy. 2007 Apr;96(2):90-4.

Clinical management of babesiosis in dogs with homeopathic *Crotalus horridus* 200C.

[Chaudhuri S](#), [Varshney JP](#).

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Abstract

Homeopathic *Crotalus horridus* 200C was evaluated in 13 clinical cases of babesiosis in dogs, compared with another 20 clinical cases treated with diminazine. Babesiosis is an important tropical tick-borne haemoprotozoan disease in dogs clinically manifested by anorexia, dehydration, temperature, dullness/depression, diarrhoea/constipation, pale mucosa, hepatomegaly, vomiting/nausea, splenomegaly, distended abdomen/ascites, yellow coloured urine, emaciation/weight loss, and ocular discharge. The diagnosis of babesiosis was based on cytological evidence of *Babesia gibsoni* in freshly prepared blood smears. The dogs were treated with oral *C. horridus* 200C, 4 pills four times daily for 14 days (n=13) or diminazine aceturate 5 mg/kg single intramuscularly dose (n=20). All the dogs were administered 5% Dextrose normal saline at 60 ml/kg intravenously for 4 days. Initial clinical scores were similar in both groups and showed similar progressive improvement with the two treatments over 14 days. Parasitaemia also improved in both groups, but haematological values showed no change. No untoward reactions were observed. It appears that *C. horridus* is as effective in causing clinical recovery in moderate cases of canine babesiosis caused by *Babesia gibsoni* as the standard drug diminazine. Large scale randomized trials are indicated for more conclusive results.

Link to paper: <http://www.iberhome.es/boletin/docs/babes.pdf>

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Choudhury, H.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brijh/article/S0007-0785%2880%2980049-4/fulltext>

Hom Rays.1986;11:252-253.

Homoeopathy - A new Approach in animal Tumour Model.

Chowdhury H.

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Treatment of clinically diagnosed equine sarcoid with a mistletoe extract (*Viscum album austriacus*).

[Christen-Clottu O](#), [Klocke P](#), [Burger D](#), [Straub R](#), [Gerber V](#).

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Abstract

BACKGROUND: Equine sarcoids (ES) are common, difficult to treat, and have high recurrence rates. *Viscum album* extracts (VAE) are used in human cancer treatment. **HYPOTHESIS:** That therapy with VAE (Iscador P) is effective in the treatment of ES. **ANIMALS:** Fifty-three horses (444 ES); 42 were treated with VAE or placebo as monotherapy; 11 were treated with VAE or placebo after selective excision of ES. **METHODS:** Prospective, randomised, blinded, clinical trial. Horses were randomly assigned to treatment (VAE; n=32) or control group (Placebo; n=21). One milliliter of VAE (Iscador P) in increasing concentrations from 0.1 to 20 mg/mL or physiological NaCl solution was given SC 3 times a week over 105 days. Number, localization, and type of the ES were documented over 12 months. A subset of 163 clinically diagnosed equine sarcoid (CDES) lesions (95 VAE, 68 Placebo) was evaluated in detail, considering clinical findings and tumor volume.

RESULTS: No undesired adverse effects were observed except for mild edema at the injection site in 5 of 32 horses (16%). Complete or partial regression was observed in 13 horses of the VAE group (41%) and in 3 of the control horses (14%; P<.05). After VAE treatment, 48 of 95 CDES (67%) showed an improvement compared with 17 of 68 CDES in the control group (40%; P<.01). Twenty-seven CDES had disappeared completely in the VAE group (38%) compared with 9 CDES in the control group (13% NS).

CONCLUSIONS AND CLINICAL IMPORTANCE: VAE (Iscador P) represents a safe and effective treatment for CDES.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21039860>

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Study of immune stimulation attitude of an homeopathic complexe in meat chickens.

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Ann Homéop Fr. 1963;5(10):743–755.

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[Hepatitis and experimental testing of homeopathic medications].

[Article in French]

Cier A, Boiron J, Quenot J.

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Diabète alloxanique et dilutions infinitésimales d'alloxane.

[Alloxan diabetes and infinitesimal dilutions of alloxan].

[Article in French]

Cier A, Boiron J, Quenot J.

Ann Homéop Fr. 1965;7(8):597–600

Essais Pharmacologiques de nouvelles dilutions korsakowiennes.

[Pharmacological testing of new korsakowiennes dilutions].

[Article in French]

Cier A, Boiron J, Vingert C.

Ann Homéop Fr. 1966;8:137-145.

Sur le traitement du diabète expérimental par des dilutions infinitésimales d'alloxane.

[On the treatment of experimental diabetes by infinitesimal dilutions of alloxan].

[Article in French]

Cier A, Boiron J, Vingert C, Braise J.

Ann Homéop Fr. 1968;10(3):180-186.

Effets préventifs d'Histamine 7 CH et de Poumon Histamine 7 CH sur les souris sensibilisées par Hemophilus pertussis.

[Preventive Effects of Histamine 7 CH and Lung Histamine 7 CH in mice sensitized with Hemophilus pertussis].

[Article in French]

Cier A, Boiron J, Braise J.

Ann Homéop Fr. 1975;17(4):395-402.

Pharmacologie homéopathique.

[Homeopathic pharmacology].

[Article in French]

Cier A, Boiron J.

Int J High Dilution Res. 2013;12(44):143-145.

Zincum metallicum highly diluted and Trypanosoma cruzi mice infection: a protocol to evaluation.

Ciupa L, da Veiga FK, Portocarrero AR, Sandri PF, de Souza Rodrigues WDN, Bonamim LV, Bellavite P, Quaresma CH, Aleixo DL, de Araújo SM.

Abstract

Background: The International Multicentre Project on High Dilutions suggests evaluating the effect of the compound Zincum metallicum in different experimental models.

Aim: Evaluate the effect of the substance high diluted Zincum metallicum in Trypanosoma cruzi murine experimental infection.

Methodology: Was performed a blind, controlled, randomized by chance study, using 121 swiss male mice, 56 days old, divided into groups according to treatment: CI-infected and untreated; CNI-uninfected and untreated; infected and treated daily with: ZNpTD - Zinc 5cH pure; ZNTD- 5cH Zinc and LacTD- 5CH Lactose; ZNP-infected animals and treated with pure Zinc 5ch 48 hours before and after the infection. Subsequently animals were treated 56/56 hours until the 9th day of the infection. Animals were inoculated with 1.400 blood trypomastigotes, strain Y-T. cruzi, intraperitoneally. Medicine Zinc 5cH was handled according to the Brazilian Homeopathic Pharmacopoeia. Microbiological testing (RDC n° 67MS-Brazil), in vivo biological test and toxicity test was performed. Medicines were diluted in natural water (1mL/100mL). Clinical (temperature, weight, water/food intake and excrete) [1,2] and parasitological parameters (pre-patent and patent period, peak parasitemia, and parasitemia overall survival time)[3] were assessed daily. The behavior of the animals was assessed by automated Noldus EthoVision XT6 (Noldus, Leesburg, Netherlands). Serum and organs were collected in 0, 8 and 12 days after infection. The cytokine profile is going to be assessed using Cytometric Bead Array Mouse Th1/Th2/Th17 Cytokine Kit (BD). Nests of amastigotes, amastigotes/nest and inflammatory focus number on heart, spleen, liver, skeletal muscle and intestine were evaluated in histopathological sections stained with hematoxylin-eosin. Data is going to be compared using BioEstat 5.0, 5% of significance.

Considerations: Organisms treated with ultra diluted and dynamized medications show privileged clinical evolution with behavior more balanced[4]. The murine infection model using the Y strain of T. cruzi progresses with inflammation and immune changes[5]. Zincum metallicum participates in various cellular mechanisms[6]. Given this, the parameters listed in this protocol will contribute to the objective of the Multicenter Project to evaluate a single compound in different biological models.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/649/672>

Homeopathy. 2010 Jul;99(3):189-91.

Database on veterinary clinical research in homeopathy.

[Clausen J](#), [Albrecht H](#).

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Abstract

OBJECTIVE: The aim of the present report is to provide an overview of the first database on clinical research in veterinary homeopathy.

PROCEDURES: Detailed searches in the database 'Veterinary Clinical Research-Database in Homeopathy' (<http://www.carstens-stiftung.de/clinresvet/index.php>).

RESULTS: The database contains about 200 entries of randomised clinical trials, non-randomised clinical trials, observational studies, drug provings, case reports and case series. Twenty-two clinical fields are covered and eight different groups of species are included. The database is free of charge and open to all interested veterinarians and researchers.

CONCLUSION: The database enables researchers and veterinarians, sceptics and supporters to get a quick overview of the status of veterinary clinical research in homeopathy and alleviates the preparation of systematical reviews or may stimulate reproductions or even new studies.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20674843>

Homeopathy. 2010 Oct;99(4):263–270.

Infection models in basic research on homeopathy.

[Jürgen Clausen](#), [Roeland van Wijk](#), [Henning Albrecht](#)

Abstract

Introduction: The objective of this study was to search for effective agents for the treatment of infections in animals or infected cell lines.

Methods: The Homeopathic Basic Research experiments (HomBRex) database (<http://www.carstens-stiftung.de/hombrex>) on model biological systems in homeopathic research was searched. Eligible experiments were reviewed and analysed.

Results: The database contains 48 eligible experiments published from 1832 to 2009. Causative pathogens were bacteria, fungi, viruses, proto- and metazoa. In the experiments, various parameters were observed and a large set of medicines was investigated. In eight of the 48 experiments, at least one of the investigated medicines was selected according to the similia principle. Nosodes and homeopathic complexes were investigated in 8 and 14 experiments respectively. Mice were the most often used host organisms (13 experiments). In 31 experiments at least one homeopathic medicine was found effective for treatment.

Conclusion: The results of basic research experiments may invigorate new clinical trials that investigate complementary treatments for infectious diseases. However, all experiments reviewed here await replication and no clear-cut conclusion can be drawn regarding the transferability of *in vitro* results to *in vivo* outcomes.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S1475491610000834>

Homeopathy. 2011 Oct;100(4):288-92. doi: 10.1016/j.homp.2011.07.003.

Review of the use of high potencies in basic research on homeopathy.

[Clausen J](#), [van Wijk R](#), [Albrecht H](#).

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info@carstens-stiftung.de

Abstract

The HomBRex database includes details of about 1500 basic research experiments in homeopathy. A general overview on the experiments listed in the HomBRex database is presented, focusing on high dilutions and the different settings in which those were used. Though often criticised, many experiments with remedies diluted beyond Avogadro's number demonstrate specific effects. A total of 830 experiments employing high potencies was found; in 745 experiments of these (90%), at least one positive result was reported. Animals represent the most often used model system (n=371), followed by plants (n=201), human material (n=92), bacteria and viruses (n=37) and fungi (n=32). Arsenicum album (Ars.) is the substance most often applied (n=101), followed by Sulphur (Sulph.) and Thuja (Thuj.) (n=65 and 48, respectively). Proving, prophylactic and therapeutic study designs have all been used and appear appropriate for homeopathy basic research using high dilutions. The basic research data set to support specific effects unique to high dilutions and opposite to those observed with low dilutions is, to date, insufficient. Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21962205>

Complementary Therapies In Medicine. 2013 Apr;21(2):115-20.

Veterinary Clinical Research Database for Homeopathy: Placebo-controlled trials.

[J. Clausen](#), [H. Albrecht](#), [R.T. Mathie](#)

Abstract

Background: Veterinary homeopathy has led a somewhat shadowy existence since its first introduction. Only in the last three decades has the number of clinical trials increased considerably. This literature is generally not well perceived, which may be partly a consequence of the diffuse and somewhat inaccessible nature of some of the relevant research publications. The Veterinary Clinical Research Database for Homeopathy (VetCR) was launched in 2006 to provide information on existing clinical research in veterinary homeopathy and to facilitate the preparation of systematic reviews.

Objective: The aim of the present report is to provide an overview of this first database on clinical research in veterinary homeopathy, with a special focus on its content of placebo controlled clinical trials and summarising what is known about placebo effects in animals.

Results: In April 2012, the VetCR database contained 302 data records. Among these, 203 controlled trials were identified: 146 randomised and 57 non-randomised. In 97 of those 203 trials, the homeopathic medical intervention was compared to placebo.

Comment: A program of formal systematic reviews of peer-reviewed randomised controlled trials in veterinary homeopathy is now underway; detailed findings from the program's data extraction and appraisal approach, including the assessment of trial quality (risk of bias), will be reported in due course.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0965229912001653>

BMC Complement Altern Med. 2007 Jan 17;7:1-10.

Rat models of acute inflammation: a randomized controlled study on the effects of homeopathic remedies.

[Conforti A](#), [Bellavite P](#), [Bertani S](#), [Chiarotti F](#), [Menniti-Ippolito F](#), [Raschetti R](#).

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<aconforti@sfm.univr.it>

Abstract

BACKGROUND: One of the cardinal principles of homeopathy is the "law of similarities", according to which patients can be treated by administering substances which, when tested in healthy subjects, cause symptoms that are similar to those presented by the patients themselves. Over the last few years, there has been an increase in the number of pre-clinical (in vitro and animal) studies aimed at evaluating the pharmacological activity or efficacy of some homeopathic remedies under potentially reproducible conditions. However, in addition to some contradictory results, these studies have also highlighted a series of methodological difficulties. The present study was designed to explore the possibility to test in a controlled way the effects of homeopathic remedies on two known experimental models of acute inflammation in the rat. To this aim, the study considered six different remedies indicated by homeopathic practice for this type of symptom in two experimental edema models (carrageenan- and autologous blood-induced edema), using two treatment administration routes (sub-plantar injection and oral administration).

METHODS: In a first phase, the different remedies were tested in the four experimental conditions, following a single-blind (measurement) procedure. In a second phase, some of the remedies (in the same and in different dilutions) were tested by oral administration in the carrageenan-induced edema, under double-blind (treatment administration and measurement) and fully randomized conditions. Seven-hundred-twenty male Sprague Dawley rats weighing 170-180 g were used. Six homeopathic remedies (Arnica montana D4, Apis mellifica D4, D30, Atropa belladonna D4, Hamamelis virginiana D4, Lachesis D6, D30, Phosphorus D6, D30), saline and indomethacin were tested. Edema was measured using a water-based plethysmometer, before and at different times after edema induction. Data were analyzed by ANOVA and Student t test.

RESULTS: In the first phase of experiments, some statistically significant effects of homeopathic remedies (Apis, Lachesis and Phosphorus) were observed (the reduction in paw volume increase ranging from 10% to 28% at different times since edema induction). In the second phase of experiments, the effects of homeopathic remedies were not confirmed. On the contrary, the unblinded standard allopathic drug indomethacin exhibited its anti-inflammatory effect in both experimental phases (the reduction in paw volume increase ranging from 14% to 40% in the first phase, and from 18% to 38% in the second phase of experiments).

CONCLUSION: The discrepancies between single-blind and double-blind methods in animal pharmacological research are noteworthy and should be better investigated, also in non-homeopathic research.

Link to paper: <http://www.biomedcentral.com/1472-6882/7/1>

Med Vet Entomol. 2011 Mar;25(1):7-11. doi: 10.1111/j.1365-2915.2010.00909.x. Epub 2010 Sep 6.

Efficiency of sulphur in garlic extract and non-sulphur homeopathy in the control of the cattle tick *Rhipicephalus (Boophilus) microplus*.

[Costa LM Jr](#), [Furlong J](#).

Curso de Zootecnia, Centro de Ciências Agrárias e Ambientais, Universidade Federal do Maranhão, Chapadinha, Maranhão, Brazil. livioslz@yahoo.com

Abstract

The objective of the present work was to evaluate the efficacy of a non-sulphur-based homeopathic preparation and a sulphur-containing natural product derived from *Allium sativum* (Linnaeus) against infestation by the cattle tick *Rhipicephalus (Boophilus) microplus* (Canestrini) (Acari: Ixodidae). A total of 24 crossbred calves (7 : 8 Holstein : Zebu), aged 6-8 months and maintained in individual stables under tick-free conditions, were divided into three groups. Group 1 (control group) received no treatment; Group 2 was treated with 0.01 g/day of the homeopathic preparation Fator C&MC(®), and Group 3 was treated with 20 g/day of Enxofre-*Allium sativum*(®). After adaptation to the diet for 1 month, each calf was subjected to artificial infestation with 8000 *R. (B.) microplus* larvae (aged 7-14 days) twice per week over a 5-month period. Numbers of engorged females were recorded every 14 days and samples of freely released engorged females were collected at 14-day intervals commencing 3 months after the start of the experiment. The engorged females were weighed, incubated for 15 days under biochemical oxygen demand conditions at 27 ± 1 °C and relative humidity >85%, and the weights of the egg masses produced were recorded. Other biological parameters, including reproduction estimate, reduction in oviposition and efficiency of treatment, were determined. A significant reduction in the number of engorged females was detected on animals treated with Enxofre-*Allium sativum*(®) (Group 3) in comparison with the other two groups. The overall efficiency of the treatment with the sulphur-containing product was 64%, whereas that of the homeopathic preparation was 26%. Under the experimental conditions established, Enxofre-*Allium sativum*(®) can reduce the intensity of the *R. (B.) microplus* infestation.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20819153>

Vet J. 2008 Jul;177(1):80-8. Epub 2007 Jun 14.

A double-blind placebo-controlled study into the efficacy of a homeopathic remedy for fear of firework noises in the dog (*Canis familiaris*).

[Cracknell NR](#), [Mills DS](#).

Animal Behaviour, Cognition and Welfare Group, Department of Biological Sciences, University of Lincoln, Riseholme Park, Lincoln LN2 2LG, UK.

Abstract

Seventy-five dogs that showed a fear response to fireworks participated in a double-blinded, placebo-controlled clinical trial to assess the efficacy of a homeopathic remedy for the alleviation of their behavioural signs. Dogs were randomly assigned

to one of two treatments; the homeopathic treatment or the placebo treatment. At the baseline assessments the owners identified the behavioural signs of fear that their dogs normally displayed in response to fireworks, rated their frequency and intensity, and assessed the global severity of their dog's responses. These measures were repeated at the final assessment and owners also completed weekly diaries for the length of the trial. There were significant improvements in the owners' rating of 14/15 behavioural signs of fear in the placebo treatment group and all 15 behavioural signs in the homeopathic treatment group. Both treatment groups also showed significant improvement in the owners' rating of the global severity of their dog's responses. However, there was no significant difference in the response seen between the two treatment groups.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17572119>

J Vet Behav. 2011;6(1):21-30.

An evaluation of owner expectation on apparent treatment effect in a blinded comparison of 2 homeopathic remedies for firework noise sensitivity in dogs

[Nina Rachel Cracknell](#), [Daniel Simon Mills](#)

Animal Behavior, Cognition and Welfare Group, Department of Biological Sciences, University of Lincoln, Lincoln, United Kingdom.

Abstract

A blinded and randomized study was carried out to investigate whether dog owners would report different treatment effects depending on whether they knew they might be administering a placebo, versus if they knew they were definitely administering a homeopathic remedy. A secondary aim was to determine the consistency of owner reports of treatment effect across multiple trial periods. A total of 73 dogs with a stable, predictable, and easily assessable response to firework noises were enrolled and randomly allocated to receive 1 of the 2 homeopathic preparations along with a basic behavior modification program. Treatment A was a homeopathic treatment formulated for firework noise sensitivity that had previously been tested in a placebo-controlled study by the authors, and Treatment B was a different formulation for the same condition. The same allocated treatment was trialed on 2 occasions by all participants to allow assessment of owner-report reliability. It was found that knowledge of participating in a placebo-controlled trial had no effect on the owners' perception of treatment effect, and that their reports of effect were consistent across both trial periods. No specific effect of homeopathic treatment was found in this study; however, it was observed that the reported behavioral effects that followed each treatment were similar across the 2 firework periods, but that there was a consistently different pattern of behavioral effects reported between Treatment groups A and B. These results might be ascribed to either a treatment or population effect. We suggest that examination of the consistency of owner-reported effects within and between treatments may be used as part of the suite of methodologies available to investigate whether any specific effect can be ascribed to homeopathic interventions.

Link to abstract/paper: <http://www.journalvetbehavior.com/article/S1558-7878%2810%2900104-8/abstract>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Efeito da Medicação Homeopática de Arnica Montana e Ruta Graveolens sobre o Ganho de Peso, Consumo de Ração e Água e Conversão Alimentar em Frangos de Corte.

[Effects of Homeopathic Medication Arnica Montana and Ruta Graveolens over Weight Gain, Food and Water Consumption and Food Conversion in Broilers].

[Article in Portuguese]

Cruvinel HMR, Chaves AH, Goloubeff B.

English Abstract

Stress over broilers musculoskeletal system can be understood as quality of life derangement and nutritional imbalance in consequence of loss of well-being. 60 broilers were transferred from the CEFET-Uberaba's aviary to individual cages, picked up in different days (5 groups of 12 broilers). 40 were submitted to a tenorrafy of the right foot's medium finger flexor (8 in each group). Half of them were treated with Arnica montana 12 CH on the first week and Ruta graveolens 6CH on the second, offered in drinking water. The weight gain, feed and water in take and feed conversion were measured. Although only feed conversion of the treated group were higher ($P>0,05$), weight gain, feed and water intake were numerically favorable for the group that received the homeopathic medication.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/218/238>

Int J High Dilution Res. 2013;12(44):109-111.

Effectiveness of different preparations homeopathic Arnica montana experimental treatment of poisoning with poison Philodryas olfersii.

D'Aprile L, da Rocha MMT, Motta PD, de Paula Coelho C, dos Santos CR, Bonamin LV.

Abstract

The administration of antivenom is not recommended in poisonings caused by snakes of the species *Philodryas olfersii*. Thus, any homeopathic or allopathic treatment may ultimately contribute to the brief recovery of patients. The aim of this work is to study the effects of different preparations of Arnica montana 6cH in experimental poisoning with the venom of *P. olfersii* in mice. Therefore, Swiss mice, males and adults were inoculated in the footpad with venom *P. olfersii* blind and treated with Arnica montana 6cH prepared by conventional method and device simulator commercial use. One group was treated with vehicle dinamized. The groups were randomly coded as A, B, C, D, the latter being the control group, which received no treatment. The development of inflammatory edema generated within 24 hours was evaluated in this phase of the study.

During the tests the following behavioral data was recorded:

- Animals of groups A and B remained calm, quiet, eating a little, drinking a little water and slept most of the time;
- The animals of group C got always more hectic when compared to the animals in Groups A and B during handling and licking the paw was inoculated licked their paw

where the poison was which may be a sign of pain. Ate and drank enough, ran from one side to the other of the cage, fought the first two hours of the experiment, calming down only after the second hour;

- The animals of group D were more agitated when compared to other groups.

Licking his paw where the poison was inoculated, all the time, showing sign of pain. They moved a lot, fought, ate and drank well, digged, tried to nest, hung up on the grid. They calmed down a little after the second hour of the beginning of the experiment, but even this way remained very agitated when compared to other groups of animals.

This behavior was repeated every day in all the groups, when each animal followed the pattern described above. The evolution of edema after the venom inoculation showed differences between the groups. However, the medicines code break (A, B and C) will be held only after the statistical analysis, the end of the study, to ensure the conduct of subsequent steps in blind. Table 1 shows the average and standard deviation of the thickness of the legs in different groups.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/674/654>

J Submicrosc Cytol Pathol. 2002 Jul;34(3):255-63.

Analysis of IL-2, IFN-gamma and TNF-alpha production, alpha5 beta1 integrins and actin filaments distribution in peritoneal mouse macrophages treated with homeopathic medicament.

[Da Rocha Piemonte M](#), [De Freitas Buchi D](#).

Department of Cellular Biology, Federal University of Paraná, Curitiba, PR, Brazil.
buchi@bio.ufpr.br

Abstract

The newer forms of immune modulatory therapy are aimed at specific cells or cytokines that contribute to the immune response. These forms of immunotherapy have been referred to as 'biological response modifiers'. Our lab was interested in investigating if a homeopathic medicament 'Metodo Canova' (MC), sold in homeopathic drugstores, does enhance immunological system responses acting through macrophages pathway. Mice peritoneal macrophages were cultivated with or without homeopathic medicament for 24 h for alpha5, beta1 and actin filaments distribution analyses through immunolabelling for confocal microscopy. To detect the IL-2, IFN-gamma and TNF-alpha production these cells were cultivated for 48 h with or without medicament, followed by analyses of these cytokines in supernatant culture with ELISA kits. It was observed differences in morphology and molecular distribution (alpha5 and beta1 integrins, actin filaments and Fc receptors) between the groups control and treated with MC. In control group macrophages had the morphology of resident cells and in MC treated group macrophages were more spread, had many cellular projections and a substantial increase in cytoplasmic volume. In addition, macrophages culture with two doses of MC showed that TNF-alpha production decreased when compared with control group.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12408358>

Rev Bras Parasitol Vet. 2006 Jan-Mar;15(1):23-7.

Efficacy of homeopathic treatment against natural infection of sheep by gastrointestinal nematodes.

[da Rocha RA](#), [Pacheco RD](#), [Amarante AF](#).

UNESP-Universidade Estadual Paulista, Departamento de Parasitologia, Instituto de Biociências, Caixa Postal 510, Botucatu, SP, 18618-000. rrabdallah@hotmail.com

Abstract

The efficacy of the homeopathic treatment with the Fator Vermes, administered according to the manufacturer's recommendations, was evaluated against gastrointestinal nematodes infections in sheep. The experiment was divided into two phases: in the first phase (January/06/2004 to April/30/2004), the animals of the treated (n=10) and control (n=10) groups were treated individually with conventional anthelmintics to avoid deaths. In the second phase (April/30/2004 to July/06/2004), the sheep from the group that received the Fator Vermes were treated as they had been in the previous phase, while the control group animals were treated with conventional anthelmintics at 14 day intervals. In the first phase of the experiment, there was no significant difference ($P>0.05$) between group means regarding egg counts in feces (EPG), weight gain, or packed cell volume (PCV). Meanwhile, in the second phase, the control group sheep had a significantly higher weight gain, higher PCV values, and lower EPG counts. Infective larvae of *Haemonchus* spp., *Trichostrongylus* spp., *Cooperia* spp., and *Oesophagostomum* spp. were identified in the fecal cultures. After six months of daily treatment with the Fator Vermes, it was not possible to substantiate the product's benefits in both sheep health and productivity or in the prophylaxis of gastrointestinal nematode infections.

Link to paper: http://www.cbpv.com.br/rbpv/documentos/1512006/c15123_27.pdf

Int J High Dilution Res. 2011;10(36):268-270.

Calcarea carbonica derivative complex (M8) as adjuvant treatment of inflammatory mammary carcinoma in a dog.

da Silva DM, da Lozzo EJ, de Oliveira CC, de Freitas Buchi D, Guérios SD.

Federal University of Paraná, Brazil.

Abstract

Background: Inflammatory mammary carcinoma (IMC) is locally aggressive, fast growing, highly malignant tumor that affects humans and dogs. Affected dogs usually are presented with generalized edema, pain, erythema, and skin ulceration in mammary glands. Surgery is not recommended and an effective treatment has not been established [1]. *Calcarea carbonica* derivative complex (M8) has demonstrated anticancer properties in a murine model, by improving innate immune response against tumor cells [2,3]. M8 is a complex high diluted medication comprised of a 10%-20% concentration of *Calcarea carbonica*, *Aconitum napellus*, *Arsenicum album*, *Asa foetida*, *Conium maculatum*, *Ipecacuanha*, *Phosphorus*, *Rhus tox*, *Silicea*, *Sulphur*, and *Thuya occidentalis*, all in decimal dilutions of Hahnemann in distilled water and submitted to vigorous shaking.

Aim: Describe an association of M8 and piroxicam (Non-steroidal anti-inflammatory drug) to treat a dog with IMC.

Discussion: A 7 years old, mixed breed intact female dog was presented to the Federal University of Parana - Veterinary Hospital, Curitiba (HV-UFPR) for mammary glands examination. The owners related inflammation of mammary glands with clinical course of approximately 10 days, which was treated for mastitis (cephalexin and metergoline) without clinical improvement. Clinical examination revealed erythema, increased skin warmth, pain on palpation, and plaque involving the 4th and 5th right mammary glands. Abdominal ultrasound and serum biochemistry were unremarkable. Thoracic radiographs showed suspicious images of pulmonary metastasis. Fine needle biopsy was taken for cytologic examination. Cytological interpretation was a malignant epithelial neoplasm, probably a mammary carcinoma. Diagnosis of IMC was based on clinical signs and cytopathology. Dog was treated with oral (0.5 mL) and topical M8 twice a day for 15 days, and pyroxicam, 0.3mg/kg, PO, q24h. Clinical improvement was observed 7 days after starting treatment. Until present date (70 treatment days with M8), dog has no clinical signs of IMC, and does not show signs of disease progression.

Conclusion: The present report suggests that M8 associated with piroxicam contributes to improvement of IMC dog's quality of life and survival rate. However, further clinical studies are needed to evaluate response to treatment in patients diagnosed with IMC.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/468/479>

Int J High Dilution Res. 2012;11(40):166-167.

Oral, topical, and inhalation of *Calcarea carbonica* derivative complex (M8) to treat inflammatory mammary carcinoma in dogs.

da Silva DM, da Lozzo EJ, de Freitas Buchi D, de Oliveira CC, Guérios SD.

Abstract

Background: Inflammatory mammary carcinoma (IMC) is locally aggressive, fast growing, highly malignant tumor that affects humans and dogs. Affected dogs usually are presented with generalized edema, pain, erythema, and skin ulceration in mammary glands. Surgery is not recommended and an effective treatment has not been established [1]. *Calcarea carbonica* derivative complex (M8) has demonstrated anticancer properties in a murine model, by improving innate immune response against tumor cells [2]. M8 is a complex high diluted medication comprised of *Calcarea carbonica* 16x, *Aconitum napellus* 20x, *Arsenicum album* 18x, *Asa foetida* 20x, *Conium maculatum* 17x, *Ipecacuanha* 13x, *Phosphorus* 20x, *Rhus toxicodendron* 17x, *Silicea* 20x, *Sulphur* 24x, and *Thuya occidentalis* 19x, dilution procedures have followed standard methodology described at the Brazilian Homeopathic Pharmacopoeia.

Aims: To describe different routes of M8 administration associated with oral pyroxicam (non-steroidal anti-inflammatory drug) to treat dogs with IMC.

Methodology: Three female dogs with 10 years old median age were presented to the Veterinary Teaching Hospital at Federal University of Parana, Curitiba (HV-UFPR) with cytological and clinical diagnosis of IMC. Patients were treated with oral (0.5 mL, q12h), topical (q12h) and inhalatory (2 mL, q24h, through an ultrasonic

inhalation device) M8, and oral pyroxican (0.3mg/kg, q24h). Thoracic radiographs showed pulmonary metastasis in all dogs.

Results: 7 days after initiating treatment all patients had clinical improvement. It was observed reduction on mammary glands inflammation and decreased pain sensitivity. One patient had 8 month of complete remission. The other two patients died 1 and 2 month after initial treatment. However none of the patients had pulmonary progressive disease, showed by radiographic examinations. Owners revealed treatment satisfaction in regards to quality of life improvement, easy M8 administration, good M8 palatability for dogs, and inflammation reduction.

Conclusion: The present report suggests that M8 influenced positively the anti-inflammatory treatment.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/594/583>

Int J High Dilution Res. 2008;7(22):3-6.

Behavior of rats treated with Rhus toxicodendron 200cH.

da Silva Rocha MP, Soares FM, Martini LC, Bonamin LV.

ABSTRACT

One of the main pathogenetic characteristics of Rhus toxicodendron (Rhus-t) is the presence of articular pain and aggravation on standing, which improve only by motion. The present study proposes an experimental model to evaluate the action of Rhus-t 200cH. Rats were divided into 3 groups according to treatment received (Rhus-t, diazepam and water); each group was further divided into two sub-groups according to the initial pattern of behavior (hyperactive and hypoactive) as assessed by open-field procedure. A second evaluation of behavior performed 24 hours later pointed out to the effects of the medications under study. Results were analyzed through Kruskal-Wallis/Dunn's test, with a level of significance $p=0.05$.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewFile/265/333>

Int J High Dilution Res. 2013;12(44):112-113.

Survival in golden syrian hamster (*Mesocricetus auratus*) infected by *Leishmania chagasi* changes

according to gender and Homeopathic product - Factors of Self Organization.

da Silva SLM, Verçosa BLA, Moreira HM, Goloubeff B, Bernardi MM, Bonamin L, Michalick MSM, Tafuri WL.

Abstract

Background: The hamster is a species used as an experimental model in the study of visceral leishmaniasis with progressive fatal evolution (Solano-Gallego et al, 2009). Factors of the Self-Organization (FAO) can be used in animals (Monteiro da Silva et al, 2011) and stand out favorably because anti-leishmania drugs cause well known side effects, mortality and toxicity, increasing antimicrobial resistance (Sundar and Chatterjee, 2006). Testosterone or estradiol influence parasitemia in males and females hamsters. The parasitemia was lower for females and animals injected with estradiol (Anuradha and Katiyar, 1990).

Aims: Evaluate the survival, clinical and pathological signs of disease in experimental hamsters infected with *Leishmania (Leishmania) chagasi*.
Methodology: Fifty healthy young animals were experimentally infected intraperitoneally with promastigotes of *Leishmania chagasi* MHON/BR/1972/BH400 strain at a concentration of 1×10^6 stationary phase of growth and monitored for 16 weeks. After 17 days of experimental infection the animals in the experimental group (n = 10 per sex) received the FAO ultra-diluted complex medication on potencies 5, 3 and 12 potencies on the 50 millesimale scale, with components Antimonium crudum; Kali carbonicum; Mercurius solubilis; Sulphur; Natrum muriaticum; Aurum metallicum; Ammonium muriaticum. The positive control group (n = 15 per sex) received 5% hydroalcoholic solution as a placebo. For statistical analysis of survival the Log-Rank test (Collett) was used, and significance level was fixed in $p < 0.05$ (BioEstat 5.3 software). This study was authorized by the ethics committee for animal use 210/2007 CONCEA UFMG.

Results: The infection was confirmed by histopathological examination. No female treated animal died during the experiment, differently from its positive control. The survival was significantly increased by the treatment in females ($p=0.04$), but not in males ($p=0.76$), compared to their respective control groups. The decrease in mortality was surprising in this experimental model. Since new tools are needed to treat visceral leishmaniasis, the use of novel therapeutic drugs, such as FAO, can contribute as an alternative to treatment of this neglected disease. Its action on mortality in females may be related to estradiol receptors expression or its endogenous production and should be evaluated in future studies.

Conclusion: Medication was able to significantly change mortality in females hamsters experimentally infected with *Leishmania chagasi* but not in males.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/666/655>

Int J High Dilution Res. 2013;12(44):146-147.

Zincum metallicum in murine infection model by *Trypanosoma cruzi*.

da Veiga FK, Ciupa L, Ferraz FN, Portocarrero AR, Sandri PF, Libero IC, Bellavite P, Quaresma CH, Bonamim LV.

Denise Lessa Aleixo¹, Silvana Marques de Araújo¹

Abstract

Background: The search for evidences of highly diluted substances mechanism of action encouraged the International Multicentre Project on High Dilutions conception in different experimental models.

Aim: To evaluate the effect of different potencies of *Zincum metallicum* (Zn) on murine infection by *T. cruzi*.

Methodology: A blind, randomized and controlled study was performed using 153 Swiss male mice, 8 weeks-old, divided in groups of 17 animals: CNI – non treated and non infected, CI – non treated and infected, ZN5cH – treated with Zn 5cH, ZNpure5cH – treated with pure Zn 5cH without lactose, ZN6cH – treated with Zn 6cH, ZN30cH – treated with Zn 30cH, LAC5cH – control, treated with lactose 5cH, LAC6cH – control, treated with lactose 6cH, LAC30cH – control, treated with lactose 30cH. Medicines [1] were offered ad libitum 48 hours before and after infection. Subsequently animals were treated 56/56 hours until 9th day of infection. The

medicines were diluted in natural water (1mL/100mL) and always offered for 16 consecutive hours. The groups were infected intraperitoneally with 1400 blood trypomastigotes of T.cruzi Y strain. Parasitological (pre patent and patent period, parasitemia peak, total parasitemia, under curve area, survival and mortality) [2] and clinical (weight, temperature, excreta production, water and food intake) parameters were evaluated [3]. Histopathological analysis (hematoxylin-eosin) from heart, liver, spleen, intestine, and skeletal muscle, counting the number of amastigotes nests, number of amastigotes/nest and inflammatory foci; apoptosis involvement (TUNEL method) and cytokines Th1 / Th2 / Th17 dosage (flow cytometry) are in analysing process. Data analysis was performed with BioEstat 5.0, 5% significance level. This study was approved by Ethics Animal Committee/UEM.

Considerations: The murine infection model by T. cruzi is widely known consisting an important tool for understanding highly diluted substances mechanisms of action attending the International Multicentre Project on High Dilutions objectives.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/654/673>

Ital J Animal Sci. 2009;8(2):613-615.

Conventional and homeopathic treatments in late pregnant goats: effects on metabolic status and immune response.

Danieli PP, Lacetera N, Bernabucci U, Ronchi B.

Abstract

The study was aimed at assessing the effects of conventional and homeopathic treatments on metabolic status and immune response in late pregnant goats.

Administration of an antichetogenic preparation and of Echinacea purpurea in homeopathic dilution did not exert unequivocal effects on metabolic status, but improved some immunological parameters of periparturient goats.

Link to paper: https://docs.google.com/a/vtiuk.com/viewer?a=v&q=cache:gsz-EWosYjUJ:www.aspajournal.it/index.php/ijas/article/download/ijas.2009.s2.613/516+&hl=en&gl=uk&pid=bl&srcid=ADGEEShaIGTy7H2IHac7gn9MkRNld1j4XFZqFkSJJ Aj5KZ91XpFfNcz8PKIilaFTYo_n2f_F38ZO6EARE6bYI4BJqSk72hIdUPyA9shJOD5 H0N6hD1OtcEJvQ-1KS8Z9tkEgq4To_ynj&sig=AHIEtbREnFu_Z9ffM0ZDKGB6AONLuD8FA

Homeopathy. 2004 Jul;93(3):119.

Homeopathy and dental caries: implications for dental practice and veterinary research.

[Darby P](#), [Bonamin LV](#).

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15287429>

Eur J Pharm Sci. 2012 Sep 29;47(2):313-24. doi: 10.1016/j.ejps.2012.06.018. Epub 2012 Jul 6.

Poly (lactide-co-glycolide) encapsulated extract of *Phytolacca decandra* demonstrates better intervention against induced lung adenocarcinoma in mice and on A549 cells.

[Das J](#), [Das S](#), [Samadder A](#), [Bhadra K](#), [Khuda-Bukhsh AR](#).

Cytogenetics and Molecular Biology Laboratory, Department of Zoology, University of Kalyani, Kalyani 741 235, India.

Abstract

We tested relative efficacy of the extract of *Phytolacca decandra* (PD) and its PLGA nano-encapsulated form (NPD) in mice intoxicated with benzo[a]pyrene (BaP) (25 mg/kg b.w.) plus sodium-arsenite (SA) (10 mg/kg b.w.) and on A549 lung cancer cells in vitro. We characterized nanoparticles by physico-chemical and morphological studies using dynamic light scattering, scanning electron and atomic force microscopies. We also conducted FTIR and ¹H NMR studies to determine if NPD had a co-polymeric nature and analyzed drug-DNA interaction through circular dichroism spectra (CD) and melting temperature profiles (T(m)) taking calf thymus DNA as target. An oral dose of 0.3mg/kg b.w. for NPD and 30 mg/kg b.w. for PD in mice showed chemopreventive effects in regard to DNA fragmentation, comet tail length and toxicity biomarkers like ROS generation, NFκβ, p53, PARP, CYP1A1 and caspase 3. NPD showed greater effects than that by PD. Results of in vivo studies showed similar effects on A549 in regard to cell viability, DAPI and PI staining, Comet tail length, DNA fragmentation. To further confirm the biological molecule present in PD we analyzed its chromatographic fraction through mass spectroscopy, NMR and FT-IR studies and characterized it to be a tri-terpenoid, a derivative of betulinic acid with a molecular formula C(30)H(46)O(2.) Thus, overall results suggest that nano-encapsulation of PD (NPD) increases drug bioavailability and thereby has a better chemo-preventive action against lung cancer in vivo and on A549 cells in vitro than that of PD.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22771545>

J Helminthol. 1987 Sep;61(3):268-70.

Antifilarial effect of *Zingiber officinale* on *Dirofilaria immitis*.

[Datta A](#), [Sukul NC](#).

Department of Zoology, Visva-Bharati University, West Bengal, India.

Abstract

Dogs, naturally infected with *Dirofilaria immitis*, were treated with the residues of the alcoholic extracts of the rhizomes of *Zingiber officinale* (ginger). Twelve subcutaneous injections of the extract given at 100 mg/kg reduced microfilarial concentration in blood by a maximum of 98%. Fifty five days after the last injection there was 83% reduction in microfilarial concentration suggesting partial destruction of adult worms. Half of the treated dogs showed some lethargy at the beginning of treatment possibly due to the mass annihilation of microfilariae in blood.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/3668217>

Complement Ther Med. 1999 Jun;7(2):62-75.

Efficacy of a potentized homoeopathic drug (Arsenicum Album-30) in reducing genotoxic effects produced by arsenic trioxide in mice: comparative studies of pre-, post- and combined pre- and post-oral administration and comparative efficacy of two microdoses.

[Datta S](#), [Mallick P](#), [Bukhsh AR](#).

Kalyani University, Kalyani, India

Abstract

Objectives: To pilot procedures to be used in a randomized controlled trial of acupuncture for low back pain.

Design: Uncontrolled clinical trial.

Setting: Primary care and acupuncture clinics in York, England.

Subjects: 20 patients with low back pain lasting 1 month or more.

Interventions: 10 sessions of individualized acupuncture from a traditional acupuncturist.

Main outcome measures: Change in Oswestry low back pain disability questionnaire; present pain intensity scale; effect on daily living scale, and SF-36 general health questionnaire at post-treatment and 6 months after the end of treatment.

Results: 14 patients completed follow-up. Patients had similar severity scores at baseline to those referred to an NHS outpatient clinic. Post-treatment, there were statistically significant improvements in Oswestry, present pain intensity, effect on daily living and the physical functioning, social functioning, bodily pain, vitality and mental health sub-scales of the SF36. Similar results were found at the six month follow-up. Oswestry scores showed reduced levels of pain at 6 months compared to than at post-treatment, falling approximately 40% from baseline.

Conclusions: Though the improvements in pain and quality in life may be due to the natural course of back pain, the promising responses justify further research. The procedures used in the study are appropriate for a randomized controlled trial. Drop-out could be reduced by more careful patient monitoring.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0965229999800843>

Complement Ther Med. 1999 Sep;7(3):156-63.

Efficacy of a potentized homoeopathic drug (Arsenicum Album-30) in reducing genotoxic effects produced by arsenic trioxide in mice: II. Comparative efficacy of an antibiotic, actinomycin D alone and in combination with either of two microdoses.

[Datta S](#), [Mallick P](#), [Bukhsh AR](#).

Kalyani University, Department of Zoology, India.

Abstract

OBJECTIVE: To determine whether actinomycin-D (AMD), an antibiotic, alters the reported efficacy of a potentized homoeopathic drug, Arsenicum Album, in reducing genotoxic effects produced in arsenic-trioxide-injected mice.

DESIGN: Mice were separately injected with AMD, As₂O₃, and conjointly with AMD plus As₂O₃, AMD plus homoeopathic drug, AMD plus As₂O₃ plus homoeopathic drug, and As₂O₃ plus homoeopathic drug in separate sets.

METHODS: Several standard cytogenetical endpoints were assessed at different fixation intervals by adopting conventional techniques.

RESULTS: Both Ars Alb-30 and Ars Alb-200 showed protective ability against AMD and As₂O₃ when injected individually, but this ability was reduced considerably in mice injected with AMD and As₂O₃ together. AMD itself had genotoxic effects, but also apparently reduced genotoxic effects of arsenic to some extent.

CONCLUSION: AMD reduced the protective efficacy of the homoeopathic drug against arsenic. This result suggests a mechanism of action for homoeopathy, as AMD is a known transcription-blocker.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/10581825>

BMC Complement Altern Med. 2001;1(9):1-12. Epub 2001 Nov 23.

Comparative efficacy of two microdoses of a potentized homoeopathic drug, Cadmium Sulphoricum, in reducing genotoxic effects produced by cadmium chloride in mice: a time course study.

[Datta SS](#), [Mallick PP](#), [Rahman Khuda-Bukhsh AA](#).

Cytogenetics Laboratory, Department of Zoology, University of Kalyani, Kalyani-741 235, West Bengal, India.

Abstract

BACKGROUND: Cadmium poisoning in the environment has assumed an alarming problem in recent years. Effective antimutagenic agents which can reverse or combat cadmium induced genotoxicity in mice have not yet been reported. Therefore, in the present study, following the homeopathic principle of "like cures like", we tested the efficacy of two potencies of a homeopathic drug, Cadmium Sulphoricum (Cad Sulph), in reducing the genotoxic effects of Cadmium chloride in mice. Another objective was to determine the relative efficacy of three administrative modes, i.e. pre-, post- and combined pre and post-feeding of the homeopathic drugs. For this, healthy mice, *Mus musculus*, were intraperitoneally injected with 0.008% solution of CdCl₂ @ 1 ml/100 gm of body wt (i.e. 0.8 mcg/gm of bw), and assessed for the genotoxic effects through such studies as chromosome aberrations (CA), micronucleated erythrocytes (MNE), mitotic index (MI) and sperm head anomaly (SHA), keeping suitable succussed alcohol fed (positive) and CdCl₂ untreated normal (negative) controls. The CdCl₂ treated mice were divided into 3 subgroups, which were orally administered with the drug prior to, after and both prior to and after injection of CdCl₂ at specific fixation intervals and their genotoxic effects were analyzed.

RESULTS: While the CA, MNE and SHA were reduced in the drug fed series as compared to their respective controls, the MI showed an apparent increase. The combined pre- and post-feeding of Cad Sulph showed maximum reduction of the genotoxic effects.

CONCLUSIONS: Both Cad Sulph-30 and 200 were able to combat cadmium induced genotoxic effects in mice and that combined pre- and post-feeding mode of

administration was found to be most effective in reducing the genotoxic effect of CdCl₂ followed by the post-feeding mode.

Link to paper: <http://www.biomedcentral.com/1472-6882/1/9>

Evid Based Complement Alternat Med. 2004 Dec;1(3):291-300. Epub 2004 Aug 18.
Comparative Efficacy of Pre-feeding, Post-feeding and Combined Pre- and Post-feeding of Two Microdoses of a Potentized Homeopathic Drug, Mercurius Solubilis, in Ameliorating Genotoxic Effects Produced by Mercuric Chloride in Mice.

[Datta S](#), [Biswas SJ](#), [Khuda-Bukhsh AR](#).

Abstract

Mercury and its derivatives have become an alarming environmental problem, necessitating the search for effective antagonists, including homeopathic drugs, which are generally used in micro doses and are devoid of any palpable side-effects. On the basis of homeopathic similia principle, two potencies of Mercurius solubilis (Merc Sol-30 and Merc Sol-200) were tested by three administrative modes, i.e. pre-feeding, post-feeding and combined pre- and post-feeding, for their possible efficacy in ameliorating mercuric chloride-induced genotoxicity in mice. Healthy mice, *Mus musculus*, were intraperitoneally injected with 0.06% solution of mercuric chloride at the rate of 1 ml/100 g of body weight, and assessed for genotoxic effects through conventional endpoints. i.e. chromosome aberrations, micronuclei, mitotic index and sperm head abnormality, keeping suitable controls. Mercuric chloride-treated mice were divided into three sub-groups, which were orally administered with the drug prior to, after and both prior to and after injection of mercuric chloride, and their genotoxic effects were analysed at specific intervals of fixation. Mercuric chloride treatment generally produced more chromosome aberrations, micronuclei and sperm head anomaly in mice, but the mitotic index appeared to be slightly reduced. While chromosome aberrations, micronuclei and sperm head anomaly were generally reduced in the drug-fed series, the mitotic index showed an apparent increase. In most cases, the combined pre- and post-feeding mode appeared to show the maximum amelioration, followed by post-feeding and pre-feeding, in that order. The amelioration by Merc Sol-200 appeared to be slightly more pronounced. We conclude that potentized homeopathic drugs can serve as possible anti-genotoxic agents against specific environmental mutagens, including toxic heavy metals.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15864357>

Biomed Pharmacother. 1988;42(3):197-206.

Immunomodulatory activity of low doses of interferon alpha, beta in mice.

[Daurat V](#), [Dorfman P](#), [Bastide M](#).

Unité de Recherches en Immunologie, Faculté de Pharmacie, Montpellier, France.

Abstract

We evaluated the immunomodulatory effects of mouse interferon (IFN) alpha, beta on the specific humoral response of mice (OF1) to sheep erythrocytes and on cell-

mediated immunity by studying the cytotoxic activity of allospecific T-cells (CTL) and natural killer (NK) cells. Four injections of 2 IU of IFN before administration of the antigen did not have an effect on the humoral response, whereas 4 injections of $2 \times 10^{(-10)}$ IU of IFN caused a significant increase in the number of antibody-secreting cells. When C57BL/6 mice were treated with 5 injections of 2 IU or $2 \times 10^{(-10)}$ IU of IFN before the second immunization with allogeneic cells, the CTL activity was not modified; but when the mice were also treated with $2 \times 10^{(-10)}$ IU 3 times after immunization, this activity was strongly stimulated. IFN caused a decrease in the activity of CTL from NZB at both doses. The cytotoxic response of NK cells was stimulated by 5 injections of 2 IU of IFN in both strains of mice. The results of our study suggest that very low doses of IFN alpha,beta have immunopharmacologic activity.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/3263148>

Br Homeopath J. 2000 Jan;89(1):41-2.

Pony with skin allergy.

[Davies C.](#)

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/10703913>

Vet Rec. 1984 Mar 3;114(9):216.

Control of stillbirths in pigs using homoeopathy.

[Day CE.](#)

Abstract

20 sows were randomly assigned to receive either homeopathic Caulophyllum 30C or placebo, to determine if the former had any affect on reducing the number of stillbirths experienced by these sows. On analysis, it was found that the sows given Caulophyllum had a stillbirth rate of 11.5%, and those given placebo had a rate of 26%, showing quite clearly that the homeopathic medicine successfully reduced the rate of stillbirths.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/6730281>

Comm Br Homoeopath Res Grp. 1984;11:28-31.

Clinical trials in veterinary work.

[Day CE.](#)

Br Homoeopath J. 1986;75(1):11-4.

Clinical trials in bovine mastitis. Use of nosodes for prevention.

[Day CE.](#)

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/S0007-0785%2886%2980027-8/abstract>

Int J Vet Hom. 1987;2(1):45-50.

Isopathic Prevention of Kennel Cough - Is Vaccination Justified?
[Day CE.](#)

Br Homoeopath J. 1993 Apr;82(2,):97–105.

Aconitum napellus: Veterinary materia medica (MMHV).
[Christopher Day](#)

Abstract

Aconitum napellus is an important homœopathic medicine. Its botany and toxicology are described and traditional and homœopathic medical indications discussed. The veterinary drug picture is presented, with the major therapeutic indications including fever and acute respiratory disease. Case studies from 6 species are given.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078505810324>

Int J High Dilution Res. 2006;5(16).

Pesquisa em Bioterápicos.
[Research on Biotherapics].

[Article in Portuguese]

de Almeida LR.

English Abstract

Biotherapics, previously called nosodes, are homeopathic medicines prepared in accordance to homeopathic pharmaceuticals. An ultra diluted etiologic agent is used, aiming to produce a therapeutic reaction. Although biotherapics are widely used in homeopathy, their use in treatment and prophylaxis of infectious and parasitic diseases has been little investigated, and there is little available research evidence. Thus, the therapeutic and prophylactic action of biotherapics must be studied, as they are employed, in some cases, instead of vaccines, even in absence of scientific evidence. Some authors have demonstrated that ultra diluted antigens can modulate the immune response when an organism is challenged with the related antigen. In our work, the model used was experimental infection of mice with protozoans of the *Trypanosoma* genus to study the effect of biotherapics prepared from the blood of animals experimentally infected with these agents. Investigations covered both acute disease (*T. evansi* infection) and chronic disease (*T. cruzi* infection); an effect was seen only in the chronic model, namely a lower mortality rate in *T. cruzi* infected mice which were treated with homeopathic medicines: *T. cruzi* Biotherapeutic 12DH and Phosphorus 12DH, compared with the control group (Placebo). There remain many questions and possibilities for further studies, particularly regarding the applicability

of the in vitro model, the ultra dilutions employed, the timing of administration of the medicine and the preparation of the biotherapics – infected blood or isolated parasite?

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/189/198>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Efeitos de Medicamentos Homeopáticos em Camundongos Experimentalmente Infectados por Trypanosoma cruzi. Resultados parciais. [Effects of Homeopathy in Trypanosoma cruzi Experimentally Infected Mice. Partial results].

de Almeida LR, de Oliveira Campos MC, Herrera HM, Bonamim LV, da Fonseca AH.

English Abstract

It was evaluated the action of homeopathic medicines - biotherapeutic of Trypanosoma cruzi 12DH and Phosphorus 12DH - on T. cruzi infection course in C57BL/6 mice. 80 adults males were divided in five experimental groups: 1- treated with biotherapeutic before experimental infection (BBI); 2-treated with biotherapeutic after infection (BAI); 3- treated with Phosphorus after infection (PAI); 4- treated with placebo before and after infection (Placebo) and 5 - control group not infected. Animals's parasitemia was monitored (parasites per mL of blood). Mean values of prepatente and patente periods and the mortality rate of the experimental groups were, respectively: 5,0; 5,2; 5,3 and 5,5 days; 11,0 ($p < 0,05$); 16,4 ($p > 0,05$); 19,8 ($p > 0,05$); and 17,5 days ($p > 0,05$); 12,5; 37,5; 0,0 and 42,8%. Results show that homeopathy represents a perspective in the treatment of T. cruzi infection and should be better investigated.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/211/223>

Homeopathy. 2008 Apr;97(2):65-9.

Effects of homeopathy in mice experimentally infected with Trypanosoma cruzi.

[de Almeida LR](#), [Campos MC](#), [Herrera HM](#), [Bonamin LV](#), [da Fonseca AH](#).

Department of Animal Parasitology, Universidade Federal Rural do Rio de Janeiro, RJ, Brazil. rodrigues_lu@yahoo.fr

Abstract

AIM: The aim of this study was to evaluate the action of homeopathic treatment on mice experimentally infected with Trypanosoma cruzi.

METHODS: Eighty adult male C57BL/6 inbred mice were randomly allocated to five groups treated with biotherapy (nosode) of T. cruzi 12dH (12x) pre- and post-infection; Phosphorus 12dH post-infection; infected control treated with control solution and uninfected control. The biotherapy was prepared by the Costa method from the blood of mice experimentally infected with the Y strain of T. cruzi.

Phosphorus was used because of its clinical and reportorial similarity to Chagas disease. T. cruzi (10(4)) sanguineous forms were inoculated intraperitoneally per

animal. Parasitaemia was monitored, leukocyte and serological responses were evaluated at 0, 7, 14 and 42 days after infection. The prepatent and patent periods of parasitaemia, maximum of parasitaemia, day of maximum parasitaemia and mortality rates were compared between groups.

RESULTS: A significantly shorter period of patent parasitaemia was observed in the group treated with the biotherapy before infection ($p < 0.05$) than in the other groups. This group also had the lowest parasitaemias values at 9, 13, 15 ($p < 0.05$), 17 ($p < 0.05$), 22, 24 and 28 days, a lower rate of mortality and a significant increase of lymphocytes compared to the infected control group. The Phosphorus group had the longest period of patent parasitaemia, higher maximum parasitaemia, and a significant reduction of lymphocyte numbers, but no mortality. The infected control group had the highest mortality rate (not statistically significant), and the highest IgG titres at 42 days post-infection ($p < 0.05$).

CONCLUSIONS: The results suggest that pre-treatment with biotherapy modulates host immune response to *T. cruzi*, mainly during the acute phase of the infection. Phosphorus shows an action on the pathogenicity by *T. cruzi* infection. Homeopathic treatment of *T. cruzi* infection should be further investigated.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/18439966>

Int J High Dilution Res. 2011;10(36):142-144.

In vivo treatment with M8, a highly diluted tinctures complex, reduced the malignancy of a mouse melanoma model.

de Andrade LF, de Souza Fonseca Guimarães F, Rossi G, Zotz R, Da Lozzo EJ, Franco CRC, de Oliveira CC, de Freitas Buchi D, da Silva Trindade E.

Abstract

Background: Cancer is a class of disease responsible for 13% of death cause worldwide. Among all types of cancers, one of the most aggressive and with the highest death rate is melanoma. It is highly metastatic and current treatments with chemotherapeutic drugs do not yield satisfactory results. Therefore, the interest on new therapeutics for cancer treatment has been increasing on research. Highly diluted tinctures (HDT) are intended to enhance immune system responses resulting in reduced frequency of various diseases, and often present no risk of serious side-effects due to its low toxicity. Previous results have demonstrated in vitro inhibition of invasion ability and in vivo anti-metastatic potential of B16F10 lung metastasis model after mice treatment with M8 inhalation.

Aims: Now we have evaluated M8 effects on hyaluronic acid and its specific melanoma cell surface receptor (CD44) expression on lungs after inhalation by mice.

Methodology: M8 compounds include Aconitum napellus 20dH, Arsenicum album 18dH, Asa foetida 20dH, Calcarea carbonica 16dH, Conium maculatum 17dH, Ipecacuanha 13dH, Phosphorus 20dH, Rhus toxicodendron 17H, Silicea 20dH, Sulphur 24dH, and Thuja occidentalis 19dH. B16F10 Melanoma cells were inoculated into C57B/L6 mouse lateral tail vein. Treatment started 24 hours after inoculation, and was repeated after each 12 hours during 14 days on an inhalation chamber that is adapted to little rodents. Mice were subjected to euthanasia by intraperitoneal injection of thiopental followed by decapitation. Lungs were surgically removed and analyzed under a stereomicroscope for the presence of metastatic foci. They were formaldehyde fixed, dehydrated and paraffin embedded. Histological

sections were processed for hematoxylin/eosin (HE), Fontana-Masson and immunohistochemistry staining methods. Images were captured and blindly analysed by ImageJ (NIH) software. Results: HE and Fontana-Masson showed a reduction in number and size of metastatic nodules, as previously demonstrated. We have detected a reduction on hyaluronic acid as well as CD44 expression on mice lungs after M8 treatment. The high metastatic potential of melanoma is proportional to hyaluronic acid expression level, together with its specific cell surface receptor, the CD44. These results suggest that M8 treatment reduces malignancy of mouse melanoma through modulation of hyaluronic acid and CD44 expression, which play crucial roles in tumor invasion and growth.

Conclusion: Even though further investigation are necessary to elucidate the mechanisms of action of M8 treatment there is an indication that these highly diluted tinctures could be a promising therapy to treat metastatic melanoma.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/481/492>

Int J High Dilution Res. 2013;12(44):95-97.

Highly diluted natural complex M-1 inhibits melanoma growth in vivo.

de Andrade LF, Biscaia SMP, Rossi G, Leck AR, da Costa CRV, Mozeleski B, de Souza Fonseca Guimarães F, Zotz R, Gabardo J, de Oliveira CC, de Freitas Buchi D, da Silva Trindade E.

Abstract

Malignant melanoma is a lethal skin melanocytic neoplasm that forms metastasis to distant organs [1]. Inhibition of tumor-related angiogenesis results in decreased nutrient transport subsequently promoting tumor hypoxia [2]. Thus anti-angiogenic strategies offer real potential for future therapeutics. Pre-clinical and clinical studies have described new targets and approaches for identifying significant parameters involved in angiogenesis inhibition [3]. The aim of this study was to assess the in vivo antitumor potential of a highly diluted natural complex named M-1. M-1 composition is based on the following natural matrixes in Hahnemann decimal dilutions (dH) [4]: Aconitum napellus (20dH), Arsenicum album (18dH), Asa foetida (20dH), Calcarea carbonica (16dH), Chelidonium majus (20dH), Cinnamon (20dH), Conium maculatum (17dH), Echinacea purpurea (20dH), Gelsemium sempervirens (20dH), Ipecacuanha (13dH), Phosphorus (20dH), Rhus toxicodendron (17dH), Silicea (20dH), Sulphur (24dH), and Thuja occidentalis (19dH). B16-F10 cells were subcutaneously injected on dorsal flank of C57BL/6 mice. After 24 hours of B16-F10 injection, M-1 treatment was administered for a period of 10 minutes with a modified inhalation chamber [5]. Subsequent treatments occurred twice a day for 14 days. After this treatment period, mice were weighed and euthanized, then solid tumors were removed, weighed and measured (all animals developed melanoma tumors). The tumors were imaged and processed for histopathology by Fontana-Masson staining. Slides were analyzed using an automated slide scanner, Mirax Scan (Carl ZeissTM). Final images were analyzed using Mirax Viewer Software (3DHISTECHTM). Visual inspection of tumors showed an obvious decrease in tumor size (Fig. 1a-b), which was confirmed by wet weight measurement indicating tumor size to be reduced by 38%, whereas mice body weight was unaffected (Fig. 1c). When analyzed by histology, tumor area from M-1 treated mice was decreased,

albeit with low significance (Fig. 1d). In summary, treatment with the highly diluted natural complex M-1 resulted in decrease in tumor size and weight. It is important to notice M-1 in vivo anticancer action, but more interesting is the first demonstration of a non-invasive route of therapy for cancer: the inhalation. Despite the promise of these series of experiments, further investigation on M-1 mechanism of action and its biochemical properties is necessary to develop more efficient therapies.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewArticle/641>

Homeopathy. 2009 Jul;98(3):160-4. doi: 10.1016/j.homp.2009.05.005.

Effect of *Mercurius solubilis* on the bacteriological response in the alveolitis process in rats.

[de Araújo FR](#), [de Castro CM](#), [Severo MS](#), [Diniz Mde F](#), [Viana MT](#), [Evêncio LB](#).

Federal University of Pernambuco, Microbiology Division, Laboratory of Immunopathology Keizo-Asami, UFPE, Brazil. flavia_regina_@hotmail.com

Abstract

OBJECTIVE: The purpose of this study was to assess the bacteriological response in alveolitis in rats treated with the homeopathic medicine Merc solubilis (Merc sol.) 12 cH.

METHODS: The study was randomized and observer blind. The animals were anesthetized and the upper right incisor extracted resulting in alveolitis. Animals were randomly assigned to groups (n=18/group): Water control, Alcohol control and Merc sol. 12 cH. These groups were subsequently divided into 3 subgroups (n=6/subgroup): Early Euthanasia (EE), Mid Euthanasia (ME) and Late Euthanasia (LE), killed at the 6th, 15th and 21st days respectively. The perialveolar microbiota was collected by swab in Brain Heart Infusion (BHI) for seeding and bacterioscopy. After seeding, the Petri dishes were incubated at 37 degrees C for 48 h.

RESULTS: Quantitative and qualitative changes were observed in the perialveolar microbiota when the groups were compared. Water control and Alcohol control had the highest counts of pathogenic bacteria, the microbiotica of the Merc sol. group remained closer to normal.

CONCLUSIONS: Merc sol. 12 cH did not reduce bacterial growth, but the microbiotica remained within the parameters of normality, obtaining the best results at 21 days after treatment.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19647210>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Tratamento Homeopático de Animais Selvagens do Zoológico de São Paulo [Homeopathic Treatment of Wild Animals at São Paulo Zoo].

[Article in Portuguese]

de Castilhos LR, Bueno MG, Miranda F, Setzer A, Dias JLC, Pinto LF, de Oliveira CA.

English Abstract

Some animals of the Sao Paulo Zoo have been treated with homeopathic medicines for the past 3 years, specially when their illness have important behavior disturbances. Clinical recovery is assessed by the Zoo veterinarians, specialists in wild animal clinic. Clinical evaluation is routinely performed and complementary exams when necessary. Results are registered in clinical records and by photographs and films. The selection of medicines is performed according to the protocol developed by the Homeopathy Sector at the Veterinarian Hospital at Universidade Federal Rural do Rio de Janeiro. Within the animals treated are Southern Sea Lion (*Otaria byronia*), Maned Wolf (*Chrysocyon brachyurus*), Golden Parakeet (*Guarouba guarouba*), King Vulture (*Sarcoramphus papa*), Chestnut-capped Blackbird (*Agelaius ruficapillus*), White-necked Hawk (*Leucopternis lacernulatus*), White-tailed Kite (*Elanus leucurus*) and Megellanic Penguin (*Spheniscus magellanicus*).

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/223/248>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Estimulação da Função Ovariana com o Ultradiluído Oophorinum 6CH em *Capra hircus*.

[Evaluation of the Dairy Goats Ovarian Functions Stimulation after the Continuous Usage of the Homeopathic Medicine Oophorinum 6CH].

[Article in Portuguese]

de Castilhos LR, Pinto LF, Moura e Silva MGC, Furtado PV, de Oliveira CA.

English Anstract

The objective of the present study is to evaluate experimentally the effects of the homeopathic medicine Oophorinum 6CH in the ovarian function stimulation of dairy goats. Using the rule for double-blind clinical assays with independent and concurrent control, 19 female goats Saanen, multiparous, in the 20th day of the puerperium were randomly distributed in the experimental groups T0 (n=9, saline solution) and T1 (n=10, Oophorinum 6CH). Treatments (1ml) are administered vaginally, 5 times per day, for 45 days (from July to September/2006). The seric concentration of progesterone and estradiol during the puerperal period is the parameter used to evaluate both reproductive status and the medicine effect. Blood samples are collected 3 times a week and hormonal quantification by radioimmunoassay. Body condition, duration of the postpartum anestrous interval, the first postpartum cycle characteristics and milk production during the treatment are also evaluated.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/221/301>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Avaliação da Terapêutica Homeopática nas Ovariopatias Císticas de Bovinos Leiteiros.

[Evaluation of the Homeopathic Therapy of Cystic Ovarian Disease in Dairy Cattle].

[Article in Portuguese]

de Castilhos LR, de Souza JC, Pinto LF, de Albuquerque FT, Oliveira CA.

English Abstract

The objective of the present study was to evaluate protocols to treat dairy cows (n=56) with cystic ovarian disease. The homeopathic was called "Homeocyst" (group 1, n=16) and is the combination of *Apis mellifica* 6CH and *Oophorinum* 6CH (cysts on the right ovary) or *Thuya occidentalis* 6CH and *Oophorinum* 6CH (on the left or on both ovaries). The hormonal is called Ovsynch® (group 2, n=18). The group 0 (control, n=22) was used to evaluate the spontaneous recovery. The results for groups 0, 1 and 2 were, respectively: cure rates of 31,82%, 87,50% e 55,56% (p=0,003); interval diagnosis-estrous of 106,38+12,51; 13,33+4,80 e 9,89+3,51 days; average services per conception of 3.36, 1.40 and 2.14 (p=0.0001) and average cost of treatments (groups 1 and 2) of US\$1.44 and US\$15.12. These findings indicate that "Homeocyst" protocol is an effective method and that the methodology used to develop this protocol was appropriated.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/220/299>

Pharmacogn Mag. 2011 Jul;7(27):234-42. doi: 10.4103/0973-1296.84238.

Circadian aspects of hyperthermia in mice induced by *Aconitum napellus*.

[de la Peña SS](#), [Sothorn RB](#), [López FS](#), [Lujambio IM](#), [Waizel-Bucay J](#), [Sánchez CO](#), [Monroy CP](#), [Betancourt ET](#).

Chronomics Research Center at Sección de Estudios de Posgrado e Investigación (SEPI)-Escuela Nacional de Medicina y Homeopatía (ENMyH), Instituto Politécnico Nacional (IPN).

Abstract

BACKGROUND: *Aconitum napellus* (Acn) is used topically to relieve pain, itching and inflammation, and internally to reduce febrile states, among others. Any circadian time-related consequences of Acn administration are unknown. The objective of this study was to explore the effects of two doses of Acn on body temperature (BT) of mice treated at six different times over 24 hours.

MATERIALS AND METHODS: BALB/c female mice were housed in six chambers (six mice each) with air temperature $24 \pm 3^\circ\text{C}$, humidity $60 \pm 4\%$, and a 12-hours light (L)/12-hours dark cycle, but with L-onset staggered by 4 hours between chambers so that study at one external test time resulted in six test times (02, 06, 10, 14, 18 and 22 hours [h] after light onset). Rectal temperature (RT; in $^\circ\text{C}$) was measured at baseline (B) and 1 hour after oral treatment with placebo (P) or two doses of Acn (6C and 30C, two studies each) in six studies over an 8 day span. The difference in RT for each mouse from the respective B + P timepoint mean RT was computed following each Acn treatment, and data from each of the six studies (original RT and difference from B + P) were analyzed for time-effect by analysis of variance (ANOVA) and for circadian rhythm by 24-hour cosine fitting.

RESULTS: A CIRCADIAN RHYTHM IN RT WAS FOUND AT B AND AFTER P (MEAN: 35.58°C vs. 35.69°C ; peak: 15:31 h vs. 15:40 h) and after each Acn dose (30C or 6C). Acn induced hyperthermia and the overall change in BT was

rhythmically significant for each dose (mean = +1.95°C vs. +1.70°C), with greatest hyperthermia observed during the L-span for each dose (peak = 08:56 h vs. 05:17 h).

CONCLUSION: Acn administered around the clock induced hyperthermia overall and in a time-dependent manner, with greatest effects during the resting (L) span. Thus, time of day may significantly impact the outcome of Acn and other homeopathic treatments and should be considered in determining optimal dosing and treatment time(s) in order to increase the desired outcome and decrease undesired effects.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3173899/>

Int J High Dilution Res. 2007 Oct-Dec;6(21):15-18.

Estudo Piloto sobre a Ação da *Nux Vomica* 12CH no Comportamento de Camundongos Submetidos à Privação de Sono.

[Pilot study on the action of *Nux vomica* 12cH os mice subjected to sleep deprivation].

[Article in Portuguese]

de O. Figueiredo KFLR, Bonamin LV, Miranda LP, D' Almeida V.

English Abstract

This work was intended to evaluate the effects of the homeopathic medicine *Nux vomica* 12CH in stressed mice submitted to a sleep deprivation protocol. The remedy was chosen according to the homeopathic similarity law. Male mice were divided in 4 groups: sleep deprived (SD); animals allowed to sleep (control) and treated with water; SD treated with *Nux vomica* 12 CH (SD-NV); and control mice treated with *Nux vomica* (NV). The animals were exposed to sleep deprivation for 3 days. The animals were weighed and submitted to open field (OF) and elevated plus maze (PM) tests before and after the SD. At the end of the experiment, the animals were sacrificed. During the experiment, 10 µl of water or medicine were given orally to the mice, daily, between 9 and 10 a.m. The experiment was blindly conducted. All sleep deprived animals had decrease of weight gain, independent of the treatment employed. The group of animals treated with NV produced more excrement on second OF exposition, but the results, taken together, suggest that *Nux vomica* 12CH had no anxiolytic effects on sleep deprived animals.

Link to abstract/paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/33/26>

J Infect. 2006 Jun;52(6):420–432.

Canova, a Brazilian medical formulation, alters oxidative metabolism of mice macrophages.

[Carolina C. de Oliveira](#) , [Simone M. de Oliveira](#), [Lyris M.F. Godoy](#), [Juarez Gabardo](#), [Dorly de F. Buchi](#).

Laboratório de Estudos de Células Inflamatórias e Neoplásicas, Departamento de Biologia Celular, SCB, Universidade Federal do Paraná; Curitiba, PR, Brasil.

Abstract

Macrophages play a significant role in the host defence mechanism. When activated they can produce reactive oxygen species (ROS) as well as related reactive nitrogen species (RNS). ROS are produced via NAD(P)H oxidase which catalyzes superoxide (O₂⁻) formation. It is subsequently converted to hydrogen peroxide (H₂O₂) by either spontaneous or enzyme-mediated dismutation. Nitric oxide synthase (NOS) catalyzes nitric oxide (NO) formation. Canova (CA) is a Brazilian medication produced with homeopathic techniques, composed of Aconitum, Thuya, Bryonia, Arsenicum, Lachesis in distilled water containing less than 1% ethanol. Previous studies demonstrated that CA is neither toxic nor mutagenic and activates macrophages decreasing the tumor necrosis factor-alpha (TNFalpha) production. In this assay we showed that macrophages triggered with Canova increased NAD(P)H oxidase activity as well as that of iNOS, consequently producing ROS and NO respectively. Cytochrome oxidase and peroxisomes activities were inhibited by NO. As NO and O₂⁻ are being produced at the same time, formation of peroxynitrite (ONOO⁻) may be occurring. A potential explanation is provided on how treatment with Canova may enhance immune functions which could be particularly important in the cytotoxic actions of macrophages. CA can be considered as a new adjuvant therapeutic approach to known therapies.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0163445305002458>

J Cell Biochem. 2008 Jul 1;104(4):1364-77. doi: 10.1002/jcb.21713.

Gene expression profiling of macrophages following mice treatment with an immunomodulator medication.

[de Oliveira CC](#), [de Oliveira SM](#), [Goes VM](#), [Probst CM](#), [Krieger MA](#), [Buchi Dde F](#).

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Abstract

Canova (CA) is a complex homeopathic medication used in diseases where the immune system is depressed. Previous studies demonstrated that it is neither toxic nor mutagenic and activates macrophages. We now evaluate CA effects on cytokine production and gene expression from mice macrophages. The global view of changes in expression of genes with known functions can provide a vivid picture of the way in which cell adapts to a changing environment or a challenge. We found a decrease in IL-2 and IL-4 production and a differential expression in 147 genes from CA group. These genes are mainly involved in transcription/translation, cell structure and dynamics, immune response, cytoprotection, enzymatic process, and receptors/ligands. With gene expression analysis we state that this medication provokes a reaction that involves alterations in gene expression profile mainly in the ones involved with macrophages activation, corroborating the laboratorial research and the clinical data.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/18286468>

BMC Complement Altern Med. 2011 Oct 26;11:101. doi: 10.1186/1472-6882-11-101.

Developments on drug discovery and on new therapeutics: highly diluted tinctures act as biological response modifiers.

[de Oliveira CC](#), [Abud AP](#), [de Oliveira SM](#), [Guimarães Fde S](#), [de Andrade LF](#), [Di Bernardi RP](#), [Coletto EL](#), [Kuczera D](#), [Da Lozzo EJ](#), [Gonçalves JP](#), [Trindade Eda S](#), [Buchi Dde F](#).

Laboratório de Estudos de Células Inflamatórias e Neoplásicas, Departamento de Biologia Celular, SCB, Centro Politecnico, Universidade Federal do Paraná - Curitiba, CEP 81531-980, PR - Brazil.

Abstract

BACKGROUND: In the search for new therapies novel drugs and medications are being discovered, developed and tested in laboratories. Highly diluted substances are intended to enhance immune system responses resulting in reduced frequency of various diseases, and often present no risk of serious side-effects due to its low toxicity. Over the past years our research group has been investigating the action of highly diluted substances and tinctures on cells from the immune system.

METHODS: We have developed and tested several highly diluted tinctures and here we describe the biological activity of M1, M2, and M8 both in vitro in immune cells from mice and human, and in vivo in mice. Cytotoxicity, cytokines released and NF- κ B activation were determined after in vitro treatment. Cell viability, oxidative response, lipid peroxidation, bone marrow and lymph node cells immunophenotyping were accessed after mice in vivo treatment.

RESULTS: None of the highly diluted tinctures tested were cytotoxic to macrophages or K562. Lipopolysaccharide (LPS)-stimulated macrophages treated with all highly diluted tinctures decreased tumour necrosis factor alpha (TNF- α) release and M1, and M8 decreased IFN- γ production. M1 has decreased NF- κ B activity on TNF- α stimulated reporter cell line. In vivo treatment lead to a decrease in reactive oxygen species (ROS), nitric oxide (NO) production was increased by M1, and M8, and lipid peroxidation was induced by M1, and M2. All compounds enhanced the innate immunity, but M1 also augmented acquired immunity and M2 diminished B lymphocytes, responsible to acquired immunity.

CONCLUSIONS: Based on the results presented here, these highly diluted tinctures were shown to modulate immune responses. Even though further investigation is needed there is an indication that these highly diluted tinctures could be used as therapeutic interventions in disorders where the immune system is compromised.

Link to paper: <http://www.biomedcentral.com/1472-6882/11/101>

Homeopathy. 2013 Oct;102(4):268-273.

Physiological responses of pacu (*Piaractus mesopotamicus*) treated with homeopathic product and submitted to transport stress.

De Oliveira Feitosa KC, Povh JA, de Abreu JS.

Abstract

Background: Pacu (*Piaractus mesopotamicus*) is a species with great potential for Brazilian fish farming and losses through mortality are common after transport as a direct or indirect result of stress. The use of homeopathic complex is a further option to minimize the various stress factors that can interfere negatively in production.

Methods: After feeding for 10 consecutive days with commercial diet; or diet supplemented with sucrose; or commercial diet supplemented with homeopathic complex, juvenile pacu were placed in a polyethylene bags and transported for four hours with the following treatments: commercial diet (control); commercial diet and homeopathic complex dissolved in the transport water (W + HP); commercial diet supplemented with sucrose (D + SU) and commercial diet supplemented with homeopathic complex (D + HP). Blood was collected before transport (basal), after transport (arrival), 24 and 72 h after transport. The physiological indicators of the stress were blood glucose, cortisol and chloride levels, hematocrit, hemoglobin and total protein. Condition factor and mortality were also determined.

Results: Blood glucose increased significantly on arrival, returning to the basal values 24 h after, similarly in all treatments. Plasma cortisol levels were elevated on arrival but not significantly compared to the basal values for fish from W + HP and D + SU groups. Increase in hematocrit and hemoglobin and low plasma chloride levels were observed after transport in all treatments.

Conclusion: Transport resulted in stress responses in juvenile pacu and the homeopathic complex, administered in the water or diet, did not minimize these responses. Sucrose supplementation altered the cortisol and blood glucose levels, suggesting a moderating effect on these stress indicators.

Link to abstract/paper: <http://www.homeopathyjournal.net/article/S1475-4916%2813%2900064-7/abstract>

Homeopathy. 2011 Oct;100(4):228-36. doi: 10.1016/j.homp.2011.05.005.

Mercurius solubilis: actions on macrophages.

[de Oliveira SM](#), [de Oliveira CC](#), [Abud AP](#), [Guimarães Fde S](#), [Di Bernardi RP](#), [Coletto EL](#), [Buchi Dde F](#).

Laboratório de Estudos de Células Inflamatórias e Neoplásicas, Departamento de Biologia Celular, SCB, Universidade Federal do Paraná, Curitiba, PR, Brazil.

Abstract

BACKGROUND: Macrophages play central roles in homeostasis as well as host defence in innate and acquired immunity, auto-immunity and immunopathology. Our research group has demonstrated the effects of highly diluted toxic substances in macrophages.

AIM: To investigate if highly diluted *Mercurius solubilis* (Merc sol), can activate or modulate macrophage functions.

METHODS: We evaluated the effects of Merc sol in the 6, 12, 30 and 200 centesimal high dilutions (CH) potencies on mice peritoneal macrophages (in vitro and in vivo). Merc sol was added to mice's drinking water for 7 days (in vivo treatment) and animals were euthanised and cells were collected. In vitro treatment was performed on macrophages and bone-marrow cell cultures.

RESULTS: Macrophages showed activated morphology, both when Merc sol was added directly to the cell culture and to drinking water. The in vitro experiments showed enhanced morphological activation, increased interferon (IFN) γ release in the supernatant at lower dilutions and interleukin (IL)-4 production at higher dilutions. Increase in nitric oxide and decrease in superoxide (O₂⁻) and hydrogen peroxide

(H₂O₂) were also observed. In vivo treatment caused a decrease in O₂(-) and increase in H₂O₂ production by macrophages.

DISCUSSION: Taken together, the results allow us to conclude that highly diluted Merc sol modulates reactive oxygen species (ROS), reactive nitrogen species (RNS) and cytokine secretion, which are central mediators of the immune system, wound healing and body homeostasis.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21962197>

Homeopathy. 2006 Jul;95(3):136-43.

Therapeutic and pathogenetic animal models for *Dolichos pruriens*.

[de Paula Coelho C](#), [D'Almeida V](#), [Pedrazzoli-Neto M](#), [Duran-Filho C](#), [Florio JC](#), [Zincaglia LM](#), [Bonamin LV](#).

FACIS--Faculdade de Ciências da Saúde de São Paulo, Centro de Ensino Superior de Homeopatia IBEHE, Brazil.

Abstract

The therapeutic and pathogenetic effects of *Dolichos pruriens* were evaluated using experimental models in rats. In the therapeutic experiment Wistar rats were housed in a heated environment (25±3 degrees C) to induce itch, and treated with ascending potencies *D. pruriens* (6 cH, 9 cH, 12 cH and 30 cH), each for 10 days. The positive control group received vehicle (ethanol 30% in water). The negative control group received no treatment and were kept at a standard temperature. In the pathogenetic experiment, all animals were kept at a temperature of 20±3 degrees C and treated for 30 consecutive days with *D. pruriens* 6 or 30 cH, or ethanol vehicle, or no treatment. The experiments were performed blind. The statistical analysis used Bartlett's test, followed by ANOVA/Tuckey-Kramer or Kruskal-Wallis/Dunn. The results point to the existence of therapeutic effects, with inhibition of the itching, skin lesions and fur thinning produced by heat, more evident in later observations, with the 9, 12, and 30 cH potencies (Kruskal-Wallis/Dunn; P=0.001). No changes were observed in the other parameters, such as open field activity and laterality of the itching. In the pathogenetic experiment, no changes were observed in any parameters examined. We conclude that the proposed experimental model demonstrates the therapeutic effect of *D. pruriens*, but not its pathogenetic effects.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/16815516>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Modelos Animais (Terapêutico e Patogenético) para o *Dolichos pruriens*.

[Therapeutic and pathogenetic animal models for *Dolichos pruriens*].

[Article in Portuguese]

de Paula Coelho C, Bonamin LV, Filho CD, Martinho KS, D'Almeida V.

Abstract

Os efeitos terapêuticos e patogenéticos do *Dolichos pruriens* foram avaliados usando modelos experimentais bem estabelecidos pela farmacologia tradicional para avaliar parâmetros comportamentais, através de métodos "Campo aberto" e

“Grooming”. O objetivo desse estudo foi testar se os modelos experimentais propostos eram instrumentos adequados para: a) estudar os possíveis efeitos terapêuticos do Dolichos pruriens 6CH, 9CH, 12CH e 30CH na coceira induzida e; b) sugerir um modelo de patogenesia em ratos, usando as potências 6CH e 30CH para a mesma substância

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/186/195>

Int J High Dilution Res. 2009;8(29):183-190.

Evaluation of preventive homeopathic treatment against Colibacillosis in swine production.

de Paula Coelho C, Soto FRM, Vuaden ER, Melville PA, Oliveira FCS, Benites NR.

Abstract

Escherichia coli is the most important etiologic agent implied in neonatal diarrhea in swine; colibacillosis is the disease with highest impact in production of swine. The demands of consumers for meat without chemical residues and the ban on the use of antibiotics and chemotherapics in production of swine compelled to find alternative therapeutic and preventive treatments. Aims: to assess homeopathic treatment as preventive against colibacillosis in swine. Methods: the study was conducted in a farm in Mato Grosso, Brazil; stools of 4 piglets with diarrhea were collected to establish the presence of *E. coli*; concomitantly it was performed a clinical exam to identify the symptoms leading to the choice of a homeopathy remedy. Newborn piglets were divided into 4 groups (n= 11 or 12): 1) control, subjected to antibiotic treatment against diarrhea; 2) homeopathic treatment, performed with Phosphorus 30cH according to the symptoms collected; 3) biotherapeutic treatment, performed with *Escherichia coli* 30cH prepared from the locally obtained bacteria; 4) homeopathic + biotherapics treatment. Results: all 3 groups treated with homeopathy/isotherapy presented a significant reduction of diarrhea compared to the control group (p=0.02); the group treated with Phosphorus 30cH + *Escherichia coli* 30cH presented the highest weight gain which was significant by comparison to all other groups (p=0.001). Conclusion: homeopathic and biotherapics treatment were more effective than antibiotics in the control of diarrhea in newborn piglets; combination of homeopathic and isopathic treatment resulted in the highest weight gain. These results suggest that homeopathy and isopathy are effective alternatives for the treatment of diarrhea by *E. coli* in newborn swine.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewFile/361/409>

Int J High Dilution Res. 2012;11(40):136-137.

Evaluation of homeopathic and biotherapeutic treatments in a swine farm to control *Escherichia coli* infection: a long term study

de Paula Coelho C, Soto FR, Vuaden ER, Melville PA, Moreno AM, Bonamin LV, Benites NR.

Abstract

Background: *Escherichia coli* is the most important etiological agent in neonatal diarrhea in swine, and Enterotoxigenic *Escherichia coli* (ETEC) is the most commonly isolated. Regarding to virulence factors, five main types of fimbriae were already described in swine samples: F4 (K88), F5 (K99), F6 (987P), F18 and F41. Thermolabile (LT) and thermostable enterotoxins (ST), as well as shiga-like toxin or verotoxin (Stx2) are also found in isolates of swine origin, related to diarrhoea process. Methods: This long term study has been developed in a swine farm (Mato Grosso, Brazil), in which 93 piglets were studied and 184 fecal samples were evaluated in two steps, with the aim to search the presence of *Escherichia coli* and to prepare a specific biotherapeutic medicine. Each step had one year of interval each other. Concurrently, for each step, a detailed anamnesis was made for choosing the ideal homeopathic medication for each step (Phosphorus 30 CH and Pulsatilla 30 CH, respectively). In each step, four groups consisting of 11-12 piglets and the respective primiparous mother pig were formed, and the treatments happened simultaneously: control group (antimicrobial treatment, the same used in the swine farm), homeopathic medication, *E. coli* biotherapeutic and homeopathic medication associated to biotherapeutic. The medications were made according to the Brazilian Homeopathic Pharmacopeia and the treatment lasted 12 days. After 24 days, in the weaning, the weight gain of each bath was also evaluated. Considering both steps, the research of virulence factors and enterotoxins was carried out in 99 *Escherichia coli* colonies through Polymerase Chain Reaction - PCR. Results: In both steps, the homeopathy treated groups passed from 75.0% of diarrhea incidence to 8.3% at the end of the treatment ($p < 0.05$); the groups treated with homeopathy + biotherapeutic also presented significant reduction in the number of sick animals ($p < 0.05$), passing from 68.2% to 27.2% at the end. Weight gain in all groups taking homeopathic medicines was 15% higher than the control group. Only the F41 virulence factor was found in 10.0% of the studied animals. Conclusion: Homeopathic medications seem to be an efficient alternative for controlling enteric disorders in swine, increasing the weight gain. However, further studies should be conducted to confirm if homeopathic medicines can interfere in the presence of virulence factors and enterotoxins in bacterial population.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/587/590>

Int J High Dilution Res. 2012;11(40)159-160.

Pilot study of preventive homeopathic treatment for colibacillosis in a swine farm in the state of São Paulo, Brazil.

de Paula Coelho C, Soto FRM, Vuaden ER, Melville PA, Bonamin LV, Benites NR.

Abstract

Background: Diarrhea has become an economically important disease in pigs due to intensive management system which has been used. *Escherichia coli* is the most important etiological agent of neonatal and post weaning diarrhea in swine colibacillosis and the greater impact of the disease in pigs. The demand of consumers seeking meat without chemical residues and the prohibition of the use of antibiotics and chemotherapeutics in swine production has led to seek an alternative medicine for preventive and therapeutic treatments in swine breeding. The objective of this study was to evaluate the effectiveness of prophylactic treatment for diarrhea

swine using homeopathic medicine, Escherichia coli biotherapeutic and search experimental evidence that may indicate the use of E. coli biotherapeutic. To evaluate the difference in weight gain of the pigs in groups and this gain is increased with less toxic.

Methods: This study was carried out in a commercial farm in São Paulo state. Stool samples were collected from five piglets presenting diarrhea and examined for the presence of Escherichia coli with these strains were made Biotherapeutics for later use. Concomitantly, a detailed interview was done with the owner, about all clinical information useful to choose the best homeopathic medicine, using repertory method. Subsequently, four groups were formed consisting of 11-12 piglets each: a control group (antimicrobial used in the farm routine for treatment of diarrhea), a group treated with the chosen homeopathic medicine - China officinalis 30 CH [1](Cinchona officinalis) - a group treated with E. coli biotherapeutic 30 CH (medicine made from E. coli strains collected and isolated from the same farm) and a group treated with both homeopathic and E. coli biotherapeutic medicines.

Results: There was no statistical difference in the number of animals presenting diarrhea among groups, but China treated pigs showed greater weight gain compared to the other three groups (Fisher test, $p = 0.0001$), despite the incidence of diarrhea.

Conclusion: This preliminary study suggests that the use of homeopathic medicines could improve productivity in swine farms even though clinical manifestations of diarrhea occur.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/592/565>

*Vet. e Zootec.*2009;16(3):471-477.

Influência do tratamento Homeopático de fêmeas suínas no dedeimento zootécnico de suas proles submetidas ao manejo de ressecção de dentes e a amputação do terço distal da cauda.

[Influence of sows homeopathic treatment on zootechnical performance of litter after early canine tooth resection and tail docking].

[Article in Portuguese]

De Souza ACM, Vuaden ER, de Paula Coelho C, Bonamin LV, de Azevedo SS, Benites NR, Vasconcellos SA, Soto FRM.

Homeopathy. 2012 Oct;101(4):243-5. doi: 10.1016/j.homp.2012.08.003.

The effect of individualized homeopathic treatment on the semen quality of bulls with reproductive disorders: a case series.

[de Souza MF](#), [Costa-E-Silva EV](#), [Macedo GG](#), [Soares BD](#), [Zúccari CE](#).

DVM, Sigo Homeopatia, Brazil. Electronic address: monicavet2003@yahoo.com.br.

Abstract

BACKGROUND: Poor semen quality of pedigree bulls has major economic implications in cattle breeding.

AIMS: To evaluate the effect of homeopathy on the semen of bulls with reproductive disorders.

METHODS: The behavioral, clinical and spermatic characteristics of four Nelore bulls were evaluated. The bulls received individualized homeopathic treatment mixed into the feed and administered once per day. Semen was collected using an artificial vagina. Successful collection, freezing, effective doses, and the number of doses of semen per collection were compared before and after homeopathic treatment.

RESULTS: The bulls were treated with Sulphur, Phosphorus, Lycopodium and Argentum nitricum all in 30CH dilution. The rates of successful collection were 97.14%, 100%, 96.67% and 30.77% pretreatment and 95.45%, 100%, 94.67% and 96.77% at post-treatment for bulls A, B, C and D, respectively. The average number of doses per ejaculate pre and post-treatment were 102.67 (SD 74.41) vs. 300.08 (SD 180.58), 0 vs. 234.78 (SD 96.12), 0 vs. 105.12 (SD 54.98), 0 ± vs. 107.37 (SD 52.12) respectively. Many of these differences were statistically significant.

CONCLUSION: The use of homeopathy apparently improved the production of viable doses of semen from bulls with previous freezing problems and poor semen quality. Controlled studies should be conducted.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/23089220>

Acta Vet Scand. 2003;44(2):97–101. doi: 10.1186/1751-0147-44-97

No Effect of a Homeopathic Preparation on Neonatal Calf Diarrhoea in a Randomised Double-Blind, Placebo-Controlled Clinical Trial

[K de Verdier](#), [P Öhagen](#) [S Alenius](#)

Abstract

A double-blind, placebo-controlled clinical trial of a homeopathic treatment of neonatal calf diarrhoea was performed using 44 calves in 12 dairy herds. Calves with spontaneously derived diarrhoea were treated with either the homeopathic remedy Podophyllum (D30) (n = 24) or a placebo (n = 20). No clinically or statistically significant difference between the 2 groups was demonstrated. Calves treated with Podophyllum had an average of 3.1 days of diarrhoea compared with 2.9 days for the placebo group. Depression, inappetence and fever were presented equally in the 2 groups. These results support the widely held opinion that scientific proof for the efficacy of veterinary homeopathy is lacking. In the European Union this implies a considerable risk for animal welfare, since in some countries priority is given to homeopathic treatments in organic farming.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1831551/pdf/1751-0147-44-97.pdf>

Int J High Dilution Res. 2006;5(16).

**Ultradiluições e Carcinogênese Hepática: Estudo Histoquímico.
[Ultradilutions and hepatic carcinogenesis].**

[Article in Portuguese]

Del Bianco V, Andrade FS de, Marthinho KS, Marcondes VA, Bonamin LV.

Abstract

This study focuses on the action of ultradilutions in liver carcinogenesis, using isopathy and endogenous molecules high dilution models. Rats were treated with aceto-amino-fluorene (AAF, 3.5 mg/kg) 20 days before and 10 days after the 30% hepatectomy. Animals were divided in 5 groups: I- control; II- treated weekly with Dexamethasone 7CH (10-17 M); III- treated weekly with Dexamethasone 7CH associated with dexamethasone 4 mg/kg; IV- treated weekly with dexamethasone 4 mg/kg; V- treated weekly with AAF 7CH (10-15 M). Results suggest that animals treated with Dexamethasone 7CH associated with dexamethasone 4 mg/kg (group III) presented significant increase (Kruskal-Wallis, $p=0.01$) in the biliary stasis in relation to those treated with dexamethasone 4mg/kg (group IV). Results suggest that high dilutions must be used carefully in animals bearing malignant or pre-malignant processes.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/207/221>

Nitric Oxide. 2007 Feb;16(1):118-30. Epub 2006 Jun 15.

Protective effect of *Hypericum perforatum* in zymosan-induced multiple organ dysfunction syndrome: relationship to its inhibitory effect on nitric oxide production and its peroxynitrite scavenging activity.

[Di Paola R](#), [Mazzon E](#), [Muià C](#), [Crisafulli C](#), [Genovese T](#), [Di Bella P](#), [Esposito E](#), [Menegazzi M](#), [Meli R](#), [Suzuki H](#), [Cuzzocrea S](#).

Department of Clinical and Experimental Medicine and Pharmacology, School of Medicine, University of Messina, Torre Biologica, Policlinico Universitario Via C. Valeria, Gazzi, 98100 Messina, Italy.

Abstract

Hypericum perforatum is a medicinal plant species containing many polyphenolic compounds, namely flavonoids and phenolic acids. Since polyphenolic compounds have high antioxidant potential, we have investigated the effects of *H. perforatum* extract on the development of multiple organ dysfunction syndrome caused by zymosan (500 mg/kg, administered i.p. as a suspension in saline) in mice. Organ failure and systemic inflammation in rats was assessed 18 h after administration of zymosan and/or *H. perforatum* extract and monitored for 12 days (for loss of body weight and mortality). Treatment of mice with *H. perforatum* extract (30 mg/kg i.p., 1 and 6h after zymosan) attenuated the peritoneal exudation and the migration of polymorphonuclear cells caused by zymosan, pulmonary, intestinal and pancreatic injury, and renal dysfunction as well as the increase in myeloperoxidase in the lung and intestine. Immunohistochemical analysis for inducible nitric oxide synthase (iNOS), nitrotyrosine, and poly(ADP-ribose) (PAR) revealed positive staining in lung and intestine tissues obtained from zymosan-injected mice. The degree of staining for nitrotyrosine, iNOS, and PAR was markedly reduced in tissue sections obtained from zymosan-treated mice, which received *H. perforatum* extract. In conclusion, this study provides evidence, for the first time, that *H. perforatum* extract attenuates the degree of zymosan-induced multiple organ dysfunction syndrome in mice.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/16889996>

BMC Complement Altern Med. 2012 Aug 16;12(126):1-7. doi: 10.1186/1472-6882-12-126.

Effect of Neurexan on the pattern of EEG frequencies in rats.

[Dimpfel W](#), [Roeska K](#), [Seilheimer B](#).

Justus-Liebig-University Giessen, NeuroCode AG, Wetzlar, Germany.

Abstract

BACKGROUND: Various medications of natural origin have effectively treated stress-related disorders, such as sleep disturbances and agitated conditions. The efficacy of Neurexan, a multicomponent, low-dose medication, has been demonstrated in observational studies, but its exact mechanism of action has not been determined.

METHODS: To characterize the effects of Neurexan on the central nervous system, we analyzed the spectral frequencies of field potentials in four rat brain areas after a single oral administration of Neurexan. Different doses of Neurexan were tested within a crossover design, and effects were compared with vehicle control.

RESULTS: Significant effects were observed with 0.5 tablets of Neurexan, predominantly on δ - and θ -waves in the frontal cortex and reticular formation ($P < 0.01$). In the reticular formation, significant changes of δ - and θ -waves occurred as early as during the first hour after administration. The time course revealed a significant and longer-lasting increase of δ - and θ -waves in the frontal cortex and reticular formation, whereas other spectral frequencies were only transiently affected in the frontal cortex, reticular formation, and striatum.

CONCLUSION: In conclusion, this study demonstrated that the low-dose medication Neurexan influences central nervous system activity in rats. The resulting electroencephalographic profile of Neurexan shows several similarities with those of other calming agents, such as Valeriana and Passiflora, suggesting a potential benefit of Neurexan for patients with stress-related disorders. Moreover, this report demonstrates that electroencephalographic signatures are also valid biomarkers for the assessment of low-dose medications, such as Neurexan.

Link to paper: <http://www.biomedcentral.com/1472-6882/12/126>

Int J High Dilution Res. 2002;1(1):8-11.

Homeopatia veterinária: estratégias de ação

[Veterinary homeopathy: strategies of action]

[Article in Portuguese]

do Amaral MTCG.

Abstract

Uma das maneiras de ver e analisar a Homeopatia Veterinária é através das estratégias de seus profissionais nos diversos campos de sua ação. A Veterinária tem uma particularidade muito interessante: a atuação de seus profissionais se dá em áreas “conflitantes”. Ao mesmo tempo em que é responsável pela saúde humana, tanto ao cuidar e prevenir doenças em seus animais de estimação como ao ser responsável pela fiscalização da qualidade dos produtos de origem animal, principalmente alimentícios, também o é pelo bem-estar de todos animais que o

homem tem sob seu controle, inclusive os de zoológicos e parques. E as estratégias de ação do veterinário não são as mesmas nas várias situações.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/64/47>

AHZ. 1929;177(1):40-47.

Arbeiten von Führern der wissenschaftlichen Homöopathie.

[Leading work for the science of homeopathy].

[Article in German]

Donner F.

Immunobiol. 1987;174(3):139.

Immunomodulation in Mice by very low Dose of alpha-Endorphin.

Doucet M, Karouby Y, Carriere V, Dorfman P, Bastide, M.

Semin Thromb Hemost. 1996;22 Suppl 1:67-70.

Effects of ultra-low-dose aspirin on embolization in a model of laser-induced thrombus formation.

[Doutremepuich C](#), [Aguejoug O](#), [Belon P](#).

Laboratoire d'Hématologie, Bordeaux, France.

Abstract

A laser-induced rat mesenteric vessel thrombosis model was used to evaluate the effect of acetylsalicylic acid (ASA) at ultra-low doses. A partial occlusion was induced in small mesenteric vessels (diameter 40-50 microns) by an argon laser. The laser induced damage of endothelial cells. Thrombi formed within seconds after the laser lesion and grew rapidly. Embolization began during the minute following the laser injury. Compared to placebo, the administration of ASA at ultra-low doses (334×10^{-11} mol/mL) by subcutaneous injection in the thorax region (0.2 mL) induced three different phenomena: (1) a decrease in the number of laser injuries required to induce thrombus formation, (2) an increase in number of emboli removed by the blood stream, and (3) an increase in the duration of embolization. The ultra-low doses of ASA showed a strong increase in the number of emboli and in the duration of embolization.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/8807732>

Pathophysiol Haemost Thromb. 2007;36(1):40-4. doi: 10.1159/000112638. Epub 2008 Mar 6.

Reverse effect of aspirin: is the prothrombotic effect after aspirin discontinuation mediated by cyclooxygenase 2 inhibition?

[Doutremepuich C](#), [Aguejoug O](#), [Eizayaga FX](#), [Desplat V](#).

Laboratoire d'Hématologie, UFR des Sciences Pharmaceutiques, Université Victor Segalen Bordeaux 2, Bordeaux, France. Christian.Doutremepuich@heph.u-bordeaux2.fr

Abstract

BACKGROUND: While aspirin is the drug most often used to prevent cardiovascular complications, its discontinuation induces an increased risk of acute coronary syndrome and ischemic stroke in some patients.

OBJECTIVES: We hypothesized that infinitesimal concentrations of aspirin could persist in plasma after its discontinuation, thereby inducing a prothrombotic effect that could be due to a modification in the mechanism of action of aspirin via the cyclooxygenase 1 (COX-1) and COX-2 pathways.

METHODS AND RESULTS: We studied the effects of ultra-low-dose aspirin (ULDA) as well as those of sc-560 and ns-398, specific COX-1 and COX-2 inhibitors, on induced hemorrhagic time and in a model of laser-induced thrombosis in rats. In the laser-induced thrombosis model, ULDA treatment increased the number of emboli and the duration of embolization, thereby confirming its prothrombotic effect described in previous publications. This effect was also observed in rats pretreated with sc-560 but not in those pretreated with ns-398.

CONCLUSIONS: We demonstrated that ULDA induced a prothrombotic effect in the rats studied. This strongly suggests that a very small amount of aspirin could remain in the patient's blood after aspirin therapy, leading to cardiovascular complications. This effect may be mediated by the COX-2 pathway.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/18332613>

Biol. Tier. 1993;10:83-92.

Prophylaktische Stoffwechselbehandlung bei Milchkühen in der Trockenstehzeit.

[Prophylactic treatment metabolism in dairy cows in the dry period].

[Article in German]

[Dorenkamp B.](#)

Abstract

An 23 trockenstehenden Milchkühen in drei Problembeständen wurde versucht, durch eine wöchentliche prophylaktische Behandlung mit *Carduus compositum ad us. vet.* und *Coenzyme compositum*, beginnend vier Wochen a.p. und endend eine Woche p.p., die Stoffwechselsituation zu stabilisieren und für die Puerperalphase vorzubereiten. Dadurch sollten die in den drei Beständen gehäuft vorkommenden Puerperalerkrankungen *Retentio secundarium*, Hypokalzämie und Ketose reduziert werden. Bei den behandelten Tieren traten diese drei Erkrankungen in keinem Fall auf. Bei den nichtbehandelten übrigen Tieren der drei Bestände kam es in der dort bestandsüblichen Häufigkeit zu diesen Erkrankungen. Die dargestellte Behandlung mit *Carduus compositum ad us. vet.* und *Coenzyme compositum* während der Trockenstehphase erwies sich als geeignete Maßnahme, um Puerperalerkrankungen bei Milchkühen in Problembeständen vorzubeugen.

Link to abstract/paper:

http://www.vevion.de/oekovet/publikationen/artikel.cfm?artikel_id=187

Biol Tier. 1996;13(4):116-123,

Behandlung des Urogenitalapparates bei Milchkühen post partum mit homöopathischen Arzneimitteln.

[Treatment of the urogenital apparatus of dairy cows post partum with homeopathic medications].

[Article in German]

[Dorenkamp B.](#)

Abstract

Es werden die Ätiologie und die Untersuchung von Erkrankungen des Urogenitalapparates bei der Milchkuh vorgestellt. Die Therapie mit Berberis-Homaccord, Cantharis compositum und begleitenden homöopathischen Präparaten in drei unterschiedlichen Phasen post partum wird beschrieben.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=98

Homeopathy. 2007 Apr;96(2):95-101.

In vivo study of the anti-inflammatory effect of Rhus toxicodendron.

[dos Santos AL](#), [Perazzo FF](#), [Cardoso LG](#), [Carvalho JC](#).

Faculdade de Ciências da Saúde de São Paulo, R. Bartolomeu de Gusmão, São Paulo, São Paulo, Brazil.

Abstract

BACKGROUND: Homeopathic Rhus toxicodendron (Rhus tox) is used in various inflammatory conditions. We screened its effect compared to succussed ethanol controls and appropriate active controls.

METHOD: We initially experimented with Rhus tox 6, 12, 30 and 200 cH, using carrageenan-induced paw oedema in rats. The 6 cH dilution appeared most effective and was used in subsequent assays. We used pre-treatment and single treatment regimes in Wistar rats, and mice.

RESULTS: We found significant reductions compared to control in carrageenan-induced paw oedema, vascular permeability, writhing induced by intraperitoneal acetic acid and stress induced gastric lesions.

CONCLUSIONS: Rhus tox in homeopathic dilution appears to interfere with inflammatory processes involving histamine, prostaglandins and other inflammatory mediators.

Link to paper: <http://www.siomi.it/documenti/pubblicazioni/articolo.pdf>

C R l'Acad Sci Paris. 1982;295(III):283-287.

Evaluation de la dose limite d'action du facteur thymique sérique.

[Evaluation of the dose limit action serum thymic factor].

[Article in French]

Doucet-Jaboeuf M, Guillemain J, Piecharczyk M, Karouby Y, Bastide M.

Cahiers de Biothérapie. 1984;21(84):81-89.

Variations saisonnières de la réaction immunitaire humorale chez la souris après administration d'hormones thymiques.

[Seasonal variations in the humoral immune response in mice after administration of thymic hormones].

[Article in French]

Doucet-Jaboeuf M, Pelegrin A, Cot MC, Guillemain J, Bastide M.

Tierarztl Umsch. 2010;65:484-490.

Über die Wirkung eines homöopathischen Kombinationsarzneimittels auf stressabhängige Laborparameter beim Absetzen von Fohlen.

[Effects of the homeopathic preparation Engystol ad us. vet. on stress induced parameters in weaning foals].

[Article in German]

Dreismann GM.

Biol Tier. 2010;27(2):47-49.

Progressive Retinaatrophie - Behandlung bei zwei Hunden.

[Progressive retinal atrophy - treatment in two dogs].

[Article in German]

[Dreismann,G.M.](#)

Int J High Dilution Res. 2012;11(40):200-201.

Additional resource for diabetes diagnostics in animals and humans

Vladimir Vitalyevich Drozdov

Abstract

Veterinary doctors often observe cases of unexplained elevated glucose and ketones in urine of domestic animals without any other signs of diabetes. We studied these effects from the standpoint of the phenomenon of interdependent conditions in animals and humans, described by T.V.Novosadyuk in 2000. She was the first to provide a theoretical and practical foundation for clinical cases of simultaneously developing similar diseases in domestic animals and their owners. During the last 5 years we studied health of humans in families where domestic animals are affected by the laboratory abnormalities described above. In vast majority of cases it has been found out that animal owners have diabetes mellitus of variable severity. At the same time there were no disorders of carbohydrate metabolism in animal owners in 11 cases. We recommended members of these families to undergo a specialized examination. In all of these cases latent diabetes mellitus was found in humans who had especially close relationships with animals. These findings led to initiation of

treatment in humans. At the same time animals were treated with a collar with a linen sack attached containing Peganum Harmala 30 globules. Repeated laboratory tests were performed after one month of such treatment. Normalization of laboratory variables was observed in all of the cases. Based on the study results we developed an algorithm of activities that helps to diagnose early and latent forms of diabetes mellitus in domestic animals and their owners. This algorithm includes: - test for glucose and/or ketones in animal urine after correction of feeding and care defects. - blood and urine glucose tests in family members of animal owners. In cases of deviations from normal values we recommended them to consult appropriate specialists and begin treatment immediately. - animals are given collars with Peganum Harmala 30 globules in a linen sack attached. - granules are removed when laboratory values normalize in animals. Control urinalysis is performed every three months during a year. This approach is especially useful in latent early forms of diabetes mellitus when abnormal findings in animals or their owners enable us to suspect a similar disease in another. In such a way, the suggested algorithm is effective for organization of preclinical diagnostics in both domestic animals and their owners. In the future it is possible to enrich not only veterinary but also medical practice with new options for effective patient aid by practical development of the use of animal and human interdependent conditions.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/561/607>

J Helminthol. 1982 Jun;56(2):81-4.

Filaricidal properties of a wild herb, *Andrographis paniculata*.

[Dutta A](#), [Sukul NC](#).

Abstract

Water decoction of the leaves of *Andrographis paniculata* killed in vitro the microfilaria of *Dipetalonema reconditum* in 40 min. Three subcutaneous injections of the extract into infected dogs at 0.06 ml per kg body-weight reduced the number of microfilariae in blood by more than 85%. The larvae were not totally eliminated with more infections but the reduced microfilarial level persisted. No toxic effect of the extract was observed in rabbits. The treated dogs became lethargic initially for a week, probably due to the mass killing of microfilariae.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/7201486>

Hahnemann Glean. 1979;46:37-41.

Short term observations on the effect of China in relation to the rectal temperature of albino rats.

Dwarakanath SK, Stanley MM.

J Am Vet Med Assoc. 1998 Jul 1;213(1):25-6.

Viewpoint on vaccination guidelines and alternative modalities.

[Dym M](#).

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/9656015>

Vet Rec. 1995 Jul 8;137(2):48.

Evaluation of a homoeopathic treatment for subclinical mastitis.

[Egan J.](#)

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/8525586>

Pathophysiol Haemost Thromb. 2005;34(1):29-34.

Platelet aggregation in portal hypertension and its modification by ultra-low doses of aspirin.

[Eizayaga FX](#), [Aguejof O](#), [Belon P](#), [Doutremepuich C](#).

Catedra de Fisiopatologia, Facultad de Farmacia y Bioquimica, Universidad de Buenos Aires, Buenos Aires, Argentina.

Abstract

Aspirin (ASA) is widely accepted as antithrombotic drug, but several reports point out that its use in ultra-low doses (ULD) has prothrombotic properties. In this study, we evaluate the effect of portal hypertension in rats on platelet aggregation in an in vivo arterial thrombosis model induced by a laser beam. Portal hypertension was produced by calibrated stenosis of the portal vein. ASA in ULD was injected to both control and portal hypertensive groups. Platelet aggregation induced by ADP, prothrombin time, activated partial thromboplastin time, fibrinogen and induced hemorrhagic time test were also performed. Portal hypertensive rats showed a diminished number of emboli and duration of embolization in the laser procedure and an increase in induced hemorrhagic time. These changes were reverted by one injection of ASA at ULD. This observation could be of importance for primary prevention or the treatment of recurrence in upper digestive tract hemorrhage in portal hypertensive patients.

Link to paper:

<http://content.karger.com/produktedb/produkte.asp?doi=10.1159/000088545&typ=pdf>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Utilização de Homeopatia no Tratamento de Insuficiência Renal em Felino – Relato de Caso.

[Use of Homeopathy in the Treatment of Renal Failure in Feline – Case Report].

[Article in Portuguese]

Elis CCJS, Bonamin LV.

English Abstract

The clinical and laboratorial evolution of renal failure in a 3 years old, male Persian feline, submitted to homeopathic treatment is related. The animal had shown

sporadic emesis for the previous 3 months with progressive evolution to daily episodes, with anorexia, polydipsia, polyuria, thinning and apathy. On the physical exam it was observed dehydration, hypothermia and epigastric pain. Laboratorial exams showed increase of creatinine, urea and packed erythrocytes.

Ultrasonographic examination indicated thick, hyperechoic renal cortex, poorly defined corticomedullary transition, and gastric wall thickened. The cat was treated with individualized homeopathic medicine (Phosphorus 12CH) and biotherapeutic of Kidney 12CH and presented remission of clinical signs and laboratorial abnormalities. Renal failure is a common disease on small animal veterinary practice and the homeopathic treatment is a plausible therapy to be used.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/225/252>

Br Homeopath J. 2001 Jan;90(1):33-6.

Cushing's disease: a new approach to therapy in equine and canine patients.

[Elliott M.](#)

Kingley Veterinary Centre, Oldwick Farm, Lavant, West Sussex, UK.

Abstract

Forty-one cases of Cushing's Disease affecting both equine and canine patients were treated with an identical mixture of two homeopathically prepared remedies (ACTH 30c and Quercus robur 30c), and the clinical improvements seen in the cases assessed. Homeopathy has been described as a medicine that can only be prescribed on the basis of individual symptoms shown, fitting the remedy to the patient, not the disease. The aim of this study was to define whether a standardised approach, using homeopathically prepared remedies, was a valid system of therapy for this disease, and if so, whether results were repeatable between species. The overall success rate for the therapy was 80% and results were broadly similar between the two species, indicating that homeopathy lends itself to the treatment of Cushing's Disease, and also to both cohort studies and group medicine.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/11212087>

Tierärztl Umschau. 1986;41:878-885.

Untersuchungen zur Stimulierung der Phagozytoseaktivität von peripheren Leukozyten durch verschiedene Dilutionen von Echinacea angustifolia, gemessen an der Chemilumineszenz aus dem Vollblut.

[Studies to stimulate phagocytic activity of peripheral leukocytes by various dilutions of Echinacea angustifolia, as measured by the chemiluminescence from the whole blood].

[Article in German]

Enbergs H, Woestmann A.

Biol. Tier. 1993;4.

Effects of different homeopathic potencies of Lachesis on lymphocyte cultures obtained from rabbit blood.

Enbergs, H., Arndt, G.

Milchpraxis. 1994;32(4):172-176.

**Einsatz von homöopathischen Komplexpräparaten bei Hochleistungskühen.
[Use of homeopathic preparations in high-yielding cows].**

[Article in German]

[Enbergs,H.](#)

Biol Tier. 1995;12(1):5-22.

Untersuchungen zur Prävention von postpartalen Zyklus- und Fruchtbarkeitsstörungen bei Hochleistungskühen durch die homöopathischen Präparate Traumeel, Lachesis compositum und Carduus compositum.

[Studies on the prevention of postpartum cycle and fertility problems in high-yielding cows by homeopathic preparations Traumeel, Lachesis compositum and Carduus compositum].

[Article in German]

Enbergs H, Vorwig W.

Abstract

Mit der vorliegenden Untersuchung sollte geklärt werden, ob durch die prophylaktische Anwendung zweier verschiedener unter Berücksichtigung der besonderen postpartalen Situation ausgewählter homöopathischer Komplexpräparatekombinationen eine Wirkung hinsichtlich des rechtzeitigen Ingangkommens des ovariellen Zyklus p.p. sowie der Prävention von postpartalen Zyklus- und Fruchtbarkeitsstörungen bei Milchkühen festgestellt werden kann.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=68

Zeitschrift für ganzheitliche Tiermedizin. 2000;14(1):16-20.

Präventiver Einsatz von Homöopathika zur Reduzierung von Fertilitätsstörungen bei Hochleistungsmilchkühen.

[Preventive use of homeopathic remedies to reduce fertility problems in high yielding dairy cows].

[Article in German]

[Enbergs,H.](#)

Berlin J Res Hom. 1991;1:151-160.

Effects of Highly Diluted Succussed Thyroxine on Metamorphosis of Highland Frogs.

Endler PC, Pongratz W, Van Wijk R, Kastberger G, Haidvogel, M.

Abstract

These experiments, performed in Graz and in Utrecht, investigate the influence of extremely dilute

thyroxine in a special "homeopathic" preparation on two transitions in the metamorphosis of highland amphibia: a) from the 2-legged to the 4-legged stage; b) from the tailed 4-legged stage to the untailed stage, the juvenile frog (performed in the two laboratories in Graz) or to the stage with reduced tail, respectively (performed in Utrecht). A homeopathic dilution (SOX) of thyroxine in a small but significant range slows down the metamorphosis of highland tadpoles as compared to the reference solution H₂O.30X. This effect could be observed for both transitions. The retardation of metamorphosis was independently shown in all 3 laboratories during the course of the metamorphosis season of the highland amphibia (from August to October). In one experiment (Graz), the number of juvenile frogs climbing out of the water in the final stages of metamorphosis was counted. Fewer "climbers" were observed under treatment with solution T4.30X.

Link to paper:

http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDYQFjAA&url=http%3A%2F%2Fwww.inter-uni.net%2Fstatic%2Fdownload%2Fpublication%2Fkomplementaer%2Fa_1991_Endler_et_al_Berlin_J_highland.pdf&ei=8OhBUYQPQFsi80QW8q4D4AQ&usg=AFQjCNF_ISDrQ6cFqxLi7NOc0k5tEH4UeQ&bvm=bv.43287494,d.d2k

Br Homeopath J. 1991 Oct;80:194-200.

Climbing activity in frogs and the effect of highly diluted succussed thyroxine.

Endler PC, Pongratz W, Kastberger G, Wiegant FA, Haidvogel, M.

Abstract

The experiments investigate the influence of extremely dilute thyroxine (T4) in special 'homoeopathic' preparation (dilution T4.30x) on the spontaneous tendency of juvenile frogs to leave the water and climb on land. Climbing activity was suppressed by dilution T4.30x, with statistical significance both in comparison to the effect of the 'potentized' preparation of the solvent (dilution H₂O.30x) as well as in comparison to the control observations before the start of the treatment. Finally, in the search for optimal treatment duration, it was shown that exposure to the dilutions for even a few minutes sufficed to cause significant effects.

Link to paper:

http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=5&ved=0CF0QFjAE&url=http%3A%2F%2Fwww.inter-uni.net%2Fstatic%2Fdownload%2Fpublication%2Fkomplementaer%2Fa_1991_Endler_et_al_BHJ_climbing.pdf&ei=uO5BUcqbNq2r0AWUgIHIAg&usg=AFQjCNE_D4z_z_QXobqQ49EHL3oQJbksTg&bvm=bv.43287494,d.d2k

Br Homeopath J. 1993 Apr;82(2):124.

A Hahnemannian Drug Proving on Frogs.

Endler PC, Pongratz W, van Wijk R, Wiegant FAC, Walzl K, Gehrler M, Kastberger G, Haidvogel M.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/S0007-0785%2805%2981042-7/fulltext>

Vet Hum Toxicol. 1994 Feb;36(1):56-9.

The effect of highly diluted agitated thyroxine on the climbing activity of frogs.

Endler PC, Pongratz W, Kastberger G, Wiegant FA, Schulte J.

Ludwig Boltzmann-Institut for Homeopathy, Graz, Austria.

Abstract

We studied the influence of specially prepared highly diluted thyroxine on the spontaneous tendency of juvenile frogs, which were at the end of thyroxine-controlled metamorphosis, to leave the water and climb onto land. The test dilution with a thyroxine concentration beyond Avogadro's value (dilution thyroxine D30) and the reference (dilution water D30) were prepared according to directions from the literature on homeopathy. A few drops of these solutions were added to tap water of basins containing the frogs. The frogs' climbing activities were monitored immediately after adding the solutions. The hypothesis derived from a preliminary study was that there is less climbing activity in frogs treated with dilution thyroxine D30 than in a reference group. This hypothesis was proven. Climbing activity diminished under the influence of dilution thyroxine D30, with statistical significance both in comparison to the effect of the analogously prepared solvent (dilution water D30) as well as in comparison to control observations before the start of treatment. When in a later step of observation the dilution water D30-control group was treated with dilution thyroxine D30, the diminishing effect on activity also occurred.

Link to paper: [http://www.inter-](http://www.inter-uni.net/static/download/publication/komplementaer/a_1994_Endler_et_al_VHTox_climbing.pdf)

[uni.net/static/download/publication/komplementaer/a_1994_Endler_et_al_VHTox_climbing.pdf](http://www.inter-uni.net/static/download/publication/komplementaer/a_1994_Endler_et_al_VHTox_climbing.pdf)

Am Soc Exp Biol J. 1994;8:A400.

Transmission of hormone information by non-molecular means.

Endler PC, Pongratz W, van Wijk R, Walzl K, Hilgers H, Brandmaier R.

Br Homeopath J. 1995 Jul;84(3):178-179.

Pilot study on a new aspect of a well-known bio-assay.

Endler PC, Pongratz W.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/S0007-0785%2805%2980086-9/abstract>

Vet Hum Toxicol. 1995 Jun;37(3):259-60.

Non-molecular information transfer from thyroxine to frogs with regard to homeopathic toxicology.

[Ender PC](#), [Pongratz W](#), [Smith CW](#), [Schulte J](#).

Institute of Zoology, University of Graz, Austria.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/7571362>

Am Soc Exp Biol J. 1996;10(3):2653.

Inversion of hormone effect by agitation.

Ender PC, Lauppert E, Heckmann C.

Forsch Komplementarmed Klass Naturheilkd. 2003 Jun;10(3):137-42.

Pretreatment with thyroxine (10-(8) parts by weight) enhances a 'curative' effect of homeopathically prepared thyroxine (10-(13)) on lowland frogs.

[Ender PC](#), [Lüdtke R](#), [Heckmann C](#), [Zausner C](#), [Lassnig H](#), [Scherer-Pongratz W](#), [Haidvoogl M](#), [Frass M](#).

lab@inter-univ.net

Abstract

We studied the influence of a moderate homeopathically prepared thyroxine dilution (final concentration in the basin water 10-(13) parts by weight) on the metamorphosis of lowland *Rana temporaria* which had been hyperstimulated with thyroxine. Two groups of animals were pretreated by immersing them in a molecular thyroxine dilution (10-(8) parts by weight). This pretreatment speeds up development, as is well known. In accordance with the homeopathic/isopathic idea of detoxication or cure, the same hormone was then diluted and agitated in successive steps for further treatment. This homeopathically prepared dilution was administered at 24-hour intervals to one of the groups. An analogously prepared blank solution was used for the control group. Our hypothesis, which was derived from earlier studies, was that animals treated with the test solution would metamorphose more slowly than the control animals, i.e. that the homeopathically prepared thyroxine would have a 'curative' effect. In this new series of experiments this hypothesis was examined by 3 independent researchers. In the experiments carried out by 2 of the 3 researchers the number of animals that reached the four-legged stage at defined points in time was smaller in the group treated with homeopathically prepared thyroxine. In the third laboratory no difference was found between the groups. However, the overall inhibiting effect was statistically significant and more pronounced than in earlier, less promising studies and in parallel experiments in which nonprestimulated animals had been used. Other studies carried out by the 3 researchers involved animals from highland biotopes, where the natural environment probably induces a greater

sensitivity towards thyroxine or higher thyroxine levels. These animals reacted to the homeopathically prepared thyroxine with a slowing down of metamorphosis, even when they had not been prestimulated with a molecular dose of the hormone. This effect was observed in all 3 laboratories and is consistent with the results of previous studies.

Link to paper: http://ww.inter-uni.net/static/download/publication/komplementaer/a_2003_Endler_et_al_RCM_pretreatment.pdf

Homeopathy. 2010 Jan;99(1):25-36. doi: 10.1016/j.homp.2009.11.008.

Repetitions of fundamental research models for homeopathically prepared dilutions beyond 10(-23): a bibliometric study.

[Endler P](#), [Thieves K](#), [Reich C](#), [Matthiessen P](#), [Bonamin L](#), [Scherr C](#), [Baumgartner S](#).

Interuniversity College for Health and Development Graz/Castle of Seggau, Austria.

Abstract

INTRODUCTION: Repeatability of experiments is an important criterion of modern research and a major challenge for homeopathic basic research. There is no recent overview about basic research studies in high homeopathic potencies that have been subjected to laboratory-internal, multicenter or independent repetition trials.

METHODS: We considered biochemical, immunological, botanical, cell biological and zoological studies on high potencies, i.e. beyond a dilution of 10(-23). Main sources of information were reviews, personal contact with members of the homeopathic basic research community, and the MEDLINE and HOMBREX databases. Studies were extracted from the publications and grouped into models. Studies were further sorted according to repetition type (laboratory-internal, multicenter, or independent) and results achieved.

RESULTS: A total of 107 studies were found. Of these, 30 were initial studies. In the attempt to reproduce one of these initial studies, 53 follow-up studies yielded comparable effects (35 laboratory-internal, 8 multicenter, 10 independent repetitions), eight studies showed a consistent, yet different result from the initial study (2 laboratory-internal, 2 multicenter, 4 independent repetitions), and 16 studies yielded no effects (5 laboratory-internal, 2 multicenter, 9 independent repetitions). When all repetitive studies are considered, 69% reported effects comparable to that of the initial study, 10% different effects, and 21% no effects. Independently performed repetition studies reported 44% comparable effects, 17% different effects, and 39% no effects.

CONCLUSIONS: We identified 24 experimental models in basic research on high homeopathic potencies, which were repeatedly investigated. 22 models were reproduced with comparable results, 6 models with different results, and repetition showed no results for 15 models. Independent reproductions with either comparable or different results were found for seven models. We encourage further repetition trials of published studies, in order to learn more about the model systems used and in order to test their repeatability.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20129174>

Homeopathy. 2014 Jan;103(1):67-68.

Highland amphibians and extremely diluted thyroxine.

[P.C. Endler](#), [W. Scherer-Pongratz](#), [H. Graunke](#).

Link to abstract/paper: <http://www.homeopathyjournal.net/article/S1475-4916%2813%2900105-7/fulltext>

Br Homeopath J. 1990;79(2):109-113.

A study of antibody formation by *Baptisia tinctoria* in experimental animals.

Engineer SJ, Vakil AE, Engeneer LS.

Abstract

Injections of *Baptisia tinctoria* Ø (Wild Indigo) were administered **i.m.** to two healthy rabbits six times at weekly intervals. Blood samples were collected before, during and at the conclusion of the trial. Blood was analysed for antibodies against *Salmonella typhosa*, using the Widal reaction. A total leucocyte count was also carried out. A third rabbit was kept as control and was injected only with normal saline **i.m.**. Its blood samples were also collected according to the above schedule. No formation of antibodies against *Salmonella typhosa* was observed in any experimental animal or control whereas marked leucopenia was observed in both experimental rabbits.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/PIIS0007078505801589/abstract>

Bull Exp Biol Med. 1999;127(3):286-289.

Effects of potentiated antibodies to brain specific protein S100 on the dynamics of long-term potentiation in hippocampal slices.

Epshtein OI, Beregovoi NA, Sorokina NS, Starostina MV, Shtark MB.

Abstract

Native monoclonal antibodies to neurospecific S100 protein completely prevented the development of long-term potentiation (LTP) in rat hippocampal slices. Potentiated antiserum prepared by multiple dilutions according to homeopathic procedure ($1:10^{12}$) did not affect LTP, but abolished the effect of native antiserum when applied 20 min prior to it. Neither nonimmune rabbit serum at the same dilution nor homeopathic solvent modified the development of LTP in hippocampal slices.

Link to abstract/paper:

http://link.springer.com/content/pdf/10.1007%2F978-3-540-24333-5_9.pdf

Bull Exp Biol Med. 1999;127(5):493-495.

Effect of potentiated antibodies to brain-specific protein S100 on the integrative activity of the brain.

Epshtein OI, Berchenko OG, Geiko VV, Garbuzova SN, Bevzyuk DA.

Abstract

Effect of potentiated antiserum to brain-specific protein S100 in a concentration of 10^{-100} prepared according to standard homeopathic procedures on integrative activity of rat brain was studied on models of conditioned avoidance reaction and self-stimulation of the lateral hypothalamus through chronically implanted electrodes. The antibodies reversibly inhibit memory processes during avoidance reaction. The incidence of the self-stimulation reaction increased after single administration of potentiated antibodies, while their administration for 5 days decreased the incidence of this reaction. Administration of water caused no such effects.

Link to abstract/paper: <http://link.springer.com/article/10.1007%2FBF02434950>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:62-4.

Hypotensive effect of potentiated antibodies to angiotensin II and AT1 receptors.

[Epstein OI](#), [Martyushev AV](#), [Kudryashova DR](#), [Markel AL](#), [Sergeeva SA](#), [Shtark MB](#).

Materia Medica Holding Research-and-Production Company, Moscow.

Abstract

Hypotensive activity of ultralow doses of antibodies to angiotensin II and its receptors was studied on adult NISAG rats with hereditary stress-induced arterial hypertension. Antibodies to C-terminal fragment of angiotensin II receptors produced the most pronounced hypotensive effect, which was reproducible after repeated administration. These antibodies decreased systolic blood pressure by 16.40 +/- 0.62 mm Hg. The most rapid hypotensive effect was produced by affinity purified antibodies to angiotensin II: 2 h after administration of these antibodies systolic blood pressure decreased by 12.80 +/- 5.49 mm Hg. Our results indicate that combination treatment with ultralow doses of antibodies to angiotensin II and its receptors hold much promise for the use in clinical practice.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949653>

Bull Exp Biol Med. 2003 Jan;135(7):96-8.

Antitussive activity of Anar.

[Epstein OI](#), [Kovaleva VL](#), [Zak MS](#).

All-Russia Research Center for Safety of Bioactive Substances, Staraya Kupavna.

Abstract

Affinity-purified antibodies to morphine (mixture of homeopathic dilutions C30+C200) produced an antitussive effect on male and female guinea pigs with cough induced by citric acid and capsaicin.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949665>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:111-3.

In vitro effects of bipathic treatment with antibodies in ultralow doses during long-term post-tetanic potentiation.

[Epstein OI](#), [Beregovoi NA](#), [Pankova TM](#), [Sorokina NS](#), [Starostina MV](#), [Shtark MB](#).

Materia Medica Holding Research-and-Production Company, Moscow.

Abstract

We studied the effects of individual or combination treatment with monoclonal antibodies 5F5-B6 in ultralow doses specifically marking mossy fibers in rat hippocampus and antibodies to S100 protein during long-term post-tetanic potentiation in hippocampal slices. The possible mechanisms of changes produced by therapeutic administration of antibodies in ultralow doses were revealed.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949670>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:123-4.

Antidepressant properties of Proproten and amitriptyline: comparative experimental study.

[Epstein OI](#), [Molodavkin GM](#), [Voronina TA](#), [Sergeeva SA](#).

Materia Medica Holding Research-and-Production Company, Moscow.

Abstract

Antidepressant properties of Proproten (antibodies to S100 protein in ultralow doses) were studied on outbred albino rats. The animals were subjected to the Porsolt's test of behavioral helplessness and Nomura's test of forced swimming in a reservoir with freely rotating wheels. Proproten in a dose of 2.5 ml/kg produced a strong antidepressant effect. It was observed after single and repeated (5 days) peroral treatment with the preparation. Proproten decreased the immobility time (Porsolt's test) and increased the number of wheel turns (Nomura's test). The activity of Proproten compared well with the standard preparation amitriptyline. As differentiated from amitriptyline, Proproten did not produce the sedative effect.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949674>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:128-9.

Neurotropic and neurospecific substances and their antibodies: effects on conditioned activity of rats.

[Epstein OI](#), [Vorob'eva TM](#), [Berchenko OG](#), [Geiko VV](#), [Pan IR](#), [Bevzyuk DA](#).

Materia Medica Holding Research-and-Production Company, Moscow.

Abstract

We compared the effects of neurotropic and neurospecific substances and their antibodies on conditioned activity of rats. Single treatment produced the positive

effect on the latency and number of conditioned responses. Repeated treatment with test compounds in the same dose improved conditioned activity of animals.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949676>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:130-1.

Neurotropic compounds and their antibodies: effect on the brain system of positive emotional reinforcement.

[Epstein OI](#), [Vorob'eva TM](#), [Geiko VV](#), [Pan IR](#), [Berchenko OG](#).

Materia Medica Holding Research-and-Production Company, Moscow.

Abstract

We studied the effects of ethanol, morphine, S100 protein, and antibodies to morphine, S100 protein, and opiate -receptors in ultralow doses on self-stimulation of the lateral hypothalamus. The reaction underwent similar changes after single administration of test preparations. Tenfold treatment produced the stimulatory and stabilizing effect, which was related to ambivalent properties of preparations in ultralow doses. Tenfold administration of water did not produce changes in control animals.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949677>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:132-3.

Psychoactive compounds and their antibodies: effect on self-stimulation of the lateral hypothalamus in morphinized rats.

[Epstein OI](#), [Vorob'eva TM](#), [Geiko VV](#), [Berchenko OG](#).

Institute of Neurology, Psychiatrics, and Narcology, Ukrainian Academy of Medical Sciences, Kharkov.

Abstract

We studied the effect of morphine hydrochloride, brain-specific S100 protein, and antibodies to morphine, S100 protein, and opiate mu-receptors in ultralow doses on self-stimulation of the lateral hypothalamus in morphinized rats. This reaction in morphine-withdrawn rats underwent specific changes after single administration of test preparations. Repeated treatment with preparations in the same dose equalized emotional homeostasis. This effect was especially pronounced after treatment with antibodies to morphine, S100 protein, and opiate mu-receptors. Our findings should be taken into account in developing methods for non-narcotic substitutive therapy of patients with morphine dependence.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949678>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:146-9.

Ultralow doses of antibodies to inflammatory mediators: antitussive properties of antibodies to bradykinin, histamine, and serotonin.

[Epstein OI](#), [Kovaleva VL](#), [Zak MS](#), [Dugina YL](#).

Materia Medica Holding Research-and-Production Company, Moscow.

Abstract

We studied antitussive activity of antibodies to inflammatory mediators (bradykinin, histamine, and serotonin) in ultralow doses. Experiments were performed on guinea pigs with cough induced by citric acid and capsaicin. Test preparations suppressed cough produced by citric acid. Antibodies to bradykinin in ultralow doses were most potent in relieving capsaicin-induced cough (up to 85%); antibodies to serotonin and, particularly, to histamine produced a smaller effect. Potentiated histamine and serotonin possessed polymodal properties.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949683>

Evid Based Complement Alternat Med. 2006 Dec;3(4):541-5.

Improvement of Memory by Means of Ultra-Low Doses of Antibodies to S-100B Antigen.

[Epstein OI](#), [Pavlov IF](#), [Shtark MB](#).

Abstract

Antigen S-100B of nervous tissue, according to the data of numerous studies, affects the mechanisms of nervous system plasticity and memory. The influence of ultralow doses of antibodies to S-100B (6C dilution, according to the homeopathic pharmacopoeia) has been studied on three learning behavioral models on Wistar rats, which were inhibitory avoidance, choosing of bowls with sucrose and feeding behavior cessation after auditory signal. For all three tasks, parameters of reproduction of the learned skills improved after per oral administration of potentiated antibodies to S-100B antigen immediately after learning. Possible mechanisms of the anti-S-100B antibodies influence on memory formation are discussed.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1697748/pdf/nel073.pdf>

J Am Anim Hosp Assoc. 2011 Nov-Dec;47(6):110-5.

Clinical resolution of nasal aspergillosis following therapy with a homeopathic remedy in a dog.

[Epstein S](#), [Hardy R](#).

Wilmington Animal Hospital, Wilmington, DE, USA.

Abstract

A 6 yr old, male, neutered Weimaraner was treated homeopathically for nasal aspergillosis after failing to respond to two treatments of topical (intranasal) clotrimazole and oral amoxicillin trihydrate/clavulanate potassium. Computed tomography, rhinoscopy, fungal culture, and cytology previously confirmed the diagnosis. At presentation for homeopathic treatment, the dog had aggressive left-sided sinusitis and rhinitis with destruction of nasal turbinates and severe bouts of epistaxis. Erosion and depigmentation of the nasal planum were evident. After two

treatments with homeopathic aurum metallicum, resolution of clinical signs occurred and clearance of the aspergillosis organisms was documented by computed tomographic scan, rhinoscopy, and histopathology. Homeopathic aurum metallicum may be beneficial in treating cases of canine nasal aspergillosis.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22058356>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

A homeopatia tratando distúrbios de comportamento: cães agressivos e/ou destrutivos.

[Homeopathy treating behavior disorders: aggressive and/or destructive dogs].

[Article in Portuguese]

Estevão E; Bonamin LV.

English Abstract

Canine aggressiveness is an increasing problem of difficult solution. Health professionals including physicians, veterinarians and researchers are involved in this subject, searching for therapeutic and social approaches to restore the harmony of man/dog relationship. As homeopathy could be a possible alternative to this question, it was designed, in this project, the use of individual homeopathic treatment for aggressive and/or destructive dogs, in a blind - randomized study. Therefore, 19 dogs of different age, sex and breed were divided in two groups: placebo and verum, independent of being submitted or not to a previous treatment. Animals that suffered any other therapeutic intervention out of the purposed protocol, during the 90 days of valuation or were represented as a high risk of accident to people were discarded from the study. The medicine selection was made by the repertory method, comparing the repertory symptoms with those described in the classical veterinary literature. The animals were reevaluated monthly. At the end of a 90-day period, the identification of each dog was revealed and animals of the placebo group were submitted to the verum treatment. The evolution of each case was followed by scores (0 to 4); at the end of the study, animals that presented a score higher than 2 (that did not bite and even not destroyed anything) were considered as success cases. Homeopathic treatment of the verum group resulted in 88% of success (Fisher, $p=0.0007$), with 45% of general remission of symptoms (Fisher, $p=0.0001$). The group that received placebo didn't have any success case; however, the following homeopathic treatment resulted in 66.7% of success, with 40.38% of general remission of symptoms. The reduction of aggressiveness, in accordance to the established scores, also was statistically higher in the verum group (Mann-Whitney, $p\leq 0.02$). In conclusion, the individual homeopathic treatment, realized during a period of 90 days, is plausible to be adopted as an effective method in controlling aggressive disorders in dog.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewFile/187/196>

Homeopathy. 2014 Jan;103(1):68.

Amelioration of pain and distress in tail-ringed lambs using homeopathy.

[David Eyles](#)

Link to abstract/paper: <http://www.homeopathyjournal.net/article/S1475-4916%2813%2900106-9/fulltext>

Int J High Dilution Res. 2012;11(40):198-199.

Causticum hahnemanni, Conium maculatum and Lycopodium clavatum highly diluted medications decreases parasitemia in mice infected by Trypanosoma cruzi.

Falkowski GJS, Lopes CR, Brustolin CF, Massini PF, Ferreira EC, da Veiga FK, Aleixo DL, Pala NR, Barion T, et al.

Abstract

Introduction: Benznidazole is the only medicine available in Brazil for Chagas' disease treatment, however it presents low efficacy in the chronic phase and several adverse effects.

Aim: Evaluate the effect of *Causticum hahnemanni*, *Conium maculatum* and *Lycopodium clavatum* administered to mice infected with *T. cruzi*.

Method: In blind randomized controlled trial 42 male Swiss mice, 8 weeks of age, have been grouped: G_{Caus} –treated with *C. hahnemanni* 13cH (n=10), G_{Con} – treated with *C. maculatum* 13 cH (n=11), G_{Ly} –treated with *L. clavatum* 13cH (n=10) and CG – control group (n=11) treated with 7% hydro alcoholic solution 13cH. The animals were infected intraperitoneally with 1.400 blood trypomastigotes of *T. cruzi* - Y strain. Medications were been prepared according to Brazilian Homeopathic Pharmacopoeia. Medication was diluted in water (1mL/100mL) offered ad libitum, from amber recipient during 16 hours administered 48 hours before infection and 48, 96 and 144 hours after inoculation. Parasitological parameters assessed: total parasitemia (TP), maximum peak of parasites (MPP), pre-patent period (PPP) and area under curve (AUC). Parasitemia was evaluated daily counting from the first day of infection. Clinical parameters assessed: weight, temperature, water and food intake and excreta were measured counting from the 5^o day before infection until animals' death or checking negative parasitemia for 3 consecutive days. Mortality was registered for 75 days after infection. Ethics Committee for Experiments in Animals gave approval UEM 054/11. Statistical comparison of data was performed with Kruskal-Wallis test, with 5% significance.

Results and Discussion: The diluted medications have been significantly reduced the parasitological parameters: MPP ($p < 0,0000$), TP ($p < 0,0000$) and AUC ($9,7 \pm 3,5 \times 10^9$; $6,2 \pm 1,7 \times 10^9$; $5,5 \pm 1,7 \times 10^9$; $5,7 \pm 1,5 \times 10^9$ ($p < 0,0001$) measured in trypanomastigotes/mL, considering CG, G_{Caus}, G_{Con} and G_{Ly} respectively. Besides, they increased the PPP for G_{Caus}, G_{Con} and G_{Ly} ($5,07 \pm 0,54$; $5,4 \pm 1,39$; $5,9 \pm 1,1$) in relation to CG ($4,8 \pm 1,0$) ($p < 0,0001$). Survival was significantly different between groups ($p = 0,0001$), with Ly showing survival estimate of 0,29 (IC: 0,182 – 1) versus 0,125 from CG (IC: 0,02 – 0,782) until the 21st day of infection. G_{Caus} and G_{Con} showed survival estimate 0 for 18 and 17 days, respectively. G_{Ly} presented significant increase in water intake ($p = 0,0000$) and higher temperature control, lowering hypothermia before death ($p < 0,0000$).

Conclusion: The high diluted medicines evaluated showed different performances. *Lycopodium clavatum* showed the best benefits for animals infected with lower parasitemia, best clinical development and greater survival.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewDownloadInterstitial/591/606>

Prakt Tierarzt. 2006;87(5):362–370.

Vergleich der Wirkung von Zeel(R) ad us. vet. bei durch nicht-infektiöse Gelenkentzündungen hervorgerufenen Lahmheiten von Pferden mit Hyaluronsäure.

[Comparison of the effect of Zeel ad us. vet. in lameness of horses caused by non-infectious arthropathy to the effect of hyaluronic acid].

[Original Article in German]

Faulstich A, Lutz H, Hellmann K.

Abstract

In a controlled, randomised and blinded study therapeutic equivalence and safety of Zeel® ad us. vet. was evaluated in the treatment of non-infectious arthropathy in horses as compared to the administration of a veterinary medicinal product containing the active ingredient hyaluronic acid. Both products were administered intravenously. The evaluation of the lameness caused by non-infectious arthropathy was done using a score for clinical lameness before and after flexion tests. The eligible horses were randomised to one of the two treatment groups by a separate person (blinding) and were treated by this person either with either 6 x 10 ml Zeel® ad us. vet. (Heel GmbH, Baden-Baden) or 2 x 4 ml Hyonate® (Bayer Vital GmbH, Leverkusen). Re-evaluations were done on day 7, day 14 and finally on day 21. On day 21 the global assessment of the efficacy and safety was done also. Both groups were statistically compared for non-inferiority. Zeel® ad us. vet. was statistically equivalent (non-inferior) to the control group at all time points. In both groups, lameness scores reduced over the study period. More than 50 % of the horses were free of lameness and were assessed as very good on the global assessment score. 17 % of the animals of the Zeel® group and 27 % of the control group did not show any changes compared to the day of enrolment. Both products were safe as no adverse events were observed. As published by other authors, Zeel® ad us. vet. had good efficacy in the treatment of non-infectious arthropathy. However, the low number of cases per joint did not allow for a statistical evaluation for the different joints involved in this study. The onset of the efficacy of Zeel® ad us. vet. seems to be slightly delayed compared to the reference product. Therefore therapy should be applied for a sufficient duration. Zeel® ad us. vet. proved to be equivalent to the reference product Hyonate® containing hyaluronic acid. It is very safe and is therefore highly recommendable for the treatment of horses with non-infectious arthropathy.

Link to abstract/paper:

http://www.vetline.de/first_site.htm?id=8581895&p=dpt_2006_05_0362.pdf

BMC Cancer. 2010 Mar;10:113. doi:10.1186/1471-2407-10-113.

In vitro and in vivo anticancer properties of a *Calcareo carbonica* derivative complex (M8) treatment in a murine melanoma model

Guimarães FSF, Andrade LF, Martins ST, Abud APR, Sene RV, Wanderer C, Tiscornia I, Bollati-Fogolin M, Buchi DF, Trindade ES.

Abstract

Background: Melanoma is the most aggressive form of skin cancer and the most rapidly expanding cancer in terms of worldwide incidence. Chemotherapeutic approaches to treat melanoma have had only marginal success. Previous studies in mice demonstrated that a high diluted complex derived from *Calcareo carbonica* (M8) stimulated the tumoricidal response of activated lymphocytes against B16F10 melanoma cells *in vitro*.

Methods: Here we describe the *in vitro* inhibition of invasion and the *in vivo* anti-metastatic potential after M8 treatment by inhalation in the B16F10 lung metastasis model.

Results: We found that M8 has at least two functions, acting as both an inhibitor of cancer cell adhesion and invasion and as a perlecan expression antagonist, which are strongly correlated with several metastatic, angiogenic and invasive factors in melanoma tumors.

Conclusion: The findings suggest that this medication is a promising non-toxic therapy candidate by improving the immune response against tumor cells or even induce direct dormancy in malignancies.

Link to paper: <http://www.biomedcentral.com/1471-2407/10/113>

Int J High Dilution Res. 2006 Jul-Sep;5(16):1.

Efeitos da Arnica montana (6CH, 12CH e tintura-mãe) na Reabsorção Linfática de Ratos Submetidos a Modelo de Inflamação Aguda.

[Effects of Arnica montana (6CH, 12CH and mother tincture) in the Lymphatic Absorption in Rats Submitted to Acute Inflammation].

[Article in Portuguese]

Ferrari FS, Bonamin LV.

Universidade Paulista (UNIP), Brasil. ferrari_fernanda@hotmail.com.

English Abstract

In this study, the effects of Arnica montana (6CH, 12CH and mother tincture) in the lymphatic absorption after the induction of acute inflammation were observed. Mice were submitted to inoculation of 0.06 mL of 1% carageenan into the footpad. During two hours, the animals were orally treated (0.1 µL/g PV) with different substances: hydro-alcoholic solution (vehicle); Arnica montana 6CH; Arnica montana 12CH; Dexamethasone (4 mg/kg) and 5% mother tincture. Resultsshowed a clear trend of Arnica montana 12CH to reduce the edema and of Arnica Montana 6CH to increase the lymphatic absorption, but without statistical significance. Such discrepancy was associated to the high standard deviation. The continuity of this study and the final conclusions depend on some methodological improvement.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/204/214>

Int J High Dilution Res. 2011;10(36):125-127.

Effect of biotherapy T. cruzi 7x in several therapeutic schemes on experimental infection by Trypanosoma cruzi.

Ferraz FN, Gonçalves VA, Aleixo DL, Mizutani AS, de Araújo SM.

Abstract

Background: Biotherapy is used against infectious diseases treatment and prophylaxis and has been investigated by many researchers [1,2].

Aim: Assess the effect of biotherapy 7x T. cruzi on several treatment schemes, upon experimental infection by T. cruzi.

Methodology: A blind, controlled and randomized by drawing experiment was performed. Male Swiss mice, four weeks old were utilized. Groups evaluated: IC – Infection Control (treated with water – 9 animals); TBBA7x3days – Treated with biotherapy 7x 3 days before and 3 days after infection (5 animals); TBB7x3days – Treated with 7x biotherapy 3 days before infection (5 animals); TBBAI7x3days – Treated with 7x biotherapy 3 days before infection and after infection indefinitely (6 animals). Animals were inoculated intraperitoneally with 1400 blood trypomastigotes Y strain. **Biotherapy:** prepared according to Farmacopéia Homeopática Brasileira [3]. **Treatment plan:** offered ad libitum, in the water (10µL/mL). **Parasitological parameters:** parasitemia was assessed according Brener's technique. [4]. **Clinical parameters:** body hair aspect, edema, movement, diarrhea, body weight, temperature, food and water intake.

Ethics: Registration 030/2008 UEM Ethics Committee for Experiments in Animals.

Statistical analysis: was performed using the tests Kruskal Wallis and Mann-Whitney testes, significance 5%.

Results: The best effect obtained was with the TBBA7x3days, both for clinical and parasitological parameters. It was expressed by lower parasitemia curve ($p=0.04$) and decrease of patent period tendency, of total parasitemia, of mortality and survival of the animals increase (Table 1). Evolution of parasitemia was distinct for the several treatment schemes. Survival of at least one mouse by treated groups is an extremely important data, since Y strain causes 100% mortality in Swiss mice. TBBAI7x3days group showed bigger tendency in raising total parasitemia compared with IC. Although it might have occurred, this group presented 80% mortality rate compared with other groups. Animals from TBBA7x3days also showed better evolution of weight body, temperature, food ($p=0.078-10\%$) and water intake, body hair aspect and edema development. Diarrhea and paralysis were only observed in IC group mice, highlighting the biotherapy use benefits.

Conclusions: Best effect was obtained TBBA7x3days, both for clinical and parasitological parameters. It's possible to speculate that in this regimen, biotherapy was able to modulate, more effectively, the host's immune system, decreasing the number of parasites.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/473/485>

Int J High Dilution Res. 2011;10(36):130-133.

Evaluation of biotherapies T.cruzi 15x, 16x, 17x and “potency chords” in experimental infection by Trypanosoma cruzi.

Ferraz FN, Gonçalves VA, Aleixo DL, Mizutani AS, de Araújo SM.

Abstract

Background: The biotherapies are drugs widely utilized against infectious diseases. Biotherapies' profylatic and therapeutic action against Chagas Disease is currently being investigated, but it is needed to develop further controlled experiments “in vivo”, which could define more clearly: dilution, dose, time of use and, if possible, the action mechanisms of these ultradiluted medicaments [1,2].

Aim: Evaluate the effect biotherapies T. cruzi 15x, 16x, 17x and “potency chords”, on experimental infection by T. cruzi.

Methodology: A blind, controlled and randomized by drawing test was performed.

Animals: 29 male Swiss mice, four weeks old were utilized. The animals were kept at Parasitology Vivarium/State University of Maringá (UEM), in ideal conditions of temperature (22 ± 2)°C and photoperiod (light / dark cycle 12h). Mice have been inoculated intraperitoneally with 1400 blood trypomastigotes Y strain and divided in groups: IC – Infection control (treated with distilled water – 9 animals);

TBBA15x3days – Treated with biotherapy 15x 3 days before and 3 days after

infection (5 animals); TBBA16x3days – Treated with biotherapy 16x 3 days before

and 3 days after infection (5 animals); TBBA17x3days – Treated with biotherapy 17x

3 days before and 3 days after infection (5 animals); TBBACHords3days – Treated

with biotherapy 15x, 16x, 17x “potency chords”, 3 days before and 3 days after

infection (5 animals). Biotherapies: prepared by a homeopathic pharmacist from

UEM, according to Farmacopéia Homeopática Brasileira [3].

Biotherapies treatment schedule: diluted in distilled water (10µL/mL in ambar bottles – renewed each two days) offered ad libitum, 3 days before and 3 days after infection in all groups.

Parasitological parameters: parasitemia was assessed from infection until death, according to Brener's technique [4] with 5µL of blood collected from the tail vein and examined in optical microscope. Pre-patent period, patent period, total parasitemia, survival and morbidity were obtained from the parasitemia curve.

Clinical parameters: Visually assessed (presence or absence): body hair aspect (bristling), edema, movement and diarrhea.

Measured: body weight, temperature, food and water intake [5]. **Ethics:** This study has been approved by the UEM

Ethics Committee for Experiments in Animals - Registration 030/2008. Statistical analysis: was performed using the tests Kruskal Wallis and Mann-Whitney tests, significance of 5%.

Results: There was not statistical difference between total parasitemia of the groups treated with biotherapies and the IC group ($p=0.6819$). The parasitemia curve of group TBBACHords3days was greater than the IC ($p=0.0418$). Despite this increase, patent period and mortality both showed a decreasing tendency, while pre patent period and survival time increased ($p=0.373$). The same tendency results were observed for TBBA17x3days results (Table 1). Survival of at least one mice in groups TBBA17x3days and TBBACHords3days is worthy of discussion, since Y strain causes 100% mortality in these experimental conditions. Groups TBBA17x3days and TBBACHords3days showed better evolution than IC group for body weight, temperature, food and water intake ($p=0.05$), body hair aspect and

edema developing. Diarrhea and hind legs paralysis were only observed in mice belonging to groups IC and TBAA16x3days.

Conclusions: Superior effect was obtained with biotherapies 17x and “Potency Chords”, both for clinical and parasitological parameters. “Potency chords” has proper effect which distinguishes it from the individual effects of the dilutions that compound it.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/477/487>

Homeopathy. 2011 Oct;100(4):237-43. doi: 10.1016/j.homp.2011.05.006.

Different forms of administration of biotherapy 7dH in mice experimentally infected by *Trypanosoma cruzi* produce different effects.

[Ferraz FN](#), [Simoni GK](#), [do Nascimento A](#), [de Melo CS](#), [Aleixo DL](#), [Gomes ML](#), [Spack M](#), [de Araújo SM](#).

Basic Health Science Department, Universidade Estadual de Maringá, Paraná, Brazil. fabiana_nabarro@hotmail.com

Abstract

OBJECTIVE: To evaluate the effects of different forms of administration of the blood trypomastigotes biotherapy 7dH in mice experimentally infected with *Trypanosoma cruzi*.

MATERIAL AND METHODS: Male swiss mice were inoculated with 1400 blood trypomastigotes of the Y strain of *T. cruzi* and allocated into 5 treatment groups: IC (distilled water); TCBZ (benznidazole); TBA(7dH) (biotherapy 7dH 20 days after infection); TBB(7dH)7 (biotherapy 7dH seven days before infection); TBB(7dH)30 (biotherapy 7dH 30 days before infection). Parasitological parameters assessed included pre-patent and patent periods, parasitemia peak, total parasitemia, mortality and survival rates. Cure index was obtained by fresh blood examination, hemoculture and polymerase chain reaction (PCR).

RESULTS: The TBB(7dH)7 group showed a reduction in parasitemia peak, parasitemia area under the curve and total parasitemia. TBB(7dH)30 showed a tendency to increased pre-patent and survival periods, peak parasitemia was increased without increased total parasitemia. TBA(7dH) did not present significant alterations in the parasitological parameters analyzed.

CONCLUSIONS: Biotherapy 7dH given before infection (7 or 30 days) produces different effects suggesting modulation of the host's immune system. The effects range from reduced parasitemia to its effective increase. The use of biotherapy to treat *T. cruzi* infection including dose, potency and schedule deserves further investigation.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21962198>

Int J High Dilution Res. 2013;12(44):91-92.

Evaluation of effect of succussed and unsuccussed homeopathic vehicle on murine infection by *Trypanosoma cruzi*.

Ferraz FN, da Veiga FK, Moreira NM, Brustolin CF, Lopes CR, Falkowski GJS, Aleixo DL, Holandino C, de Araújo SM.

Abstract

Background: The control group in "in vivo" studies using highly diluted medicines is a subject of a lot of attention. A relevant point is: What kind of control group is most appropriate to use? Is there any difference between succussed or unsuccussed homeopathic vehicle? [1].

Aim: Evaluate succussed and unsuccussed homeopathic vehicle (hydroalcoholic solution and water) on the course of murine infection by *Trypanosoma cruzi*.

Methodology: A blind, randomized and controlled study was performed. Animals: 40 male Swiss mice, eight weeks old were inoculated intraperitoneally with 1400 blood trypomastigotes Y strain of *T. cruzi* and divided in groups (10 animals/group): IC - Infection control (received natural water); DW13cH - treated with distilled water 13cH; HS7% - treated with hydroalcoholic solution 7%; HS7%13cH - treated with hydroalcoholic solution 7% 13cH. Succussed homeopathic vehicle: distilled water 13cH and hydroalcoholic solution 7% 13cH were prepared according to Brazilian Homeopathic Pharmacopoeia [2]. The 13cH dynamization was chosen because it presented the best results in our model [3]. **Treatment plan:** each treatment was diluted in natural water (1mL/100mL) and offered ad libitum, on 4th, 6th, 8th, 11th, 13th, 15th e 18th day of infection, for 16 consecutive hours. Parasitological and clinical parameters were evaluated. Parasitological: pre-patent and patent period, parasitemia peak, total parasitemia, survival time and mortality [4].

Clinical: quantitative - body weight, water and food intake, temperature; qualitative - body hair aspect, edema, movement, diarrhea [5].

Ethics: study was approved by Ethics Committee for Experiments in Animals – UEM. **Statistic:** data was compared using the Kruskal-Wallis test or ANOVA, significance of 5% (BioEstat 5.0).

Results: No statistical difference ($p > 0.05$) for parasitological parameters was observed among groups (Table 1). Similarly, quantitative and qualitative clinical analysis showed no statistical differences among groups. These data confirm that results obtained in "in vivo" experiments with *T. cruzi* in which controls groups with succussed and unsuccussed vehicles were used really showed the effect of highly diluted medicines [3,6].

Conclusions: Hydroalcoholic solution 7% and water succussed or unsuccussed did not modify parasitological and clinical course of murine infection by *T. cruzi*.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/642/645>

Int J High Dilution Res. 2013;12(44):100-101.

Effect of highly diluted mice's serum on murine infection by *Trypanosoma cruzi*.

Ferraz FN, da Veiga FK, Brustolin CF, Mizutani AS, Aleixo DL, de Araújo SM.

Abstract

Background: *Trypanosoma cruzi* biotherapies' alter the course of experimental infection by this protozoan [1,2], a fact that encourages the evaluation of other highly diluted medicines which modulates host's immune system.

Aim: Evaluate the effect of highly diluted mice's serum on murine infection by *T. cruzi*.

Methodology: A blind, randomized and controlled study was performed. Animals: 20 male Swiss mice, four weeks old were inoculated intraperitoneally with 1400 blood trypomastigotes Y strain and divided in groups: IC: Infection control - treated with hydroalcoholic solution 7% (n=7); MSI13cH: treated with mice's serum infected by *T. cruzi* 13cH (n=6); MSNI13cH: treated with mice's serum non-infected by *T. cruzi* 13cH (n=7).

Medicines: produced from serum of infected and non-infected mice by *T. cruzi* in 13cH dynamization [3].

Treatment plan: mice were treated 48 hours before and after infection. Subsequently animals were treated 56/56 hours until 9th day of infection. The medicines were diluted in natural water (1mL/100mL) and offered ad libitum, for 16 consecutive hours. Parasitological and clinical parameters were evaluated.

Parasitological: pre-patent and patent period, parasitemia peak, total parasitemia and survival time [4].

Clinical: quantitative - body weight, water and food intake, temperature; qualitative - body hair aspect, edema, movement, diarrhea [5]. Ethics: study was approved by Ethics Committee for Experiments in Animals/UEM.

Statistic: data were compared with Mann Whitney test or t Test, significance 5%.

Results: MSI13cH showed tendency to increase total parasitemia (p=0.06) and parasitemia peak (p=0.05), with lower patent period (p=0.03) and lower animals survival (p=0.05). MSNI13cH showed no different parasitological parameters from IC (Table 1). MSI13cH and MSNI13cH showed no statistical differences in clinical parameters when compared to IC. These results suggest that highly diluted *T. cruzi* antibodies present in infected serum administered prior to infection worsen the course of infection by stimulating immunological tolerance via anti-idiotypic antibodies production, which neutralized the activity of anti-*T. cruzi* antibodies produced by animals [6]. These data need further studies, either by changing treatment plan, or by researching immunological markers involved on suppressor response.

Conclusions: MSI13cH worsen murine infection by *T. cruzi*, with premature death and no alteration in clinical parameters compared to IC.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewArticle/648>

Int J High Dilution Res. 2011;10(36):115-118.

Homeopathy: statistical significance versus the sample size in experiments with *Toxoplasma gondii*.

Ferreira EC, Braga CF, Massini PF, Drozino RN, Moreira NM, Aleixo DL, Guilherme ALF, de Araújo SM.

Abstract

Introduction: Toxoplasmosis is a zoonosis that represents a serious public health problem, caused by *Toxoplasma gondii*, which affects 20-90% of the world human population [1,2]. It is a serious problem especially when considering the congenital transmission due to congenital sequels. Treatment with highly diluted substances is one of the alternative/complementary medicines most employed in the world [3,4].

The current ethical rules regarding the number of animals used in animal experimental protocols with the use of more conservative statistical methods [5] can not enhance the biological effects of highly diluted substances observed by the experience of the researcher.

Aim: To evaluate the minimum number of animals per group to achieve a significant difference among the groups of animals treated with biotherapeutic *T. gondii* and infected with the protozoan regarding the number of cysts observed in the brain.

Material and methods: A blind randomized controlled trial was performed using eleven Swiss male mice, aged 57 days, divided into two groups: BIOT-200DH - treated with biotherapeutic (n=6) and CONTROL - treated with hydroalcoholic solution 7% (n=7). The animals of the group BIOT-200DH were treated for 3 consecutive days in a single dose 0.1ml/dose/day. The animals of BIOT – 200DH group were orally infected with 20 cysts of ME49-*T. gondii*. The animals of the control group were treated with cereal alcohol 7% (n=7) for 3 consecutive days and then were infected with 20 cysts of ME49 -*T. gondii* orally. The biotherapeutic 200DH *T. gondii* was prepared with homogenized mouse brain, with 20 cysts of *T. gondii* / 100µL according to the Brazilian Homeopathic Pharmacopoeia [6] in laminar flow. After 60 days post-infection the animals were killed in a chamber saturated with halothane, the brains were homogenized and resuspended in 1 ml of saline solution. Cysts were counted in 25 ml of this suspension, covered with a 24x24 mm coverglass, examined in its full length. This study was approved by the Ethics Committee for animal experimentation of the UEM - Protocol 036/2009. The data were compared using the tests Mann Whitney and Bootstrap [7] with the statistical software BioStat 5.0.

Results and discussion: There was no significant difference when analyzed with the Mann-Whitney, even multiplying the "n" ten times (p=0.0618). The number of cysts observed in BIOT 200DH group was 4.5 ± 3.3 and 12.8 ± 9.7 in the CONTROL group. Table 1 shows the results obtained using the bootstrap analysis for each data changed from 2n until 2n+5, and their respective p-values. With the inclusion of more elements in the different groups, tested one by one, randomly, increasing gradually the samples, we observed the sample size needed to statistically confirm the results seen experimentally. Using 17 mice in group BIOT 200DH and 19 in the CONTROL group we have already observed statistical significance. This result suggests that experiments involving highly diluted substances and infection of mice with *T. gondii* should work with experimental groups with 17 animals at least. Despite the current and relevant ethical discussions about the number of animals used for experimental procedures the number of animals involved in each experiment must meet the characteristics of each item to be studied. In the case of experiments involving highly diluted substances, experimental animal models are still rudimentary and the biological effects observed appear to be also individualized, as described in literature for homeopathy [8]. The fact that the statistical significance was achieved by increasing the sample observed in this trial, tell us about a rare event, with a strong individual behavior, difficult to demonstrate in a result set, treated simply with a comparison of means or medians.

Conclusion: Bootstrap seems to be an interesting methodology for the analysis of data obtained from experiments with highly diluted substances. Experiments involving highly diluted substances and infection of mice with *T. gondii* should be better work with experimental groups using 17 animals at least.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/466/483>

Int J High Dilution Res. 2008;7(24):152-158.

Homeopathic treatment of vaginal leiomyoma in a dog: case report.

Ferreira MIC, Pinto LF.

Abstract

The most common vaginal neoplasias in old dogs are leiomyoma and fibroma. Although surgical excision is the indicated treatment, it does not eliminate potential complications that may lead to death or poor quality of life. This paper reports the case of a 9 year-old female Doberman dog with vaginal leiomyoma attended by copious and recidivating colporrhagia homeopathically treated between March and December 2005. Homeopathic approach was the one designed at Homeopathic Unit of the Veterinary Hospital, Rural Federal University of Rio de Janeiro, Brazil. The progress of disease was assessed through clinical evaluation, laboratory exams and ultrasonography. Hemorrhage decreased while the general clinical state of the animal improved. After 7 months of homeopathic treatment, the tumor was spontaneously eliminated through violent abdominal contractions, which was followed by recovery of the animal's state of health.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/304/358>

Int J High Dilution Res. 2009;8(28):91-99.

Anxiolytic effect of the homeopathic complex Tepeex.

Ferreira Vaz A; Campos RMV, dos Santos KC, Viriato EP, Carvalho JCT.

Abstract

Homeopathic complex Tepeex is a compound of *Actaea racemosa* 4cH, *Natrum muriaticum* 2cH, *Pulsatilla nigricans* 3cH, *Chamomilla* 3cH and *Sepia succus* 5cH. This study evaluated the effect of Tepeex in pre-clinical models of depression and anxiety. Methods: the following tests were performed: elevated plus maze test (EPM); forced swimming test (FST); open field test (OFT) and Rotarod test (RRT). Results: In EPM, animals treated with Tepeex on days 20 and 30 stayed longer in the open arms of the maze than the control group ($p < 0.05$, Dunnett test). In FST, treatment with Tepeex did not increase swimming time compared to the control group in any phase of treatment. In OFT, crossing increased significantly with treatment with amfepramone, and also with 30-day treatment with Tepeex ($p < 0.05$, Dunnett test). In RRT, treatment with amfepramone significantly reduced latency time. 30-day treatment with Tepeex did not affect motor coordination when compared to the control group. Conclusion: results suggest that homeopathic complex Tepeex has anxiolytic properties without affecting motor coordination.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewFile/346/397>

Int J High Dilution Res. 2011;10(34):4-14.

Anxiolytic and antidepressive effects of the homeopathic complex Homeopax® (pre-clinical study).

Ferreira Vaz A, Campos RMV, dos Santos KC, Medeiros BJ, Viriato EP, Perazzo FF, Carvalho JCT.

Abstract

The homeopathic complex Homeo-Pax® has been used as an antidepressant and anxiolytic homeopathic medicine available in Brazil. It is a complex mixture prepared with *Aconitum nap.* 6cH, *Aurum met.* 6cH, *Phosphorus* 6cH, *Argentum nitricum* 6cH, *Arsenicum alb.* 6cH, and *Valeriana officinalis* 3cH. This study had evaluated the behavior in rats after treatment with Homeo-Pax® in pre-clinical models of depression and anxiety. Elevated Plus Maze Test (EPM), Forced Swimming Test (FST), Open Field Test (OFT) and the Rota Rod Test (RRT) behavior assays were used to confirm its activity. In the EPM, the animals treated with Homeo-pax® on the 1st day and until the 20th day of treatment remained longer in the open arms of the maze than on 30th day. This result was statistically significant compared with the control group ($p < 0.05$). In the FST, the treatment with Homeo-pax® (0.5 ml, p.o) increased the swimming time, compared to the control group. This effect was dependent on treatment time, resulting in a similar effect to that presented by amfepramone (10 mg/kg, p.o). In the OFT, crossing by the animals was significantly increased by the treatment with amfepramone (10mg/kg, p.o), and also with the 30-day treatment with Homeo-pax®. In the RRT, the 30-day treatment with Homeo-pax® (0.5 ml, p.o) did not affect the animals' motor coordination, compared with the control group, which presented the same behavior. Based on the results obtained, it can be suggested that the homeopathic complex Homeo-pax® has anxiolytic and antidepressant properties without affecting motor coordination capacity.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/420/456>

Dtsch Tierarztl Wochenschr. 2007 Jul;114(7):268-74.

Homöopathische Prophylaxe in der Bestandsbetreuung von Milchkühen Teil 1 – Fruchtbarkeit.

[Homeopathic prophylaxis in dairy cows on an organic farm part 1—fertility].

[Original Article in German]

[Fidelak Ch](#), [Klocke P](#), [Heuwieser W](#).

Tierklinik für Fortpflanzung, Freie Universität Berlin. author@bestandsbetreuung.de

Abstract

The objective of the study was to assess the efficacy of different prophylactically applied homeopathic compounds on health and fertility during the periparturient period on an organic dairy farm. In a randomised double blinded study 146 dairy cows were enrolled in two treatment groups. The average milk yield was about 5100 kg per cow per lactation. The treatment group received the homeopathic compounds Carduus comp. and Coenzyme comp. at drying off, Traumeel on the day of calving, Lachesis comp. on day 7 post partum (p.p.) and Carduus comp. and Coenzyme comp. on day 14 days p.p. The control group followed the same protocol with a placebo (physiological saline solution). Each drug was administered subcutaneously in a dosage of 5 ml. At drying off, the day of calving and in weekly intervals until day 35 p.p. clinical examinations as well as blood sampling were performed. The effect of treatment was measured by clinical parameters, reproductive performance and

serum profiles (Ca, P, AST, Urea, Bilirubin). Data of reproductive performance (days to first service, days open, conception rate) were compared between treatment groups and to those in the previous lactation. There was no significant difference between both treatment groups. Cows of the treatment group had an earlier onset of cyclic activity, especially when milk yield was considered as an influencing factor (82% vs. 57%, $P < 0,05$). In contrast the cows of the treatment group had a significant lower submission rate. The prophylactic treatment of all cows did not have an effect in general, but in cows with increased milk yield, especially in the current lactation. The reproductive performance in the previous lactation did not have any effects on the success of the homeopathic treatment. Reproductive performance in the herd could be enhanced slightly compared to the previous lactation.
Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17724935>

Hum Toxicol. 1987 Jul;6(4):321-4.

The influence of the homeopathic remedy plumbum metallicum on the excretion kinetics of lead in rats.

Fisher P, House I, Belon P, Turner P.

Abstract

There are a number of reports that certain metals, when prepared by the homeopathic method of serial dilution with succussion, stimulate excretion of the same metal from previously loaded animals. We report an experiment on the effect of homeopathically diluted lead on urinary lead excretion in the rat, controlled against distilled water and the chelating agent DMPS. The homeopathic preparations were made specially, with precautions against contamination. Homeopathic treatment did not cause a significant change in urinary lead excretion compared to distilled water, although there were significant differences between different homeopathic dilutions. DMPS produced a large increase in urinary lead excretion.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/3623578>

Br Homoeopath J. 2000 Jul;89(3):105.

Animal experiments and the British Homeopathic Journal.

Fisher P.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S1475491699904113>

Homeopathy. 2009 Oct;98(4):183-5. doi: 10.1016/j.homp.2009.09.010.

Biological models of homeopathy.

Fisher P.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19945673>

Homeopathy. 2012 Jul;101(3):139-140.

Animal models of homeopathic treatment

[Peter Fisher](#)

Link to abstract/paper:

<http://www.homeopathyjournal.net/article/PIIS1475491612000380/abstract?rss=yes>

Homeopathy. 2012 Oct;101(4):195.

Corrigendum to “Animal models of homeopathic treatment”

Fisher P.

Link to abstract/paper: <http://www.homeopathyjournal.net/article/S1475-4916%2812%2900057-4/fulltext>

Homeopathy. 2013 Oct;102(4):231-232.

Fish Farming and Immunomodulation.

[Fisher P.](#)

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/24050767>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Análise de Regressão do Teor de Tanino das Plantas de *Porophyllum ruderale* após a Aplicação de Sulphur 4CH.

[Regression analysis of Tannin content in *Porophyllum ruderale* plants after application of Sulphur 4CH].

[Article in Portuguese]

Fonseca Marques MC, Dias Casali VW, Cecon PR.

English Abstract

Medicinal plants like *Porophyllum ruderale* are more suitable to pathogenesis tests, for example tannin changes, because they were not disturbed by genetic selections for yield or for dependence to agrochemicals. A pathogenesis trial under randomized blocks design of three replicates, eight tannin determinations (each 48 hours) and a control (distilled water) was conducted in the double blind procedure. Only one application of Sulphur 4CH was done over the soil of pots containing one plant. Tannin was quantified through Chemist A. O. method in leaves of the same plant position. Tannin content of control plants remained about the same from zero to 13 days period ($y = 1,4768$). Tannin of Sulphur treated plants decreased from the day of application up to 48 th hour but reached minimum value by 96 th hour and by 192 th hour it was equal to control plants reaching maximum value by 288 th hour decreasing then on until the end of the trial, what means, 336 th hour/13 rd day ($\hat{y} =$

1,50182 – 0,00921X + 0,00008X² – 0,00000015X³ ; R² = 0,95). The adjustment through regression analysis allowed the interpretation of the data along the short period.

Link to abstract/paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/230>

Int J High Dilution Res. 2005;4(13):1-4.

Ação Terapêutica do Medicamento Homeopático em Ratas com Infecção Urinária por *Escherichia coli*.

[Therapeutic action of homeopathic medication in female rats with urinary infection from *Escherichia coli*].

[Article in Portuguese]

Fontes OL, Severino P, Chaud MV, Nascimento GGF, Alves MIF, Gutiérrez MA.

English Abstract

This article intends to contribute to a greater convergence between the scientific and homeopathic milieus. Therefore, it uses a model consistent with regular medicine's in order to establish the action of remedies prepared according to homeopathic procedures and to compare their therapeutic effects with those of regular medicine in urinary infections by *Escherichia coli* (E.coXi). Remedies were homeopathic *Cantharis vesicatoria*, 6CH and 30CH; biotherapeutic *Urina* 30CH, *Escherichia coli* 30CH, and *Colibacillum* 30CH; and allopathic nalidixic acid, p.o.. Female Wistar rats were contaminated by urethral probe with a suspension of *E. coli*. Urine was aseptically collected and subjected to microbiological tests to verify actual infection. Animals infected were divided into seven groups, including one control. Each group received a different remedy. After treatment, urine was aseptically collected and subjected to microbiological tests to verify infection. In order to establish a potential preventive action of remedies, rats received a 5-day course of treatment before contamination. In the first setting, *Cantharis vesicatoria* 6CH and 30CH nalidixic acid were effective in the treatment of urinary infection; in the second, *Urina* 30CH achieved the best results.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/177/182>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Estudo do Efeito Dinâmico de Diferentes Doses de *Arsenicum album* 6CH em Ratos Intoxicados com Arsênico.

[The Dynamic Effect Study of *Arsenicum album* 6CH Different Doses in Mice Intoxicated with Arsenic].

[Article in Portuguese]

Fontes OL, Foltran FP, Chaud MV, Alonso AB, Okuda C, Bueno JT.

English Abstract

The notion of dose in homeopathy is not unanimous. Some authors consider that the therapeutic action of homeopathic medication occurs qualitatively and dynamically. However, others emphasize the importance of the amount of homeopathic medication administered. This study had as a purpose to evaluate the effect in vivo

of different doses of Arsenicum album 6CH in mice intoxicated with arsenic. Male Wistar mice were intoxicated with sodium arseniate (16,8 mg Ar/kg) and soon after treated (p.o) with Arsenicum album 6CH, in 60,0; 147,0 and 295,0 µL doses. Arsenic eliminated through urine, was quantified by atomic absorption spectroscopy. After 30 days treatment with Arsenicum album 6CH total amount of eliminated As was smaller in groups treated with 60,0 and 147,0 µL. The group treated with 295,0 µL eliminated larger amount of As in the same period. In control group treated with ethanol 30% arsenic elimination didn't happen.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/214/230>

Int J High Dilution Res. 2006;5(17):9-13.

A study comparing different doses of Arsenicum album 6CH on rats intoxicated with Arsenic.

Fontes OL, Chaudr MV, Alves MIF, Gutierrez MA, Foltran FP, de Carvalho GGA.

Int J High Dilution Res. 2006;5(17).

Estudo comparativo do efeito dinâmico de diferentes doses de Arsenicum álbum 6CH em ratos intoxicados com arsênico.

[Comparative study of the dynamic effect of different doses of Arsenicum album 6CH in rats intoxicated with arsenic].

Fontes OL, Chaud MV, Alves MIF, Gutiérrez MA, Foltran FP, de Carvalho GGA.

English Abstract

The notion of dose in homeopathy is not unanimous. Some authors consider that the therapeutic action of the homeopathic medication occurs qualitatively and dynamically. However, others emphasize the importance of the amount of homeopathic medication administered. This study had as a purpose to evaluate the effect of different doses of Arsenicum album 6CH in mice intoxicated with sodium arseniate (16,8 mg As/kg) and soon after treated (p.o) with Arsenicum album 6CH, in 2, 5 and 10 drops doses. Arsenic eliminated through urine, was quantified by atomic absorption spectroscopy. After 30-day treatment with Arsenicum album 6CH, total amount of eliminated As was similar in groups treated with 2,5 e 10 drops.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/171/175>

Int J High Dilution Res. 2009;8(28):119-127.

Evaluation of the effect of different concentrations of Arsenicum album 6ch on intoxicated rats

Fontes OL, Farhat FCLG, Cesar AT, Lara MG, Montebelo MIL, Rodrigues GCG, Chaud MV, *Luizetto CMB, Chaud MV.*

Abstract

Aims: Homeopaths diverge on the concept of dose, i.e. the amount of drug that a patient must take to alter his or her state of disease. In order to stimulate reflections

on this concept, this study sought to evaluate in vivo the effect of different concentrations of Arsenicum album 6cH prepared according to homeopathic pharmacotechnics.

Methods: male Wistar rats were intoxicated with arsenic and then treated with Arsenicum album 6cH and Arsenicum album 6cH diluted at 1%, administered orally. The amount of arsenic retained in the animals' organism and that eliminated by urine were measured through atomic absorption spectroscopy. Samples of urine were collected before and after intoxication and during treatment. The positive control group (intoxicated animals) and the negative control group (non-intoxicated animals) received only the vehicle used in the preparation of the medicine.

Results: Groups treated with Arsenicum album 6cH and Arsenicum album 6cH diluted at 1% eliminated significant amounts of arsenic when compared to the control groups. The group treated with Arsenicum album 6cH eliminated significantly higher amounts of arsenic than the group treated with the diluted medicine at 1%.

Conclusion: results suggest that Arsenicum album 6cH should not be diluted as not to compromise its effectiveness in the treatment of rats intoxicated with arsenic.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/349/401>

Int J High Dilution Res. 2010;9(33):128-137.

The problem of dose in homeopathy: evaluation of the effect of high dilutions of Arsenicum album 30cH on rats intoxicated with arsenic.

Fontes OL, Farhat FCLG, Cesar AT, Lara MG, Montebelo MIL, Rodrigues GCG, Chaud MV.

Abstract

Background: Although scientific studies have confirmed the action of homeopathic high dilutions in living organisms an endless debate on the choice of the most fitting dilution, the frequency of administration and the dose (amount of medicine) still remains. Aims: This study sought to assess the in vivo effect of 2 different concentrations of Arsenicum album 30cH in order to elucidate some problems in the homeopathic notion of dose. Methods: Male Wistar rats previously intoxicated with sodium arsenate by peritoneal injection were treated with undiluted Ars 30cH and Ars 30cH in 1% solution administered by oral route. Atomic absorption spectroscopy was employed to measure the levels of arsenic retained in the animals as well as the amounts eliminated through urine. Urine samples were collected before and after and during treatment. A positive control group (intoxicated animals) and negative control group (non-intoxicated animals) were administered only the vehicle used to prepare the medicine (ethanol). Results: The groups treated with undiluted Ars 30cH and Ars 30cH in 1% solution eliminated significant amounts of arsenic through urine when compared to the control groups. The group treated with undiluted Ars 30cH eliminated significantly higher amounts of arsenic than the group treated with the same medicine in 1% solution. Conclusion: These results suggest that undiluted Ars 30cH was more effective than in 1% solution in this experimental model.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewFile/348/449>

Int J High Dilution Res. 2011;10(36):218-219.

The problem of dose in homeopathy: evaluation of the effect of high dilutions of Arsenicum album 30cH on rats intoxicated with arsenic.

Fontes OL, Farhat FCLG, Cesar AT, Lara MG, Montebelo MIL, Rodrigues GCG, Chaud MV.

Abstract

Background: Although scientific studies have confirmed the action of homeopathic high dilutions in living organisms an endless debate on the choice of the most fitting dilution, the frequency of administration and the dose (amount of medicine) still remains.

Aims: This study sought to assess the in vivo effect of 2 different concentrations of Arsenicum album 30cH in order to elucidate some problems in the homeopathic notion of dose.

Methods: Male Wistar rats previously intoxicated with sodium arsenate by peritoneal injection were treated with undiluted Ars 30cH and Ars 30cH in 1% solution administered by oral route. Atomic absorption spectroscopy was employed to measure the levels of arsenic retained in the animals as well as the amounts eliminated through urine. Urine samples were collected before and after and during treatment. A positive control group (intoxicated animals) and negative control group (nonintoxicated animals) were administered only the vehicle used to prepare the medicine (ethanol).

Results: The groups treated with undiluted Ars 30cH and Ars 30cH in 1% solution eliminated significant amounts of arsenic through urine when compared to the control groups. The group treated with undiluted Ars 30cH eliminated significantly higher amounts of arsenic than the group treated with the same medicine in 1% solution.

Conclusion: These results suggest that undiluted Ars 30cH was more effective than in 1% solution in this experimental model.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/465/528>

European Journal of Integrative Medicine. 2012 Sep;4(1):89.

Strongyles burden monitoring in a flock treated with homeopathy.

[Pisseri Francesca](#), [Giulioti Lorella](#), [Benvenuti Maria Novella](#).

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S1876382012007706>

Homeopathy. 2014 Jan;103(1):70.

Bridging the gap between the homeopathic world and the conservative medical world – test case in rats.

[Yakov Freed](#), [Salman Zubedat](#), [Yuval Eshed](#), [Adi Cymerblit-Sabba](#), [Ami Ritter](#), [Maayan Nachmani](#), [Rom Harush](#), [Avi Avital](#).

Link to abstract/paper: <http://www.homeopathyjournal.net/article/S1475-4916%2813%2900109-4/fulltext>

Prakt Tierarzt. 1981;63:17-18.

Erfahrungen mit Dysenteral(R) bei Durchfallerkrankungen junger Kälber.
[Knowledge by using Dysenteral(R) in cases of diarrhoea in young calves].

[Article in German]

[Frerking H.;](#) [Romansky Rieken M. E.](#)

Abstract

Es konnten 180 Kälber aus 71 Familienbetrieben in die Auswertung einbezogen werden. Alle Probanden litten an Durchfall und waren nicht älter als 10 Tage. Als Präparate wurden Dysenteral, Ampicillin und Colistin verwendet. Ein Vergleich der Therapieerfolge ergab, daß bei alleiniger Behandlung mit Dysenteral etwa doppelt so viele Nachbehandlungen nötig waren und rund doppelt so viele Todesfälle auftraten wie bei mit Ampicillin behandelten Kälbern. Auch eine Zusatztherapie mit Dysenteral ergab keine besseren Erfolge. Dysenteral ist für die Behandlung von Durchfallerkrankungen neugeborener Kälber unter den hier geprüften Bedingungen nicht geeignet.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=33

Prakt Tierarzt, Coll Vet XV. 1984;65:133-134.

Möglichkeiten und Grenzen der Therapie bei Leberschäden des Rindes.
[Possibilities and limits of therapy for liver damage in cattle].

[Article in German]

[Frerking,H.](#)

Vet Rec. 1995 Aug 5;137(6):152.

Evaluation of homoeopathic treatment.

[Fussell MH.](#)

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/8540210>

Homéopath Europ. 1997;5(3):28-29.

Evaluation 'in vivo' de la réponse immunologique du lapin envers un antigène mycobactérien à doses infra-pharmacologiques.

[Assessment 'in vivo' of the immunological response towards infra-pharmacological doses of a mycobacterial antigen in the rabbit].

[Article in French]

Garcia GM, Landa VR, Rodriguez MR.

Med Parazitol (Mosk). 2012 Apr-Jun;(2):36-9.

[The agent *Latrodectus* and canine paecilomycotic eclampsia as a laboratory model in the survey of treatment for mycoses and parasitic diseases].

[Article in Russian]

[Gasparian ER](#), [Streliaeva AV](#), [Chebyshev NV](#), [Sagieva AT](#), [Polzikov VV](#), [Lazareva NB](#), [Kurilov DV](#), [Zuev SS](#), [Shcheglova TA](#), [Sadykov VM](#).

English Abstract

The extragent used to prepare a *Latrodectus mactans* hydrocarbon extract is a multicomponent system composed of alkanes, alkenes, and arenes. More than 100 compounds were identified in the hydrocarbon extract (petroleum). The petroleum matrix of *Latrodectus mactans* was first obtained to manufacture homeopathic remedies. The authors could prepare the first Russian homeopathic medicine from *Latrodectus mactans*, which proved to be effective in treating canine eclampsia. Canine experiments provide a rationale for the authors' choice as the only homeopathic remedy among thousand known drugs to treat female eclampsia. It is *Latrodectus mactans* that is in the list of homeopathic medicines permitted for use in accordance with Order No. 335 (Supplement 2) of the Ministry of Health and Medical Industry of Russia, issued on November 29, 1995. It is manufactured from *Latrodectus mactans* living in the USA.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22774506>

Evid Based Complement Alternat Med. 2011;2011:950347. doi:

10.1155/2011/950347. Epub 2011 Jun 9.

Effects of the Topical Application of Hydroalcoholic Leaf Extract of *Oncidium flexuosum* Sims. (Orchidaceae) and Microcurrent on the Healing of Wounds Surgically Induced in Wistar Rats.

[de G de Gaspi FO](#), [Foglio MA](#), [de Carvalho JE](#), [Santos GM](#), [Testa M](#), [Passarini JR Jr](#), [de Moraes CP](#), [Esquisatto MA](#), [Mendonça JS](#), [Mendonça FA](#).

Núcleo de Ciências da Saúde do Centro Universitário Hermínio Ometto (UNIARARAS), Av. Dr. Maximiliano Baruto, 500, Araras, CEP: 13607-339, SP, Brazil.

Abstract

This study evaluated the wound healing activity of hydroalcoholic leaf extract of *Oncidium flexuosum* Sims. (Orchidaceae), an important native plant of Brazil, combined or not with microcurrent stimulation. Wistar rats were randomly divided into four groups of nine animals: control (C), topical application of the extract (OF), treated with a microcurrent (10 μ A/2 min) (MC), and topical application of the extract plus microcurrent (OF + MC). Tissue samples were obtained 2, 6, and 10 days after injury and submitted to structural and morphometric analysis. The simultaneous application of OF + MC was found to be highly effective in terms of the parameters analyzed ($P < .05$), with positive effects on the area of newly formed tissue, number of fibroblasts, number of newly formed blood vessels, and epithelial thickness. Morphometric data confirmed the structural findings. The *O. flexuosum* leaf extract contains active compounds that speed the healing process, especially when applied simultaneously with microcurrent stimulation.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3118730/>

Br Homoeopath J. 1988 Jul;77(3):188-189.

Animal experiments in homoeopathy.

Gattari M.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078588801005>

Int J High Dilution Res. 2010;9(33):156-164.

Efficiency of tick biotherapeutic on the control of infestation by *Rhipicephalus (Boophilus) microplus* in Dutch dairy cows.

Gazim ZC, Ferreira FBP, da Silva AV, Bolognese KC, Merlin E, Messa V, de Jesus RA, Coutinho CA, da Silva LCM.

Abstract

Background: cattle tick *Rhipicephalus (Boophilus) microplus* poses serious problems for farmers in Brazil, especially because the parasite easily develops resistance to pesticide agents. For this reason, together with other factors including environmental, human and animal contamination and costs, alternative approaches have been sought for. Aims: this study sought to evaluate the efficiency of a tick biotherapeutic on tick-infested cows. Methods: 34 dairy Dutch cows were divided in 2 groups: one group received 100g/day of mineral salt supplement impregnated with tick biotherapeutic 12cH for 6 months, and then in alternate days with tick biotherapeutic 30cH to complete 28 months of treatment; the other group (control) received only the mineral salt supplement. After 28 months of treatment, engorged *Rhipicephalus (boophilus) microplus* females were collected in both groups, counted and weighed; in vitro tests were carried out to assess mass of ticks; egg mass; egg-hatching rate; and reproductive efficiency. Results: There was significant difference between both groups for all parameters evaluated; tick-mass ($p = 0.0008$); egg mass ($p=0.0044$); egg-hatching rate ($p= 0.0017$); and reproductive efficiency ($p = 0.0044$). Conclusion: treatment with tick biotherapeutic significantly decreased the mass of engorged females, deposition and hatching rate of eggs, resulting consequently in the decrease of the reproductive efficiency of ticks.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/407/447>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:32-3.

Potentiated antibodies to mu-opiate receptors: effect on integrative activity of the brain.

[Geiko VV](#), [Vorob'eva TM](#), [Berchenko OG](#), [Epstein OI](#).

Institute of Neurology, Psychiatrics, and Narcology, Ukrainian Academy of Medical Sciences, Kharkov.

Abstract

The effect of homeopathically potentiated antibodies to mu-receptors (10(-100) wt %) on integrative activity of rat brain was studied using the models of self-stimulation of the lateral hypothalamus and convulsions produced by electric current. Electric current was delivered through electrodes implanted into the ventromedial hypothalamus. Single treatment with potentiated antibodies to mu-receptors increased the rate of self-stimulation and decreased the threshold of convulsive seizures. Administration of these antibodies for 7 days led to further activation of the positive reinforcement system and decrease in seizure thresholds. Distilled water did not change the rate of self-stimulation and seizure threshold.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949641>

Indian J Exp Biol. 1993 Jul;31(7):604-6.

Antifilarial effect of two triterpenoid saponins isolated from *Acacia auriculiformis*.

[Ghosh M](#), [Babu SP](#), [Sukul NC](#), [Mahato SB](#).

Department of Zoology, Visva-Bharati University, India.

Abstract

The active principle, isolated from the funicles of *A. auriculiformis*, consisted of two triterpenoid saponins, acaciaside A and acaciaside B which killed in vitro 97% microfilaria of *Setaria cervi* in 100 min at 4mg/ml concentration and 100% of adults in 35 min. The drug, when administered orally at 100 mg/kg on rats, in which *S. cervi* adults were implanted intra-peritoneally, increased the blood mf count by 1.5-fold after the first phase of treatment for 10 days. Following the third phase of treatment and thereafter, the mf density was reduced by more than 80%. No toxic effect of the saponins was observed in rats. The rise in mf count indicated that the drug induced a very high physiological stress on the adult worms which increased the rate of discharge of the mf before impending death. The treated rats on autopsy did not show any adult worms.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/8225417>

J Helminthol. 1996 Jun;70(2):171-2.

Cestocidal activity of *Acacia auriculiformis*.

[Ghosh NK](#), [Babu SP](#), [Sukul NC](#), [Ito A](#).

Department of Zoology, Visva-Bharati University, West Bengal, India.

Abstract

The cestocidal activity of *Acacia auriculiformis* was evaluated using rats each harbouring a single adult worm of *Hymenolepis diminuta*. The ethanol extract (300 mg/kg/day) and the saponins (200 mg/kg/day) obtained from the funicles of *A. auriculiformis*, were administered orally to two groups each of 10 rats, respectively, on day 20 after oral inoculation with a single cysticercoid of *H. diminuta*. Adult worms

were expelled within 5 days from rats treated with the ethanol extract and within 3 days from those treated with saponins. No appreciable side effects were observed in the treated rats.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/8960214>

Br Homeopath J. 1997;86(3):139-141.

Suppression of alpha adrenergic agonist-induced catalepsy in mice by potentized *Agaricus muscarius*.

Ghosh S, Sinha Babu SP, Sukul NC.

Abstract

Agaricus muscarius 30c, a potentized homoeopathic drug prepared by successive dilution with 90% ethanol followed by sonication in 30 steps, suppressed catalepsy induced by alpha adrenergic agonists in Swiss albino mice. *Agaricus* produced anticataleptic effect when it was administered orally and no such effect when administered intraperitoneally. The alpha 1 agonist phenylephrine and alpha 2 agonist clonidine were administered intraperitoneally to mice at a dose of 2 mg/kg and 1 mg/kg, respectively. Mice were pretreated orally with *Agaricus muscarius* 30c. The action of *Agaricus* is thought to be mediated through oreoreceptors.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/PIIS0007078597800804/abstract>

Parasitol Res. 2011 Feb;108(2):361-70. doi: 10.1007/s00436-010-2070-0. Epub 2010 Oct 1.

In vitro and in vivo efficacy of *Acorus calamus* extract against *Rhipicephalus (Boophilus) microplus*.

[Ghosh S](#), [Sharma AK](#), [Kumar S](#), [Tiwari SS](#), [Rastogi S](#), [Srivastava S](#), [Singh M](#), [Kumar R](#), [Paul S](#), [Ray DD](#), [Rawat AK](#).

Entomology Laboratory, Parasitology Division, Indian Veterinary Research Institute, Izatnagar, 243122, Bareilly, UP, India. sghoshp@yahoo.co.in

Abstract

To develop an environment friendly control measure against cattle tick, *Rhipicephalus (Boophilus) microplus*, medicinally important plants were identified and extracts were prepared. Twelve 95% ethanolic, thirteen 50% hydroethanolic and nine hot water extracts were prepared and tested against laboratory reared homogenous colony of *R. (B.) microplus*. Amongst the 34 extracts, 26 extracts showed no mortality within 72 h of application while 12.0 ± 4.9% to 35.0 ± 9.6% mortality of treated ticks was recorded in other extracts. Of the effective extracts, the extract prepared from rhizome of *Acorus calamus* proved highly efficacious and 100% final mortality within 14 DPT was recorded. The LC85 value of the extract was determined as 11.26. In vivo experiments confirmed the efficacy of the extract up to 42%, and repeat application was required after 7 DPT. The extract was found safe and no reaction was observed when animals were treated with 50% of the concentration, which was

five times of the concentration used for in vivo studies. The possibility of using the extract for the control of cattle tick is discussed.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20886235>

BT. 1999;2:53-57.

Contribution to study of the efficacy of homeopathic potencies of phosphorus.
Gomez, J.C.

Int J High Dilution Res. 2006 Jul-Sep;5(16).

**Controle Homeopático de Dermatobia hominis em Gado Bovino Leiteiro.
[Homeopathic Control of Dermatobia hominis in Milk Cattle].**

[Article in Portuguese]

Gonçalves Fonseca I, Goloubeff B.

English Abstract

This work reports homeopathic treatment of *Dermatobia hominis* infestation in dairy cattle in Minas Gerais State. Cattle grazed on *Brachiaria decumbens* pasture with proteinated salt supplement. 40 females _ to _ Zebu-Holstein crosses were used divided in 2 groups, each with 10 cows and 10 heifers, all naturally infested with *D. hominis* larvae (number of larvae 75+64 and 56+44 respectively). One group was treated with isotherapeutic drug 12 DH and the other was the control. Medication was administered orally mixed to the salt for 35 days, during spring when highest infestation in this region occurs. After 15 days was observed 50% volume and number reduction of larvae nodules. After 32 days results were evident with complete interruption of cycle of *D. Hominis* followed by fine healing. Since pastures were only 100m apart, dynamic infection of the control group was observed, which after 38 days was also clean.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/217/236>

Schweiz Arch Tierheilkd. 2012 Sep;154(9):371-9. doi: 10.1024/0036-7281/a000367.

Baseline survey of health prophylaxis and management practices on Swiss dairy farms.

[Gordon P](#), [Kohler S](#), [Reist M](#), [van den Borne B](#), [Menéndez González S](#), [Doherr M](#).

Veterinary Public Health Institute, University of Bern, Switzerland.

Abstract

Health prophylaxis management practices have acquired a major role in the success of dairy herd health programs, however, little is known about the scope and level of implementation on Swiss dairy farms. The main objective of this study was therefore to provide a general overview of the most important preventive measures which are currently being used on these farms. In March 2011, an online survey with 75 questions was sent to 2'285 randomly selected Swiss dairy farmers. Response rate

by question ranged from 35 to 53 %. Within this study, answers were compared between dairy farms with a tie-stall (n = 739) and farms with a free-stall (n = 458). Homeopathic treatments were used by 51 % of the dairy farmers and antibiotic dry cow treatments by 94 %. Farmers with a tie-stall tended to carry out more prophylactic treatments against external parasites, vaccinated their cows more frequently against *Clostridium chauvoei* and *Moraxella bovis*, and carried out claw trimming more frequently than dairy farmers with a free-stall. A higher proportion of dairy farmers with a free-stall had a written feeding plan, carried out regular feed analysis, wore an apron and rubber gloves during milking, and carried out post milking teat disinfection more frequently than dairy farmers with a tie-stall. The data collected in this survey could assist in improving future dairy health communication campaigns in Switzerland.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22923321>

Asian Pacific Journal of Tropical Disease. 2012;2(2):S603–S611.

Therapeutic effect of *H. pylori* nosode, a homeopathic preparation in healing of chronic *H. pylori* infected ulcers in laboratory animals .

[Tejas Prabhakar Gosavi](#), [Pinaki Ghosh](#), [Amit Dattatraya Kandhare](#), [V. Shiva Kumar](#), [Mohammad Adil](#), [Anuchandra Ramchandra Rajmane](#), [Subhash L. Bodhankar](#).

Abstract

Objective: *H. pylori* is classified as class I carcinogen by World Health Organization and is a global as it is the primary cause of gastric carcinoma. The objective of present investigation was made to investigate the protective effect of homeopathically potentized *H. pylori* nosode in rats infected with *H. pylori*.

Methods: The infection was induced in the rats using a bacterial suspension of 5×10^8 CFU per ml. The various animals were treated with three potencies of *H. pylori* nosode (3X, 6X and 12X) and standard (Clarithromycin 25mg/kg + amoxicillin 50 mg/kg + omeprazole 20 mg/kg). A period of ten weeks followed and then the rats were sacrificed.

Results: *H. pylori* nosode was able to stop the initiation of infection in the pretreatment group of animals. This defines and provides us with the data regarding its sphere of action. A plethora of parameters such as ulcer area, infection status, biomarkers of oxidative stress, total intracellular ROS, degree of apoptosis, TNF level and load of bacteria in the gastric tissue served as the hallmarks to prove the preventive role of *H. pylori* nosode in the amelioration of the infection. It is evident that homeopathic drug *H. pylori* nosode was able to transform the susceptibility of the animals to the induction of infection. It provides a novel avenue in the field of research in homeopathy as the results suggest that *H. pylori* nosode was able to initiate the infection resistive forces in the animals before being subjected to the infection of *H. pylori*.

Conclusion: *H. pylori* nosode possesses potent prophylactic anti *H. pylori* activity *in vivo*.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S2222180812602308>

Tierärztl. Umschau. 1976 Dec;31(12):551-556.

Die Behandlung der Rindergrippe (respiratorische und enteritische Verlaufsform) unter besonderer Berücksichtigung von Viruvetsan.

[The treatment of bovine flu (respiratory and enteritic onset form) with special reference to Viruvetsan.]

[Article in German]

[Grandel E](#), Grandel E.

Biol Tier. 2002;19(3-4):88.

Malasseziabefall bei zwei Hunden im Augenbereich.

[Malassezia infestation in two dogs in the eye area].

[Article in German]

[Gratz,H.](#)

ScientificWorldJournal. 2007 Oct 22;7:1697-702.

Treatment of lowland frogs from the spawn stage with homeopathically prepared thyroxin (10(-30)).

[Graunke H](#), [Ender PC](#), [Scherer-Pongratz W](#), [Spranger H](#), [Frass M](#), [Lothaller H](#).

Interuniversity College for Health and Development, Graz, Castle of Seggau, Austria.

Abstract

The influence of a highly diluted agitated, i.e. homeopathically prepared thyroxin solution (10(-30), final concentration in the basin water 10(-35) parts by weight after the first application) on metamorphosis in lowland *Rana temporaria* from the spawn stage on was studied. The treatment with homeopathically prepared thyroxin solution (10(-30)) starts at the frogspawn stage. It represents a tool to learn more about the previously standardized amphibian model, where the thyroxin solution was applied from the two-legged stage on only. Lowland frogs were pretreated by immersing spawn in an aqueous molecular thyroxin dilution (10(-8) parts by weight). In later stages of development (2 to 4 legged), this has been found to speed up metamorphosis by around 15%. In accordance with the homeopathic idea of detoxication or cure, hyperstimulated animals (spawn or, in subsequence, larvae) were treated either with thyroxin that had been highly diluted and agitated in successive steps, i.e. homeopathically prepared (10(-30)), or analogously prepared blank solution (water). Development was monitored by documenting the number of animals that had entered the four-legged stage. It has been found that animals treated with the test solution metamorphosed more slowly than the control animals, i.e. the effect of the homeopathically prepared thyroxin was opposed to the usual effect of molecular thyroxin. The number of test animals that reached the 4-legged stage at defined points in time was slightly smaller in the group treated with homeopathically prepared thyroxin at some, but not at all points in time, compared to control. The results in this study sustain the previous multi researcher findings that highly diluted homeopathically prepared thyroxin is able to slow down metamorphosis of *Rana temporaria*.

Link to paper: http://www.inter-uni.net/static/download/publication/komplementaer/2007_Graunke_et_al_TSWJ_hyp_erstim_lowland_7_weeks.pdf

Prakt Tierarzt. 1975 May;56(5):280-288.

Klinische Erfahrungen mit Vitavetsan in der Rinderpraxis.

[Clinical experience with Vitavetsan, tradename, in bovine practice].

[Article in German]

[Greiff W](#)

Prakt Tierarzt. 1985;66(7):549-558.

Beobachtungen und Untersuchung über die therapeutische Wirksamkeit von Flor de Piedra D3 bei Rind und Schwein.

[Observation and study of the therapeutic efficacy of Flor de Piedra D3 in cattle and swine].

[Article in German]

[Greiff W.](#)

Abstract

Hepato- und Nephropathien beim Rind sind zunehmend an Gebärpareseerkrankungen beteiligt. Abgesehen von dem Problem frühzeitiger Erkennung stellt sie medikamentelle Beeinflussung subklinischer und klinischer Fälle im prophylaktischen und rehabilitativen Sinn den Therapeuten vor schwierige Aufgaben, wenn er versucht, die Selbstheilungsvorgänge des Organismus zu stimulieren. Mit dem Homöopathikum Flor de Piedra D3 konnte der Verfasser in Einzelfällen günstige Wirkungen auf Hepatopathien und präpartale Ketonurien unter Praxisbedingungen nachweisen. Erstmals werden erfolgreiche Wirkungen auf Nephropathien beschrieben, die in Zusammenhang mit Hepatosen aufgetreten sind. Die präventive Anwendung von Flor de Piedra bei den im Vorjahr an komplizierter Gebärparese festgelegenen Tieren mildert im Wiederholungsfalle den Krankheitsverlauf, soweit er durch dekompensierte Degenerationsprozesse von Leber bzw. Niere bedingt erschien. In Kombination mit Vitavetsan scheint bislang der Präventionseffekt optimal zu sein. Ferner wird erstmals ein positiver Effekt von Flor de Piedra auf das osteorenale Syndrom (renal bedingte Krämpfigkeit des Rindes) und das nephrogene Terrain bei Harnwegsinfekten und Pyelonephritiden beschrieben. Beim Schwein wurde Flor de Piedra erfolgreich zur Prophylaxe des MMA-Komplexes eingesetzt, eine Wirkung auf andere Syndrome scheint möglich.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=196

Biol Tier. 1989;6(1):17-27.

Östrusinduktion und Reproduktionsstimulation mit "Vetsanen" und homöopathischen Einzelmitteln beim Rind.

[Oestrus and reproductive stimulation with "Vetsanen" and homeopathic single remedies in cattle].

[Article in German]

[Greiff W.](#)

Abstract

In einer retrospektiven Studie über die Jahre 1968 - 1972 wird der Einfluss von Metrovetsan (einmalige Injektion von 5 ml) auf die Östrusinduktion und die Reproduktion ermittelt. Es zeigte sich bei allen mit Metrovetsan behandelten Gruppen (Gruppe 1: 118 Tiere mit Afollikulie; Gruppe 2: 143 Tiere mit zusätzlicher E nukleation des Corpus luteum (CL); Gruppe 3: 144 Tiere ohne E nukleation des CL), dass die Ergebnisse im Vergleich mit Literaturangaben *keinesfalls schlechter* waren, als bei Gestagenanwendung. Weiterhin werden die Auswirkungen schlechter Haltung, mangelhafter Fütterung und unzureichender Hygiene auf die Fruchtbarkeit der Kühe dargestellt. Eigene Behandlungserfahrungen mit den Präparaten Metrovetsan, Östrovetsan und Vitavetsan (Fa. Heel) werden wiedergegeben.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=65

Dynamis. 1995;8:20-24.

Prolapsus rectal chez le porc: traitement homéopatique.

[Swine rectal prolapse treated with homoeopathy].

[Article in French]

Guajardo-Bernal G , Searcy-Bernal R, Soto-Avila J.

Br Homeopath J. 1996 Jan;85(1):15-16.

Growth-promoting effect of sulphur 201c in pigs.

[Germán Guajardo-Bernal](#) , [Roberto Searcy-Bernal](#), [José Soto-Avila](#)

Abstract

In a blind, placebo-controlled trial, a homoeopathic dynamized dilution of *Sulphur* 201c was given orally to pregnant sows every 10 days. No significant difference was detected between the birth weight of litters (39 piglets) of treated sows and control litters (40 piglets). On day 30 statistically significant differences were observed both in the final weight of litters, mean total and daily weight gain.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078596800196>

Homeopathy. 2004 Jul;93(3):132-7.

Homeopathically prepared dilution of *Rana catesbeiana* thyroid glands modifies its rate of metamorphosis.

[Guedes JR](#), [Ferreira CM](#), [Guimarães HM](#), [Saldiva PH](#), [Capelozzi VL](#).

Laboratory of Molecular Pathology, University of São Paulo School of Medicine, SP, Brazil.

Abstract

One strand of research on the scientific basis of homeopathy is based on inversion effects of dilutions and the biophysical properties of information transfer. A model developed by Endler, was the basis for the study of the influence of high-diluted solution (1:1026 part by weight) of thyroid glands on the rate of metamorphosis of the frog *Rana catesbeiana* from the no legged to four-legged stage. The glands were obtained from tadpoles and prepared according by (dilution and succussion). Similar pure hydroalcoholic solution (unsuccussed) was used as control. In order to identify significant differences in the frequencies of four-legged tadpoles, in homeopathic and control group, we used a chi-square goodness-of-fit test ($P < 0.01$) and the cumulative risk for metamorphosis by Cox's Proportional Hazards model ($P < 0.05$). The number of animals that reached the four-legged stage is generally smaller in the treated group, than in the hydroalcoholic control group. It was postulated that thyroid hormones transmitted information' specific to the molecules used to prepare the solution, even though the molarity was beyond Avogadro's number.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15287432>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Glândula Tireoidiana de *Rana catesbeiana* em Ultradiluição Homeopática altera a velocidade de

Metamorfose de Girinos da Mesma Espécie.

[Homeopathically Prepared Dilution of *Rana catesbeiana* Thyroid Gland Modifies Speed of Metamorphosis].

[Article in Portuguese]

Guedes JRP, Ferreira CM, Guimarães HMB, Saldiva PHN, Capelozzi VL.

English Abstract

This study was supported by the following Brazilian agencies: the National Council for Scientific and technological Development [CNPq]; the Foundation for the Support of Research of the State of São Paulo [FAPESP]; and the Laboratories for Medical Research [LIMs]; Clinics Hospital, School of Medicine, University of São Paulo. One strand of research on the scientific basis of homeopathy is based on inversion effects of specially prepared dilutions and the biophysical properties of information transfer. A model developed by Endler, was the basis for the study of the influence of high-diluted solution (1:1026 part by weight) of thyroid glands on the rate of metamorphosis of the frog *Rana catesbeiana* from the no legged to four-legged stage. The glands were obtained from tadpoles and prepared by dilution and succussion. Similar pure aqueous alcohol solution (unsuccussed) was used as control. In order to identify significant differences in the frequencies of four-legged tadpoles, in the homeopathic and control groups, we used a chi-square goodness-of-fit test ($P < 0.01$) and the cumulative risk for metamorphosis by Cox's Proportional Hazards model ($P < 0.05$). The number of animals that reached the four-legged stage was generally smaller in the treated group than in the control group. It was postulated that thyroid hormones transmitted information specific to the molecules used to prepare the solution, even though the molarity was beyond Avogadro's number.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/190/199>

Altern Ther Health Med. 1996;2(4):90.

Radioprotection and immune system regeneration of irradiated mice by using high dilution treatment.

Guennooun M, Boudard F, Cabaner C, Robbe Y, Dubois JB, Bastide M.

Link to abstract/paper:

<http://connection.ebscohost.com/c/articles/6166388/radioprotection-immune-system-regeneration-irradiated-mice-by-using-high-dilution-treatment>

Ann Homéop Fr. 1981;23:35-41.

Action anticonvulsivante expérimentale de dilutions d'Ignatia chez la souris.

[Anticonvulsant action of experimental dilutions of Ignatia on mice]

[Article in French]

Guillemain J, Huguet F, Binsard AM, Tetau M, Narcisse G.

Ann Homéop Fr. 1982;24(6):61-68.

Effet protecteur de dilutions d'histamine vis-à-vis de l'ulcère expérimental chez le rat.

[Protective effect of histamine dilutions vis-à-vis the experimental ulcer in rats].

[Article in French]

Guillemain J, Bakri-Logeais F, Huguet F, Tetau M, Narcisse G.

Homéopathie française. 1982;15(4):175-188.

La recherche pharmacologique appliquée à l'homéopathie.

[Pharmacological research applied to homeopathy].

[Article in French]

Guillemain J.

Link to abstract/paper: <http://cat.inist.fr/?aModele=afficheN&cpsidt=9319921>

Homéopathie. 1984;1(3):41-47.

Protection d'ulcères expérimentaux chez le rat et le cobaye par des dilutions homéopathiques d'Histamine, de Poumon histamine et d'Apis.

[Protection of experimental ulcers in rats and guinea pigs by homeopathic dilutions of histamine, lung histamine and Apis].

[Article in French]

Guillemain J, Bakri-Logeais F, Huguet F, Tetau M, Narcisse G.

Collegamento. 1984;7:32-36.

Correlazione clinica e recettologica dell'attività di diluizioni omeopatiche di sostanze colinergiche sul modello oxotremorina.

[Recettologica and clinical correlation of activity of homeopathic dilutions of cholinergic substances on the oxotremorine model].

[Article in Italian]

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Effet protecteur de dilutions homéopathiques de métaux néphrotoxiques vis-à-vis d'une intoxication mercurielle.

[Protective effect of homeopathic dilutions nephrotoxic metal vis-à-vis a mercury poisoning].

[Article in French]

Guillemain J, Cal JC, Desmoulière D, Tétau M, Cambar J.

Cahiers de Biothérapie. 1989;103:53-66.

Recherche en psychopharmacologie.

[Research in psychopharmacology].

[Article in French]

Guillemain J, Rousseau A, Dorfman P, Tétau M, Narcisse G.

Berlin J Res Hom. 1991;1(3):170.

Comparative study of the anxiolytic properties of 5C sempervirine and alprazolam in mice.

Guillemain J, Rousseau A, Dorfman P, Narcisse G.

Biol Tier. 2010;27(2):53–55.

Fallbericht: Unterstützende biologische Behandlung bei einem Hund mit Hämophilie A.

[Case report: Supporting biological treatment in a dog with hemophilia A].

[Article in German]

[Günther,C.](#)

European Journal of Integrative Medicine. 2012 Sep;4:92.

Pasteurellosis and staphylococcosis in pet rabbits: homeopathic treatment.

Gustavo P.

AHZ. 1944;192(3-4):87-98.

Wismut und seine homöopathische Verwendung.

[Bismuth and its homeopathic use].

[Article in German]

Haehl E.

Int J High Dilution Res. 2012;11(38):33-42.

Assessment of homeopathic medicine *Aconitum napellus* in the treatment of anxiety in an animal model.

Haine GB, Ghandour SHE, Ghandour SAE, Fréz AR.

Abstract

Background: *Aconitum napellus* is a classic resource of complementary medicine for the treatment of patients exhibiting neurological symptoms of anxiety. Aim: To assess the action of homeopathic medicine Acon in the treatment of generalized anxiety in an experimental model using rats. Methods: 48 adult (two to three months old) male Wistar rats (*Rattus rattus*) were randomly divided in six groups (n= 8/treatment) and given the following treatments by gastric tube along 10 days: 1) control (diazepam 1 mg/kg/day); 2) negative control (0.15 mL saline solution/day); 3) ACH6 (0.15 mL Acon (6cH/day); 4) ACH12 (0.15 mL Acon 12cH/day); 5) ACH30 (0.15 mL Acon 30cH/day); and 6) ALC30 (0.15 mL 30% cereal alcohol/day). Behavioral effects were blindly and randomly assessed in elevated plus maze (EPM) and open field test. Results: Acon in dilutions 12cH and 30cH exhibited possible anxiolytic effects on the central nervous system (CNS) since they increased the number of entries in the EPM open arms (12cH and 30cH) and the permanence time in the EPM open arms (30cH only). In the open field test the homeopathic preparations did not show effects on the locomotor system of rats. Conclusion: Dilutions 12cH and 30cH of Acon exhibited anxiolytic effects on the CNS in an animal experimental model.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/547/557>

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Treatment of equine summer eczema with an autogenous serum preparation, possibly effected by inductational lipid signals.

Hallamaa RE, Lepisto RL, Tallberg Th.

Link to paper:

http://scholar.google.co.uk/scholar_url?hl=en&q=http://www.tekstotaal.com/ftp/treatment_equine_summer_eczema_with_autogenous_serum_2001.pdf&sa=X&scisig=AAGBfm3Rs6ia61ehl6zqXvhSs1xjMIBx_Q&oi=scholar&ei=NZu5Ud38Jlaz0QWZ64CgAg&ved=0CC4QgAMoADAA

Equine Vet. Educ. 2010;22(12):610-615.

Autoserum preparation in the treatment of equine summer eczema: Findings over 12 years.

Hallamaa RE.

Abstract

Equine summer eczema, the most common allergic skin disease of the horse, is notoriously difficult to treat with available methods. In the present study, 343 horses were treated with an autogenous serum preparation made from their highly diluted sera. This work was a continuation of the earlier, randomised and placebo controlled study on the autoserum therapy that showed a significant, positive clinical effect and was carried out on a series of horses in 1997–98. The main aim of the present study was to collect long-term information from the owners on this therapy. In the period from 1997–2008, 70% of the horses benefited from the treatment and 16% did not, while 14% of owners could give no clear opinion. After a 5 year follow-up, horses treated with autoserum had significantly milder clinical signs of summer eczema than before this treatment. No harmful side effects were found. An autoserum preparation was shown to be a feasible alternative in the treatment of equine summer eczema.

Link to paper: <http://onlinelibrary.wiley.com/doi/10.1111/j.2042-3292.2010.00143.x/abstract>

Biol Tier. 2011;28(1):16–18.

Behandlung der Osteomyelosklerose bei einem Kanarienvogel.

[Treatment of osteomyelosclerosis in a canary].

[Article in German]

[Halpick,E](#)

Br Homoeopath J. 1957 Jan;46(1):25–31.

Homoeopathy and the animal.

Hancock RCG.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078557800477>

Br Homoeopath J. 1964 Jan;53(1):46-50.

Some animal viruses over 100 years.

Hancock RCG.

Link to abstract/paper:

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Dt Z Hom. 1925;42(4):145-151.

Versuch über Wirksamkeit von Hochpotenzen bei gesunden Meerschweinchen.

[Trial on the efficacy of high potency in healthy guinea pigs].

[Article in German]

Harder M.

AHZ. 1984;229(5):190-199.

Beitrag zum Leberstoffwechsel der Ratte nach Tetrachlorkohlenstoff unter dem Einfluß von Nux vomica D6 bzw. Flor de Piedra D4.

[Contribution to the liver metabolism of rats after carbon tetrachloride under the influence of Nux vomica D6 and D4 Flor de Piedra].

[Article in German]

Harisch G, Müller R, Meyer W.

Abstract

Tetrachlorkohlenstoff (1,0 ml/kg Ratte) beeinflusst bei intraperitonealer Verabreichung die Konzentration von GSH, GSSG, gemischten Glutathiondisulfiden und Gesamtglutathion der Rattenleber in eindrucksvoller Weise. 2. Der CCl₄-induzierte Verlauf dieser Parameter wird bei 24 Stunden vorher erfolgender Verabreichung von Nux vomica D6 oder Flor de Piedra D4 zu bestimmten Zeitpunkten in charakteristischer Weise verändert. 3. Eine Potenz Nux vomica D6 und eine der D6 konzentrationsmäßig gleiche aber unpotenzierte Nux-vomica-Verdünnung verändern die GSH-Konzentration der Leber in gleichsinniger Weise; die Potenz Nux vomica D6 wirkt jedoch deutlich stärker als die Verdünnung. 4. Die CCl₄-induzierte Leberverfettung wird durch Nux vomica D6 und Flor de Piedra D4 in drastischer Weise vermindert. 5. Die Effekte dieser Homöopathika werden als Beeinflussung der Glutathion-Funk-tions-Systeme der Leber diskutiert.

Link to abstract/paper: <https://www.thieme-connect.de/ejournals/pdf/10.1055/s-2006-936070.pdf>

DAZ Fortbildung Homöopathie. 1986;126(26):29-31.

Experimentell-pharmakologische Untersuchungen.

[Experimental and pharmacological studies].

[Article in German]

Harisch G, Andresen M, Kretschmer M.

DTW. 1987;94(9):515-516.

Beitrag zum Histamin Release aus peritonealen Mastzellen von männlichen Wistar-Ratten.

[Histamine release from peritoneal mast cells of male Wistar rats].

[Article in German]

Harisch G, Kretschmer M, von Kries U.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/2446828>

DTW. 1988;95(8):329-331.

Zirkadiane Wirkungsunterschiede bei der Applikation von Sulfur dargestellt an Funktionssystemen des Leberstoffwechsels.

[Circadian differences in the application of sulphur shown to function systems of liver metabolism].

[Article in German]

[Harisch G](#), [Kretschmer M](#).

TPK. 1988;2(10):588-590.

Wirkungen ausgewählter homöopathischer Präparationen im Kurzzeitbereich.

[Effects of selected homeopathic preparations in the short time range].

[Article in German]

[Harisch G](#), [Kretschmer M](#).

Experientia. 1988 Sep 15;44(9):761-2.

Smallest zinc quantities affect the histamine release from peritoneal mast cells of the rat.

[Harisch G](#), [Kretschmer M](#).

Institut für Physiologische Chemie, Tierärztliche Hochschule Hannover, Federal Republic of Germany.

Abstract

Seven individual 0.025-mg doses of zinc administered as lactose tablets on consecutive days, significantly increase histamine release from peritoneal mast cells of the rat. Seven individual doses of 0.25 microgram caused a somewhat smaller, though still very pronounced increase in the release in comparison with zero control.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/2458284>

J Appl Nutrition. 1989;41:45-49.

Histamine release from rat peritoneal mast cells after oral doses of homeopathically prepared minerals and sodium cromoglycate.

Harisch G, Kretschmer M.

Forsch Komplementarmed. 1998 Jun;5(3):122-131.

In-vivo-und In-vitro-Versuche zur Erforschung der Wirkungsentfaltung von Homöopathika.

[In vivo and in vitro experiments to investigate the development of the effects of homeopathic remedies].

[Article in German]

[Harisch G](#), [Dittmann J](#).

Link to abstract/paper: <http://www.karger.com/Article/Abstract/21092>

Homeopathy. 2013 Jan;102(1):25-30. doi: 10.1016/j.homp.2012.09.003.

Replication of an experiment on extremely diluted thyroxine and highland amphibians.

[Bernhard Harrer](#)

Abstract

Introduction: The purpose of this study was to reproduce an experiment with diluted thyroxine and amphibians. A detailed account of the difficulties of this line of research has been published by the initial team (Endler and Scherer-Pongratz). One experiment which has been reported reproducible by the initial team and independent researchers is the effect of extremely diluted agitated thyroxine (T30x) *versus* analogously prepared water (W30x) in amphibians from biotopes above the tree line (highland amphibians).

Methods: (A) The author replicated the experiment. *Rana temporaria* were taken from an alpine biotope and the methods given in the original protocols were followed. Animals were treated from the 2-legged stage on. (B), the author reanalyzed the results reported by the initial team and by independent researchers (van Wijk, Lassnig, Zausner-Lukitsch, Bach, Harrer).

Results: (A) In the author's own experiment, there was a clear trend of T30x animals developing more slowly (i.e. up to 6 h within 3 days) than W30x animals. This is in line with the previous experiments. Due to small numbers of animals, the differences in the frequency of larvae reaching the 4-legged stage and the stage with reduced tail were not statistically significant ($p > 0.05$). The effect size was large ($d > 0.08$). (B) In the analysis of all available data with regard to the 4-legged stage, pooled T30x values from the initial team were 10.1% smaller than W30x values (100%) and pooled T30x values from the 5 independent researchers were 12.4% smaller ($p < 0.01$ and $d > 0.08$). Analogously, the number of animals entering the juvenile stage with reduced tail was smaller for T30x than for W30x.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/23290876>

C R Séances Acad Sci. 1962;255:2283-2284.

Le comportement de poissons sous l'influence de substances odorantes en solutions.

[The behavior of fish under the influence of odorant solutions].

[Article in French]

Heintz E.

C R Séances Acad Sci. 1964;258:3572-3574.

Le comportement de Daphnia dans des solutions de coumarine et de sulfate de cuivre.

[The behavior of Daphnia in solutions of coumarin and copper sulfate].

[Article in French]

Heintz E.

Link to abstract/paper:

<http://www.antiqubook.com/books/bookinfo.phtml?o=lelivr&bnr=RO40140263>

J Vet Med A Physiol Pathol Clin Med. 2004 May;51(4):196-202.

Evaluation of stratification factors and score-scales in clinical trials of treatment of clinical mastitis in dairy cows.

[Hektoen L](#), [Ødegaard SA](#), [Løken T](#), [Larsen S](#).

Department of Production Animal Clinical Sciences, Norwegian School of Veterinary Science, PO Box 8146 Dep., 0033 Oslo, Norway. lisbeth.hektoen@veths.no

Abstract

There is often a need to reduce sample size in clinical trials due to practical limitations and ethical considerations. Better comparability between treatment groups by use of stratification in the design, and use of continuous outcome variables in the evaluation of treatment results, are two methods that can be used in order to achieve this. In this paper the choice of stratification factors in trials of clinical mastitis in dairy cows is investigated, and two score-scales for evaluation of clinical mastitis are introduced. The outcome in 57 dairy cows suffering from clinical mastitis and included in a clinical trial comparing homeopathic treatment, placebo and a standard antibiotic treatment is investigated. The strata of various stratification factors are compared across treatments to determine which other factors influence outcome. The two score scales, measuring acute and chronic mastitis symptoms, respectively, are evaluated on their ability to differentiate between patients classified from clinical criteria as responders or non-responders to treatment. Differences were found between the strata of the factors severity of mastitis, lactation number, previous mastitis this lactation and bacteriological findings. These factors influence outcome of treatment and appear relevant as stratification factors in mastitis trials. Both score scales differentiated between responders and non-responders to treatment and were found useful for evaluation of mastitis and mastitis treatment.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15265177>

Vet Rec. 2004 Nov 27;155(22):701-7.

Investigations of the motivation underlying Norwegian dairy farmers' use of homoeopathy.

[Hektoen L](#).

Department of Production Animal Clinical Sciences, Norwegian School of Veterinary Science, PB 8146 Dep, 0033 Oslo, Norway.

Abstract

Eighteen Norwegian dairy farmers were interviewed to examine their reasons for using homeopathic treatments in managing their herds' health. Overall, they chose the treatments on the basis of factors related to their personal experience, considerations of individual animals and the framework for dairy production. For individual animals homeopathy was used as an alternative to conventional veterinary treatment, but at the herd level it was used to complement it. The farmers' use of homeopathic treatment for personal health problems and the experience of their colleagues with its use in dairy production were important factors motivating their initial use of homeopathy. Other factors included a desire to decrease the use of antibacterial drugs, reduce costs and find alternatives when conventional veterinary medicine provided no effective treatment. In individual cases, the severity of disease, previous experience and the farmers' personal knowledge and resources were important. These factors parallel those found to influence the use of complementary and alternative therapies in human medicine. The lack of understanding and documentation of the effects of homeopathic remedies was not important to the farmers, and they valued personal experience more highly than scientific evidence or the opposition to homeopathy encountered within the veterinary profession.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15605537>

J Vet Med A Physiol Pathol Clin Med. 2004 Dec;51(9-10):439-46.

Comparison of homeopathy, placebo and antibiotic treatment of clinical mastitis in dairy cows - methodological issues and results from a randomized-clinical trial.

[Hektoen L](#), [Larsen S](#), [Odegaard SA](#), [Løken T](#).

Department of Production Animal Clinical Sciences, Norwegian School of Veterinary Science, Pb. 8146 Dep., 0033 Oslo, Norway. lisbeth.hektoen@veths.no

Abstract

Based on the widespread use of homeopathy in treatment of animal disease and the poor documentation of its possible effects and consequences, a clinical trial was carried out in order to evaluate the efficacy of homeopathy in treatment of clinical mastitis in dairy cows and a design for clinical studies on homeopathic treatment, taking into account the guidelines for randomized-clinical trials (RCT) as well as the basic principles of homeopathy. A three-armed, stratified, semi-crossover design comparing homeopathy, placebo and a standardized antibiotic treatment was used. Fifty-seven dairy cows were included. Evaluation was made by two score scales, with score I measuring acute symptoms and score II measuring chronic symptoms, and by recording the frequencies of responders to treatment based on four different responder definitions. Significant reductions in mastitis signs were observed in all treatment groups. Homeopathic treatment was not statistically different from either placebo or antibiotic treatment at day 7 ($P = 0.56$, $P = 0.09$) or at day 28 ($P = 0.07$, $P = 0.35$). The antibiotic treatment was significantly better than placebo measured by the reduction in score I ($P < 0.01$). Two-thirds of the cases both in the homeopathy and placebo groups responded clinically within 7 days. The outcome measured by

frequencies of responders at day 28 was poor in all treatment groups. Evidence of efficacy of homeopathic treatment beyond placebo was not found in this study, but the design can be useful in subsequent larger trials on individualized homeopathic treatment.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15610489>

Vet Rec. 2005 Aug 20;157(8):224-9.

Review of the current involvement of homeopathy in veterinary practice and research.

[Hektoen L.](#)

Department of Production Animal Clinical Sciences, Norwegian School of Veterinary Science, po Box 8146 Dep, 0033 Oslo, Norway.

Abstract

Homeopathy has become the focus of increasing interest and use as a complementary and alternative treatment for both human and animal disease. However, from the point of view of academic medicine, this type of therapy is controversial. The use of highly diluted remedies cannot be reconciled with the scientific theories on which the current understanding of disease and its treatment is based, and clinical research in the field is considered to be neither extensive enough nor of a high enough standard to determine whether homeopathic treatments are clinically effective. Animals have no choice in their treatment and are dependent on the judgements of their owners and their therapists. There is therefore a need for information about the effects and consequences of the use of alternative therapies. This paper discusses the use of homeopathy in the treatment of animal disease from the point of view of academic veterinary medicine, and the various approaches to research in this field, with an emphasis on the randomised clinical trial. It also discusses the role of the placebo response and the natural resolution of disease in the clinical evaluation of homeopathic treatment.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/16113167>

J Am Inst Homeopath. 1932;25:1080-1086.

A new Method of Determining the Indicated Remedy by a Flocculation Test of the Serum.

Henshaw GR.

J Am Inst Homeopath. 1966 Sep-Oct;59(9):296-9.

Laboratory experience with homeopathic remedies.

[Henshaw GR.](#)

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/6013468>

Berlin J Res Hom. 1991 Jun;1(2):93-97.

Potentized Microdoses of Cadmium Reduce the Lethal Effect of this Heavy Metal in Amphibian Embryos.

Herkovits J, Pérez-Coll CS.

Berlin J Res Hom. 1991 Jun;1(3):171.

Could Potentized Microdoses of Cadmium change the Toxicological Effect of this Heavy Metal?

Herkovits J, Perez-Coll CS.

Abstract

Toad embryos were exposed to Cadmium in 4X, 8X and 10X potencies. Either immediately or 24 hours later, the embryos were exposed to a (normally lethal) solution equivalent to 1mg/l of Cadmium. Both on immediate and delayed exposure, the potencies of cadmium exerted a statistically significant protective effect against the actions of the cadmium solution.

Complementary Therapies in Medicine. 1993 Jan;1(1);6-8.

Dose-response relationship within the potentized microdoses phenomenon.

Herkovits J, Perez-Coll CS.

Abstract

The possibility of reducing the lethal effect of cadmium in *Bufo arenarum* embryos by means of solutions prepared with potentized microdoses (PM) of this heavy metal was confirmed. Changing the proportion of the PM solution in the culture medium from 100% to 1%, we found that the beneficial effect is not proportional to the amount of the PM employed. Therefore, it seems that a qualitative property of the PM solution could spread in the whole media exerting its action on the biological organism.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/yctim/article/PII096522999390131V/abstract>

Evid Based Complement Alternat Med. 2009 December;6(4):465–471.

doi: 10.1093/ecam/nem143.

Evaluating Complementary Therapies for Canine Osteoarthritis—Part II: A Homeopathic Combination Preparation (Zeel®)

[Anna Hielm-Björkman](#), [Riitta-Mari Tulamo](#), [Hanna Salonen](#), [Marja Raekallio](#)

Abstract

A homeopathic combination preparation (HCP) for canine osteoarthritic pain was evaluated in a randomized, double-controlled and double-blinded clinical trial. Forty-four dogs with osteoarthritis (OA) that were randomly allocated into one of three

groups completed the study. All dogs were fed test products or placebo for 8 weeks. The dogs were evaluated at the clinic four times, with 4-week intervals. Six different variables were assessed: veterinary-assessed mobility, two force plate variables, an owner-evaluated chronic pain index and pain and locomotion visual analogue scales (VASs). Intake of extra non-steroidal anti-inflammatory drugs was also evaluated. A Chi-squared test and a Mann–Whitney test were used to determine significant improvement between groups. When changed into dichotomous responses of ‘improved’ or ‘not improved’ three out of the six variables showed a significant difference ($P = 0.016$, $P = 0.008$, $P = 0.039$) in improved dogs per group, between the HCP group and the placebo group. The odds ratios were over one for the same variables. As extent of improvement in the variables from start to end of treatment, the HCP product was significantly more improved in four ($P = 0.015$, $P = 0.028$, $P = 0.049$, $P = 0.020$) of the six variables, compared with the placebo. Our results indicated that the HCP Zeel® was beneficial in alleviating chronic orthopedic pain in dogs although it was not as effective as carprofen.

Link to paper:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2781775/pdf/nem143.pdf>

Vet Rec. 2009 Mar 21;164(12):364-70.

Pilot study of the effect of individualised homeopathy on the pruritus associated with atopic dermatitis in dogs.

[Hill PB](#), [Hoare J](#), [Lau-Gillard P](#), [Rybnicek J](#), [Mathie RT](#).

Division of Companion Animal Studies, Department of Clinical Veterinary Science, University of Bristol, Langford House, Langford, North Somerset BS40 5DU.
phill@vetspecialist.com.au

Abstract

Twenty dogs with confirmed atopic dermatitis were treated with homeopathy. In the first phase of this pilot study, all of the dogs were treated by a veterinary homeopath with individualised remedies prescribed on the basis of the dog's cutaneous signs and constitutional characteristics. The response to treatment was assessed by scoring the severity of pruritus from 0 to 10 on a validated scale. The dogs were evaluated at monthly intervals for at least two months. In 15 cases, the owners reported no improvement following homeopathic treatment. In the other five cases, the owners believed that the homeopathic treatment was associated with a substantial improvement, and reported reductions in pruritus scores ranging from 64 to 100 per cent. These five dogs were selected for the second phase of the study, in which homeopathic remedies were tested against placebos in a randomised and blinded trial. In one of these dogs, atopic dermatitis resolved completely and so this dog could not participate in phase 2; another dog was euthanased because of status epilepticus before phase 2 could be started. In the remaining three cases, the owners correctly distinguished between the placebo and homeopathic remedies, and reported reductions in the pruritus score of 0, 0.2 and 0.8 following placebo treatment and 4.3, 2.4 and 3.0, respectively, following the remedy.

Link to paper: <http://www.vetpath.co.uk/voodoo/hill.pdf>

Homeopathy. 2006 Jul;95(3):148-50.

Effect of fortification of Mulberry leaves with homeopathic drug *Nux vomica* on *Bombyx mori*. L.

[Hiware CJ](#).

Department of Zoology, Dr. Babasaheb Ambedkar Marathwada University,
Aurangabad 431004, MS, India. drhiware@rediffmail.com

Abstract

Silk worm (*Bombyx mori* L.) larvae were fed on Mulberry leaves treated with *Nux vomica* mother tincture. The impact on larval, cocoon, shell and pupal weight, silk ratio, average filament length and denier, and number of breakages during reeling were investigated. The results were positive in all parameters under study except cocoon weight, pupal weight, and the average denier of the filament.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/16815518>

J Ethnopharmacol. 1987 Mar-Apr;19(2):133-43.

Comparative choleric and hepatoprotective properties of young sprouts and total plant extracts of *Rosmarinus officinalis* in rats.

[Hoefler C](#), [Fleurentin J](#), [Mortier F](#), [Pelt JM](#), [Guillemain J](#).

Abstract

Lyophilised ethanol and aqueous extracts of *Rosmarinus officinalis* young sprouts and total plant have been evaluated for choleric and hepatoprotective activities in the rat. *R. officinalis* ethanol extracts prepared from young sprouts show a significant dose-related choleric activity and are more active than the total plant extract. Aqueous extracts of young sprouts show a significant hepatoprotective effect on plasma GPT levels when given as pretreatment before carbon tetrachloride intoxication while the whole plant extract was inactive. Both sprouts and whole plant aqueous extracts were ineffective when given after carbon tetrachloride administration.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/3613606>

Arch Hom. 1953;1:24-40.

Untersuchungen über die Wirkung von *Pulsatilla* auf die Genitalfunktionen der weißen Maus.

[Investigations of the effect of *Pulsatilla* on the genital functions of the white mouse].

[Article in German]

Hofmeister M.

Zeitschrift für Ganzheitliche Tiermedizin. 2009;23(2):44-47. DOI: 10.1055/s-0029-1185619

Goldakkupunktur mit Nebenwirkungen - eine Fallstudie.

[Gold acupuncture with side effects: A case study]

[Article in German]

[Hohmann,M.](#)

English Abstract

The article describes the case of wrong therapy of gold acupuncture on a German Dogge with fatal disorders regarding its general health. The complete recovery of the dog was not possible and thus homeopathic treatment was the only possibility of suppressing the Aurum symptomatic. Additionally an evaluation from the homeopathic point of view and Traditional Chinese Veterinary Medicine is offered.

Link to paper: <https://www.thieme-connect.com/ejournals/abstract/10.1055/s-0029-1185619>

Zeitschrift für Ganzheitliche Tiermedizin. 2011;25(3):76-82. DOI: 10.1055/s-0031-1280071.

Metallisches Quecksilber bei Myxomatose eines Zwergkaninchens.

[Metalic Mercury in a myxomatous dwarf rabbit].

[Article in German]

[Hohmann,M.](#)

English Abstract

The article describes the case of a three-year-old dwarf rabbit with myxomatosis. A conventional medicine was not available, the ultimate option for the dwarf rabbit was euthanasia. However, the application of homoeopathic therapy by using mercury and myxomatosis nosodes enabled the rabbit to heal completely.

Link to abstract/paper: <https://www.thieme-connect.com/ejournals/abstract/10.1055/s-0031-1280071>

Vet Rec. 2005 Apr 30;156(18):565-7.

Controlled clinical trial of the effect of a homoeopathic nosode on the somatic cell counts in the milk of clinically normal dairy cows.

[Holmes MA](#), [Cockcroft PD](#), [Booth CE](#), [Heath MF](#).

Farm Animal Epidemiology and Informatics Unit, Department of Clinical Veterinary Medicine, University of Cambridge, Madingley Road, Cambridge CB3 0ES.

Abstract

Cows in a 250-cow Holstein-Friesian herd were allocated at random to be treated with either a homoeopathic nosode or a negative control, both treatments being applied by means of an aerosol spray to the vulval mucous membranes. A total of six treatments were given over a period of three days and milk samples were taken for the determination of somatic cell counts (SCC) on days -3, 3, 7, 9, 14, 21 and 28. Individuals applying the treatments or carrying out the SCC determination were unaware of which animals were receiving which treatment. Owing to the wide natural variations in SCC, the trial had only a 71 per cent possibility of detecting a 30 per

cent difference in SCC between the two groups. There were no significant differences between the SCC of the two groups on any sample day, but there were significant variations between the SCC on different days ($P=0.003$) in both groups. Link to paper: <http://www.vetpath.co.uk/voodoo/mastitis.pdf>

Int J High Dilution Res. 2007 Jul-Sep;6(20):22-26.

A adoção da homeopatia por agricultores familiares na criação de bovinos leiteiros.

[The adoption of homeopathy in small Brazilian dairy farms].

[Article in Portuguese]

Honorato LA, Hötzel MJ, Machado Filho LCP, Karam KF.

English Abstract

To investigate the motivations of family farmers to adopt or not homeopathy as a therapeutic tool, semi-structured interviews were carried out in 20 dairy farms in Antonio Prado and Ipê, Rio Grande do Sul, Brazil. Among the farmers that used homeopathy, its degree of adoption was determined by subjective factors like previous experience with its use in the family members, the production of organic milk, a desire to avoid poisons and the influence of neighbor farmers. The lack of information among the farmers on the efficacy of the homeopathic medicines was a contributing factor for the rejection of homeopathy for some, and seems to have led others to discontinue its use during the first months of trial. For the same reason many users restricted its use to the prevention of a few diseases, ignoring that the health status of the herds treated with homeopathy was comparable to the conventionally treated herds. To help in a successful transition from conventional to alternative veterinary medicine systems and to avoid homeopathy from being used only in the prevention of a few diseases, programs that aim at supporting the transition to homeopathy as a main therapeutic option must include specialized veterinary assistance and incorporate methodologies that lead to a higher confidence and commitment of farmers.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/24/17>

Cahiers de Biothérapie. 1985;22(88):31-34.

Activité de dilutions homéopathiques de substances cholinergiques sur le modèle oxotremorine.

[Activity of homeopathic dilutions of cholinergic substances on the oxotremorine model].

[Article in French]

Huguet F, Narcisse G, Guillemain J, Tétou M.

Biol Tier. 2002;19(3-4):64–87.

Stoffwechselstörungen und peripartale Erkrankungen beim Milchrind - Pro- und Metaphylaxe mit homöopathischen Arzneimitteln.

[Metabolic disorders and peripartum diseases in dairy cows - Pro-and metaphylaxis with homeopathic medicines].

[Article in German]

[Hümmelchen M.](#)

Vet Rec. 1991 Oct 12;129(15):343.

Homeopathic treatment of a dog.

[Hunter FE.](#)

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/1750181>

Revista Médica de Homeopatía. 2009 May-Aug;2(2):81-86.

La homeopatía en las alergias animales.

[Homeopathy in animal allergies].

[Article in Spanish].

Iturri AB.

English Abstract

Allergies are frequent among animals living closely with humans such as pets and stabled equines but are extremely rare among wild equines or those living in ecological conditions are extremely rare. We wish to disseminate our highly positive experience of the use of homeopathy in these currently frequent diseases. Our methodology consisted of the use of biotherapies, frequently selected by ourselves and prepared by a specialized laboratory.

The results were highly positive, except in a very few cases, in which we attempted to identify the cause of the process with negative results. We treated pruritus (identifying up to 95 medications for the disease), sometimes with positive results and, in cases without results, we proceeded to stimulate cortisone production in the body, with excellent results. We conclude that homeopathic treatment of allergies has numerous advantages, both clinical and in terms of animal welfare. This treatment avoids desensitization by injections, reduces costs and improves animal well-being.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S1888852609700244>

Propagateur Homéopath. 1932;7:319-336.

Recherches expérimentales de tests pour estimer l'activité du remède homéopathique.

[Experimental testing to estimate the activity of the homeopathic remedy].

[Article in French]

Jarricot J.

Mol Cell Biochem. 2006 Nov;292(1-2):59-67. Epub 2006 May 30.

Pretreatment with alcoholic extract of *Crataegus oxycantha* (AEC) activates mitochondrial protection during isoproterenol - induced myocardial infarction in rats.

[Jayalakshmi R](#), [Thirupurasundari CJ](#), [Devaraj SN](#).

Department of Biochemistry, University of Madras, Guindy Campus, Chennai - 600 025, Tamil Nadu, India.

Abstract

Crataegus oxycantha (hawthorn) is used in herbal and homeopathic medicine as a cardiogenic. The present study was done to investigate the effect of the alcoholic extract of *Crataegus oxycantha* (AEC) on mitochondrial function during experimentally induced myocardial infarction in rat. AEC was administered orally to male albino rats (150-200 g), at a dosage of 0.5 ml/100 g body weight/day, for 30 days. At the end of the experimental period, the animals were administered isoproterenol (85 mg/kg body weight, s.c) for 2 days at an interval of 24 h. After 48 h, the rats were anaesthetized and sacrificed. The hearts were homogenized for biochemical and electron microscopic analysis. AEC pretreatment maintained mitochondrial antioxidant status, prevented mitochondrial lipid peroxidative damage and decrease in Krebs's cycle enzymes induced by isoproterenol in rat heart.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/16733799>

Ann Homéop Fr. 1972;14(4):311-328.

Expérimentation pharmacologique de la follicula-stimuline hypophysaire F.S.H. diluée et dynamisée.

[Pharmacological experimentation of the follicle-stimulating pituitary hormone FSH diluted and energized].

[Article in French]

Jeannes A, Tétou M, Fouche L.

Ann Homéop Fr. 1977;19(3):325-337.

Possibilités de prévention d'un cancer expérimental de la souris par les acides nucléiques dynamisés.

[Opportunities for prevention of experimental cancer in mice by energized nucleic acids].

[Article in French]

Jenaer M.

Rev Belg Hom. 1978;3:427-434.

Essai de détermination expérimentale de l'activité anticancéreuse séparée de l'ARN et de l'ADN dans leurs différentes dynamisations CH et K.

[Test of experimental determination of the anticancer activity of separate RNA and DNA in their different potencies and K CH].

[Article in French]

Jenaer M, Gengoux P, Karelle-Bui Thi H.

Rev Belg Hom. 1978 Mar;10(1):293-299.

Controle de prévention de la leucémie spontanée chez la souris AKR, par ADN-ARN dynamisés.

[Control for the prevention of spontaneous leukemia in AKR mice by energised DNA-RNA].

[Article in French]

Jenaer, M.; Gengoux, P.; Karelle-Bui Thi, H.

Link to abstract/paper: <http://bases.bireme.br/cgi-bin/wxislind.exe/iah/online/?IsisScript=iah/iah.xis&src=google&base=HomeoIndex&lang=p&nextAction=Ink&exprSearch=3100&indexSearch=ID>

Int J High Dilution Res. 2012;11(40):211-212.

Experimental induced wound cicatrisation after highly diluted products treatment.

Jeronimo FF, Golçalves JP, do Nascimento KF, de Oliveira SM, di Bernardi RP, de Oliveira CC, Farias ELP, de Freitas Buchi D.

Abstract

Introduction: Skin is an attractive target to study extracellular matrix, due to abundance in Connective tissue. In cases of injuries the first step is an inflammatory reaction and subsequent the healing that involves several changes in the matrix. These changes are fundamental to inflammatory cells activities allowing healing. Highly diluted products were shown to facilitate inflammatory mediators and to activate immune cells in vivo and in vitro, thus it can be effective to wound healing. Aims: This study aims to evaluate highly diluted products effects on inflammation and cicatrization process.

Methodology: Three compounds (M8 (Aconitum napellus 20dH, Arsenicum album 18dH, Asa foetida 20dH, Calcarea carbonica 16dH, Conium maculatum 17dH, Ipecacuanha 13dH, Phosphorus 20dH, Rhus toxicodendron 17dH, Silicea 20dH, Sulphur 24dH, Thuja occidentalis 19dH), M1 (Chelidonium majus 20dH, Cinnamon 20dH, Echinaceae purpurea 20dH, Gelsemium sempervirens 20dH plus all M8 compounds) and Curcuma cH30 – simple product), were manipulated as a gel and applied on mice dorsal flank after incision and suture (approximately 1 cm and three points), for 3 consecutive days. After the treatments the scars were evaluated macroscopically, the animals were killed, the skin samples collected, fixed and processed for Hematoxylin-Eosin (HE) and Masson Tricromic (to observe the collagen fibers type I). The slices were analyzed and images collected by a light microscope Olympus BX51 with camera attached Olympus DP72.

Results: It was observed a higher and faster rate of tissue epithelization in the treated groups after three days of gel-product application. This could be observed in lower rates in the control group (no treatment) - Figure 1 and 2). Regeneration and organization of connective tissue were proportional to epithelization the treated

groups. We also observed evidences of changes in amount of neutrophils and fibroblasts, resulting in changes in the healing period. Analyses for these confirmations are in progress.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/601/620>

Br Homoeopath J. 1991 Jan;80(1):71.

Animal experimentation.

Johnson D.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078505804478>

Perfusion. 1999;12:452-462.

Treatment of experimental stroke with low-dose glutamate and homeopathic Arnica Montana.

Jonas WB, Lin Y, Williams A, Tortella F, Ruma R.

Altern Ther Health Med. 1999 Sep;5(5):36-40.

Do homeopathic nosodes protect against infection? An experimental test.

[Jonas WB.](#)

Department of Family Medicine, Uniformed Services University of the Health Sciences, Bethesda, Md. 20814, USA. wjonas@mx.usuhs.mil

Abstract

CONTEXT: For centuries, homeopathic practitioners have claimed that serially agitated dilutions of infectious agents (called "nosodes") are effective in the prevention of infectious disease. However, no rigorous tests of this claim have been performed.

OBJECTIVE: To test whether a nosode of *Francisella tularensis*-infected tissue could protect from subsequent challenge with this pathogen in vivo.

DESIGN: Experimental laboratory test.

SETTING: A P3 containment laboratory at an infectious disease research facility.

PARTICIPANTS: 142 male C3H/HeN specific, pathogen-free mice.

INTERVENTION: Six levels of a nosode prepared from tularemia-infected tissue were produced. All exposures were below the lowest level at which a classical vaccination response was expected. The nosode and diluent control solutions were administered orally (.03 mL, 3 times per week) for 1 month before and after challenge. Animals were challenged with a potentially lethal dose (LD50 or LD75) of *F tularensis*, then evaluated for time of death and total mortality.

MAIN OUTCOME MEASURES: Mortality and time to death.

RESULTS: In a series of 15 trials (n = 142), the tularemia nosode consistently produced increased mean times to death. All but 2 of 15 trials showed reduced time

to death in the nosode group and decreased mortality compared with controls. Protection rates averaged 22% over controls compared to 100% protection by standard vaccination.

CONCLUSIONS: This study found partial protection from a nosode of tularemia in dilutions below those expected to have protective effects, but not as great as those produced by standard vaccination. If homeopathic nosodes can induce protection from infectious agents for which vaccination is currently unavailable, they may provide an interim method of reducing morbidity or mortality from such agents.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/10484829>

Journal of Scientific Exploration. 2000;14(1):35–52.

Protection of Mice from Tularemia Infection with Ultra-Low, Serial Agitated Dilutions Prepared from Francisella tularensis-Infected Tissue.

Jonas WB, Dillner DK.

Abstract

Reports of immunomodulation with serial agitated dilutions (SADs) of cytokines, hormones, minerals, and whole tissue led to this inquiry as to whether exposure to a complex SAD preparation produced from *Francisella tularensis*-infected mice could alter the immune response and the effects of subsequent challenge with this pathogen in vivo. Six SAD preparations of reticuloendothelial tissue from *F. tularensis*-infected C3H/HeN mice were produced through a process of serial log₁₀ and log₁₀₀ dilutions in 70% ethanol interspersed with 30-second agitation. SAD preparations were analyzed for protein content and for contamination with ¹H-NMR spectroscopy. Three preparations contained detectable protein by Lowry and NMR analysis, and three were diluted beyond detection of protein. These preparations were administered orally for 1 month to 147 animals randomly assigned to SAD or diluent control groups. All animals were then challenged with a lethal dose (LD₅₀ or LD₇₅) of *F. tularensis* and evaluated for time to death and total mortality. In a series of 15 trials, the SAD preparations consistently produced increased mean times to death (MTD; MTD SAD = 18.6 days [range, 12.9–25.6]; MTD controls = 13.7 days [range, 11.6–15.6]), and decreased mortality (SAD: 53%; control: 75%) when compared with matched control groups given the diluent only. Protection was not related to the level of dilution, the number of times vortexed, or the presence or absence of original substance from the tissue. Active and inactive solutions could be distinguished from one another using ¹H NMR-spectroscopy. Two preparations induced specific anti-tularemia IgG antibody production before challenge. This anomalous finding needs independent repetition and further investigation.

Link to a paper:

<http://www.audesapere.in/researchstudies/pdf/Protection%20of%20Mice.pdf>

Integr Cancer Ther. 2006 Dec;5(4):343-9.

Can homeopathic treatment slow prostate cancer growth?

[Jonas WB](#), [Gaddipati JP](#), [Rajeshkumar NV](#), [Sharma A](#), [Thangapazham RL](#), [Warren J](#), [Singh AK](#), [Ives JA](#), [Olsen C](#), [Mog SR](#), [Maheshwari RK](#).

Samueli Institute, 1700 Diagonal Road, Suite 400, Alexandria, VA 22314, USA.

Abstract

BACKGROUND: Homeopathy is a complementary medicine widely used around the world. Despite extensive use of homeopathy for cancer and other serious conditions with reported success, clinical and laboratory research has been equivocal, and no rigorous research has been done on cancer. In 1999, the US National Cancer Institute evaluated the effects of homeopathic treatment of cancer from a clinic in India and has released a request for protocols to conduct further research into this treatment. Therefore, the authors conducted a series of carefully controlled laboratory studies evaluating the effects of commonly used homeopathic remedies in cell and animal models of prostate cancer.

STUDY DESIGN: One hundred male Copenhagen rats were randomly assigned to either treatment or control groups after inoculation with prostate tumor cells.

METHODS: Prostate tumor cells DU-145, LNCaP, and MAT-LyLu were exposed to 5 homeopathic remedies. Male Copenhagen rats were injected with MAT-LyLu cells and exposed to the same homeopathic remedies for 5 weeks. In vitro outcomes included tumor cell viability and apoptosis gene expression. In vivo outcomes included tumor incidence, volume, weight, total mortality, proliferating cell nuclear antigen (PCNA) expression, apoptotic cell death (terminal deoxynucleotidyl transferase mediated d-uridine triphosphate nick end labeling), and gene expression (rAPO-multiprobe).

RESULTS: There were no effects on cell viability or gene expression in 3 prostate cell lines with any remedies at any exposure time. There was a 23% reduction in tumor incidence ($P < .0001$), and for animals with tumors, there was a 38% reduction in tumor volume in homeopathy-treated animals versus controls ($P < .02$). At time of killing, experimental animals with tumors had a 13% lower average tumor weight ($P < .05$). Tumors in these treated animals showed a 19% increase in apoptotic cell death ($P < .05$) and reduced PCNA-positive cells.

CONCLUSIONS: The findings indicate that selected homeopathic remedies for the present study have no direct cellular anticancer effects but appear to significantly slow the progression of cancer and reduce cancer incidence and mortality in Copenhagen rats injected with MAT-LyLu prostate cancer cells.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17101763>

J Pharmacol Exp Ther. 2003 Jun;305(3):919-24. Epub 2003 Mar 6.

Nonopioid actions of U50,488 enantiomers contribute to their peripheral cutaneous antinociceptive effects.

[Joshi SK](#), [Gebhart GF](#).

Department of Pharmacology, Roy J. and Lucille A. Carver College of Medicine, The University of Iowa, Iowa City, IA 52242, USA. shailen-joshi@uiowa.edu

Abstract

The ability of arylacetamide kappa-opioid receptor agonists (kappa-ORAs) to block sodium channels by a nonopioid mechanism has been previously documented. The present experiments were undertaken to test whether two enantiomers of the arylacetamide kappa-ORA (trans)-3,4-dichloro-N-methyl-N-[2-(1-pyrrolidinyl)-

cyclohexyl]benzeneacetamide (U50,488), (+)-(1R,2R)-U50,488 and (-)-(1S,2S)-U50,488, are antinociceptive in the formalin model by a peripheral, nonopioid receptor-mediated mechanism. Although both enantiomers have been previously shown to block sodium channels with comparable potencies, only (-)-(1S,2S)-U50,488 has activity at the kappa-opioid receptor (KOR). In the formalin test, intrapaw administration of U50,488 enantiomers as well as lidocaine exhibited significant dose-related attenuation of formalin-induced flinching behavior. The rank order of potency of the drugs tested was (-)-(1S,2S)-U50,488 > (+)-(1R,2R)-U50,488 > lidocaine. The antinociception produced by lower doses of (-)-(1S,2S)-U50,488 was blocked by intrapaw nor-binaltorphimine as well as by antisense knockdown of the KOR. Such pretreatments, however, did not block the antinociception produced by (+)-(1R,2R) U50,488, lidocaine, or higher doses of (-)-(1S,2S)-U50,488. These data suggest that the sodium channel blocking effects of U50,488 and similar kappa-ORAs can contribute to their peripheral antinociceptive actions.

Link to paper: <http://jpet.aspetjournals.org/content/305/3/919.long>

AHZ. 1902;145(5-6):42-43.

Einige Mittelprüfungen an Thieren: Emetin, Tart. emeticus, Calomel.

[Some tests on animals: emetine, Tart. emetic, calomel].

[Article in German]

Jousset M.

Cahiers de Biothérapie. 1965;2(8):251-257.

Expérimentation psycho-pathologique animale selon les lois d'analogie et d'identité homéopathiques par la béserpine (résérpine) et la cicuta virosa.

[Psychopathological animal experimentation under the laws of analogy and identity by homeopathic béserpine (reserpine) and cicuta virosa].

[Article in French]

Julian OA, Launay J.

J Am Inst Homeopath. 1966 May-Jun;59(5):155-64.

Psycho-pathological test on animals by reserpine and Cicuta virosa, according to the homeopathic laws of analogy and identity.

[Julian OA](#), [Launay J](#).

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/5952581>

Biol Zentralbl. 1925;45(1):26-34.

Über die Wirkung extrem verdünnter Substanzen auf Paramecien.

[About the effect of extremely diluted substances on Paramecia].

[Article in German]

Junker H.

Pflügers Archiv für die gesamte Physiologie des Menschen und der Tiere.
1928;219(5/6):647-672.

Die Wirkung extremer Potenzverdünnungen auf Organismen.

[The effects of extreme potency dilutions on organisms].

[Article in German]

Junker H.

Homeopathy. 2013 Jul;102(3):172-8. doi: 10.1016/j.homp.2013.05.004.

Preliminary investigation on ultra high diluted B. vulgaris in experimental urolithiasis.

[Jyothilakshmi V](#), [Thellamudhu G](#), [Kumar A](#), [Khurana A](#), [Nayak D](#), [Kalaiselvi P](#).

Department of Medical Biochemistry, Dr ALM Post Graduate Institute of Basic Medical Sciences, University of Madras, Taramani Campus, Chennai, Tamilnadu 600113, India.

Abstract

PURPOSE: The study focuses on the anti-urolithiasis potential of ultra-diluted homeopathic potency of *Berberis vulgaris* (*B. vulgaris*) root bark, commonly used in homeopathic system to treat renal calculi.

METHODOLOGY: *B. vulgaris* root bark (200c, 20 µl/100 g body weight/day, p.o, for 28 days) was tested in an animal model of urolithiasis. Urolithiasis was induced in male Wistar rats by adding 0.75% ethylene glycol (EG) to drinking water. Urine and serum samples were analyzed for calcium, magnesium, phosphorus, uric acid and creatinine. Enzymic makers of renal damage (alkaline phosphatase, lactate dehydrogenase, leucine aminopeptidase and γ-glutamyl transpeptidase) were assessed in kidney and urine. Renal tissues were analyzed for oxalate content.

RESULTS: Administration of EG to rats increased the levels of the stone-forming constituents calcium, phosphorus and uric acid, in urine. Levels were normalized by *B. vulgaris* treatment. The decrease in the urolithiasis inhibitor magnesium in urine was prevented by treatment with *B. vulgaris*. Serum creatinine levels were largely normalized by *B. vulgaris* treatment. Hyperoxaluria induced renal damage was evident from the decreased activities of tissue marker enzymes and an apparent escalation in their activity in the urine in control animals; this was prevented by *B. vulgaris* treatment.

CONCLUSION: Homeopathic *B. vulgaris* root bark has strong anti-urolithiasis potential at ultra-diluted dose.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/23870376>

Zeitschrift für Klassische Homöopathie. 1989;33(3):112-120.

Wiederentdeckt: ein grundlegendes Manuskript Hahnemanns.

[Rediscovered: A basic Hahnemann manuscript].

[Article in German]

Kaiser D.

English Abstract

A lecture by Samuel Hahnemann on veterinary homoeopathy previously known only by quotations is published in full length for the first time. While former comments refer to the lecture only as a helpful hint the author is discussing it as the principal description of homoeopathy.

Link to abstract/paper: <https://www.thieme-connect.com/ejournals/abstract/10.1055/s-2006-938322>

Asian Pac J Cancer Prev. 2010;11(2):545-51.

Anti-carcinogenic potentials of a plant extract (*Hydrastis canadensis*): I. Evidence from in vivo studies in mice (*Mus musculus*).

[Karmakar SR](#), [Biswas SJ](#), [Khuda-Bukhsh AR](#).

P. G. Deptt. of Zoology, Jhargram Raj College, India.

Abstract

Ethanollic extract of *Hydrastis canadensis* has been tested for its possible anti-cancer potentials against p-dimethylaminoazobenzene (p-DAB) induced hepatocarcinogenesis in mice. Mice were chronically fed p-dimethylaminoazobenzene (p-DAB) and phenobarbital (PB), two hepato-carcinogens for 1, 2, 3 and 4 months, respectively, and were divided into sub-groups: i) fed normal low protein diet (Gr. I, normal control); ii) fed diet mixed with 0.06% p-DAB at a daily dose of 165 mg/kg b.w. per mouse plus 0.05% PB plus 0.06 ml 90% alcohol (vehicle of the crude extract) (Gr. II, carcinogen treated); iii) fed diet mixed with p-DAB and PB at the same daily dose plus crude extract of *Hydrastis canadensis* (Gr. III, drug treated). Several biochemical parameters like acid and alkaline phosphatases, alanine amino-, aspartate amino-, and gamma glutamyl-transferases, lipid peroxidation, reduced glutathione content, lactate dehydrogenase, catalase and glucose-6-phosphate dehydrogenase activities and electron microscopy of liver in different groups of treated and control mice were studied. A critical analysis of results of these studies suggested anti-cancer potentials of the drug suitable for use as a supportive complementary medicine in liver cancer.

Link to abstract/paper:

http://www.apocpcontrol.org/page/apjcp_issues_view.php?sid=Entrez:PubMed&id=pmid:20843149&key=2010.11.2.545

AHZ. 1913;161(11):323-349

Nachprüfung der Cahis'schen Versuche mit den sogenannten 'homöopathischen Akkorden.

[Verification of Cahis'schen experiments with so-called 'homeopathic chords].

[Article in German]

Katz J.

Evid Based Complement Alternat Med. 2011;2011:917541. doi: 10.1155/2011/917541. Epub 2011 Jan 19.

Inflammatory process modulation by homeopathic arnica montana 6CH: The role of individual variation.

[Kawakami AP](#), [Sato C](#), [Cardoso TN](#), [Bonamin LV](#).

Laboratory of Cell and Molecular Biology, Research Center of University Paulista, Avenue José Maria Whitaker, 290, 04057-000 São Paulo, SP, Brazil.

Abstract

The effects of Arnica montana 6cH on the individual modulation of acute inflammation kinetics in rats were evaluated. Adult male Wistar rats were inoculated with 1% carrageenan into the footpad and treated with Arnica montana 6cH, dexamethasone (4.0 mg/kg; positive control) or 5% hydroalcoholic solution (negative control), per os, each 15 minutes, between 30 and 180 minutes after the irritant inoculation. Histopathological and immunohistochemistry procedures were done in order to get a panel of inflammatory positive cells for CD3 (T lymphocytes), CD45RA (B lymphocytes), CD18 (beta 2 integrin), CD163 (ED2 protein), CD54 (ICAM-1), and MAC 387 (monocytes and macrophages). The statistical treatment of data included a posteriori classification of animals from each group (N = 20) in two subgroups presenting spontaneous precocious or late oedema. Animals that presented precocious oedema were less responsive to Arnica montana 6cH in relation to hemodynamic changes. Instead, rats that exhibited late oedema presented less intense oedema (P = .01), lower percentage of mast cell degranulation (P = .0001), and increase in lymphatic vessels diameter (P = .05). The data suggest an individually qualitative adjustment of inflammatory vascular events by Arnica montana 6cH.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3035003/>

Br Homeopath J. 1994;83:202-204.

The use of Arsenicum album 30c to complement conventional treatment of neonatal diarrhoea ('scours') in calves

[S. Kayne](#), [A. Rafferty](#)

Abstract

In a pilot double blind study carried out in Scotland, the effect of supplementing a conventional treatment plan with homeopathic *Arsenicum album* was studied. In the management of neonatal calf scour it appeared that more animals recovered after one day in the group that had received active medicine, than in the placebo group. These results are encouraging.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078505807926>

Midlands Hom Res Group Communications. 1984;11:32-48.

An investigation into the analgesic activity of two homeopathic preparations arnica and hypericum.

Keysell GR, Williamson KL, Tolman BD.

Perspectives in Cytology and Genetics. 1986;5:407-412.

Some Homeopathic Drugs as Radioprotective Agents in X-irradiated Mice.

Khuda-Bukhsh AR.

Berlin J Res Hom. 1991;1(4/5):254-263.

Assessment of cytogenetical damage in X-irradiated mice and their alterations by oral administrations of potentized homeopathic drug, Ginseng-200.

Khuda-Bukhsh AR, Banik S.

Berlin J Res Hom. 1991;1(4/5):264–274.

Alteration of cytogenetical effects by oral administration of a homeopathic drug, *Ruta Graveolens* in mice exposed to sub lethal X-ray irradiation.

Khuda-Bukhsh AR, Maity S.

Proc. Zoological Society, Calcutta. 1992;45(Suppl A):243–248.

Quantitative assessment of sperm head anomaly in X-irradiated mice and the alteration of frequency by the oral administration of a potentized homeopathic drug, Ginseng.

Khuda-Bukhsh AR, Banik S.

Mol Cell Biochem. 2003 Nov;253(1-2):339-45.

Towards understanding molecular mechanisms of action of homeopathic drugs: an overview.

[Khuda-Bukhsh AR.](#)

Department of Zoology, University of Kalyani, Kalyani, West Bengal, India.
arkb@klyuniv.ernet.in

Abstract

The homeopathic mode of treatment often encourages use of drugs at such ultra-low doses and high dilutions that even the physical existence of a single molecule of the original drug substance becomes theoretically impossible. But homeopathy has sustained for over two hundred years despite periodical challenges thrown by scientists and non-believers regarding its scientificity. There has been a spurt of research activities on homeopathy in recent years, at clinical, physical, chemical,

biological and medical levels with acceptable scientific norms and approach. While clinical effects of some homeopathic drugs could be convincingly shown, one of the greatest objections to this science lies in its inability to explain the mechanism of action of the microdoses based on scientific experimentations and proofs. Though many aspects of the mechanism of action still remain unclear, serious efforts have now been made to understand the molecular mechanism(s) of biological responses to the potentized form of homeopathic drugs. In this communication, an overview of some interesting scientific works on homeopathy has been presented with due emphasis on the state of information presently available on several aspects of the molecular mechanism of action of the potentized homeopathic drugs.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/14619985>

CCRH Quarterly Bull. 2006;28(2).

Alterations of cytogenetical effects by the oral administration of a homoeopathic drug, *Ruta graveolens*, in mice exposed to sub-lethal X-irradiation.

Khuda-Bukhsh AR, Maity S.

Perspect Cytol Genet. 2007;13:177-185.

An evidence-based evaluation of efficacy of homeopathic drugs in mice during induced hepatocarcinogenesis.

[Khuda-Bukhsh AR.](#)

Evid Based Complement Alternat Med. 2011,2011:286320. DOI: 10.1093/ecam/nep084.

Modulation of Signal Proteins: A Plausible Mechanism to Explain How a Potentized Drug *Secale Cor 30C* Diluted beyond Avogadro's Limit Combats Skin Papilloma in Mice.

[Khuda-Bukhsh AR](#), [Bhattacharyya SS](#), [Paul S](#), [Dutta S](#), [Boujedaini N](#), [Belon P](#).

Abstract

In homeopathy, ability of ultra-high diluted drugs at or above potency 12C (diluted beyond Avogadro's limit) in ameliorating/curing various diseases is often questioned, particularly because the mechanism of action is not precisely known. We tested the hypothesis if suitable modulations of signal proteins could be one of the possible pathways of action of a highly diluted homeopathic drug, *Secale cornutum 30C* (diluted 10(60) times; *Sec cor 30*). It could successfully combat DMBA + croton oil-induced skin papilloma in mice as evidenced by histological, cytogenetical, immunofluorescence, ELISA and immunoblot findings. Critical analysis of several signal proteins like AhR, PCNA, Akt, Bcl-2, Bcl-xL, NF- κ B and IL-6 and of pro-apoptotic proteins like cytochrome c, Bax, Bad, Apaf, caspase-3 and -9 revealed that *Sec cor 30* suitably modulated their expression levels along with amelioration of skin papilloma. FACS data also suggested an increase of cell population at S and G2 phases and decrease in sub-G1 and G1 phases in carcinogen-treated drug-unfed

mice, but these were found to be near normal in the Sec cor 30-fed mice. There was reduction in genotoxic and DNA damages in bone marrow cells of Sec Cor 30-fed mice, as revealed from cytogenetic and Comet assays. Changes in histological features of skin papilloma were noted. Immunofluorescence studies of AhR and PCNA also suggested reduced expression of these proteins in Sec cor 30-fed mice, thereby showing its anti-cancer potentials against skin papilloma. Furthermore, this study also supports the hypothesis that potentized homeopathic drugs act at gene regulatory level.

Link to paper: <http://europepmc.org/articles/PMC3136355?pdf=render>

Homeopathy. 2009 Oct;98(4):267-79.

Mice as a model for homeopathy research.

[Khuda-Bukhsh AR](#).

Cytogenetics and Molecular Biology Laboratory, Department of Zoology, University of Kalyani, Kalyani 741235, West Bengal, India. prof_arkb@yahoo.co.in

Abstract

Mice (*Mus musculus*) have been used as a model for homeopathy research in relation to cytotoxicity, genotoxicity and carcinogenesis in our laboratory for the last three decades. Initially, anti-radiation activities of several potentized homeopathic drugs were tested against suitable controls by taking into consideration several cytogenetic endpoints. Subsequently, anti-cytotoxic, anti-genotoxic and anti-oxidative stress effects of some homeopathic drugs were tested against several chemical toxic metalloids and metal compounds. Modern techniques including Western blot, immunofluorescence, electron microscopy, UV-spectroscopy, HPLC, FTIR, NMR, RT-PCR etc were deployed to understand the possible mechanisms and pathways of action of potentized homeopathic drugs. We hypothesise that one way by which potentized homeopathic drugs act is through regulatory action on gene expression.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19945679>

Int J High Dilution Res. 2012;11(38):3-18.

Lowland amphibians - recalculation of data on effects of diluted thyroxine

Kiefer P, Lingg G, Endler PC.

Interuniversity College for Health and Development Graz / Castle of Seggau

ABSTRACT

Our previous paper described methodological problems and a generally acceptable pooling method for metamorphosis experiments and application of that method to the results of multicentre experiments performed over the course of two decades (1990 - 2010) on highland amphibians (*Rana temporaria*) treated with a homeopathically prepared high dilution of thyroxine ("30x"). Differences between treatment groups thus calculated were in line with those obtained with other pooling methods:

Thyroxine 30x does slow down metamorphosis in highland amphibians. This follow up paper provides a broader background on metamorphosis physiology and

describes application of the pooling method to experiments with *Rana temporaria* from lowland biotopes both with a moderate dilution of thyroxine ("8x") and with 30x. Analogously prepared water was used for control (water 8x or 30x). Development was, again as above, monitored by documenting the number of animals that had entered the 4-legged stage. Experiments were carried out between 1990 and 2000 by different researchers independently and in blind. As it is well known, metamorphosis can be speeded up by thyroxine 10⁻⁸ mol/l; interestingly, thyroxine 8x may produce a reverse, i.e. inhibiting effect ($p < 0.01$). In contrast to the inhibiting effect of thyroxine 30x on highland larvae (see above), 2-legged lowland larvae did not react to thyroxine 30x ($p > 0.05$). However, an inhibiting effect on lowland larvae was found when animals were treated from the spawn stage on ($p < 0.01$).
Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/526/546>

Münch Med Wschr. 1932;25:986-988.

Untersuchungen über die Grundlagen der Homöopathie.

[Studies on the principles of homeopathy].

[Article in German]

Kisskalt K, Mahnkopf R.

Oekologie und Landbau. 2000;114(2):40-44.

Homöopathie statt Antibiotika: Feldstudie liefert Resultate.

[Homeopathy instead of antibiotics - a field trial provides first results].

[Article in French]

Klocke P, Garbe S, Spranger J, Merck C.

Abstract

Nach gut zwei Jahren konnte in Brodowin (Brandenburg) eine groß angelegte deutsch-schweizerische Feldstudie abgeschlossen werden. An einer Herde von 350 Milchkühen wollten die Tierklinik der FU Berlin und das FiBL testen, ob die Homöopathie in der Behandlung von Euterentzündungen eine taugliche Alternative zu den Antibiotika bieten kann. Die Wirksamkeit der in dieser Studie angewendeten Homöopathika kann unter den gegebenen Betriebsbedingungen in der Mastitistherapie als sehr wahrscheinlich angesehen werden. Es lassen sich im Vergleich zur Antibiose befriedigende bakteriologische Heilungsraten erzielen, die für die Lieferfähigkeit der Milch von vorrangigem Interesse sind. Die insgesamt unbefriedigenden vollständigen Heilerfolge lassen sich durch die Gabe eines homöopathischen Prophylaktikums vor dem Trockenstellen und zur Geburt verbessern, insbesondere bei antibiotischer Therapie. Auch die Kombination aus homöopathischer und antibiotischer Trockenstellprophylaxe führt zu weniger Mastitiden in der Folgelaktation. Dieses Ergebnis erscheint auf den ersten Blick aus Sicht der Biolandwirtschaft nicht befriedigend, bietet aber Anlass zur Diskussion. Offenbar ist die homöopathische Behandlung allein nicht immer in der Lage, eine latente Mastitis vollständig auszuheilen. Die Kombination mit der Antibiose führt möglicherweise zu einer gleichzeitigen exogenen und endogenen Beeinflussung der Euterschleimhaut. Somit scheint es notwendig zu sein, in weiteren

Forschungsprojekten Alternativen zur exogenen Therapie (statt Antibiose) zu konzipieren.

Link to paper: http://orgprints.org/3153/1/Brodo1_Oel.pdf

Homeopathy. 2010 Apr;99(2):90-8.

A randomized controlled trial to compare the use of homeopathy and internal Teat Sealers for the prevention of mastitis in organically farmed dairy cows during the dry period and 100 days post-calving.

[Klocke P](#), [Ivemeyer S](#), [Butler G](#), [Maeschli A](#), [Heil F](#).

Research Institute of Organic Agriculture, CH-5070 Frick, Switzerland.

peter.klocke@fibl.org <peter.klocke@fibl.org>

Abstract

INTRODUCTION: Routine use of antibiotics to prevent mastitis in dairy cows is prohibited by organic farming regulations. Internal Teat Sealers have been proposed as an alternative. We compared two drying-off (DO) supporting measures (Internal Teat Sealer and Homeopathy) to an untreated control group to assess their protective effects against clinical mastitis and intra-mammary infections during dry period of dairy cows.

METHODS: A field trial with 102 dairy cows from 13 Swiss organic dairy farms was conducted. Cows were randomly assigned to one of three groups within a herd. In the Internal Teat Sealer group (ITS; 36 cows) cows were treated with the commercial ORBESEAL (Pfizer) in all four quarters immediately after the last milking. In the Homeopathy group (HDT; 32 cows) the cows were treated per-orally by a herd-specific homeopathic formulation consisting of two remedies in 1:10(6) dilution over 5 days before and after DO. The untreated group received no therapy (U; 34 cows).

RESULTS: For ITS, HDT and U the clinical mastitis incidence rates for the first 100 days post-calving were 11%, 9% and 3%, respectively, and the proportion of normally secreting quarters was (quarter somatic cell count (SCC)

[QSCC]<100,000/ml) 70%, 68%, and 65%, respectively. Power analysis indicates that a proportion of 75% would support the rejection of null hypothesis in the HDT, and 74% in the ITS group against untreated control. Quarters of cows with SCC<200,000/ml at DO showed significantly higher normal secretion in HDT group (odds ratio [OR] 9.69) compared to untreated control, whereas Teat Sealing lead to an OR of 3.09 (not significant, post hoc power 31.3%).

CONCLUSIONS: Under the studied conditions herd-specific homeopathic dry cow therapy was effective in increasing the number of animals with normal milk secretion after subsequent parturition, compared to untreated control. It may be an effective alternative to Teat Sealing, particularly in animals with relatively low SCCs. Further research is required to confirm these results, and under different environmental conditions.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20471611>

Prakt Tierarzt. 1980;5:1-4.

homeopathic drugs showed higher levels of leukocytes than blood from conventionally treated calves.

Link to abstract/paper:

<http://www.cabdirect.org/abstracts/20002215448.html;jsessionid=917CBB2A68BF4A7CBC904103FD6C0727>

J Am Inst Hom. 1971;64:231-233.

Birth Control Pill in Homoeopathy.

Krishnamurty PS.

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:80-2.

Antiulcer activity of ultralow doses of antibodies to histamine under experimental conditions.

[Krylova SG](#), [Zueva EP](#), [Razina TG](#), [Amosova EN](#), [Shilova NV](#), [Dugina YL](#), [Epstein OI](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences, Tomsk.

Abstract

Ultralow doses of antibodies to histamine produced a considerable antiulcer effect in rats with gastric ulcers induced by various factors. Antibodies to histamine markedly decreased aggressiveness of the gastric juice.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949659>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:83-4.

Analgesic and antiinflammatory activity of antibodies to histamine under experimental conditions.

[Krylova SG](#), [Razina TG](#), [Zueva EP](#), [Amosova EN](#), [Shilova NV](#), [Dugina YL](#), [Epstein OI](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences.

Abstract

Ultralow doses of antibodies to histamine in produced an antiproliferative effect on experimental animals with inflammation. Analgesic activity of antibodies to histamine was revealed on the model of acetic acid-induced writhing.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949660>

Indian J Vet Med. 1984;4(2):87-89.

Treatment of bovine papillomatosis with some homeopathic drugs.

Kumar A, Tanwar RK et al.

Indian Journal of Animal Sciences. 2004;74(7),739-740.

Management of post partum anestrus in dairy animals with a homeopathic combination remedy.

[Kumar, H.](#); [Srivastava, S.K.](#); [Yadav, M.C.](#); [Varshney, J.P.](#)

Indian Veterinary Research Institute, Izatnagar (India)

Link to abstract/paper: <http://agris.fao.org/agris-search/search/display.do?f=2005/IN/IN0501a.xml;IN2005000525>

Asian Pac J Cancer Prev. 2007 Jan-Mar;8(1):98-102.

Inhibition of chemically induced carcinogenesis by drugs used in homeopathic medicine.

[Kumar KB](#), [Sunila ES](#), [Kuttan G](#), [Preethi KC](#), [Venugopal CN](#), [Kuttan R](#).

Amala Cancer Research Centre, Amala Nagar, Thrissur, Kerala State, India.

Abstract

Homeopathy is considered as one modality for cancer therapy. However, there are only very few clinical reports on the activity of the drugs, as well as in experimental animals. Presently we have evaluated the inhibitory effects of potentized homeopathic preparations against N'-nitrosodiethylamine (NDEA) induced hepatocellular carcinoma in rats as well as 3-methylcholanthrene-induced sarcomas in mice. We have used Ruta, Hydrastis, Lycopodium and Thuja, which are commonly employed in homeopathy for treating cancer. Administration of NDEA in rats resulted in tumor induction in the liver and elevated marker enzymes such as gamma-glutamyl transpeptidase, glutamate pyruvate transaminase, glutamate oxaloacetate transaminase and alkaline phosphatase in the serum and in liver. Concomitant administration of homeopathic drugs retarded the tumor growth and significantly reduced the elevated marker enzymes level as revealed by morphological, biochemical and histopathological evaluation. Out of the four drugs studied, Ruta 200c showed maximum inhibition of liver tumor development. Ruta 200c and phosphorus 1M were found to reduce the incidence of 3-methylcholanthrene-induced sarcomas and also increase the life span of mice harboring the tumours. These studies demonstrate that homeopathic drugs, at ultra low doses, may be able to decrease tumor induction by carcinogen administration. At present we do not know the mechanisms of action of these drugs useful against carcinogenesis.

Link to paper:

http://www.apocpcontrol.net/paper_file/issue_abs/Volume8_No1/Kuttan%2098-102.pdf

J Sci Res Pl Med. 1979;1:15-16.

Effect of Certain Homoeopathic Medicines on Larval Hatching of *Meloidogyne Incognita* (Kofoid & White) Chitwood.

Kumar R, Sharma RK.

J Res Ind Med Yoga Hom. 1978;13(1):97-100.

Effect of *Caulophyllum* 200 and 10.000 Potencies on the Uterus of Immature Rats.

Kumar S, Prasad S, Chandrasekhar K.

Br Homoeopath J. 1981 Jul;70(3):135–138.

Effects of *Caulophyllum* on the uteri and ovaries of adult rats.

[Sunil Kumar](#), [Anil Kumar Srivastava](#), [K. Chandrasekhar](#)

Abstract

Adult female rats were given the 200th and 10,000th potency of *Caulophyllum* orally on alternate days for ten days. The vehicle used was 90 per cent. alcohol.

The 200th potency brought about a significant increase in ovarian and uterine weight and also in cell height of the endometrium and luminal epithelium. Increased mitotic division was also discernible. Simultaneously the stromal cells became smaller in size and exhibited retardation in mitotic division.

In addition, the 200th potency treated groups showed marked retardation in the maturation of ova, with the number of maturing ova minimized. Increased atresia was noted and a perceptible decrease in the number and diameter of functional corpora lutea. The controls and animals treated with the 10,000th potency of the same drug exhibited only insignificant changes.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078581800336>

CCRH Quaterly Bull. 1998;20(1/2):19-21.

Anti-tetanus activity of *Hypericum perforatum* L.

Kumar S, Singh DM.

Ind J Res Hom. 2008;2(4):10-19.

Ultra dynamised and undynamised dilutions of alloxan at micro-doses influence selective pancreatic beta cell and hormonal profile.

Kumar S, Nayak C.

Abstract

Dynamised and Undynamised preparations of Alloxan 6x, 30x, 200x, and 1000x were examined for its anti-diabetic activities in Alloxan induced diabetes mellitus albino rats. Oral administration of dynamised potencies of Alloxan 6x, 30x, 200x, and

1000x at dose level of 50µl/100 g.b.w. daily for 30 days regularly exhibited slow and steady fall in blood sugar level accompanied with perceptible increase in serum growth hormone (GH) i.e. $p < 0.01$ (less significant) and $p < 0.001$ (significant) respectively when compared to dynamised and Undynamised control as well as Undynamised Alloxan fed groups under identical conditions. Histological and histomorphometric studies also revealed reactivation of Pancreatic β -cells. Dynamised dilutions of Alloxan acts steadily through hypothalamo-hypophysial- pancreatic β -cells axis producing selective reactivation of β -cells at micro-doses, steadily viz $6x < 30x < 200x < 1000x$. The drug may indirectly release Releasing factors (RF) from hypothalamic neurons, stimulating the secretion of growth hormone which in turn triggers optimum insulin secretion from β -cells. The therapeutic action of the test drug in dynamised dilutions at micro dose and relatively high dilutions on pancreatic β -cells confirms the phenomenon of "Potentization" & "Similia Similibus Curentur" and lack of acute and sub-acute toxicity at fairly large dosage may open up new prospects in the treatment of diabetes mellitus and throw light in elucidating the mechanism of action at higher dilutions. It was noticed that the dynamised dilutions of alcohol fed control group is more toxic and lethal to animals than the dynamised and Undynamised dilutions of Alloxan and Undynamised alcohol fed control groups. Furthermore, it was also discernible that blood sugar and growth hormone levels were stabilized even after withdrawal of test drug in its 30x, 200x and 1000x potencies.

Link to abstract/paper:

http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDIQFjAA&url=http%3A%2F%2Fccrindia.org%2Fijrh%2F2%284%29%2F2.pdf&ei=ZvpvUbr8JoOUO9jdgZgC&usg=AFQjCNGrB_f3K_MBRMstrRofmcoNsfeaTw&bvm=bv.45368065,d.ZWU

J Vet Parasitol. 1989;3:125-129.

Therapeutic trials in buffaloes naturally infected with microfilariae of *Sertaria cervi*.

[Kumar V](#), Joshi HC, Kumar M.

Complement Ther Med. 2000 Jun;8(2):76-81.

Efficacy of a potentized homoeopathic drug (*Arsenicum-album-30*) in reducing cytotoxic effects produced by arsenic trioxide in mice: III. Enzymatic changes and recovery of tissue damage in liver.

[Kundu SN](#), [Mitra K](#), [Bukhsh AR](#).

Department of Zoology, Kalyani University, Kalyani, 741235, India.

Abstract

OBJECTIVE: To determine whether the potentized homoeopathic drug *Arsenicum Album-30* can induce enzymatic and some other biochemical changes to repair tissue damage caused by the injection of arsenic trioxide in mice.

DESIGN: Controlled laboratory study. **Methods:** Mice injected with arsenic trioxide and then orally administered the homoeopathic drug were compared with control

animals who either received saline only, or injections of arsenic trioxide, or injections of arsenic trioxide followed by orally administered dilute alcohol. Activities of the enzymes acid and alkaline phosphatases, lipid peroxidation and reduced glutathione, which are used as 'marker' enzymes for cytotoxicity levels, were assessed by standard methods. Histopathological slide preparations of liver were made by routine microtechnique method of tissue sectioning and staining with haematoxylin- eosin for histological examination.

RESULTS: The mice fed homoeopathic drug showed positive results of tissue recovery both in terms of enzymatic and histological changes, compared to controls.

CONCLUSIONS: The homoeopathic drug is capable of preventing or repairing liver damage induced by arsenic trioxide and the positive changes were also confirmed by the activities of the enzymatic markers.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/10859599>

Complement Ther Med. 2000 Sep;8(3):157-65.

Efficacy of a potentized homeopathic drug (Arsenicum-Aalbum-30) in reducing cytotoxic effects produced by arsenic trioxide in mice: IV. Pathological changes, protein profiles, and content of DNA and RNA.

[Kundu SN](#), [Mitra K](#), [Khuda Bukhsh AR](#).

Department of Zoology, Kalyani University, Kalyani, India.

Abstract

OBJECTIVE: To examine if the potentized homeopathic drug Arsenicum Album-30 can help restore the damage produced in protein profiles, DNA and RNA contents in liver and testis as a result of arsenic treatment in mice.

DESIGN: Sets of mice were injected with arsenic trioxide, one set was fed with Ars. Alb-30, another with Alcohol-30 and the final set was fed neither. The gel electrophoretic protein profiles and DNA and RNA contents in these three sets were studied.

METHODS: Protein profiles were studied by SDS-PAGE method; the DNA and RNA contents were assayed by the standard methods through diphenylamine and orcinol reactions respectively.

RESULTS: arsenic trioxide injection produced some pathological conditions, drastic changes (mainly reduction of protein bands) in protein sub-fractions, reduced DNA and RNA contents in both liver and testis; Ars. Alb-30-fed arsenic-intoxicated mice showed revival and restoration in both liver and testis as revealed by gel patterns and quantitative assay of DNA and RNA.

CONCLUSION: Efficacy of the homeopathic drug Ars. Alb-30 in reducing arsenic-induced damage to protein and nucleic acids is substantiated and the mechanism of action of the homeopathic drug through expression of regulatory genes inferred.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/11068345>

Forsch Komplementarmed Klass Naturheilkd. 2003;10(6):309–314.

Inhibition of (-)-propranolol hydrochloride by its enantiomer in white mice.

[Kuzeff RM](#), [Topashka-Ancheva MN](#), [Mecheva, RP](#).

Abstract

Background: This study is based on the hypothesis, that the toxic or physiological effects of an optical isomer may be counteracted or reversed by the administration of a potentized preparation of one of its stereoisomers. In the present study the enantiomer was used.

Methods: 154 ICR conventional mice were used. 77 mice were administered (R)-(+)-propranolol HCl homeopathic potency prior to and during the experiment, and the other 77 were administered indistinguishable placebo. On the day of the experiment the mice were sedated with intraperitoneal Rometar. Once sedated they were injected intraperitoneally with the LD₅₀ dose of (S)-(-)-propranolol HCl.

Results: The end point for statistical analysis was the difference in survival between the placebo and treatment mice. The odds ratio for survival of treatment mice relative to placebo mice was 1.64. The hypothesis of equal survival proportions gave a chi-square of 2.0916 (1 degree of freedom), which has a p-value of 0.1481. The analysis was then adjusted for mouse weight and intraperitoneal (-)-propranolol dosage using a logistic regression (LR) model. The LR treatment odds ratio was 2.017 and the LR treatment chi-square was 2.8864 (1 degree of freedom), which has a p-value of 0.0893. Consequently we accept the null hypothesis of no treatment effect on survival. The odds ratio estimates show that the treatment mice are 2.02 times more likely to survive than placebo mice, but this was not statistically significant with $p = 0.089$. Nine percent more treatment mice survived than placebo mice. The investigators accustomed to handling rodents noted that mouse recovery seemed substantially faster in the treatment mice than in the placebo mice.

Link to abstract/paper:

<http://content.karger.com/ProdukteDB/produkte.asp?doi=10.1159/000075884>

Forsche Komplementarmed Klass Naturheilkd. 2004;11(3):144–149.

Inhibition of (-)-trans-(1S,2S)-U50488 hydrochloride by its enantiomer in white mice—a placebo-controlled, randomized study.

Kuzeff RM, Topashka-Ancheva MN, Mecheva RP.

Abstract

Background: Previous studies have been performed to see if toxicity of optically active compounds may be inhibited by potentized preparations of their enantiomers. The present study is based on the hypothesis that the toxic effects of an optical isomer may be counteracted or reversed by the administration of a potentized preparation of one of its stereoisomers and in particular the enantiomer (patent applied for). **Methods:** The design was prospective, blind, randomized, and placebo-controlled. 210 ICR conventional mice were used. 105 mice were administered a mixture of (+)-U50488 hydrochloride homeopathic potencies prior to and during the experiment, and the other 105 were administered indistinguishable placebo. The first 52 mice were used to establish an LD₅₀ of intraperitoneally administered (-)-U50488 hydrochloride under the conditions of this experiment. The estimated LD₅₀ was 25 mg/kg. The remaining 158 mice were then administered this LD₅₀ of (-)-U50488 HCl intraperitoneally. One mouse from the placebo group was excluded from the analysis because it died immediately after the possibly intravenous injection of (-)-U50488 HCl. **Results:** 67% of homeopathy mice survived compared with 47% of placebo

mice. The end point for statistical analysis was the difference in survival between the placebo and homeopathy mice. The analysis was adjusted for mouse weight using a logistic regression (LR) model. The LR treatment odds ratio for survival of treatment mice relative to placebo mice was 2.301 and the LR treatment chi-square was 6.2030 (1 degree of freedom), which has a p-value of 0.0128. Consequently, we reject the null hypothesis of no treatment effect on survival. Conclusion: We conclude that toxicity of intraperitoneal injection of (-)-U50488 hydrochloride may be inhibited by administration of a mixture of potencies of its enantiomer.

Link to abstract/paper:

<http://content.karger.com/ProdukteDB/produkte.asp?Aktion=ShowAbstract&ArtikelNr=79443&Ausgabe=230293&ProduktNr=224242>

Forsch Komplementarmed Klass Naturheilkd. 2004 Feb;11(1):14-9.

Inhibition of (-)-propranolol hydrochloride by its enantiomer in white mice--a placebo-controlled randomized study.

[Kuzeff RM](#), [Mecheva RP](#), [Topashka-Ancheva MN](#).

Graduate School of Integrative Medicine, Swinburne University of Technology, Melbourne, Australia. kuzeffm@ausdoctors.org

Abstract

BACKGROUND: A previous pilot study was performed to see if toxicity of (S)-(-)-propranolol hydrochloride may be inhibited by a potentized preparation of its enantiomer. The present study is based on the hypothesis that the toxic effects of an optical isomer, may be counteracted or reversed by the administration of a potentized preparation of one of its stereoisomers, and in particular the enantiomer. **METHODS:** 508 ICR conventional mice were used. 254 mice were administered (R)-(+)-propranolol HCl homeopathic potency prior to and during the experiment, and the other 254 were administered indistinguishable placebo. On the day of the experiment mice were anesthetized with intraperitoneal Rometar. Once sedated the mice were administered the LD50 dose of (-)-propranolol HCl intraperitoneally.

RESULTS: The end point for statistical analysis was the difference in survival between the placebo and treatment mice. The odds ratio for survival of treatment mice relative to placebo mice was 1.52. The hypothesis of equal survival proportions gave a chi-square of 5.0429 (1 degree of freedom), which has a p-value of 0.0247. The analysis was then adjusted for mouse weight and intraperitoneal (-)-propranolol dosage using a logistic regression (LR) model. The LR treatment odds ratio was 1.51 and the LR treatment chi-square was 4.8112 (1 degree of freedom), which has a p-value of 0.0283. Consequently, we reject the null hypothesis of no treatment effect on survival. Eleven percent more treatment mice survived than placebo mice.

CONCLUSION: We conclude that the toxicity of intraperitoneal (-)-propranolol HCl, may be counteracted by administration of a potency of its enantiomer, in ICR conventional mice which have survived preceding intraperitoneal Rometar injection, and pre-dosing with (+)-propranolol HCl homeopathic potency.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15004443>

Homeopathy. 2009 Apr;98(2):83-7. doi: 10.1016/j.homp.2009.02.002.

Isopathic versus enantiomeric inhibition of U-50488 HCl toxicity--experimental studies.

[Kuzeff RM](#), [Topashka-Ancheva M](#), [Metcheva R](#).

National Institute of Integrative Medicine, Melbourne, Australia.

kuzeffm@ausdoctors.net

Abstract

BACKGROUND: Previous studies have investigated toxicity inhibition of optically active compounds by potentized preparations of their enantiomers. It was hypothesised that inhibition of toxicity may be stereospecific. This paper presents 2 studies investigating stereoisomer potencies in terms of their ability to counteract toxicity of the (-) stereoisomer. The stereoisomers used were (-)-trans-(1S,2S)-U-50488 HCl and (+)-trans-(1R,2R)-U-50488 HCl.

MATERIALS & METHODS: Designs were prospective, blind, randomised, intention-to-treat and compared the efficacy of 2 indistinguishable treatments. The outcome was the difference in survival. Potency 'chords' consisting of 4th, 12th and 30th approximately centesimal dilutions were prepared, representing concentrations of 1.08×10^{-10} M. One study compared inhibition of (-)-U-50488 toxicity injected ip at the estimated LD50 into male ICR mice, treated with a potency chord of the same stereoisomer, with control ('isopathic' study). The other study compared inhibition of toxicity by potency chords made from the stereoisomers (+)-U-50488 and (-)-U-50488 ('enantiomer' study), Treatments were administered orally on 11 occasions: twice before and nine times after ip injections.

RESULTS: The isopathic study did not yield a significant result. In the enantiomer study, comparison of isopathy with enantiomer potency treatment showed a highly significant difference odds ratio 1.97 (95% CI: 1.23-3.14).

CONCLUSION: We conclude that enantiomeric potencies are superior to identically produced isopathic potencies, in inhibiting toxicity of (-)-U-50488 HCl. Homeopathic inhibition of toxicity may be stereospecific.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19358960>

Berlin J Res Hom. 1991 Jun;1(3):169, (Congress Report Poster).

Effect of Bryonia on Experimental Arthritis in Rats.

Labrecque G., Guilleminot J.

Abstract

In this study, 35 male rats suffering from arthritis were treated with placebo or 4X, 4C or 9C potencies of homeopathic Bryonia for 15 days and assessed at various stages using grip strength body weight as assessment criteria. At the end of the treatment period, all of the Bryonia potencies had improved the condition when compared to placebo, with Bryonia 4C providing the best outcomes.

Int J High Dilution Res. 2013;12(44):156-157.

Dairy Goats endoparasites infection and effects of commercial homeopathy medicine.

Lacerda EB, de Almeida Rezende Machado NV, de Souza GH, Bonamin L, Bernardi MM, da Silva SLM.

Absrtact

Background: The gastrointestinal helminths parasitism may limit the production because it represents the greatest economic loss in goat (Mandonnet, 2005). The most common treatment against the worms currently is the use of antiparasitic class drugs. However, indiscriminate use of these substances led to the selection of resistant populations of helminths for all anthelmintics groups, increase the cost of production, leaves toxic residues in animals and environment. These facts lead to the new demands, in which homeopathy is inserted (Macleod, 1991). Among the advantages, one can minimize the use of pesticides, reduce the risk of the resistance to conventional antiparasitic substances, prolongs active life of the active principles without pharmacological residues in milk or goat meat.

Aims: The study evaluated the parasitic load of endoparasites by FEC in a goat herd with the use of commercial homeopathic product CapriOvi Verm100 of RealH manufacturer.

Methodology: Sixteen (16) young female goats (*Capra aegagrus hircus*) 7 months old were assessed weekly to Fecal Eggs Count (FEC) determined in triplicate McMaster Egg Counting Technique during two months. All dairy animals had predominance of Alpine and Saanen breeds. All animals received albendazole anthelmintic drenching before treatment and routine handling of the goats was maintained for all animals to mimic the conditions in the field. They were housed in the same pen with wood sawdust bedding. The mixed natural infection was controlled by exclusive access to the paddock star grass with time restrictions. Breeding season occurred at 8 months age. The animals were distributed in a randomized block design by the average of four weekly FECs prior to treatment. The commercial product CapriOvi Verm100 RealH (Brazil) was individually orally administered (10g/animal/day), 6 days a week, during 2 months.0

Results: The effect of the product show to reduce the animals OPGs by the half part after a month of use during early-mid pregnancy. A two-way ANOVA showed that the treatment affected the results [$F_{1/103} = 33.05$, $p < 0.0001$] as the time does [$F_{1/103} = 3.35$, $p = 0.003$]; there was no interactions between the factors [$F_{1/103} = 0.1.41$, $p = 0.21$]. Using the same pen for the animals treated and control provided a challenging situation for greater than when treating all animals collectively. Long-term tests should be performed to determine its effects and its long-term strategic interaction with conventional medicines because it seems to increase the safety of the animals to infection. Homeopathy treatment kept the FEC levels similar to those found initially; differently, control group presented increase in FEC values in function of time.

Conclusion: The product CapriOvi Verm100 RealH shown to reduce the FEC in goats during a month of use in the early and middle third of gestation nulliparous dairy goats.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/667/678>

Homeopathy. 2012 Jul;101(3):171-174.

Anxiolytic effect of homeopathic preparation of Pulsatilla nigricans in Swiss albino mice.

[Lakshmipathy Prabhu R](#), [Ruckmani A](#), [Venkatesan D](#), [Madhusudhanan N](#), [Pavithra R](#).

Department of Pharmacology, Chettinad Hospitals and Research Institute, Kelambakkam, Chennai, Tamilnadu 603103, India.

Abstract

BACKGROUND: The homeopathic preparation of Pulsatilla nigricans is used in the treatment of anxiety related disorders. Though in clinical use for many years, the anxiolytic activity of Pulsatilla nigricans (Puls) has not been evaluated experimentally. Hence the present study was conducted in Swiss albino mice to evaluate the anxiolytic activity of Puls and compare its activity with the standard anxiolytic drug, diazepam.

METHODS: Twenty four mice were divided into 4 groups of 6 animals each, control, standard and two test groups. The control group was treated Ethyl alcohol 10 ml/kg. The standard group received Diazepam, 1 mg/kg. Puls 3x and 6x solutions were given at the dose of 10 ml/kg to the test groups. All animals were given the test and control treatments orally for 15 days. The anxiolytic effect was tested on days 1, 8 and 15 using the Elevated Plus Maze (EPM) and Open Field Test (OFT).

RESULTS: Both diazepam and Puls showed significant anxiolytic activity in EPM and OFT test compared to control. The total number of entries and time spent in open arm in EPM was increased by both diazepam and Puls, the effect of 3x dilution of Puls was greater than diazepam. In the OFT the number of squares crossed, rearing and assisted rearings decreased with both diazepam and Puls compared to control and the anxiolytic effect of diazepam was greater than Puls. The anxiolytic effect is greater for the 3x dilution than 6x dilution of Puls.

CONCLUSION: The study showed an anxiolytic effect of homeopathic preparation of Pulsatilla nigricans comparable to that found with a standard drug.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22818235>

Ann Homéop Fr. 1965;7(7):492-500.

Approche d'une démonstration expérimentale du principe de similitude.

[An experimental demonstration approach of the principle of similarity].

[Article in French]

Lallouette P.

Ann Homéop Fr. 1967;9(7):415-424.

Contribution à l'étude d'une pharmacologie homéopathique.

[Contribution to the study of a homeopathic pharmacology].

[Article in French]

Lallouette P, Boyer R.

Ann Homéop Fr. 1975;17(4):409-414.

Essai de démonstration expérimentale du principe de similitude.

[Experimental demonstration of the principle of similarity].

[Article in French]

Lallouette P, Boyer R, Martin C.

J Ethnobiol Ethnomed. 2007 Feb 26;3:11.

Ethnoveterinary medicines used for ruminants in British Columbia, Canada.

[Lans C](#), [Turner N](#), [Khan T](#), [Brauer G](#), [Boepple W](#).

School of Environmental Studies, University of Victoria, British Columbia, V8W 3P5, Canada. trini@uvic.ca

Abstract

BACKGROUND: The use of medicinal plants is an option for livestock farmers who are not allowed to use allopathic drugs under certified organic programs or cannot afford to use allopathic drugs for minor health problems of livestock.

METHODS: In 2003 we conducted semi-structured interviews with 60 participants obtained using a purposive sample. Medicinal plants are used to treat a range of conditions. A draft manual prepared from the data was then evaluated by participants at a participatory workshop.

RESULTS: There are 128 plants used for ruminant health and diets, representing several plant families. The following plants are used for abscesses: *Berberis aquifolium*/*Mahonia aquifolium*, *Echinacea purpurea*, *Symphytum officinale*, *Bovista pila*, *Bovista plumbea*, *Achillea millefolium* and *Usnea longissima*. *Curcuma longa* L., *Salix scouleriana* and *Salix lucida* are used for caprine arthritis and caprine arthritis encephalitis. *Euphrasia officinalis* and *Matricaria chamomilla* are used for eye problems. Wounds and injuries are treated with *Bovista* spp., *Usnea longissima*, *Calendula officinalis*, *Arnica* sp., *Malva* sp., *Prunella vulgaris*, *Echinacea purpurea*, *Berberis aquifolium*/*Mahonia aquifolium*, *Achillea millefolium*, *Capsella bursa-pastoris*, *Hypericum perforatum*, *Lavandula officinalis*, *Symphytum officinale* and *Curcuma longa*. *Syzygium aromaticum* and *Pseudotsuga menziesii* are used for coccidiosis. The following plants are used for diarrhea and scours: *Plantago major*, *Calendula officinalis*, *Urtica dioica*, *Symphytum officinale*, *Pinus ponderosa*, *Potentilla pacifica*, *Althaea officinalis*, *Anethum graveolens*, *Salix alba* and *Ulmus fulva*. Mastitis is treated with *Achillea millefolium*, *Arctium lappa*, *Salix alba*, *Teucrium scorodonia* and *Galium aparine*. *Anethum graveolens* and *Rubus* sp., are given for increased milk production. *Taraxacum officinale*, *Zea mays*, and *Symphytum officinale* are used for udder edema. Ketosis is treated with *Gaultheria shallon*, *Vaccinium* sp., and *Symphytum officinale*. *Hedera helix* and *Alchemilla vulgaris* are fed for retained placenta.

CONCLUSION: Some of the plants showing high levels of validity were *Hedera helix* for retained placenta and *Euphrasia officinalis* for eye problems. Plants with high validity for wounds and injuries included *Hypericum perforatum*, *Malva parviflora* and *Prunella vulgaris*. Treatments with high validity against endoparasites included those with *Juniperus communis* and *Pinus ponderosa*. Anxiety and pain are well treated with *Melissa officinalis* and *Nepeta caesarea*.

Link to paper: <http://www.ethnobiomed.com/content/3/1/11>

Thérapie. 1955;10:625-638.

Mobilisation de l'Arsenic fixé chez le cobaye sous l'influence de doses infinitésimales d'arsenate de sodium.

[Mobilization of Arsenic set in guinea pigs under the influence of infinitesimal doses of sodium arsenate].

[Article in French]

Lapp C, Wurmser L, Ney J.

Thérapie. 1958;13:438-450.

Mobilisation du Bismuth fixé chez le cobaye sous l'influence de doses infinitésimales d'un sel de bismuth.

[Mobilization of Bismuth set in guinea pigs under the influence of infinitesimal doses of sodium Bismuth].

Lapp C, Wurmser L, Krautele N.

Cahiers de Biothérapie. 1985;88:71–74.

Mise en evidence de l'effet Protecteur de differentes dilutions de mercurius corrosivus.

[Getting evidence of the protective effect of different dilutions of Mercurius corrosivus].

[Article in French]

Larue F, Cal JC, Tetau M, Buisard AM, Guillemain J, Cambar J.

Homéopathie Française. 1985;73:375-380.

Influence du facteur dilution sur l'effect protecteur de Mercurius corrosivus vis-à-vis de la toxicité induite par le chlorure mercurique chez la souris.

[Influence of dilution factor on protective effect of Mercurius cor vis-à-vis the toxicity induced by mercuric chloride in mice].

[Article in French]

Larue F, Cal JC, Guillemain J, Cambar J.

Homéopathie Française. 1986;74:275–281.

Influence de la durée de prétraitement sur l'effect de mercurius corrosivus vis-à-vis de la toxicité induite par le chlorure mercurique chez la souris.

[Influence of the duration of the effect of pretreatment on mercurius corrosivus vis-à-vis the toxicity induced by mercuric chloride in mice].

[Article in French]

Larue F, Cal JC, Guillemain J, Cambar J.

Bulletin du Groupe d'Etude des Rythmes Biologiques. 1986;18:8–9.

Variations saisonnières et circadiennes de l'efficacité du prétraitement par *Mercurius corrosivus* 15CH vis-à-vis de la toxicité induite par le chlorure mercurique.

[Circadian and seasonal variations of the effectiveness of the pretreatment by *Mercurius corrosivus* 15CH vis-à-vis the toxicity induced by mercuric chloride].

[Article in French]

Larue F, Cal JC, Guillemain J, Cambar J.

Néphrologie. 1987;6:86.

Influence du prétraitement de dilutions infinitésimales de *Mercurius corrosivus* sur la mortalité induite par le chlorure mercurique.

[Influence of pretreatment high dilutions of *Mercurius corrosivus* on mortality induced by mercuric chloride].

[Article in French]

Larue F, Cal JC, Dorian C, Guillemain J, Cambar J.

Food Chem Toxicol. 2012 Dec;50(12):4412-4420. doi: 10.1016/j.fct.2012.09.002. Epub 2012 Sep 12.

The protective effect of Canova homeopathic medicine in cyclophosphamide-treated non-human primates.

[Leal MF](#), [Antunes LM](#), [Lamarão MF](#), [da Silva CE](#), [da Silva ID](#), [Assumpção PP](#), [Andrade EF](#), [Rezende AP](#), [Imbeloni AA](#), [Muniz JA](#), [Pinto GR](#), [Smith Mde A](#), [Burbano RR](#).

Disciplina de Genética, Departamento de Morfologia e Genética, Universidade Federal de São Paulo, São Paulo 04023-900, SP, Brazil. mariana.morf@epm.br

Abstract

BACKGROUND: Canova activates macrophages and indirectly induces lymphocyte proliferation. Here we evaluated the effects of Canova in cyclophosphamide-treated non-human primates.

METHODS: Twelve *Cebus apella* were evaluated. Four animals were treated with Canova only. Eight animals were treated with two doses of cyclophosphamide (50 mg/kg) and four of these animals received Canova. Body weight, biochemistry and hematologic analyses were performed for 40 days. Micronucleus and comet assays were performed for the evaluation of DNA damage.

RESULTS: We observed that cyclophosphamide induced abnormal WBC count in all animals. However, the group treated with cyclophosphamide plus Canova presented a higher leukocyte count than that which received only cyclophosphamide.

Cyclophosphamide induced micronucleus and DNA damage in all animals. The frequency of these alterations was significantly lower in the Canova group than in the group without this medicine.

CONCLUSIONS: Our results demonstrated that Canova treatment minimizes cyclophosphamide myelotoxicity in *C. apella*.

Link to paper:

<http://www.canovado brasil.com.br/uploads/study/The%20protective%20effect%20of%20Canova%20homeopathic%20medicine%20in%20cyclophosphamide-treated%20non-human%20primates-1354279833.pdf>

Kleintierpraxis. 1984;29:203-208.

Reduzierung der Endometritisgefahr bei Hündinnen nach Nidationsverhütung mit Östradiolbenzoat durch Sepia- und Pulsatillaextrakte.

[Reduction of endometritis risk in bitches after prevention of nidation with estradiol benzoate using extracts from Sepia and Pulsatilla].

[Article in German]

Lepple FJ.

Homoeopathic Links. 2010;23(3):177–179.

Homeopathic Management of a Greyhound with Addison's Disease.

[Levy, J.](#)

Abstract

This is a case report on a greyhound dog with Addison's disease (hypoadrenocorticism). A sequence of three remedies over four years' time - *Belladonna*, *Calcarea carbonica*, and *Lachesis* - has not only improved his individual symptoms, but has dramatically raised his general level of health in spite of the ongoing, presumably incurable, condition.

Link to abstract/paper: <https://www.thieme-connect.com/ejournals/abstract/10.1055/s-0030-1250196>

ScientificWorldJournal. 2008 Apr 20;8:446-50.

Treatment of highland frogs from the two-legged stage with homeopathically prepared thyroxin (10-11 - 10-21).

[Lingg G](#), [Endler PC](#), [Frass M](#), [Lothaller H](#).

Interuniversity College for Health and Development Graz/Castle of Seggau, Austria.

Abstract

The influence of moderately diluted, agitated, i.e., homeopathically prepared, thyroxin solutions (10-11 - 10-21, final concentration in the basin water 0.6 10-15 - 0.6 10-25 parts by weight after the first application) on metamorphosis in highland *Rana temporaria* from the two-legged stage was studied. In accordance with the homeopathic idea of effects of specially prepared dilutions being inverse to those of their mother substances, animals were treated either with thyroxin 10-11 - 10-21 or analogously prepared blank solution (water). Development was monitored by documenting the number of animals that had entered the four-legged stage. It has

been found that animals treated with the thyroxin solutions metamorphosed more slowly than the control animals, i.e., the effect of the homeopathically prepared thyroxin was opposed to the usual effect of molecular thyroxin. The number of test animals that reached the four-legged stage at defined points in time was smaller (2-13.5%) in the group treated with homeopathically prepared thyroxin at the points in time, compared to control. The results in this study sustain the previous multiresearcher findings that show that diluted homeopathically prepared thyroxin is able to slow down metamorphosis of *R. temporaria*.

Link to paper:

[https://www.google.co.uk/search?q=Treatment+of+highland+frogs+from+the+two-legged+stage+with+homeopathically+prepared+thyroxin+\(10-11+-+10-21\).&ie=utf-8&oe=utf-8&aq=t&rls=org.mozilla:en-GB:official&client=firefox-a](https://www.google.co.uk/search?q=Treatment+of+highland+frogs+from+the+two-legged+stage+with+homeopathically+prepared+thyroxin+(10-11+-+10-21).&ie=utf-8&oe=utf-8&aq=t&rls=org.mozilla:en-GB:official&client=firefox-a)

Int J High Dilution Res. 2011;10(36):196-197.

Recalculation of data from 1990 to 2010 on the effects of highly diluted thyroxine on the metamorphosis of highland amphibians.

[Gerhard Lingg](#), [P.C. Endler](#)

Abstract

Experiments on amphibian metamorphosis can vary considerably in duration. The authors had set themselves the task of defining a generally applicable pooling method for metamorphosis experiments III. Normalization with respect to time was done on the assumption that differences in speed of metamorphosis attributable to treatment would override differences in duration between experiments. The problem of artificial differences in variability when comparing and pooling data from several experiments was approached by normalization with respect to time based on the development of *both* the test and the control animals. The range from 0% to 100% over which the fraction of four-legged animals progresses in the course of an experiment is divided into 10°c-intervals and mapped onto a corresponding relative scale. Each measurement is then assigned to the point on the 10%-scale to which it is closest, in this way each reference point is assigned a value giving the number or percentage of four-legged animals at that point. These values are aggregated over all experiments within the test- and control-group. The results of experiments performed over the course of two decades (1990 - 2010) on highland *Rana temporaria* treated with a homeopathically prepared high dilution of thyroxine (30x) are presented in full detail based on this normalization method(IJ). It was found that differences between treatment groups thus calculated were in line with those obtained with other pooling methods [2]. Thyroxine 30x does slow down metamorphosis in inert highland amphibians. This was observed by 5 researchers in 20 sub-experiments, and it seems to be the most reliable bio-assay found in amphibian research on homeopathy so far². When experiments were performed with highland animals pretreated by hyperstimulation with molecular thyroxine, slowing down of metamorphosis was again observed (by 3 of 4 researchers) in most of 10 sub-experiments.

Link to abstract/paper:

http://www.researchgate.net/publication/215697721_Recalculation_of_data_from_1990_to_2010_on_the_effects_of_highly_diluted_thyroxine_on_the_metamorphosis_of_highland_amphibians

Int J High Dilution Res. 2011;10(37):311:324.

Highland amphibians – Recalculation of data from 1990 to 2010 on the effects of extremely diluted thyroxine.

Lingg G, Endler PC.

Abstract

Experiments on amphibian metamorphosis can vary considerably in duration. The authors had set themselves the task of defining a generally applicable pooling method for metamorphosis experiments. The problem of artificial differences in variability when comparing and pooling data from several experiments was approached by normalization with respect to time based on the development of both test and the control animals. The range from 0% to 100% over which the fraction of four-legged animals progresses in the course of an experiment is divided into 10%-intervals and the 10% reference points are mapped on a corresponding scale. Each measurement is then assigned to the point on the time scale to which it is closest. In this way each reference point is assigned a value giving the number or percentage of four-legged animals at that point on the scale. Subsequent analysis was then based on the individual values for the test and control groups that corresponded to the joint 10% reference point. Normalization respect to time was done on the assumption that differences in metamorphosis speed attributable to treatment would override differences in duration between experiments. The results of experiments performed over the course of two decades (1990 - 2010) on highland *Rana temporaria* treated with a homeopathically prepared high dilution of thyroxine ("30x") are presented in full detail based on this normalization method. Differences found between treatment groups thus calculated were in line with those obtained with other pooling methods. Thyroxine 30x does slow down metamorphosis in inert highland amphibians. This was observed by five researchers in 20 sub-experiments, and it seems to be the most reliable bio-assay found in amphibian research on homeopathy so far. When experiments were performed with highland animals pretreated by hyperstimulation with molecular thyroxine, slowing down of metamorphosis was again observed (by three out of four researchers) in most of 10 sub-experiments.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/429/541>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:140-2.

Antibodies to delta sleep-inducing peptide in ultralow doses: effect on the behavior of male mice with anxiety and depressive syndrome.

[Lipina TV](#), [Mikhnevich NV](#), [Epstein OI](#).

Institute of Cytology and Genetics, Siberian Division of the Russian Academy of Sciences, Novosibirsk.

Abstract

We studied the effect of antibodies to delta sleep-inducing peptide in ultralow doses on the behavior of male mice with anxiety and depressive syndrome resulting from competitive interactions. The behavior of animals was studied in the elevated plus-

maze, partition, and forced swimming tests. The preparation produced a strong anxiolytic effect, which was especially pronounced in animals with anxiety and depressive syndrome.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949681>

Homeopathy. 2006 Oct;95(4):223-8.

Effects of homeopathic medications *Eupatorium perfoliatum* and *Arsenicum album* on parasitemia of *Plasmodium berghei*-infected mice.

[Lira-Salazar G](#), [Marines-Montiel E](#), [Torres-Monzón J](#), [Hernández-Hernández F](#), [Salas-Benito JS](#).

Especialización en Terapéutica Homeopática, Mexico.

Abstract

Malaria is one of the most important parasitic diseases in the world and a major public health problem because of emerging drug-resistant strains of *Plasmodium*. A number of synthetic and natural compounds are now being analysed to develop more effective antimalarial drugs. We investigated the effect of homeopathic preparations of *Eupatorium perfoliatum* and *Arsenicum album* on parasitemia using a rodent malaria model. We found significant inhibitory effect on parasite multiplication with both medications with a level of 60% for *Eupatorium perfoliatum* at a 30 CH potency. *Arsenicum album* 0/6 gave 70% inhibition but this was less stable than *Eupatorium perfoliatum*. The number of schizonts was higher in animals treated with homeopathic medications. Although the mechanism of action is unknown, these agents would be good candidates as alternative or complementary medications in the treatment of malaria.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17015193>

Homeopathy. 2007 Jan;96(1):49-51.

Homeopathic treatment for infertility in a prize Nelore bull.

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Abstract

Treatments for infertility in bulls are not described in homeopathic literature. A few treatments, such as changing the protein content of the diet, giving extra minerals, etc have been proposed. This case report describes homeopathic treatment for infertility in a prize bull. A Nelore bull, considered infertile for 3 years, was treated with homeopathic *Pulsatilla nigricans* 200 CH. Decreased total sperm defects, increased sperm motility and a very impressive increased number of doses of semen produced were observed. The bull relapsed after treatment was withdrawn, but again responded when it was resumed. Since only one animal was observed one cannot assume that the observed changes were due only to this treatment. Further studies may establish the real benefits of a homeopathic medicine in bull infertility.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17227749>

Acta Vet Scand Suppl. 2001;95:47-50.

Alternative therapy of animals--homeopathy and other alternative methods of therapy.

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Abstract

Alternative therapy of animals is described, in the meaning of alternatives to veterinary therapy traditionally accepted by veterinary faculties and schools and included in their curricula. Alternative therapy composes of different disciplines, of which homeopathy is emphasised in this presentation. Information is given on the use and interest of such therapy among veterinarians and animal owners. Homeopathy as other alternative therapies, may offer great advances, if they induce any effect. Some of the disciplines are based on a scientifically accepted documentation. Others, and homeopathy in particular, are missing such a documentation of effect. The justification of including alternative therapy in treating animals is discussed. Research in alternative therapy of animals is greatly needed, in particular to evaluate therapeutic methods which are in extensive use without any documented effect. An ongoing research project in Norway on the effect of homeopathic treatment of mastitis in cows is shortly presented.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/11995390>

Int J High Dilution Res. 2013;12(44):141-142.

Effect of different homeopathic medicines on histopathology of mice infected by *Trypanosoma cruzi*.

Lopes CR, Falkowski GJS, Brustolin CF, Massini PF, Moreira NM, Braga CF, Ferreira EC, Aleixo DL, de Araújo SM.

Abstract

Background: Chagas' disease is the third most prevalent parasitic disease in the world [1], and has been presenting new cases in European and Asian countries [2]. A drug with satisfactory healing potential is still lacking [3]. Homeopathic medicines can contribute with its dealing.

Aim: To evaluate the effect of different homeopathic medicines on skeletal muscle, heart and intestine parasitism of mice infected by *Trypanosoma cruzi*.

Material and Methods: In a blind, controlled and randomized study, we used 16 (4/group) Swiss male mice, divided into: CG - control group treated with preparation vehicle (7% hydroalcoholic solution), LyG - treated with *Lycopodium clavatum* 1:1026 group, CaG- treated with *Causticum* 1:1026 group and CoG - treated *Conium maculatum* 1:1026 group. Medicines were prepared according to Brazilian Homeopathic Pharmacopoeia. The drug was offered 48 hours before infection and 48, 96 and 144 hours after inoculation, diluted in water (1mL/100mL) ad libitum for 16 hours. The selection of drugs was based in behavioral, social, mental and

physiological characteristics of mice. Lynx Expert System Software and Homeopathic Materia Medica were used, considering the keywords: company, fear, shyness, small amount of water, diminished vision, hearing and heightened sense of smell. Animals were intraperitoneally infected with 1400 blood trypomastigotes of *T. cruzi* Y strain. On 12th day of infection, samples of heart, intestine and skeletal muscle were collected and 4 histological sections from each organ/animal were prepared. Amastigotes nests and amastigotes/nest on 40 microscopic fields/section were counted. Data were compared with Statistica 8.0 software. Project approved by Animal Ethics Committee/UEM.

Results and discussion: Highly diluted *Lycopodium clavatum* and *Causticum* 1:1026 induced a significant decrease on amastigote nests and amastigotes per nest in heart, skeletal and smooth muscle. The murine infection by *T. cruzi* is an inflammatory disease and its morbidity is directly related to parasite load (5).

Emphasizing that survival of animals treated with Ly was significantly higher than in CG (6), in this study, decrease of nests/amastigotes as effect of repertorized drugs to healthy animals showed benefits for the animals when infected, deserving further research to improve dose and treatment regimen.

Eight weeks old Swiss male mice, inoculated with 1,400 blood trypomastigotes of *T. cruzi* Y strain. GC (Control): Animals infected and treated with hydroalcoholic solution 7% group. LYG: Animals infected and treated with homeopathic medicine *Lycopodium clavatum* 13CH group. CaG: Animals infected and treated with homeopathic medicine *Causticum* 13CH group. CoG: Animals infected and treated with homeopathic medicine *Conium maculatum* 13CH group. Animals were euthanised on 12th day of infection (dpi). Values expressed as mean and standard deviation. Different letters in the column means $p < 0.05$.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/647/671>

Micron. 2006;37(3):277-87. Epub 2005 Sep 19.

Phagocytosis, endosomal/lysosomal system and other cellular aspects of macrophage activation by Canova medication.

[Lopes L](#), [Godoy LM](#), [de Oliveira CC](#), [Gabardo J](#), [Schadeck RJ](#), [de Freitas Buchi D](#).

Laboratório de Estudos de Células Inflamatórias e Neoplásicas, Departamento de Biologia Celular, Universidade Federal do Paraná, Brazil.

Abstract

Canova is a homeopathic medication with immunomodulatory properties, recommended for diseases where the immune system is depressed. Our research aims to study the activation of mice peritoneal macrophages when submitted to in vivo and in vitro Canova treatment. Morphological parameters and acid phosphatase activity were analyzed using light and transmission electron microscopy. Differential interference contrast microscopy, including serial time acquisition in living cells, was also performed. The results demonstrated a greater spreading ability in Canova treated macrophages, a higher phagocytic activity of non-infective microorganisms (*Saccharomyces cerevisiae* and *Trypanosoma cruzi* epimastigotes) and a tendency to lower the phagocytic activity of the infective microorganisms *T. cruzi*

trypomastigotes and *Leishmania amazonensis*, when compared with control cells. Acid phosphatase activity was analyzed and showed that Canova treatment stimulates an increase of the endosomal/lysosomal system. Treated macrophages that do or do not interact with yeast present a higher number of acid phosphatase marked vesicles compared to control cells. In contrast, the activity of tartrate resistant acid phosphatase (TRAP), is lower in Canova treated macrophages. The net results demonstrate that Canova medication is an effective stimulator of macrophage activity.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/16364649>

Micron. 2006 Apr;37(3):277–287.

Phagocytosis, endosomal/lysosomal system and other cellular aspects of macrophage activation by Canova medication.

[Luciana Lopes](#), [Lyris M.F. Godoy](#), [Carolina C. de Oliveira](#), [Juarez Gabardo](#), [Ruth J.G. Schadeck](#), [Dorly de Freitas Buchi](#).

Laboratório de Estudos de Células Inflamatórias e Neoplásicas, Departamento de Biologia Celular, Universidade Federal do Paraná, Brazil.

Abstract

Canova is a homeopathic medication with immunomodulatory properties, recommended for diseases where the immune system is depressed. Our research aims to study the activation of mice peritoneal macrophages when submitted to in vivo and in vitro Canova treatment. Morphological parameters and acid phosphatase activity were analyzed using light and transmission electron microscopy. Differential interference contrast microscopy, including serial time acquisition in living cells, was also performed. The results demonstrated a greater spreading ability in Canova treated macrophages, a higher phagocytic activity of non-infective microorganisms (*Saccharomyces cerevisiae* and *Trypanosoma cruzi* epimastigotes) and a tendency to lower the phagocytic activity of the infective microorganisms *T. cruzi* trypomastigotes and *Leishmania amazonensis*, when compared with control cells. Acid phosphatase activity was analyzed and showed that Canova treatment stimulates an increase of the endosomal/lysosomal system. Treated macrophages that do or do not interact with yeast present a higher number of acid phosphatase marked vesicles compared to control cells. In contrast, the activity of tartrate resistant acid phosphatase (TRAP), is lower in Canova treated macrophages. The net results demonstrate that Canova medication is an effective stimulator of macrophage activity.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0968432805001290>

Deutsche Tierärztliche Wochenschrift. 1992;99(3):99-106.

Homöopathie - Eine wirksame und risikoarme Alternative zur konventionellen Pharmakotherapie? Teil 2: Nachweis der Wirksamkeit beim Tier.

[Homeopathy: an effective and risk-free alternative to conventional chemotherapy? 2. Detection of effectiveness in animals].

[Article in German]
Löscher W

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/1576951?dopt=Abstract>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:20-2.

Efficiency of ultralow doses of antibodies to S100 protein and delta sleep-inducing peptide in rats with anxious depression.

[Loskutova LV](#), [Shtark MB](#), [Epstein OI](#).

Institute of Molecular Biology and Biophysics, Siberian Division of the Russian Academy of Medical Sciences, Novosibirsk.

Abstract

We studied the effects of single peroral treatment with antibodies against S100 protein and delta sleep-inducing peptide in ultralow doses on behavioral characteristics of rats with anxious depression produced by acute stress (unavoidable electrical shock). Stress-produced behavioral changes and anxiolytic activity of antibodies were determined using the elevated plus-maze, open field, and tail suspension tests. High efficiency of the mixture of antibodies against S100 protein and delta sleep-inducing peptide was observed in all tests. Anxiolytic activity of anti-S100 antibodies (although less pronounced than that of the mixture of antibodies) was revealed in the elevated plus-maze and tail suspension test.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949637>

Homeopathy. 2012 Jul;101(3):159-64.

The therapeutic effect of *Tarentula cubensis* extract (Theranekron®) in foot-and-mouth disease in cattle: a randomised trial in an endemic setting.

[Lotfollahzadeh S](#), [Alizadeh MR](#), [Mohri M](#), [Mokhber Dezfouli MR](#).

Department of Clinical Sciences, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran. [samadzadeh@ut.ac.ir](mailto:samadlzadeh@ut.ac.ir)

Abstract

BACKGROUND: Foot-and-mouth disease (FMD) is a contagious viral disease of ruminant animals. Eradication of disease in western countries is by slaughter of infected and in contact animals but this is not possible in endemic countries. There is no standard treatment for FMD in endemic countries, but anti-inflammatory drugs and mild disinfectant and protective dressing to inflamed areas to prevent secondary infection is recommended.

METHOD: A randomised controlled clinical trial of a homeopathic preparation of *Tarentula cubensis* (Theranekron®) was conducted during an outbreak of FMD in cattle in Iran. A single subcutaneous injection of Theranekron® was used as sole treatment in 50 infected animals (treatment group). The control group comprised 15 infected animals treated with standard medication including: daily injection of flunixin

meglumine and oxytetracycline and daily dressing of lesions with 4% sodium carbonate. Systemic and local signs were recorded over 14 days.

RESULTS: Rectal temperature in treatment group subsided to normal range within 1 day of homeopathic treatment, and was significantly lower in test group than in control group on several successive days ($P < 0.05$). Healing of inflamed mucosal areas and appetite score of the treatment was significantly better than control during first 3 days of treatment ($P < 0.05$).

CONCLUSION: It appears that Theranekron® is effective for treatment of systemic and local signs of FMD-infected cattle. Further research is justified.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22818233>

Zentralbl Gyn. 1927;12:763-768.

Über eine bisher unbekannte Wirkung der Sekalepräparate.

[About a previously unknown effect of secale preparation].

[Article in German]

Louros N, Scheyer HE.

Complement Ther Med. 1999 Dec;7(4):225-30.

Effect of Traumeel S, a homeopathic formulation, on blood-induced inflammation in rats.

[Lussignoli S](#), [Bertani S](#), [Metelmann H](#), [Bellavite P](#), [Conforti A](#).

Istituto di Farmacologia, Università di Verona, Policlinico B. Roma, Italy.

Abstract

OBJECTIVE: To evaluate the activity of Traumeel S (TRS), a homeopathic formulation containing *Arnica montana* and other plant extracts and minerals on an animal model of traumatic inflammation.

DESIGN: TRS and individual components thereof were administered locally to rats 1 h before hind-paw injection with 0.1 ml of homologous blood and the development of oedema was measured over five hours. In each experiment, a control group was treated with saline.

MAIN OUTCOME MEASURES: Paw volume of each rat was measured before oedema and 1, 3, and 5 h after oedema induction. Serum levels of IL-6 were determined at hour 5.

RESULTS: The decrease of paw oedema, associated with the process of healing, was more rapid in rats treated with TRS ($P < 0.05$ after 3 h and $P < 0.01$ after 5 h). Similar effects were also induced by separate injection of most, but not all, TRS ingredients. The efficacy of complete mixture of TRS was higher than the combination of a selection of active components. TRS also reduced oedema development when administered after the oedema induction. The therapeutic effect of TRS was associated with a significant decrease of systemic interleukin-6 production.

CONCLUSION: TRS seems to act by speeding up the healing process instead of blocking the development of oedema from the beginning. Moreover, its effect cannot

be considered as the 'sum' of its active components and probably a synergistic interaction occurs to determine the final effect.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/10709306>

Homeopathy. 2004 Apr;93(2):84-7.

Anti-inflammatory activity of Arnica montana 6cH: preclinical study in animals.
[Macêdo SB](#), [Ferreira LR](#), [Perazzo FF](#), [Carvalho JC](#).

Faculdade de Odontologia, Pontificia Universidade Católica de Brasília, Brasília, Brazil.

Abstract

The anti-inflammatory effect of Arnica montana 6cH was evaluated using acute and chronic inflammation models. In the acute, model, carrageenin-induced rat paw oedema, the group treated with Arnica montana 6cH showed 30% inhibition compared to control ($P < 0.05$). Treatment with Arnica 6cH, 30 min prior to carrageenin, did not produce any inhibition of the inflammatory process. In the chronic model, Nystatin-induced oedema, the group treated 3 days previously with Arnica montana 6cH had reduced inflammation 6 h after the inflammatory agent was applied ($P < 0.05$). When treatment was given 6 h after Nystatin treatment, there was no significant inhibitory effect. In a model based on histamine-induced increase of vascular permeability, pretreatment with Arnica montana 6cH blocked the action of histamine in increasing vascular permeability.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15139092>

Br Homeopath J. 1990 Jul;79(3):132-134.

A study model with initial findings using sepia 200c given prophylactically to prevent anoestrus problems in the dairy cow.

[W.L. Mackie](#), [A.V. Williamson](#), [W.J. Crawford](#), [B. Rennie](#)

Abstract

Overall reproductive performance and associated periparturient disorders were monitored in a herd of British Friesian cross dairy cows from September 1987 to August 1988. Pregnancy diagnosis and cyclical status of the herd was determined by palpation of the ovaries per rectum. A total of 49 (110) cows were randomly treated with *Sepia* 200c either on day 14(19) or 21 days (30) postpartum. Statistical analysis of the results was based on the differences between the control and combined *Sepia*-treated groups. Although there were significant differences in the proportion of heifers calving in each group, there was no significant difference in periparturient disorders or during the pre-service period. However, in the *Sepia* Group that held a lower proportion of heifers, a significant difference was found in the conception rate to 1st service (47%), the percentage of cows in calf (90%) and total culling rate (10%) compared to the Control Group (26%, 72% and 28% respectively). A reduction (non significant) was found between the *Sepia* and Control services to conception (0.2), calving to conception interval (5 days) and calving index (2 days). The results of this pilot study appear to demonstrate a difference in effect between

the *Sepia*-treated Group and Control Group. The study has been extended to treat a larger number of dairy cows to examine the reproducibility of these results.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/PIIS0007078505803308/abstract>

Integr Cancer Ther. 2006 Dec;5(4):362-72.

Effects of homeopathic preparations on human prostate cancer growth in cellular and animal models.

[MacLaughlin BW](#), [Gutsmuths B](#), [Pretner E](#), [Jonas WB](#), [Ives J](#), [Kulawardane DV](#), [Amri H](#).

Department of Physiology and Biophysics, Georgetown University Medical Center, Washington, DC 20007, USA.

Abstract

The use of dietary supplements for various ailments enjoys unprecedented popularity. As part of this trend, *Sabal serrulata* (saw palmetto) constitutes the complementary treatment of choice with regard to prostate health. In homeopathy, *Sabal serrulata* is commonly prescribed for prostate problems ranging from benign prostatic hyperplasia to prostate cancer. The authors' work assessed the antiproliferative effects of homeopathic preparations of *Sabal serrulata*, *Thuja occidentalis*, and *Conium maculatum*, in vivo, on nude mouse xenografts, and in vitro, on PC-3 and DU-145 human prostate cancer as well as MDA-MB-231 human breast cancer cell lines. Treatment with *Sabal serrulata* in vitro resulted in a 33% decrease of PC-3 cell proliferation at 72 hours and a 23% reduction of DU-145 cell proliferation at 24 hours ($P < .01$). The difference in reduction is likely due to the specific doubling time of each cell line. No effect was observed on MDA-MB-231 human breast cancer cells. *Thuja occidentalis* and *Conium maculatum* did not have any effect on human prostate cancer cell proliferation. In vivo, prostate tumor xenograft size was significantly reduced in *Sabal serrulata*-treated mice compared to untreated controls ($P = .012$). No effect was observed on breast tumor growth. Our study clearly demonstrates a biologic response to homeopathic treatment as manifested by cell proliferation and tumor growth. This biologic effect was (i) significantly stronger to *Sabal serrulata* than to controls and (ii) specific to human prostate cancer. *Sabal serrulata* should thus be further investigated as a specific homeopathic remedy for prostate pathology.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17101766>

Psychopharmacology (Berl). 2010 Jul;210(4):533-45. Epub 2010 Apr 20.

Dose-effect study of *Gelsemium sempervirens* in high dilutions on anxiety-related responses in mice.

[Magnani P](#), [Conforti A](#), [Zanolin E](#), [Marzotto M](#), [Bellavite P](#).

Dipartimento di Patologia, Università di Verona, Strada Le Grazie, 37134, Verona, Italy.

Abstract

INTRODUCTION: This study was designed to investigate the putative anxiolytic-like activity of ultra-low doses of *Gelsemium sempervirens* (*G. sempervirens*), produced according to the homeopathic pharmacopeia.

METHODS: Five different centesimal (C) dilutions of *G. sempervirens* (4C, 5C, 7C, 9C and 30C), the drug buspirone (5 mg/kg) and solvent vehicle were delivered intraperitoneally to groups of ICR-CD1 mice over a period of 9 days. The behavioral effects were assessed in the open-field (OF) and light-dark (LD) tests in blind and randomized fashion.

RESULTS: Most *G. sempervirens* dilutions did not affect the total distance traveled in the OF (only the 5C had an almost significant stimulatory effect on this parameter), indicating that the medicine caused no sedation effects or unspecific changes in locomotor activity. In the same test, buspirone induced a slight but statistically significant decrease in locomotion. *G. sempervirens* showed little stimulatory activity on the time spent and distance traveled in the central zone of the OF, but this effect was not statistically significant. In the LD test, *G. sempervirens* increased the % time spent in the light compartment, an indicator of anxiolytic-like activity, with a statistically significant effect using the 5C, 9C and 30C dilutions. These effects were comparable to those of buspirone. The number of transitions between the compartments of the LD test markedly increased with *G. sempervirens* 5C, 9C and 30C dilutions.

CONCLUSION: The overall pattern of results provides evidence that *G. sempervirens* acts on the emotional reactivity of mice, and that its anxiolytic-like effects are apparent, with a non-linear relationship, even at high dilutions.

Link to paper: http://www.paolobellavite.it/files/238_10-gelsemiumpsychopubblicato.pdf

Cahiers de Biotherapie. 1986;13(91):69-76.

Evaluation en double aveugle de l'effet d'une cure homéopathique collective sur la morbidité et les qualités bouchères des veaux à l'engrais.

[Double-blind assessment of the effect of a homeopathic cure on the collective morbidity and meat qualities of veal calves].

[Article in French]

Mahé F , Roger C.

Cahiers de Biotherapie. 1986;22(91):81-84.

Comparison en aveugle d'un traitement homéopathique et d'un placebo dans un cas collectif d'ulcération chronique chez le lapin.

[Comparison of blind homeopathic treatment and a placebo in a collective case of chronic ulceration in rabbits].

[Article in French]

[Mahé F.](#)

Int J Vet Hom. 1986;1(2):15-22.

Double-blind pathogenic trial of the homeopathic remedy *Arsenicum album* in the rabbit.

[Mahé F.](#)

Int J Vet Hom. 1987;2(1):13-20.

Evaluation of the effect of a collective homeopathic cure on the morbidity and the butchery qualities in calves being fattened.

[Mahé F.](#)

Homéopathie Française. 1987;75:237-251.

Essai pathogénique en double aveugle d'un grand remède homéopathique chez le lapin: *Arsenicum album*.

[Double-blind pathogenic trial of the homeopathic remedy *Arsenicum album* in the rabbit].

[Article in French]

[Mahé, F.](#)

Br Homeopath J. 1988;77(1):30-33.

Homeopathic cancer considerations.

Male RR, Rodgers P.

CCRH Quaterly Bull. 1996;18(3/4):15-16.

High potency homeopathic medicines in experimental oncology.

Maliekal TP.

Br Homeopath J. 1997;86(2):90-91.

Antineoplastic effects of 4 homeopathic medicines.

Maliekal TP.

Abstract

The present work is concerned with the study of the antitumour activities of the 4 homeopathic medicines *Kali muriaticum*, *Phytolacca decandra*, *Hydrastis canadensis* and *Zincum metallicum* in murine models. The experiments showed that the administration of *Zincum met* 200x considerably increased the life span of the tumour-bearing mice.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078597801238>

BMC Complement Altern Med. 2003 Oct 22;3(1):7.

Ameliorating effect of microdoses of a potentized homeopathic drug, Arsenicum Album, on arsenic-induced toxicity in mice.

[Mallick P](#), [Mallick JC](#), [Guha B](#), [Khuda-Bukhsh AR](#).

Department of Zoology, University of Kalyani, Kalyani-741235, WB, India.
palash_mallick@yahoo.com

Abstract

BACKGROUND: Arsenic in groundwater and its accumulation in plants and animals have assumed a menacing proportion in a large part of West Bengal, India and adjoining areas of Bangladesh. Because of the tremendous magnitude of the problem, there seems to be no way to tackle the problem overnight. Efforts to provide arsenic free water to the millions of people living in these dreaded zones are being made, but are awfully inadequate. In our quest for finding out an easy, safe and affordable means to combat this problem, a homeopathic drug, Arsenicum Album-30, appears to yield promising results in mice. The relative efficacies of two micro doses of this drug, namely, Arsenicum Album-30 and Arsenicum Album-200, in combating arsenic toxicity have been determined in the present study on the basis of some accepted biochemical protocols.

METHODS: Mice were divided into different sets of control (both positive and negative) and treated series (As-intoxicated, As-intoxicated plus drug-fed). Alanine amino transferase (ALT) and aspartate amino transferase (AST) activities and reduced glutathione (GSH) level in liver and blood were analyzed in the different series of mice at six different fixation intervals.

RESULTS: Both Arsenicum Album-30 and Arsenicum Album-200 ameliorated arsenic-induced toxicity to a considerable extent as compared to various controls.

CONCLUSIONS: The results lend further support to our earlier views that microdoses of potentized Arsenicum Album are capable of combating arsenic intoxication in mice, and thus are strong candidates for possible use in human subjects in arsenic contaminated areas under medical supervision.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC521186/pdf/1472-6882-3-7.pdf>

Rev Med Vet. 1988;139:790-793.

Comparaison d'un traitement homéopathique et d'un placebo dans un cas sévère de toux de porcherie.

[Comparison of a homeopathic treatment and placebo in a severe case of pig cough].

[Article in French]

Marie P, Mahé F.

Br Homoeopath J. 1993 Jul;82(3):191.

Animal experiments – a few facts.

Marc B.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078505800262>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:57-59.

Hypotensive activity of ultralow doses of antibodies to factors involved in the regulation of vascular tone.

[Markel' AL](#), [Kudryashova DR](#), [Martyushev AV](#), [Epstein OI](#), [Shtark MB](#).

Institute of Cytology and Genetics, Siberian Division of the Russian Academy of Sciences, Novosibirsk.

Abstract

Hypotensive activity of ultralow doses of antibodies to some endogenous substances involved in the regulation of vascular tone was studied on NISAG rats with hereditary stress-induced arterial hypertension. It was found that antibodies to angiotensin II and its receptor in ultralow doses markedly reduced systolic blood pressure, which was reproducible after repeated treatment. The course of peroral treatment with antibodies to endothelin and endothelial NO synthase in ultralow doses did not decrease systolic blood pressure.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949651>

Mediterranean Journal of Economics, Agriculture and Environment. 2012;11(4 Sup):42-45.

Efficiency and costs of homeopathy and phytotherapy in an organic dairy farm.

[Andrea Martini](#), [Roberto Polidori](#), [Giangiacomo Lorenzini](#), [Claudia Lotti](#), [Anne Whittaker](#)

Abstract

The EU regulation for organic farming explicitly promotes the use of homeopathy and phytotherapy. The aim of the present study was to investigate both the efficiency and the costs of these methods. The assessment was performed in an organic dairy farm where the animals are normally treated by homeopathy and phytotherapy even if, sometimes, conventional medicines have to be used (integrative medicine). In comparison to the remaining permissible treatments, homeopathy was the preferable form of treatment to cure ailments. Homeopathy and phytotherapy can be used to treat, with a positive outcome, the majority of diseases that occur in a dairy cattle farm. The costs incurred using the homeopathic and phytotherapeutic treatments were very low in comparison with the conventional treatments.

Link to abstract/paper: <http://dialnet.unirioja.es/servlet/articulo?codigo=4140788>

Int J High Dilution Res. 2007 Apr-Jun;6(19):16-19.

Tratamento de Mastite Subclínica por meio de Suplementação Mineral Homeopática da Dieta de Vacas Leiteiras em Lactação – Estudo de Caso. [Treatment of subclinical mastitis through the mineral homeopathic supplement in the diet of lactating milking cows: case study].

[Article in Portuguese]

Martins CR, Vieira AC, Gazim ZC, Massambani C.

Abstract

The present work results from experimental research conducted in a dairy establishment in the city of Perobal, Paraná. It was tested a homeopathic treatment in 32 animals with symptoms of subclinical mastitis detected previously by the California Mastitis Test (CMT). The remedies were prepared according to the Hahnemannian method for the decimal scale and divided in 4 groups according to their pathogenetic action: Group A (Phytolacca D30, Urtica ureus D3, Asa foetida D6); Group B (Phytolacca D12, Magnesium fluoricum D12, Kalium muriaticum D6); Group C (Hepar sulphur D200, Magnesium fluoricum D200, Streptococcinum D200, Staphylococcinum D200); Group D (Urtica ureus D30, Lachesis D12, Pulsatilla D30). They were administered in the dosage of 300g per day per animal during 90 days. It could be verified that subclinical mastitis, as predicted by indirect cellularity, decreased from 44,5% to 3,9%, a statistically significant ($p < 0.05$) decrease, attributed to the treatment.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/41/35>

Homeopathy. 2012 Jan;101(1):57-67.

Effects of Ignatia amara in mouse behavioural models.

[Marzotto M](#), [Conforti A](#), [Magnani P](#), [Zanolini ME](#), [Bellavite P](#).

Department of Pathology and Diagnostics, University of Verona (I), Italy.

Abstract

BACKGROUND: Ignatia amara (Ignatia), a remedy made from the *Strychnos ignatii* seeds, is used for anxiety-related symptoms, but consistent evidence of its activity in reproducible experimental models is lacking. An investigation was performed in order to assess on mice, by means of emotional response models, the activity of homeopathic Ignatia dilutions/dynamizations.

METHODS: Groups of 8 mice of the CD1 albino strain were treated intraperitoneally for 9 days with 0.3ml of five centesimal (C) dilutions/dynamizations of Ignatia (4C, 5C, 7C, 9C and 30C). Control mice were treated with the same hydroalcoholic (0.3%) solution used to dilute the medicines. Diazepam (1mg/kg) was the positive reference drug. Validated test models for locomotion and emotional response, the Open-Field (OF) and the Light-Dark (LD) tests, were employed. Five replications of the same protocol were carried out, in a randomised way using coded drugs/controls.

RESULTS: In the OF the general locomotion of mice was slightly decreased by Ignatia 4C, but not by Ignatia 5C, 7C, 9C and 30C, indicating the absence of unspecific motor impairment or sedation by these dilutions/dynamizations. Ignatia and diazepam seemed to decrease the number of urine spots released in the OF during 10min, with borderline significance ($P = 0.083$). In the LD the tested medicine

showed anxiolytic-like activity (increase of time spent and distance travelled in the lit area), though to a lesser extent than diazepam. The highest and most significant difference with untreated controls ($P < 0.01$) was observed with the 9C dilution/dynamization. Among the 5 replication experiments, the best drug effects were obtained where the baseline anxiety of mice was higher.

CONCLUSIONS: Homeopathic Ignatia dilutions/dynamizations (peak at 9C) modify some emotion-related symptoms in laboratory mice without affecting locomotion.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22226316>

Indian Veterinary Journal. 1994;71(6):590-592.

Therapeutic trials with Podophyllum (a homeopathic medicine) in clinical cases of prolapse of vagina in buffaloes.

Mata MM, Chugh SK, et al.

Abstract

Therapeutic trials were conducted with Podophyllum, a homeopathic medicine, in clinical cases of prolapse of vagina in buffaloes. Twelve out of 16 buffaloes (75%) recovered successfully with Podophyllum-200 in an average treatment period of 7,25 days. This is perhaps the first report of treatment of this condition with Podophyllum. Full course of the treatment involves very low cost.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=258

Homeopathy. 2007 Jan;96(1):27-34.

Outcomes from homeopathic prescribing in veterinary practice: a prospective, research-targeted, pilot study.

[Mathie RT](#), [Hansen L](#), [Elliott MF](#), [Hoare J](#).

Faculty of Homeopathy and British Homeopathic Association, Hahnemann House, 29 Park Street West, Luton LU1 3BE, UK. rmathie@trusthomeopathy.org

Abstract

BACKGROUND AND AIMS: Targeted research development in veterinary homeopathy is properly informed by the systematic collection and analysis of relevant clinical data obtained by its practitioners. We organised a pilot data collection study, in which 8 Faculty of Homeopathy veterinarians collected practice-based clinical and outcomes data over a 6-month period.

METHODS: A specifically designed Excel spreadsheet enabled recording of consecutive clinical appointments under the following headings: date; identity of patient and owner (anonymised); age, sex and species of patient; medical condition/complaint treated; whether confirmed diagnosis, chronic or acute, new or follow-up case; owner-assessed outcome (7-point Likert scale: -3 to +3) compared with first appointment; homeopathic medicine/s prescribed; other medication/s for the condition/complaint. Spreadsheets were submitted monthly by e-mail to the project organisers for data checking, synthesis and analysis.

RESULTS: Practitioners submitted data regularly and punctually, and most data cells were completed. 767 individual patients were treated (547 dogs, 155 cats, 50 horses, 5 rabbits, 4 guinea-pigs, 2 birds, 2 goats, 1 cow, and 1 tortoise). Outcome from two or more homeopathic appointments per patient condition was obtained in 539 cases (79.8% showing improvement, 6.1% deterioration, 11.7% no change; outcome not recorded in 2.4% of follow-ups). Strongly positive outcomes (scores of +2 or +3) were achieved in: arthritis and epilepsy in dogs and, in smaller numbers, in atopic dermatitis, gingivitis and hyperthyroidism in cats.

CONCLUSIONS: Systematic recording of data by veterinarians in clinical practice is feasible and capable of informing future research in veterinary homeopathy. A refined version of the spreadsheet can be used in larger-scale research-targeted veterinary data collection.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17227745>

Vet Rec. 2010 Feb 20;166(8):234-8.

Homeopathic prescribing for chronic conditions in equine veterinary practice in the UK.

[Mathie RT](#), [Baitson ES](#), [Hansen L](#), [Elliott MF](#), [Hoare J](#).

Faculty of Homeopathy, Hahnemann House, 29 Park Street West, Luton LU1 3BE.
rmathie@britishhomeopathic.org

Abstract

Twelve Faculty of Homeopathy veterinarians recorded data systematically at 777 consecutive homeopathic appointments for horses over a period of 12 months. A spreadsheet enabled the recording of information, which included the date of appointment; horse and owner identity (anonymised); sex of horse; main medical problem treated; whether the condition was chronic or acute; whether the appointment was new or a follow-up; owner-assessed clinical outcome on a seven-point scale, ranging from -3 to +3, compared with the first appointment; homeopathic medicine(s) prescribed; and whether any conventional or other complementary/alternative medicine (CAM) was being used concurrently to treat the condition. Data from 289 horses comprised a total of 305 individual conditions identified as chronic in nature, of which 234 had a follow-up assessment. At the final appointment for chronic cases during the study period, 4.3 per cent were receiving conventional medication and 17.1 per cent were being given another CAM treatment in addition to homeopathy. The eight chronic conditions most frequently treated with homeopathy were: arthritis, headshaking, laminitis, chronic obstructive pulmonary disease, sweet itch, dermatitis, sarcoidosis and Cushing's syndrome.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20173108>

Homeopathy. 2010 Oct;99(4):243-8.

Homeopathic prescribing for chronic conditions in feline and canine veterinary practice.

[Mathie RT](#), [Baitson ES](#), [Hansen L](#), [Elliott MF](#), [Hoare J](#).

British Homeopathic Association, Luton, UK. rmathie@britishhomeopathic.org

Abstract

INTRODUCTION: The peer-review literature contains no controlled clinical research of homeopathy in cats and very little in dogs.

MAIN OBJECTIVE: To collect clinical outcomes data systematically from individualised homeopathic treatment of cats and dogs that would help to inform controlled research in feline and canine homeopathy.

METHODS: Twenty-one homeopathic veterinary surgeons recorded data systematically from consecutive feline and canine patients over a 12-month period. Records included: date; patient and owner identity (anonymised); medical problem treated; whether new or follow-up (FU) appointment; chronic or acute condition; owner-assessed clinical outcome (7-point scale, range -3 to +3) compared with first appointment.

RESULTS: Data from 400 cats comprised a total of 372 individual chronic problems, of which 270 had FU assessment. Data from 1504 dogs comprised a total of 1408 individual chronic problems, of which 1070 had FU assessment. In both species, 22% of FUs in chronic cases received conventional medicines concurrently. In cats, 117 different chronic medical conditions in total were treated with homeopathy. Five of those conditions included ≥ 20 cases, in which owner-reported outcomes (in decreasing rank order of frequency) were: dermatitis (69.6% patients with +2 or +3 outcome, 0% patients with -2 or -3 outcome); renal failure (57.1%, 14.3%); overgrooming (57.1%, 7.2%); arthritis (80.0%, 0%); hyperthyroidism (66.7%, 0%). In dogs, of 301 different chronic medical conditions treated in total, those most commonly recorded (≥ 20 cases) were: dermatitis (66.2% with +2 or +3 outcome, 5.4% with -2 or -3 outcome); arthritis (80.2%, 0.8%); pyoderma (75.8%, 0%); colitis (85.2%, 0%); fear (31.6%, 0%); epilepsy (63.6%, 4.5%); otitis externa (72.7%, 0%); diarrhoea (68.2%, 0%); urinary incontinence (73.7%, 0%); aggression (57.1%, 0%); spondylosis (81.0%, 0%); lymphoma (40.0%, 6.7%).

CONCLUSIONS: A programme of controlled research in veterinary homeopathy for these feline and canine conditions is clearly indicated.

Link to paper:

http://www.facultyofhomeopathy.org/export/sites/faculty_site/media/facts_about_homeopathy/PUBLISHED_PAPER_xcats_dogsx.pdf

Homeopathy. 2012 Oct;101(4):196-203. doi: 10.1016/j.homp.2012.05.009.

Randomised controlled trials of veterinary homeopathy: Characterising the peer-reviewed research literature for systematic review.

[Mathie RT](#), [Hacke D](#), [Clausen J](#).

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Abstract

INTRODUCTION: Systematic review of the research evidence in veterinary homeopathy has never previously been carried out. This paper presents the search methods, together with categorised lists of retrieved records, that enable us to

identify the literature that is acceptable for future systematic review of randomised controlled trials (RCTs) in veterinary homeopathy.

METHODS: All randomised and controlled trials of homeopathic intervention (prophylaxis and/or treatment of disease, in any species except man) were appraised according to pre-specified criteria. The following databases were systematically searched from their inception up to and including March 2011: AMED; Carstens-Stiftung Homeopathic Veterinary Clinical Research (HomVetCR) database; CINAHL; Cochrane Central Register of Controlled Trials; Embase; Hom-Inform; LILACS; PubMed; Science Citation Index; Scopus.

RESULTS: One hundred and fifty records were retrieved; 38 satisfied the acceptance criteria (substantive report of a clinical treatment or prophylaxis trial in veterinary homeopathic medicine randomised and controlled and published in a peer-reviewed journal), and were thus eligible for future planned systematic review. Approximately half of the rejected records were theses. Seven species and 27 different species-specific medical conditions were represented in the 38 papers. Similar numbers of papers reported trials of treatment and prophylaxis (n=21 and n=17 respectively) and were controlled against placebo or other than placebo (n=18, n=20 respectively). Most research focused on non-individualised homeopathy (n=35 papers) compared with individualised homeopathy (n=3).

CONCLUSION: The results provide a complete and clarified view of the RCT literature in veterinary homeopathy. We will systematically review the 38 substantive peer-reviewed journal articles under the main headings: treatment trials; prophylaxis trials.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/23089214>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

**Uso de Medicamento Homeopático como Suporte no Retorno Anestésico.
[The Use of Homeopathic Medicine as Support of Anesthesia Return].**

[Article in Portuguese]

Matsuhara KL, Goloubeff B.

English Abstract

Veratrum album 6CH was used during the post anesthesia period of 12 dogs and cats submitted to different anesthetic protocols aiming to the best recovery of the anaesthetized animal. All animals had been considered healthy and the procedures taken were not life threatening. The repertorization of an anaesthetized animal more important symptoms were characteristic of the homeopathic medicine Veratrum album. Each animal received 4 drops of Veratrum album 6CH after the procedure and has its rectal temperature measured every 10 minutes for one hour. All received fluid therapy and none external heating. This medication was effective in speeding the recovery on the majority of them on an average of 38 minutes versus 56 minutes, respectively (0,9759 of positive correlation), as well as the hypothermia was lower (1,08°C and 1,48°C on an average) than in the control group.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/219/240>

Biol Tier. 1993;10(1):4-12.

Feldversuch zur Bestandsbehandlung bei erhöhten Milchzellzahlen mit Nosoden.

[Field test of herd treatment with nosodes on elevated milk cell counts].

[Article in German]

May T, Reinhart E.

Abstract

In einem Milchkuhbestand von durchschnittlich etwa 280 Tieren sollte in einem Feldversuch die Wirkung einer homöopathischen Bestandsbehandlung auf die erhöhte Milchzellzahl geprüft werden. Nach verschiedenen Abänderungen ergab sich als bestes Behandlungsschema die monatliche Verabreichung von Staphylococcus-Injeel forte, Streptococcus haemolyticus-Injeel forte, Engystol ad us. vet. und Belladonna-Homaccord ad us. vet. über das Trinkwasser.

Mit dieser Behandlung gelang es, die stark erhöhten Zellzahlen in der Sammelmilch auf Werte von mittlerweile knapp über 400 000 pro ml zu stabilisieren. Im Verlauf des Feldversuchs ging die Häufigkeit klinischer Mastitiden deutlich zurück. Die Milchleistung stieg im Versuchsjahr gegenüber dem Vorjahr um durchschnittlich 700 kg pro Tier an. Da auch die auftretenden klinischen Mastitiden homöopathisch behandelt werden, konnte der Einsatz von Antibiotika drastisch reduziert werden.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=133

Biol Tier. 1997;14(1):20-27.

Feldstudie zur prophylaktischen Bestandsbehandlung von Absatzferkeln gegen Coli-Enterotoxämie.

[Field study for prophylactic treatment of piglets against coli enterotoxemia].

[Article in German]

May T, Reinhart E.

Abstract

In einem Ferkelerzeugerbetrieb sollte geprüft werden, ob unter Einsatz von homöopathischen Arzneimitteln auf Bestandesebene die Zahl der Ferkelverluste nach dem Absetzen, bedingt vor allem durch Coli-Enterotoxämie, auf ein akzeptables Maß gesenkt werden kann. Nach unterschiedlichen Behandlungsschemata wurden ein Probiotikum sowie die Präparate Nux vomica-Homaccord ad us. vet., Veratum-Homaccord ad us. vet. und Atropinum compositum ad us. vet. eingesetzt. Die Applikation erfolgte über das Trinkwasser. Als optimale Vorgehensweise erwies sich in dieser Untersuchung die Anwendung von Nux vomica-Homaccord vom 8. Bis zum 13. Tag nach dem Absetzen sowie von Veratum-Homaccord und Atropinum compositum vom 10. Bis zum 15. Tag. Die Verlustquoten lagen bei drei Ferkeldurchgängen mit zusammen über 700 Ferkeln in allen Durchgängen bei unter 1,5%.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=69

Homeopathy. 2007 Apr;96(2):113-9.

Hypothesis: do homeopathic medicines exert their action in humans and animals via the vomeronasal system?

[McGuigan M.](#)

moiramcguigan@aol.com

Abstract

There is significant debate on the nature of the active therapeutic ingredient in homeopathic medicines and whether the effect of homeopathic medicines is exerted locally. This paper accepts that there is an active therapeutic ingredient in homeopathic medicines that acts pharmacologically in the body and proposes a possible receptor site. The vomeronasal organ (Jacobson's organ) is the receptor site for the detection of non-odorant molecules, eg pheromones, in reptiles, amphibians and mammals. The organ forms the main part of a chemoreceptor system known as the vomeronasal system. This paper proposes that it is this system that constitutes the receptor for homeopathic medicines in both animal and human subjects.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17437939>

Prev Vet Med. 2012 Apr 1;104(1-2):1-14. doi: 10.1016/j.prevetmed.2011.10.012. Epub 2011 Dec 6.

A systematic review-meta-analysis of primary research investigating the effect of selected alternative treatments on gastrointestinal nematodes in sheep under field conditions.

[Mederos A](#), [Waddell L](#), [Sánchez J](#), [Kelton D](#), [Peregrine AS](#), [Menzies P](#), [VanLeeuwen J](#), [Rajić A](#).

National Research Institute for Agriculture, Uruguay. Ruta 5 km 386, Tacuarembó 45000, Uruguay. amederos@inia.org.uy

Abstract

Selected alternative treatments for preventing or controlling gastrointestinal nematodes (GIN) in sheep under field conditions were evaluated using a systematic review-meta-analysis methodology. Forty-three publications reporting 51 studies (21 controlled studies (CS) and 30 challenge studies (ChS)) and 85 unique treatment comparisons were included in the review. The alternative treatment categories were nutraceuticals (28 studies), breeding for genetic resistance (12), nutritional manipulation (6), homeopathies (2), administration of copper oxide wire particles (2), and biological control (1). Random effect meta-analyses (MA) and meta-regression were performed with the natural logarithm of the difference in means (lnMD) between the control and treatment groups, for fecal egg counts per gram of wet feces (FEC), worm counts (WC) or fecal egg counts per gram of dry matter (FECDM) as the outcome. Treatment effect estimates (lnMD) were back-transformed to their count ratios (CR), a relative measure of effect for controlled versus treated groups, for presentation of results. Significant heterogeneity was observed for both CS and ChS that evaluated nutraceuticals, genetic resistance and nutrition treatments. MA of ChS that investigated nutraceuticals resulted in a significant overall CR of 1.62 ($P < 0.01$)

and 1.64 ($P < 0.01$) for FEC and FECDM, respectively and a marginal significant CR of 1.14 ($P = 0.06$) for WC, all favoring the treated groups. MA of CS and ChS that investigated genetic resistance resulted in a significant overall CR of 5.89 and 15.42, respectively ($P < 0.01$), again favoring treated groups. MA of CS that investigated homeopathies with FEC as an outcome were homogenous ($I(2) = 0.0\%$) and resulted in a non-significant pooled CR of 1.61. ChS investigating copper oxide wire particle treatments and WC as an outcome, were homogenous ($I(2) = 0.0\%$) and had a marginally significant pooled CR of 1.68 ($P = 0.06$). Publication bias was observed for ChS with WC outcomes, indicating that small size studies reporting non-significant CR, were less likely to be published than similar studies that found a significant CR. In a meta-regression, randomization (6.2%) and study size (29.2%) were the main factors contributing to the total variation when the outcome was FEC, and none of the variables contributed to between study heterogeneity. When the outcome was WC, type of treatment was the only significant covariate, explaining 6% of the heterogeneity and 38.5% of the total variation. The methodological soundness and reporting of primary research in the selected studies were low. Our results indicate that from the studied alternative treatments, nutraceuticals and use of genetically resistant sheep might be more promising for control of GINs in sheep.
Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22153184>

Neurosci Behav Physiol. 1997 May-Jun;27(3):272-4.

Organization of the *Drosophila* genome in mutants with changes in second messenger metabolism and learning ability.

[Medvedeva AV](#), [Tokmacheva EV](#), [Savvateeva EV](#), [Kornitskii VS](#).

Laboratory of Comparative Behavioral Genetics, I. P. Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg.

Abstract

Mechanisms modifying the structural-functional organization of polytene chromosomes were studied in a *Drosophila* line in which the activating properties of calmodulin were altered and learning ability was increased, by treating mutants with homeopathic preparations which affect Ca^{2+} and F- ion metabolism. The results indicated a dominant role for Ca^{2+} ions and calmodulin in determining the chromocentric organization of the nucleus. F- ions, which stimulate the adenylate cyclase complex, were found not to have a role.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/9194065>

Acta Cir Bras. 2009 Mar-Apr;24(2):150-5.

Effects of the application of Aloe vera (L.) and microcurrent on the healing of wounds surgically induced in Wistar rats.

[Mendonça FA](#), [Passarini Junior JR](#), [Esquisatto MA](#), [Mendonça JS](#), [Franchini CC](#), [Santos GM](#).

Physiology Division, Herminio Ometto University Center, UNIARARAS, Araras-SP, Brazil. fernandamendonca@uniararas.br

Abstract

PURPOSE: To investigate the effects of topical application of an Aloe vera gel combined or not with microcurrent application on the healing of skin wounds surgically induced in Wistar rats.

METHODS: The animals were randomly divided into the following groups: control group, animals topically treated with Aloe vera, animals treated with a microcurrent, and animals receiving topical application of Aloe vera combined with microcurrent application.

RESULTS: The results indicated differences in wound healing between the various treatments when compared to the control group. Tissue hyperplasia was lower in the control group compared to the other treated groups. Accelerated wound healing was observed in the group treated with Aloe vera compared to control. Animals submitted to microcurrent application only and the group treated with microcurrent plus Aloe vera presented an earlier onset of the proliferative phase compared to the control group and animals treated with Aloe vera gel alone. Morphometric data confirmed the structural findings.

CONCLUSION: Simultaneous application of Aloe vera gel and microcurrent is an excellent choice for the treatment of open wounds thus indicating a synergistic action of these two applications.

Link to paper: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0102-86502009000200013&lng=en&nrm=iso&tlng=en

Berl Münch Tierärztl Wschr. 1989;102(8):266-272.

Untersuchungen über den Einsatz homöopathischer Arzneimittel zur Behandlung akuter Mastitiden beim Rind.

[The administration of homeopathic drugs for the treatment of acute mastitis in cattle].

[Article in German]

Merck CC, Sonnenald B, Rollwage H.

English Abstract

The general principles of homeopathic therapy are described together with a number of homeopathic drugs used for the treatment of acute bovine mastitis. Fifty cows with acute mastitis were used in the study. The initial treatment comprised aconitum D 4, phytolacca D 1 and bryonia D 4. In subsequent treatments phytolacca D 1, bryonia D 4 and lachesis D 8 either singly or in combination were used; mercurius solubilis D 4 was also used. Encouraging results, especially in the treatment of cases of E.coli mastitis, were achieved.

Link to abstract/paper: <http://tematicas.es/salud/articulo/untersuchungen-uber-den-einsatz-homopathischer-arzneimittel-zur-behandlung-akuter-mastitiden-beim-rind/>

Homeopathy. Article in Press.

Effects of a homeopathic complex on the performance and cortisol levels in Nile tilapia (*Oreochromis niloticus*).

[Luiz Sérgio Merlini](#), [Lauro Vargas](#), [Ranulfo Piau Jr.](#), [Ricardo Pereira Ribeiro](#), [Natalie Bertelis Merlini](#)

Abstract

Background: Intensive fish farming results in stress adversely affecting the performance of farmed fish. Plasma cortisol is a validated measure of stress in fish. We evaluated the effect of a homeopathic complex on the cortisol level of Nile tilapias (*Oreochromis niloticus*).

Method: 60 animals with approximate average weight of 100 g each at the start of experiment were randomly distributed in six glass fiber water tanks, capacity 1000 liters, with a daily water renewal rate of 20%. They received one of two treatments: 30 animals in control treatment and 30 animals receiving the homeopathic complex *Homeopatia 100*. On days 1, 30 and 60, all fish were anesthetized and blood was collected by puncture on the caudal vein, to determine the levels of circulating cortisol.

Results: At the end of the experiment the fish receiving a homeopathic complex, had significantly lower circulating cortisol level (17.96 ng/mL \pm 0.95) than the control group (38.68 ng/mL \pm 1.21) ($p < 0.05$).

Conclusions: Cortisol levels were significantly lower in the treated group than control, and the fish were larger in the treated group.

Link to abstract/paper: <http://www.homeopathyjournal.net/article/S1475-4916%2813%2900069-6/abstract>

Food Chem Toxicol. 2004 Oct;42(10):1611-7.

Extract of Toxicodendron quercifolium caused genotoxicity and antigenotoxicity in bone marrow cells of CD1 mice.

[Mersch-Sundermann V](#), [Kassie F](#), [Böhmer S](#), [Lu WQ](#), [Wohlfahrth R](#), [Sobel R](#), [Brunn HE](#), [EISohly MA](#), [Ross SA](#), [Stahl T](#).

Institute of Indoor and Environmental Toxicology, University of Giessen, University Hospital, Aulweg 123, D-35385 Giessen, Germany. volker.mersch-sundermann@uniklinikum-gies-sen.de

Abstract

As has been shown in numerous studies, naturally occurring compounds can have protective effects towards mutagens and carcinogens. In the present study, the genotoxic/antigenotoxic effect of Toxicodendron quercifolium (poison ivy) extract, which has been identified as antigenotoxic in human HepG2 cells in former studies, was examined in the in vivo micronucleus assay using polychromatic erythrocytes (PCE) of bone marrow of CD1-mice. For this, D0 (1:10), D0 (1:25), D0 (1:50), D1 (1:50), D2 (1:50), and D4 (1:50) dilutions of ethanolic plant extract prepared on the basis of the "Hömoopathisches Arzneimittelbuch (HAB 2000)" were administered orally to CD1 mice over a period of two days. A significant increase ($p < 0.05$) in micronucleus frequencies was found after administration of D0 (1:10), the highest tolerated dose. Additionally, antigenotoxic effects of T. quercifolium towards benzo(a)pyrene-induced micronucleus formation were studied. For that, four dilutions of the plant extract [D0, D2, D4, D6, each 1:50] were administered orally to CD1 mice for five days prior to the administration of benzo(a)pyrene (250 mg/kg

b.w.) for another two days. It was found that the administration of the dilutions D0 (1:50) and D2 (1:50) of *T. quercifolium* extract significantly inhibited benzo(a)pyrene-induced micronucleus formation ($p < 0.0001$). The results of this study indicated that *T. quercifolium* extract has the character of a so-called "Janus"-genotoxin: High doses led to a weak but significant increase of micronucleus frequencies whereas low doses showed chemopreventive effects towards benzo(a)pyrene-induced DNA damage. The constituents of *T. quercifolium* responsible for the genotoxic and antigenotoxic effects may be flavonoids, which are known to have prooxidative and scavenging effects and identified by HPLC-MS/MS.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15304307>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:23-5.

Antidepressant properties of antibodies to serotonin, brain-specific S100 protein, and delta sleep-inducing peptide.

[Meshcheryakov AF.](#)

Department of Emotions and Emotional Stress, P. K. Anokhin Institute of Normal Physiology, Russian Academy of Medical Sciences, Moscow.

Abstract

Potentiated antibodies to delta sleep-inducing peptide and S100 protein produced an antidepressant effect in Wistar rats. This effect was more pronounced after combined treatment with these antibodies. It can be assumed that these antibodies modulate neurobiological mechanisms of positive emotional reinforcement and, therefore, affect the resistance to depression associated with psychoemotional stress.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949638>

Wounds (King of Prussia Pa.). 2011;23:111-120.

Effect of Glycolic Extract of *Dillenia indica* L. Combined With Microcurrent Stimulation on Experimental Lesions in Wistar Rats.

Migliato KF, Chiosini MA, Mendonça FA, Esquisatto MA, Salgado HR, Santos GMT.

Abstract

This study evaluated the wound healing activity of a glycolic extract of *Dillenia indica* (GED) prepared from the mature fruits of the plant applied alone or in combination with microcurrent stimulation to skin wounds surgically induced on the back of Wistar rats. *Methods.* The animals were randomly divided into six groups: (A) negative control group; (B) group receiving microcurrent application (MC; [10 mA/2 mins]); (C) group treated with GED; (D) group treated with an emulsion containing GED; (E) group treated with GED and MC, and (F) group treated with the emulsion containing GED and MC. Tissue samples were obtained 2, 6, and 10 days after injury and underwent structural and morphometric analysis. *Results.* There were observed differences in wound healing among the various treatments when compared to the control group. The combination of microcurrent plus extract or microcurrent plus emulsion containing GED was advantageous in all of the studied parameters ($P <$

0.05) when compared to the other groups with positive effects seen regarding newly formed tissue, number of fibroblasts, and number of newly formed blood vessels. The morphometric data confirmed the structural findings. *Conclusion.* Microcurrent application alone or combined with GED exerted significant effects on wound healing in this experimental model. This was probably due to the efficacy of microcurrent application since the extract alone did not significantly accelerate the healing process. *D indica* fruit extract most likely participates in the wound healing process as a result of its anti-inflammatory properties.

Link to paper: <http://www.woundsresearch.com/article/effect-glycolic-extract-dillenia-indica-l-combined-microcurrent-stimulation-experimental-les?page=0,0>

Zeitschrift für ganzheitliche Tiermedizin. 2010;24(2):46–48.

Homöopathische Therapie einer "Bambuswirbelsäule" mit *Bambus arundinacea* .

[Homeopathic treatment of a "bamboo spine" with *bambus arundinacea*].

[Article in German]

Milleder B.

English Abstract

We discuss the homeopathic treatment of a golden-retriever dog which was seriously lamed due to bamboo spine. After the application of *Silicea C 200* did not deliver the expected positive results, the therapy was replaced by *Bambusa arundinacea C 30*. After only three days of treatment with *Bambusa arundinacea*, considerable improvement in the health of the dog was noticeable. The case report is a pointer to the fact that the healing process of serious pathologies is often sparked by "tiny" measures.

Link to abstract/paper: <https://www.thieme-connect.com/ejournals/abstract/10.1055/s-0030-1249813>

Complement Ther Med. 1998 Dec;6(4):178–184.

Efficacy of a potentized homoeopathic drug (*Arsenicum Album-30*) in reducing toxic effects produced by arsenic trioxide in mice: I. On rate of accumulation of arsenic in certain vital organs.

[K. Mitra](#), [S.N. Kundu](#), [A.R. Khuda Bukhsh](#)

Kalyani University, Kalyani, India

Abstract

Objective: The widespread occurrence of arsenic poisoning in West Bengal, India led us to examine the extent of deposition of arsenic in different vital organs of mice after a single sublethal injection of arsenic trioxide and if microdoses of arsenic could reduce the deposition effectively in them.

Design: For each fixation interval, 15 mice were injected intramuscularly with As_2O_3 in a single dose @ 1.0 mg/kg body weight and were divided into three batches and another batch of five mice injected with normal saline served as negative control (saline control). Among arsenic treated mice, one batch was fed with diluted

potentized alcohol-30 (alcohol-treated-positive control), one batch with a potentized homoeopathic drug Arsenicum Album-30 in ultra low doses (active treatment) while the remaining one was neither fed with potentized alcohol nor with the potentized homoeopathic drug (as-intoxicated control).

Methods: The accumulation of arsenic was determined by spectrophotometric analysis in four tissues, namely, liver, kidney, spleen and testis at seven different fixation intervals, viz. 12 hours, 24 hours, 48 hour, 7 days, 21 days, 30 days and 90 days.

Results: In arsenic treated mice orally administered with the homoeopathic drug, statistically significant decreases in accumulation were observed in all tissues at most fixation intervals as compared to controls.

Conclusions: This homoeopathic drug can be considered to effectively antagonize and antidote arsenic poisoning.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0965229998800253>

Complement Ther Med. 1999 Mar;7(1):24–34.

Efficacy of a potentized homoeopathic drug (Arsenicum Album-30) in reducing toxic effects produced by arsenic trioxide in mice: II. On alterations in body weight, tissue weight and total protein

[K. Mitra](#), [S.N. Kundu](#), [A.R. Khuda Bukhsh](#)

Kalyani University, Department of Zoology, Kalyani, W B 741235, India

Abstract

Objective: To study the alterations in body weight, tissue weight and total protein in mice, caused by a single sublethal injection of arsenic trioxide and to investigate whether treatment by microdoses of arsenic has any antidotal effect. Methods: For each fixation interval, altogether 36 individuals of Swiss albino mice, *Mus musculus*, were used, 27 were injected with As₂O₃ in a single sub-lethal dose (@1.0 mg/kg body weight) and were divided into three batches. One batch was fed with diluted potentized alcohol (Alcohol control), one batch was fed with potentized homoeopathic drug Ars.Alb-30 (Active treatment), while the remaining one neither fed with potentized alcohol nor with the potentized homoeopathic drug (As-intoxicated control). The remaining batch of nine mice were injected with normal saline which served as negative control (Saline control). The mean body weights before and after injections and weights of different tissues like liver, kidney, spleen and testis were recorded at seven fixation intervals, 12 hours, 24 hours, 48 hours, 7 days, 21 days, 30 days, and 90 days. Results: In arsenic treated mice orally administered with the homoeopathic drug statistically significant increases were noted in the weights of individual tissue weight, protein content as well as the mean body weight as compared to their respective controls. Conclusions: Arsenicum album can be considered as an antidote to arsenic poisoning.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S096522999800557>

Homeopathy. 2012 Jul;101(3):141-6.

Homeopathic treatment for peripheral nerve regeneration: an experimental study in a rat sciatic nerve transection model.

[Mohammadi R](#), [Amini K](#), [Charehsaz S](#).

Department of Clinical Sciences, Faculty of Veterinary Medicine, Urmia University, Nazloo Road, Urmia 571531177, Iran. r.mohammadi@urmia.ac.ir

Abstract

AIM: Effects of homeopathic treatment with *Hypericum perforatum* (*Hypericum*) on peripheral nerve regeneration was studied using a rat sciatic nerve transection model.

METHODS: Fifty-four male healthy White Wistar rats were divided into three experimental groups (n = 18), randomly: Sham-operation (Sham), control: silicon tube (Sil) and treatment: silicon tube + *Hypericum* (Sil/*Hypericum*). In the Sham group after anesthesia left sciatic nerve was exposed through a gluteal muscle incision and after homeostasis muscle was sutured. In the Sil group the left sciatic nerve was exposed the same way and transected proximal to tibio-peroneal bifurcation leaving a 10-mm gap. Proximal and distal stumps were each inserted into a silicone tube. In the Sil/*Hypericum* group a silicone tube was implanted the same way and each animal received three oral drops of *Hypericum* 30c twice daily for 1 week. Each group was subdivided into three subgroups of six animals each studied 4, 8, 12 weeks after surgery.

RESULTS: Data were analyzed statistically by factorial analysis of variance (ANOVA) and, the Bonferroni test for pair-wise comparisons. Functional study showed faster and better recovery of regenerated axons in Sil/*Hypericum* than in Sil group (P < 0.05). Gastrocnemius muscle mass in Sil/*Hypericum* was significantly greater than in Sil group. Morphometric indices of regenerated fibers showed number and diameter of the myelinated fibers in Sil/*Hypericum* were significantly higher than in control group. Immunohistochemistry, showed the location of reactions to S-100 in Sil/*Hypericum* was clearly more positive than in Sil group.

CONCLUSION: *Hypericum* improves functional recovery of peripheral nerve regeneration in rats.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22818230>

Evid Based Complement Alternat Med. 2012;2012:436139. doi:

10.1155/2012/436139. Epub 2012 May 29.

Evaluation of Hepatoprotective Effect of Leaves of *Cassia sophera* Linn.

[Mondal A](#), [Karan SK](#), [Singha T](#), [Rajalingam D](#), [Maity TK](#).

Department of Pharmaceutical Technology, Jadavpur University, Jadavpur, West Bengal, Kolkata 700 032, India.

Abstract

In the present study, the hepatoprotective activity of ethanolic extracts of *Cassia sophera* Linn. leaves was evaluated against carbon-tetrachloride- (CCl₄-) induced hepatic damage in rats. The extracts at doses of 200 and 400 mg/kg were administered orally once daily. The hepatoprotection was assessed in terms of

reduction in histological damage, changes in serum enzymes, serum glutamate oxaloacetate transaminase (AST), serum glutamate pyruvate transaminase (ALT), serum alkaline phosphatase (ALP), total bilirubin, and total protein levels. The substantially elevated serum enzymatic levels of AST, ALT, ALP, and total bilirubin were restored towards the normalization significantly by the extracts. The decreased serum total protein level was significantly normalized. Silymarin was used as standard reference and exhibited significant hepatoprotective activity against carbon tetrachloride-induced hepatotoxicity in rats. The biochemical observations were supplemented with histopathological examination of rat liver sections. The results of this study strongly indicate that *Cassia sophera* leaves have potent hepatoprotective action against carbon tetrachloride-induced hepatic damage in rats. This study suggests that possible activity may be due to the presence of flavonoids in the extracts.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3368335/>

European Journal of Integrative Medicine. 2012 Sep;4(1):166–167.

An ethological discussion of repertorial mental symptoms in veterinary homeopathy.

[Antoni Monica](#)

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S1876382012009559>

C R Hebd Séances Acad Sci. 1959;249:18-20.

Mobilisation de l'arsenic fixé sous l'effet de doses infinitésimales et variations de l'indice chronologique vestibulaire.

[Mobilization of fixed arsenic by the effect of infinitesimal doses & changes of the vestibular chronological index].

[Article in French]

Mouriquand G, Cier A, Boiron J, Edel V, Chighizola R.

Link to abstract/paper: <http://www.biomedsearch.com/nih/Mobilization-fixed-arsenic-by-effect/13671796.html>

Bull Trav Soc Pharm Lyon. 1960;1:1-8.

Variation de l'indice chronologique vestibulaire et de l'élimination arsenicale chez le pigeon sous l'effet de doses infinitésimales d'arsenic.

Mouriquand G, Cier A, Boiron J, Edel V, Chighizola R.

C R Hebd Séances Acad Sci. 1961;252:3173-3176.

Variations de l'indice chronologique vestibulaire et mobilisation de l'antimoine fixé chez le pigeon par des doses infinitésimales de cet élément.

[Changes in the vestibular chronological index and mobilization of antimony in the pigeon set by infinitesimal doses of this element].

[Article in French]

Mouriquand G, Cier A, Boiron J, Edel V, Chighizola R.

Ann Homéop Fr. 1961;3:19-30.

Rétention et mobilisation de toxiques exogènes chez le pigeon.

[Retention and mobilization of toxic exogenous in pigeons].

[Article in French]

Mouriquand G, Cier A, Boiron J, Edel V, Chighizola R.

J Ethnopharmacol. 2000 Jun;70(3):315-21.

Evaluation of in-vivo wound healing activity of *Hypericum patulum* (Family: hypericaceae) leaf extract on different wound model in rats.

[Mukherjee PK](#), [Verpoorte R](#), [Suresh B](#).

JSS College of Pharmacy, Rocklands, PO Box 20, Ootacamund-643 001, Tamil Nadu, India.

Abstract

The methanol extract of *Hypericum patulum* Thumb. leaves were investigated for the evaluation of their wound healing potential on different experimental models of wounds in rats. The methanol extract of leaves (HPM), in the form of an ointment with two different concentrations (5% and 10% w/w ointment of leaf extract in simple ointment base) was evaluated for wound healing potential in an excision wound model and an incision wound model in rats. Both concentrations of the methanol extract ointment showed significant responses in both the wound types tested when compared with the control group. The effect produced by the extract ointment, in terms of wound contracting ability, wound closure time, regeneration of tissues at wound site, tensile strength of the wound and histopathological characteristics were comparable to those of a standard drug nitrofurazone ointment.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/10837993>

Hippokrates. 1938;9(34).

Experimentelle Untersuchungen in vitro et vivo zur Frage der Wirksamkeit homöopathischer Verdünnungen und Komplexmittel.

[Experimental studies in vitro and co-vivo on the effectiveness of homeopathic dilutions and complex remedies].

[Article in German]

Müller KW.

Arzneim Forsch. 1964;14:205-207.

Die verschiedenen Formen des experimentellen Ulcus ventriculi bei der Ratte

und seine medikamentöse Beeinflussung.

[The various forms of experimental gastric ulcer in rats and pharmacological effects].

[Article in German]

Müller WA, Braun J.

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:102-4.

Antibodies to delta sleep-inducing peptide in ultralow doses: study of the effect by enzyme immunoassay.

[Myagkova MA](#), [Abramenko TV](#), [Panchenko ON](#), [Epstein OI](#).

Institute of Physiologically Active Substances, Russian Academy of Sciences, Chernogolovka.

Abstract

The effects of potentiated homeopathic preparations containing antibodies to delta sleep-inducing peptide in ultralow doses were studied by enzyme immunoassay. Experiments were performed with the following immunochemical reagents: antigens of delta sleep-inducing peptide conjugated to various macromolecular carriers and specific antigens. Antibodies to delta sleep-inducing peptide were synthesized in dilutions of C3, C6, C12, C50, and C200. Enzyme immunoassay showed that test preparations of antibodies in dilutions of 1:400-1:3200 produce the combined effect on immune complex formation. The proposed method holds much promise for identification of medicinal preparations in ultralow doses.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949667>

Br Homeopath J. 1990;79(4):224-227.

Dose-dependent effect of *Baryta carbonicum* and *Baryta muriaticum* in homoeopathic trituration on experimentally induced high serum lipid concentration in chickens.

Nandi M, Raha D.

Abstract

Concentration of various serum lipids was experimentally increased in chickens. Feeding *Baryta carbonicum* and *Baryta muriaticum* resulted in reduction of serum total cholesterol, phospholipid, triglyceride, total lipids and total cholesterol and phospholipid ratio (c/p). Results obtained with various doses of *Baryta carbonicum* and *Baryta muriaticum* were compared with a standard hypocholesterolaemic drug, clofibrate.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/PIIS0007078505804570/abstract>

Ann Homéop Fr. 1982;24(3):53-64.

Emploi de biothérapies dans le traitement de souris infectées par trypanosoma cruzi résultats préliminaires.

[Use of biotherapy in the treatment of mice infected with Trypanosoma cruzi, preliminary results].

[Article in French]

Nasi AMTT, Ribeiro RD, Lopes RA.

J Am Anim Hosp Assoc. 2011 Jan-Feb;47(1):12-20. doi: 10.5326/JAAHA-MS-5483. Epub 2010 Dec 16.

Effectiveness of the homeopathic preparation Zeel compared with carprofen in dogs with osteoarthritis.

[Neumann S](#), [Stolt P](#), [Braun G](#), [Hellmann K](#), [Reinhart E](#).

Clinic for Small Animals, Institute of Veterinary Medicine, University of Goettingen, Germany. sneuman@gwdg.de

Abstract

The authors compared the symptomatic effectiveness of a complex homeopathic preparation Zeel (1-3 tablets orally per day depending on body weight) to carprofen (4 mg/kg body weight) in dogs (n=68) aged >1 yr diagnosed with osteoarthritis in a multicenter, prospective, observational open-label cohort study in 12 German veterinary clinics. The active treatment period was 56 days. Symptomatic effectiveness, lameness, stiffness of movements, and pain on palpation were evaluated by treating veterinarians and owners. Clinical signs of osteoarthritis improved significantly ($P<0.05$) at all time points (days 1, 28, and 56) with both therapies. At the end of the treatment period, effectiveness was comparable in both groups. Both treatment regimens were well tolerated with only three treatment-related adverse events, all in the carprofen group.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21164168>

Wien Tierärztl Wochenschr. 1977;64:180-186.

Zur Wirkung homöopathischer Mittel am Beispiel des Rattenpfotenödems.

[The effects of homeopathic remedies on the example of the rat paw edema].

[Article in German]

Niebauer GW.

Prakt Tierarzt. 1980;61(2):128-132.

Die Wirkung von homöopathischem Arnica D und Actihaemly auf die Wundheilung im Tierexperiment.

[Effect of homeopathic arnica-D12 and actihemyl on wound-healing in the animal-experiment].

[Article in German]

Niebauer GW, Dorcsi M, Pfeil L.

Psychol Rep. 2012 Oct;111(2):473-92.

Serial dilutions: a new area of research for animal behavior.

[Nolf SL](#), [Craig DP](#), [Abramson CI](#).

Oklahoma State University, Laboratory of Comparative Psychology and Behavioral Biology, Department of Psychology, 116 N. Murray, Stillwater, OK 74078, USA.

Abstract

This paper attempts to stimulate the psychological investigation of homeopathy and serially agitated dilutions. The history of homeopathy and serial dilutions is provided in a literature review of selected research areas. Two original illustrative experiments are also presented and discussed. The first examined the effect of serially agitated dilutions of Sevin on the mortality rate of honey bees (*Apis mellifera*). In a second experiment, the effect of serially agitated dilutions of sucrose on proboscis extension in honey bees was assessed. No differences were found between serially agitated dilutions of pesticides and sucrose compared with dilutions alone. Implications, limitations, and proposed further work are discussed.

Link to abstract/paper:

<http://www.ncbi.nlm.nih.gov/pubmed/23234091?dopt=Abstract>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Desenvolvimento de Vacinas Homeopáticas em Veterinária.

[Developing Homeopathic Veterinary Vaccines].

[Article in Portuguese]

Novosaduk TV, Komisarenko AA.

English Abstract

The article substantiates the use of homeopathic vaccine substances for prevention of infectious diseases in animals based on experimental administration of homeopathic chicken laryngotracheitis vaccine. It describes the nature of the protection mechanism in such substances. Of special importance is the high effectiveness, safety, simple administration and low cost of such substances. Despite the undoubted success of vaccination science, infectious morbidity still exists, and for many infections no vaccines have been developed. At the same time, it is impossible with vaccines to get rid of such problems as the necessity to repeat inoculations, possible infection transfer through blood, vaccine short shelf life and high costs, and, most importantly, side effects or sometimes severe complications. In our opinion, it makes sense apply nosodes - specific preparations for infectious disease prevention; such nosodes are prepared from disease causing agents or standard inoculation materials using homeopathic techniques. With this aim in mind a series of trial vaccinations of chicken against laryngotracheitis (ILT), one of the most threatening poultry diseases, was performed in the All-Russian Poultry Farming Institute. The trial included 710 male 27±3.0 days old chicks. Vaccines were prepared from the disease causing agent using homeopathic techniques in both water and alcohol dilutions 1:10-18 1:10-60 1:10-2000 (1:9, 1:60 and 1:1000 in

homeopathic terminology) as well as in a mixture of such dilutions. Administration of vaccine to the chicks was intraocular, intranasal, cloacal and parenteral. The vaccine was administered once. Two weeks after the vaccination, a culture of laryngotracheitis agent was introduced to all male chicks. Upon infecting by ILT virus, morbidity of chicks in the control group (without vaccination) reached 95%, and only 5% remained healthy. In the trial groups results varied, from 47% of chicken remaining healthy after administration of the vaccine in the dilution 1:30 up to 70% of healthy chicken with virus dilution 1:9. The development of homeopathic vaccine preparations from infectious disease agents is therefore promising; they are highly effective, safe and cheap, and, as a consequence, this direction in infectious disease prevention may have good prospects.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/188/197>

Int J High Dilution Res. 2012;11(40):206-207.

Concept of classical homeopathy in veterinary medicine

Novosaduk TV.

Abstract

Attempts to use the principles of classical homeopathy in animal treatment encountered impossibility to select drugs according to the similarity principle due to lack of verbal contact. We suggested a new method of choosing homeopathic remedies according to the similarity principle based on the phenomenon of interdependent conditions in animals and their owners. The accumulated experience enabled us to confirm that this method is correct and productive, as well as the recommendations for diagnostics and treatment of different diseases in domestic animals.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/556/617>

Vet Rec. 1984 Jan 7;114(1):24.

Homoeopathic treatment of partial epilepsy.

[Nunn RJ.](#)

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/6422612>

Berlin J Res Hom. 1991 Jun;1(3):168, (Congress Report).

Treatment of Murine SLE by Idiotypic Isotherapy.

Oberbaum M, Weissman Z, Bentwich Z.

Abstract

Using the knowledge that Systemic Lupus Erythematosus (SLE) is induced by anti-DNA idiotype 16/6, homoeopathic potencies were made of this material and it was administered to mice suffering from SLE. When compared to controls, 100% of the

mice treated with the 30X potency of the idotype had a positive response to the treatment.

Harefuah. 1992 Aug;123(3-4):79-82:156.

[Wound healing by homeopathic silica dilutions in mice].

[Article in Hebrew]

[Oberbaum M](#), [Markovits R](#), [Weisman Z](#), [Kalinkevits A](#), [Bentwich Z](#).

Ruth Ben-Ari Institute of Clinical Immunology, Kaplan Hospital, Rehovot.

Abstract

Highly diluted solutions of silica are widely used in homeopathic medicine to treat lesions such as chronic wounds, ulcers, and abscesses. We tested the therapeutic effects of homeopathic dilutions of silica on induced chronic wounds. Holes were made in the ears of mice by dental wire, which then remained hanging from the ear to cause persistent mechanical irritation. In each experiment 3 or 4 groups of 10 mice each were treated by adding homeopathic dilutions of silica (10(-10), 10(-60), 10(-400)) and of saline (10(-10), respectively, to the drinking water of the mice for 4-20 days. The size of the wound holes was measured every second day (grades 0-4) and/or by an objective image analysis system. The results showed that in 7/11 experiments the ear holes of the silica-treated animals were significantly smaller (p less than 0.05-0.001) and healed faster than in those treated with saline. Also the therapeutic effect increased progressively with increase in dilution of the silica (10(-10) less than 10(-60) less than 10(-400)). These results show that homeopathic dilutions of silica (even well beyond Avogadro's number) clearly have a therapeutic effect on wound healing and that our experimental model for studying wound healing is a very useful tool for such studies.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/1325402>

Br Homeopath J. 1994 Apr;83(2):90.

The effect of arnica montana and symphytum officinalis on the bone healing of guinea pigs.

[M. Oberbaum](#), [E. Yakovlev](#), [D. Kaufman](#), [S. Shoshan](#).

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/S0007-0785%2894%2980017-0/abstract>

J Altern Complement Med. 2011 Oct;17(10):909-13. doi: 10.1089/acm.2011.0205.

Epub 2011 Oct 6.

Effect of Traumeel S on cytokine profile in a cecal ligation and puncture (CLP) sepsis model in rats.

[Oberbaum M](#), [Spira RM](#), [Lukasiewicz E](#), [Armon Y](#), [Samuels N](#), [Singer SR](#), [Barak V](#), [Izbicki G](#), [Einav S](#), [Hersch M](#).

The Center for Integrative Complementary Medicine, Shaare Zedek Medical Center, Jerusalem, Israel.

Abstract

BACKGROUND: Sepsis results in significant morbidity and mortality, with current treatment options limited with respect to efficacy as well as safety. The complex homeopathic remedy Traumeel S has been shown to have both anti-inflammatory and immunostimulatory effects in the in vitro setting.

OBJECTIVES: The objective was to explore the effects of Traumeel S in an in vivo setting, using a cecal ligation and puncture (CLP) sepsis model in rats, evaluating the effects of the medication on cytokine activity.

DESIGN: Sepsis was induced in 30 rats using accepted CLP methodology.

Following the procedure, rats were randomly allocated to receive an intraperitoneal injection of either Traumeel S (n=15) or normal saline (n=15). At 6 hours post-CLP, serum cytokines (interleukin [IL]-1 β , tumor necrosis factor- α , IL-6, and IL-10) were evaluated.

RESULTS: IL-1 β levels were significantly higher in the treatment group ($p=0.03$) with no significant differences found between the groups with respect to the other cytokines tested.

CONCLUSIONS: In contrast to in vitro studies, Traumeel significantly increased IL-1 β levels in an in vivo model, without influencing other cytokines. IL-1 β is a proinflammatory cytokine that has been shown to have a protective effect in the CLP rat model. Further research is warranted to examine this finding, as well as its clinical implications.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21978221>

Homeopathy. 2013 Jan;102(1):1-2. doi: 10.1016/j.homp.2012.10.001.

Highland amphibians and high potencies: a 20-year metamorphosis.

[Menachem Oberbaum](#)

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/23290874>

Micron. 2009 Dec;40(8):775-82. doi: 10.1016/j.micron.2009.07.008. Epub 2009 Jul 23.

Investigating lung remodeling in Modul8-treated BALB/c asthmatic animals.

[Oberholzer HM](#), [Pretorius E](#).

Department of Anatomy, School of Medicine, Faculty of Health Sciences of the University of Pretoria, Pretoria, South Africa.

Abstract

Animal models of bronchial hyperresponsiveness have been successfully used to investigate the pathophysiology of asthma. When mice are sensitized and challenged with an allergen, such as OVA, they experience symptoms and processes similar to that of humans, and are therefore widely used as asthmatic animal models. In the current study the BALB/c murine asthmatic animal model was

used to investigate the histological and ultrastructural changes that occur in the lungs of asthmatic animals that received no treatment, compared to two groups of asthmatic animals that were treated with a homeopathic immunodulator Modul8 and hydrocortisone as positive control, respectively. Eosinophil counts in the bronchial lavage of the animals were also analyzed, since it is known that eosinophil counts are increased in the bronchial lavage in asthma. Results indicated that eosinophil counts were elevated in asthmatic animals compared to the controls, but were found to be significantly decreased in the treatment groups. Also, in the asthmatic, untreated animals, histological and ultrastructural changes, typically associated with the inflammatory process were found. Both treatment groups compared well to that of the control animals, indicating that the homeopathic product might be successfully used in the treatment of asthma.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19665389>

BMC Complementary and Alternative Medicine. 2011;11:101. doi:10.1186/1472-6882-11-101.

Developments on drug discovery and on new therapeutics: highly diluted tinctures act as biological response modifiers.

Oliveira CC, Abud APR, Oliveira SM, Guimarães F, Andrade LF, Bernardi RP, Coletto EL, Kuczera D, Lozzo EJ, Gonçalves JP, S Trindade E, Buchi D.

Abstract

Background: In the search for new therapies novel drugs and medications are being discovered, developed and tested in laboratories. Highly diluted substances are intended to enhance immune system responses resulting in reduced frequency of various diseases, and often present no risk of serious side-effects due to its low toxicity. Over the past years our research group has been investigating the action of highly diluted substances and tinctures on cells from the immune system.

Methods: We have developed and tested several highly diluted tinctures and here we describe the biological activity of M1, M2, and M8 both *in vitro* in immune cells from mice and human, and *in vivo* in mice. Cytotoxicity, cytokines released and NF- κ B activation were determined after *in vitro* treatment. Cell viability, oxidative response, lipid peroxidation, bone marrow and lymph node cells immunophenotyping were accessed after mice *in vivo* treatment.

Results: None of the highly diluted tinctures tested were cytotoxic to macrophages or K562. Lipopolysaccharide (LPS)-stimulated macrophages treated with all highly diluted tinctures decreased tumour necrosis factor alpha (TNF- α) release and M1, and M8 decreased IFN- γ production. M1 has decreased NF- κ B activity on TNF- α stimulated reporter cell line. *In vivo* treatment lead to a decrease in reactive oxygen species (ROS), nitric oxide (NO) production was increased by M1, and M8, and lipid peroxidation was induced by M1, and M2. All compounds enhanced the innate immunity, but M1 also augmented acquired immunity and M2 diminished B lymphocytes, responsible to acquired immunity.

Conclusions: Based on the results presented here, these highly diluted tinctures were shown to modulate immune responses. Even though further investigation is needed there is an indication that these highly diluted tinctures could be used as therapeutic interventions in disorders where the immune system is compromised.

Link to paper: <http://www.biomedcentral.com/1472-6882/11/101>

Tijdschr Diergeneeskd. 1997 Jan 15;122(2):36-9;discussion 40.

Wie die Similia Prinzip der Homöopathie einen Notfall gelöst. Anamnese von Ivermectin-Vergiftung in einem Collie.

[How the Similia principle of homeopathy resolved an emergency. Case history of ivermectin poisoning in a Collie].

[Article in Dutch]

[Opmeer RJ.](#)

English Abstract

The condition of a Collie with ivermectin poisoning worsened rapidly despite allopathic treatment. Given that the prognosis of this type of poisoning is poor in this breed, it was decided to use a homeopathic dilution of the poison. After administration, the dog's condition improved rapidly, and the animal recovered almost completely within a week. In this situation application of the Similia principle of homeopathy was effective.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/9045393>

Vet Clin North Am Small Anim Pract. 1996 May;26(3):643-50.

Management of feline lower urinary tract disease by homeopathy.

[Osborne CA.](#)

Department of Small Animal Clinical Sciences, College of Veterinary Medicine, University of Minnesota, St. Paul, USA.

Abstract

Homeopathy is a system of therapeutics based on a philosophy of treating various disease symptoms with minute quantities of natural drugs capable of producing comparable symptoms if given in large doses to healthy patients. Suitable studies have not been performed to substantiate the claim that they have any beneficial effect in cats with lower urinary tract disease.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/9157659>

Tierärztliche Umschau. 1982;37(10):732-734.

Erfahrungen mit der homöopathischen Therapie akuter parenchymatöser Mastitiden des Rindes.

[Experiences with the homeopathic treatment of acute parenchymatous mastitis in cattle].

[Article in German]

Otto H.

Abstract

Zweihundert an akuter parenchymatöser Mastitis erkrankte Kühe, deren Erkrankungen unter 24 Stunden alt war, wurden mit homöopathischen Mitteln

behandelt. Nach der geschilderten Methoden ließ sich in 87% der Fälle mit homöopathischen Mitteln, in 12,5% der Fälle nach antibiotischer Nachbehandlung eine Heilung erzielen. Eine Kuh (0,5%) konnte nicht geheilt werden.

Link to abstract/paper:

http://www.veition.de/oekovet/publikationen/artikel.cfm?artikel_id=124

Turk J Vet Anim Sci. 2005;29:903-907.

Effectiveness of Homeopathy for the Treatment of Pseudopregnancy in Bitches.

Özyurtlu N, Alaçam E.

Abstract

The effects of homeopathy on pseudopregnancy in bitches were investigated. Thirty clinically pseudopregnant bitches were used. Fifteen dogs were treated by homeopathy and the remaining animals received placebo treatment. Thuja D30 globules, which contain Thuja Occidentalis, were given orally (8 globules, 3 times a day) as a homeopathic agent. Clinical response was evaluated every 5 days. Maximum duration of the treatment was 3 weeks. Physical changes in mammary glands and behavioral response were evaluated during the treatment. Animals were classified as +1, +2 and +3 according to physical changes in the mammary glands. In addition to qualitative examination, longitudinal and transversal mammary gland dimensions were measured by a caliper compass. Complete recovery in both physical and behavioral signs was observed in all animals in the treatment group. Mean duration of treatment was 13.67 ± 5.50 days. Average regression in mammary gland dimensions in the treatment group was 3 times that of the control group on day 10. No side effects were observed in the treatment group. It is concluded that homeopathic Thuja D30 may be used effectively and safely as an alternative to common pharmacological agents in pseudopregnant bitches. Taking its advantages into account, homeopathy has the potential to be used in pseudopregnant bitches.

Link to paper: <http://journals.tubitak.gov.tr/veterinary/issues/vet-05-29-3/vet-29-3-48-0407-17.pdf>

Biol Tier. 2011;28(1):19–22.

Fallbericht: Biologische Therapie bei einem vorbehandelten Hund mit saisonalem Pruritus und chronischer Otitis.

[Case report: Biological therapy in a dog pretreated with seasonal pruritus and chronic otitis.]

[Article in German]

Palmquist RE.

CCRH Quarterly Bull. 1989;11(1/2):1-5.

Study of heart rate in swiss albino mice treated with potentised sodium pentobarbitone during anaesthesia.

Paranjpe AS, Nene SP, Vidyasagar PB, Jindal GD.

Oncol Res. 2006;16(5):211-6.

In vivo treatment of melanoma (B16F10) with a homeopathic agent and with a cytokine (IFN-alpha).

[Pascual-Carpe F](#), [Vicente-Ortega V](#), [Campos-Aranda M](#), [Yañez-Gascón J](#).

Department of Pathology, Faculty of Medicine, Murcia University, Espinardo Campus, 30100 Murcia, Spain.

Abstract

Among the numerous agents tested on melanoma, cytokines have attracted much attention over recent decades, in particular interferon-alpha (IFN-alpha). However, in a small number of experimental assays, homeopathic products have also been used. This study aimed to analyze the effects of INF-alpha and Lymphomyosot, administered individually or in combination, on the growth of B16F10 melanoma transplanted in C57BL/6J mice. Two experiments were performed using 72 young male mice, treated with 1×10^6 B16F10 cells and treated with phosphate-buffered saline (I), INF-alpha (II), Lymphomyosot (III), and both INF-alpha and Lymphomyosot (IV). Subsequent morphological and immunohistochemical studies were performed. All treatments produced a reduction in tumor weight with significant differences in those treated with INF-alpha and Lymphomyosot. INF-alpha reduced the cell proliferation index and the spread of inflammatory infiltrates and produced an increase in the extent of intratumoral necrosis. An antitumour effect was displayed by both agents, as was the cytotoxicity of INF-alpha and the immune response-stimulating effect of Lymphomyosot.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17294801>

Homeopathy. 2012 Jul;101(3):165-70.

Toxicodendron pubescens retains its anti-arthritic efficacy at 1M, 10M and CM homeopathic dilutions.

[Patel DR](#), [Ansari IA](#), [Kachchhi YN](#), [Patel RB](#), [Patil KR](#), [Jadhav RB](#), [Patil CR](#).

R. C. Patel Institute of Pharmaceutical Education and Research, Karvand Naka, Shirpur, Dist-Dhule 425405, Maharashtra, India.

Abstract

BACKGROUND: Our previous studies of *Toxicodendron pubescens* (Rhus tox) in homeopathic dilutions have shown anti-inflammatory activity in line with the principle of similia. The present study aimed to evaluate its anti-inflammatory activity in 1M, 10M and CM dilutions in rats.

METHOD: Arthritis was induced by subplantar injection of 0.1 ml of Complete Freund's Adjuvant (CFA) in the right hind paws of rats. The severity of inflammatory lesions was measured plethysmometrically on 21st day post CFA injection. The intensity of pain was measured using digital Von Frey apparatus. Other estimations included serum C-reactive protein (CRP), hematological parameters, body weight changes, arthritic pain score and radiological analysis of the arthritic paws.

RESULT: The 1M, 10M and CM homeopathic dilutions of Rhus tox reduced primary and secondary arthritic lesions, improved body weight gain and protected rats against CFA-induced hematological and radiological perturbations. A significant reduction in the serum levels of CRP and an improvement in pain threshold of injected paws was observed in the groups treated with the Rhus tox dilutions.

CONCLUSION: The anti-arthritic potential of Rhus tox is retained at 1M, 10M and CM dilutions.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22818234>

BMC Complement Altern Med. 2010 Nov 23;10:73. doi: 10.1186/1472-6882-10-73.

Effects of Hypericum Perforatum, in a rodent model of periodontitis.

[Paterniti I](#), [Briguglio E](#), [Mazzon E](#), [Galuppo M](#), [Oteri G](#), [Cordasco G](#), [Cuzzocrea S](#).

Department of Clinical and Experimental Medicine and Pharmacology, School of Medicine, University of Messina, Italy. ipaterniti@unime.it

Abstract

BACKGROUND: Hypericum perforatum is a medicinal plant species containing many polyphenolic compounds, namely flavonoids and phenolic acids. In this study we evaluate the effect of Hypericum perforatum in animal model of periodontitis.

METHODS: Periodontitis was induced in adult male Sprague-Dawley rats by placing a nylon thread ligature around the lower 1st molars. Hypericum perforatum was administered at the dose of 2 mg/kg os, daily for eight days. At day 8, the gingivomucosal tissue encircling the mandibular first molar was removed.

RESULTS: Periodontitis in rats resulted in an inflammatory process characterized by edema, neutrophil infiltration and cytokine production that was followed by the recruitment of other inflammatory cells, production of a range of inflammatory mediators such as NF- κ B and iNOS expression, the nitration of tyrosine residues and activation of the nuclear enzyme poly (ADP-ribose) polymerase; apoptosis and the degree of gingivomucosal tissues injury. We report here that Hypericum perforatum exerts potent anti-inflammatory effects significantly reducing all of the parameters of inflammation as described above.

CONCLUSIONS: Taken together, our results clearly demonstrate that treatment with Hypericum reduces the development of inflammation and tissue injury, events associated with periodontitis.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3000377/>

Mol Cell Biochem. 2006 Apr;285(1-2):121-31. Epub 2006 Mar 15.

Protective potentials of a potentized homeopathic drug, Lycopodium-30, in ameliorating azo dye induced hepatocarcinogenesis in mice.

[Pathak S](#), [Kumar Das J](#), [Jyoti Biswas S](#), [Khuda-Bukhsh AR](#).

Department of Zoology, Cytogenetics and Molecular Biology Laboratory, University of Kalyani, Kalyani, 741235, West Bengal, India.

Abstract

The protective potentials of a potentized homeopathic drug, Lycopodium-30, prepared from extract of spores of a plant, Lycopodium clavatum (Fam: Lycopodiaceae) and used as a remedy for various liver ailments, have been tested in mice chronically fed p-dimethyl amino azo benzene (p-DAB) - an initiator, and phenobarbital (PB) - a promoter of hepatic cancer, by using some cytogenetic endpoints like chromosome aberrations (CA), micronuclei (MN), mitotic index (MI) and sperm head abnormality (SHA), and toxicity biomarkers like acid and alkaline phosphatases (AcP and AlkP, respectively), alanine and aspartate amino transferases (ALT and AST, respectively) and lipid peroxidation (LPO) and reduced glutathione (GSH) activities. The effects of chronic treatment of the carcinogens were assessed at different intervals of fixation, namely, at day 7, 15, 30, 60, 90 and day 120, and compared with that of mice fed conjointly with the carcinogens and the homeopathic remedy. Both the assay systems indicated considerable protective potentials of the homeopathic remedy against p-DAB induced hepatocarcinogenesis in mice.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/16538399>

Forsch Komplementmed. 2007 Jun;14(3):148-56. Epub 2007 Jun 22.

Supportive evidence for the anticancerous potential of alternative medicine against hepatocarcinogenesis in mice.

[Pathak S](#), [Bhattacharjee N](#), [Das JK](#), [Choudhury SC](#), [Karmakar SR](#), [Banerjee P](#), [Paul S](#), [Banerjee A](#), [Khuda-Bukhsh AR](#).

Cytogenetics and Molecular Biology Laboratory, Department of Zoology, University of Kalyani, West Bengal, India.

Abstract

INTRODUCTION: The present study examines if Lycopodium 200 (Lyco-200) has demonstrable anti-cancer activities in mice which are chronically fed carcinogens, p-dimethylaminoazobenzene (p-DAB) and phenobarbital (PB) to induce liver cancer.

MATERIALS AND METHODS: Mice in 5 different groups were chronically fed for varying periods of time: group I: normal diet; group II: normal diet + alcohol 200); group III: p-DAB + PB; group IV: p-DAB + PB + alcohol 200 (vehicle of Lyco-200 being ethyl alcohol); group V: p-DAB + PB + Lyco-200. They were sacrificed at day 7, 15, 30, 60, 90 or 120, and the following parameters were assessed: cytogenetic endpoints like chromosome aberrations, micronuclei, mitotic index and sperm-head anomaly; toxicity biomarkers like acid and alkaline phosphatases, alanine and aspartate amino transferase, glutathione reductase, succinate dehydrogenase and catalase activities, lipid peroxidation and reduced glutathione content. Additionally, scanning and transmission electron microscopic analyses of liver tissues were made at day 90 and 120, and immunodetection of p53 protein as well as gelatin zymography for matrix metalloproteinases in liver tissue were performed. Furthermore, studies were conducted on blood glucose, hemoglobin and cholesterol, estradiol, testosterone and cortisol, and lymphocyte and hepatic cell viabilities. Physical properties of Lyco-200 and potentized alcohol 200 were analyzed by using methods such as UV, Fourier Transform Infrared Spectroscopy (FTIR), Fluorescence Spectroscopy, ¹H-NMR and ¹³C-NMR (Nuclear Magnetic Resonance Spectroscopy).

RESULTS: Lyco-200 reduced cytogenetic damages yielding positive modulations of all biochemical, pathological and other risk factors, cell viability and expression of p53 protein and matrix metalloproteinases as compared to controls.

CONCLUSION: Studies on other mammals are recommended to further investigate the potential of Lyco-200 in liver cancer.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17596695>

Indian J Exp Biol. 2009 Jul;47(7):602-7.

Protective potentials of a plant extract (*Lycopodium clavatum*) on mice chronically fed hepato-carcinogens.

[Pathak S](#), [Banerjee A](#), [Paul S](#), [Khuda-Bukhsh AR](#).

Department of Zoology, Cytogenetics and Molecular Biology Laboratory, University of Kalyani, Kalyani, India.

Abstract

Chronic feeding of carcinogens p-dimethylamino azobenzene (initiator) and phenobarbital (promoter) for 90 and 120 days elevated activities of acid and alkaline phosphatases, levels of blood glucose and cortisol and decreased the activities of glutathione reductase, succinate dehydrogenase, and blood cholesterol and hemoglobin contents, and levels of serum estradiol and testosterone in mice. Levels of these biomarkers in both liver and spleen tissues were positively altered along with a significant reduction of tumor incidence in liver of carcinogen intoxicated mice treated with spore extract of *Lycopodium clavatum*. The results validate the use of this plant extract in complementary and alternative medicines against hepato-toxicity.

Link to paper:

<http://nopr.niscair.res.in/bitstream/123456789/5036/1/IJEB%2047%287%29%20602-607.pdf>

Clin Exp Hom. 2009;1(1):1-10.

Combinational homeopathic therapy reduces genotoxicity and cytotoxicity in mice fed carcinogenesis.

[Pathak S](#), [Roy-Karmakar S](#), [Banerjee A](#), [Dutta S](#), [Khuda-Bukhsh AR](#).

Abstract

Comparative efficacy of combinational homeopathic therapy has been examined in mice by administering a homeopathic drug, *Lycopodium* 30 (Lyco 30) on a regular basis and a nosode *Cholesterinum* 200 (Chol 200) intermittently in one set and *Lycopodium* 200 (Lyco 200) and Chol 200 in another set. While potentized *Lycopodium* is routinely used in treating various liver ailments, use of Chol 200 is also advocated in dealing with stubborn cases, particularly in cases of suspected cancer. The present experiment was designed to induce liver tumor in mice by feeding them two carcinogens, namely, pdimethyl amino azo benzene and phenobarbital for varying periods of time viz. 7, 15, 30, 60, 90 and 120 days. Liver tumors develop at 60 days onward, some of which turn cancerous later. This serves as a model to test efficacy of drugs against cancer. Cytogenetical endpoints like

chromosome aberration, micronucleus, mitotic index and sperm head anomaly and hepatotoxicity biomarkers like acid and alkaline phosphatases, alanine and aspartate amino transferases, lipid peroxidation and reduced glutathione were tested. Results indicated that Chol 200 fed intermittently either with Lyco 30 or Lyco 200 produced additional benefits, the latter combination showing marginally better results, validating its use.

Link to paper:

http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDsQFjAA&url=http%3A%2F%2Fwww.sukulhomeopathy.com%2Fnewjournal%2Fkhuda-buksh1.pdf&ei=8t1vUYHLCYGYO_HogdAD&usg=AFQjCNE5baKLTecrI1JoKQTjb997LYj7JQ&bvm=bv.45368065,d.ZWU

Homeopathy. 2009 Apr;98(2):88-91.

Dual effect of Toxicodendron pubescens on Carrageenan induced paw edema in rats.

[Patil CR](#), [Gadekar AR](#), [Patel PN](#), [Rambhade A](#), [Surana SJ](#), [Gaushal MH](#).

R.C. Patel Institute of Pharmaceutical Education and Research, Near Karvand Naka, Shirpur, Dhule, Maharashtra, India. pchandragouda@yahoo.com

Abstract

BACKGROUND: Toxicodendron pubescens is the current botanical name of homeopathic Rhus toxicodendron (Rhus tox). Rhus tox drug is widely used in homeopathically diluted form in the treatment of inflammatory and edematous conditions. We studied the effect of crude form of this plant, after single and multiple doses in Carrageenan induced paw inflammation in rats.

METHOD: We evaluated effects of single dose and multiple doses of orally administered Rhus tox on Carrageenan induced paw inflammation in rats. We tested 10 mg/kg, 20 mg/kg and 40 mg/kg doses of Rhus tox. In the single dose study, Rhus tox was administered 1 h prior to the subplantar injection of Carrageenan. In the multiple dose study, Rhus tox was administered twice daily for three days and Carrageenan was injected 1 h after the last dose. Paw volume was measured using a digital plethysmometer.

RESULTS: Administration of a single dose of Rhus tox 1h prior to injection of Carrageenan significantly reduced the paw inflammation in a dose dependent manner. Administration of multiple doses of Rhus tox increased the intensity of inflammation induced by Carrageenan, but this was not statistically significant.

CONCLUSION: Rhus tox, in crude form, exerts anti-inflammatory effects after a single dose and proinflammatory effect after multiple doses in Carrageenan induced paw inflammation in rats. Further study is needed to explain this dual effect.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19358961>

Homeopathy. 2009 Jul;98(3):154-9. doi: 10.1016/j.homp.2009.02.011.

Immunomodulatory activity of Toxicodendron pubescens in experimental models.

[Patil CR](#), [Salunkhe PS](#), [Gaushal MH](#), [Gadekar AR](#), [Agrawal AM](#), [Surana SJ](#).

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pchandragouda@yahoo.com

Abstract

BACKGROUND: Toxicodendron pubescens is a botanical name of Rhus toxicodendron (Rhus tox). This plant is widely used in its homeopathically diluted form in the treatment of inflammatory and edematous conditions. In this study, various dilutions of Rhus tox including its crude form have been evaluated for their effects on immune response in the in vivo and in vitro experimental models.

METHODS: Rhus tox in the form of mother tincture, 6cH, 30cH, 200cH and 1000cH dilutions was tested through in vivo models including sheep red blood cells (SRBCs) induced cellular and humoral immune response in C57/BL6 mice. The effects of Rhus tox dilutions were also evaluated in vitro on the functions of human polymorphonuclear (PMN) cells such as phagocytosis and intracellular killing of Candida albicans, chemotaxis, and reduction of nitroblue tetrazolium (NBT) dye.

RESULTS: Rhus tox was found to intensify SRBCs induced antibody titer and delayed type hypersensitivity response in mice. Even higher dilutions such as 200cH and 1000cH were found to affect the immune response; however, the crude form, mother tincture, 6cH and 30cH dilutions revealed more potent effects than the 200cH and 1000cH dilutions. In in vitro assays, all the dilutions exerted stimulation of phagocytosis, candidacidal activity and chemotaxis of human PMN cells. The NBT dye reduction assay revealed that oxidative processes in the PMN cells are accelerated in the presence of Rhus tox. This study shows that Rhus tox possesses immunostimulatory activity in its crude form as well as in homeopathically diluted forms. These effects appeared to be concentration dependent as higher dilutions had less potent effects.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19647209>

Homeopathy. 2011 Jul;100(3):131-7.

Modulation of arthritis in rats by Toxicodendron pubescens and its homeopathic dilutions.

[Patil CR](#), [Rambhade AD](#), [Jadhav RB](#), [Patil KR](#), [Dubey VK](#), [Sonara BM](#), [Toshniwal SS](#).

RC Patel Institute of Pharmaceutical Education and Research, Karvand Naka, Shirpur 425 405, Dhule, Maharashtra, India. pchandragouda@yahoo.com

Abstract

BACKGROUND: Toxicodendron pubescens P. Mill (Anacardiaceae) known in homeopathy as Rhus toxicodendron (Rhus tox) is used as an anti-inflammatory medicine in homeopathic practice. In this study, Rhus tox in its crude form and homeopathic dilutions (3cH, 6cH, 30cH, 200cH) was evaluated for effects on Complete Freund's Adjuvant (CFA) induced arthritis in rats.

METHOD: We assessed the severity of arthritis through observations including inflammatory lesions, body and organ weight and hematological parameters

including C-reactive protein (CRP). Blinded radiological analysis of the affected joints and pain intensity determination was also carried out.

RESULTS: Rhus tox protected rats from CFA-induced inflammatory lesions, body weight changes and hematological alterations. Rhus tox protected against radiological joint alterations due to arthritis. Arthritic pain scores were also favorably affected by Rhus tox. All the dilutions of Rhus tox including crude form showed anti-arthritic activity. The maximum protective effect was evident in the crude form at 10mg/kg/day, by mouth.

CONCLUSION: This study supports claims in the homeopathic literature on the role of Rhus tox and its ultra dilutions in the treatment of arthritis and associated pain.

Further study is needed to explain this anti-arthritic effect of Rhus tox.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21784329>

Evid Based Complement Alternat Med. 2011;2011:785245.

doi:10.1093/ecam/nep148

Anti-Arthritic Activity of Bartogenic Acid Isolated from Fruits of *Barringtonia racemosa* Roxb. (Lecythydaceae).

Patil KR, Patil CR, Jadhav RB, Mahajan VK, Patil PR, Gaikwad PS.

Abstract

The fruits of *Barringtonia racemosa* are prescribed in the ayurvedic literature for the treatment of pain, inflammation and rheumatic conditions. In present investigation, activity guided isolation of bartogenic acid (BA) and its evaluation in the Complete Freund's Adjuvant (CFA)-induced arthritis in rats is reported. Among the various extracts and fractions investigated preliminarily for carrageenan-induced acute inflammation in rats, the ethyl acetate fraction displayed potent anti-inflammatory activity. Large-scale isolation and characterization using chromatography and spectral study confirmed that the constituent responsible for the observed pharmacological effects was BA. Subsequently the BA was evaluated for effectiveness against CFA-induced arthritis in rats. The results indicate that at doses of 2, 5, and 10 mg kg⁻¹ day⁻¹, p.o., BA protects rats against the primary and secondary arthritic lesions, body weight changes and haematological perturbations induced by CFA. The serum markers of inflammation and arthritis, such as C-reactive protein and rheumatoid factor, were also reduced in the BA-treated arthritic rats. The overall severity of arthritis as determined by radiological analysis and pain scores indicated that BA exerts a potent protective effect against adjuvant-induced arthritis in rats. In conclusion, the present study validates the ethnomedicinal use of fruits of *B. racemosa* in the treatment of pain and inflammatory conditions. It further establishes the potent anti-arthritic effects of BA. However, additional clinical investigations are needed to prove the efficacy of BA in the treatment of various immuno-inflammatory disorders.

Link to paper: <http://www.hindawi.com/journals/ecam/2011/785245/>

J Ethnopharmacol. 2011 Jan 7;133(1):92-6. doi: 10.1016/j.jep.2010.09.004. Epub 2010 Sep 15.

Anticonvulsant activity of aqueous root extract of *Ficus religiosa*.

[Patil MS](#), [Patil CR](#), [Patil SW](#), [Jadhav RB](#).

Department of Pharmacognosy, RC Patel Institute of Pharmaceutical Education & Research, Shirpur, Maharashtra, India.

Abstract

ETHNOPHARMACOLOGICAL RELEVANCE: *Ficus religiosa* Linn is frequently used for the treatment of nervous disorders among Pawara tribe of the Satpuda range, India.

AIM OF THE STUDY: This study aimed to investigate the anticonvulsant activity of the aqueous aerial root extract of *Ficus religiosa* in chemoconvulsant-induced seizures in mice.

MATERIALS AND METHODS: The anticonvulsant activity of the extract (25, 50 and 100 mg/kg, p.o.) was investigated in strychnine-, pentylenetetrazole-, picrotoxin- and isoniazid-induced seizures in mice. Rat ileum and fundus strip preparations were used to study the effect of the extract on acetylcholine (Ach)- and serotonin (5-HT)-induced contractions, respectively.

RESULTS: The extract showed no toxicity and protected the animals in the strychnine and pentylenetetrazole tests in a dose-dependent manner. Its effect in the picrotoxin and isoniazid tests, however, was less potent. The extract also exhibited dose-dependent potentiation of Ach in rat ileum but failed to potentiate the effect of 5-HT in rat fundus strip preparation.

CONCLUSIONS: The results suggest that an orally administered aqueous root extract of *Ficus religiosa* has dose-dependent and potent anticonvulsant activities against strychnine- and pentylenetetrazole-induced seizures. The observed activities may be ascribed to the appreciable content of zinc and magnesium in the extract.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20837125>

Proc Zool Soc Calcutta. 1992;45(Suppl A):311–314.

Effect of a potentized homeopathic drug, *Nux vomica* on alcoholic rats and their hypothalamic neurons.

Paul A, Sinha Babu SP, Sukul NC, Kurzina NP, Batuev AS.

Hahnemann Glean. 1980;47(2).

Influence of *Natrum muriaticum* on adrenocortical (zona glomerulosa) steroidogenesis.

Paul B.

J Acupunct Meridian Stud. 2010 Sep;3(3):188-96. doi: 10.1016/S2005-2901(10)60035-0.

In vitro and in vivo studies demonstrate anticancer property of root extract of *Polygala senega*.

[Paul S](#), [Mandal SK](#), [Bhattacharyya SS](#), [Boujedaini N](#), [Khuda-Bukhsh AR](#).

Cytogenetics and Molecular Biology Laboratory, Department of Zoology, University of Kalyani, Kalyani, India.

Abstract

Polygala senega is extensively used in traditional systems of medicine against various lung diseases including cancer. In the present study we tested the anticancer potentials of ethanolic extract of roots of *P. senega* (generally used as a homeopathic drug) in a mammalian model, where mice, in vivo, were treated chronically with benzo[a] pyrene and in vitro where lung adenocarcinoma cell line (A549) were used. We deployed various parameters like cell viability assay, chromatin condensation studies with Hoechst 333258 staining, and maintained suitable controls. To understand the possible signal transduction pathways, expression of various signal proteins such as Aryl Hydrocarbon receptor (AhR), cytochrome P450 (CYP1A1), Bcl-2, proliferating cell nuclear antigen (PCNA), Bax and Caspase-3 was studied. Additionally, reverse transcriptase polymerase chain reaction analysis of AhR, p53, PCNA and β -actin (housekeeping) genes was made. Immunohistochemical localization of PCNA proteins was also conducted in vivo. Feeding of root extract of *P. senega* to mice (at the rate of 50 mg/kg and 100 mg/kg bw) chronically treated with the carcinogen (50 mg/kg bw dissolved in olive oil) showed positive modulation in expression of signal proteins. Upregulation of apoptotic signals such as p53, Caspase-3 and Bax, and downregulation of AhR, cytochrome P450 (CYP1A1), Bcl-2 and PCNA were observed. Addition of root extract of *Polygala Senega* (at doses of 50 μ g and 100 μ g) into culture medium containing A549 cells induced recovery of decreased cell viability and increased chromatin fragmentation (apoptosis). Therefore, results of both in vivo and in vitro studies scientifically validate its potential use as an anticancer agent, particularly against lung cancer, and provide important information potentially helpful in drug designing.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20869020>

Zhong Xi Yi Jie He Xue Bao. 2011 Mar;9(3):320-7.

Anticancer potentials of root extract of *Polygala senega* against benzo[a]pyrene-induced lung cancer in mice.

[Paul S](#), [Bhattacharyya SS](#), [Samaddar A](#), [Boujedaini N](#), [Khuda-Bukhsh AR](#).

Cytogenetics and Molecular Biology Laboratory, Department of Zoology, University of Kalyani, Kalyani 741235, India.

Abstract

OBJECTIVE: To evaluate anticancer potentials of *Polygala senega* on lung cancer induced by benzo[a]pyrene (B[a]P) in mice.

METHODS: Swiss albino mice were divided into five groups with each containing six animals. Group 1 served as control, and the animals received olive oil as vehicle. Group 2 animals were treated with B[a]P (50 mg/kg body weight dissolved in olive oil) orally twice a week for four consecutive weeks. Group 3 animals were fed B[a]P as in group 2 and 48% alcohol (since the vehicle of the remedy was alcohol). Group 4 animals were B[a]P-intoxicated mice (as in group 2) which were additionally fed ethanolic extract of *Polygala senega* (EEPS) daily for 16 weeks. EEPS treatment

started after the first dose of B[a]P. Group 5 animals were treated with EEPS alone for 16 weeks to test cytotoxicity of EEPS if any. Mice were sacrificed after 16 weeks and the following parameters were assessed: the anti-oxidant activity measured by 2,2-diphenyl-1-picrylhydrazyl free radical assay, tumor incidence, lung weight and body weight, DNA damage evaluation by comet assay and enzyme-linked immunosorbent assay (ELISA); toxicity biomarkers like catalase, superoxide dismutase, glutathione peroxidase, glutathione reductase, lipid peroxidation (LPO) and total thiol content were also detected.

RESULTS: Treatment with EEPS increased the final body weight and significantly decreased the lung weight in group 4 mice ($P < 0.01$) compared with group 3 mice. Comet assay showed that EEPS-treated mice in group 4 presented a decrease of DNA damage significantly ($P < 0.01$) in lung tissues. There was a significant increase observed in the level of p53 in group 4 as compared with group 3 ($P < 0.01$) detected by ELISA. A highly significant increase in tissue LPO with concomitant decrease in the activity of anti-oxidants was observed in group 2 and group 3 mice ($P < 0.05$) compared with the control mice. These adverse changes were reversed significantly in group 4 mice ($P < 0.01$).

CONCLUSION: Chemopreventive potentials of *Polygala senega* against chemically induced lung cancer in mice are confirmed.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21419086>

Immunopharmacol Immunotoxicol. 2011 Dec;33(4):691-9. doi: 10.3109/08923973.2011.561354. Epub 2011 Mar 14.

Immunomodulatory effect of leaf extract of *Murraya koenigii* in diabetic mice.
[Paul S](#), [Bandyopadhyay TK](#), [Bhattacharyya A](#).

Department of Molecular Biology and Biotechnology, University of Kalyani, Kalyani, India.

Abstract

CONTEXT: Extracts of different parts of *Murraya koenigii* were traditionally used as medicine in many countries for the treatment of various diseases including diabetes. **OBJECTIVE:** To delineate whether aqueous (AEM) and 50% methanol (MEM) leaf extracts have immunomodulatory properties to regulate oxidative stress metabolism and fight against the adverse effect of diabetes in diabetic mice.

MATERIALS AND METHODS: Alloxan-induced diabetic mice were received oral doses of extract (≥ 200 mg/kg body weight). Fasting blood glucose, total cholesterol (TC), triglycerides (TG), phospholipids (PL), and antioxidant enzymes activity were estimated by biochemical processes. Western blotting, flow cytometry study, cell count, and histology were performed to justify different aspects of diabetes-related pathology.

RESULTS: Alloxanized mice showed higher blood glucose that was further reduced after treatment of extracts for 30 days. Extract-treated diabetic mice were found lower TC, TG, and PL than diabetic mice. Rising of glutathione (GSH) and superoxide dismutase (SOD) enzyme activities compared with diabetic mice showed antioxidant property of the extracts. We found anti-inflammatory response as it was evident by interleukin (IL)-2, 4, 10, and tumor necrosis factor alpha (TNF- α)

expression. In addition, the reduction of apoptosis in pancreatic cells was found upon extract-treated diabetic mice.

DISCUSSION: The leaf extracts of the plant not only have hypoglycemic property but also have certain effects to regulate mice immunology related to oxidative stress metabolism. Moreover, AEM gave better response than MEM.

CONCLUSION: Thus, the work reveals about immunomodulatory property of the leaf extracts of *M. koenigii* on diabetes and diabetes-related pathology in mice.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21401386>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:29-31.

Behavioral effects of potentiated antibodies to morphine and mu-opioid receptors during withdrawal syndrome.

[Pavlov IF](#), [Epstein OI](#), [Shtark MB](#).

Institute of Molecular Biology and Medicine, Siberian Division of the Russian Academy of Medical Sciences, Novosibirsk.

Abstract

We studied the effects of potentiated antibodies to morphine and mu-opioid receptors on animal behavior in the forced swimming test and reaction of light avoidance after morphine withdrawal. Antibodies to morphine normalized behavioral characteristics in the forced swimming test, while antibodies to mu-opioid receptors reduced dark preference in animals.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949640>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:137-9.

Morphine and antibodies to mu-opiate receptors in ultralow doses: effect on oxygen consumption.

[Pavlov IF](#), [Epstein OI](#).

Institute of Molecular Biology and Medicine, Siberian Division of the Russian Academy of Medical Sciences, Novosibirsk.

Abstract

The degree of oxygen consumption in rats was determined after intraperitoneal injection of morphine in a single dose of 5 mg/kg. Some animals were injected with morphine and perorally received morphine or antibodies to mu-opiate receptors in ultralow doses obtained by the technology of potentiation. Potentiated substances significantly reduced oxygen consumption intensified after morphinization.

Potentiated morphine decreased the intensity of oxygen consumption to the level observed in intact animals. Our results indicate that morphine in ultralow doses modulates the action of this compound in toxic concentrations (bipathic phenomenon) and produces the normalizing effect. Potentiated antibodies to mu-opiate receptors modulated the effect of morphine, which indicates that they are involved in the development of opium dependence.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949680>

Bull Exp Biol Med. 2007 Jun;143(6):686-8.

Effect of antibodies against S-100B antigen in ultralow doses on sucrose consumption during learning.

[Article in English, Russian]

[Pavlov IF.](#)

Institute of Molecular Biology and Biophysics, Siberian Division of the Russian Academy of Medical Sciences, Novosibirsk.

Abstract

We studied the effect of potentiated antibodies against S-100B antigen on 20% sucrose consumption by Wistar rats under conditions of free-choice drinking from the bowls with sucrose and water during presentation of an acoustic pre-nociceptive or neutral signal. Peroral administration of antibodies after training sessions increased the number and duration of contacts with sucrose solution.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/18239801>

J Exp Med. 1931;54:407-419.

Production of a refractory state as concerns the Shwartzman phenomenon by the injections of venom of the moccasin snake (*Ancistrodon piscivorus*).

Peck SM, Sobotka H.

Abstract

The majority of rabbits receiving intradermal, intraperitoneal or intravenous injections of moccasin venom became refractory to the development of the Shwartzman phenomenon. An incubation period of about 14 days was required for their resistance to develop. The incidence of refractory animals was inversely proportional within limits to the amount of toxin given intravenously to elicit the Shwartzman phenomenon. The intravenous route was the most efficacious in developing refractivity. The refractory state was still present 44 days after the primary injection of moccasin venom. Rattlesnake venom was not efficacious in inducing a refractory state. The refractory animals did not show a changed reaction to moccasin venom in the concentrations used. No circulating antibodies could be demonstrated to explain the refractory state. Antivenin had no effect on the course of the Shwartzman phenomenon.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19869927>

Homeopathy. 2004 Oct;93(4):193-8.

Effect of *Atropa belladonna* and *Echinacea angustifolia* in homeopathic dilution on experimental peritonitis.

[Pedalino CM](#), [Perazzo FF](#), [Carvalho JC](#), [Martinho KS](#), [Massoco Cde O](#), [Bonamin LV](#).

Faculty of Health Sciences of São Paulo, FACIS, Instituto Brasileiro de Estudos Homeopáticos, IBEHE, Rua Bartolomeu de Gusmão, 86. 04111-020 São Paulo, SP, Brazil.

Abstract

Atropa belladonna and *Echinacea angustifolia* have been used in homeopathy as modulators of inflammatory processes, in simple potency or 'accord of potencies', as recommended by homotoxicology. We evaluated their effects on leukocyte migration and macrophage activity induced by experimental peritonitis in vivo. Mice were injected (i.p.) with LPS (1.0mg/kg) and treated (0.3ml/10g/day, s.c.) with different commercial forms of these medicines. *Echinacea angustifolia* D4--a simple potency preparation--and Belladonna Homaccord, Belladonna Injeel, Belladonna Injeel Forte, *Echinacea* Injeel and *Echinacea* Injeel Forte--all in 'accord of potencies'--were tested. The association of *A. belladonna* and *E. angustifolia* in 'accord of potencies' produced an increase of polymorphonuclear cell migration (Kruskal-Wallis, $P = 0.03$) and a decrease of mononuclear cell percentages (Kruskal-Wallis, $P < \text{or} = 0.04$), when compared with control, mainly in preparations containing low potencies. The proportion of degenerate leukocytes was lower in the treated groups, compared to a control group ($P < \text{or} = 0.05$). The treated groups showed increased phagocytosis ($P < \text{or} = 0.05$), mainly in preparations containing high potencies. Our results suggest that *A. belladonna* and *E. angustifolia*, when prepared in 'accord of potencies', modulate peritoneal inflammatory reaction and have a cytoprotective action on leukocytes.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15532698>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Diluições Homeopáticas na Peritonite Experimental: Efeito da *Atropa belladonna* e *Echinacea angustifolia*.

[Effect of *Atropa belladonna* and *Echinacea angustifolia* Homeopathic Dilutions on Experimental Peritonitis].

[Article in Portuguese]

Pedalino CMV, Perazzo FF, Carvalho JXT, Martinho KS, Massoco CO, Bonamin LV.

English Abstract

This research was made with the purpose to evaluate *Atropa belladonna* and *Echinacea angustifolia*, in simple potency and potency's accords, effects on leukocyte activity and migration in a model of experimental peritonitis using mice. In phase A, *A. belladonna* and *E. angustifolia* associated in a same preparation increase polymorphonuclear, spreading percentage and macrophage phagocytosis percentage and decrease lymphocyte, macrophage and degenerated leukocyte percentage. In phase B, *E. angustifolia* increased polymorphonuclear cells and phagocytic activity of macrophages and reduced degenerated cells percentage. In phase C, Belladonna Injeel Forte" increased polymorphonuclear cells migration, phagocytosis and spreading percentage and decreased lymphocyte migration and degenerated leukocytes. We conclude that both *A. belladonna* and *E. angustifolia* have evident modulating activity on inflammatory response and exert synergic

effects among them. Evidence of having weak cytotoxicity effects upon migrated leukocytes should be noted.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/212/225>

Prat Méd Chir Anim Cie. 1986;18(2):71-72.

L'homéopathie vétérinaire une spécialité, un art de guérir, une conception différente des maladies.

[The veterinary homeopathy specialty, a healing art, a different conception of the sick].

[Article in French]

Peker J.

Rev Med Vet. 1988;139:789-790.

A comparison of a homeopathic treatment to a placebo in the case of chronic staphylococcus infection in a group of rabbits.

Perrot M, Mahé F.

Dt Z Hom. 1922;1=39(11):510-512.

Laboratoriumsversuche mit Hochpotenzen.

[Laboratory experiments with high potencies].

[Article in German]

Pfander A.

Homeopathy. 2012 Jul;101(3):154-8.

Morphometry of white muscle fibers and performance of Nile tilapia (*Oreochromis niloticus*) fingerlings treated with methyltestosterone or a homeopathic complex.

[Piau R Jr](#), [Vargas L](#), [Valentim-Zabott M](#), [Ribeiro RP](#), [da Silva AV](#), [Otutumi LK](#).

Universidade Paranaense, Umuarama, PR, Brasil. piau@unipar.br

Abstract

BACKGROUND: Nile tilapia (*Oreochromis niloticus*), are widely used in fish farming, hormonal treatments are used to increase productivity. Studies of the characteristics of the fiber types are important in species that have well developed muscle mass, such as Nile tilapia.

METHODS: A total of 4800 post-larval fish were randomly assigned by tank to receive one of three treatments: Control (30°GL alcohol), Homeopathic complex (Homeopatila RS) or Hormone (17- α -methyltestosterone) supplemented in the feed for 28 days. Survival and morphological parameters were measured at day 45.

RESULTS: At day 45, the survival rates were 54.1% (Control), 87.8% (Homeopathy), 50.3% (Hormone). The mean final weight for Homeopathy was statistically significantly lower (1.07 g) than the other two groups: Control (1.81 g) and Hormone (2.04 g). Mean total lengths were Control (4.75 cm), Hormone (4.49 cm), statistically significantly different from Homeopathy (3.83 cm). Average partial length, trunk length, height and body width were significantly lower for Homeopathy than Control or Hormone ($p < 0.05$) Homeopathy treated fish had significantly greater muscle fiber diameter than the other two groups.

CONCLUSIONS: Fish treated with the homeopathic complex had improved survival and muscle fiber hypertrophy, but were smaller (probably related to increased survival and overcrowding) compared to fingerlings treated with synthetic hormone or control.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22818232>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Pesquisa Clínica Veterinária em Homeopatia na Universidade Federal Rural do Rio de Janeiro.

[Clinical Veterinary Research in Homeopathy at the “Universidade Federal Rural do Rio de Janeiro].

[Article in Portuguese]

Pinto LF.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/192/201>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Emprego do Ultradiluído *Calcarea carbonica* 6CH e *Phytolacca decandra* 6CH no Tratamento da Mastite em Vacas Leiteiras.

[Homeopathic Treatment of Mastitis in Lactating Dairy Cows within Organic Production].

[Article in Portuguese]

Pinto LF, Fajardo RSL, Alves PAM, de Castilhos LR.

English Abstract

The objective of the present study is to evaluate the efficiency of the homeopathic treatment of dairy cows with clinical and sub clinical mastites. 34 lactating Girolando cows from the experimental herd of PESAGRO-RIO were used in this study.

Diagnostic was based on the clinical examination, physical exam of the mammary glands, California Mastitis Test (CMT) and bacteriological examinations. Animals were distributed within the experimental groups T1 (n=15, oral administration with the ration of 2 ml of *Calcarea carbonica* 6CH after the morning milking and *Phytolacca decandra* 6CH after the afternoon milking) and T2 (n=19, intramammary antibiotic therapy). CMT was repeated after 30 days. Results were analysed by Mann-Whitney U Test, considering $\alpha = 0.05$. There was no significant difference between the CMT scores of the animals treated with homeopathic and allopathic

medicines ($p=0.17$), demonstrating that both therapies are equally efficient in therapy of bovine mastitis.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/222/246>

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Estudo Experimental da Ação Patogenética de *Palicourea marcgravii* em Doses Ponderal e Ultradiluída em *Rattus norvegicus*.

[Experimental Study of the Pathogenetic Action of Ponderal and Ultradiluted *Palicourea marcgravii* in *Rattus norvegicus*].

[Article in Portuguese]

Pinto LF, Peixoto PV, de Castilhos LR.

English Abstract

The aim of this study is to verify the pathogenetic evidences and the therapeutic action of ultra diluted *Palicourea marcgravii* (P.m.). Research is being developed in 50 Wistar rats, with a mean weight of 110g, distributed in four experiments. The first one is to evaluate the lethal dosage of the aqueous extract of P.m., the second is to evaluate the effects of the lethal dosage of the mother tincture of P.m. The third is to develop the P.m. 6CH e P.m. 30CH pathogenetic manifestation. The fourth is to evaluate the preventive and curative action of the ultra-diluted cited above. Each experiment has a control group and the animals will receive the substances orally or by esophageal catheter. Data to be collected are: behavior in open field, clinical parameters (weight, piloerection, body temperature, cianosis of the extremities, nervous depression, respiratory frequency, convulsion and death), and the macro and microscopic aspects.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/224/250>

Int J High Dilution Res. 2006 Jul-Sep:5(16).

Modelos Experimentais para o Estudo dos Efeitos da Chamomilla 6CH no Tratamento do Estresse e Depressão.

[Experimental Models for the Study of the Effects of Chamomilla 6CH on the Treatment of Stress and Depression].

[Article in Portuguese]

Pinto SAG, Bohland E. Bonamin LV, Morgulis MSFA.

English Abstract

This study describes the effects of Chamomilla 6CH on neuro-immune balance of mice submitted to different experimental models: contact with sick (exp.1) and depression model (exp.2), with evaluation of behavioural and hematologic parameters, measured through Open Field and Forced Natation (Porsolt). In exp. 1, animals that lived together with the sick cage mate presented decrease in general activity, but the treatment with Chamomilla 6CH induced the recovery of behavioral parameters to the same level as presented by the 'base control', suggesting

a putative anxiolytic effect. In exp. 2 “amitryptiline” and “vehicle” groups presented a statistically significant increase of the motility time, in relation to “Chamomilla 6CH” and “control”. Leucocytes were decreased in “amitryptiline” and “Chamomilla 6CH” groups. The treatment with Chamomilla 6CH induced the recovery of normal behavioural parameters in animals submitted to contact with a sick cage mate, but no effect was observed in the forced swimming test, when compared to the amitryptiline anti-depressive effects. The present suggests an anxiolytic effect. Hematologic results are not conclusive.

Link to abstract/paper:

<http://www.doaj.org/doaj?func=issueTOC&isId=89700&uiLanguage=en>

Homeopathy. 2008 Jul;97(3):141-4.

An animal model for the study of Chamomilla in stress and depression: pilot study.

[Pinto SA](#), [Bohland E](#), [Coelho Cde P](#), [Morgulis MS](#), [Bonamin LV](#).

Faculty of Health Sciences, Brazilian Institute for Homeopathic Studies (FACIS-IBEHE), São Paulo, Brazil.

Abstract

The behavioral and hematological effects of treatment with Chamomilla 6cH in mice subjected to experimental stress are described. Swiss mice were randomly divided into pairs, one animal was inoculated with Ehrlich's tumor, the other was treated daily with Chamomilla 6cH or control or received no treatment. After 7 days, the animals were observed in an open-field arena and blood samples taken. Mice who cohabitated with a sick cage-mate showed a decrease in their general activity, but those treated with Chamomilla 6cH were less severely affected ($p=0.0426$). No hematological changes were observed. In a second experiment, the forced swimming test was applied to mice pre-treated with Chamomilla 6cH, controls were: water, 10% ethanol or amitriptyline. Only the amitriptyline and ethanol treated groups showed significant excitatory behavior ($p=0.0020$), Chamomilla 6cH treated animals' scores intermediate between water control and ethanol or amitriptyline. A decrease in the leukocyte count was observed in the amitriptyline and Chamomilla 6cH treated groups ($p=0.039$). These data suggest that treatment with Chamomilla 6cH is related to the recovery of basal behavioral conditions in mice subjected to stressful conditions.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/18657773>

Int J High Dilution Res. 2008;7(24):163. Dissertation Abstract.

Effects of aqueous and hydroalcoholic extracts and ultra-highly diluted solutions of *Palicourea marcgravii* (Rubiaceae) in rats.

Pinto LF

Federal Rural University of Rio de Janeiro, RJ, Brazil

ABSTRACT

Palicourea marcgravii (Pm) is the most important toxic plant in Brazil. It is responsible for about half of all bovine deaths by natural poisoning in the country. The poisoning has a hyperacute evolution resulting in sudden death, which is attributed to the monofluoroacetic acid. This substance has high toxicity to several mammals, including humans. The homeopathic therapeutics uses ultra-highly diluted and dynamized solutions and there is enough evidence to investigate them as possible protection against poisonings. The aims of the present work were to compare the toxic effects of aqueous (AE) and hydroalcoholic (mother tincture - MT) extracts of Pm in rats, evaluate the effects of ultra-highly diluted and dynamized solutions (Pm 6CH and Pm 30CH) over the development of tolerance to the toxic effects of Pm and evaluate clinical, necroscopic and histopathological alterations in non-intoxicated rats treated with these solutions. AE and MT groups were formed of 10 animals each which received the extract in doses of 0.4g/kg, 0.8g/kg, 2g/kg and 4g/kg, intragastrically. The UD6EA and UD30EA groups were formed of five rats each, which received respectively 1 mL of Pm 6CH e Pm 30CH solutions, by oral route, three times a day, for eight days. Then, they were intoxicated with 2g/kg of Pm aqueous extract, intragastrically and received the correspondent ultra-highly diluted and dynamized preparations hourly until death. The UD6 and UD30 groups were formed of five rats each and received respectively 1 mL of Pm 6CH and Pm 30CH, orally, three times a day for 63 days. The animals were evaluated using clinical parameters, including the direct observation of their behavior at the open field and at the elevated plus-maze, and the study of the macro and microscopic lesions. Hyperacute death occurred after administration of the doses of 0.4g/kg, 0.8g/kg, 2g/kg e 4g/kg. In the AE group, prostration and nervous hyperexcitability followed or not by convulsive crisis were observed. In the MT group, the animals presented marked nervous depression without convulsion. Hepatic congestion and evidence of cardiac dilation were observed in the necropsy. Hydropic vacuolar degeneration of the renal distal convoluted tubules and congestion of several organs were observed in the histopathological examination. The latencies for the emergence of the first clinical signs, the convulsions and death occurrence were different in the animals of groups AE1 (Pm 2g/kg), UD6EA and UD30EA, but was considered inadequate the animals amount. Groups UD6 and UD30 did not show any clinical, behavioral, necroscopical or histopathological differences when compared to the control group. The conclusions were that the aqueous extract causes nervous excitability and convulsions while the mother tincture causes nervous depression. There is cumulative effect of the toxic substances present in the plant, and there is not evidence that the ultra-highly diluted and dynamized preparation increases the tolerance to Pm intoxication.

Link to abstract: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewFile/303/365>

Int J High Dilution Res. 2008;7(25):193-198.

Effects of High Diluted Solutions of *Palicourea marcgravii* St Hill in Rats Poisoned by Aqueous Extracts of This Plant.

Pinto LF, de Castilhos LR, Telhado J, França TDN, de Farias Brito M, Peixoto PV.

Abstract

Palicourea marcgravii , a shrub causing sudden death in cattle, is a major cause of economic loss to breeders in Brazil. The aim of the present study was to evaluate

the effects of high diluted solutions 6cH and 30cH of *P. marcgravii*, on the development of tolerance to the toxic effects of this plant. 14 adult Wistar rats were divided into 3 test groups. AE (aqueous extract) group was composed of 4 rats receiving aqueous extract of *P. marcgravii* intragastrically at a dose of 2g/kg. Groups HD6AE and HD30AE comprised 5 rats each. Animals in these groups received 1 mL of 6cH and 30cH solutions of *P. marcgravii* respectively by oral route 3 times a day, for 8 days. At the end of this period, they were intragastrically intoxicated with 2g/kg of aqueous extract of *P. marcgravii*, receiving the corresponding high diluted preparation hourly until death. Main symptoms were nervous excitability and convulsions. Even though the times for onset of the first clinical signs, convulsions and death was slightly longer in the animals in group HD30AE when compared to group AE, no evidence indicating that the highly diluted preparations increase tolerance to intoxication by *P. marcgravii* was found.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewFile/301/372>

Med Welt. 1960;26:1417-1422.

Vergleichende Untersuchungen über die choleretische Wirkung verschiedener Arzneimittel bei der Ratte.

[Comparative studies on the choleric effect of different drugs in the rat].

[Article in German]

Pirtkien R, Surke E, Seybold G.

Link to abstract/paper:

http://www.researchgate.net/publication/34700942_Vergleichende_Untersuchungen_ber_die_choleretische_Wirkung_verschiedener_Arzneimittel_bei_der_Ratte

Dt J Hom. 1983;2(4):353-355.

Lactatio sine graviditate der Hündin.

[Lactation of a dog during pregnancy].

[Article in Romanian]

Pohl W, Fischer M.

Biol Tier. 2010;27(1):7–16.

Risikomanagement mit homöopathischen Präparaten bei Milchkühen nach Schweregeburt.

[Risk management with homeopathic preparations in dairy cows after dystocia].

[Article in German]

Pöhlmann A, Enbergs H.

Bulletin de l'Académie Vétérinaire de France. 1986;59(3):395-401.

Etude des dilutions infinitésimales dans les systèmes biologiques. Exemples, methode d'etude, resultats.

[Study of infinitesimal dilutions in biological systems. Examples, method of study, results].

[Article in French]

Poitevin, B.

Int J High Dilution Res. 2013;12(44):102-103.

Protocol for evaluation of highly diluted *Atropa belladonna* in murine infection by *Trypanosoma cruzi*.

Portocarrero AR, Sandri PF, Ciupa L, da Veiga FK, Falkowski GJS, de Souza Rodrigues WDN, Quaresma CH, Bonamin LV, Bellavite P, Aleixo DL, de Araújo SM.

Abstract

Background: The Multicentre International Project on High Dilutions suggests evaluating the effect of the compound *A. belladonna* in different experimental models.

Aim: The aim is to evaluate the effect of *A. belladonna* ultra-diluted in the course of murine infection caused by *T. cruzi*.

Methodology: The experiments, approved by the UEM's Animal Ethics Committee, will be performed as a blind controlled, randomized assay by chance. Animals will be maintained in an environment with temperature (18-20 °C), humidity (70%) and lighting controlled, in a 12 hours light and dark cycle, and will receive water and food ad libitum in micro-acclimated cages. Provided by the UEM's Central Animal Vivarium, swiss male mice, 56 days old were divided in groups of 12 animals each according to the treatment: CI- infected untreated; CNI- not infected and not treated; and animals infected and treated with the TM - mother tincture of *A. belladonna* and their dynamized solutions: 2cH; 3cH; 5cH; 6cH; 12cH and 30cH.

Infection: 1400 blood trypomastigotes of the Y strain of *T. cruzi*, via i.p.

Treatment: Will be provided ad libitum diluted in water (1mL/100mL water) 48 hours before and after the infection, subsequently in 56/56 hours until complete nine days of infection. It will be available to the animals during 16 hours. Dynamizations will be prepared from the *A. belladonna* TM (commercially purchased) according to the Brazilian Homeopathic Pharmacopoeia, with microbiological testing (RDC67-MS Brazil) and in vivobiological test.

Analyses: Clinical parameters (temperature, weight, water/food intake and excreta) [1,2] and parasitological parameters (pre-patent, patent period, parasitemia peak, total parasitemia, mortality and survival time) will be assessed daily. The dynamization that presents the best performance will be elected for behavioral study through the automated system NoldusEthoVision XT6 (Noldus, Leesburg, Netherlands). The analysis will include assessment of motor activity (distance covered in the arena and average speed of each animal), and the exploratory activity (frequency of events and time spent by the animal in fields determined by the software).

Considerations: In vivo experiments using highly/ultra diluted substances demonstrate that they are able to influence the clinical with direct reflects in the animal's behavioral equilibrium [3]. The *A. belladonna* is a plant rich in primary alkaloids [4] and it is used as a modulator of inflammatory processes [5,6].

Link to abstract/paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/655>

Homeopathy. 2004 Jan;93(1):12-16.

Action of Causticum in inflammatory models.

[Prado Neto Jde A](#), [Perazzo FF](#), [Cardoso LG](#), [Bonamin LV](#), [Carvalho JC](#).

Faculdade de Ciências da Saúde de São Paulo, Instituto Brasileiro de Estudos Homeopáticos, R. Bartolomeu de Gusmão, 86, CEP 04111-020, S. Paulo, SP, Brazil.

Abstract

The anti-inflammatory effect of Causticum was evaluated using acute and chronic inflammatory models in vivo. The administration of concentrated Causticum solution into the hind paw of rats produced an inflammatory reaction with oedema formation within the first hour, showing that Causticum acts as an oedematogenic agent. Carrageenin induced rat paw oedema was significantly inhibited ($P < 0.05$) in the group treated with Causticum 30cH solution compared to control. Groups treated with potentized Causticum (6cH, 12cH, 30cH and 200cH), showed significant inhibition ($P < 0.05$) of the inflammation pre-induced by carrageenin. However pre-treatment with Causticum 30cH for 6 days (0.5 ml, daily) did not significantly inhibit granulation using an implantation method.

Link to paper:

http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CFsQFjAD&url=http%3A%2F%2Fwww.researchgate.net%2Fpublication%2F7969907_Acti%2Fon%2Fof%2FCausticum%2Fin%2Fflammatory%2Fmodels%2Ffile%2F9fcd5098f2bf84ff9.pdf&ei=3Z7QUND4luSZ0QW4i4GACQ&usq=AFQjCNHCzI181-0_ljqBI8xy5yVYp3OI_w&bvm=bv.1355534169,d.d2k

Acta Eur Fertil. 1987 Mar-Apr;18(2):129-35.

Uterine histoarchitecture during pre and post-implantation periods of rats treated with aqueous extract of *Moringa oleifera* Lam.

[Prakash AO](#), [Pathak S](#), [Shukla S](#), [Mathur R](#).

Abstract

The effect of aqueous extract of *Moringa oleifera* Lam. (roots) has been studied on histoarchitecture of the uterus during pre and post-implantation stages in rats so as to elucidate its antifertility mode of action. The histoarchitecture of the uterus of control pregnant rat had revealed a clear-cut close apposition of the uterine endometrium with reduced lumen and loose stroma. There was a prominent appearance of deciduoma and the uterine glands were enlarged. Glandular cells showed hypertrophy and in the endometrium the leucocytic infiltration was increased. When the aqueous extract of *M. oleifera* Lam. was administered, no deciduoma was observed on day 5th of pregnancy and the luminal epithelium remained unstimulated. The lumen was enlarged and the uterus was non-oedematous. It has been concluded that the administration of aqueous extract of *M. oleifera* Lam. to pregnant rats could not stimulate the uterus which remained non-

receptive throughout the period of treatment, therefore, the fertilized eggs may not be welcomed by the unprepared uterus.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/3630576>

Proc Ind Acad Sci. 1977;85B:100-106.

Effect of Pulsatilla 30 and 200 Potencies (a Homoeopathic Drug) on the Ovaries, the Uteri and the Thyroids of Female Albino Rats.

Prasad S, Chandrasekhar K.

Abstract

200 and 30 potencies of the drug *Pulsatilla* were used and their effect on the ovaries, the uteri and the thyroids of female albino rats were assessed. The higher potency was found significantly to reduce the weight of the uterus as well as the ovary. Drug treated rats exhibited variation in the sequences of vaginal cytology by shortening the proestrus phase of estrus cycle. The drug was found to increase the number of atretic follicles and decrease the number and size of the corpora lutea. *Pulsatilla* was seen to reduce the height of endometrium as well as those of the luminal epithelium. The two potencies of the drug were found to increase the number as well as the size of the stromal cells. In the drug treated rats the height of epithelial cells of the thyroids were lesser in comparison to the control. In the control group the intrafollicular colloid exhibited vacuoles whereas the intrafollicular colloid in the experimental groups had a homogeneous consistency.

Link to abstract/paper: <http://link.springer.com/content/pdf/10.1007%2FBF03050907>

Indian J Exp Biol. 1978 Mar;16(3):289-93.

Effect of Pulsatilla administered pituitary extracts of ovariectomized donor rats on the ovaries, uteri & thyroids of normally cycling recipients.

[Prasad S, Chandrasekhar K.](#)

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/567185>

J Res Ind Med Yoga Hom. 1978;13(4):81-91.

Effect of Pulsatilla on Ovary and Uterus of Pre-Pubertal and Ovary, Uterus and Thyroid of Estrogen Primed Pre-Pubertal Female Albino Rats.

Prasad S, Chandrasekhar K.

Br Homeopath J. 1978;67(4):265-275.

Parallel effects of pulsatilla and exogenous leucocyclin on the rat ovary, uterus and thyroid.

Prasad S, Chandrasekhar K.

Abstract

A comparative study of *Pulsatilla* (a homœopathic medicine) and leutocyclin was undertaken in female albino rats showing regular oestrus cycles. *Pulsatilla* in the 30th and 200th potencies was administered orally, and leutocyclin was injected in doses of 0.125 mg and 1.25 mg. 0.25 ml/dose of 90 per cent. alcohol was used as the vehicle. *Pulsatilla* 30 and 200 and leutocyclin at a dose of 1.25 mg markedly reduced the weight of the ovary. The higher dose of leutocyclin (1.25 mg) and both the attenuations of *Pulsatilla* increased the process of atresia in ovarian follicles. But a simultaneous decrease in the number and diameters of the corpora lutea was observed. Administration of *Pulsatilla* and leutocyclin resulted in reduction in the weight of the uterus and the height of the endometrium and luminal epithelium. There was also a reduction in the height of epithelial cells in the thyroid. Both *Pulsatilla* and leutocyclin enhanced mitotic division in the uterine stroma. The results indicate that leutocyclin in doses of between 0.125 mg and 1.25 mg may be used to produce similar changes in the ovary, uterus and thyroid of the rat as *Pulsatilla* 30 and 200.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078578800532>

Current Trends Biotechnol Pharm. 2009;3(2):138-148.

Withaferin A suppresses the expression of vascular endothelial growth factor in Ehrlich ascites tumor cells via Sp1 transcription factor.

Prasanna KS, Shilpa P, Salimath BP.

Abstract

In the ayurvedic system of medicine, the medicinal plant, *Withania somnifera* Dunal (Solanaceae) finds application for numerous ailments including cancer. This herbal plant yields a host of steroidal lactones called withanolides, some of which have shown growth inhibition of human tumor cell lines. Withaferin A amongst these withanolides reportedly is very active in impairing antitumor activity. However; the underlying molecular mechanisms of this activity remains still unclear. In the present study, we have shown that withaferin A inhibited vascular endothelial cell growth factor (VEGF) -induced tube formation by human umbilical vein endothelial cells (HUVECs) and angiogenesis in chick chorioallantoic membrane (CAM) assay. In Ehrlich ascites tumor (EAT) model, the animals treated with withaferin A suppressed in vivo, the peritoneal angiogenesis and microvessel density. When compared to the untreated animals, the withaferin A treated tumor bearing mice showed a decrease in the volume of ascites and tumor cell number. Quantitation of VEGF levels in ascites from withaferin A untreated or treated tumor bearing mice indicated decreased secretion of VEGF in ascites from treated mice, as measured by ELISA. Studies at molecular level revealed that withaferin A inhibits binding of Sp1 transcription factor to VEGF-gene promoter, in order to exert its antiangiogenic activity. These results clearly indicate the antiangiogenic potential of withaferin A in modulating antitumor activity.

Link to abstract/paper:

<http://www.indianjournals.com/ijor.aspx?target=ijor:ctbp&volume=3&issue=2&article=003>

Asian Pac J Cancer Prev. 2008 Oct-Dec;9(4):763-9.

Clastogenic potential of *Ruta graveolens* extract and a homeopathic preparation in mouse bone marrow cells.

[Preethi KC](#), [Nair CK](#), [Kuttan R](#).

Department of Biochemistry, Amala Cancer Research Centre, Kerala, India.

Abstract

Ruta graveolens belonging to family Rutaceae has long been traditionally used as a medicinal plant as well as a flavoring agent in food. However, very little data are available on the toxicity of the plant. This report presents evidence on the genotoxic and clastogenic potential of an extract of *Ruta graveolens* and *Ruta 200C*, a homeopathic preparation. Various types of chromosomal aberrations were noted in bone marrow cells after treatment. The percentage of aberrated cells in the 400mg/kg.b.wt extract administered group was found to be 21% and with 1,000 mg/kg.b.wt it was 31%. The value for the *Ruta 200C* treated group was also elevated to 23% as compared to the 3% for untreated animals. In addition, bone marrow cells had higher incidence of micronuclei induction when treated with the extract (400 mg and 1,000 mg/kg body weight) and *Ruta 200C* for 30 days. Administration of the extract (1,000 mg/kg.b.wt) over a period of 30 days also resulted in damage to cellular DNA as evidenced by comet formation where the comet parameters such as percentage DNA in tail, tail length, tail moment of the bone marrow cells were increased several fold over control values. The comet tail moment of the bone marrow cells increased from 4.5 to 50.2 after the extract treatment. Administration of *Ruta 200C* for 5 consecutive days increased the tail moment to 11.7. These results indicate that *Ruta graveolens* and *Ruta 200C* may induce genotoxicity in animals.

Link to paper:

http://www.apocpcontrol.org/paper_file/issue_abs/Volume9_No4/763%20c%20Preeti%20hi.pdf

Integr Cancer Ther. 2012 Jun;11(2):172-82. doi: 10.1177/1534735411400310. Epub 2011 Jul 19.

Induction of apoptosis of tumor cells by some potentiated homeopathic drugs: implications on mechanism of action.

Preethi K, Ellanghiyil S, Kuttan G, Kuttan R.

Amala Cancer Research Centre, Thrissur, Kerala, India.

Abstract

BACKGROUND: Homeopathic medicines treat diseases, including cancer, using ultradiluted preparations. Earlier studies indicated that homeopathic medicines are cytotoxic to tumor cells and reduced animal tumors. However, the mechanism of homeopathic medicines at the cellular level is not known.

METHODS: The following drugs were used in the study: *Ruta 200C*, *Carcinosinum 200C*, *Hydrastis 200C*, *Thuja 200C*, and *Thuja 1M*. These drugs were tested for their ability to induce apoptosis as seen by morphology, DNA laddering, expression of

genes related to apoptosis, and TUNEL assay. Similarly, the effect of homeopathic medicines on apoptosis was measured by microarray analysis. Activity of Ruta 200C was compared with that of the mother tincture.

RESULTS: Ruta 200C produced morphological changes in the Dalton's lymphoma ascites tumor cells and induced DNA laddering. Carcinosinum 200C increased apoptotic gene p53 and Ruta 200C decreased antiapoptotic gene Bcl2.

Administration of potentiated homeopathic drugs to tumor-bearing mice induced TUNEL-positive cells in the tumor, showing increased apoptosis of tumor cells.

Microarray analysis of cells treated with homeopathic drugs indicated that many enzymes related to apoptosis were increased by homeopathic drugs.

CONCLUSION: These data indicate that apoptosis is one of the mechanisms of tumor reduction of homeopathic drugs. A comparison of potentiated drugs with their mother tincture indicated that the potentiated drugs have biological activity similar to that of their mother tincture in spite of ultradilution.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21771822>

Exp Parasitol. 2010 Dec;126(4):435-40. doi: 10.1016/j.exppara.2010.04.002. Epub 2010 Apr 28.

Canova medication modifies parasitological parameters in mice infected with *Trypanosoma cruzi*.

[Pupulin AR](#), [Marques-Araujo S](#), [Toledo MJ](#), [Gomes ML](#), [Takejima E](#), [Cuman RK](#), [Bersani-Amado CA](#).

Laboratory of Parasitology, Department of Clinical Analysis, State University of Maringá-PR, Brazil.

Abstract

The goals of this study were to evaluate the effect of the Canova medication, a homeopathic immune-system modulator, on the evolution of infection induced by the *Trypanosoma cruzi* Y strain in mice. The animals were divided into five groups: (i) untreated infected controls (I), (ii) infected animals treated with benznidazole (Bz), (iii) infected animals treated with the Canova medication (CM), (iv) infected animals treated with benznidazole and the Canova medication (Bz+CM), and (v) uninfected controls that received only the vehicle (grain alcohol) (C). The parameters evaluated were: parasitemia, mortality, control of cure, and tissue parasitism analysis. Our results showed that the evolution of the experimental infection was modified by treatment with CM, and that daily and consecutive doses were harmful to the animals, causing death in 100% of the infected animals in a brief period. The analysis of parasitism performed on the organs on the 12th day postinfection showed that in infected animals treated with CM, the number of amastigote/nests in the spleen was significantly reduced, while in cardiac tissue, intestine, and liver the number was significantly increased compared with infected control animals. These results indicate that CM has a negative influence on the host-parasite relationship, modifying the tropism of the parasite for tissues, and increasing the parasitemia peak in this experimental model.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20433834>

AHZ. 1899;138(5-6):33-37.

Versuche mit Kali arsenicosum an Tieren.

[Experiments on animals with Kali arsenicosum].

[Article in German]

Quaglio M.

Int J High Dilution Res. 2006;5(17):9-12.

Avaliação do bioterápico Trypanosoma cruzi 30 DH.

[Evaluation of biotherapeutic Trypanosoma cruzi DH 30].

[Article in Portuguese]

Queiroz AO, Xavier SCC, Faria KG, Bernardo RR, Leitão TCA.

English Abstract

In the present study, our main objective was to evaluate the biological activity and the kinetics of the humoral immune response in Swiss Webster mice using the biotherapeutic agent Trypanosoma cruzi 30DH. This compound was prepared following the pharmacotechnique described by Roberto Costa. Trypanosoma cruzi 30DH was evaluated by the parasitemia parameters and the humoral immune response, performed by Indirect Immunofluorescence Reaction (RIFI) to analyse IgM and IgG antibodies. Based on the biological activity, 50% of the animals in the group treated with the biotherapeutic agent survived. The group which received treatment and infection simultaneously and in the control group had 100% mortality. Higher IgG levels in the group of animals previously treated with the compound could be observed, presenting 1:80 and with sub-patent parasitemia. Our results suggest that the previous treatment with the biotherapeutic agent showed a humoral immune response, with higher serological titers and absence of parasites in the blood.

Link to paper:

http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDUQFjAA&url=http%3A%2F%2Fwww.feg.unesp.br%2F~ojs%2Findex.php%2Fijhdr%2Farticle%2FviewFile%2F172%2F176&ei=IrtvUb_IG4GbO5iqgeAF&usq=AFQjCNEmoldnX3kd3Vpx9tSIJSnv8C5O0w&bvm=bv.45368065,d.ZWU

Evid Based Complement Alternat Med. 2008 Jun;5(2):181-6. doi: 10.1093/ecam/nem017.

Evaluation of the anxiolytic effect of Nepeta persica Boiss. in mice.

[Rabbani M](#), [Sajjadi SE](#), [Mohammadi A](#).

Department of Pharmacology, Department of Pharmacognosy and Isfahan Pharmaceutical Sciences Research Centre, School of Pharmacy and Pharmaceutical Sciences, Isfahan University of Medical Sciences, Isfahan, Iran.

Abstract

The aim of the present study was to evaluate the anxiolytic effects of hydroalcoholic extract (HE) of *Nepeta persica* Boiss. (Lamiaceae) on the elevated plus-maze (EPM) model of anxiety. The extract of arial parts of the plant was administered

intraperitoneally to male NMRI mice, at various doses, 30 min before behavioural evaluation. The HE extract of *N. persica* at the dose of 50 mg kg⁻¹ significantly increased the percentage of time spent and percentage of arm entries in the open arms of the EPM. This dose of plant extract affected neither animal's locomotor activity nor ketamine-induced sleeping time. The 50 mg kg⁻¹ dose of the plant extract seemed to be the optimal dose in producing the anxiolytic effects, lower or higher doses of the plant produce either sedative or stimulant effects. At 100 mg kg⁻¹, the plant extract increased the locomotor activity. These results suggested that the extract of *N. persica* at dose of 50 mg kg⁻¹ possess anxiolytic effect with less sedative and hypnotic effects than that of diazepam and causes a non-specific stimulation at 100 mg kg⁻¹.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2396471/>

Asian J Hom. 2011;5(5).

Effects of *Carduus marianus* 6th and 30th potency (aqueous) on paracetamol induced hepatic damage.

Rajamanickam K.

J Parasit Dis. 2011 Oct;35(2):134–139.

SEM studies on blood cells of *Plasmodium berghei* infected Balb/c mice treated with artesunate and homeopathic medicine China.

Rajan A, Bagai U.

Abstract

The therapeutic efficacy of antimalarial drugs and their effect on various organs in the form of surface morphological deformations can be analyzed using scanning electron microscopy (SEM). Present study has been undertaken on *Plasmodium berghei* (NK-65), a lethal rodent malaria parasite, to monitor the morphological changes in blood cells induced by the treatment with combination of artesunate and homeopathic medicine. Combination therapy of artesunate (100 mg/kg) and China ϕ was found to be highly effective in clearing the blood stage infection of *Plasmodium berghei* and it also enhanced the mean survival time (28 ± 0 days) of mice. Not much morphological changes were induced on WBCs and RBCs of mice treated with combination therapy but in treated groups the number of live PMN cells was more as observed in AO/EB staining. In normal mice the mononuclear cells were both smooth surfaced and layered surfaced, whereas, polymorphonuclear cells were having finger like projections. The combination of artesunate and China was found to be very effective and did not cause any alteration on the surface of blood cells as observed in SEM.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3235391/>

J Complement Integr Med. 2013 May 7;10(1):1-8. doi: 10.1515/jcim-2012-0016.

Antimalarial potential of China 30 and Chelidonium 30 in combination therapy against lethal rodent malaria parasite: *Plasmodium berghei*.

Rajan A, Bagai U.

Abstract

Homeopathy is a therapeutic method based on the application of similia principle, utilizing ultra-low doses of medicinal substances made from natural products. The present study has been designed to evaluate the efficacy of *Cinchona officinalis* (Chin.) 30C and *Chelidonium majus* (Chel.) 30C in combination therapy against lethal murine malaria. Five groups having twelve BALB/c mice each were administered orally with 0.2 ml/mouse/day of different drugs, and their antimalarial potential was evaluated by Peter's 4-day test. The combination of Chin. 30 and Chel. 30 exhibited complete parasite clearance by the 28th day post-inoculation which was similar to the positive control [artesunate (4 mg/kg)+sulphadoxine-primethamine (1.2 mg/kg)] group. Both the groups exhibited enhanced mean survival time (MST) 28±0 days, whereas, the mice of infected control group survived up to 7.6±0.4 days only. The preventive and curative activities of the combination in comparison to the positive controls [pyrimethamine (1.2 mg/Kg) and chloroquine (20 mg/Kg), respectively] were also evaluated. The combination had a significant preventive activity ($p < 0.0005$), with 89.2% chemosuppression which was higher than the standard drug, pyrimethamine (83.8%). It also showed a moderate curative activity with complete clearance of parasite in 50% of surviving mice, and enhancing the MST of mice up to 26.8±2.8 days. These findings point to the significant antiplasmodial efficacy of the combination of these homeopathic drugs against *Plasmodium berghei*.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/23652641>

Homeopathy. 2006 Jul;95(3):131-5.

Effect of a Homeopathic complex on oestrus induction and hormonal profile in anoestrus cows.

[Rajkumar R](#), [Srivastava SK](#), [Yadav MC](#), [Varshney VP](#), [Varshney JP](#), [Kumar H](#).

Division of Animal Reproduction, Indian Veterinary Research Institute, Izatnagar, Bareilly, Uttar Pradesh, India. rajrkumar@rediffmail.com

Abstract

This study was undertaken to evaluate the efficacy of a homeopathic complex in the management of true anoestrus in crossbred cows. Six anoestrus cows were treated with a homeopathic complex (*Calcarea phosphorica* 30c, *Aletris farinosa* 30c, *Pulsatilla* 30c, *Aurum muriaticum natronatum* 30c, *Sepia* 30c and *Phosphorus* 30c in equal proportion, 15 pills twice daily orally for 10 days). Six animals acted as control without any treatment. Treatment was 100% effective in inducing oestrus in anoestrus cows with mean interval of 27.5±5.3 days. All animals conceived and overall conception rate was 54.5% with 1.83 services per conception. In the homeopathic complex treated group, increased serum oestradiol concentration (20.88±5.60 to 27.80±7.28 pg/ml) was observed compared to the pretreatment (11.71±2.06 pg/ml) and control value (10.43±1.77 to 13.94±3.14 pg/ml). The homeopathic complex medicine may be effective and economical in the treatment of true anoestrus condition in cows.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/16815515>

Journal of Parasitic Diseases. 2013 Mar.

Successful management of refractory cases of canine demodicosis with homeopathy medicine Graphitis .

Ranjan R, Dua K, Turkar S, Singh H, Singla LD.

Abstract

Canine demodicosis is a refractory skin disease caused by excessive proliferation of mite *Demodex canis*. Despite availability of several treatment options, the disease poses a great challenge to clinicians for its long term management as some drugs may be ineffective or toxic. Present report describes successful treatment of two refractory cases of canine demodicosis using homeopathy medicine. After oral administration of Graphitis 200 C two drops once daily for 2 months, complete cure from the disease was observed. No adverse health effects of the medication were recorded during the treatment. Thus, it may be concluded that homeopathy medicine may be used safely for long-term management of canine demodicosis.

Link to paper: <http://link.springer.com/article/10.1007%2Fs12639-013-0269-6>

Livestock Adv. 1981;6(7):47-49.

Economical Treatment Of Corneal Opacity In Bovines.

Rao BH , Sreemannarayana O.

Fitoterapia. 1991;62(6):508-510.

Calendula and hypericum.

Rao SG, Udupa AL, Udupa SL, Rao PGM, Rao G, Kulkarni DR.

Br Homeopath J. 1988 Jul;77(3):147-151.

Pancreatic beta-cell regeneration: A novel anti-diabetic action of *Cephalendra indica* mother tincture.

[D.P. Rastogi](#), [A.C. Saxena](#), [Sunil Kumar](#).

Abstract

Cephalendra, indica (41% v/v alcoholic extract of the wild variety of *Cephalendra indica* Naud.), on regular administration in doses ranging from 25 µml to 75 µml/100 g of body weight (gbw) by the oral or intraperitoneal (ip) route produced a significant fall in blood sugar level in alloxan-induced diabetic rats. Biochemical studies showed stabilization of blood sugar level in 70% of cases of fourteen to twenty days after withdrawal of the drug. Histopathological studies revealed regeneration of pancreatic β cells. The hypothesis is that the drug acts through the hypothalamo-hypophysial-pancreatic axis, producing selective regeneration of β cells. The drug may indirectly release inhibitory factors from hypothalamic neurons, inhibiting the secretion of growth hormone and triggering insulin secretion from β cells. The therapeutic action

of the drug on pancreatic β cells and lack of acute and subacute toxicity may open up new prospects in the treatment of diabetes mellitus.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/PIIS0007078588800711/abstract>

CCRH Quarterly Bull. 1991;13(3/4):25-32.

Demonstration of anti-diabetic activities of Alloxan in potentised diluent state.

Rastogi DP, Nagpaul VM, Kumar S.

J Adv Zool. 1997;18(2):72-76.

Prevention of toxic effects of Mercuric chloride in mice epididymis with a homoeopathic drug Caladium complex.

Rathore HS, Bhan A, Patel KG.

Behav Brain Res. 1996 Nov;81(1-2):89-97.

Optokinetic and vestibulo-ocular reflex adjustment by GABA antagonists.

[Reber A](#), [Poitevin B](#), [Leroy MH](#), [Nzobounsana V](#).

Laboratoire de Neurosciences et Environnement, Université de Rouen, Faculté des Sciences, Mont-Saint-Aignan, France. Annie.Reber@univ-rouen.fr

Abstract

We determined if high and low doses of anti-GABAergic drugs have opposite effects on the visuo-vestibular activity in pigmented rats and examined a possible correlation with the level of GABA in the related structures. First, the horizontal optokinetic and vestibulo-ocular reflexes of most animals were depressed by high doses of anti-GABAergic drugs (10^{-3} M purified picrotoxin or 10^{-6} M picrotoxin in unpurified vegetal extract). Simultaneously, a drop in GABA level in the cerebellum and posterior brainstem was detected. Second, after a subsequent injection (1 ml) of the diluted extract (10^{-13} M picrotoxin), the reflexes returned to normal despite the fact that no correlation with the GABA level was found. These results demonstrate that small doses of anti-GABAergic drugs reverse the depressive effect created by large doses of these drugs on the oculomotor system, and even adjust the reflexes to the stimulation. This adjustment, without correlation with the GABA level, suggest a powerful effect of very low dose of the drug to modulate either the activity of the cerebellar inhibiting input or of the vestibular nuclei neurons or to trigger the adaptation by other neurotransmitter systems involved in the performances of the reflexes.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/8950005>

Homéopath Europ. 1997;5(3):23-27.

Action de Cocculine dans le traitement des troubles de stabilisation du regard chez le rat.

[Efficacy of cocculine during the treatment of troubles with ocular stabilisation in the rat.]

[Article in French]

Reber A, Poitevin B, Leroy MH, Robert C.

J Vet Sci. 2006 Jun;7(2):189-92.

Matricaria chamomilla CH12 decreases handling stress in Nelore calves.

[Reis LS](#), [Pardo PE](#), [Oba E](#), [Kronka Sdo N](#), [Frazatti-Gallina NM](#).

Departamento de Pos-graduacao, Universidade do Oeste Paulista, UNOESTE, Presidente Prudente, SP, CEP 19067-175, Brazil. guga@femanet.com.br

Abstract

Matricaria chamomilla CH12 is a phytotherapeutic or homeopathic product, which has been used to reduce stress. Here, we examined its effect on preventing handling stress in bovines. Sixty Nelore calves were randomly distributed into two equal groups. One group was administered Matricaria chamomilla CH12 in diet and the other the 'control' was not. Animals in both groups were maintained unstressed for 30 days to adjust to the feeding system and pasture, and were then stressed by constraint on the 31th, 38th, 45th and 60th experimental days. Blood samples were taken on these days after animals had been immobilization in a trunk contention for 5 min. Stress was followed by analyzing serum cortisol levels. These peaked on the 45th day and then decreased, but not to baseline, on the 60th day. On the 45th day cortisol levels were significantly lower in animals fed Matricaria chamomilla CH12, suggesting that this product reduces stress. These effects may be a consequence of its inhibiting cortisol production and its calming and anxiolytic effects.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3242113/pdf/jvs-7-189.pdf>

Vet Rec. 2008 Sep 13;163(11):343-4.

Selenium supplementation and rabies antibody titres in cattle.

[Reis LS](#), [Chiacchio SB](#), [Oba E](#), [Pardo PE](#), [Frazatti-Gallina NM](#).

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/18791215>

J Vet Sci. 2008 Dec;9(4):433-5.

Efficiency of Matricaria chamomilla CH12 and number of doses of rabies vaccine on the humoral immune response in cattle.

[Reis LS](#), [Frazatti-Gallina NM](#), [de Lima Paoli R](#), [Giuffrida R](#), [Albas A](#), [Oba E](#), [Pardo PE](#).

Universidade do Oeste Paulista-UNOESTE, Pós-graduação em Ciência Animal,
Presidente Prudente-SP, CEP 19067-175, Brasil. reis.lsls@gmail.com

Abstract

This study evaluated the effect of *Matricaria chamomilla* and vaccination frequency on cattle immunization against rabies. Four groups (n = 15 /group) were treated with or without *Matricaria chamomilla* CH12 and vaccinated with one or two doses of rabies vaccine (30 day interval). No effect of chamomile was found on cattle immunization against rabies; however, antibody titers were protective in cattle vaccinated twice, while 93.3% of cattle vaccinated only once had titers under 0.5 UI/ml after 60 days. In conclusion, the use of chamomile did not alter the humoral immune response in cattle, and two vaccine doses are suggested for achieving protective antibody titers.

Link to paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2811788/pdf/jvs-9-433.pdf>

Journal of the American Institute of Homeopathy, 1998;91(3):277-283.

A Potential Antidote for the Necrotic and Systemic Effects Caused by the Brown Recluse Spider (*Loxosceles Reclusa*): A Homeopathic Preparation from the Spider.

Richardson-Boedler, C.

Link to abstract/paper: <http://connection.ebscohost.com/c/articles/6245792/potential-antidote-necrotic-systemic-effects-caused-by-brown-recluse-spider-loxosceles-reclusa-homeopathic-preparation-from-spider>

Homeopathy. 2002 Jul;91(3):166-70.

The brown spider *Loxosceles laeta*: source of the remedy *Tarentula cubensis*? [Richardson-Boedler C.](#)

crboedler@aol.com

Abstract

The homeopathic remedy *Tarentula cubensis* (Cuban tarantula), used in homeopathy to treat abscesses with burning pains, gangrene, septicaemia, toxemia, has been grouped by homeopathic authorities with either the mygalomorph or wolf spiders. The original specimen used for preparation of the mother tincture was decomposed, leaving the spider's exact identity in doubt. Investigation of the toxicological and clinical literature, compared with homeopathic materia medica, reveals the brown spider, *Loxosceles laeta*, indigenous to South America but present also in Mid- and North America, as a more likely source. Venoms of spiders of the genus *Loxosceles* cause severe necrotic arachnidism, as well as, in some cases, a life-threatening systemic reaction marked by renal failure, disseminated intravascular coagulation, thrombocytopenia, coma and convulsions.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12322871>

J Vet Med B Infect Dis Vet Public Health. 2005 Aug;52(6):296-300.

Protection against neonatal *Escherichia coli* diarrhoea in pigs by vaccination of sows with a new vaccine that contains purified enterotoxigenic *E. coli* virulence factors F4ac, F4ab, F5 and F6 fimbrial antigens and heat-labile *E. coli* enterotoxin (LT) toxoid.

[Riising HJ](#), [Murmans M](#), [Witvliet M](#).

Intervet Danmark A/S, Skovlunde, Denmark. hans-jorgen.riising@intervet.com

Abstract

The efficacy of a new vaccine against neonatal *Escherichia coli* diarrhoea in piglets containing purified F4ab, F4ac, F5 and F6 fimbriae and detoxified heat-labile toxin (LT) was tested in challenge experiments by the method described by the European Pharmacopoeia (3rd edn, EDQM, Council of Europe, Strasbourg, France). A group of 11 young sows from a herd without *E. coli* problems was vaccinated 6-8 and 2-4 weeks prior to expected farrowing and another group of nine young sows were non-vaccinated controls. *Escherichia coli* antibody titres were determined in serum samples taken from the sows before first vaccination and before farrowing and in colostrum samples. The newborn piglets were allowed to suckle colostrum from their mother immediately after birth. The piglets were marked with individually numbered ear tags. Approximately 12 h after birth, 118 piglets from vaccinated sows and 79 piglets from non-vaccinated control sows were challenged by oral instillation of 5 ml of a freshly prepared culture of one of the challenge strains [O8:K87:F4ab (LT+) or O149:K91:F4ac (LT+) or O9:K30:F5 or O9:K103:F6 respectively]. The challenge cultures contained as a mean 6.8×10^9 CFU/ml. After challenge the piglets were observed for 7 days and mortality and morbidity were recorded. Vaccinated sows developed significant levels of antibody titres in colostrum and serum. Control sows stayed at a low/seronegative level. The protective efficacy was excellent because 66.7-87.5% of the piglets from vaccinated sows remained without clinical signs after challenge. Only 0.0-28.0% of the piglets from non-vaccinated sows remained healthy and more than 47.1% of the piglets in this group died after challenge. It is concluded that the new vaccine is very effective in protection of piglets against neonatal *E. coli* diarrhoea.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/16219094>

Arzneim Forsch. 1964;14:47-50.

Die verschiedenen Formen des experimentellen Ulcus ventriculi bei der Ratte und seine medikamentöse Beeinflussung.

[The various forms of experimental gastric ulcer in rats and pharmacological effects].

[Article in German]

Röhm F, Seybold G, Pirtkien R.

Naturwiss. 1929;17(6):104-105.

Über die Wirkung kleinster Thyroxindosen auf den Gasstoffwechsel von Wirbellosen.

[About the effect of the smallest dose of Thyroxine on the gas metabolism of invertebrates].

[Article in German]

Romeis B, Wüst J.

Link to abstract/paper: <http://link.springer.com/content/pdf/10.1007%2F01506410>

Biol Tier. 1995;12(3):80-88.

Vergleichende Untersuchungen zur Zyklusstimulation bei Zuchtsauen mit Horneel, Ovarium compositum und PMSG.

[Comparative studies of the stimulation of the cycle in sows with Horneel, ovarium compositum and PMSG].

[Article in German]

Roost H.

Abstract

In einer konventionell bewirtschafteten 1000er Sauenanlage wurden vergleichende Untersuchungen zur Zyklusstimulation mit Horneel, Ovarium compositum und PMSG bei einer Gesamtzahl von 730 Altsauen durchgeführt. 24 Stunden nach dem Absetzen der Ferkel erfolgte prophylaktisch eine Behandlung mit Horneel, Ovarium compositum oder PMSG. Die Besamung erfolgte duldsorientiert bei der nachfolgenden Rausche.

Bei der Gegenüberstellung der Fruchtbarkeitsleistungen zeigten insbesondere mit Horneel behandelte Altsauen höherer Wurfnummern Ergebnisse, die denen mit PMSG behandelten Tiere ebenbürtig waren. Der Praxisversuch lässt den Schluss zu, dass der Einsatz von Homöopathika unter definierten Bedingungen eine Alternative im Rahmen der Zyklusstimulation multiparer Altsauen darstellt.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=184

Boletin Mexicano de Homeopatía. 1997;30:5-10.

Evidence for Homoeopathic Vaccination?

Rosas-Landa V, Garcia M, Rodriguez R.

Br Homeopath J. 1997 Oct;86(4):201-206.

Homeopathic effect on the sleep pattern of rats.

[Guadalupe Ruiz, José-Leonel Torres](#)

Abstract

The effect of *Nux vomica* on the EEGs of rats during sleep was quantified in terms of suitable statistical parameters that showed systematic changes after the

homoeopathic stimulus. Our results are consistent with a decrease in the coherence of the brain signal compared to results obtained by using either the solvent on its own or pure water, and can be interpreted in terms of irritation of the animals' central nervous system due to the applied stimulus. This coincides with the effect *Nux vomica* has on healthy humans and suggests a means of characterizing the homoeopathic effect in physicochemical terms, based on parameters similar to those found appropriate in this study, calculated for physiological data from animal models for specific conditions. It also lends scientific support to ongoing attempts to extend Hahnemann's principles of similitude and potentiation beyond their original context, into the realm of veterinary medicine.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078597800452>

Br Homeopath J. 2000 Jul;89(3):122-6.

An evaluation of Coffea cruda effect on rats.

[Ruiz-Vega G](#), [Pérez-Ordaz L](#), [Proa-Flores P](#), [Aguilar-Díaz Y](#).

Instituto de Física y Matemáticas, Universidad Michoacana, Morelia, Michoacán, México.

Abstract

To investigate the effect of the homeopathic medicine Coffea cruda on sleep pattern, it was orally administered to rats at the beginning of their waking period. EEG from the parietal region was recorded during their next sleep cycle. Applying an FFT algorithm, spectral in the delta band, 0.5-2.5 Hz, was chosen as a marker parameter, evaluated for control and verum groups using a double-blind protocol. Power in the verum group was statistically higher than baseline value, it was not statistically different in the control group. The results indicate that an enhancement in EEG slow delta activity is associated with Coffea cruda.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/10939767>

Homeopathy. 2002 Apr;91(2):80-4.

Comparative effect of Coffea cruda potencies on rats.

[Ruiz-Vega G](#), [Pérez-Ordaz L](#), [León-Huéramo O](#), [Cruz-Vázquez E](#), [Sánchez-Díaz N](#).

Instituto de Física y Matemáticas, Universidad Michoacana, Morelia, Michoacán, Mexico. guruu@infosel.net.mx

Abstract

The effects of Coffea cruda 30 and 200c and caffeine on the sleep pattern of rats were investigated. Treatments were administered orally at the beginning of the sleeping period. EEG from the parietal region was recorded. Delta (0.5-2.5 Hz) and slow (< 1 Hz) waves are two of the major oscillation types that characterize neocortical electrical activity. The spectral power in these bands and the power ratio between 0.32-0.48 Hz and the delta band (slow/delta power ratio) for control and treatment groups were analyzed blind. Power in the delta band was significantly

higher than baseline for Coffea 30c and caffeine (15.5mg/kg). An increase in the slow/delta power ratio between control and treatment was detected for Coffea cruda 30 and 200c. Coffea 30c and caffeine have similar effects on sleep pattern, enhancing delta power; Coffea cruda 200c appears to affect only the synchronization.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12371461>

Homeopathy. 2003 Jan;92(1):19-29.

A kinetic approach to caffeine--Coffea cruda interaction.

[Ruiz-Vega G](#), [Pérez-Ordaz L](#), [Cortés-Galván L](#), [Juárez-G FM](#).

Instituto de Física y Matemáticas, Universidad Michoacana, Morelia, Michoacán, Mexico. guruu@infosel.net.mx

Abstract

The biological effect of Coffea cruda 30c was investigated in rats pre and post treated with caffeine. The experimental subjects were male Wistar rats. Caffeine was administered intraperitoneally at the beginning of a sleep period. Coffea cruda 30c (0.1 ml) was administered orally, a contemporaneous control group was tested. The Electroencephalogram (EEG) was recorded in the parietal region during the following sleep cycle. The effect was evaluated by three EEG parameters: the spectral power in delta (0.5-2.5 Hz) and slow 0.32-0.48 Hz bands and the slow/delta power ratio. These markers were analyzed vs time for control and homeopathic groups, blind. In the pretreated set, a similar pattern was identified for control and verum groups up to the 4th hour. From the 5th hour on, power in the delta band was statistically higher in the verum. Spectral power in the slow band and power ratio for the verum group was smaller than the control group from the 6th hour on. In the post-treated set, two verum sub-groups were identified: Post v-A: did not exhibit significant differences from control; Post v-B: displayed an opposite tendency than pre-treatment verum. We conclude that Coffea cruda 30c modifies sleep pattern increasing sleep intensity with pre-treatment. In a subset of the post-treated animals Coffea 30c appeared to reinforce the effects of caffeine.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12587991>

Homeopathy. 2005 Apr;94(2):86-91.

Histamine at high dilution reduces spectral density in delta band in sleeping rats.

[Ruiz-Vega G](#), [Poitevin B](#), [Pérez-Ordaz L](#).

Laboratorio de Biofísica, Instituto de Física y Matemáticas, Universidad Michoacana de San Nicolás de Hidalgo, Morelia, Michoacán, México. ruizvega@ifm.umich.mx

Abstract

Histamine is a central neurotransmitter, it increases arousal via H1 receptors. This study examines the effect of ultra-diluted histamine on arousal through changes in the sleep pattern of Wistar rats. The spectral density in delta (0.5-2.5 Hz) band, one

of the three major spectral components of the sleep-electroencephalogram, was analyzed against time. Rats were randomized to receive histamine 30c (histamine 30c, 0.05 ml every 20 min during the first 2 h orally), histamine intraperitoneal pretreatment/histamine 30c (histamine 6mg/kg i.p., followed by histamine 30c) or solvent control. The mean delta band spectral density was lower in the histamine 30c and histamine pretreatment/histamine 30c groups than the control group. Significant differences between histamine 30c and baseline during the first 2 h imply an immediate effect. These results also suggest a dynamic process in which the system spontaneously evolves between two locally stationary states according to a power law. From the time perspective, the system approaches, asymptotically, an equifinal state.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15892488>

Poultry Adviser. 1992;25(12):59-61.

Treatment of infectious bursal disease/gumboro disease with homoeopathic medicines.
Sahni A, Grewal RS.

Clin Oral Implants Res. 2008 Jun;19(6):624-8. Epub 2008 Apr 16.

Influence of homeopathic treatment with comfrey on bone density around titanium implants: a digital subtraction radiography study in rats.

[Sakakura CE](#), [Neto RS](#), [Bellucci M](#), [Wenzel A](#), [Scaf G](#), [Marcantonio E Jr](#).

Barretos Dental School, Barretos Educational Foundation, São Paulo, Brazil.

Abstract

OBJECTIVE: The objective of this study was to evaluate the influence of homeopathic treatment with comfrey (*Shymphytum officinalis* 6CH) on radiographic bone density and area around titanium implants.

MATERIAL AND METHODS: Forty-eight rats were divided into two groups of 24 animals each: a control group (C) and a test group (SO). Each animal received one titanium micro-implant placed in the tibia. The animals in Group SO were subjected to 10 drops of comfrey 6CH per day mixed into their drinking water until the day of sacrifice. Eight animals of each group were sacrificed at 7, 14 and 28 days post-surgery, respectively. Standardized digital radiographs were obtained on the day of implant installation (baseline images) and on the day of sacrifice (final images). Digital subtraction of the two corresponding images was performed to evaluate changes in bone density and the area related to change around the implant between baseline and final images.

RESULTS: Subtraction images demonstrated that a significant difference existed in mean shade of gray at 14 days post-surgery between Group SO (mean 175.3+/-14.4) and Group C (mean 146.2+/-5.2). Regarding the area in pixels corresponding to the bone gain in Group SO, the differences observed between the sacrifice periods and groups were only significant at 7 days sacrifice between Group SO (mean 171.2+/-21.9) and Group C (mean 64.5+/-60.4).

CONCLUSION: Within the limits of this study, comfrey administration promotes an increase in radiographic bone density around titanium implants in the initial period of bone healing.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/18422987>

Hippokrates. 1948;15(8):230-237.

Experimentelle Homöopathie.

[Experimental Homeopathy]

[Article in German]

Saller K.

Environ Toxicol Pharmacol. 2012 Nov;34(3):743-52. doi:

10.1016/j.etap.2012.09.013. Epub 2012 Oct 8.

Dihydroxy-isosteviol-methyl-ester, an active biological component of *Pulsatilla nigricans*, reduces arsenic induced cellular dysfunction in testis of male mice.

[Samadder A](#), [Das J](#), [Das S](#), [Khuda-Bukhsh AR](#).

Cytogenetics and Molecular Biology Laboratory, Department of Zoology, University of Kalyani, Kalyani 741235, India.

Abstract

Arsenic contamination has become a menacing health concern, warranting search for new drugs capable of ameliorating its toxicity. Extract of *Pulsatilla nigricans* is occasionally used as traditional medicine including homeopathy to combat/alleviate toxicity-related symptoms of known or unknown cause. Mice were intoxicated with a sub-lethal dose of sodium arsenite (20mg/kg b.w./day, determined through a range-finding trial) and the effect on testicular toxicity after 30, 60, and 90 days was examined. We observed an increased level of reactive oxygen species, cellular damage in testes of SA-intoxicated mice and further analysed expressions of apoptotic signal proteins and mRNA like Bax, Bcl2 and caspase3. Treatment with EEPN showed significant inhibition/reversal of the arsenic-induced toxic effect in testis and reduced oxidative stress through modulating expressions of signal proteins, thereby inhibiting the progression of events of apoptosis in testis cells and sperm. Therefore, EEPN has potentials for therapeutic use in arsenic- induced reproductive toxicity.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/23117066>

Ind J Res Hom. 2008;2(1):38-41.

Search for potential anticancer agents.

Samanta S, De AU, Tarafder PK, Jha T.

Homeopathy. 2013 Jul;102(3):160-171.

Effect of homeopathic preparations of *Syzygium jambolanum* and *Cephalandra indica* on gastrocnemius muscle of high fat and high fructose-induced type-2 diabetic rats.

Sampath S, Narasimhan A, Chinta R, Janardanan Nair KR, Khurana A, Nayak D, Kumar A, Karundevi B.

Abstract

Background: Homeopathy is a holistic method of treatment that uses microdoses of natural substances originating from plants, minerals, or animal parts. *Syzygium jambolanum* and *Cephalandra indica* are used in homeopathy for treatment of type-2 diabetes. However, the molecular mechanisms responsible for such effects are not known.

Methods: Homeopathic preparations of *S.jambolanum* and *C.indica* in mother tincture, 6c and 30c were used to examine the molecular mechanism of antidiabetic effects in the skeletal muscle of rats with high fat and fructose-induced type-2 diabetes mellitus. After 30 days treatment, fasting blood glucose, serum insulin and insulin signaling molecules in the skeletal muscle (gastrocnemius) were measured. Results: Diabetic rats showed a significant decrease in serum insulin and lipid profile as well as low levels of insulin receptor (IR), v-akt murine thymoma viral oncogene homolog (Akt), p-Aktser473 and glucose transporter-4 (GLUT4) protein expression ($p < 0.05$) with a significant increase in fasting blood glucose level ($p < 0.05$) compared to the control group. Treatment with homeopathic remedies significantly increased the serum insulin and expression of these proteins ($p < 0.05$) with a significant decrease in fasting blood glucose ($p < 0.05$) compared to diabetic rats. Conclusions: In the present study homeopathic preparations of *S.jambolanum* and *C.indica*, including ultramolecular dilutions exhibit antidiabetic effects, improving insulin action through activation of insulin signaling molecules in skeletal muscle of type-2 diabetic rats.

Link to abstract/paper: <http://www.homeopathyjournal.net/article/S1475-4916%2813%2900036-2/abstract>

Br Homeopath J. 1998;87:131-134.

Preliminary research for testing *Baptisia tinctoria* 30c effectiveness against salmonellosis in first and second quality broiler chickens.

[CH Sandoval](#), [LL Morfin](#), [BB Lopez](#)

Abstract

The aim of this research was to compare the effectiveness of *Baptisia tinctoria* 30c and Ciprofloxacin against salmonellosis in fowl. Eight hundred (400 first quality and 400 second quality) poultry birds were used. All were the same commercial brand. There were two treatments, both with four repetitions. Treatment began when chickens were eight days old; two drops/kg live weight/d *Baptisia tinctoria* or 15 mg/kg live weight/d of Ciprofloxacin. Both treatments lasted ten days and were given in the drinking water. Salmonella diagnostic tests were made on day 0, day 8 and day 49 of age and death rate was when treatments had finished. Death rate values were applied a square root transformation and a 2×2 factorial analysis was made. The mortality for first and second quality fowl in the *Baptisia tinctoria* group were 0.7125 and 2.037, respectively, and in the Ciprofloxacin group, 0.7245 and

2.1848, respectively. No significant statistical difference was observed ($P>0.1$) regarding treatments, only regarding different quality fowl ($P<0.01$). After comparing, *Baptisia tinctoria* 30c and Ciprofloxacin treatments against salmonellosis, it was concluded that there were no meaningful differences between outcomes.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S147549169990228X>

Int J High Dilution Res. 2011;10(36):110-114.

Biotherapeutic of Trypanosoma cruzi 17x controlled histopathological alterations in mice infected by this protozoon.

Sandri PF, Falkowski GJS, Júnior ADN, Spack M, Moreira NM, de Ornelas Toledo MJ, Filho BA, Gabriel M, Silvana Marques de Araújo SM.

Abstract

Introduction: about 10 million people worldwide suffer from Chagas' disease [1]. The World Health Organization (WHO) has explicitly acknowledged the significance of this condition and supports the use of Complementary and Alternative Medicine by health systems integrated with conventional treatments. Even so, one century after its discovery it still represents a global challenge [1,2]. Biotherapies are ultradiluted medicines and the infection of mice by *Trypanosoma cruzi* is an excellent model to understand their effect [3,4]. At 8 weeks, mice are physiologically more developed than at age 4 weeks, including a more competent immune system [5]. Aim: the aim of this study was to assess the effect of biotherapeutic of *T. cruzi* in dilution 17x on liver and spleen tissue of mice of different ages infected by this protozoon.

Method: in a blind, randomized controlled trial 12 male Swiss mice aged 4 and 8 weeks, infected by 1,400 blood trypomastigotes *T. cruzi* Y strain were divided into groups control – treated with 7% hydroalcoholic solution (CI-4=3 animals or CI-8=3 animals) and treated with biotherapeutic 17x (BIOT-4=3 animals or BIOT-8=8 animals). Treatment (0.2 ml biotherapeutic/day/animal, per gavage) started after infection was verified (4th day) and animals were sacrificed on the 3rd day of treatment. For histopathological exam, the liver and spleen were removed and fixated in 4% paraformaldehyde for 24 hours and then processed for inclusion in paraffin. Semi-serial 7m cuts were made and subjected to hematoxylin-eosin stain. It was performed a quantitative analysis of the number of nests of amastigotes and inflammatory foci in the liver. Slides were observed under microscope Olympus BX41 (Tokyo, Japan) and images captured with camera Qcolor3 (Olympus) coupled to the microscope. In the spleen it was counted the number of nests of amastigotes and the number of foreign-body giant cells. In each organ, 20 microscopic fields/cut were counted under power 40x totaling 120 fields/animal with microscope Olympus CBA (Tokyo, Japan). To analyze data it was used software Statistica 8.0. For data not exhibiting normal distribution it was used Kruskal-Wallis' test at 5% significance and ANOVA for the ones with normal distribution. Chi-square test was used to compare percentages. Biotherapeutic 17d was prepared by adding 0.9 ml of blood with *T. cruzi* (107 trypomastigotes/ml) to 9.1 ml of distilled water in laminar flow. Following dilutions were prepared in 86% hydroalcoholic solutions up to 16x. Dilution 17x was prepared with 7% hydroalcoholic solution [6]. It was performed microbiological control and in vivo biological risk of the biotherapeutic.

Results showed a number of colony forming units proper for use ($>1\text{CFU/ml}$).

Intraperitoneal inoculation of the biotherapeutic did not cause infection in animals. This study was approved by the Ethics Committee for Animal Experimentation/UEM protocol 030/2008. Results and Discussion: in the liver, animals of group BIOT-8 exhibited less nests of amastigotes ($p < 0.001$) and less inflammatory foci ($p < 0.06NS$) than animals in group CI-8. In the spleen, the number of nests of amastigotes was lower in BIOT-8 than in CI-8 ($p < 0.08NS$). Similarly, the number of giant-cells/megakaryocytes in the spleen was lower in BIOT-8 than in CI-8 ($p < 0.01$). In 4-week old animals, the number of inflammatory foci in the liver ($p = 0.06NS$) and the number of amastigotes in the spleen ($p = 0.01$) was higher in group BIOT-4 (Figure1). There was no statistical difference in the number of nests of amastigotes in the liver and the number of megakaryocytes/giant cells in the spleen between BIOT-4 and CI-4. Physiological development affects a large variety of metabolic functions including the development and functioning of the immune system [7-9]. Histopathological analysis showed that 8-week old animals treated with biotherapeutic exhibited a lower number of nests of amastigotes in the liver and spleen, inflammatory foci in the liver and megakaryocytes/giant cells in the spleen by comparison to the control group suggesting a modulation of the immune response in treated animals that diminishes histopathological alterations. This phenomenon was not seen in 4-week old animals. This contrast is probably related to the difference in thymic maturation [10] and is involved in different immunological mechanisms, such as memory, regulatory, inhibitory, autoimmunity among others, which must be carefully analyzed to better elucidate these mechanisms [11]. According to Sandri et al. [12] in animals treated with biotherapeutic of *T. cruzi* 17x there is increase of apoptosis together with clearance of apoptotic cells (macrophages including apoptotic bodies). This clearance of apoptotic cells controls inflammation [13], which would explain the decrease in the number of inflammatory foci in the treated group observed in our study despite the greater number of parasites found in the blood. It cannot be ruled out the possibility of the biotherapeutic having altered the tissue affinity of *T. cruzi* [14].

Conclusion: there is a difference in the effect of the ultradiluted medicine between mice 4- and 8-week old. Eight-week old animals treated with biotherapeutic exhibited lower tissue parasitism, which is the opposite of what was observed in 4-week old animals.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/464/482>

Int J High Dilution Res. 2011;10(36):119-124.

Biotherapeutic of *Trypanosoma cruzi* 17d increases apoptosis in experimentally infected mice.

Sandri PF, Falkowski GJS, Hernandez L, de Oliveira Dalálio MM, Aleixo DL, Gomes ML, Nascimento Júnior AD, Moliterno RA, de Araújo SM.

Abstract

Introduction: the mechanism of action of ultradiluted medicines has not yet been established[1,3]. Many basic research studies have focused on isopathic models using in vitro or in vivo designs [4,5]. Recent studies indicate that an ultradiluted (isopathic) antigen can transfer signals to the immune system and modulate its response when an organism is challenged against this same antigen [6]. Some

studies on experimental infection of mice by *T. cruzi* identified apoptotic cells and showed that the increase of their number is associated with an increase also in the number of parasites in the blood of the infected animals, while blockage of apoptosis can be the target of therapeutic intervention [7,8].

Aim: to evaluate the development of apoptosis in mice treated with biotherapeutic of *Trypanosoma cruzi* in dilution 17d through in situ detection of fragmented DNA.

Method: in a blind randomized controlled trial, 36 male Swiss mice age 4 or 8 weeks were distributed in groups control - treated with 7% hydroalcoholic solution (CI-4=9 animals or CI-8=9 animals); and treated with biotherapeutic 17d (BIOT-4=9 animals or BIOT-8=9 animals). Infection was performed with 1,400 trypomastigotes *T. cruzi*-strain Y via intraperitoneal. Biotherapeutic 17d was prepared through the addition of 0.9ml of concentrated *T. cruzi* (107 trypomastigotes/ml) to 9.1 ml of distilled water. The following dilutions were prepared in 86% hydroalcoholic solution until dilution 16d. Dilution 17d was prepared with 7% hydroalcoholic solution. It was performed microbiological control and biological risk in vivo. Treatment: 0.2 ml in 3 consecutive days, oral route, from the moment infection was verified. Animals were sacrificed on the 3rd day of treatment in a chamber saturated with ether. The liver and spleen were removed and fixated in 4% paraformaldehyde for 24 hours and then included in paraffin. Apoptosis was evaluated through DNA fragmentation – TUNEL technique (TdT dUTP-biotin Nick End Labeling (ApopTag® Peroxidase-Chemicon). For statistical analysis software Statistica 8.0 was used. This study was approved by the Ethics Committee for Animal Experimentation of UEM.

Results and Discussion: in the samples of liver of animals age 4 and 8 weeks either treated or not with biotherapeutic 17d it was found cells parasitized by amastigotes of *T. cruzi* with apoptotic bodies, or phagocytic cells with phagocytic vacuole with apoptotic marked material inside them. The number of cells in apoptosis in animals age 4 weeks was not significantly ($p=0.03$) larger in treated group BIOT-C4 than in control group CI-4 (Figure 1). In animals age 8 weeks, the number of cells in apoptosis was significantly ($p<0.001$) larger in the treated group BIOT-8 than in control group CI-8 (Figure 1). These results point to a mechanism of action for the rise in the peak of parasitemia caused by ultradiluted substances in low dilutions in Swiss mice experimentally infected by *T. cruzi*, as it was observed in several studies [9-12]. It is known that homeopathic preparations are able to increase communication between cells [13-14]. Affected organisms treated with ultradilutions would resort to apoptosis as mechanism of cure, removing altered cells[15].

Literature confirms that the use of homeopathic medicines increases apoptosis[16]. The idea to be assessed is that, when attempting to eliminate infection by *T. cruzi*, parasitized cells enter into apoptosis and consequently release parasites to the circulation rising the peak of parasitemia up. This hypothesis was demonstrated here, since it was shown that the number of cells in apoptosis and the number of cells containing phagocytized apoptotic material inside them (Figure 2) was larger in the group treated with biotherapeutic of *T. cruzi* 17d than in the control group.

According to the law of similitude, a homeopathic medicine must cause symptoms similar to the ones observed in disease [17] in order to awaken in the organism a reaction fit to combat the affection and promote the re-equilibrium of health in the treated individual. In this study in particular, the administration of biotherapeutic of *T. cruzi* 17d increased apoptosis and acted according to the principle of similarity, since Dos Reis et al (2007) state that apoptotic cells were detected in both experimental infection of mice by *T. cruzi* and the heart of patients with chronic Chagas' disease[8]. In another article, members of the same group state that an increase of

apoptotic cells during infection by *T. cruzi* might contribute to the increase of parasitemia in infected animals [7]. According to Francisco (2007)[18], treatment of mice infected by *T. cruzi* with benznidazole – the only medicine available in Brazil for the etiological treatment of Chagas' disease – elicits an accumulation of CD8 T lymphocytes due to inhibition of apoptosis.

Conclusion: these results show that apoptosis is increased in animals treated with biotherapeutic of *T. cruzi* 17d.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/467/529>

Int J High Dilution Res. 2013;12(44):104-105.

Experimental protocol: Atropa belladonna highly diluted for the treatment of Trypanosoma cruzi infection.

Sandri PF, Portocarrero AR, Falkowski GJS, Ciupa L, da Veiga FK, Libero IC, Quaresma CH, Bonamin LV, Bellavite P, Aleixo DL, de Araújo SM.

Abstract

Background: Natural products are a potential source of new drugs which may present fewer side effects [1]. The analysis of *Atropa belladonna* in different experimental models is suggested as object of study considering the Multicenter International Project on High Dilution.

Aim: To evaluate the effect of highly diluted medicine of *Atropa belladonna* under murine infection by *T. cruzi*.

Methodology: Project approved by the Animal Ethics Committee UEM. The experiments will be done under blind, controlled and randomized testing by draw. One hundred and twenty swiss male, mice, 8 weeks old, will be divided into groups with 12 animals according to the treatment: CI - infected non treated; CNI- non infected and non treated; infected and treated animals 48 hours before and after infection, subsequently were treated 56/56 hours until 9th day of infection with TM - *A. belladonna* mother tincture and in the 2cH; 3cH; 5cH; 6cH; 12cH e 30cH dilutions. Animals will be infected with 1400 blood trypomastigotes of *T. cruzi*, strain Y, via ip. Medicines are going to be prepared according to the Brazilian Homeopathic Pharmacopoea [2] and offered diluted in water ad libitum, in an amber drinker during 16 hours. Parasitological parameters evaluated: total parasitemia, total peak of parasites, pre-patent period and area under the curve. The parasitemia will be evaluated daily from the 1st day of infection until negative findings for 3 consecutive days. Histological parameters of spleen, heart, liver, intestine, skeletal muscle, and immunohistochemical analysis of the apoptosis process. Statistical comparisons will be analyzed by the Software Statistic 8.0 with 5% of significance.

Considerations: Since the Multicenter International Project on High dilution intends to study the same medicine in several experimental models and, moreover, the murine model of infection by *T. cruzi* is widely known, it will be possible to suggest probable mechanisms of action to the tested medicines.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewArticle/653>

Biol Tier. 2008;25(1):11-17.

**Behandlung von Milchkühen mit subklinischer Mastitis unter tropischen Bedingungen.
[Treatment of dairy cows with subclinical mastitis in tropical conditions].**

[Article in German]

Sanjaya AW.

Int J High Dilution Res. 2012;11(40):163.

Chronic inflammatory response modulation against *Leishmania (L.) amazonensis* by homeopathic thymulin and antimonium crudum in Balb/c mice.

Santana FR, Cardoso TN, de Paula Coelho C, Osugui L, Laurenti MD, Hurtado EP, Bonamin LV.

Abstract

In previous studies it was found that thymulin 5cH (thymic hormone) can modulate immune processes in several diseases. Additionally, the Antimonium crudum has been used in dogs bearing leishmaniasis, according to the similia principle. We studied the inflammatory and immune modulation by thymulin 5cH and Antimonium crudum 30cH treatment in mice experimentally inoculated with *Leishmania (L.) amazonensis*. Male adult Balb/c mice were inoculated with *Leishmania* (2×10^5 promastigotes) into the footpad to induce inflammatory response and peritoneum and spleen cells were evaluated by flow cytometry after 60 days. Animals were divided in 3 groups (n=10): thymulin 5cH, Antimonium crudum 30cH and vehicle/control. Treatment was made in blind, daily, in water/alcohol 30% diluted 1:2500 in drinking water, during all experimental period. CD11b (activated phagocytes and B1 cells), CD19 (B1 cells and B2), CD4 and CD8 (effective T lymphocytes) markers were used to identify immune cells subsets in peritoneal washing fluid and spleen cell suspension. Mice treated with thymulin 5cH presented increase in peritoneal and spleen B1 stem cells ($X^2=0.0001$) and higher CD8+/CD4+ ratio in spleen, regarding to the control. Also, Antimonium crudum 30cH induced a mild increase in B1 cells in peritoneum and spleen (both X^2 , $p=0.0001$). Further histological analysis of the primary lesion will be done in the next step, to elucidate the impact of these findings in the disease evolution. The results show that both treatments stimulate B1 stem cell proliferation and suggest the cooperation of T spleen lymphocytes in the process.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/581/579>

Int J High Dilution Res. 2013;12(44):151.

Modulation of acute inflammatory response in murine cutaneous leishmaniasis after treatment with Thymulin 5cH and Antimonium crudum 30cH.

Santana FR, Hurtado ECP, Laurenti MD, de Paula Coelho C, Cardoso TN, Osugui L, Benites NR, Bonamin LV.

Abstract

Leishmaniasis is a zoonosis caused by intracellular protozoa of the mononuclear phagocyte system; the modulation of these cells may impact in the host/parasite relationship. The present study evaluated the action of homeopathic Thymulin 5 cH and Antimonium crudum 30 cH in the experimental infection of *Leishmania (L.) amazonensis*. Balb/c mice were inoculated with 2×10^6 promastigotes of *Leishmania (L.) amazonensis* into the footpad and, after 48 hours, different cell populations such as CD19+ (lymphocytes B1 and B2), CD5+ (B1subtype), CD11b+ (phagocytes), CD4+ and CD8+ (T lymphocytes) were analyzed in the peritoneal washing fluid by flow cytometry. Histomorphometry of the paw, lymph nodes and spleen were also made after Giemsa staining and immunohistochemistry for CD3, CD11b and CD45RA (T lymphocytes, B lymphocytes and macrophages, respectively). The results showed increase in B-lymphocytes (X2, $p=0.0001$), in particular, B2 cells (X2, $p=0.0001$) in the peritoneum, in the group treated with Antimonium crudum 30 cH. There was no difference in the number of amastigote forms of *Leishmania (L.) amazonensis* in the lesion. There were significant differences for CD45RA+ lymphocyte area in the lymph node, comparing the total area ($p=0.0001$), Mantle Zone ($p=0.0010$) and paracortical area ($p=0.0003$). The spleen also showed increase of CD45RA+ cells, defined by scores ($p=0.0001$), in the groups treated with thymulin 5 cH and Antimonium crudum 30 cH, when compared to the control. CD11b+ cells were also increased in these groups ($p=0.0001$). We conclude that the homeopathic medicines interfered in the inflammatory and immune responses in the murine experimental infection by *Leishmania (L.) amazonensis*.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/665/675>

Homeopathy. 2014 Jan;103(1):64.

Modulation of chronic inflammation response to *Leishmania (L.) amazonensis* by Thymulin 5CH in mice.

[Fabiana Rodrigues Santana](#), [Cideli de Paula Coelho](#), [Elizabeth C.P. Hurtado](#), [Marcia Dalastra Laurenti](#), [Leoni Villano Bonamin](#).

Link to abstract/paper: <http://www.homeopathyjournal.net/article/S1475-4916%2813%2900098-2/fulltext>

C R Soc Biol. 1990;184:55-58.

Incidence d'un traitement homéopathique par Cuprum 4CH sur le transit intestinal de la souris.

[Effect of a homeopathic treatment 4CH Cuprum on intestinal transit in mice].

[Article in French]

Santini R, Tessie M, Belon P, Pacheco H.

Abstract

Un traitement homéopathique préalable par cuprum 4 CH, 24 et 5 heures avant néostigmine (50 $\mu\text{g}/\text{kg.i. p.}$) réduit de façon significative (Kruskal-Wallis: $p < 0,02$) l'effet facilitateur de la néostigmine sur le transit intestinal chez la Souris.

Link to abstract/paper: <http://cat.inist.fr/?aModele=afficheN&cpsidt=19327752>

Int J High Dilution Res. 2006;5(14):9-11.

**Tratamento homeopatico da mastite do gado leiteiro
[Homeopathic treatment of mastitis in dairy cattle].**

[Article in Portuguese]

Santos JS, Griebeler SA.

English Abstract

A non-probabilistic trial was conducted in a dairy farm in Tucunduva, Rio Grande do Sul. Two therapeutic approaches to the treatment of bovine mastitis were tested in order to compare respective effectiveness and costs. The trial was performed in 14 animals, divided in two groups $n = 7$. One group was treated with a combination of Belladonna 30CH, Mercurius solubilis 30CH, Phytolacca decandra 30CH e Hepar sulphur 30CH, globules p.o. and intramammary non ionic base cream. The second group received regular treatment, with gentamicin cream 0.25%, intramammary, and inert homeopathic globules p.o. All seven animals in the first group were cured after seven days of treatment. One animal in the regular treatment group did not show improvement. Respective costs were R\$ 7.00 and R\$ 64.40 per animal. This study suggests that homeopathic treatment is as effective in the treatment of bovine mastitis as regular treatment, with significant less cost. Link to paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewFile/151/154>

Comparative Clinical Pathology. 2007;16(3):197-200.

Evaluation of wound contraction and epithelialization after subcutaneous administration of Theranekron® in cows.

[Kamran Sardari](#), [Ehsan Galedar Kakhki](#), [Mehrdad Mohri](#)

Abstract

Ten bulls (age 7 months, weight 302 ± 15 kg) were used in this study. After sterile preparation of skin, a full thickness wound (20×20 mm) was created in each bull. The bulls were randomly assigned into two groups: group 1 received 6 ml Theranekron subcutaneously and group 2 penicillin banzatine 10,000 IU/kg IM. These doses were repeated 6 days after initial wounding. At days 0, 3, 6, 10 and 14, digital photographs were taken from the wounds to calculate wound contraction and epithelialization using geometry. Chi-square test was performed for statistical analysis using SPSS 9 for Windows. There was no significant differences in wound contraction between trial groups ($P > 0.05$) but a statistical difference was seen in epithelialization between groups ($P < 0.05$). Epithelialization is one of the most important factors in wound healing. According to the results of the present study, Theranekron can significantly stimulate epithelialization in full thickness wounds in cows during the first 14 days of healing.

Link to abstract/paper: <http://rd.springer.com/article/10.1007/s00580-006-0657-8>

Homeopathy. Article in Press.

Anti-rheumatoid and anti-oxidant activity of homeopathic *Guaiaecum officinale* in an animal model.

[Amrita Sarkar](#), [Poulami Datta](#), [Asok Kumar Das](#), [Antony Gomes](#)

Abstract

Background: Homeopathy is a popular form of complementary and alternative medicine. *Guaiaecum* extract is said to be useful for pain and inflammation, but there appears to be no scientific evidence to support this.

Aims: The aim of the present study was to evaluate the anti-rheumatic and anti-oxidant activity of homeopathic preparations of *Guaiaecum officinale* (*Gua*) on experimental animal model.

Design: Rheumatoid arthritis (RA) was induced in male albino rats by Freund's complete adjuvant (FCA) at a dose of (0.25 mg heat killed *Mycobacterium tuberculosis*/ml of emulsion). *Gua* mother tincture (MT) (prepared from the latex part of the plant) (MT), *Gua* 30cc and 200cc were purchased commercially from King Company, Kolkata, India. Male albino Wistar rats (130 ± 10 g) were divided into 6 groups: Sham control; Arthritis control; Standard treatment indomethacin (0.25 mg 100 g⁻¹ p.o. × 5 alternative days), *Gua* MT (1 ml kg⁻¹ p.o. × 5 days) treated; *Gua* (30c 1 ml kg⁻¹ p.o. × 5 days) treated; *Gua* (200c; 1 ml kg⁻¹ p.o. × 5 days) treated. Anti-rheumatic activity was examined through physical, urinary, serum parameters. All the results were expressed in terms of mean ± SEM (statistical error of mean *n* = 6) at each dose level. The level of significance was determined through one-way analysis of variance (ANOVA), *p* < 0.05 was considered significant.

Results: It was observed that body weight, ankle and knee diameter, urinary parameters (hydroxyproline (OH-P), glucosamine, calcium (Ca²⁺), creatinine (CRE), phosphate (PO₄³⁻)), serum ACP (acid phosphatase)/ALP (alkaline phosphatase)/Ca²⁺/CRE/PO₄³⁻/gamma-glutamyl transferase (GGT)/Lipid peroxidation (LPO)/Glutathione (GSH)/Superoxide dismutase (SOD)/Catalase, serum GGT, serum interleukins like IL-1β/CINC-1/PGE2/TNF-α/IL-6, IL-12/IL-4/IL-6 levels were significantly affected. After treatment with *Guaiaecum* in all 3 regimes was associated with normalization of these parameters compared to control group.

Conclusion: These findings suggest that homeopathic *G. officinale* possesses anti-rheumatic and anti-oxidant activity in experimental animal and these activities may be more significant in higher potencies.

Link to abstract/paper: <http://www.homeopathyjournal.net/article/S1475-4916%2813%2900070-2/fulltext>

Ind J Hom Zootomy. 1975;16:129-136.

Studies on the Effect of Pituitary Extract of Ovariectomized Untreated and Caulophyllum Treated Rats on the Ovaries, the Uteri and the Thyroids of Normally Cycling Rats.

Sarma GHR, Chandrasekhar K.

Ind J Hom Zootomy. 1975;16:205-209.

Effect of Thyroidectomy and Thyroxinisation on the Ovaries and the Uteri of Caulophyllum 200 to 10.000 Potencies Administered Rats.

Sarma GHR, Chandrasekhar K.

Homeopathy. 2012 Jan;101(1):68-73.

Development of broiler chickens after treatment with thymulin 5cH: a zoo technical approach.

[Sato C](#), [Listar VG](#), [Bonamin LV](#).

Centro de Pesquisa, Universidade Paulista, Rua Dr Bacelar, 1212. 4° andar, 04026-002 São Paulo, São Paulo, Brazil. satocesar@uol.com.br

Abstract

Modulation of immune response due to thymulin 5cH has been previously observed. The aim of the present study is to evaluate the development of broiler chickens treated with thymulin 5cH by conventional zoo technical indices, phytohemagglutinin induced inflammation test and histomorphometric analysis of lymphoid organs (thymus, Fabricius bursa and spleen). Animals were divided in two groups: (a) test: birds with free access to thymulin 5cH diluted into the drink water and (b) control: birds with free access to water only, from the 1st to the 42nd day of life. All experimental procedures were done in blind. The results show that thymulin 5cH treated group had increased productivity index compared to control (391.45 versus 261.93) associated with higher viability in the 7th week ($p = 0.013$), and a possible shunt to B lymphocyte activity. The data suggest that thymulin 5cH could be a viable method to improve productivity in poultry production due to its immune modulation properties.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/22226317>

Homeopathy. 2005 Jan;94(1):26-32.

Histopathological and immunophenotyping studies on normal and sarcoma 180-bearing mice treated with a complex homeopathic medication.

[Sato DY](#), [Wal R](#), [de Oliveira CC](#), [Cattaneo RI](#), [Malvezzi M](#), [Gabardo J](#), [Buchi Dde F](#).

Universidade do Vale do Itajaí.

Abstract

Canova is a homeopathic complex medicine, used as an immune modulator. We studied its effects in normal and sarcoma 180-bearing mice. Three control groups were also evaluated. The mice were examined at daily intervals and the tumours observed histologically. Peripheral blood was analysed by flow cytometry. A delay in the development, and a reduction in size of the tumours, and increased infiltration by lymphoid cells, granulation tissue, and fibrosis surrounding the tumour were observed with active treatment compared to control. All animals from the treated group survived, 30% of control groups died. In 30% of treated animals, a total regression of the tumour was confirmed using light microscopy, no regression was

found in the control groups. Treatment with Canova increased total numbers of leukocytes and lymphocytes. Among lymphocytes, TCD4, increased in normal-treated group and B and NK cells in S180-treated groups. The results reflect enhanced immune response of the host after treatment with Canova.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15751331>

Int J Vet Hum. 1991;5:8-12.

The use of canine distemper nosode in disease control.

Saxton J.

Homeopathy. 2007 Jan;96(1):3.

The diversity of veterinary homeopathy.

[Saxton J](#)

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17227741>

AHZ. 1929;177(4):426-432.

Versuche mit Kieselsäureinjektionen bei Kaninchen.

[Experiments with silica injections in rabbits].

[Article in German]

Scheidegger E.

ÖAZ. 2003;57(8):379-381.

Untersuchung am zoologischen Modell.

[Study on zoological model].

[Article in German]

Scherer-Pongratz W, Endler C, Haidvogel M, Frass M.

Link to abstract/paper: <http://bibnet.org/vufind/Record/ccmed951877230>

Österr Apoth Z. 2004;12:564-565.

Röntgenkontrolle homöopathischer Arzneimittel.

[X-ray inspection of homeopathic remedies].

[Article in German]

Scherer-Pongratz W, Endler PC, Haidvogel M, Frass M.

Z Exp Med. 1942;111(6):681-689.

Experimentelle Untersuchungen über die Wirkung des Bariumchlorids auf die

**Coronardurchblutung und seine therapeutische Verwendbarkeit.
[Experimental studies on the effect of barium chloride on the coronary
circulation and its therapeutic utility].**

[Article in German]

Schimert G.

Abstract

Es wurde die Wirkung von Bariumchlorid in verschiedenen Dosen am Coronarkreislauf von Hunden mit der *Reinschen* Stromuhr und am Menschen mit Hilfe des Ekg geprüft. Beim Hund führten große Dosen (20-200 mg BaCl₂) nach einer vorübergehenden Steigerung der Coronardurchblutung während der Phase des starken Blutdruckanstiegs zu einer nachhaltigen Drosselung der Coronardurchblutung. Es wird angenommen, daß die anfängliche Mehrdurchblutung trotz Erhöhung des Coronarwiderstandes durch die Steigerung der Herzleistung und damit des Blutangebotes erzielt wird. Mittlere Dosen (1-20 mg) können eine sofortige Senkung der Durchblutung erzeugen, die von der anfänglichen hier geringen Blutdrucksteigerung nicht durchbrochen werden kann. Kleine Dosen (um 1 mg) führen zu einer Steigerung der Coronardurchblutung, die auch nach Rückkehr des Blutdruckes zur Norm weiter bestehenbleibt. Kleinste Dosen (0,01-0,1 mg) führen zu einer Steigerung des Coronardurchflusses ohne Veränderung des Blutdruckes.

Hat vorher eine Verminderung der Coronardurchblutung durch Hypophysenhinterlappenpräparate stattgefunden, so lösen kleine und kleinste Dosen eine Steigerung der Coronardurchblutung bei sinkendem Blutdruck aus. Hier wird im Gegensatz zur Wirkung durch große Dosen eine Verminderung des Widerstandes im Coronargefäßgebiet angenommen.

Beim Menschen ist bei intravenöser Darreichung von 1-10 γ beim Herzgesunden keine Wirkung nachweisbar. Bei Angina pectoris-Kranken trat in 2 Fällen auf 10γ BaCl₂ eine kurz dauernde Verschlechterung des Ekg und in 3 Fällen bei Dosen von 1-10 γ eine einwandfreie Besserung des Ekg im Sinne einer Besserung der Coronardurchblutung auf. Auf Grund der Ergebnisse wird die therapeutische Verwendbarkeit von kleinsten Bariumchloridgaben bei tonisch verengerten Coronargefäßen angenommen. Die Wirkung tritt zwar nicht regelmäßig ein, aber bei vorsichtiger Dosierung ist es lohnend, die therapeutische Wirkung zu versuchen.

Link to abstract/paper: <http://link.springer.com/article/10.1007%2FBF02669498>

Dtsch Tierarztl Wochenschr. 1985 Apr 9;92(4):128-30.

Pharmakologisch-toxikologische Aspekte der homöopathischen Behandlung von Tieren.

[Pharmacological-toxicological aspects of the homeopathic treatment of animals].

[Article in German]

[Schmid A.](#)

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/3899575>

DTW. 1940;48:108-110.

Behandlungsversuche mit Lachesis Bengen bei Pararuschbrand und Novödem.

[Article in German]

Schoop G, Stolz A.

Zeitschrift für Ganzheitliche Tiermedizin. 1999;13(5):5.

Sabinacomp.PLV - Praxisstudie zur Anwendung einer Arzneimittelkombination beim MMA-Komplex der Sau.

[Sabina Comp.PLV - practice study using a drug combination in MMA complex of the sow].

[Article in German]

Schork W, Wesselmann S.

Prakt Tierarzt. Colleg Vet 1988;19:67-73.

Neue Ergebnisse aus Untersuchungen zur Behandlung des Puerperalsyndroms der Zuchtsauen.

[New results from investigations concerning the treatment of the puerperal syndrome of breeding sows].

[Article in German]

Schütte, A.

Abstract

Es wird zusammenfassend über die Ergebnisse der Dissertation „Die Behandlung des Mastitis-Metritis-Agalaktie-(MMA-) Syndroms der Muttersauen mit homöopathischen Arzneimitteln im Vergleich mit einer praxisüblichen allopathischen Therapie“ berichtet. 64 spontan am MMA-Syndrom erkrankte Muttersauen aus insgesamt 21 Betrieben wurden randomisiert zwei Behandlungsgruppen (Gruppe H = Behandlung mit homöopathischen Einzelmitteln; Gruppe A = Behandlung mit praxisüblichen Allopathika) zugeordnet. Als Homöopathika kamen als Einzelmittel oder in Kombination zum Einsatz: Apis (D4), Asa Foetida (D3), Aristolochia (D12), Bryonia (D4), Carbo vegetabilis (D 12), Lachesis (D8), Phytolacca (D3, D6), Pulsatilla (D4), Pyrogenium (D8), Sabina (D3) und Veratum album (D2). Die homöopathisch behandelte Gruppe war Gruppe A u.a. bezüglich der Behandlungsdauer (2,39 und 3,16 Tage), der Ferkelverluste nach vier Wochen (10,0% und 19,15%) überlegen. (Zusammenfassung verfasst von S. Arlt)

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=172

Berl Münch Tierärztl Wochenschr. 1994;107(7):229–236.

Ist Forschung in der Veterinärhomöopathie gerechtfertigt?

Grundsatzgedanken und eine Zusammenschau über 5 Jahre Forschung zum Thema "Anwendung der Homöopathie bei Nutztieren" an der Außenstelle der Freien Universität Berlin in Schwarzenbek.

[Is research warranted in veterinary homeopathy? Fundamental ideas and a synopsis of over 5 years research on "use of homeopathy in farm animals" at the remote location of the Free University of Berlin in Schwarzenbek].

[Article in German]

Schütte A.

AHZ. 1939;187(2):69-75.

Über die Anwendung histologischer Methoden zur Ergänzung homöopathischer Arzneiprüfungen.

[On the application of histology to supplement homeopathic provings].

[Article in German]

Schwabe W.

Int J High Dilution Res. 2006 Jul-Sep;5(16).

Uso das Terapias Ultra High Dilution (UHD) na Produção Agropecuária.

[Use of Ultra High Dilution (UHD) Therapies in Agricultural Production].

[Article in Portuguese]

Schwartz FF, Paredes AMC.

English Abstract

Currently, UHD therapies are used not only in organic productions, but also in conventional farming/cattle-raising activities, because they do not leave toxic residues in food nor in the environment, are more effective in some pathologies than allopathic curative agents, and also because they cost less than conventional therapies. This article shows the producer's point of view concerning the advantages and disadvantages of using UHD therapies in farming/cattleraising activities, as well as their demands towards homeopathy. Some homeopathic treatments for the most common clinical findings in milk and aviculture production are related. The study concludes that the host-parasite relationship and especially the physiological collection and expansion of endogenous information disclosed by UHD therapies must be studied in the light of modern technologies, thereby providing support to a new approach to diseases and the field worker's clinical reasoning.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/201/209>

European Journal of Integrative Medicine. 2012 Sep;4(1):91.

Clinic case of an animal's companionship (dog).

[Mario Sciarri](#), [Pecchia Luca](#)

Laurea in Medicina Veterinaria, Milan, Italy

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S1876382012007755>

Europaeen Journal of Integrative Medicine. 2012 Sep;4(1):91.

Homeopathic veterinary medicine and its application in preventing and curing diseases of animals for production and company.

[Mario Sciarri](#), [Testadura Maurizio](#)

Laurea in Medicina Veterinaria, Milan, Italy

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S1876382012007743>

Can Vet J. 2002 Aug;43(8):601-3.

Treatment of canine atopic dermatitis with a commercial homeopathic remedy: a single-blinded, placebo-controlled study.

[Scott DW](#), [Miller WH Jr](#), [Senter DA](#), [Cook CP](#), [Kirker JE](#), [Cobb SM](#).

Department of Clinical Sciences, College of Veterinary Medicine, Cornell University, Ithaca, New York 14853, USA.

Abstract

A commercial homeopathic remedy and a placebo were administered orally as individual agents to 18 dogs with atopic dermatitis. The pruritus was reduced by less than 50% in only 2/18 dogs; 1 of these dogs was receiving the homeopathic remedy, the other was receiving the placebo. One dog vomited after administration of the homeopathic remedy.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12170834>

Br Homeopath J. 1995 Apr;84(2):67-70.

Control of subclinical bovine mastitis: Utilization of a homoeopathic combination

[R. Searcy](#), [O. Reyes](#), [G. Guajardo](#)

Abstract

A clinical trial was conducted on a dairy farm. 26 animals were divided into 2 groups of 13 each, pairing on clinical and subclinical mastitis status, milk production and number of lactations, assigning both animals and treatments by a systematic random method. One group received homoeopathic treatment, the other placebo. Monthly milk production was carefully recorded for each animal, as were the results of the California Mastitis Test (CMT) performed on each quarter of the udder. The proportion of affected quarters according to CMT was 32% in the treated group, and 68% in the control group. The odds ratio of the difference shows that animals receiving placebo presented 4.5 (1.78–11.73) times more subclinical mastitis than those under homoeopathic treatment ($p < 0.05$). Average milk production in the treated group did not differ significantly from that of the control group ($p < 0.05$). The

study confirms previous observations of the benefit the homoeopathic method can provide in disease control in animal populations.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078595800336>

Br Homeopath J. 1996 Jan;85(1):42.

Use of homoeopathic Arnica to wean cows.

Seco JL, von Bernard H, DugganA.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S000707859680041X>

Tierärztliche Ambulanz Schwarzenbek , Fachbereich Veterinärmedizin, Freie Universität Berlin. 1987;1-211.

Die Behandlung des Mastitis-Metritis-Agalaktie-MMA Syndroms der Muttersauen mit homöopathischen Arzneimitteln im Vergleich mit einer praxisüblichen allopathischen Therapie.

[The treatment of mastitis-metritis-agalactia MMA syndrome of sows with homeopathic medicine compared with a typical allopathic therapy].

[Article in German]

Seifert U.

English Abstract

Under field conditions trials with homeopathic medication were performed on sows with the MMA syndrome in comparison to therapy with allopathic drugs. A total of 64 sows spontaneously affected by MMA was evaluated statistically, out of which 33 animals belonged to group H (homeopathy). Thirty one sows served as control group A (allopathy). The assignment to the respective group of treatment was determined prior to the visit by a farm related method of random selection. The sows of group H were treated with homeopathic medication usually by selecting 2 - 4 compounds each time from 11 single compounds available according to the rules of homeopathy (simile rule !), which were applied to the sows combined parenterally and orally. The sows of the control group A received antibiotics, hormones, antipyretic and analgetic agents etc. according to the generally accepted principles of MMA therapy. The recovery of the sows and the development of the piglets were recorded in a protocol on 5 examinations (1 - V) within 28 (+/-1) days. As shown in the following table, marked differences could be noticed between oth groups of therapy with regard to the criteria determining the therapeutic success: (table only available in printed issue) In 60.6 % of the sows from group H one or two treatments were sufficient to normalize the state of health of the dam and the piglets, in 39.4 % of the animals three or more treatments had to be carried out. In contrast, the number of sows in group A who needed 3 or more treatments predominated with 64.6 %. In 35.4 % of the sows in this group a cure could be achieved after 1 or 2 therapeutic measures. The average duration of treatment was 2.39 days in the homeopathically treated sows, 3.16 days in the sows treated allopathically. The average litter size varied markedly upon the examination on the 28.(+/-1) day (V) : at this time the

average number of piglets of the allopathically treated sows was 0.84 piglets per litter less than of the sows belonging to group H - and this in spite of the fact that on the first visit (I) the sows of group A had higher numbers of piglets per litter. The differences concerning the piglet losses after 4 weeks in favour of the sows from the homeopathic group are significant ($p = 0.008$). The piglets of the homeopathically treated sows showed higher average litter weights during the period of the trial, although the differences are small. Between the first and second weighing (I-IV) group A showed higher weight gains of the piglets than group H, between the second and third weighing (IV-V) the situation was reverse: the piglets of the homeopathically treated sows showed higher increase in weight. Furthermore, considering to the clinical findings, the sows from the homeopathically treated group showed the tendency toward a more favourable course of recovery compared to those of the allopathic control group. From the results of this comparative investigation the conclusion can be drawn that homeopathic treatment of the MMA-complex under field conditions is possible and practicable and that, as far as the therapeutic success is concerned, homeopathic treatment and conventional therapy are to be considered as equally valuable.

Link to abstract/paper: <http://library.vetmed.fu-berlin.de/diss-abstracts/69997.html>

Indian Vet J. 2000;77(9):813-814.

Evaluation of homeopathic drugs in hypogalactia of cows.

[Selukar, P. S.](#), [Dakshinkar, N. P.](#), [Sarode, D. B.](#), [Rode, A. M.](#), [Kothekar, M. D.](#)

Abstract

The serum calcium, phosphorus and milk yield of 18 hypogalactic cows, that were equally divided into 3 treatment groups (T1 (subcutaneous injection of tincture calcarea phosphorica 30 \times in a 1:3 dilution, once daily for 5 days), T2 (oral administration of tincture calcarea phosphorica 30 \times in a 1:10 dilution, daily for 5 days), and T3 (control)), were recorded weekly from 0 to 8 weeks post-treatment. Critical test analysis revealed that serum calcium in T1 and T2 were significantly lower than in T3. T1 registered an increase of 2.83% over pre-treated values with corresponding increase in milk yield by 0.26, 2.21 and 1.21 litres per week for the 1st, 2nd, and 3rd week, respectively; T2 had marginal increase of 0.20 and 0.08 litres of milk for the 1st and 2nd week, respectively. There was a positive correlation between serum calcium and milk yield (0.3211 ± 0.2821). Effect of treatment on phosphorus and milk yield was significantly different ($P < 0.01$) between groups. The serum phosphorus level was inversely related to plasma calcium level.

Link to abstract/paper:

<http://www.cabdirect.org/abstracts/20003023408.html;jsessionid=CE89E3B9886E208B4E110D41B8C17C8F>

Zeitschrift für Ganzheitliche Tiermedizin. 2010;24(1):4-6.

Homöopathische Therapie einer Vakzinose nach Taubenpockenimpfung - Ein Fallbeispiel aus der Praxis.

[Homeopathic treatment for a vaccinosis pigeon pox vaccination - A case study from practice].

[Article in German]
Serrano I.

Abstract

The article describes the homeopathic treatment of a population of doves with symptoms of pigeon pox following an inoculation against the same. The diagnosed vaccinosis was treated with Thuja and a further homeopathic therapy of Antimonium crudum and Viola tricolor. Additionally, Bach flower remedies were used to speed up the healing process.

Link to abstract/paper: <https://www.thieme-connect.com/ejournals/abstract/10.1055/s-0029-1240752>

Indian Journal of Natural Products and Resources. 2010 Dec;1(4):450-455.

Immunostimulatory activity of aqueous extract of *Murraya koenigii* (Linn.) Spreng. leaves.

Shah AS, Juvekar AR.

Abstract

Leaves of *Murraya koenigii* (Linn.) Spreng. (Curry patta) are reported to possess antidiabetic, antimicrobial, cytotoxic and anti-inflammatory activity. In the present study immunomodulatory potential of aqueous extract of its leaves on specific (humoral and cell mediated) and non specific (macrophage) immunity in mice was investigated. Oral administration of the aqueous extract of leaves at the doses of 250 and 500 mg/kg significantly enhanced the delayed-type hypersensitivity reaction induced by ovalbumin however, the effect was not dose related. The extract also potentiated the production of circulating antibody titre significantly in response to ovalbumin. Pre-treatment of the extract restored the myelosuppressive effect of cyclophosphamide through ameliorating total white blood cells count. Significant increase in release of nitric oxide from mouse peritoneal macrophages in culture supernatant indicates enhancement of cytotoxic activity of macrophages. The present investigation thus reveals that aqueous extract of *M. koenigii* leaves possesses immunostimulatory activity by acting on both specific and non-specific immunity.

Link to paper:

<http://nopr.niscair.res.in/bitstream/123456789/10829/1/IJNPR%201%284%29%20450-455.pdf>

Rheuma. 1999;13(3):101-108.

Effects of Zeel comp. on Experimental Osteoarthritis in Rabbit Knee.

Stanciková M, Bely M, Svik K, Svik K, Metelmann H, Schmolz M, Istok R, Fano R.

Journal of Ethnopharmacology. 2011 Oct;138(1):99–104.

Wound healing efficacy of *Jatyadi Taila*: *In vivo* evaluation in rat using excision wound model.

[Sunita Shailajan](#), [Sasikumar Menon](#), [Suhas Pednekar](#), [Ashish Singh](#).

Abstract

Ethnopharmacological relevance: In traditional Indian medicinal treatise there are several Ayurvedic formulations mentioned which have been claimed as potential wound healing agents like *Madhu Ghrita* and *Jatyadi Taila*. *Jatyadi Taila (JT)* is a medicated oil formulation (*Taila*) popularly used in the treatment of various topical wounds.

Aim of the study: Though *JT* has its composition recorded in ancient Ayurvedic texts, there have been minimal attempts to standardize its use in the management of wound. The current work evaluates the wound healing efficacy of *JT* and also provides evidence of the dermal absorption kinetics of Karanjin from *JT*.

Materials and methods: *JT* was subjected to preliminary phytochemical evaluation. Therapeutically active marker components β -sitosterol, lupeol and karanjin were detected and separated using HPTLC. As a part of safety evaluation, skin irritation potential of *JT* was evaluated on rabbit skin. Excision wound model in rats were used to evaluate the wound healing efficacy of *JT*. Histopathological and biochemical evaluations of excised skin tissues at wound sites were carried out. The HPTLC method developed was also validated to evaluate the pharmacokinetics of Karanjin from *JT* after topical application on pinna of rabbit.

Results: Preliminary phytochemical evaluation of *JT* revealed presence of flavonoids, essential oils, tannins, glycosides, steroids and alkaloids while resins were found to be absent. HPTLC confirmed the presence of karanjin, lupeol and β -sitosterol in *JT*. *JT* was found to be non-irritant when applied to the skin of rabbits. Topical application of *JT* on excision wounds caused significantly faster reduction in wound area as compared to the application of modern topical formulation (Neosporin®) and untreated control wounds. Animals treated with *JT* showed significant increase in protein, hydroxyproline and hexosamine content in the granulation tissue when compared with the untreated controls. Wound healing potential of *JT* was found to be dose dependant. HPTLC method was successfully used to evaluate the pharmacokinetics of Karanjin after topical application of *JT* on rabbit pinna.

Conclusions: Current work demonstrates a modern approach towards standardization of the use of traditional topical formulation *JT*. The results justify the traditional claim of *JT* for its use in the management of wounds.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0378874111006234>

Indian J Anim Prod Manage. 1986;2:30-34.

Efficiency of some homoeopathic feed additives for commercial broilers.

Sharma ML, Kansal ML, Ichhponani JS.

Indian J Poult Sci. 1987;22:344-348.

Supplemental value of homoeopathic preparation on feed of commercial broilers.

Sharma ML, Kansal ML, Ichhponani JS.

Hahnemann Glean. 1982;49:167-173.

Experimental Support for Principle of Dynamization, Law of Similiars and for new Science of Ultramicroxenopathy.

Sharma RR, Agnihotri A, Gogna ML.

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:67-9.

Ultralow doses of anti-idiotypic antibodies to human gamma-interferon: immunotropic properties.

[Sherstoboev EY](#), [Masnaya NM](#), [Churin AA](#), [Borsuk OS](#), [Martyushev AV](#), [Epstein OI](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences, Tomsk.

Abstract

We studied the effects of ultralow doses of anti-idiotypic antibodies to human gamma-interferon on humoral immune response in experimental animals immunized with a thymus-dependent antigen, delayed-type hypersensitivity, and phagocytic activity of neutrophils in the peritoneal exudate. This preparation stimulated the humoral immune response and activated phagocytosis, but had no effect on functional activity of T cells.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949655>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:70-2.

Immunotropic effects of potentiated antibodies to human interferon-gamma.

[Sherstoboev EY](#), [Masnaya NM](#), [Churin AA](#), [Borsuk OS](#), [Martyushev AV](#), [Sergeeva SA](#), [Epstein OI](#), [Dygai AM](#), [Goldberg ED](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences.

Abstract

We studied immunotropic properties of antibodies to human interferon-gamma in homeopathic doses. The effects of these antibodies on the ratio between the counts of T helper (CD4+) and T suppressor cells (CD8+), production of interleukin-1 and interleukin-2, and functional activity of natural killer cells were evaluated. Potentiated antibodies slightly decreased the number of CD8+ cells in the spleen of experimental animals. After the addition to cultured human mononuclear cells the preparation produced a moderate comitogenic effect, stimulated proliferation of T and B lymphocytes, increased spontaneous and induced production of interleukin-1, and enhanced functional activity of natural killer cells (under certain conditions).

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949656>

Semina: Ciências Agrárias. 2010;31(4):985–994.

Efeito do núcleo homeopático homeopatila 100® na eficiência produtiva em alevinos revertidos de tilápia do nilo (*Oreochromis niloticus*)

[Effect of core homeopathic homeopatila 100® in productive efficiency of fingerlings reverted from Nile tilapia (*Oreochromis niloticus*)]

[Article in Portuguese]

Siena CE, Natali MRM, Braccini GL, de Oliveira AC, Ribeiro RP, Vargas L.

English Abstract

It was researched the effect of Core Homeopathic Homeopatila 100® on the integrity branchial histological, weight, final length, survival, feed conversion and apparent index hepatossomático in fingerlings from Nile tilapia (*Oreochromis niloticus*). We used in the control treatment (T1) with 20mL/kg water-alcohol solution (alcohol 30 GL) and three treatments with 20mL/kg (T2), 40mL/kg (T3) e 60mL/kg (T4) of core homeopathic Homeopatila 100® in fingerlings male reversed, with initial weight and initial length the $1,05 \pm 0,32g$ and $4,15 \pm 0,42cm$ respectively. It was distributed a total of 832 fingerlings in 16 polyethylene water tanks with individual capacity of 2000 liters, contends 1000 liters each one, where they ha remained during 61 days. At the end of experiment, was not observed statistic difference between the different treatments in histological changes examined in gills: epithelial lifting, hyperplasia, telangectasy and lamellar fusion. The fingerlings which received 40mL/kg of Homeopatila 100® (T3) showed a higher rate of survival and also lower rate than the other hepatossomático the fingerlings in control group (T1).

Link to paper:

<http://www.uel.br/revistas/uel/index.php/semagrarias/article/view/7602/6696>

Rev Bras Parasitol Vet. 2008 Sep;17 Suppl 1:40-4.

Desempenho e infestação por parasitos em machos leiteiros suplementados com sal proteínado com ou sem os medicamentos homeopáticos.

[Performance and parasitologic infestation of male dairy cattle supplemented with proteic salt containing or not homeopathic medicines].

[Original Article in Portuguese]

[Signoretti RD](#), [Veríssimo CJ](#), [De Souza FH](#), [Garcia Tda S](#), [De Oliveira EM](#), [De Souza KG](#), [Mourão GB](#).

Agência Paulista de Tecnologia dos Agronegócios, Regional Alta Mogiana, Colina, SP, Brazil.

Abstract

The objective of this study was to evaluate the performance and parasitologic infection of male dairy cattle submitted to supplemental proteic salt with and without the use of homeopathic medicines. Were used crossbred Gir x Holstein castrated males calves, with 10 months of age and live weight of 150.75 kg, distributed in a completely randomized design with eight replicates per treatment, totaling 16 animals. The calves of each treatment remained in a pasture of *Brachiaria brizantha* cv. Marandu, managed in continuous grazing system for 8 months. The treatments employed were: supplementation with 300 g/animal/day of protein (40% of crude

protein (CP) and 25% CP in the dry and rainy season, respectively) added or not with 5 g/animal/day of the homeopathic medicines FATOR PRO® and C & MC®. The addition of homeopathic medicines in the protein supplement did not affect ($P > 0.05$) the development of body male crossbred to pasture. The counting of the larvae and adults of ticks in scrapings were lower ($P < 0.05$) in animals that did not receive homeopathic medicines in the protein supplement. The females tick in the body anterior third (simplifying counting), nymphs in scrapings and the number of eggs per gram of helminths were not affected ($P > 0.05$) by the treatments. It was concluded that the use of homeopathic medicines did not affect the development of male crossbred Gir x Holstein dairy cattle neither their parasitic infection.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20059813>

Int J High Dilution Res. 2005;4(13).

**Uso de Bioterápico de Mycoplasma Spp. em Rebanho Bovino Leiteiro.
[The Use of Mycoplasma Spp Biotherapeutic in Dairy Cattle Herd].**

[Article in Portuguese]

Silva AMCP, Schwartz FF, Cardoso MV, de Toledo César A, Sollero PA.

English Abstract

The present trial has been conducted in an organic milk production farm, where there had been breeding problems and sporadic outbreaks of respiratory disease. A course of treatment with Hydrastis had been performed, according to repertory-analysis of the symptoms of the epidemic respiratory disease, the results of which, however, were merely palliative followed by recurrence of symptoms. Research for a possible etiologic agent showed Mycoplasma spp, a biotherapeutic remedy of which was prepared, at the 30th CH potency. 10 drops of Mycoplasma were diluted in water drunk by the animals over a 6-month period. A week after medication was started, respiratory symptoms gradually improved, with concurrent enhancement of the breeding capacity, represented by a higher AI (artificial insemination) ratio from 5 to 2.5 doses per animal; 20% of animals got pregnant by the first AI. The monitoring process consisted of 4 series of bacteriological exams (from vaginal and nasal mucus swabs) performed in July, October, January and March 2004, all with negative results.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/181/191>

Int J High Dilution Res. 2006 Sep;5(16).

**Tratamento Homeopático de Mamite Subclínica em Bovinos.
[Homeopathic treatment of bovine subclinical mastitis].**

[Article in Portuguese]

Silva EL, Goloubeff B.

Abstract

Foi observada a aplicação de homeopatia no controle de mamite em rebanho leiteiro em uma propriedade de Minas Gerais. Havia sinais de inflamação, leite coagulado, purulento ou sanguinolento, úbere endurecido, abscessos mamários e fibrose. A repertorização indicou medicamentos de tropismo para a glândula mamária,

administrados em complexo homeopático: Mercurius solubilis/ Phytolacca/ Bryonia/ Silicea 12CH, 5 glóbulos, via oral, 2 vezes ao dia nos casos sintomáticos e 1 vez ao dia nos assintomáticos. Para a determinação do miasma dominante (sicose), foram incluídos os sintomas comportamentais observados no proprietário/tratadores e a papilomatose crônica no rebanho, entendidos como obstáculos à cura. Foi aplicado Thuja 200CH em dose única para todos os animais. Após 14 dias, mediante o teste CMT, observou-se redução de 42% dos quadros com grau 3, e redução de 53% dos quadros com grau 4, elevando em consequência os quadros com grau 1 e 2 em 16%, antes de completar a recuperação total.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/216/234>

Int J High Dilution Res. 2008;7(22):36-38.

Use of biotherapeutic in the control of natural infestation by *Boophilus microplus*: pilot study.

Silva NL, Moletta JL, Minho AP, Filippesen LF.

Department of Animal Health; Department of Animal Nutrition, Instituto Agronômico do Paraná - IAPAR, Ponta Grossa, Paraná, Brazil

Abstract

In the control of tick-borne disease (TBD), resistance to chemical products has been reported and a concern with the preservation of the environment requires alternative procedures to control infestation by *Boophilus microplus* worldwide. The use of biotherapeutic preparations is one of such alternatives. The aim of this study was to evaluate the effects of a biotherapeutic mixture including *B. microplus* in naturally infested cattle. 27 animals were divided in 3 groups (n=9): I – control, received no treatment; II- treated with amitraz dip; III- treated with a standard commercial mixture of biotherapeutic 12CH, p.o. Group III presented a statistically significant decrease of ticks when compared to the control group (p<0.05). There was no statistically significant difference between groups II (amitraz) and III (biotherapeutic) (p<0.05). These results suggest that biotherapeutic preparations might be an effective in the control of *B. microplus* in cattle.

Link to paper:

<http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDIQFjAA&url=http%3A%2F%2Fwww.feg.unesp.br%2F~ojs%2Findex.php%2Fijhdr%2Farticle%2FviewFile%2F251%2F337&ei=pWY4UeSbIIWMOISUgOAD&usg=AFQjCNF9-6K34zTdWMcEoeBDnhKfY4nCIQ&bvm=bv.43287494,d.ZWU>

Hahnemann Glean. 1985;52:361-367.

Homoeopathic Drugs: A Potential Inhibitor of Animal Viruses.

Singh LM, Gupta G.

J Res Ind Med Hom. 1971;6:242-244.

An Experimental Appraisal of the Antiviral Activity of Variolinum.

Singh N, Srivastava VK, Kohli RP.

Clin Exp Hom. 2011;3(1).

Amelioration of rat adjuvant arthritis by potentized *Arum maculatum* and *Colchicum*.

Singh R, Sukul NC.

Int J High Dilution Res. 2011;10(36):128-129.

Evaluation of BALB/c mice behavior and relations to the immune response after treatment with H3N2 homeopathic solutions.

Siqueira CM, Bonamin LV, Motta PD, Cardoso TN, Correia M, Couceiro JN, Quaresma CH.

Abstract

In Brazil, homeopathic medicines are prepared according to the Homeopathic Pharmacopeia, regulated by ANVISA. Among several categories of medicines, there is the biotherapeutic group, which is prepared from etiologic agents. In this study, we developed a biotherapeutic from influenza A virus, aiming the influenza infection prevention. Influenza is a disease that affects thousands of people worldwide every year, with an important economic impact, what motivates the development of new low cost therapies. The H3N2 biotherapeutic developed in this study was administered to Balb/c mice to evaluate their immune response to viral specific antigens and behavior (homeopathic proving). Sixty-two 4 weeks old Balb/c mice were divided into five experimental groups (n=14 per group), after approval by the Ethics Committee of Animal Use (Protocol DFBCICB 037) and stimulated daily, blindly, with 1% (v/v) different homeopathic medicines, for a maximum period of 42 days. The tested medicines were: biotherapeutic 30x prepared from inactivated influenza A virus; biotherapeutic 30x prepared with infectious influenza A virus; and thymulin 5cH, a thymus hormone. The two control groups were treated with water 30x and nothing (baseline group). After 21 days of treatment, half of the animals from each group was challenged subcutaneously with the viral hemagglutinin antigen (7 mg / 200 mL) and monitored by 21 days further, to evaluate the humoral immune response and general behavior, using an open field device. The remaining animals were evaluated by the same behavioral tests at the end of the first 21 days, as an attempt to define the proving features. After euthanasia, all animals were autopsied and the spleen, lungs, heart and mediastine lymph nodes were weighed. Histometry of the spleen follicles was also made. Histopathological and behavioral analyses showed absence of behavioral effects, however, there was increase of spleen lymphoid follicles diameter in immunized animals treated with thymulin and with the biotherapeutic prepared from infectious influenza A, when compared to the control group. This experiment is being repeated using flow cytometry to complete the analysis and confirm the results.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/474/489>

Int J High Dilution Res. 2012;11(40):152-153

Evaluation of immune response of BALB/c to homeopathic solutions.

Siqueira CM, Bonamin LV, Motta PD, Cardoso TN, de Paula Coelho C, Couceiro JN, Holandino C.

Abstract

Introduction: Biotherapics are medicines prepared from etiologic agents, following Brazilian Homeopathic Pharmacopeia. Influenza is a disease that affects thousands of people worldwide every year, motivating the development of new therapies.

Aim: In this study, we developed two biotherapics from live/active influenza A virus, at 12x and 30x, and verified some immune response parameters in mice.

Methodology: The biotherapeutic was administered to male SPF 4 weeks old Balb/c mice. The protocol was approved by the UFRJ Ethics Committee of Animal Use (Protocol DFBCICB 040). Animals were stimulated daily, blindly, with different homeopathic medicines, at 1% (V/V) for a maximum period of 42 days. Three homeopathic medicines were tested: biotherapeutic 30x containing active influenza A virus; biotherapeutic 12x containing active influenza A virus; and thymulin 5cH. The experimental groups were: Group A (5 animals) – administration of thymulin 5cH, Group B (5 animals) – administration of biotherapeutic 30x, Group C (5 animals) – administration of biotherapeutic 12x, Group D (5 animals) - administration of a water 30x, Group E (5 animals) - administration of a water 12x, Group F (5 animals) - control (without treatment). After 21 days of treatment, all animals were challenged subcutaneously with the viral hemagglutinin antigen at the concentration of 7 mg/200mL and monitored by further 21 days. After euthanasia, all animals were autopsied and the spleen was collected for weight and immunohistochemistry analyses. Additionally, peritoneal washing was done and a “pool” of samples from each group was prepared to be analyzed by flow cytometry.

Results: Mice treated with biotherapeutic 30x and thymulin 5cH showed similar profile, different from controls, in which a switch of lymphocytes/phagocytes proportion in the peritoneum was seen, followed by predominance of B1b cells in relation to conventional B and T cells (X2, $p=0.005$). Regarding to T cell population, in the contrary to control, CD4+ cells were predominant in relation to CD8+ cells (X2, $p=0.0001$). The immunohistochemistry revealed increase in the number of activated CD11b+ macrophages in spleen ($p<0.05$), but no difference were detected in the spleen lymphocytes profile.

Conclusion: The results show that the action of biotherapeutic 30x and thymulin 5cH have similar immune modulation effects, improving the innate immune response.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/599/594>

J Am Inst Hom. 1968;61:197-212.

Changes Caused by Succussion on N.M.R. Patterns and Bioassay of Bradykinin Triacetate (BKTA) Succussions and Dilutions.

Smith RB, Boericke GW.

Prakt Tierarzt. 1972;53(2):45-46.

Metaphylaktische Anwendung von Pulsatilla miniplex in der Sterilitätsbekämpfung des Rindes.

[Metaphylactic application of Pulsatilla miniplex in fertility control in cattle].

[Article in German]

Sommer H, Marx D.

Abstract

Pulsatilla miniplex wurde bei 40 Kühen zur Metaphylaxe von Fruchtbarkeitsstörungen eingesetzt. Gegenüber 18 Kontrolltieren erkrankten die Versuchstiere seltener (2:1). Ebenso wurde der Grad der Erkrankung günstig beeinflusst. In der Kontrollgruppe war das Fünffache an Uterusbehandlungen pro Tier notwendig. Anscheinend keinen Einfluss hatte das Präparat auf Zyklusstörungen.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=230

Prakt Tierarzt. 1989;71(0):94-96.

Prophylaxe durch Homöopathie in Rinderbeständen zur Vermeidung von Puerperalerkrankungen.

[Prophylaxis by homeopathy in cattle herds to prevent puerperal disorders].

[Article in German]

Sommer H, Erbe U.

Abstract

Am Beispiel von Sabina wird die Möglichkeit einer homöopathischen Präventive und Metaphylaxe dargestellt. Bei Tieren mit auffallenden Blutplasmawerten a.p. konnte durch die metaphylaktische Gabe von Sabina C 30 die Krankheitsrate im Vergleich zu den Kontrolltieren im Verhältnis 1 : 10 und die Behandlungsrate 1 : 23 verbessert werden. Hohe Potenzen (C 30) scheinen eine bessere Wirkung zu haben als niedrigere (D6 und D30). Hinsichtlich der Wirtschaftlichkeit ist die Präventive für den Landwirt weit interessanter als die Therapie.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=25

Biol Tier. 1990;7(4):125-131.

Der Einfluß einer präventiven homöopathischen Behandlung der Milchkuh auf Erkrankungen nach dem Abkalben.

[The impact of preventive homeopathic treatment of dairy cows on diseases after calving].

[Article in German]

Sommer H, Freking H, Erbe U, Wirth F.

Abstract

Gegenwärtig werden immer häufiger homöopathische Mittel bei der Behandlung von Kühen eingesetzt, und zwar das aus zwei Gründen: ihre hohe Wirksamkeit und die

fehlenden Nebenwirkungen. Auf der anderen Seite wird aber behauptet, dass der Erfolg homöopathischer Arzneimittel geringfügig sei und wahrscheinlich nur auf Einbildung beruhe, vor allem dann, wenn die Verdünnung höher ist als D 6. Unsere eigenen Versuche in einer Doppel-Blind-Studie mit 70 Kühen haben gezeigt, dass Pulsatilla miniplex und Sabina C 30 auf Erkrankungen des Uterus deutlich wirken. Die vorsorgende homöopathische Behandlung von Kühen mit unphysiologischen Blutwerten vor dem Abkalben war imstande, das Auftreten von Retentio und Endometritiden in der Behandlungsgruppe gegenüber der Kontrollgruppe hochsignifikant zu reduzieren. In den Behandlungsgruppen fanden wir allerdings etwas häufiger Fälle von Ketose und Mastitis, als dies in der Kontrollgruppe der Fall war. Das Problem möglicher Nebenwirkungen im Zusammenhang mit der homöopathischen Behandlung wird diskutiert.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=109

Biol Tier. 1994;11(2):50–56.

**Homöopathie in der Tierproduktion.
[Homeopathy in Animal Production].**

[Article in German]

Sommer H.

Indian Vet J. 1977;54:755-757.

Homoeopathic treatment of warts in Gir, Gir x Holstein, Frisian and Gir x Jersey heifers.

Soni JL , Parekh HKB.

Livestock Adviser. 1978;3(3):39–42.

Chronic papillomatous growths and their homeopathic treatment in pure indigenous, cross bred cattle and buffalo heifers.

Soni JL.

Vet Zootec. 2008;15(2):332-339.

**Uso de Medicação Homeopática para Redução da Mortalidade em Leitões por Doenças Infecciosas na Fase de Creche em uma Granja Comercial de Suínos.
[Use of homeopathic medication to reduction of piglets mortality for infectious diseases in the nursery stage in a commercial swine herd].**

[Article in Portuguese]

Soto FRM, Vuaden ER, Coelho CP, Bonamin LV, Azevedo SS, Benites NR.

English Abstract

Due to the difficulty to reduce mortality indexes of piglets principally by infectious diseases in nursery stage by allopathic method, this study was proposed to evaluate

the prophylactic and therapeutic potential of homeopathic medicaments for this finality. This work was performed in two phases divided in equal periods. In the first phase, the infectious diseases were prevented and treated using enrofloxacin (2.5mg/kg). In the second phase a homeopathic complex was prepared to infectious diseases, with the origin viral and bacterial, that was constituted by Echinacea augustifolia, Avena sativa, Carbo vegetabilis, Ferrum metallicum, Phosphorus, China, Calcarea carbonica, Arnica Montana and Bryonia alba (all of them 6CH), E. Coli 32CH, Streptococcus suis CH 32 organs and blood sera of circovirus reactive piglets (36CH). Among the 663 animals treated with antibiotics, the mortality rate was 5.13%. Instead, 589 animals were treated with homeopathy and the mortality rate was 1.86% (X^2 , $p=0.003$). Thus, homeopathic treatment was better than the antibiotics to reduce mortality in nursery piglets.

Link to paper:

http://200.144.190.38/bitstream/handle/2012.1/2025/art_SOTO_Usodehomeopatica_para_reducao_da_2008.pdf?sequence=1

Homeopathy. 2008 Oct;97(4):202-5.

A randomized controlled trial of homeopathic treatment of weaned piglets in a commercial swine herd.

[Soto FR](#), [Vuaden ER](#), [Coelho C](#), [Benites NR](#), [Bonamin LV](#), [de Azevedo SS](#).

Zoonoses and Sanitary Surveillance, University of São Paulo, São Paulo, Brazil.
chicosoto@ig.com.br

Abstract

AIM: To evaluate the zootechnic performance and occurrence of diarrhea in piglets in the week post-weaning comparing supplementation with sucrose saline which contained or did not contain added homeopathic medicine.

METHOD: Animals were randomly divided into three groups of 24 piglets each. The control group did not receive any treatment. Another group received sucrose saline, and the third group received sucrose saline with homeopathic medicine added, in the period of zero to seven days post-weaning. The homeopathic treatment consisted of Echinacea angustifolia, Avena sativa, Ignatia amara, Calcarea carbonica, all 6cH. Piglets were weighed daily for weight gain or loss, and observed for diarrhea and feed intake.

RESULTS: Animals receiving sucrose saline alone and sucrose saline with homeopathy had less weight loss than control ($p=0.017$, $p=0.0001$ respectively). There was no statistical difference in relation to overall incidence of diarrhea or food consumption. These data suggest that the supplementation with sucrose saline with added homeopathic medicine in the first seven days post-weaning may be an useful option to reduce weight loss in weaned piglets.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19371569>

Vet Zootec. 2009 Jun;16(2):367-372.

Efeito da Avena sativa CH6 no metabolismo do sêmen diluído de suínos. [Effect of Avena sativa CH6 in the metabolism of diluted semen of pigs].

[Article in Portuguese]

Soto FRM, Vuaden ER, Coelho CP, Bonamin LV, Azevedo SS, Benites NR.

English Abstract

The use of *Avena sativa* prepared homeopathically on diluted semen of boars was studied in order to verify a putative improvement in the sperm cells metabolic activity. The experiment was developed in a commercial swine herd composed of 200 sows. Two groups were divided, named treated and control, with sixty sows in each. Semen was collected from two boars and motility, concentration and sperm vigor were evaluated at zero, 24, 48, 72 and 96 hours after collection. For treated group it was added *Avena sativa* CH6 (two globules) per litre of distilled water added to dilluent. For control group it was added only dilluent. Treated group showed statistical significant difference in sperm motility at 48 and 96 hours after semen collection ($p < 0.05$). In relation to sperm vigor, statistical significance was seen after 48 and 72 hours ($p < 0.05$) for the treated group. The number of return to estrus was higher at the control group (20.00%), compared to treated group (16.66%), without statistical significance. A total of 464 piglets were born in control group and 516 were born in treated group. The inclusion of globules of *Avena sativa* 6CH on diluted semen contributed to improved sperm metabolic activity and higher motility and sperm cells vigor.

Link to paper:

http://200.144.190.38/bitstream/handle/2012.1/1900/art.BENITES_efeito_da_avena_sativa_ch6_no_metabolismo.pdf?sequence=1

Int J High Dilution Res. 2010;9(30):51-57.

Reproductive performance of sows inseminated with diluted semen treated with homeopathic medicine.

Soto FRM, Vuaden ER, Coelho C de P, Bonamin LV, de Azevedo SS, Benites NR, Visintin JA, de Barros FRO, Goissis MD et al.

Abstract

Aims: this study sought to assess the reproductive performance of sows inseminated with sperm treated with homeopathic medicines. **Materials and methods:** the semen of 2 sexually mature boars age 18 months Pietrain and Duroc cross-bred with similar genetic and reproductive performance were chosen, as well as 125 sows. Sixteen samples of semen were collected and standardized through semen evaluation. Three homeopathic preparations and a placebo (control) were tested on the sperm ($n=31/32$ per group): *Avena sativa* 6cH, *Pulsatilla nigricans* 6cH and *Avena sativa* 6cH + *Pulsatilla nigricans* 6cH. Sows were inseminated 3 times with the same estrous diagnostic procedures. **Results:** there was significant difference ($p < 0.05$) between *Avena sativa* 6cH and the other 3 groups regarding the return to estrus and parturition rate. There was no significant difference among the groups regarding the number of newborn piglets. **Conclusion:** these data suggest that homeopathic preparation *Avena sativa* may be used directly on sperm cells to improve the parturition rate in technified swine farms.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewFile/375/413>

Homeopathy. 2010 Oct;99(4):249-54.

Homeopathic *Symphytum officinale* increases removal torque and radiographic bone density around titanium implants in rats.

[Spin-Neto R](#), [Belluci MM](#), [Sakakura CE](#), [Scaf G](#), [Pepato MT](#), [Marcantonio E Jr](#).

UNESP - Univ Estadual Paulista, Department of Periodontology, Araraquara, São Paulo, Brazil.

Abstract

INTRODUCTION: This study evaluated the effect of *Symphytum officinale* in homeopathic potency (6cH), on the removal torque and radiographic bone density around titanium implants, inserted in rats tibiae.

METHODS: Implants were placed in male rat tibiae, and the animals randomized to two groups (Control and *S. officinale* 6cH treated), which were evaluated at 7, 14, 28 and 56 days post-implantation. Radiographic bone density was measured at 6 points around the implant, using digital radiographic images, when implants were inserted and at sacrifice. Removal torque of the implants was also evaluated.

RESULTS: Both removal torque and radiographic bone density evaluation showed that *S. officinale* 6cH treatment enhanced bone formation around the micro-implants, mainly at 14 days. At 56 days, the radiographic bone density was higher in the treated group.

CONCLUSIONS: We conclude that *S. officinale* 6cH enhances, principally at the early stages of osseointegration, bone formation around titanium implants in rats' tibiae, based on radiographic and mechanical analysis.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20970094>

Zeitschrift für Ganzheitliche Tiermedizin. 1999;13(0):123-125.

**Ovariell-bedingte Fruchtbarkeitsstörungen beim Rind
[Ovarian-related fertility problems in cattle].**

[Article in German]

Spranger J.

Abstract

470 Milchkühe wurden wegen ovariell bedingter Sterilität mit homöopathischen Kombinationsmitteln behandelt. In 90 % der Fälle ließ sich ein Erfolg feststellen. Die Ovarbefunde wurden rektal erhoben und in 10-Tages-Abständen kontrolliert. Es wurden vier verschiedene Kombinationspräparate mit definierten Einsatzbereichen verwendet.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=144

Br Homeopath J. 2000 Jul;89(1):62.

Testing the effectiveness of antibiotic and homeopathic medication in the frame of herd reorganisation of subclinical mastitis in milk cows.

Spranger J.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/S1475-4916%2899%2990400-9/abstract>

Tierärztl. Umschau. 1955;10:284-291.

Die Bekämpfung der Ferkelgrippe mit Viruvetsan.

[Combating piglet flu with Viruvetsan].

[Article in German]

Stadler E.

J S Afr Vet Assoc. 1986 Jun;57(2):91-3.

A field trial comparing the efficacy of sulphamonomethoxine, penicillin, and tarantula poison in the treatment of pododermatitis circumspecta of cattle.

[Stampa S.](#)

Abstract

Nearly 80% of 87 cattle suffering for the first time from pododermatitis circumspecta were cured by each of the three drugs under test. Sixty and 73% of those cured by sulphamonomethoxine and penicillin, respectively, and 29% of those cured by the tarantula poison (Theranekron), showed relapses within 6 months. Of the 92 cattle with previous records of pododermatitis circumspecta, sulphamonomethoxine cured 44%, penicillin 73% and Theranekron 32%. Of the latter three groups 72-80% showed relapses within the subsequent 6 months. The results of surgical treatments were, possibly, improved by the prior administration of Theranekron. In addition, in a pilot trial, the demarcation of a gangrenous udder half of a goat suffering from blue-bag, appeared to be accelerated by the parenteral administration of Theranekron.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/3540300>

Epidemiol. 1999;10(4 Suppl.):S37.

The benefic antioxidant effect of Arsenicum album homeopathic remedy on nervosus central system and myocard in the cronic experimental intoxication with arsenic.

Stanescu MO, Anca Z, Olinic A, Simionescu D.

Link to abstract/paper:

http://hero.epa.gov/index.cfm?action=reference.details&reference_id=1353721

Biol Tier. 2009;26(1):7-18.

Prophylaxe und Therapie des Sommerekzems von Pferden mittels biologischer Präparate.

[Prophylaxis and treatment of sweet itch horses by biological preparations]

[Article in German]

Steidle B, Enbergs H.

J Am Inst Hom. 1925;18:433-444.

Experimental data on one of the fundamental claims in homoeopathy.

Stearns GB.

Dt Z Hom. 1926;5=43(12):647-655.

Versuche mit homöopathisch potenzierten Stoffen an der *Drosophila melanogaster* mit erblichen Tumoren.

[Experiments with homeopathically potentized substances on the *Drosophila melanogaster* with hereditary tumors].

[Article in German]

Stearns GB, Stark MB.

Bulletin for Organic Agriculture. 1990;10:6-10.

The use and efficacy of a homoeopathic nosode in the prevention of mastitis in dairy herds: a farm survey of practicing users.

Stopes C , Woodward L.

Abstract

A survey of 12 farms (11 conventional and 1 organic) that had for at least 6 months used a homeopathic nosode (administered regularly in drinking water to the whole herd) suggested that contrary to the farmers' opinions the nosode had no effect in controlling mastitis incidence.

Link to abstract/paper: <http://www.cabdirect.org/abstracts/19930458605.html>

Österr Apoth Z. 2006;20:973-975.

Handy-Exposition homöopathischer Arzneimittel.

[Handy Exposition of Homeopathic Medicines].

[Article in German]

Suanjak-Traidl E, Weber S, Welles SU, Scherer-Pongratz W, Endler PC, Frass M, Zak R.

Br Homeopath J. 1999 Apr;88(2):58-61.

Reduction of alcohol induced sleep time in albino mice by potentized *Nux vomica* prepared with 90% ethanol.

[Sukul A](#), [Sinhbau SP](#), [Sukul NC](#).

Department of Zoology, Visva Bharati University, West Bengal, India.

Abstract

Male adult albino mice were administered potentized *Nux vomica* 30 c (*Nux v*). The drug was mixed with sterile distilled water at 0.05 ml/2 ml water and given at 0.05 ml/individual. Control consisted of blank ethanol solution. Ethanolic extract from the seeds of *Strychnos nuxvomica* L was mixed with 90% ethanol 1:100 and sonicated for 30 s at 20 KHz. This was further diluted and sonicated in 30 steps to produce *Nux v* 30 c. Six hours after treatment, mice were given 25% ethanol i.p. at 4 g/kg body wt. The duration of sleep time starting from the loss of righting reflex until its restoration was recorded for each mouse. The duration of sleep time with ethanol was recorded in four sessions for the same group of mice with an interval of 10 d between sessions. Treatments: session 1 with control solution, 2 with *Nux v* (oral), 3 with control solution and 4 with *Nux v* (i.p.). *Nux v* (oral) produced the shortest sleep time as compared to other treatments which did not differ from each other significantly with respect to sleep time. In another experiment *Nux v* 30 c was prepared with distilled water and pure absolute ethanol by the above process of successive dilution and sonication. These two preparations together with *Nux v* 30 c, prepared with 90% ethanol, were tested on mice for their effect on alcohol-induced sleep time. Only *Nux v* 30 c prepared with 90% ethanol was effective in reducing the sleep time in mice. It is concluded that the solution structure of ethanol/water mixture carries the specificity of the *Nux v* at ultra high dilution. It is further concluded that the effect is mediated through oral receptors.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/10335413>

Br Homeopath J. 2000 Apr;89(2):73-7.

Altered solution structure of alcoholic medium of potentized *Nux vomica* underlies its antialcoholic effect.

[Sukul A](#), [Sarkar P](#), [Sinhbabu SP](#), [Sukul NC](#).

Department of Zoology, Visva-Bharati University, Santiniketan, West Bengal, India.

Abstract

Nux vomica 30c, 200c and 1000c were administered orally to three batches of albino mice for three days. Six hours after the last dose on the third day the mice were injected i.p. with ethanol 4g/kg body wt. They lost their righting reflex and lay motionless apparently sleeping due to alcohol. Mice treated with three potencies of *Nux vomica* regained their righting reflex more quickly than the corresponding untreated controls. Each of the three batches of mice was tested twice for ethanol sedation, once with a potency of *Nux vomica* and another time with a placebo control. The time interval between drug treatment and control was 10 days. NMR spectra of *Nux* 30, *Nux* 200, *Nux* 1000, alcohol 30, alcohol 30 (unagitated) and 90% alcohol showed significant difference from each other with respect to the spin-lattice relaxation time (T₁) of the deuterium nuclei. This gives a measurable physical basis of the effective high potencies of *Nux vomica*.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/10826446>

Int J High Dilution Res. 2013;12(44):135-136.

Effect of Rhus tox and Causticum on rat adjuvant arthritis.

Sukul A, Sukul NC.

Abstract

Introduction: Homeopathic drug like Causticum 30c and Rhus tox 30c have long been used for the treatment of arthritic patients. While Causticum acts more or less on both sides of the body, Rhus tox is more left-sided in its action. In the present study we tested the anti-arthritic and anti-nociceptive effect of Causticum 30c and Rhus tox 30c on the rat model.

Material and Methods: Fifty male albino rats of Charles Foster strain weighing 65-120g were divided into 5 batches and were kept in an animal house at a room temperature $26\pm 20^{\circ}\text{C}$. all the animals were handled with extreme care and were approved by the Animal Ethics Committee of the University.

Treatment: Arthritis was induced by injecting 0.1 ml of FCA, purchased from GENEI, Bangalore, in the plantar region of the hind paw of left leg in batches II, III and IV and that of the right leg in batch V on day 0. Batch I remained untreated and uninjected. Batch II was injected and untreated (Placebo, Ethanol 30). Batches III and V received Causticum 30c orally, one dose daily, from day 2 to day 18. Batch IV received Rhus tox 30c during the same period. Each potency was mixed with sterile distilled water 1:100 and administered orally by a micropipette at $100\mu\text{l}/\text{rat}$. The control consisted of Ethanol 30c prepared in the same way.

Observations: (1) Measurement of paw volume; (2) Open field activity; (3) Movement on an inclined wire grid were taken.

Results: Paw volumes increased significantly ($p < 0.01$, Mann-Whitney U-test) on day 14 in all FCA-injected batches as compared to the uninjected untreated control batch. Compared with the batch II (untreated) paw volume was significantly reduced in left paw injected Rhus tox 30c –treated batch IV ($p < 0.01$) and right paw –injected Causticum 30c-treated batch V ($p < 0.02$).

The locomotor activity was significantly higher in batch III, batch IV and batch V as compare to the untreated batch II.

Movement scores on the inclined wire grid were significantly higher in batches III, IV and V ($p < 0.05$) as compared to the injected untreated batch II.

Conclusions: It is evident from the results that both Causticum 30c and Rhus tox 30c produced anti-inflammatory effect with respect to the FCA-induced edema in paws. Both the drugs produce significant anti-nociceptive effect as is evident from the results of the two locomotor activity tests. The drug treated rats performed better in these two tests as compared to the placebo control and this might be due to amelioration of pain in affected paw to some extent.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/644/668>

Sci Cult. 1985;51(5):5.

Influence of homoeopathic drugs on neurotransmitter systems.

Sukul NC.

Psychopharmacology (Berl). 1986;89(3):338-9.

Prolonged cataleptogenic effects of potentized homoeopathic drugs.

[Sukul NC](#), [Bala SK](#), [Bhattacharyya B](#).

Abstract

The four homoeopathic drugs, Gelsemium, Cannabis Indica, Graphites and Agaricus Muscarius, administered orally in 30th and 200th potencies on white rats, enhanced restraint-induced catalepsy in a similar manner to the two standard drugs pilocarpine and haloperidol (IP injection at 5 mg/kg). All the drugs tested differed from each other in the duration of cataleptogenic effect, which was more prolonged with Cannabis, Graphites and Agaricus than with Gelsemium and the two non-homoeopathic drugs used. The 200th potency of any homoeopathic drug tested acted longer than its 30th potency.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/3088660>

Enviroment Ecol. 1986;4(4):585-588.

Differentiation of Homoeopathic potencies by experimental catalepsy.

Sukul NC, Bhattacharya A, Bala SK.

Br Homeopath J. 1987 Jul;76(3):122-125.

Differentiation of potencies of Agaricus muscarius by experimental catalepsy.

Sukul NC, Bhattacharya A, Bala SK.

Abstract

Agaricus m., administered orally to rats subjected to restraint to induce catalepsy, enhanced the cataleptic state. The higher the potency the longer its duration of peak action and the longer did it take to reach the peak effect. The action of atropine sulphate which diminishes catalepsy, was suppressed by *Agaricus m.* The degree of suppression increased with the increase in potency of *Agaricus m.* Since restraint-induced catalepsy is mediated by cholinergic-dopaminergic interactions in the brain, *Agaricus m.* is thought to produce its effect by influencing those systems. The work provides a scientific proof for the action of potentized homoeopathic drugs and for the principle of the minimum dose. Further, it introduces an animal model for testing homoeopathic drugs.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078587800571>

Enviroment Ecol. 1987;5(3):411-415.

Cataleptogenic effect of a homoeopathic drug mediated through the alimentary tract.

Sukul NC, Bala SK, Bhattacharya A.

Arch Int Pharmacodyn Ther. 1988 Sep-Oct;295:40-51.

Influence of dopamine agonists and an opiate antagonist on agaricus-induced catalepsy, as tested by a new method.

[Sukul NC](#), [Klemm WR](#).

Department of Veterinary Anatomy, Texas A & M University, College Station 77843.

Abstract

A few drugs affecting the dopaminergic system were tested for cataleptic effects in mice, and compared with an orally administered plant extract, *Agaricus Muscarius* 30. Haloperidol, *Agaricus*, and a low dose of apomorphine (0.3 mg/kg) were cataleptic. Paralleling previously reported results with haloperidol, the *Agaricus* catalepsy was potentiated by the mixed agonist, apomorphine (5 mg/kg), and by the selective D2 agonist, bromocriptine (5 mg/kg) and was reversed by the D1 agonist, SKF 38393. Naloxone also reversed *Agaricus* catalepsy, suggesting an involvement of opiate as well as dopaminergic mechanisms. All conditions that produced catalepsy also suppressed spontaneous locomotion, except for *Agaricus* 30 given alone. These experiments also compared cataleptic drugs by the published "pinch" method that involves repeated trials with a new single-trial method. Catalepsy was produced by the same drugs in both tests, but the single-trial method was more sensitive for disclosing the catalepsy induced by weaker cataleptogens.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/2907723>

Sci Cult. 1990;56(3):134-137.

Increase in serotonin and dopamine metabolites in mouse hypothalamus following oral administration of *Agaricus muscarius* 12, a homoeopathic drug.

[Sukul NC](#).

Abstract

Agaricus muscarius 12 was prepared from a crude alcoholic extract of the fungus, *Agaricus muscarius* and administered orally to 6 mice at 3.1 ml/kg. The same amount of 90% alcohol was administered to a further 6 mice as a control. The mice were killed 6 h after administration of the drug and the levels of dopamine (DA), serotonin (5-HT) and their metabolic products dihydroxyphenylacetic acid (DOPAC) and 5-hydroxyindolacetic acid (5-HIAA) in the hypothalamus were determined by HPLC with electro-chemical detection. The group treated with *Agaricus muscarius* 12 showed significant increases in DOPAC and 5-HIAA compared with the control but no significant changes in DA and 5-HT were observed. The results suggest the involvement of hypothalamic transmitter systems in the action of this drug which has been reported to induce catalepsy in rats and mice.

Link to abstract/paper:

<http://www.cabdirect.org/abstracts/19930323820.html;jsessionid=E4C68AFD3C4CD59FF706FC192A73D55D?gitCommit=4.13.29>

Indian Biol. 1991;23(2):17-21.

Neuronal activity in the lateral hypothalamus of the cat and the medial frontal cortex of the rat in response to homeopathic drugs.

Sukul NC, Batuev AS, Sabanov V, Kourzina NP.

ZGT. 1994;9(1):2-5.

Protrahierte kataleptogene Wirkungen von potenzierten homöopathischen Einzelmitteln.

[Cataleptogenic protracted effects of potentized homeopathic single remedies].

[Article in German]

Sukul NC, Bala SK, Bhattacharyya B.

Br Homeopath J. 1995 Jan;84(1):6-10.

Haloperidol-induced catalepsy in mice and rats suppressed by orally pre-administered potentized *Agaricus*.

[N.C. Sukul](#), [A. Paul](#), [S.P. Sinhababu](#), [S. Ghosh](#).

Abstract

Agaricus muscarius 30s, a potentized homeopathic drug prepared by successive dilution and sonication from the alcoholic extract of the fungus of the same name, significantly reduced haloperidol-induced catalepsy in mice and rats. The drug produced the anticataleptic effect when administered orally and no such effect when administered intraperitoneally. Open field activity of the mice was suppressed more with haloperidol (hal) alone than with the combination of *Agaricus* 30s (oral) and hal. *Agaricus* 30s, given intraperitoneally, did not alter hal-induced suppression of the spontaneous activity of mice. Based on the previously reported results with *Agaricus* in combination with apomorphine, D1 and D2 agonists, it was thought that *Agaricus* might have served as a D1 blocker. It was further assumed that the effect of *Agaricus* was mediated through the oral taste receptors.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/PIIS0007078505807112/abstract>

Br Homeopath J. 1996;85(3):141-144.

Dose-dependent suppression of haloperidol-induced catalepsy by potentized *Agaricus muscarius*.

Sukul NC, Ghosh S, Sinha Babu SP.

Abstract

Agaricus muscarius 30c, a potentized homeopathic drug prepared by successive dilution with 90% alcohol followed by sonication, suppressed haloperidol-induced catalepsy in Swiss albino mice significantly. This anticataleptic effect was dose-dependent being greatest with the undiluted *Agaricus* 30c and least if diluted 1:20,000. Higher dilutions like 1:40,000 and 1:50,000 did not produce an anticataleptic effect. The effect reappeared when the 1:50,000 dilution was

sonicated. The anticataleptic effect of potentized *Agaricus* was observed with the drug administered both before and after haloperidol. However, the pre-treatment effect was more pronounced than the post-treatment effect.

It is thought that potentized *Agaricus* contains an active principle that can be attenuated by dilution and multiplied by mechanical agitation or sonication.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/PIIS0007078596801165/abstract>

Jap J Trop Med. 1999;27(4):477–481.

Antifilarial effect of *Artemisia nilagirica* extract and its ultra high dilutions against canine dirofilariasis.

Sukul NC, Sarkar P, Sukul A, Sinhababu SP.

Abstract

An ethanolic extract of the flowering meristems of worm wood, *Artemisia nilagirica* was allowed to evaporate. The residue, thus obtained, was administered orally on 4 pariah dogs naturally infected with *Dirofilaria immitis* at 10 mg/kg/day for 15 days and then at 20 mg/kg/day for the next 15 days. Two homoeopathic potencies of the *A. nilagirica* extract, called Cina 200 and Cina 1000, were obtained commercially and administered orally at 0.1 ml/dog/day for 30 days on two separate batches, each consisting of 4 dogs. Blood was sampled from the dogs before treatment and on day 15, 30, 45 and 75 following the treatment. *A. nilagirica* extract (Cina .THETA.) was diluted with 90% ethanol 1:100 and shaken by 10 manual strokes to prepare the 1st potency, called Cina 1. All subsequent potencies were prepared by mixing 1 part of the preceding potency with 99 parts of 90% ethanol and giving the mixture 10 manual strokes. Cina .THETA., Cina 200 and Cina 1000 reduced microfilarial densities in treated dogs by 78.38, 63.06 and 71.40%, respectively on day 30. There were 57.13, 42.44 and 64.20% reduction on day 75. No apparent toxic effect was observed in the treated dogs. Electronic spectra of Cina .THETA., Cina 200 and Cina 1000 showed comparable absorbance with the latter two giving a blue shift. Cina .THETA. in CCl₄ showed a red shift suggesting molecular complexation and charge transfer (CT) interaction between aqueous ethanol and compounds of *A. nilagirica*. CT was further evidenced by the NMR spectra of the deuterium nuclei of Cina .THETA. in 90% ethanol. NMR spectra of Cina .THETA., Cina 200, Cina 1000 and 90% ethanol indicated a change in the solution structure of Cina 200 and Cina 1000. This altered solution structure is thought to be responsible for inducing immune reaction of the hosts against the parasite.

Link to abstract/paper:

<http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDEQFjAA&url=http%3A%2F%2Fwww.iberhome.es%2Fboletin%2Fdocs%2Fcinafila.doc&ei=hbHAUOHeDcOTHeZtoCYBA&usq=AFQjCNHZ3rmqeHCrHEjhZCceNAM-VYEZTw>

Enviroment Ecol. 2000;18:972-975.

Potentized *Nux vomica* counters ethanol induced loss of righting reflex in

toads.

Sukul NC.

Br Homeopath J. 2000;89(1):S63.

Effect of *Nux vomica* mother tincture, strychnine and *Nux vomica* 30c on the alcohol addiction of albino rats.

[NC Sukul](#), [S Ghosh](#), [SP Sinhababu](#), [A Sukul](#).

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/S1475-4916%2899%2990401-0/abstract>

J Altern Complement Med. 2001 Apr;7(2):187-93.

Strychnos nux-vomica extract and its ultra-high dilution reduce voluntary ethanol intake in rats.

[Sukul NC](#), [Ghosh S](#), [Sinhababu SP](#), [Sukul A](#).

Department of Zoology, Visva-Bharati University, Santiniketan, West Bengal, India.
nirmal@vbharat.ernet.in

Abstract

OBJECTIVES: To see whether *Strychnos nux-vomica* extract (mother tincture [MT]), its potency *Nux 30c*, and its principal alkaloid, strychnine, could reduce voluntary ethanol intake in rats. To analyze the solution structure of *Nux MT*, *Nux 30c*, 90% ethanol, and ethanol 30c by means of electronic (ES) and nuclear magnetic resonance (NMR) spectra.

DESIGN: Potentially alcoholic rats were first given 20% ethanol and then kept on a two-choice bottle, one with 20% ethanol and another with tap water. These rats were given the following oral treatments for 15 days: group 1, control; group 2, strychnine at 0.36 mg/kg per day; group 3, ethanolic extract of *S. nux-vomica* seeds (*Nux MT*) at 3.6 mg/kg per day; and group 4, *Nux 30c* at 0.05 mL/d per rat. *Nux 30c* was prepared by successive dilution of *Nux MT* and 90% ethanol (1:100) and sonication at 20 kHz for 30 seconds in 30 steps.

RESULTS: Both *Nux MT* and *Nux 30c* significantly reduced ethanol intake and increased water intake in rats. ES of two dilutions of *Nux MT* and *Nux 30c* showed intersections at more than one point suggesting existence of molecular complexes. ES of *Nux MT* in CCl₄ showed a red shift when 90% ethanol was added indicating molecular complexation and charge transfer interaction between ethanol and *Nux* compounds. NMR spectra of *Nux MT*, 90% ethanol, ethanol 30c, and *Nux 30c* indicated a change in solution structure of the medium (90% ethanol) of *Nux 30c*.

CONCLUSION: *Nux MT* and *Nux 30c* could reduce ethanol intake in rats. The altered solution structure of *Nux 30c* is thought to mimic *Nux MT* and produce ethanol aversion in rats.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/11327524>

Br Homeopath J. 2001 Apr;90(2):79-85.

Nux vomica 30 prepared with and without succussion shows antialcoholic effect on toads and distinctive molecular association.

[Sukul NC](#), [De A](#), [Dutta R](#), [Sukul A](#), [Sinhbabu SP](#).

Department of Zoology, Visva-Bharati University, Santiniketan, West Bengal, India.
nirmal@vbharat.ernet.in

Abstract

Adult toads, *Bufo melanostictus*, were administered Nux vomica (Nux v) 30 prepared with and without succussion on the tongue. The drug was mixed with sterile distilled water at the rate 0.05ml/ml water and given orally 0.05ml/individual. The control consisted of blank ethanol solution. Seeds of *Strychnos nuxvomica* were ground and extracted with 90% ethanol in the laboratory. Nux v 30 was prepared by successive dilution and succussion in 30 steps, Nux v 30 u was prepared by successive dilution only. Four hours after treatment, toads were given 25% ethanol i.p. at 8g/kg body weight. The duration of ethanol induced sleep time was recorded for each toad. Both Nux v 30 and Nux v 30 u significantly reduced ethanol induced sleep time in toads as compared to their respective controls. Electronic, infra red and nuclear magnetic resonance spectra of Nux v 30, Nux v 30 u and their diluent medium (90% ethanol) show marked differences from each other. These dilutions and ethanol 30 and ethanol 30 u show marked differences from each other with respect to spin-lattice relaxation time (T1) and chemical shift. The difference has been attributed to the variation in intra and inter-molecular association of ethanol and water.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/11341461>

Forsch Komplementarmed Klass Naturheilkd. 2005 Aug;12(4):202-5. Epub 2005 Aug 29.

Reduction in the number of infective *Trichinella spiralis* larvae in mice by use of homeopathic drugs.

[Sukul NC](#), [Ghosh S](#), [Sinhbabu SP](#).

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Abstract

BACKGROUND: Trichinellosis caused by the gastrointestinal nematode *Trichinella spiralis* occurs in humans, domestic animals and wild animals. It is difficult to control the muscle phase of the parasite. Homeopathic drugs such as Cina and Santoninum have anthelmintic properties. We have observed that in material doses, the homeopathic drug Podophyllum also has nematotoxic properties. We have also observed that homeopathic potency can influence the water permeability of cells.

OBJECTIVE: The purpose of this study was to investigate whether potentized homeopathic drugs such as Cina 30, Santoninum 30 and Podophyllum mother tincture can affect the muscle phase of the parasite *T. spiralis* in mice. Another objective was to see whether trichinellosis and its treatment with the 3 named homeopathic drugs could alter the water content in the muscle tissue of mice.

MATERIALS AND METHODS: Cina 30 and Santoninum 30 were prepared from the mother tincture of the flowering tops of *Artemisia nilagirica* and its active principle santonin, in each case by successive dilution (1:100) with 90% ethanol and sonication in 30 steps following the single glass method (K30). Ethanol 30 was prepared by successive dilution of 90% ethanol with 90% ethanol (1:100) followed by sonication in 30 steps. In each step, the dilution was sonicated at 20 KHz for 30 s. We have observed before that sonication is a more uniform, measurable and effective process of mechanical agitation of a liquid than manual succussion. Experimentally infected mice were orally treated with an aqueous Podophyllum suspension at 60 mg/kg/day. Each potentized drug was diluted 1:20 with distilled water and administered orally at 0.05 ml/mouse/day. Each mouse was inoculated with *T. spiralis* larvae at a dose of 200 larvae/mouse by esophageal intubation. Treatment was started on day 7 post-infection and continued for 120 days. After completion of treatment, the mice were sacrificed and the larvae were extracted from muscles by HCl-pepsin digestion. The water content of the muscles was measured by determining the difference between fresh weight and dry weight of the tissue.

RESULTS: Podophyllum Theta, Cina 30 and Santoninum 30 reduced the larval population in the studied mice by 68.14%, 84.10% and 81.20%, respectively, as compared to the untreated control group. Ethanol 30 achieved no significant reduction in the larval population compared to the untreated control group. The water content of the muscle tissue in the untreated control group and the Podophyllum-treated groups was significantly higher than in the Ethanol 30-, Cina 30- and Santoninum 30-treated groups.

CONCLUSIONS: (1) Podophyllum Theta, Cina 30 and Santoninum 30 were effective in the muscle phase of *T. spiralis* infection and significantly reduced the larval population in the treated mice. The potencies were more effective than the mother tincture, an effect which was not due to the medium ethanol. (2) The potencies significantly reduced the water content of the muscle tissue which might have affected the larvae. The effect of Podophyllum Theta might be due to the direct toxic effect of the drug on the larvae.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/16137982>

Ind J Res Hom. 2009 Jun;3(2):53-55.

Effect of Three Potentized Homoeopathic Drugs on Alcohol-induced Changes in the Nerve Plexus of Heart and Serum Parameters in Albino Rats.

Sukul NC, Singh RK, Sinhababu SP.

Int J High Dilution Res. 2012;11(41):216-223.

Transfer of anti-alcoholic effect of Nux Vomica 200 cH through water from one group of toads to another under alcohol anesthesia

Sukul NC, Chakraborty I, Sukul A, Chakravarty R.

Abstract

Background: A common practice is to give homeopathic medication to nursing mothers to treat their children, assuming that the drug will be conveyed by the milk. In the case of conventional treatment, the drug molecules are indeed passed on from

the mother to her breastfed infant. However, high dilutions (HD) above 12 cH, i.e., over Avogadro's number, are traditionally held to lack any molecule from the starting material. If that is the case, then, does medication taken by the mother actually reach the child? To answer to that question, we developed plant models and demonstrated the transfer of HD effects between 2 groups of plants. Aims: To demonstrate the transfer of HD effects in an animal model in a much shorter time. Methods: Two batches of toads were respectively placed in two beakers, one containing Nux vomica 200 cH diluted with water 1:500 (direct treatment), and the other the same amount of distilled water were connected by cotton thread soaked in water and encased in a polyethylene tube (connected group); a third batch of toads (control) were placed in a beaker with 90% ethanol diluted with distilled water 1:500; all the animals were left 30 minutes, and then transferred to 3 independent beakers containing 209 mM ethanol. Every 10 minutes, the motionless toads were removed from the beakers, and placed on supine position, failure to recover the upright position after 60 sec was considered as loss of the righting reflex (RR). The experiment was replicated using large adult toads. Results: The percentage of toads losing the RR increased with the time of exposure to 209 mM ethanol in the 3 groups of toads. Significant difference in the percentage distribution was found between the control and the direct treatment and connected groups on χ^2 test ($p < 0.001$, $p < 0.01$, respectively), whereby the latter required much longer time to lose the RR, and did not differ between them. In the experiment with large adult toads, the control group lost RR in 78 min, whereas the 2 treated groups did not lose RR even after 240 min. Conclusion: Nux-v 200 cH countered the hypnotic effect of alcohol in young toads, and this effect was transferred through capillary water in the cotton thread, supporting the transfer of the effect of homeopathic medication from mother to child. Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/619/624>

CCRH Quarterly Bull. 1998;20(1/2):1-18.

Screening of homoeopathic drugs for hypoglycaemic activity.

Sundaram EN, Rastogi DP, Kumar S.

Indian J Res Homeopathy. 2009 Jan-Mar;3(1):6-17.

Biochemical and Haematological Evaluation of Different Potencies of Homoeopathic Drug *Ricinus Communis*.

Sundaram EN, Reddy PUM, Singh KP, Nair KRJ, Raveendar C, Nayak C.

Abstract

Although the seeds and / or oil of *R. communis* have been reported to be highly toxic, these seeds are being used in nursing women to increase the flow of milk. There is therefore a need to generate data on the biochemical and haematological profiles. Four potencies (3x, 6x, 12x and 30x) of this drug were administered orally in daily doses of 0.1 ml, 0.2 ml and 0.5 ml/rat for 14 days. The biochemical and haematological profiles of animals were studied on 21st and on 28th day during post-treatment period. Preliminary studies carried out with 4 potencies of *R. communis* on biochemical (serum glucose, serum cholesterol, serum triglycerides, serum total protein, serum albumin, serum urea and serum SGOT and serum SGPT

levels) and on haematological (haemoglobin, total R.B.C. and W.B.C and differential leucocytes counts) profiles showed variable effects of different potencies of *R. communis* but mostly within the normal range of healthy animals. Only one rat in 12x potency group showed spear/spindle shaped R.B.C. with very less haemoglobin content. Further study is needed to confirm the effect of 12x potency on haematological profiles. The effects of *R. communis* significantly reduced on body weights of rat while on while no apparent difference in behaviour of animals was observed during and 14 days post-treatment.

Link to abstract/paper:

<http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDIQFjAA&url=http%3A%2F%2Fccrindia.org%2Fijrh%2F3%281%29%2F2.pdf&ei=LQ5wUbrNDcuLOcTMgNAK&usq=AFQjCNH8jtVhUhyUTxmFGzbP32iCLoyl3g&bvm=bv.45368065,d.ZWU>

Indian J Res Homeopathy. 2009 Oct-Dec;3(4):44-53.

Biochemical and haematological evaluation of homoeopathic drug *Tribulus terrestris* in rats.

Sundaram EN, Singh KP, Uma Maheswara Reddy P, Nair KRJ, Nayak C.

Abstract

Although in Homoeopathy different potencies of *Tribulus terrestris* (Ikshugandha) have been commonly prescribed in urinary affections, especially dysuria and in debilitated status of the sexual organs, no scientific experimental data has been documented to establish their safe use. The present study was, therefore, undertaken to generate preliminary data on the biochemical and haematological parameters with homoeopathic drug *Tribulus terrestris*. The four potencies (3x, 6x, 12x and 30c) of this drug were administered orally in daily doses of 0.1ml, 0.2ml and 0.5ml /rat for 14 days and their effects on biochemical and haematological parameters were studied on 21st and 28th day during post- treatment period. Preliminary findings on biochemical (serum glucose, serum total cholesterol, serum triglycerides, serum total protein, serum albumin, serum urea and SGOT and SGPT levels) and haematological (haemaglobin content, total R.B.C. and total W.B.C. and differential leucocyte counts) parameters showed variable effects of different potencies of *T. terrestris*, but all the observed values for both biochemical and haematological profiles were found to be within the normal range of healthy animals. There was no apparent effect on the behaviour of animals during the period of study. This homoeopathic drug did not have any toxic effect in the four potencies studied. However, in order to arrive definite conclusion on the complete safety profiles of this drug, further research on acute and chronic toxicity studies are needed in different species of experimental animals.

Link to abstract/paper: <http://ccrindia.org/ijrh/3%284%29/6.pdf>

Indian J Res Homeopathy. 2010 Apr-Jun;4(2):41-48.

A preliminary study to evaluate analgesic and behavioural activities of the homoeopathic drug, *Anagallis arvensis* in rats.

Sundaram EN, Singh KP, Pratap Reddy K, Uma Maheshwara Reddy P, Nair KRJ, Raveendar CH, Nayak C.

Abstract

In Homoeopathy, *Anagallis arvensis* is used in the treatment of skin rashes, warts and urinary tract infections, but not for the treatment of diseases of central nervous system unlike its use in Indian medicine for mania and other derangements of the nervous system. In the present preliminary study, the effect of different potencies (3x, 6x, 12x and 30C) of *A. arvensis* administered at a daily dose of 0.5 ml/rat/day had been examined and were tested for their analgesic (hot plate, ice plate and Randall-Selitto assay) and behavioural (rota rod and open field assay) activities, 30 minutes after administration of drug on 10th, 20th and 30th day of the study. All the four different potencies (3x, 6x, 12x and 30C) of *A. arvensis* had increased the latency time required to raise and to lick the hind paw for thermal sensation on hot plate test and for cold sensation on Ice plate test. They had also increased the quantum of threshold pressure to mechanically induced pain on Randall-Selitto assay but depressed the motor coordination and locomotor activity. The analgesic and behavioural effects of these potencies on 10th day was maximum but subsided on 20th day and 30th day of the study. The preliminary results suggest that *A. arvensis* may be screened for CNS depressive property on appropriate animal model in order to arrive at a meaningful conclusion.

Link to abstract/paper: <http://ccrhindia.org/ijrh/4%282%29/7.pdf>

Indian J Res Homeopathy. 2010 Jul-Sep;4(3):44-50.

Preliminary studies on analgesic and behavioural activities of the homoeopathic formulations of *Chenopodium ambrosioides* in experimental animal models.

Sundaram EN, Singh KP, Pratap Reddy K, Uma Maheshwara Reddy P, Raveendar CH, Nair KRJ, Nayak C.

Abstract

Chenopodium ambrosioides Linn. (Family: Chenopodiaceae) is traditionally used in the treatment of dysmenorrhoea, uterine haemorrhage and fibroids. In homoeopathy, *C. ambrosioides* is prescribed for worm infestation but its use in providing relief to the subjects suffering from central nervous system disorders is lacking though *C. ambrosioides* has been reported to possess anti-inflammatory and analgesic effect. In the present preliminary study, homoeopathic formulations (3X, 6X, 12X and 30C potencies) of *C. ambrosioides* administered at a dose of 0.5 ml/rat/day were tested for their analgesic (hot plate, ice plate and Randall-Selitto tests) and behavioural (rota rod and open field tests) activities 30 min after administration of drug on 10th, 20th and 30th day of the study. The results revealed that all the four potencies of *C. ambrosioides* had increased the latency time required to raise and to lick the fore or hind paw for thermal sensation on hot plate test and for cold sensation on Ice plate test. They had also increased the quantum of threshold pressure to mechanical induced pain on Randall-Selitto test but depressed the motor coordination and locomotor activity. Based on the findings of this study, we report that the homoeopathic formulations of *C. ambrosioides* may possess CNS

depressant property. However, further detailed studies are needed for a definitive conclusion.

Link to abstract/paper: <http://ccrhindia.org/ijrh/4%283%29/6.pdf>

Asian Pac J Cancer Prev. 2007 Jul-Sep;8(3):390-4.

Effect of homeopathic medicines on transplanted tumors in mice.

Sunila ES, [Kuttan G](#), [Kc P](#), [Kuttan R](#).

Amala Cancer Research Centre, Amala Nagar, Thrissur, Kerala State, India.
680555.

Abstract

Ultra low doses used in homeopathic medicines are reported to have healing potential for various diseases but their action remains controversial. In this study we have investigated the antitumour and antimetastatic activity of selected homeopathic medicines against transplanted tumours in mice. It was found that *Ruta graveolens* 200c and *Hydrastis canadensis* 200c significantly increased the lifespan of Ehrlich Ascites Carcinoma and Dalton's Lymphoma Ascites induced tumour-bearing animals by 49.7%, and 69.4% respectively. Moreover there was 95.6% and 95.8% reduction of solid tumour volume in *Ruta* 200c and *Hydrastis* 200c treated animals on the 31st day after tumour inoculation. *Hydrastis* 1M given orally significantly inhibited the growth of developed solid tumours produced by DLA cells and increased the lifespan of tumour bearing animals. Some 9 out of 15 animals with developed tumors were completely tumour free after treatment with *Hydrastis* 1M. Significant anti-metastatic activity was also found in B16F-10 melanoma-bearing animals treated with *Thuja*1M, *Hydrastis* 1M and *Lycopodium*1M. This was evident from the inhibition of lung tumour nodule formation, morphological and histopathological analysis of lung and decreased levels of gamma-GT in serum, a cellular marker of proliferation. These findings support that homeopathic preparations of *Ruta* and *Hydrastis* have significant antitumour activity. The mechanism of action of these medicines is not known at present.

Link to paper: http://www.apocp.org/cancer_download/Volume8_No3/390-394%20c_Kuttan%205.pdf

Br Homeopath J. 1990 Jul;79(3):152-156.

Hepatoprotective action of potentized *lycopodium clavatum* L.

[R.K. Sur](#), [Kajal Samajdar](#), [Susmita Mitra](#), [M.K. Gole](#), [B.N. Chakrabarty](#)

Abstract

A high potency of *Lycopodium clavatum* Linn. (200th centesimal potency) is tested for its hepatoprotective action against carbon tetrachloride-induced hepatic damage in rat. It has been established from biochemical and histopathological studies that at least 4 doses of *Lycopodium* 200 can control the CCl₄-induced alteration of plasma levels of aspartate aminotransferase, alanine aminotransferase, alkaline phosphatase, acetylcholinesterase, lactate dehydrogenase, bilirubin and urea.

Protective action of the drug has also been confirmed by microanatomical studies on hepatic tissues.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/PIIS0007078505803345/abstract>

Homéopathie. 1986;3(3):51-54.

Platina - Observations expérimentales 'in vivo' et 'in vitro' avec Platina 7 CH et Platina 200 CH.

[Platina - Experimental observations in vivo 'and' in vitro 'with Platina Platina 200 7 CH and CH].

[Article in French]

Taddei J, Giachetti D, Taddei E, Bellani LM, Franchi GG.

Vet Rec. 1989;124:15-17 doi:10.1136/vr.124.1.15.

Efficacy of a homoeopathic prophylaxis against experimental infection of calves by the bovine lungworm *Dictyocaulus viviparus*.

[SM Taylor](#), [TR Mallon](#), [WP Green](#)

Abstract

Two groups of parasite-free calves, one of which had been treated with four doses of a homoeopathic oral vaccine for parasitic bronchitis due to *Dictyocaulus viviparus* and the other with a placebo, were infected at the rate of 25 infective larvae/kg bodyweight 18 days after the final dose. Both groups became severely affected by parasitic bronchitis, with clinical signs starting 13 days after infection. There were no discernible differences between the treated and control groups in their manifestations of resistance to *D viviparus* or their clinical responses to the disease produced.

Link to abstract/paper: <http://veterinaryrecord.bmj.com/content/124/1/15.abstract>

Toxicol Appl Pharmacol. 1965;7:500.

Protective Effects of low doses of cadmium chloride against subsequent high oral doses in the rat.

Terhaar CJ, Vis E, Roudabush RL, Fasset, DW.

Ann Homéop Fr. 1960;2:669-678.

Pharmacologie et psycho-pharmacologie de Thuya.

[Pharmacology and psychopharmacology of Thuya].

[Article in French]

Tetau J, Tetau M.

Integr Cancer Ther. 2006 Dec;5(4):350-5.

Effect of homeopathic treatment on gene expression in Copenhagen rat tumor tissues.

[Thangapazham RL](#), [Rajeshkumar NV](#), [Sharma A](#), [Warren J](#), [Singh AK](#), [Ives JA](#), [Gaddipati JP](#), [Maheshwari RK](#), [Jonas WB](#).

Department of Pathology, Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA.

Abstract

BACKGROUND: Increasing evidence suggests that the inability to undergo apoptosis is an important factor in the development and progression of prostate cancer. Agents that induce apoptosis may inhibit tumor growth and provide therapeutic benefit. In a recent study, the authors found that certain homeopathic treatments produced anticancer effects in an animal model. In this study, the authors examined the immunomodulating and apoptotic effects of these remedies. Materials and

METHODS: The authors investigated the effect of a homeopathic treatment regimen containing *Conium maculatum*, *Sabal serrulata*, *Thuja occidentalis*, and a MAT-LyLu Carcinosis nosode on the expression of cytokines and genes that regulate apoptosis. This was assessed in prostate cancer tissues, extracted from animals responsive to these drugs, using ribonuclease protection assay or reverse transcription polymerase chain reaction.

RESULTS: There were no significant changes in mRNA levels of the apoptotic genes *bax*, *bcl-2*, *bcl-x*, *caspase-1*, *caspase-2*, *caspase-3*, *Fas*, *FasL*, or the cytokines interleukin (IL)-1alpha, IL-1beta, tumor necrosis factor (TNF)-beta, IL-3, IL-4, IL-5, IL-6, IL-10, TNF-alpha, IL-2, and interferon-gamma in prostate tumor and lung metastasis after treatment with homeopathic medicines.

CONCLUSIONS: This study indicates that treatment with the highly diluted homeopathic remedies does not alter the gene expression in primary prostate tumors or in lung metastasis. The therapeutic effect of homeopathic treatments observed in the in vivo experiments cannot be explained by mechanisms based on distinct alterations in gene expression related to apoptosis or cytokines. Future research should explore subtle modulations in the expression of multiple genes in different biological pathways.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17101764>

Hom Heritage. 1990.

An experimental homoeopathic application of Aloe vera Linn. on mice bearing induced cancer.

Thobias MP.

Hom Heritage. 1991.

Cancer and Arsenicum album.

Thobias MP.

Homeopathy. 2009 Apr;98(2):132-3. doi: 10.1016/j.homp.2009.01.001.

Homeopathic treatment of weaned piglets.

[Thomas DM](#).

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19358970>

Homeopathy. 2002 Jan;91(1):59; author reply 59.

Nux vomica and animal experiments.

[Thurneysen A](#).

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12371453>

Bull Exp Biol Med. 2003 Jan;135(7):36-8.

Effect of preparations from potentiated ethanol on the content of biogenic monoamines and metabolism of ethanol in tissues of rats during alcoholization.

[Titkova AM](#), [Epstein OI](#).

Institute of Neurology, Psychiatry, and Narcology, Ukrainian Academy of Medical Sciences, Kharkov.

Abstract

The effect of homeopathically potentiated ethanol (C30 and C200) on ethanol metabolism was studied in alcoholized rats. We measured ethanol concentration in the blood, alcohol dehydrogenase activity in the liver, and contents of biogenic monoamines in the hypothalamus, septum, and whole blood. Potentiated preparations of ethanol were efficient after long-term treatment and delayed ethanol elimination from the blood. Preparation C200 increased alcohol dehydrogenase activity. Potentiated preparations of ethanol (particularly C200) produced a positive effect on catecholaminergic and serotonergic systems of the brain, i.e. they enhanced protective and adaptive reactions.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949643>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:117-9.

Effects of potentiated antibodies against brain-specific S100 protein on biogenic amine content and lipid peroxidation in rats under conditions of alcoholization.

[Titkova AM](#), [Pan IR](#), [Epstein OI](#).

Institute of Neurology, Psychiatry, and Narcology, Ukrainian Academy of Medical Sciences, Kharkov.

Abstract

Antibodies against S100 protein in ultralow doses specifically affected catecholamine metabolism in rats withdrawn from chronic ethanol exposure. The contents of tryptophan, tyrosine, and norepinephrine in brain structures returned to normal. The concentrations of dopamine, epinephrine, and norepinephrine in the peripheral blood decreased. Modulation of monoamine content in the peripheral blood suggests that antibodies against S100 protein possess stress-protective activity during ethanol withdrawal.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949672>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:134-6.

Potentiated antibodies against morphine: effects on biogenic amines and lipid peroxidation in chronically morphinized rats.

[Titkova AM](#), [Kharitonova SM](#), [Pan IR](#), [Epstein OI](#).

Institute of Neurology, Psychiatry, and Narcology, Ukrainian Academy of Medical Sciences, Kharkov.

Abstract

The efficiency of potentiated antibodies against morphine was studied on the model of chronic morphine intoxication. Test antibodies stimulated catecholamine metabolism in the hypothalamus (i.e., prevented initiation of catecholamine- and histaminergic peripheral reactions) and normalized lipid peroxidation.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949679>

Indian J Poultry Sci. 1985;20:61-62.

Effect of some homoeopathic and an allopathic preparation on growth and feed efficiency in broilers.

Trehan PK, Singh B, Dhir DS.

Indian J Animal Res. 1994;28:23-26.

Effect of some homoeopathic drugs on the performance in broilers.

Trehan PK.

Cell Mol Biol (Noisy-le-grand). 2011 Feb 12;57(1):3-15.

Protective potential of Bacopa monniera (Brahmi) extract on aluminum induced cerebellar toxicity and associated neuromuscular status in aged rats.

[Tripathi S](#), [Mahdi AA](#), [Hasan M](#), [Mitra K](#), [Mahdi F](#).

Chhatrapati Shahuji Maharaj Medical University, Department of Biochemistry, Lucknow, India.

Abstract

The present study attempts to assess the comparative effects of *Bacopa monniera*, (40 mg/kg body weight) and donepezil (2.5 mg/kg b. wt) on aluminum (100 mg / kg b. wt. of AlCl₃) mediated oxidative damage in the cerebellum of aged rats (24 months) along with the associated dysfunctioning of neuromuscular coordination and motor activity. A significant decrease in the activities of antioxidant enzymes and increased total reacting oxygen species, lipid and protein peroxidation products observed in aluminum exposed rats. We observed that treatment with *B. monniera* extract restored the altered antioxidant enzyme activities more, when compared with donepezil. However, acetylcholinesterase showed similar effect both in donepezil and *B. monniera* treated groups. The content of aluminum was increased in all experimental groups, however, iron content was found increased in all groups except the *B. monniera* treated groups. Moreover, aluminum treated groups of rats exhibited significant changes in behavioral profiles but these changes were in both *B. monniera* and donepezil treated groups. The light microscopic and ultrastructural studies revealed damaged Purkinje's neurons and altered granular cell layer along with the increased accumulation of lipofuscin granules in aluminum treated animals. These changes were quite less pronounced in *B. monniera* group than that of donepezil and this may be due to the reduction of excess iron content by *B. monniera*. On the basis of our results it may be concluded that Al may be linked with cerebellar degeneration and neuromuscular disorders while *Bacopa monniera* extract helps in reversing these changes.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/21366957>

AHZ. 1924;172(4):268-272.

Arzneimittelstudien.

[Drug trials]

[Article in German]

Tröscher H.

Biol Tier. 2011;28(1):7–12.

Biologische Nachbehandlung eines Rhabdomyosarkoms bei einem Hund.

[Biological treatment of a rhabdomyosarcoma in a dog].

[Article in German]

Unglaube S.

Homeopathy. 2008 Oct;97(4):190-5.

Effects of a homeopathic complex in Nile tilapia (*Oreochromis niloticus* L.) on performance, sexual proportion and histology.

[Valentim-Zabott M](#), [Vargas L](#), [Ribeiro RP](#), [Piau R Jr](#), [Torres MB](#), [Rönnau M](#), [Souza JC](#).

Animal Parasitology, Universidade Federal do Paraná - Campus Palotina, PR, Brazil.
marvalentim@yahoo.com.br

Abstract

This study aimed to evaluate the effects of the homeopathic complex Homeopatila RS (REAL Homeopathy, Brazil), in the performance, sexual proportion and gills and liver histology of the Nile tilapia fish (*Oreochromis niloticus* L.). 4,800 post-larvae were treated for 45 days, in 12 tanks (500 L), in a closed environment, with density of 400 larvae per tank. Three treatments were given: alcohol 30%, negative control (C); hormonal, positive control, 17 alpha-methyltestosterone (H); homeopathic, Homeopatila RS, in ethanol (HH), with four replications. Mean values for length, weight, liver somatic index, condition factor, survival rate, average values of histological alterations and sexual proportion were determined. Analysis revealed significant differences ($p < 0.05$) in growth, survival rate, liver somatic index and average values of hepatic histological alterations between treatments. It was concluded that the addition of Homeopatila RS to the diet of Nile tilapias, during the phase of gonadal differentiation, did not induce any alteration in the sexual proportion. Homeopathically treated fish were significantly smaller, but had significantly greater survival than the other two groups, there was no significant difference in final total biomass. The homeopathically treated fish had a lower liver/somatic index with less hepatic lipid inclusions than the other groups. Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19371567>

Tijdschr Diergeneeskd. 2007 Apr 15;132(8):292-5.

Questionnaire survey of disease prevalence and veterinary treatments in organic layer husbandry in the Netherlands.

[van der Meulen J](#), [van der Werf JT](#), [Kijlstra A](#).

Animal Sciences Group of Wageningen UR, Lelystad, the Netherlands.
jan.vandermeulen@wur.nl

Abstract

Disease prevalence and veterinary treatments in organic animal production differ from those in conventional systems. In order to gather information about current practices in organic layer husbandry, 33 organic egg producers of 16 small, 12 medium-sized, and 5 large farms were asked to complete a questionnaire on disease prevalence and treatments. On these farms, the mean mortality was 9% and the mean laying percentage was 79%. In contrast with the regulations for organic farming, the use of chemotherapeutics was not recorded on 30% of the farms. One third of the farmers were not aware of the type of vaccination given to their hens, and on the other farms hens had been vaccinated as pullets against nine or more viral and bacterial diseases. Several health problems were mentioned, such as feather pecking, red mites, helminths, infectious bronchitis, colibacillosis, and coccidiosis. On 19 farms, diseases were treated with homeopathic, phytotherapeutic, or other alternative medicines; on 10 of these farms chemotherapeutics were also used. On 4 farms only chemotherapeutics were used, on 10 farms no products were used, and on some farms up to seven products were used. Although quite a large number of organic layer farmers in the Netherlands used homeopathic, phytotherapeutic, or

other alternative medicines, the use of chemotherapeutics is currently inevitable to prevent animal suffering or distress in organic husbandry.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17489372>

Homeopathy. 2007 Oct;96(4):247-51.

Classification of systems and methods used in biological basic research on homeopathy.

[Van Wijk R](#), [Albrecht H](#).

Faculty of Biology, Utrecht University, Padualaan 8, 3584CH Utrecht, The Netherlands. meluna.wijk@wxs.nl

Abstract

The HomBRex database indexes basic research on homeopathy (www.carstens-stiftung.de/hombrex). It includes research on effects of homeopathic preparations in bioassays and physico-chemical effects of the homeopathic preparation process (potentization). At the end of 2006 it contained more than 1100 experiments in more than 900 original articles, including 1014 biological studies. The types of organisms used as laboratory "model" organisms in fundamental homeopathic research include animal, human, plant, fungi and microbial organisms. Most animal studies (607) were with rats (209) or mice (171). Most plant studies (171) were with wheat (52). The database catalogues whether the experiment was performed on intact organisms or in organs or cells, isolated and analyzed for changes in structure, function and subcellular composition. The database might be especially useful to facilitate a search for experimental models that have been used in the study of both proving and therapeutic experiments-ultimately in the research on the homeopathic similia principle.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17954382>

Homeopathy. 2009 Oct;98(4):280-6.

The rat in basic therapeutic research in homeopathy.

[van Wijk R](#), [Clausen J](#), [Albrecht H](#).

Faculty of Biology, Utrecht University, Padualaan 8, 3584CH Utrecht, The Netherlands. meluna.wijk@wxs.nl

Abstract

The Similia Principle, the basis of homeopathy, implies that substances initiating symptoms when applied to healthy biological systems can be utilized as remedies to treat a diseased system with similar symptoms. Depending whether the remedy substance was of the same type as the etiologic agent, treatment is classified as either homologous or heterologous. The intact rat is the biological system most utilized in basic science homeopathic research. The Homeopathy Basic Research experiments (HomBRex) database (about 1300 experiments on model biological systems in homeopathic research) was analyzed for homologous and heterologous

treatments of disease states of intact rats. The relationship between the Similia Principle and hormesis is discussed.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19945680>

Int J High Dilution Res. 2006;5(16).

Efeito de Diferentes Preparos Farmacotécnicos de Soluções Ultradiluídas de Euphorbia tirucalli (Aveloz) sobre a Variação de Leucócitos em Esfregaço. [Effect of different pharmacotechnic preparation of ultra diluted solutions of Euphorbia tirucalli Lineu (Aveloz) upon leucocytes variation].

[Article in Portuguese]

Varricchio MCBN, Moreno G, Lessa C, Pereira F, Leal F, Pereira C, Pereira NR, Sales F, Gomes T, Ferreira VCS, Lima FG, Gomes NBN, Hobaica PEM, Pyrrho A, Kuster RM, Castelo Branco MTL, Holandino C.

English Abstract

Euphorbia tirucalli Lineu (aveloz) is a succulent plant species of well known hepatotoxicity and antitumoural activity in Brazil and in traditional medicine around the world. The aim of this study is to evaluate the influence of methods of preparations of aveloz latex in extremely diluted solutions (latex-EDS) upon the biological response of healthy mice. 13 groups of 5 mice were treated for 4 months with latex-EDS diluted in DMSO and latex-EDS prepared by triturating in lactose at the potencies of 5CH, 15CH and 30CH. No morphological changes were observed in leucocytes from peripheral blood plate among the analyzed groups. However, there was significant statistic variation on the absolute number and the percentage index of mice lymphocytes which were treated with lactose triturated latex ($P < 0.05$). Results suggest that the method used to prepare EDS of aveloz may influence the biological response of healthy mice.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/213/228>

Int J High Dilution Res. 2008;7(25):174-178.

Chronic toxicological effects of ultradiluted solutions of Aveloz (Euphorbia tirucalli Lineu) on healthy mice: a preliminary study.

Varricchio MCBN, Pereira C, Sales F, Gomes T, Daudt E, Aquino CL, Barbosa GM, Gomes N, dos Santos Pyrrho A, Hobaica PEM, Branco MC, Kuster R, Holandino Co.

Abstract

The latex extracted from Euphorbia tirucalli, a plant popularly known as Aveloz, is used in complementary medicine to induce tumor regression. However, as this latex has toxic effects when administered orally in ponderal doses, the present study was designed to assess the effects of high dilutions in healthy mice over a period of 18 weeks. The Aveloz latex-high diluted solutions (latex-HD) were obtained through the interaction of two processes: 1:100 dilution in mass and succussion, using ethanol 70% as a solvent, in the homeopathic dilutions of 5, 15 and 30cH, following Farmacopéia Homeopática Brasileira. Control solutions without latex were compounded (ethanolic-HD) in the same dilutions and were administered

simultaneously. The animals which received latex-HD 30cH showed a significant increase in food consumption ($p < 0.05$) without significant difference in weight gain. In regards to water consumption, no statistical difference was shown when different Aveloz latex-HD groups were compared, apart from the group that received 1 drop of pure latex in water, which presented a significant increase ($p < 0.05$) in this parameter.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/308/371>

Homeopathy. 2004 Jan;93(1):17-20.

Evaluation of a homeopathic complex in the clinical management of udder diseases of riverine buffaloes.

[Varshney JP](#), [Naresh R](#).

Division of Medicine, Indian Veterinary Research Institute, Izatnagar, Bareilly, Uttar Pradesh State, India.

Abstract

We report an uncontrolled observational study of the treatment of udder diseases of buffalo, using a homeopathic complex medicine. Mastitis is an economically important disease of buffaloes. In India economic losses due to mastitis are estimated at 526 million US dollars annually. Conventional veterinary treatment relies on costly antibiotics; cure rate is only 60% in field conditions with a problem of milk residues. The present investigation was undertaken to evaluate the effectiveness of a homeopathic complex in the management of clinical udder health problems of riverine buffaloes. Cases of subclinical mastitis were excluded from the study. A total of 102 mastitic quarters (fibrosed--40, nonfibrosed--62) and five cases each of blood in milk and udder oedema in lactating buffaloes were treated with a homeopathic complex consisting of *Phytolacca* 200c, *Calcarea fluorica* 200c, *Silicea* 30c, *Belladonna* 30c, *Bryonia* 30c, *Arnica* 30c, *Conium* 30c and *Ipecacuanha* 30c. The diagnosis of udder diseases and recovery criterion was based on physical examination of udder and milk and CMT/WST score. Bacteriological analysis and somatic cell count were not performed. Treatment was 80 and 96.72% effective in cases of fibrotic mastitis and nonfibrosed mastitis respectively. Recovery period was 21-42 days (fibrosed) and 4-15 days (nonfibrosed). Udder oedema and blood in milk responded favourably in 2-5 days. Cost of treatment was 0.07 US dollars per day. The homeopathic complex medicine may be effective and economical in the management of udder health problems of buffaloes. Definitive conclusions are premature due to the limited number of observations and lack of control group.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/14960098>

Homeopathy. 2005 Apr;94(2):81-85.

Comparative efficacy of homeopathic and allopathic systems of medicine in the management of clinical mastitis of Indian dairy cows.

[Varshney JP](#), [Naresh R](#).

Indian Veterinary Research Institute, Izatnagar-243 122, India.

Abstract

Mastitis is the major problem of dairy animals despite a number of preventive and therapeutic approaches. Treatment is costly and out of reach of farmers of developing countries like India. The treatment cost of bovine mastitis with conventional treatment has been calculated. Good results have been claimed with homeopathic treatment however, treatment costs are not available. This article reports the treatment economics of homeopathic drugs conventional drugs for the management of bovine mastitis. Ninety-six mastitic quarters (non-fibrosed 67 and fibrosed 29) were treated with a homeopathic combination medicine. Another 96 quarters with acute mastitis (non-fibrosed) treated with different antibiotics were included in the study. The animals were selected from dairy farm of the Indian Veterinary Research Institute and from private dairy farms. The overall effectiveness of homeopathic combination medicine in the treatment of acute non-fibrosed mastitis was 86.6% with a mean recovery period of 7.7 days (range 3-28), and total cost of therapy as Indian Rupees 21.4 (0.39 Euros, US\$ 0.47). The corresponding cure rate for the antibiotic group was 59.2% with a mean recovery period of 4.5 days (range 2-15) and an average treatment cost of Rs.149.20 (2.69 Euros, US\$ 3.28). We conclude that the combination of *Phytolacca*, *Calcarea fluorica*., *Silica*, *Belladonna*, *Bryonia*, *Arnica*, *Conium* and *Ipecacuanha* (Healwell VT-6) was effective and economical in the management of mastitis in lactating dairy cows.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15892487>

Am J Homeopath Med. 2006;99(4):296-298.

Management of Gastroenteritis in Pups: A Comparative Clinical Study.

Varshney JP.

Link to abstract/paper:

<http://direct.bl.uk/bld/PlaceOrder.do?UIN=202866670&ETOC=RN&from=searchengine>

Homeopathy. 2007 Jan;96(1):46-8.

Clinical management of idiopathic epilepsy in dogs with homeopathic Belladonna 200C: a case series.

[Varshney JP.](#)

Division of Medicine, Indian Veterinary Research Institute, Izatnagar, India.
dr_jpvarshney@rediffmail.com

Abstract

Epilepsy is an important neurological disorder in dogs. Belladonna 200C was evaluated in 10 dogs with idiopathic epilepsy. During the seizure phase, 3-4 drops of Belladonna 200C were administered orally at 15 min intervals until considerable reduction in seizure activity, then four times daily. Four dogs with head shaking syndrome in addition to seizures were given *Cocculus* 6C, 3-4 drops orally weekly for 3 months in addition. Numbers of fits reduced to 2-3 during first 2 weeks post-

therapy and then became occasional in next 2 weeks. With continuation of Belladonna therapy, no fits were observed during 2-7 months follow-up. In two cases epileptic fits reappeared within 15-25 days of cessation of therapy. Belladonna therapy was resumed and seizure control was again achieved. Owners were advised to continue the therapy at least twice daily until there were no fits for 2-3 months. Liver specific enzymes were monitored, no abnormalities were observed.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17227748>

Homeopathy. 2007 Oct;96(4):270-2.

Atrial paroxysmal tachycardia in dogs and its management with homeopathic Digitalis--two case reports.

[Varshney JP](#), [Chaudhuri S](#).

Division of Medicine, Indian Veterinary Research Institute, Izatnagar 243 122, India.
jpvarshney@gmail.com

Abstract

Homeopathic Digitalis 6c was evaluated in two clinical cases of atrial paroxysmal tachycardia in dogs. Tachycardias are common cardiac problems in dogs, and atrial paroxysmal tachycardia is a serious cardiac arrhythmia that may lead to syncope. Both adult dogs (Labrador and German Shepherd) were treated with Digitalis 6c, 4 drops orally four times daily for 7 days. Following treatment with Digitalis 6c heart rate stabilised and synchronized atrial and ventricular electrical activity was restored in 7 days.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/17954385>

CCRH Quarterly Bull. 1981;3(1):3-8.

Effect of 1.000 and 10.000 Potencies of Pulsatilla (a Homoeopathic Drug) on Ovaries, Uteri and Arcuate Neurons in Albino Rats.

Velicheti SH, Chandrasekhar K.

Biol Tier. 1988;5(1)2-9.

Einsatz verschiedener Homöopathika zur Prophylaxe von Erkrankungen des Partussyndroms als Instrument zur Gesunderhaltung von Milchviehherden I. Mitteilungen: Die Wirkung von Hepar compositum auf die AST-Aktivität.

[Use of different homeopathic remedies for the prevention of parturition related diseases as an instrument for maintaining the health of dairy herds I. releases: the effect of Hepar compositum on AST activity].

[Article in German]

Velke H, Sommer H.

Abstract

Es wird über die Wirkung von vier Homöopathika in der Präventive von Erkrankungen des Partussyndroms berichtet. In der vorliegenden I. Mitteilung konnte

aufgezeigt werden, dass Hepar comp. geeignet ist, die AST-Werte bei Kühen zu senken. Voraussetzung für einen nachhaltigen Erfolg ist allerdings eine begleitende Rations- und Fütterungskontrolle.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=107

Biol Tier. 1988;5(2):50–57.

Einsatz verschiedener Homöopathika zur Prophylaxe von Erkrankungen des Partussyndroms als Instrument zur Gesunderhaltung von Milchviehherden. II. Metaphylaktischer Einsatz von Lachesis compositum bei Kühen, die hinsichtlich Retentio secundinarum gefährdet sind.

[Use of different homeopathic remedies for the prevention of of parturition related diseases as an instrument for maintaining the health of dairy herds. II metaphylactic use of Lachesis compositum in cows that are at risk with regard to retained placenta].

[Article in german]

Velke H.

Biol Tier. 1988;5(3):70–81.

Einsatz verschiedener Homöopathika zur Prophylaxe von Erkrankungen des Partussyndroms als Instrument zur Gesunderhaltung von Milchviehherden. III. Einsatz von Ovarium compositum bei Kühen mit Fertilitätsstörungen.

[Use of different homeopathic remedies for the prevention of of parturition related diseases as an instrument for maintaining the health of dairy herds. III. Use of ovary compositum in cows with fertility problems].

[Article in German]

Velke H.

Abstract

Es wird von Erfahrungen des Einsatzes von Ovarium compositum bei nichtinfektiösen Fertilitätsstörungen berichtet. Die Untersuchungen erfolgten an 25 Kühen in drei Betrieben. Da Fertilitätsstörungen häufig multifaktoriell bedingt sind, wurden zur Objektivierung der Ursachen Blutuntersuchungen (metabolisches Profil), Milchuntersuchungen (Harnstoff- und Progesteronprofile) sowie Informationen aus einem computergestützten Herdenkontrollsystem (Einschätzung des Managements) einbezogen. In dieser Studie waren bei 21 Tieren die diagnostizierten gynäkologischen Ursachen der Fertilitätsstörungen beseitigt und konnten zumindest langfristig erfolgreich besamt werden. Das Ergebnis läßt vermuten, daß Ovarium compositum geeignet ist, neben anderen Bestandsmaßnahmen, zur Erhaltung und Hebung des Fruchtbarkeitsniveaus beizutragen. Das Ergebnis sollte an einer größeren Stichprobe überprüft werden.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=46

Biol Tier. 1988;5(4):113–116.

Einsatz verschiedener Homöopathika zur Prophylaxe von Erkrankungen des Partussyndroms als Instrument zur Gesunderhaltung von Milchviehherden. IV. Mitteilung. Der Einsatz von Traumeel bei Kühen mit erhöhten Zellzahlen - Erste Erfahrungen.

[Use of different homeopathic remedies for the prevention of parturition related diseases as a tool for maintaining the health of dairy herds. IV release. The use of Traumeel in cows with increased cell counts - First Experiences].

[Article in German]

Velke H.

Res Vet Sci. 2005 Feb;78(1):77-83.

Isopathic and pluralist homeopathic treatment of commercial broilers with experimentally induced colibacillosis.

[Velkers FC](#), [te Loo AJ](#), [Madin F](#), [van Eck JH](#).

Department of Farm Animal Health, Faculty of Veterinary Medicine, Utrecht University, Yalelaan 7, 3584 CL, Utrecht, The Netherlands. f.c.velkers@vet.uu.nl

Abstract

This study sought to determine the efficacy of isopathic and pluralist homeopathic treatment of colibacillosis in broiler chickens and thereby contribute to the evaluation of homeopathy in general. In each of two experiments three groups of broilers, infected intratracheally at 8 days of age with *E. coli* (O78:K80), were treated with different combinations of homeopathic remedies. Control groups and an infected, doxycycline-treated group were included. Experiments differed only in the dose of *E. coli*. Efficacy of treatment was evaluated based on the parameters mortality, body weight gain and colibacillosis lesions. In both experiments doxycycline prevented mortality and reduced *E. coli* lesions and stunting. None of the homeopathically treated groups differed significantly with respect to any of the parameters from the non-medicated, infected control group. It is concluded that the results of this study do not justify use of these homeopathic remedies for treatment of colibacillosis in broilers. Furthermore, no significant effects of this homeopathic treatment were established.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/15500843>

Evid Based Complement Alternat Med. 2011;2011:407617. Epub 2011 Jun 16.

Comparative Analysis of Gelsemine and Gelsemium sempervirens Activity on Neurosteroid Allopregnanolone Formation in the Spinal Cord and Limbic System.

[Venard C](#), [Boujedaini N](#), [Mensah-Nyagan AG](#), [Patte-Mensah C](#).

Equipe "Stéroïdes, Neuromodulateurs et Neuropathologies", EA-4438, Université de Strasbourg, Bâtiment 3 de la Faculté de Médecine, F-67000 Strasbourg, France.

Abstract

Centesimal dilutions (5, 9 and 15 cH) of *Gelsemium sempervirens* are claimed to be capable of exerting anxiolytic and analgesic effects. However, basic results supporting this assertion are rare, and the mechanism of action of *G. sempervirens* is completely unknown. To clarify the point, we performed a comparative analysis of the effects of dilutions 5, 9 and 15 cH of *G. sempervirens* or gelsemine (the major active principle of *G. sempervirens*) on allopregnanolone (3 α ,5 α -THP) production in the rat limbic system (hippocampus and amygdala or H-A) and spinal cord (SC). Indeed, H-A and SC are two pivotal structures controlling, respectively, anxiety and pain that are also modulated by the neurosteroid 3 α ,5 α -THP. At the dilution 5 cH, both *G. sempervirens* and gelsemine stimulated [(3)H]progesterone conversion into [(3)H]3 α ,5 α -THP by H-A and SC slices, and the stimulatory effect was fully (100%) reproducible in all assays. The dilution 9 cH of *G. sempervirens* or gelsemine also stimulated 3 α ,5 α -THP formation in H-A and SC but the reproducibility rate decreased to 75%. At 15 cH of *G. sempervirens* or gelsemine, no effect was observed on 3 α ,5 α -THP neosynthesis in H-A and SC slices. The stimulatory action of *G. sempervirens* and gelsemine (5 cH) on 3 α ,5 α -THP production was blocked by strychnine, the selective antagonist of glycine receptors. Altogether, these results, which constitute the first basic demonstration of cellular effects of *G. sempervirens*, also offer interesting possibilities for the improvement of *G. sempervirens*-based therapeutic strategies.

Link to paper: <http://www.hindawi.com/journals/ecam/2011/407617/>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:60-1.

Effect of allotransplantation of embryonic brain tissues and administration of potentiated antibodies to bombesin on hemodynamics in rats with emotional hypertension.

[Veselovskaya EV](#), [Epstein OI](#).

Institute of Neurology, Psychiatry, and Narcology, Ukrainian Academy of Medical Sciences, Kharkov.

Abstract

Transcutaneous allotransplantation of embryonic tissues from the anterior hypothalamus and amygdaloid complex and administration of potentiated antibodies to bombesin normalized blood pressure and parameters of ECG in rats with emotional hypertension.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949652>

Bull Exp Biol Med. 2003 Jan;135(7):85-7.

Effects of homeopathic preparations on the liver in rats with acute and chronic toxic hepatitis.

[Vetoshkina TV](#), [Fomina TI](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences.

Abstract

Ultralow doses of antibodies to phenobarbital and their mixture (1:1) with ultralow doses of antibodies to cholecystokinin reduced the severity of structural and metabolic disturbances in the liver of rats with acute CCl₄-induced hepatitis. The mixture of antibodies had no effect on the course of CCl₄-induced hepatitis.

Link to paper:

http://download.springer.com/static/pdf/509/art%253A10.1023%252FA%253A1024747200854.pdf?auth66=1354995701_df1fb7eac4224a9d0a6bcfe0a066f514&ext=.pdf

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:88-90.

Hepatoprotective properties of potentiated antibodies to cholecystokinin.

[Vetoshkina TV](#), [Fomina TI](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences.

Abstract

Ultralow doses of antibodies to cholecystokinin prevented hepatocyte death, delayed the formation of the connective tissue, and normalized plasma of liver enzyme in rats with experimental acute and chronic toxic hepatitis.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949662>

Int J High Dilution Res. 2009;8(26):9-14.

Study of high dilutions of copaiba oil on inflammatory process.

Viriato EP, Bianchetti ES, dos Santos KC, Vaz AF, Campos RMV, Pereira AP, Bezerra RM, Perazzo FF, Carvalho JCT.

Abstract

This trial was a collaborative effort by researchers from several Brazilian universities and was designed to test the hypothesis that Copaiba oil, homeopathically potentised to 30C from either mother tincture or triturate, is as effective as Indomethacin in reducing inflammation induced by carageenan, and also to determine if it was capable of influencing tissue granulation when compared to conventional treatment. The 30C potency from mother tincture and triturate both reduced inflammation by up to 73%, and Indomethacin reduced inflammation by 55%. In addition, 6C potencies of Copaiba oil were able to produce a 48% inhibition of granulation, compared to a 57% reduction from the use of Dexamethasone.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/viewFile/305/380>

Homeopathie Française. 1965;53:21–33.

Influence des doses infinitésimales de plomb sur l'évolution de l'intoxication au plomb chez l'animal.

[Influence of infinitesimal doses of lead on the development of lead poisoning in animals].

[Article in French]
Vischniac I.

Z Ges Exp Med. 1929;66(1):535-538.

**Die Sterblichkeit der Kaulquappen in Ultralösungen.
[The mortality of tadpoles in Ultra solutions].**

[Article in German]
Vondráček V.

Link to abstract/paper: <http://link.springer.com/article/10.1007%2FBF02621978>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:34-5.

Effect of potentiated antibodies to morphine on behavioral reactions in rats with morphine dependence.

[Vorob'eva TM](#), [Berchenko OG](#), [Geiko VV](#), [Kolyadko SP](#), [Bevzyuk DA](#), [Pan IR](#), [Epstein OI](#).

Institute of Neurology, Psychiatrics, and Narcology, Ukrainian Academy of Medical Sciences, Kharkov.

Abstract

We studied the effect of potentiated antibodies to morphine (10(-100) wt %) on self-stimulation of the lateral hypothalamus and behavioral reactions reflecting the severity of withdrawal syndrome in rats with morphine dependence. Repeated treatment with potentiated antibodies to morphine increased the rate of self-stimulation, suppressed active avoidance response, promoted freezing behavior after acoustic stimulation, and decreased tail-flick latency in rats after morphine withdrawal. Distilled water did not produce these changes.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949642>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:120-2.

Anxiolytic effect of Proproten under conditions of punished and unpunished behavior.

[Voronina TA](#), [Molodavkin GM](#), [Sergeeva SA](#), [Epstein OI](#).

Materia Medica Holding Research-and-Production Company, Moscow.

Abstract

The anxiolytic effect of Proproten containing potentiated antibodies to brain-specific S100 protein (2.5 ml/kg) in male outbred albino rats was studied under conditions of punished (Vogel's conflict situation with pain stimulation) and unpunished behavior (elevated plus-maze and open-field tests). Proproten significantly increased the incidence of punished drinking in the conflict situation with pain stimulation, number of entries, and time spent in the open arms of the elevated plus-maze and decreased

the rate of defecation and urination. In the open-field test Proproten induced entries of rats into the center of an illuminated area. Proproten was efficient after single administration and course of treatment (2 times a day, 5 days). These results show that Proproten produces the anxiolytic effect under conditions of punished and unpunished behavior.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949673>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:125-7.

GABAergic system in the anxiolytic effect of Proproten: experimental study.
[Voronina TA](#), [Molodavkin GM](#), [Sergeeva SA](#), [Epstein OI](#).

Materia Medica Holding Research-and-Production Company, Moscow.

Abstract

The medicinal preparation Proproten contains ultralow doses of antibodies to S100 protein that acts as an important regulator of integrative activity in the brain and synaptic processes. Intracerebroventricular administration of Proproten, diazepam, and mexidol in doses of 2.5 ml/kg, 2 mg/kg, and 100 mg/kg, respectively, produced a strong anxiolytic effect on male outbred rats in the conflict situation and markedly increased the incidence of punished drinking. Antagonists of GABAergic transmission bicuculline (GABAA receptor blocker) and picrotoxin (chlorine channel blocker) produced the pro-conflict anxiogenic effect, which was accompanied by a decrease in the number of punished drinking in control animals. The anti-conflict effect of Proproten was less pronounced during blockade of GABAA receptors or chlorine channels. Bicuculline and picrotoxin similarly modulated the anxiolytic effect of diazepam and mexidol. Our results suggest that the GABAergic system plays a role in the anxiolytic effect of diazepam, mexidol, and Proproten.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949675>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:75-6.

Mutagenic activity of potentiated antibodies to erythropoietin.
[Voronova OL](#), [Rogozina OP](#), [Dugina YL](#), [Martyushev AV](#), [Epstein OI](#), [Dygai AM](#), [Goldberg ED](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences.

Abstract

Single and repeated administration of ultralow doses of antibodies to erythropoietin did not increase the count of aberrant metaphases in bone marrow cells of BALB/c mice and were not genotoxic for *Drosophila melanogaster* wing cells in the test of somatic mosaicism.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/19678412>

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:65-6.

Cytogenetic effects of antibodies to gamma-interferon in ultralow doses.

[Voronova OL](#), [Rogozina OP](#), [Martyushev AV](#), [Sergeeva SA](#), [Epstein OI](#), [Dygai AM](#), [Goldberg ED](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences.

Abstract

Single and course administration of ultralow doses of antibodies gamma-interferon did not increase the incidence of cytogenetic abnormalities in bone marrow cells from BALB/c mice and produced no genotoxic effect on *Drosophila melanogaster* wing cells in the test of somatic mosaicism.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949654>

Arzneim Forsch. 1986;36(2):1421-1425.

Die Beeinflussung der Phagozytosefähigkeit von Granulozyten durch homöopathische Arzneipräparate.

[The influence on the phagocytosis of granulocytes through homeopathic preparations].

[Article in German]

Wagner H, Jurcic K, Doenicke A, Rosenhuber E, Behrens N.

Acta Veterinaria Scandinavica 2001 Mar;42:31-44. doi:10.1186/1751-0147-42-31.

Plants as De-Worming Agents of Livestock in the Nordic Countries: Historical Perspective, Popular Beliefs and Prospects for the Future

Waller PJ, Bernes G, Thamsborg SM, Sukura A, Richter SH, Ingebrigtsen K, Höglund J.

Abstract

Preparations derived from plants were the original therapeutic interventions used by man to control diseases (including parasites), both within humans and livestock. Development of herbal products depended upon local botanical flora with the result that different remedies tended to develop in different parts of the world.

Nevertheless, in some instances, the same or related plants were used over wide geographic regions, which also was the result of communication and/or the importation of plant material of high repute. Thus, the Nordic countries have an ancient, rich and diverse history of plant derived anthelmintic medications for human and animal use. Although some of the more commonly used herbal de-wormers were derived from imported plants, or their products, many are from endemic plants or those that thrive in the Scandinavian environment. With the advent of the modern chemotherapeutic era, and the discovery, development and marketing of a seemingly unlimited variety of highly efficacious, safe synthetic chemicals with very wide spectra of activities, herbal remedies virtually disappeared from the consciousness – at least in the Western world. This attitude is now rapidly changing. There is a widespread resurgence in natural product medication, driven by major

threats posed by multi-resistant pest, or disease, organisms and the diminishing public perceptions that synthetic chemicals are the panacea to health and disease control. This review attempts to provide a comprehensive account of the depth of historical Nordic information available on herbal de-wormers, with emphasis on livestock and to provide some insights on potentially rewarding areas of "re-discovery" and scientific evaluation in this field.

Link to paper: <http://www.actavetscand.com/content/42/1/31>

Br Homoeopath J. 1983 Apr;72(2):108-109.

Animal experiments – a few facts.

Warren AG.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078583800465>

Br Homoeopath J. 1985 Oct;74(4):207–210.

A homoeopathic view of pain and stress in animals.

Warren AG.

Link to abstract/paper:

<http://www.sciencedirect.com/science/article/pii/S0007078585800259>

Homeopathy. 2008 Jan;97(1):3-9.

The effect of homeopathically prepared thyroxine on highland frogs: influence of electromagnetic fields.

[Weber S](#), [Endler PC](#), [Welles SU](#), [Suanjak-Traidl E](#), [Scherer-Pongratz W](#), [Frass M](#), [Spranger H](#), [Peithner G](#), [Lothaller H](#).

Interuniversity College Graz/Castle of Seggau, Austria.

Erratum in

- *Homeopathy.* 2008 Jul;97(3):165.

Abstract

BACKGROUND: Previous experiments show that amphibian larvae are responsive to homeopathically prepared thyroxine.

METHODS: We studied the effect of a highly diluted and agitated thyroxine solution exposed to various electromagnetic fields on metamorphosis in highland *Rana temporaria*. The devices tested were: microwave oven, mobile phone, airport X-ray, and a red light barcode scanner. Animals were treated either with homeopathically prepared thyroxine (10(-30) parts by weight, 10(-35) in the water in which the animals were kept), or analogously prepared blank solution, or analogously prepared thyroxine exposed to the electromagnetic field of one of the devices tested. Solutions were administered at 48h intervals according to a standardized protocol.

RESULTS: Animals treated with the standard test solution thyroxine 10(-30) metamorphosed more slowly than the control animals, ie the effect of the homeopathically prepared thyroxine was opposed to the usual physiological effect of molecular thyroxine. The cumulative number of test animals that had reached the four-legged stage at defined points in time was smaller in the group treated with homeopathically prepared thyroxine at most of the points in time. This was found independently by all three research teams involved. In contrast, this effect did not occur when the thyroxine solution had been exposed to the field of the early model microwave oven, or mobile phone. There was no difference between aqueous or alcoholic solutions were used, and there was, if any, only a small protective effect from aluminum foil. Airport X-ray and red light barcode scanning did not diminish the effect of the homeopathic solution.

Link to paper: <http://www.homeopathyoz.org/downloads/Resch-Frogs.pdf>

Forsch Komplementmed. 2007 Dec;14(6):353-7. Epub 2007 Dec 12.

Pretreatment with thyroxin 10(-8) and the effect of homeopathically prepared thyroxin 10(-30) on highland frogs--a multi-researcher study.

[Welles SU](#), [Endler PC](#), [Scherer-Pongratz W](#), [Suanjak-Traidl E](#), [Weber S](#), [Spranger H](#), [Frass M](#), [Lothaller H](#).

Interuniversity College Graz, Castle of Seggau, Graz, Austria.

Abstract

BACKGROUND: Studies performed in 5 laboratories have shown that homeopathically prepared highly diluted thyroxin (10(-30)=30x) slowed down metamorphosis of highland amphibians. Metamorphosis of lowland amphibians, however, could be slowed down by a low dilution of thyroxin (10(-8)=8x) if animals had been artificially pretreated with thyroxin.

OBJECTIVE: To combine the advantages of using animals from highland biotopes and hyperstimulation prior to treatment.

ANIMALS AND METHODS: *Rana temporaria* from an alpine biotope were pretreated in an aqueous molecular thyroxin dilution (10(-8) parts by weight, hyperstimulation). This is supposed to accelerate metamorphosis. In accordance with the homeopathic idea of detoxification or cure, one group of these hyperstimulated animals was then treated with thyroxin 30x, and another group with water 30x. Experiments were performed by 4 independent researchers.

RESULTS: As a trend, the thyroxin-30x animals metamorphosed more slowly than the water-30x animals. The number of thyroxin-30x animals that reached the 4-legged stage at defined points in time was slightly smaller at some but not all points in time, compared to control. This is in line with previous findings and can be discussed as an interesting result. Contrary to our working hypothesis, however, differences were not bigger than in the previous experiments in which animals had not been pretreated with thyroxin 10(-8).

CONCLUSION: This study supports previous findings but does not prove the assumption that pretreatment of highland animals with molecular thyroxine improves the original protocol.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/18219210>

Braz Oral Res. 2006 Jul-Sep;20(3):196-201.

**Comparative therapeutic use of Risedronate and Calcarea phosphorica--
allopathy versus homeopathy--in bone repair in castrated rats.**

[Werkman C](#), [Senra GS](#), [da Rocha RF](#), [Brandão AA](#).

Department of Biosciences and Oral Diagnosis, School of Dentistry of São Jose dos Campos, São Paulo State University.

Abstract

Osteoporosis, a disease characterized by progressive bone loss, has been the target of several studies in the past few years. It results in a much higher risk for fractures and might cause slower bone lesion healing. The aim of this work was to study the effects of Risedronate (allopathic medicine) and Calcarea phosphorica 6CH (homeopathic medicine) on the repair of bone lesions in male rats with osteoporosis induced by castration. Eighty-four three-month-old rats were used divided into four groups of twenty-one animals each. Three groups were castrated and one group was submitted to Sham surgery. One month later, cortical lesions were made in all animals' tibiae and, after one day, the different experimental treatments began according to the following groups: CR--castrated/Risedronate (1 mg/kg/day); CCp--castrated/Calcarea phosphorica 6CH (3 drops/day); CP--castrated/placebo and SP--Sham/placebo. The animals were sacrificed at seven, fourteen and twenty-eight days after the beginning of the treatments and had their tibiae removed. Digital radiographs of the tibiae were taken and analyzed in order to evaluate the optical density of the defect area. Then, they were decalcified and processed for histological and histomorphometrical analysis. The data were submitted to ANOVA, and to the Tukey and Dunnett tests (5%). The allopathic and homeopathic treatments led to different bone formation as regards remodeling and maturation aspects. Further research is necessary to assess the resistance and quality of the newly formed bone.

Link to paper: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1806-83242006000300003&lng=en&nrm=iso&tlng=en

J Dairy Res. 2010 Nov;77(4):460-7. Epub 2010 Sep 8.

Efficacy of homeopathic and antibiotic treatment strategies in cases of mild and moderate bovine clinical mastitis.

[Werner C](#), [Sobiraj A](#), [Sundrum A](#).

Department of Animal Nutrition and Animal Health, Faculty of Organic Agricultural Sciences, University of Kassel, Nordbahnhofstr. 1a, D-37213 Witzenhausen, Germany. cwerner@uni-kassel.de

Abstract

The objective of this clinical control trial was to examine the effectiveness of the classical homeopathic treatment strategy in cases of mild and moderate bovine clinical mastitis in comparison with antibiotic and placebo treatments. Owing to characteristics of the selected herds, only cases of clinical mastitis caused by

environmental pathogens and clinical cases with negative bacteriological result in the pre-treatment milk sample were included in the trial. A total of 136 lactating dairy cows with 147 affected quarters from four herds in Germany were randomly allocated to three treatment groups. The cows were examined on days 0, 1, 2 and on days 7, 14, 28 and 56 post initial infection to assess clinical signs. Simultaneously, with the exception of days 1 and 2, quarter milk samples for laboratory examinations (bacteriology, somatic cell count) were collected to assess bacteriological and cytological cure rates. On days 28 and 56, treatment strategies did not differ significantly with respect to the clinical outcomes and the total cure rate in cases of bacteriological negative mastitis (n=56). In cases of pathogen-positive mastitis (n=91), the cure rate after 4 and 8 weeks was similar between the two treatment strategies, homeopathy and antibiotic treatment, but the difference between the homeopathic and the placebo treatment at day 56 was significant ($P < 0.05$). The results indicate a therapeutic effect of homeopathic treatment in cases of mild and moderate clinical mastitis. However, independent of treatment strategy and bacteriological status, the total cure rate was on a low level, revealing limitations in the effectiveness of both antibiotic and homeopathic treatment strategies.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/20822562>

Br Homeopath J. 1991 Jul;80:149-156.

A study using *Sepia 200c* given prophylactically postpartum to prevent anoestrus problems in the dairy cow.

[A.V. Williamson](#), [W.L. Mackie](#), [W.J. Crawford](#), [B. Rennie](#)

Abstract

The results obtained from a study model using *Sepia 200c* in a herd of dairy cows led to an extended study. Overall reproductive performance was monitored monthly by a farm action list and the technique of palpation of the ovaries per rectum was used to determine pregnancy and cyclical status. A total of 101 cows were randomly treated with *Sepia 200c* on day 14 or 21 postpartum.

Statistical analysis of the results was based on the differences between the untreated Control and *Sepia*-treated groups in periparturient disorders and pre- and post-service periods, and between the two *Sepia*-treated groups.

In the pre-service period, a significant difference was found between the *sepia*-treated groups in the proportion of heifers calved, the number of assisted calvings and pre-service problems compared to Control. A difference of 9.9 total mean days to oestrus post-treatment was found between the *Sepia*-treated groups.

During the post-service period, significant differences were found in the conception rate to first service, the percentage of cows in calf and total culled.

A reduction (non significant) was found in the 21-day treatment group compared to control and 14-day treatment in the mean days calving to conception interval and the calving index. However, between the *Sepia*-treated groups a significant difference was found in total mean days calving to conception interval.

The results of this study appear to demonstrate a difference in effect between the *Sepia*-treated groups and Control group. The study has been extended into a double blind placebo trial to find the effect of using a placebo and assess the use of *Sepia* given earlier postpartum on herd reproductive performance.

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/PIIS0007078505802261/abstract>

Br Homeopath J. 1995 Jan;84(1):14-20.

A Trial of Sepia 200: Prevention of anoestrus problems in dairy cows.

[A.V. Williamson](#), [W.L. Mackie](#), [W.J. Crawford](#), [B. Rennie](#)

Abstract

The effect of *Sepia* 200c on the reproductive performance of Friesian cross dairy cows was assessed in a controlled trial from September 1989 until August 1990. Overall reproductive performance was monitored monthly and pregnancy diagnosis and cyclical status was determined. The cows were randomly allocated to 4 groups, untreated controls, placebo controls, *Sepia*-treated 24 to 48 hours postpartum and *Sepia*-treated day 14 postpartum.

The trial was concluded in July 1990 when another treatment was employed to reduce declining herd reproductive status. Statistical analysis of the results was based on differences between the placebo control and the *Sepia*-treated, 24–48 hours postpartum, the pooled control groups and placebo control with *Sepia* day 14, and lastly the difference between the 2 *Sepia*-treated groups.

The highest rates of periparturient disease occurred in the *Sepia*-treated groups, the highest single incidence rate of periparturient disease risk (cysts) found in the cows in the *Sepia* 24 to 48 hours postpartum group. *Sepia* day 14 produced the largest percentage of cows seen in first oestrus (45%), the largest number of observed heats (60%) in the cows without periparturient disease risk factors or recurrent traits and the lowest total mean value days to oestrus post-treatment.

Sepia day 14 produced the largest percentage that held to first service, the lowest post-treatment period to first service, calving to conception interval, mean number of services and rectal examinations per conception, mean day calving interval and calving index. The results show that the effect of *Sepia* 200c administered to cows two weeks postpartum increased the numbers of cows observed in first oestrus, held to first service and lowered the calving to conception interval and calving index. The results of the *Sepia* day 14 postpartum group were also found to be compatible with the same group data reported in the previous study.

Link to abstract/paper: [http://dx.doi.org/10.1016/S0007-0785\(05\)80713-6](http://dx.doi.org/10.1016/S0007-0785(05)80713-6)

Ärztezeitschrift für Naturheilverfahren. 1984;25(9):1–5.

Auswirkungen eines homöopathischen Komplexmittels (Diabetes-Gastreu R 40) auf den Blutzuckerspiegel.

[Effects of a homeopathic agent (diabetes-gas scattering R 40) on blood sugar levels].

[Article in German]

Wölfel B, Weingärtner O, Altenburg HP, Raute-Kreinson U.

Prakt Tierarzt. 1966;47:431-432,496-501.

Arzneiwirkungsprüfung an Caulophyllum D 30.

[Drug efficacy testing of Caulophyllum D 30].

[Article in German]

Wolter H.

AHZ. 1968;213(10):433-452.

Experimentelle Untersuchungen über die Leberwirksamkeit von Flor de Piedra.

[Experimental studies on the liver efficiency with Flor de Piedra].

[Article in German]

Wolter H.

AHZ. 1968;213(10):433-452.

Experimentelle Untersuchungen über die Leberwirksamkeit von Flor de Piedra.

[Experimental studies on the liver efficiency with Flor de Piedra].

[Article in German]

Wolter H.

Abstract

Nadi kurzer Darstellung verschiedener Untersuchungsmethoden über die Wirksamkeit homöopathischer Arzneien wird versucht, den Nachweis der Wirksamkeit von Flor de Piedra in homöopathischer Potenz mit Hilfe von histologischen Untersuchungen zu bringen. In verschiedenen Versuchsreihen wird die Leberwirksamkeit von Flor de Piedra aufgezeigt, die sich bei fettiger Degeneration und bei Leberdegeneration infolge einer Intoxikation durch Wurmbefall und infolge einer Infektion zunächst in funktioneller Regulierung zeigt, der histologisch nachweisbar die Regeneration des Lebergewebes folgt. Diese Regeneration erfolgt innerhalb weniger Wochen.

Link to abstract/paper: <https://www.thieme-connect.com/ejournals/abstract/10.1055/s-2006-935470>

Prakt Tierarzt. 1976;57(9):523–526.

Experimentelle Untersuchungen zur Behandlung der Stoffwechsel (Leber)erkrankungen der Kühe.

[Experimental studies on the treatment of metabolism (liver) disease of cows].

[Article in German]

Wolter H.

Abstract

Es werden Versuche beschrieben, über die therapeutische Wirksamkeit eines homöopathischen Mittels Flor de Piedra D3, die im Auftrage des Bundesministers für Jugend, Familie und Gesundheit durchgeführt wurden, und in denen zum Ausdruck kam, dass die untersuchte Pflanze bei den Stoffwechselerkrankungen der Kühe eine

deutliche Wirkung erkennen ließ. Zum Schluss werden 2 kasuistische Fälle angeführt.

Link to abstract/paper:

http://www.vetion.de/oekovet/publikationen/artikel.cfm?artikel_id=208

AHZ. 1977;222(2):60-68.

Prinzipielle Überlegungen zur homöopathischen Behandlung - Dargestellt an Beispielen aus der Veterinärmedizin.

[Fundamental considerations for the homeopathic treatment - Illustrated by examples of Veterinary Medicine].

[Article in German]

Wolter H.

Abstract

Für die Anerkennung der homöopathischen Medizin ist es heute entscheidend, auch die Heilung schwerer Krankheitsfälle überzeugend zu belegen. Die Beobachtungen der Veterinärmedizin sind besonders beweiskräftig, weil suggestive Wirkungen ausgeschlossen werden können. Die üblichen Untersuchungen pharmakologischer Wirkungen an gesunden Laboratoriumstieren sind zur Verifizierung der homöopathischen Therapie nicht geeignet. Die homöopathische Therapie ist eine aktivierende und regulierende Methode. Ihre Wirksamkeit kann nur am erkrankten Menschen oder Tier erkannt und reproduziert werden. An 4 ausführlich wiedergegebenen ernstesten Krankheitsprozessen im Bereich der Atmungsorgane wird gezeigt, daß auch in der homöopathischen Medizin die klinische Diagnose so genau wie möglich gestellt werden muß und daß auch therapieresistente Fälle noch auf eine homöopathische Therapie ansprechen können. Die Homöotherapie kann auf verschiedenen Ebenen erfolgen. Sie kann auf das erkrankte Organ gerichtet sein, wie im Fall 1, in welchem *Lycopus virginicus* bei Husten infolge einer Hyperthyreose verordnet wurde; sie kann auf tieferliegende Regulationsstörungen abgestimmt werden, wie im Fall 2, in welchem das "Hysteriemittel" *Asa foetida* bei komplexen Störungen indiziert war; sie kann schließlich als Konstitutionstherapie gehandhabt werden, wie vielleicht im Fall 3, in welchem sich Sulfur und seine Verbindungen bei einer Bronchopneumonie bewährten. Im Hinblick auf die manchmal ungewöhnlichen Erfolge nimmt man es in Kauf, daß die homöopathische Methode schwieriger ist als die relativ einfache Chemotherapie.

Link to abstract/paper: [https://www.thieme-](https://www.thieme-connect.com/ejournals/abstract/10.1055/s-2006-935802)

[connect.com/ejournals/abstract/10.1055/s-2006-935802](https://www.thieme-connect.com/ejournals/abstract/10.1055/s-2006-935802)

AHZ 1979;224(3):91-99.

Flor de Piedra D 3 - Therapeutische Versuche bei Azetonämie des Rindviehs.

[Flor de Piedra D 3 - Therapeutic trials in ketosis of cattle].

[Article in German]

Wolter H.

Abstract

Nach einer Begründung, warum der Verfasser die Azetonämie der Rinder für den Wirksamkeitsnachweis von Flor de Piedra wählte, werden die klinischen Beobachtungsparameter dieser Erkrankung, vor allem auch die Leberschmerzpunkte erörtert. Außerdem umfaßten die Untersuchungen drei serologische Parameter, nämlich die GOT, die alkalische Phosphatase und das Bilirubin. Von insgesamt 68 in den Versuch genommenen Kühen konnten die Daten von 47 Tieren verwertet und rechnerisch beurteilt werden. Es ergab sich ein Prozentsatz von 71,787 Vo für die voraussagbare klinische und serologische Wirksamkeit von Flor de Piedra D 3. Fünf Tabellen verdeutlichen die Untersuchungsergebnisse.

Link to abstract/paper: <https://www.thieme-connect.com/ejournals/abstract/10.1055/s-2006-935863>

Homéopathie Française. 1957;45:427-433.

Action de doses infinitésimales de bismuth sur l'elimination de ce métal chez le cobaye.

[Action of infinitesimal doses of bismuth on the elimination of this metal in the guinea pig].

[Article in French]

Wurmser L.

Bull C.H.F. 1962:153-159.

Recherches sur l'action des doses infinitésimales de plomb.

[Research on the action of infinitesimal doses of lead].

[Article in French]

Wurmser L, Vischniac I.

AHZ. 1973;218(6):265-270.

Mischen von Lösungen - Mythos oder Wirklichkeit?

[Mixing solutions - Myth or Reality?].

[Article in German]

Wurmser L.

Link to abstract/paper: <https://www.thieme-connect.de/ejournals/pdf/10.1055/s-2006-935696.pdf>

J Am Vet Med Assoc. 1998 Mar 1;212(5):719-24.

Studies on use of homeopathy in animals.

[Wynn SG](#).

Department of Microbiology and Immunology, School of Medicine, Emory University, Atlanta, GA 30322, USA.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/9524649>

Indian J Pharmacol. 2008 Jan;40(1):32-6. doi: 10.4103/0253-7613.40487.

Effect of Morus alba L. (mulberry) leaves on anxiety in mice.

[Yadav AV](#), [Kawale LA](#), [Nade VS](#).

Government College of Pharmacy, Vidyanagar, Karad, Dist. Satara - 415 110, India.

Abstract

OBJECTIVE: The aim of the present work is to evaluate the anxiolytic effect of a methanolic extract of *Morus alba* L. leaves in mice.

MATERIALS AND METHODS: The hole-board test, elevated plus-maze paradigm, open field test, and light/dark paradigm were used to assess the anxiolytic activity of the methanolic extract of *M. alba* L. *Morus alba* extract (50, 100, and 200 mg/kg, i.p.) and diazepam (1 mg/kg, i.p.) were administered 30 min before the tests.

RESULTS: The results showed that the methanolic extract of *M. alba* significantly increased the number and duration of head poking in the hole-board test. In the elevated plus-maze, the extract significantly increased the exploration of the open arm in similar way to that of diazepam. At a dose of 200 mg/kg i.p. the extract significantly increased both the time spent in and the entries into the open arm by mice. Further, in the open field test, the extract significantly increased rearing, assisted rearing, and number of squares traversed, all of which are demonstrations of exploratory behavior. In the light/dark paradigm, the extract produced significant increase in time spent in the lighted box as compared to vehicle. The spontaneous locomotor activity count, measured using an actophotometer, was significantly decreased in animals pretreated with *M. alba* extract, indicating a remarkable sedative effect of the plant.

CONCLUSION: The results of the present study suggest that a methanolic extract of *M. alba* leaves may possess an anxiolytic effect.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3023120/>

Industrial Health. 1970;8:184-191.

Preventive Effect of Pretreatment with Low Dose of Metals on the Acute Toxicity of Metals in Mice.

Yoshikawa H.

Abstract

In a previous short communication, it was reported that mice injected with small amounts of metals tolerated the lethal dosage of the same metals given 24 hs later. The present study was designed to obtain the precise information on the tolerance to the acute toxicity of various kinds of metals. This tolerance was determined by the difference of mortality between the mice given the lethal doses of metals with and without pretreatment. From the results of this experiment, it was found that metals were divided into 3 groups as follows :

Group I: Metals with which the mortality caused by challenge are reduced with pretreatment. These metals which can develop a tolerance against their own toxic action are Ag, As, Cd, Hg, In, Pb, Mn, and Sn.

Group II : Metals with which their pretreatment had no effect on mortality caused by challenging are Cu, Ni, Se, and Tl.

Group III: Metals with which pretreatment increased their mortality and these metals became more toxic by pretreatment : Ba, Cr, Fe, and Zn.

From these results, it can be concluded that pretreated mice show a tolerance to the toxic action of most of contaminant metals and do not to that of essential metals.

Moreover, it was found that metals belonging to Group I have the ability to develop a cross-tolerance while those of Group II and III do not.

Link to paper:

http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDcQFjAA&url=http%3A%2F%2Fwww.jstage.jst.go.jp%2Farticle%2Ffindhealth1963%2F8%2F4%2F8_4_184%2F_pdf&ei=03NUUdvvB9GT0QWA74DIDQ&usg=AFQjCNHXAnX7A1hQq9C7jBFh2lp0muN2XA&bvm=bv.44442042,d.d2k

Industrial Health. 1973;11:113-119.

Preventive Effect of Pretreatment with Cadmium on Acute Cadmium Poisoning in Rats.

Yoshikawa H.

Abstract

It was previously reported that mice pretreated with small doses of cadmium developed a tolerance to a subsequent acute cadmium poisoning. The present experiment intended to explain this tolerance mechanism by an animal experiment. Male rats were used as experimental animals, of which one group was administered intraperitoneally 0.6 mg cadmium per kg of body weight as pretreatment and 24 hr later 3 mg cadmium per kg of body weight was injected intraperitoneally as challenging. Another group was injected with 3 mg cadmium per kg intraperitoneally. About all rats, the determination of cadmium was made in each organ, urine, and feces for 7 days after challenging. In the pretreatment group, it was recognized that the cadmium contents in liver increased remarkably compared with nonpretreatment group, on the contrary, the cadmium content in blood, especially in serum, and in other organs, and the amount of cadmium excreted in urine decreased in pretreatment group compared with nonpretreatment group.

Link to paper:

http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDcQFjAA&url=http%3A%2F%2Fwww.jstage.jst.go.jp%2Farticle%2Ffindhealth1963%2F11%2F3%2F11_3_113%2F_pdf&ei=MHVUUZzOI8jB0QWmkoCoDw&usg=AFQjCNGAbRCXxZLDtALvdSm1qqKT4uialA&bvm=bv.44442042,d.d2k

J Immunother. 1993;9:169–180.

Effects of embryonic burssectomy and in ovo administration of highly diluted bursin on adrenocorticotrophic and immune responses of chickens.

Youbicier-Simo BJ, Boudard F, Mekakouche M, Bastide M, Baylé JD.

Br Homeopath J. 1994 Apr;83(2):90-91.

The effect of in ovo administration of high dilutions of bursin in bursectomized chickens.

[B.J. Youbicier-Simo](#), [F. Boudard](#), [M. Guellati](#), [J.D. Baylé](#), [M. Bastide](#).

Link to abstract/paper:

<http://www.journals.elsevierhealth.com/periodicals/brihj/article/S0007-0785%2894%2980018-9/abstract>

Int J Immunopathol Pharmacol. 1996;9:43-51.

Specific abolition reversal of pituitary-adrenal activity and control of the humoral immunity in bursectomized chickens through highly dilute bursin.

Youbicier-Simo BJ, Boudard F, Mékaouche M, Baylé JD, Bastide M.

J Pineal Res. 1996 Aug;21(1):35-43.

A role for bursa fabricii and bursin in the ontogeny of the pineal biosynthetic activity in the chicken.

[Youbicier-Simo BJ](#), [Boudard F](#), [Mékaouche M](#), [Baylé JD](#), [Bastide M](#).

Laboratoire de Physiologie Générale, Université de Montpellier II, France.

Abstract

The tripeptide bursin (Lys-His-Gly-NH₂) is a B cell differentiation hormone derived from the bursa fabricii. The latter is a cloacal diverticulum and the site of B lymphocyte differentiation and selection in aves; also the bursa fabricii is involved in endocrine functions. Herein we demonstrate that in the chicken, the bursa fabricii and bursin are crucial to the ontogeny of both the pineal response to antigenic challenge and pineal circadian synthetic activity. In early embryonically bursectomized chickens, the plasma melatonin response to immunization by porcine thyroglobulin (Tg) was abolished. Also, the amplitudes of both plasma melatonin and pineal N-acetyltransferase (NAT) circadian rhythms were reduced by 50%, whereas the activity of hydroxyindole-O-methyltransferase (HIOMT) remained unchanged. Conversely, administration of either minute amounts (100 pg, 100 fg) or highly dilute (5 x 10⁻²⁷ g) bursin, with the exception of a highest dose (100 micrograms), to bursaless embryos induced recovery of normal antigen-induced melatonin response and normal amplitudes of melatonin and NAT rhythms. These findings establish that early in embryonic life, the bursa fabricii and its derived signal (bursin) are essential for normal development of pineal synthetic activity and underline the efficacy of very dilute bursin as an informative signal.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/8836962>

Rev Ciênc Méd. 1998 Jan-Apr;7(1):21-6.

**Atividade antiinflamatória da Arnica montana.
[Anti-inflammatory activity of Arnica montana].**

[Article in Portuguese]

Yui, F; Linarelli, MCB; Zelante, Paulo M.

Abstract

Devido a quase inexistência de estudos com relação a Arnica ao nível sistêmico, este estudo visa comprovar a atividade antiinflamatória da Arnica montana. A solução de Arnica montana utilizada neste experimento foi obtida a partir da tintura de Arnica. Foram utilizados 88 ratos Wistar, adultos (150-200g), e foram divididos em três grupos recebendo, por via oral o volume de 0,2ml/100g, para o grupo controle: água destilada com Tween, utilizado na diluição da solução de Arnica; no grupo experimental: solução de Arnica montana (10mg/ml) na dose de 20mg/kg; no grupo controle positivo: corticóide (Betametazona) na dose 1mg/kg. Após 60 minutos de tratamento foi medido o deslocamento da coluna de mercúrio, provocado pela imersão da pata posterior direita do rato até o moléolo lateral. A formação do edema, provocado pela administração de 0,1ml de formol foi avaliada também por deslocamento da coluna de mercúrio, nos tempos: 30, 60, 120, 180 e 240 minutos após a injeção do agente flogístico. Os resultados foram expressos como as diferenças de volume deslocado entre o tempo zero e os tempos subsequentes. A Arnica montana mostrou atividade antiinflamatória quando provocou redução do edema da pata do rato provocado pelo formol em relação ao grupo controle da ordem de 49,2; 40,6; 37,5; 37,9 e 33,7 por cento aos 30, 60, 120, 180 e 240 minutos respectivamente após a indução do edema. Esta ação foi menor do que a do corticóide, na primeira hora (73 por cento) e praticamente igual nas horas subsequentes (91,97 e 90 por cento). Pôde-se observar ainda, que os animais apresentaram um comportamento semelhante ao grupo controle, não demonstrando efeitos tóxicos da Arnica na dose utilizada. (AU)

Link to abstract/paper:

<http://bases.bireme.br/cgi-bin/wxislind.exe/iah/online/?IsisScript=iah/iah.xis&src=google&base=LILACS&lang=p&nextAction=lnk&exprSearch=224351&indexSearch=ID>

Homeopathy. 2008 Jul;97(3):145-51.

Effect of homeopathic medicines on helminth parasitism and resistance of Haemonchus contortus infected sheep.

[Zacharias F](#), [Guimarães JE](#), [Araújo RR](#), [Almeida MA](#), [Ayres MC](#), [Bavia ME](#), [Mendonça-Lima FW](#).

Empresa Baiana de Desenvolvimento Agrícola S/A, Salvador, Bahia, Brazil.

Abstract

This study evaluated the effects of homeopathic treatment on control of Haemonchus contortus infection in sheep. Twenty lambs were randomized to three treatments: treated with the homeopathic medicines, Ferrum phosphoricum, Arsenicum album and Calcarea carbonica; treated with a conventional anthelmintic, doramectin, and an untreated control group. Fecal and blood samples

were taken from each animal on days 18, 38 and 68 after start of treatment. A significant reduction in number of *H. contortus* larvae ($p < 0.01$) was observed for animals in the homeopathic treatment group compared to the control group. Fecal egg counts showed negative correlation between haematocrit and haemoglobin concentrations in the homeopathic treatment group ($p < 0.01$); however, the biochemical and immunological parameters showed better correlation, indicating that the homeopathic medicine improved vital functions. Daily weight gain in the homeopathic treatment group was superior to the control and to the antihelminthic groups, 31 and 6.5%, respectively. The cost benefit analysis confirmed that homeopathy group increases economic trend when compared with the other groups. Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/18657774>

Int J High Dilution Res. 2006 Jul-Sep;5(16):1.

Evolução de Inflamação Granulomatosa no Tecido Subcutâneo Frente ao Tratamento com Timulina em Preparações Homeopáticas: Estudo Piloto. [Evolution of Granulomatous Inflammation in the subcutaneous tissue under treatment with Thymulin in homeopathic preparations: a pilot study].

[Article in Portuguese]

Zalla Neto R, Russo RT, Morante G, dos Anjos B, Mariano M, Bonamin LV.

English Abstract

The immunomodulatory effects of thymulin in ultra high dilutions are known since the 80's. In this study we verified the evolution of BCG induced granuloma in the mice footpad subcutaneous tissue. Nine animals were divided in two groups: 1- treated with thymulin 5CH diluted into the drink water ad libitum; 2- treated with hidro-alcoholic solution (vehicle) by the same way. The treatment started in the day zero (day of inoculation) and lasted until the last measurement of the paw, on the 8th day. The granuloma evolution was measured by the paw thickness, with a micrometer. Results showed a significant increase (20%) of paw thickness in treated animals, between days 5 and 8 after BCG inoculation ($p \leq 0.01$). These findings corroborate the hypothesis of immunomodulating effect of homeopathic thymulin.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/206/219>

Int J High Dilution Res. 2012;11(40):184.

Hypoglycemic effect of alloxan and thymulin both diluted in wistar rats with degeneration of beta cells islets of Langerhans

Zalla Neto R, Moriguchi P, Chaves AFR, de Oliveira ILB.

Abstract

Diabetic animals induced by alloxan show severe hyperglycemia and intense catabolism characterized by the absence of insulin. Therefore, the objective of this study is to assess whether the alloxan 6CH, is able to reverse or mitigate the changes promoted by diabetes mellitus, as well as assess the effects of thymulin. In biological tests male Wistar rats were used induced to experimental diabetes by the administration of alloxan (iv 42 mg / kg). The sample comprised four groups (n = 4):

G1 – control without the induction of diabetes, G2 - diabetic without treatment, G3 - diabetic treated with thymulin 12CH and G4 - treated with alloxan 6CH. The data were statistically analyzed by ANOVA followed by Tukey-Kramer test ($p < 0.05$). After treatment for 40 days slight decrease of glucose in animals treated with alloxan (502 ± 28) mg/dl and thymulin (500 ± 10) mg/dl was observed compared with untreated animals (563 ± 23)mg/dl. Remained unchanged feed intake and water, however, significant decrease of body weight in diabetic group (96 ± 21)g was observed compared to animals treated with alloxan (27 ± 23)g and thymulin (20 ± 16)g, fact not observed when the last two groups are compared with the control (5.1 ± 3.9)g. Significant reduction in the percentage of lymphocytes in diabetic animals (44.8 ± 2.4)% and increase in the group treated with thymulin (12CH) (83.3 ± 4.5)% was checked, when compared to the others. Animals treated with alloxan and thymulin showed clinical improvement. Based on these findings it is concluded that alloxan and thymulin improve the general state of the animal, and suggest inhibition of strong catabolism observed in diabetic animals without treatment.

Link to paper: <http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/579/598>

Ergebnisse einer multizentrischen Kontrollstudie Perfusion. 2002;17:268–276.

Die Wirkung von “homöopathisch” zubereitetem Thyroxin auf die Metarmorphose von Hochlandamphibien.

[The effect of "homeopathic" Prepared Thyroxin on the metamorphosis of highland amphibians].

[Article in German]

Zausner C, Lassing H, Endler PC, Scherer-Pongratz W, Haidvogel M, Frass M, Kastberger G, Lüdtker R.

English Abstract

We studied the influence of a high dilution of thyroxine (10-30) on the metamorphosis of highland frogs. The hormone was step by step diluted and agitated according to directions given in literature on homeopathy. Analogously prepared water was used as reference. The hypothesis derived from previous studies was that tadpoles treated with the test dilution metamorphose less rapidly than the reference animals. This hypothesis was proven by 3 independent researchers in recent experiments. The number of animals having reached the 4-legged stage, which also includes metamorphosis of the heart and circulation system, at given points in time was smaller under the influence of the homeopathically prepared thyroxine dilution in comparison to the effect of water control. Further experiments indicate that the observed difference becomes more distinct if all animals are pretreated with a molecular thyroxine dose (10-8). In this way it has also been possible to induce a response to homeopathically diluted thyroxine in animals from lowland biotopes.

Link to paper: [http://www.inter-](http://www.inter-uni.net/static/download/publication/komplementaer/a_2002_Zausner_et_al_Perfusion_Hochland.pdf)

[uni.net/static/download/publication/komplementaer/a_2002_Zausner_et_al_Perfusion_Hochland.pdf](http://www.inter-uni.net/static/download/publication/komplementaer/a_2002_Zausner_et_al_Perfusion_Hochland.pdf)

Bull Exp Biol Med. 2003 Jan;135 Suppl 7:73-4.

Erythropoietic activity of preparations containing receptors and antibodies to erythropoietin in ultralow doses.

[Zhdanov VV](#), [Simanina EV](#), [Dugina YL](#), [Stavrova LA](#), [Gur'yantseva LA](#), [Epstein OI](#), [Dygai AM](#), [Goldberg ED](#).

Institute of Pharmacology, Tomsk Research Center, Siberian Division of the Russian Academy of Medical Sciences.

Abstract

We compared the erythropoiesis-stimulating effects of ultralow doses of erythropoietin receptors and antibodies to erythropoietin in intact mice. Antibodies to erythropoietin, but not erythropoietin receptors, possessed considerable erythropoiesis-activating properties.

Link to abstract/paper: <http://www.ncbi.nlm.nih.gov/pubmed/12949657>

Int J High Dilution Res. 2013;12(44):154-155.

The role of educational scientific program “Step into the future” in the forming of potential researcher in the field of ultrahigh dilutions.

Zhdanova O, Sheshunov I, Mazina N, Byeloribkina O, Imbryakova I, Kalinina O.

Abstract

“Step into the future” is the most famous educational scientific program for children in Russia. The main target of this program is children preparation for studying in the establishments of higher education. In Russia it is compulsory and now lasts eleven years. It consists of primary education and secondary education. Primary education starts at the age of 6-7 and continues for four years. During this time we recommend to have simple experiments in the field of biology, botany etc. with children. After 4 years of primary-school classes pupils continue to study in secondary school, where they have a great variety of subjects such as physics, chemistry, biology etc. But there are also some special schools (KLEN, Ortodoxy gymnasiums etc) in Kirov which give profound knowledge in various academic subjects, including “experimental biology”. Besides, they offer different elective subjects, which are not necessary for them for the future work or future education at University or Academy. For example, “experimental biology” will be necessary for future education in biology in Medical academy. This subject gives us a chance to have different experiments. As the example we propose rats’ swimming. The rats have been divided into 4 groups. The 1st group - rats that were given a vitamin complex, the 2nd group - rats received a preparation of arnica 6C, the 3rd group - rats received arnica + vitamins, 4 - was the control group.

While swimming of rats experiment carrying out, the longest time of swimming (on 37 % above) was in the 3rd group of the rats, where they received a complex of vitamins and an arnica. The given experiment was enough simple for performance with children and illustrated homoeopathy effect evidently. Children have submitted data results at school conference in Kirov, Russia and All-Russia conference “Step into the future”. We consider that such work gives positive experience in experimental biology, in representation of reports and definition of the further activity.

Also schools have different scientific societies, and pupils can take part in their work according to their preferences. For example in Kirov there is a scientific society of

young people called “Vector”. Moreover in scientific societies of Kirov SMA and SS “Vector” there is such subject as “stylistics of the English scientific language” that is of great value for the students because it gives them an opportunity to get acquainted with academic language and to be ready for academic writing (for example, articles). Taking all this into consideration we want to say that many students take part in international conferences, try their hand in international grant getting and promote science using their knowledge of the Homeopathy. As a part of our scientific work we are planning to present experiment’s data results on the international conference.

Link to abstract/paper:

<http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/661/677>

DHM. 1953;4(10):433-438.

Cactus grandiflorus.

Zimmermann W.