

RESEARCH HIGHLIGHTS

Research highlights (October–December 2015)

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USE OF HOMOEOPATHY IN ORGANIC DAIRY FARMING IN SPAIN

Journal reference: Homoeopathy, Available online 1 October 2015.

Authors: Inmaculada Orjales, Marta López-Alonso, Ruth Rodríguez-Bermúdez, Francisco Rey-Crespo, Ana Villar, Marta Miranda

Summary: Organic farming principles promote the use of unconventional therapies as an alternative to chemical substances (which are limited by organic regulations), with Homoeopathy being the most extensive. Traditionally, Spain has had little faith in Homoeopathy, but its use in organic farming is growing. Fifty-six Spanish organic dairy farmers were interviewed to obtain what we believe to be the first data on the use of Homoeopathy in organic dairy cattle in Spain. Only 32% of farms use some sort of alternative therapy (16.1% Homoeopathy, 10.7% phytotherapy, and 5.3% using both therapies) and interestingly, a clear geographical pattern showing a higher use toward the East (similar to that in the human population) was observed. The main motivation to use Homoeopathy was the need to reduce chemical substances promoted by organic regulations, and the treatment of clinical mastitis being the principle reason. The number of total treatments was lower in farms using Homoeopathy compared with those applying allopathic therapies (0.13 and 0.54 treatments/cow/year, respectively) and although the bulk somatic cell count was significantly higher ($P < 0.001$) in these farms (161,826 and 111,218 cell/ml, respectively), it did not have any negative economical penalty for the farmer, and milk quality was not affected complying with the required standards; on the contrary, homoeopathic therapies seem to be an alternative for reducing antibiotic treatments,

allowing farmers to meet the organic farming principles.

Source: <http://www.sciencedirect.com/science/article/pii/S147549161500065X>

USING HETERO-ISOTHERAPICS IN CANCER SUPPORTIVE CARE: THE FRUIT OF 15 YEARS OF EXPERIENCE

Journal reference: Homoeopathy, Available online 1 October 2015.

Author: Jean-Lionel Bagot

Summary: Chemotherapy, hormone therapy, and new targeted therapies for cancer lead to adverse effects, which are often difficult to relieve using classical Homoeopathy. Besides diminishing the quality of life of the patient, they can force the oncologist to reduce or even to cease treatment prematurely, which represents a loss of opportunity for the patient. Faced with these recurring problems, would the use of homoeopathic dilution of chemotherapy, also called hetero-isotherapy, be a suitable response for improving the tolerance of and the adherence to cancer treatment? Based on experiments conducted for over 50 years by many authors, we have offered our patients, since 1998, a protocol of hetero-isotherapy chemotherapy starting the day after each cytotoxic infusion. It involves taking a daily dose of a dilution of the chemotherapy

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used, using the increased dilution technique from 5c to 15c. We observed a significant decrease in side effects, allergic reactions, and late sequelae in more than 6000 hetero-isotherapeutic treatments given to some 4000 patients. The better tolerance to chemotherapy and the improvement in the quality of life led to an increase in treatment adherence. No interference with chemotherapy was observed. When it was necessary to prescribe another homoeopathic medicine, combination with hetero-isotherapy generally improved its effectiveness. In a large population, followed for over 15 years, we observed that hetero-isotherapeutics, well tolerated and easy to use, reduced the side effects of chemotherapy, targeted therapy, or hormone therapy, and so improve the quality of life of patients.

Source: <http://www.sciencedirect.com/science/article/pii/S1475491615000612>

INTEGRATION AMONG ORTHODOX MEDICINE, HOMOEOPATHY, AND ACUPUNCTURE FOR INPATIENTS: 3 YEARS EXPERIENCE IN THE FIRST HOSPITAL FOR INTEGRATED MEDICINE IN ITALY

Journal reference: Journal of Traditional and Complementary Medicine, Volume 5, Issue 4, October 2015, Pages 234-240.

Authors: Simonetta Bernardini, Franco Cracolici, Rosaria Ferreri, Massimo Rinaldi, Roberto Pulcri

Summary: The hospital in Pitigliano (Tuscany) is the first hospital in Italy to put into practice a model of integrated medicine. This clinical setting caters for the use of complementary medicine (Homoeopathy and acupuncture [針灸zhēnjiǔ]) alongside orthodox therapies (conventional medicine). The therapeutic model implicates doctors who are experts in complementary and alternative medicine (CAM) and the rest of the hospital personnel working together as equals. This contribution explains the difficulties, critical aspects, and potential of this innovative setting. The clinical setting for integrated medicine was evaluated in part through observation and in part through the analysis of approval questionnaires. The writers of the questionnaires were the orthodox medical personnel and the hospital patients. The project is still evolving today in spite of the initial partial contrariety of some doctors in the hospital and some external doctors in the area. However, it can already be considered a positive experience, as

confirmed by the high approval gained from many health workers and most of the hospital patients. Moreover, the follow-up carried out through specific surgeries dedicated to CAM is extremely positive. Up to now, 532 inpatients suffering from acute illnesses, relapse of a chronic illness, or neurological or orthopedic rehabilitation following strokes, brain hemorrhage, neurological illness, or limb prosthesis operations have been treated. This work has tried to illustrate the innovative and positive experience for the Italian public health authorities so that it may also be useful to anyone who would like to promote similar initiatives within its public health institution.

Source: <http://www.sciencedirect.com/science/article/pii/S2225411015000450>

SPREAD OF TRADITIONAL MEDICINES IN INDIA: RESULTS OF NATIONAL SAMPLE SURVEY ORGANIZATION'S PERCEPTION SURVEY ON THE USE OF AYURVEDA, NATUROPATHY AND YOGA, UNANI, SIDDHA, AND HOMOEOPATHY

Journal reference: J Evid Based Complementary Altern Med, 2015 October 4, pii: 2156587215607673. PMID: 26438717.

Authors: Srinivasan R, Sugumar VR

Summary: For the first time, we have a comprehensive database on the usage of acronym for Ayurveda, Naturopathy and Yoga, Unani, Siddha, and Homoeopathy (AYUSH) in India at the household level. This article aims at exploring the spread of the traditional medical systems in India and the perceptions of people on the access and effectiveness of these medical systems using this database. The article uses the unit level data purchased from the National Sample Survey Organization, New Delhi. Household is the basic unit of survey, and the data are the collective opinion of the household. This survey shows that <30% of the Indian households use the traditional medical systems. There is also a regional pattern in the usage of particular type of traditional medicine, reflecting the regional aspects of the development of such medical systems. The strong faith in AYUSH is the main reason for its usage; lack of need for AYUSH and lack of awareness about AYUSH are the main reasons for not using it. With regard to the source of medicines in the traditional medical systems, home is the main source in the Indian medical system, and private sector is

the main source in Homoeopathy. This shows that there is a need for creating awareness and improving access to traditional medical systems in India. By and large, the users of AYUSH are also convinced about the effectiveness of these traditional medicines.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/26438717>

ELECTROMAGNETIC AND MAGNETIC VECTOR POTENTIAL BIO-INFORMATION AND WATER

Journal reference: Homoeopathy, Available online 21 October 2015.

Author: Cyril William Smith

Summary: This work developed over the past 40 years starting from dielectric measurements on enzymes and the subsequent finding that the measurements were affected by electric, magnetic, electromagnetic, and quantum fields. A request for help in the diagnosis and therapy of chemically sensitive patients who had become sensitive to their electromagnetic environment came in 1982. The same symptoms could be provoked by a chemical or a frequency challenge and this led to an appreciation of the synergy between chemical and frequency environmental sensitivities. Experimental cooperation with theoretical physicist Herbert Fröhlich FRS and others led to an understanding of the physics of coherent water in living systems and a mechanism for the memory of water for coherent frequencies. In a coherent system, there are interacting frequencies proportionate to any velocity the system will support, in particular, the velocity of light and the velocity of coherence diffusion. Thus, there can be biological interaction among the optical, microwave, and extremely low-frequency spectral regions. Frequency modulation of light scattered by bio-fields and its retention in recorded images are discussed. A “nil-potent” frequency can erase a frequency signature and hence affect a biological system. Homoeopathy is interpreted through the biological effects of coherent frequencies derived from the frequency signature of the “Mother Tincture” and developed through dilution and succussion. A homoeopathic potency has a frequency signature; therefore, it must be able to have a biological effect.

Source: <http://www.sciencedirect.com/science/article/pii/S1475491615000661>

ULTRA-HIGHLY DILUTED PLANT EXTRACTS OF HYDRASTIS CANADENSIS AND MARSDENIA CUNDURANGO THAT INDUCE EPIGENETIC MODIFICATIONS AND ALTER GENE EXPRESSION PROFILES IN HELA CELLS IN VITRO

Journal reference: Journal of Integrative Medicine, Volume 13, Issue 6, November 2015, Pages 400-411.

Authors: Santu Kumar Saha, Sourav Roy, Anisur Rahman Khuda-Bukhsh

Summary: Methylation-specific epigenetic process and gene expression profiles of HeLa cells treated with ultra-high dilutions (HDs) of two plant extracts, *Hydrastis canadensis* (HC-30) and *Marsdenia cundurango* (Condu-30), diluted 1060 times, were analyzed against placebo 30C (PI-30) for alterations in gene profiles linked to epigenetic modifications. Separate groups of cells were subjected to the treatment of Condu-30, HC-30, and PI-30 prepared by serial dilutions and succussions. Global microarray data recorded on affymetrix platform, using 25-mer probes were provided by iLife Discoveries, India. Slides were scanned with 3000 7-gauge microarray scanner and raw data sets were extracted from Cel (raw intensity) files. Analyses of global microarray data profile, differential gene expression, fold change, and clusters were made using GeneSpring GX12.5 software (Agilent Technologies) and standard normalization procedure. Before microarray study, concentration of RNA (ng/ μ L), RNA integrity number value, and rRNA ratio for all the samples were analyzed by Agilent Bioanalyzer 2100. Reverse transcriptase-polymerase chain reaction (RT-PCR) and quantitative RT-PCR were done for analyzing SMAD-4 expression. Fluorescence-activated cell sorting study was further made to elucidate the fate of cells at divisional stages. Methylation-specific restriction enzyme assay was conducted for ascertaining methylation status of DNA at specific sites. HDs of HC-30 and Condu-30 differentially altered methylation in specific regions of DNA and expression profiles of certain genes linked to carcinogenesis, as compared to PI-30. Two separate cut sites were found in genomic DNA of untreated and placebo-treated HeLa cells when digested with McrBC, compared to a single cut observed in Condu-30-treated genomic DNA. SMAD-4 gene expression validated the expression pattern observed in microarray profile. Methylation-specific restriction

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enzyme assay elucidated differential epigenetic modifications in drug-treated and control cells. HDs triggered epigenetic modifications and alterations in microarray gene expression profiles of many genes associated with carcinogenesis in HeLa cells *in vitro*.

Source: <http://www.sciencedirect.com/science/article/pii/S2095496415602011>

PREVALENCE AND LIKELIHOOD RATIO OF SYMPTOMS IN PATIENTS WITH GOOD THERAPEUTIC RESPONSE TO LYCOPODIUM CLAVATUM: A RETROSPECTIVE STUDY

Journal reference: Homoeopathy, Available online 2 November 2015.

Authors: José Enrique Eizayaga, María Isabel Pozzi, María Clara Canan, Laura Saravia

Summary: Assessment of the likelihood ratio (LR) of symptoms has been proposed as a rational means for detecting indicators to homoeopathic medicines. To investigate the prevalence and LR of symptoms commonly attributed to the homoeopathic medicine *Lycopodium clavatum* (Lyc). Secondly, to answer the question if experienced homeopaths could intuitively infer which the main symptoms of this medicine are. The presence of 35 selected symptoms, prescribed medicines, and therapeutic response was assessed retrospectively. The symptoms' prevalence in the Lyc responding population and the LR of the symptoms compared to their prevalence in the remainder of the population were calculated. Two hundred and two Lyc and 550 non-Lyc cases (total 752) were included for analysis. Twenty-two symptoms were confirmed as pertaining to Lyc's semiology (prevalence %; LR): contemptuous (3.3; 6.7), urinary stones history (2.7; 5.4), egotism (5.6; 3.6), dictatorial (33.3; 3.4), haughty (8.7; 3.3), sleeps on abdomen (3.3; 3.3), intolerance to clothing in abdomen (12.0; 3.1), reproaches (4.0; 3.0), helplessness (24.0; 2.7), fear of failure (10.7; 2.6), irritability on waking in the morning (16.7; 2.5), constipation alternating with diarrhea (8.7; 2.5), intolerant to contradiction (59.3; 2.3), want of self-confidence (30.0; 2.4), abdominal distension after eating (23.3; 2.1), ailments from anticipation (32.0; 1.9), irritability before menses (23.3; 1.8), conscientious (26.0; 1.6), desire of sweets (52.0; 1.6), desire of chocolate (16.7; 1.6), lack of vital heat (41.3; 1.3), and flatterer (1.3; ∞). Surveyed homeopaths' intuitive inferences correlated well with symptoms' prevalence, but not

with their LR. *Lycopodium's* main symptoms are well known by homeopaths, but their knowledge correlates well with the symptoms' prevalence and not with their LR. Retrospective assessment of prevalence and LR of symptoms in good responders might be a means for better selection of symptoms for prospective studies.

Source: <http://www.sciencedirect.com/science/article/pii/S1475491615000703>

USE OF COMPLEMENTARY AND ALTERNATIVE MEDICINE BY PARENTS IN THEIR CHILDREN AND ADOLESCENTS WITH EPILEPSY: PREVALANCE, PREDICTORS, AND PARENTS' ASSESSMENT

Journal reference: Eur J Paediatr Neurol, 2015 Nov 10, pii: S1090-3798 (15) 00186-5. doi: 10.1016/j.ejpn.2015.11.003.

Authors: Hartmann N, Neining MP, Bernhard MK, Syrbe S, Nickel P, Merckenschlager A, Kiess W, Bertsche T, Bertsche A

Summary: The use of complementary and alternative medicine (CAM) is popular. Parents of children suffering from epilepsy may also consider administering CAM to their children. Systematic data about the frequency of and motivations for CAM use, however, are scarce. In a university hospital's neuropaediatric department, parents of patients aged 0–18 years suffering from epilepsy were consecutively invited to take part in a structured interview during 4 months in 2014. Of the invited parents, 164/165 (99%) agreed to participate. From those, 21/164 (13%) stated that they used CAM in their child. The highest independent predictive value of CAM use was the occurrence of adverse drug events (ADE) of anticonvulsants as judged by parents. Patients affected by ADE had a 5.6 higher chance of receiving CAM compared to patients without ADE. Most commonly used were Homoeopathy (14/21, 67%) and osteopathy (12/21, 57%). The internet was the most frequently used source of information (14/21, 67%). Of the parents, 10/21 (48%) described positive effects of CAM on seizure frequency, 12/21 (57%) on the general condition of their child, and 20/21 (95%) wished to continue CAM for epilepsy therapy. From the nonusers of CAM, 91/143 (66%) expressed the desire to learn more about CAM for epilepsy therapy. Our study was performed in a university hospital in a large urban city in Eastern Germany. CAM user rates can differ in other parts of Germany and Europe,

in other institutions and for chronic diseases other than epilepsy. The main reason for CAM use was the occurrence of ADE of anticonvulsants. More than half of the parents saw a benefit of CAM for their children. Almost all parents wished to continue CAM use, even those who did not see concrete positive effects.

Source: <http://www.sciencedirect.com/science/article/pii/S1090379815001865>

CHEMOMETRICS MEETS HOMOEOPATHY: AN EXPLORATORY ANALYSIS OF INFRARED SPECTRA OF HOMOEOPATHIC GRANULES

Journal reference: Journal of Pharmaceutical and Biomedical Analysis, Volume 115, 10 November 2015, Pages 36–38.

Authors: Kinga Gorlowska, Joanna Gorlowska, Robert Skibiński, Łukasz Komsta

Summary: Ten homoeopathic remedies commercially available (each in three dilutions) as sugar granules, where half of them were of organic (and half inorganic) origin were subjected to solid-state infrared spectroscopy, both in middle infrared (attenuated total reflection-Fourier transform infrared) and near infrared range. Measurements were repeated 6 times (6 days, each sample was measured once in the same day, samples were measured in random order). The obtained spectra was subjected to unsupervised (principal component analysis) and supervised (partial least squares discriminant analysis) chemometric techniques to check any visible differences in spectral data between homoeopathic remedies, including also feature selection approaches. It can be concluded that the only one information encoded in this dataset is the atmospheric drift of spectra between consecutive measurement days. This proves that Homoeopathy is not “infrared visible” in the case of proper experimental design. These results can be useful in further investigations of possible mechanisms of the action of Homoeopathy (if they exist).

Source: <http://www.sciencedirect.com/science/article/pii/S0731708515300455>

POLYCRYSTALLINE STRUCTURES FORMED IN EVAPORATING DROPLETS AS A PARAMETER TO TEST THE ACTION OF ZINCUM METALLICUM 30C IN A WHEAT SEED MODEL

Journal reference: Homoeopathy, Available online 12 November 2015.

Authors: Maria Olga Kokornaczyk, Stephan Baumgartner, Lucietta Bett

Summary: Polycrystalline structures formed inside evaporating droplets of different biological fluids have been shown to be sensitive toward various influences, including ultra-high dilutions, representing so a new approach that is potentially useful for basic research in Homoeopathy. In the present study, we tested on a wheat seed model *Zincum metallicum* 30C efficacy versus *Lactose* 30C and water. Stressed and nonstressed wheat seeds were watered with the three treatments. Seed-leakage droplets were evaporated and the polycrystalline structures formed inside the droplet residues were analyzed for their local connected fractal dimensions (LCFDs) (a measure of complexity) using the software (ImageJ is a public domain, Java-based image processing program developed at the National Institutes of Health). We have found significant differences in LCFD values of polycrystalline structures obtained from stressed seeds following the treatments ($P < 0.0001$); *Zincum metallicum* 30C lowered the structures' complexity compared to lactose 30C and water. In nonstressed seeds, no significant differences were found. The droplet evaporation method might represent a potentially useful tool in basic research in Homoeopathy. Furthermore, our results suggest a sensitization of the stressed model toward the treatment action, which is conforming to previous findings.

Source: <http://www.sciencedirect.com/science/article/pii/S1475491615000806>

A FEASIBILITY PILOT TRIAL OF INDIVIDUALIZED HOMOEOPATHIC TREATMENT OF FATIGUE IN CHILDREN RECEIVING CHEMOTHERAPY

Journal reference: Integrative Cancer Therapies, 2015 November 15, pii: 1534735415617023.

Authors: Brulé D, Gillmeister B, Lee M, Alexander S, Gassas A, Hendershot E, Zupanec S, Dupuis L, Sung L

Summary: Fatigue is a major problem in children with cancer. The objective was to examine the feasibility of performing a clinical trial of homoeopathic treatment for fatigue in children receiving chemotherapy. This was a single-institution, open-label, pilot study. Children 2–18-year-old, diagnosed with cancer, and receiving chemotherapy were eligible. Participants were given individualized homoeopathic treatment for a maximum of 14 days. In-home or clinical assessments were conducted up

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to 3 times weekly. Feasibility was defined as the ability to recruit and administer Homoeopathy to 10 participants within 1 year. Fatigue was measured using the Symptom Distress Scale daily and the PedsQL Multidimensional Fatigue Module weekly. Between April 2012 and April 2014, 155 potential participants were identified. There were 45 eligible and contacted patients; 36 declined participation, 30 because they were not interested; 9 agreed to participate, but one participant withdrew prior to treatment initiation. Median length of homoeopathic treatment was 10.5 (range = 6–14) days. All parents found homoeopathic treatment to be easy or very easy to follow. Trials of individualized Homoeopathy for fatigue reduction in pediatric cancer are not feasible in this context; lack of interest was a primary reason. Alternative approaches to evaluate Homoeopathy efficacy are needed.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/26574487>

AMPHIBIANS AND ULTRA-HIGH DILUTED THYROXINE: FURTHER EXPERIMENTS AND RE-ANALYSIS OF DATA

Journal reference: Homoeopathy Volume 104, Issue 4, October 2015, Pages 250-256, Available online 21 November 2015.

Authors: Peter Christian Endler, Waltraud Scherer-Pongratz, Bernhard Harrer, Gerhard Lingg, Harald Lothaller

Summary: A model of thyroxine and metamorphosis of highland amphibians is frequently mentioned as an example of experiments on extremely diluted substances in discussions around “Homoeopathy.” The model was scrutinized by reanalyzing the results of the initial researcher A and a second researcher B as well as of five external researchers C between 1990 and 2013. *Rana temporaria* larvae were taken from an alpine highland biotope. The test solution was thyroxine 10–30 (T30x), tetra-iodo-thyronine sodium pentahydrate diluted with pure water in 26 steps of 1:10, being agitated after each step. Analogously prepared water (W30x) was used for control. Tadpoles were observed from the 2-legged to the 4-legged stage. Experiments were performed in different years, at different times of season, and their duration could vary. Frequencies of 4-legged animals, effect sizes, and areas under the curves were calculated, and regression analyses were performed to investigate

possible correlations among year, season, duration, etc. Experiments were in line with animal protection guidelines. The total set of data A + B + C as well as subsets A (initial researcher, $N = 286 + 293$), B (second center, $965 + 965$), and C (5 external researchers, $690 + 690$) showed an effect of extremely diluted agitated thyroxine reverse to that known of molecular thyroxine, i.e., test values were below control by 11.4% for A, 9.5% for B, and 7.0% for C ($P < 0.001$ for each of the subsets). The effect size (Cohen's d) was >0.8 (large) for both A and B and 0.74 (medium) for C. Although a perfect reproducibility was not obtained, this paradoxical phenomenon was generally consistent in different observations. Correlations were found among details of laboratory handling, as well as environment temperature, and the size of the results.

Source: <http://www.sciencedirect.com/science/article/pii/S147549161500079X>

WHEAT AND ULTRA HIGH DILUTED SILVER NITRATE – FURTHER EXPERIMENTS AND RE-ANALYSIS OF DATA

Journal reference: Homoeopathy Volume 104, Issue 4, 246-249, Available online 23 November 2015.

Authors: Scherer-Pongratz, Waltraud *et al.*

Summary: Since 1926, an influence of a dilution of silver nitrate (24x) on the growth of coleoptiles of wheat seedlings was described. The aim of the study discussed here is the critical proof of the reliability of a test system which has been quoted as a basic model for the research on Homoeopathy for decades. Grains of winter wheat (*Triticum aestivum*) were observed under the influence of extremely diluted silver nitrate (10–23) prepared by stepwise dilution and agitation according to a protocol derived from Homoeopathy (“24x”). Analogously prepared water and/or inert water was used for control. Thirty experiments including 5000 + 5000 grains were performed by five researchers. Stalk lengths clearly indicate that development is enhanced by the probe silver nitrate 24x as compared to control. When the experiments 1989–1995 were pooled, means and standard deviation (SD) for silver nitrate 24x-groups were 42.3 ± 26.9 mm and for water control groups 34.7 ± 22.2 mm. Verum stalk length was 21.9% bigger than control (100%) ($P < 0.01$; $d = 0.31$, i.e., small). For the experiments 1998–2014, means and SD were

73.7 ± 21.7 mm and 60.5 ± 20.9 mm, respectively. Verum stalk length was 21.7% bigger than control (100%) ($P < 0.01$; $d = 0.62$, i.e. medium). From the results, one may hypothesize that the result is more marked in experiments showing an average mean of stalk length between ca. 50 and 90 mm in contrast to smaller or bigger mean lengths. The previous findings were confirmed by the results.

Source: <http://www.sciencedirect.com/science/article/pii/S1475491615000776>

UPDATE ON PRELIMINARY ELEMENTS OF A THEORY OF ULTRA-HIGH DILUTIONS

Journal reference: Homoeopathy, Volume 104, Issue 4, October 2015, Pages 337-342, Available online 23 November 2015.

Authors: Jurgen Schulte, Peter Christian Endler

Summary: The different mechanisms: (A) The interaction between the molecular mother substance and the solvent water or ethanol. (B) The storage of molecule-specific information in the solvent. (C) The physiological basis of the sensitivity of the living organism toward an ultra-high dilution (UHD). (D) The mechanism of the interaction of the test dilution with the organism are largely unknown. Several ideas have been postulated, and experiments to test them were carried out in physics and biology. The authors revisited a 1994 contribution on “preliminary elements of a theory on UHDs” and updated it with regard to more recent literature and research findings. Although the experimental basis can still be questioned in most cases, remarkable fundamental observations have been made to explain the effects of UHDs. For some topics in question, it appears that information specific properties of the diluted substance to be transferred is stored by means of electromagnetic fields. The interaction between the UHD and the organism seems to be electromagnetic in nature. The transmission of information from (bio-) molecules to the UHD is of special interest. Again, electromagnetic actions and vector potential fields appear to be implicated. The mechanisms of information storage and transfer in UHDs are far from fully understood, but progress has been made at experimental and theoretical levels.

Source: <http://www.sciencedirect.com/science/article/pii/S1475491615000788>

REPLICATIONS OF FUNDAMENTAL RESEARCH MODELS IN ULTRA-HIGH DILUTIONS 1994 AND 2015: UPDATE ON A BIBLIOMETRIC STUDY

Journal Reference: Homoeopathy Volume 104, Issue 4, October 2015, Pages 234–245. Available online 25 November 2015.

Authors: Peter Christian Endler, Paolo Bellavite, Leoni Bonamin, Tim Jäger, SintiaMazon

Summary: This paper focuses exclusively on experimental models with ultra-high dilutions (i.e., beyond 10–23) that have been submitted to replication scrutiny. It updates previous surveys, considers suggestions made by the research community, and compares the state of replication in 1994 with that in 2015. Following literature research, biochemical, immunological, botanical, cell biological, and zoological studies on ultra-high dilutions (potencies) were included. Reports were grouped into initial studies, laboratory-internal, multicenter, and external replications. Repetition could yield either comparable or zero or opposite results. The null-hypothesis was that test and control groups would not be distinguishable (zero effect). A total of 126 studies were found. From these, 28 were initial studies. When all 98 replicative studies were considered, 70.4% (i.e. 69) reported a result comparable to that of the initial study, 20.4% (20) zero effect and 9.2% (9) an opposite result. Both for the studies until 1994 and the studies 1995–2015, the null-hypothesis (dominance of zero results) should be rejected. Furthermore, the odds of finding a comparable result are generally higher than of finding an opposite result. Although this is true for all the three types of replication studies, the fraction of comparable studies diminishes from laboratory-internal (total 82.9%) to multicenter (total 75%) to external (total 48.3%), while the fraction of opposite results was 4.9%, 10.7%, and 13.8%. Furthermore, it became obvious that the probability of an external replication producing comparable results is bigger for models that had already been further scrutinized by the initial researchers. We found 28 experimental models which underwent replication. In total, 24 models were replicated with comparable results, 12 models with zero effect, and six models with opposite results. Five models were externally reproduced with comparable results. We encourage further replications of studies to learn more about the model systems used.

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Source: <http://www.sciencedirect.com/science/article/pii/S1475491615000818>

INTEGRATIVE MANAGEMENT OF PEDIATRIC TONSILLOPHARYNGITIS: AN INTERNATIONAL SURVEY

Journal reference: Complementary Therapies in Clinical Practice, Available online 2 December 2015.

Authors: Silvia Salatino, Alastair Gray

Summary: This survey investigated the management of pediatric tonsillopharyngitis, with a focus on natural remedies. One hundred and thirty-eight pediatricians, general practitioners, and ear-nose-throat specialists in seven countries were surveyed by a dedicated questionnaire. A rapid strep test (RST) to diagnose acute tonsillopharyngitis was routinely used by 56/138 participants (41%). The use of RST allowed 200 diagnosis/year compared with 125 diagnoses/year for clinicians who did not use this tool. Homoeopathy remedies were prescribed as a supportive therapy by 62% of participants (85/138). Among different homoeopathic remedies, SilAtro-5-90 was the most frequently prescribed (53/138, 38%). In the chronic setting, Homoeopathy was suggested as a supportive therapy by 82/138 participants (59%), phytotherapy by 39 (28%), and vitamins/nutritional supplementation

by 51 (37%). The management of tonsillopharyngitis in pediatric patients still remains empiric. Natural remedies and Homoeopathy, in particular, are used in the management of upper respiratory tract infections. An integrative approach to these infections may help reduce excessive antibiotic prescription.

Source: <http://www.sciencedirect.com/science/article/pii/S1744388115300165>

WHEN LACK OF EVIDENCE IS EVIDENCE OF LACK

Journal reference: J Bioeth Inq. 2015 Dec 2.

Author: Pickering N

Summary: In their recent article, "A Gentle Ethical Defence of Homoeopathy," Levy, Gadd, Kerridge, and Komesaroff use the claim that "lack of evidence is not equivalent to evidence of lack" as a component of their ethical defense of Homoeopathy. In response, this article argues that they cannot use this claim to shore up their ethical arguments. This is because it is false.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/26631232>

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