

# 4<sup>th</sup> HRI International Homeopathy Research Conference 14-16 June



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LONDON 2019



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# Welcome

We would like to extend a warm welcome to the Homeopathy Research Institute's 4<sup>th</sup> International Homeopathy Research Conference. Following the success of previous conferences in Barcelona, Rome and Malta, we are proud to once again be hosting a world-class homeopathy research event, this time in the heart of the city of London.

As the topic of homeopathy continues to stimulate intense debate in many parts of the world, research is playing an ever more vital role in the development of homeopathy as an academic field and medical discipline.

Against this backdrop, HRI conferences provide an essential focal point for the global homeopathy research community. Every two years we bring together world experts, new researchers, practitioners, students and representatives of the industry for a unique experience within the conference calendar – a two and a half day event dedicated solely to research. This provides an unrivalled forum for the sharing of ideas and the creation of international scientific collaborations.

HRI London 2019 is our biggest conference yet, with over 330 delegates from around the world. For this landmark event celebrating HRI's 10th Anniversary, 75 researchers from 26 countries will be presenting their work. Continuing our ongoing theme of 'Cutting Edge Research in Homeopathy' has enabled us to create a diverse programme, giving attendees a snapshot of the latest developments across various sub-fields of homeopathy research, including:

- Clinical research
- Fundamental research
- Plant and cell-based studies
- Veterinary research

It only remains to invite you to join us in making the most of this opportunity to share scientific knowledge, and form closer links, with colleagues from around the world.



## HRI Management Team



**Dr Alexander Tournier**  
HRI Executive Director  
*BSc DIC MAST Cantab PhD*  
*LCHE RSHom*



**Rachel Roberts**  
HRI Chief Executive  
*BSc(Hons) MCH FSHom*  
*FFHom(Hon)*

## **HRI London 2019 – Key facts**

- 132 abstracts submitted
- 34 oral presentations and 48 poster presentations
- Presenters from 26 countries
- Over 330 delegates from 27 countries

The 'HRI London 2019' event has been organised by our Conference Organising Committee, with additional input from the Conference Advisory Committee and HRI's Scientific Advisory Committee.

### **Conference organising committee**

Rachel Roberts (Chair) – Chief Executive, Homeopathy Research Institute  
Simon Wilkinson-Blake – Event Manager, Homeopathy Research Institute  
Chris Connolly – Communications Officer, Homeopathy Research Institute  
Amy Hurlstone – Event Organiser, Homeopathy Research Institute  
Mani Norland – Principal, School of Homeopathy  
Dr Alexander Tournier – Executive Director, Homeopathy Research Institute

### **Conference advisory committee**

Prof Dr Carla Holandino – Associate Professor, Federal University of Rio de Janeiro, Brazil  
Dr Raj Manchanda – Director General, Central Council for Research in Homeopathy, India  
Dr Hélène Renoux – President, European Committee for Homeopathy, France  
Michael Smith – Chair, European Central Council of Homeopaths, Ireland  
Cristal Sumner – Chief Executive, British Homeopathic Association, UK

## About HRI

The Homeopathy Research Institute (HRI) is an innovative charity, created to address the need for high quality scientific evidence in homeopathy. We use our resources and expertise to foster new projects and to improve the quality of research being carried out in the field.

HRI is dedicated to the evaluation of homeopathy using the most rigorous scientific methods available and communicating the results of such work beyond the usual academic circles. As well as providing academic input to initiatives around the world, we are currently funding four active research projects. These range from a pragmatic randomised controlled trial assessing homeopathy for the treatment of ADHD, to a physics research programme investigating the mechanism of action of homeopathic medicines.

The Institute's day-to-day operations and management are the responsibility of Rachel Roberts (Chief Executive) and Alexander Tournier (Executive Director), guided by our Board of Trustees. The HRI Scientific Advisory Committee (SAC), a team of independent world experts in homeopathy and complementary and alternative medicine research, provide the strong scientific foundations essential to our work.

**For more information visit [www.HRI-Research.org](http://www.HRI-Research.org)**

## HRI Core Team



**Simon Wilkinson-Blake**  
Events Manager



**Chris Connolly**  
Communications Officer



**Angelina Mosley**  
*BSc(Hons) Cantab MSc PhD LCHE*  
Project Co-ordinator & Research  
Advisor



**Amy Hurlstone**  
Events Officer

## HRI Scientific Advisory Committee



**Dr Stephan Baumgartner PhD**  
*Lecturer, Institute of Complementary & Integrative Medicine, Univ. of Bern, Switzerland*  
*Senior Researcher, Institute of Integrative Medicine, Univ. of Witten/Herdecke, Germany*



**Prof Dr Iris Bell MD PhD**  
*Professor Emeritus, Department of Family and Community Medicine*  
*University of Arizona College of Medicine, USA*



**Prof Dr Paolo Bellavite MD**  
*Teaching Fellow of General Pathology*  
*School of Medicine, Verona University, Italy*



**Prof Dr P. Christian Endler PrD PhD**  
*Head and Scientific Director*  
*Interuniversity College for Health and Development, Graz, Austria*



**Dr Jennifer Jacobs MD MPH**  
*Clinical Assistant Professor in Epidemiology*  
*School of Public Health and Community Medicine, University of Washington, USA*



**Dr Robert Mathie PhD**  
*Independent Researcher, UK*



**Dr Clare Relton BA(Hons) FSHom MSc PhD**  
*Senior Lecturer in Clinical Trials, Pragmatic Clinical Trials Unit (PCTU)*  
*Centre for Primary Care and Public Health, Queen Mary University, London UK*



**Dr Elizabeth Thompson BAOxon MBBS MRCP DM(Oxon) FFHom**  
*CEO and Lead Clinician*  
*National Centre for Integrative Medicine, Bristol, UK*

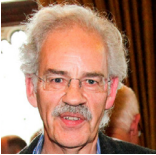


**Dr Alexander Tournier BSc DIC MAST Cantab PhD LCHE RSHom**  
*HRI Executive Director and Independent Researcher, Germany*



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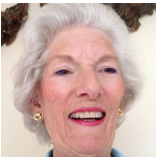
The entire team at HRI wish to express our gratitude for the financial support we have received from our patrons, past and present, who have provided significant funds to drive HRI activities. Without their help, we would not have been able to achieve all that we have so far, or be able to continue the work which means so much to us all.



## **Charles Wansbrough**

*“I am interested in the scientific paradigm shift which homeopathy may represent. We trust modern medicine and technology and distrust homeopathy because it refuses to abide by present scientific models of reality. In order to overcome such inherent prejudice we need to fund institutes that dare to question the widely accepted scientific world view, and explore new models that expand our understanding.*

*Homeopathy is far too well established and valued for it to be banished entirely, but until its mechanism of action is understood it will continue to court controversy. The lack of a coherent model to explain how it works restricts the impact homeopathy can have on world healthcare, despite the powerful perspectives at its heart, such as mind/body correlations and new ideas about the properties of matter. It is therefore essential that we fund institutes such as this which encourage scientists in their efforts to answer the key question – how does homeopathy work?”*



## **Lady Mary Holmes**

*“Having first been treated homeopathically at the age of six or seven, I am well aware of its great benefits. Over the last thirty years there have been several times when I have been under great stress which has adversely affected my general health and wellbeing. Homeopathy has been invaluable in helping me through these episodes – with no side effects! That is one of the great advantages of homeopathy, there are no side effects from the medication yet it is very much to the point. Now in my mid-seventies, I lead an active life and continue to benefit greatly from homeopathy which helps to keep me in good health.”*



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# Programme

## Registration and Welcome

THURSDAY 13 JUNE 2019

- 18:00 – 20:00**                      **Registration** – Conference centre, Mezzanine level, Tower Hotel
- 18:30 – 20:00**                      **Welcome Drinks** – The Lawn, Tower Hotel

## Day 1 – Cutting Edge Research in Homeopathy

FRIDAY 14 JUNE 2019

- 08.00 — 08:50**                      **Registration** – Conference centre, Mezzanine level, Tower Hotel

### Full Day Plenary Sessions – Tower Suite 2 + 3

- 09:00 — 09:25**                      **Opening Ceremony**  
Opening remarks: **David Tredinnick**, Member of Parliament  
Chairman All-Party Parliamentary Group for Integrated Healthcare
- 09:25 — 10:30**                      **Does homeopathy get a fair hearing?**  
**Chair: Dr Elizabeth Thompson**  
**Prof ROBERT HAHN**, Sweden. *How homeopathy is treated in meta-analyses*  
**Rachel Roberts**, UK. *Challenging inaccurate, influential literature on homeopathy*
- 10:30 — 11:00                      Coffee
- 11:00 — 12:30**                      **Mixed Session 1**  
**Chair: Prof Robert Hahn**  
**Dr ELIZABETH THOMPSON**, UK. *Cutting Edge Research – what are the priorities for clinical research and evaluation for homeopathy to become a valued part of the Integrated Medicine Model?*  
**Dr Alexander Tournier**, Germany. *Physicochemical investigations of homeopathic preparations: a systematic review*  
**Dr Robert Mathie**, UK. *The high-quality randomised controlled trials of homeopathic treatment, as defined by systematic review and meta-analysis*
- 12:30 — 14:00                      Buffet Lunch

14:00 — 15:20

**Mixed Session 2**

**Chair: Dr Klaus von Ammon**

**Prof VLADIMIR VOEIKOV**, Russia. *Disperse and dissipative nature of aqueous systems – a possible foundation of homeopathy?*

**Dr Stephan Baumgartner & Sandra Würtenberger**, Germany. *Effects of homeopathic preparations of Mercurius corrosivus on the growth rate of mercury-stressed duckweed Lemna gibba L. as a function of different stress levels*

**Dr Jean-Lionel Bagot & Dr Ingrid Theunissen**, France. *Homeopathy and expert consensus recommendations – unlikely bedfellows? New research in homeopathy and expert consensus recommendations in oncological supportive care*

15:20 — 15:50

Coffee

15:50 — 16:50

**Poster Talks**

**Chair: Dr Robbert van Haselen**

**Dr Francisco Eizayaga**, Argentina. *Homeopathic treatment of psoriasis, a case series*

**Dr Amjith Naisam**, India. *Homoeopathic management of tomato leaf curl virus using Psorinum*

**Dr Carlo Maria Rezzani**, Italy. *Clifical: First result of Carcinosinum patient cases*

**Dr Leena Bagadia**, India. *A randomised control trial using individualised homeopathic treatment for modifying anger and thereby reducing blood pressure in patients with essential hypertension against standard care treatment*

**Dr Domingos Jose Vaz Do Cabo**, UK. *Proposal homeopathic treatment guidelines for patients with Hepatitis C*

**Prof Elizabeth Macera**, Swaziland. *Symptom severity and functional status in patients with joint pain, back pain, headache, and cough: a 10-year retrospective analysis of The Swaziland Homeopathy Project*

17:00 — 19:00

**Poster Session & Drinks Reception – Tower Suite 1**

19:30

**River Thames Dinner Cruise – St. Katharine Pier**

**Morning Plenary Sessions – Tower Suite 2 + 3****09:00 — 10:30****Clinical Research 1****Chair: Dr Michael Teut****Dr CLARE RELTON**, UK. *Randomised Controlled Trials***Dr Raj Manchanda**, India. *Effectiveness of homeopathic medicines as add-on to institutional management protocol for acute encephalitis syndrome in children: an open-label randomized placebo-controlled trial***Homeopathy Research Institute**. *10 years in 10 minutes*

10:30 – 11:00

Coffee

**11:00 — 12:20****Agrohomeopathy & Veterinary Research****Chair: Dr Stephan Baumgartner****Prof LEONI BONAMIN**, Brazil. *Homeopathy and environmental challenges***Dr Cidéli Coelho**, Brazil. *Use of Papaver somniferum and Arnica montana in ultradiluted form to assist in anesthesia recovery and as an analgesia for dogs that underwent an ovariectomy***Franzcinne Narita**, Brazil. *Control of liver enzymes in Magellanic penguins (Spheniscus magellanicus) through ultradiluted medicine*

12:30 — 14:00

Buffet Lunch

**Afternoon Parallel Sessions****14:00 — 15:20****Cell & Plant Based Research – Tower Suite 1****Chair: Prof Dr Carla Holandino****Dr Marta Marzotto**, Italy. *In vitro testing homeopathic drugs on bronchial cells***Dr Oskan Tasinov**, Bulgaria. *Ferrum phosphoricum D12 treatment affects J774A.1 and 3T3-L1 cells proliferation and gene expression of inflammation, oxidative stress and iron metabolism related proteins***Susann Buchheim-Schmidt**, Germany. *In vitro evaluation of the anti-pathogenic activity of Okoubaka aubrevillei mother tincture/ 3X in the human gastrointestinal tract using the SHIME technology platform***Annekathrin Ücker**, Germany. *Systematic review of plant-based homeopathic basic research: An update*

14:00 — 15:20

**Clinical Research 2 – Tower Suite 2 + 3**

**Chair: Dr Petra Klement**

**Dr José Eizayaga**, Argentina. *Prevalence and likelihood ratio of 6 common objective homeopathic signs in patients responding to muriatic medicines. Multicentre prospective observational study*

**Dr Russell Malcolm**, UK. *Demographic review of outcomes in an NHS Homeopathy clinic*

**Dr Anil Khurana**, India. *An assessment of a public health initiative of homeopathy for primary teething*

**Aaron Ka Lun To**, Hong Kong. *Safety and efficacy of individualised homeopathic treatment in sciatica – a phase I pre-post comparison study*

15:20 — 15:50

Coffee

15:50 — 16:50

**Fundamental & Basic Research – Tower Suite 1**

**Chair: Prof Leoni Bonamin**

**Dr Steven Cartwright**, UK. *Immobilisation of solvatochromic dyes on transparent membranes: a simple and effective method for investigating the physics of homeopathic potencies*

**Dr Maria Olga Kokornaczyk**, Switzerland. *Homeopathic preparations in the low potency range studied by means of pattern formation in evaporating droplets: influence of succussion stroke number*

**Prof Shahram Shahabi**, USA. *Subcutaneous isopathic immunotherapy of allergic asthma in a mouse model of allergic asthma*

15:50 — 16:50

**Clinical Research 3 – Tower Suite 2 + 3**

**Chair: Dr Robert Mathie**

**Dr Katharina Gaertner**, Switzerland. *Outcome-specific review of controlled clinical studies with homeopathic medicines*

**Dr Roja Varanasi**, India. *Effects of individualized homeopathic intervention in stage I essential hypertension: a single blind randomized, placebo controlled pilot trial*

**Dr Elio Rossi**, Italy. *Homeopathic treatment of atopic diseases: short and long-term results in a cohort of 563 atopic adult patients*

19.15 – 20.00

**Gala Drinks Reception – White Tower, Tower of London**

20:00 – 22.05

**Gala Dinner – New Armouries, Tower of London**

21:30 – 01.00

**HRI 10th Birthday Party – Gallery, Tower Hotel**

## Morning Plenary Sessions – Tower Suite 2 + 3

09:20 — 10:40

**Basic Research & Oncology****Chair: Dr Raj Manchanda****Prof Christian Endler & Dr Corinne Kraus**, Austria.*Further data on wheat germination and silver nitrate (10e-3 to 10e-25): low and medium dilutions***Paul Doesburg**, Netherlands. *Replication and meta-analysis of specific effects of homeopathically prepared tin (Stannum metallicum 30x) with a cress seedling, CuCl<sub>2</sub> crystallisation 'fingerprint' approach***Dr Cristina Noberasco**, Italy. *Severity of radiodermatitis in breast cancer patients with preventive treatment with homeopathic/integrative protocol compared with a control group***Dr Yakov Freed**, Israel. *Homeopathic treatment ameliorates fatigue and attentional deterioration in radiotherapy breast cancer patients*

10:40 – 11:10

Coffee

11:10 – 12.30

**Clinical Research 4****Chair: Dr Clare Relton****Dr Debadatta Nayak**, India. *Effect of adjuvant homeopathy with usual care in management of thrombocytopenia due to dengue – a comparative cohort study***Dr Gualberto Diaz-Saez**, Spain. *A homeopathic medication can improve upper respiratory tract infections in COPD patients: EPOXILO cohorts study***Dr MICHAEL TEUT**, Germany. *Rethinking homeopathic research methodology: why comparative effectiveness research matters*

12:30 – 12.40

**Closing Ceremony**

12:40 – 14:00

Buffet Lunch

## Keynote Speakers



**Prof LEONI BONAMIN**  
Professor, Universidade Paulista  
UNIP, Brazil

Prof Bonamin works at the Graduating Program of Environmental and Experimental Pathology in the University Paulista – UNIP and has experience in experimental pathology. She has been undertaking research in homeopathy and high dilutions, using in vitro and physico-chemical methods since 1997. She is a past President of GIRI, Deputy Editor of “Homeopathy” and a member of the editorial board of the International Journal of High Dilution Research (IJHDR).

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**Prof ROBERT HAHN**  
Research Director  
Södertälje, Sweden

Professor Robert Hahn worked as a full-time clinical anaesthetist from 1979-1993 and then turned to academia. He has held several university positions as associate professor and professor. Prof Hahn’s favourite topics have been physiology and monitoring of fluid overload in transurethral surgery and kinetic modelling of infusion fluids. His current research also includes the development and evaluation of clinically useful methods of monitoring fluid therapy and the detection of preoperative dehydration.

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**Prof VLADIMIR VOEIKOV**  
Senior Lecturer  
Lomonosov Moscow State University

Professor Vladimir Voeikov is renowned in the field of physical and chemical properties of aqueous systems providing their key role in vital processes in living systems, evaluation of the functions of water and water-borne reactive oxygen species in bioenergetics. Prof Voeikov is currently full professor and Vice-Chairman of the Chair of Biorganic Chemistry, Faculty of Biology at Moscow State University.





**Dr CLARE RELTON**

Senior Lecturer  
Queen Mary University, London

Dr Clare Relton worked as a homeopath from 1994-2013. From 2003-2008 she trained as a health researcher at the University of Sheffield, funded by the Department of Health. During her training Dr Relton discovered a fascination for randomised controlled trials. She is currently a senior lecturer in clinical trials at Queen Mary University London, where she specialises in innovation in practical randomised trial design.

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**Dr MICHAEL TEUT**

Medicine Researcher  
Institute for Social Medicine, Epidemiology and Health Economy at  
Charité Universitätsmedizin, Berlin

As a family physician and specialist for Integrative Medicine, Dr Michael Teut works at the Charité Outpatient Department for Integrative Medicine. His research interests include randomized controlled studies, outcome research, qualitative studies in the fields of geriatrics, homeopathy, European traditional medicine and hypnosis.

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**Dr ELIZABETH THOMPSON**

Chief Executive Officer & Lead Clinician  
National Centre for Integrative Medicine, UK

Dr Elizabeth Thompson trained in medicine at Oxford University and completed her clinical training at Guy's Hospital in London. Dr Thompson is a Holistic Doctor and CEO of the new National Centre for Integrative Medicine (NCIM), a Community Interest Company in Bristol. She holds a vision for a health service based around creating health and resilience and reducing dependency on drugs and surgical interventions.

## Partner Events



### **33rd GIRI Symposium**

Wednesday 12 June, 09:00 – 13:30  
Britannia Suite, Tower Hotel

The 33rd GIRI symposium was scheduled to coincide with HRI London 2019. The symposium features a workshop on mechanisms of action of high dilution systems, where biological, medical, environmental and physico-chemical approaches to understand the homeopathic systems will be explored.

This workshop is led by Prof Leoni Bonamin, Dr Alexander Tournier and Dr Stephan Baumgartner. The remainder of the symposium showcases a series of oral presentations and poster presentations of selected abstracts.

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### **Memorial Service for Dr Peter Fisher**

Wednesday 12 June, 15.30  
St Martin in the Fields, Trafalgar Square, London

A public memorial service held at St Martin in the Fields to celebrate the life of Dr Peter Fisher. This service is open to all.

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### **WissHom Workshop**

*Guidelines and Recommendations for High Quality Clinical Research in Homeopathy*

Thursday 13 June, 09.00 – 17.45  
Britannia Suite, Tower Hotel

This workshop is by invitation only. Parallel to the workshop, an expert panel discusses the choice of quality assessment tools for reviews with respect to potential development of the available literature into meta-analyses and with a view to developing clinical practice guidelines. This project is supported by the Homöopathie-Stiftung and the Robert Bosch Stiftung.

## Exhibitors



DHU is an affiliated company of the Dr Willmar Schwabe Corporate Group, owned by the Schwabe family since its creation and managed today by the 5th generation.

In 1866, Dr Willmar Schwabe established the Homöopathische Central Officin Dr Willmar Schwabe (Central Homeopathic Dispensary). 150 years of experience in homeopathic manufacturing make us a leader in expertise and quality.

DHU's production processes comply with GMP (Good Manufacturing Practice) guidelines and the manufacturing processes described in the German Homeopathic Pharmacopeia (HAB). In 1872, Dr Willmar Schwabe published his Pharmacopoea Homoeopathica Polyglottica as the first recognised compendium of quality specifications for homeopathic medicines. It became the predecessor of the current German Homeopathic Pharmacopeia and is progressively taken over into the European Pharmacopeia (Ph. Eur.).

At DHU, everything from the seed to the final product comes from one source. We have been cultivating our own medicinal plants for 40 years now. Our Terra Medica site is the largest of its kind in Europe, ecologically certified and sustainable.

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The School of Homeopathy has provided homeopathic education from beginner to practitioner level to thousands of students across the world since 1981. The School is the oldest and longest running homeopathy school in the UK and for many years has been recognised for clarity of vision, precision in homeopathic prescribing, and professionalism.

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Each student is given access to our award winning Online Learning System where they watch movie lectures from all our teachers and patrons, download course material and handouts, upload assignments, engage with other students, complete quizzes, instant chat and more.

It is our passion for advancing and spreading homeopathy to the very highest level that has given our programmes a leading edge and helped to create a national and international benchmark.



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Vithoukaskompass is a comprehensive online toolbox organized to support effective practice and help elevate the success rate of any homeopath, from beginner to master.

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# Charitable and not-for-profit organisations



## **The British Homeopathic Association**

The British Homeopathic Association (BHA) is the main public & patient focussed homeopathic charity in the UK. Its vision is that every person in the UK understands the potential for homeopathy and is able to access high quality homeopathic care from registered healthcare professionals. Founded in 1902, it ensures public access to homeopathy through provision of information, education, research and direct access to care. To facilitate its aims, the Association funds and operates a growing number of charitable clinics throughout the UK. The BHA is also trustee of the Hahnemann House Trust which has a large collection of Hahnemann's artefacts.



## **Groupe International de Recherche sur l'Infenitésimal (GIRI)**

The International Research Group on Very Low Doses and High Dilution Effects (GIRI) is a professional scientific society unifying researchers working in different fields of science and coming from all over the world, who are engaged in research on very low doses and high dilutions. GIRI's interest is directed towards both the basic and the clinical research on homeopathy.

The group organizes yearly meetings on work-shop basis providing to its members and associated scientists the opportunity to present their research, exchange experiences, make new contacts, and develop international joint-research projects.

The proceedings of GIRI meetings get published in a peer-reviewed open-access journal (International Journal of High Dilution Research; IJHDR) hosted by GIRI.

The group offers different membership options: regular and student membership (free options), and institutional membership (1'000 Euro/year).



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# Oral Presentations

**Dr Jean-Lionel Bagot and Dr Ingrid Theunissen**

Fri 14 June, 15:00

## **Homeopathy and expert consensus recommendations – unlikely bedfellows? New research in homeopathy and expert consensus recommendations in oncological supportive care**

Jean-Lionel Bagot<sup>1,2,3</sup>, Jean-Claude Karp<sup>4</sup>, Christiane Messerschmitt<sup>5</sup>, Véronique Lavallée<sup>6</sup>, Ingrid Theunissen<sup>7</sup>, Jean-Philippe Wagner<sup>8</sup>

<sup>1</sup>St. Vincent Hospital Group, Dept of Integrative Medicine, Saint Anne Hospital, Strasbourg

<sup>2</sup>Robertsau Radiotherapy Center, 184 Route de la Wantzenau, 67000 Strasbourg

<sup>3</sup>Main General Practice Surgery, 5 Place des Halles, 67000 Strasbourg

<sup>4</sup>Troyes Hospital Centre, Dept of Oncology-Radiotherapy, 101 Avenue Anatole France; 10000 Troyes

<sup>5</sup>Pharmacy des Grisettes, 100 Rambla des Calissons, 34070 Montpellier

<sup>6</sup>General Practice Surgery, Résidence Pasteur, Allée de l'Europe 33185, Le Haillan

<sup>7</sup>Breast unit, City-Clinic Louise Avenue Louise 235B, 1050 Bruxelles

<sup>8</sup>Andrée Dutreix Cancer Institute, 891 Avenue de Rosendaël, 59240 Dunkerque

**Correspondence:** Dr Jean-Lionel Bagot

St. Vincent Hospital Group, Department of Integrative Medicine, Saint Anne Hospital, Rue Philippe Thys, 67000 Strasbourg, France. Robertsau Radiotherapy Center 184 Route de la Wantzenau, 67000 Strasbourg, Main General Practice Surgery, 5 Place des Halles, 67000 Strasbourg. France.

Email: jlbagot@orange.fr

**Context:** Homeopathy is the integrative medicine most widely used by patients with cancer in France. However, there were as yet no supportive care guidelines for this therapy. The International Homeopathic Society of Supportive Care in Oncology ([www.shisso-info.com](http://www.shisso-info.com)) aimed to make recommendations in order to propose to all health professionals concerned with supportive care, a homeopathic prescription tool respecting the principles of similitude, individualisation and infinitesimality.

**Method:** We used the method of expert consensus proposed by the French High Health Authority (HAS). It is a consensus method for writing a small number of concise, unambiguous recommendations, answering the questions asked. This method is proposed when there is a paucity of scientific argument on the subject, which is the case here.

Seven steering groups studied respectively cancer disclosure, surgery, chemotherapy, targeted therapies, radiation therapy, hormone therapy and the post-cancer period. These recommendations were presented during the plenary session which brought together some fifty physicians, pharmacists, oncologists or surgeons specializing in homeopathic supportive care.

**Results:** Thirty recommendations were discussed, amended and unanimously adopted or not during the plenary session. Although some side effects, such as fatigue for example, are common to every patient, because the effects of cancer medication are stronger than an individual's reaction. Certain situations, however, require an individualised homeopathic consultation.

**Conclusion:** These recommendations are part of a program to improve good practice in supportive care. They are indicative and do not replace in any way an individualised homeopathic consultation. They are very safe to use as there are no medicine interactions or no significant side effects of homeopathic medicine. This is the first time that such an approach has been implemented in homeopathic circles. The same methodology could be used for other pathologies. Two years' hindsight has shown that they are indeed comfortable bedfellows!

**Keywords:** Expert consensus, oncological supportive care, homeopathy



## Homeopathy and environmental challenges

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Homeopathy is growing in areas beyond human medicine because of its capacity to act on all living systems. In agriculture and cattle farms, especially those oriented to organic production, homeopathy has been a very useful tool and works in harmony with the concept of sustainability, including its application in biodynamic agriculture and agro-forestry.

In Brazil, more than 15 companies are established to manufacture homeopathic products for animal and vegetal use. The use of homeopathy has been present in zoos and protective organizations for wild animals, mainly in epidemic situations. This new point of view points towards a putative ecological role of homeopathy.

In a recent study, we verified the protective role of isotherapy in *Artemia salina* exposed to pesticides and heavy metals, highlighting that this crustacean is a known experimental model of eco-toxicology. The treatment of *Artemia* cysts exposed to glyphosate and lead with the respective isotherapeutic, induced better adaptation of these animals to the harmful medium, reducing the level of eggs outbreak and the incidence of malformations in the newborn nauplii.

Other parameters like motility and general activity also improved after the treatment. Physico-chemical analyses of the water are still in progress, to provide some understanding about the mechanisms involved in this protection. In another set of experiments performed in vitro, the correspondence between changes in the dipole moment of homeopathic medicines and of the culture medium of responsive single cells could also be observed, using solvatochromic dyes. This suggests that electric resonance could be a possible mechanism involved in the homeopathic treatment of aqueous environment.

Under this hypothesis, another field study was set up, using the same method. The treatment of a natural water source with *Phos* 30cH produced significant changes of the dipole moment in water samples harvested from different and distant locales of the same environment. That was similar to those effects observed in the medicine itself. The samples were taken before and in different times after water treatment. The same signals could be measured, even in distant points of the water flow, up to 72 hours after the immersion of *Phos* 30cH into the source.

These studies show the importance to know how far the homeopathic signal can reach in nature, mainly in water, and unveils the putative role of homeopathy in recovering environmental disturbances.

**Keywords:** Environmental sciences, basic research, physico-chemical models, high dilutions technology

## In vitro evaluation of the anti-pathogenic activity of *Okoubaka aubrevillei* mother tincture/ 3X in the human gastrointestinal tract using the SHIME technology platform

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**Background/Aim:** *Okoubaka aubrevillei* (*Okou.*) is known in homeopathy for its action on the gastrointestinal tract, e.g. in gastroenteritis and traveler's diarrhea. Within a simulator of the Human Intestinal Microbial Ecosystem (SHIME) the modulating effect of *Okou.* on the activity of physiological human proximal colon microbiota and its preventive effect against gastrointestinal infections was evaluated.

**Methods:** Upon inoculation with fecal microbiota from a healthy donor, 4 parallel proximal colon compartments of the SHIME were treated either with *Okou.* mother tincture or 3X in therapeutic doses, blank and ethanol control for one week. Using the "Okoubaka-adapted" microbial community from SHIME, 48 hours "challenge tests" were performed with Enterotoxigenic *Escherichia coli* (ETEC) and *Salmonella enteritidis* in 4 different doses between 10<sup>3</sup>–10<sup>8</sup> CFU for ETEC and 10<sup>3</sup>–10<sup>6</sup> for *Salmonella*, considering the minimum infectious doses. Concentrations of the pathogens and short-chain fatty acids (SCFA) production were measured at 0, 24 and 48 h. The experiments were done in triplicate and normalized to ethanol control.

**Results:** Both *Okou.* mother tincture and 3X were capable of restricting the colonization of *Salmonella enteritidis* and ETEC at 3 of the 4 pathogen doses. A stronger antipathogenic effect was observed for the mother tincture, which included a reduction of 1.1 log-units of *Salmonella* (p<0.001) and 2.0 units of ETEC (p<0.001) after 24 h of incubation for the lowest pathogen dose.

Total SCFA levels remained unaffected, but propionate and butyrate slightly increased during the first 24 h and remained high during the 24 – 48 h time interval, accompanied with a decreased acetate production which indicates a "cross feeding" process from acetate to health-related butyrate.

**Conclusion:** An activating effect of the intestinal microbiome's resistance can be postulated for both, *Okou.* mother tincture and 3X.

**Keywords:** *Okoubaka*, microbiome, SHIME®, in vitro

**Immobilisation of solvatochromic dyes on transparent membranes; a simple and effective method for investigating the physics of homeopathic potencies**

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**Background and aims:** Solvatochromic dyes have demonstrated themselves to be effective detectors of homeopathic potencies. Current research is directed at the immobilisation of solvatochromic dyes onto transparent membranes in order to examine in detail the primary interaction between a range of different homeopathic medicines across potency scales.

**Methods:** It has been found that a number of solvatochromic dyes can be covalently immobilised onto cellulose membranes, thereby allowing a direct examination of the primary interaction between homeopathic potencies and molecular detectors. Immobilisation means that dye aggregation cannot occur and therefore a much clearer picture is beginning to emerge with respect to the kinetics and thermodynamics of potency-dye interactions.

**Results:** One surprising finding already emerging is that the interaction between dyes and potencies is hysteretic or S-shaped. This behaviour is characteristic of positive feed-back loops or auto-catalytic processes where a process self-strengthens over time before eventually reaching a maximum. Results suggest some kind of resonant interaction between potencies and dyes is taking place, the strength and development of which is dependent upon starting conditions and the electronic and structural features of the dye used.

Further findings indicate that potencies are not constant in their strength but fluctuate over time.

**Conclusions:** What the possible causes of both the hysteretic behaviour of potencies and the fluctuations in potency strength over time are and what they mean for homeopathy in general will be discussed, along with what these results may be telling us about the likely identity of potencies.

**Keywords:** Solvatochromism, immobilisation, feedback, hysteresis, resonance

## Use of *Papaver somniferum* and *Arnica montana* in ultradiluted form to assist in anesthesia recovery and as an analgesia for dogs that underwent an ovariohysterectomy

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Ovariohysterectomies are one of the most frequently performed procedures in veterinary surgery. The objective was to assess the effects of using *Papaver somniferum* 200cH and *Arnica montana* 30cH in the recovery room and as a postoperative analgesia in dogs that had undergone an ovariohysterectomy. This study was approved by the Ethics Committee for Animal Experimentation of the Integrated University Center (No. 2124/2017).

A total of 40 dogs were considered ASA I (American Anesthesiology Association) after physical and laboratory examinations, and were divided into four groups: *Arnica*, *Papaver*, hydroalcoholic and physiological solution, receiving 4 drops of each treatment over a period of 1 hour, 10/10 minutes. Anesthesia recovery time (in minutes), as well as the duration of the postoperative analgesia (in hours), was measured using the modified Glasgow scale. Heart rate, respiratory rate, systolic blood pressure and rectal temperature were also evaluated during the recovery period. The study was blinded. The data was analyzed using ANOVA, followed by the Tukey test, with  $p < 0.05$  considered a statistically significant difference.

The *Papaver*-treated group recovered from anesthesia ( $41 \pm 7.6$  minutes) faster than the others: *Arnica* ( $65.8 \pm 17.3$ m), hydroalcoholic solution ( $68.8 \pm 15$ m) and physiological solution ( $55.3 \pm 12.5$ m),  $p \leq 0.05$ . The *Arnica* group required rescue analgesia later than the others ( $17.8 \pm 3.6$  hours): *Papaver* ( $6.6 \pm 0.9$ h), hydroalcoholic solution ( $5.1 \pm 1.2$ h) and physiological solution ( $4.1 \pm 0.9$ h), with  $p \leq 0.05$ .

There were no statistically significant differences among the other physiological parameters. The findings of this study coincide with other studies in the literature. It was concluded that *Papaver* 200cH is effective in accelerating anesthesia recovery time in dogs and that *Arnica* 30cH can be an alternative in the protocol for acute pain management in these animals.

**Keywords:** Homeopathy, opium, dog

## **A homeopathic medication can improve upper respiratory tract infections in COPD patients: EPOXILO cohorts study**

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**Background:** Exacerbations of the Chronic Obstructive Pulmonary Disease (COPD) can be triggered by Upper Respiratory Tract Infections (URTI), viral aetiology being of increasingly higher importance. A homeopathic approach of the viral URTI in COPD patients could help reduce its frequency and related exacerbations.

**Methods:** Prospective, cohorts, multicenter study in Cantabria (Spain) with 219 COPD patients taking a weekly dose of the homeopathic medicine Oscillococcinum (HG=109) or not (CG=110) added to conventional treatment and following usual practice. Main objective was measuring the number of URTI (follow-up of 4-5 months). Secondary endpoints included duration of URTIs, number and duration of COPD exacerbations, use of drugs, quality of life and adverse events.

**Results:** There was a significant reduction in the mean number of URTIs in HG compared to CG (0.51 vs 1.04), with a difference of -0.52 (CI95 [-0.84;-0.20], p=0.001) and 3.3 more probabilities of suffering  $\geq 2$  URTI episodes in CG (p=0.003). The duration of the episodes was reduced in HG patients (3.57 days vs 5.22; p=0.012). When looking at the exacerbator-phenotype patients there was a significant decrease in number of URTIs (0.54 vs 1.31; p=0.011) and fewer COPD exacerbations (0.9 vs 1.5; p=0.037). The prescription of exacerbation-corticoids was decreased in both groups between baseline and visit 2, but more reduced in HG (22.1% vs 7.5%; p=0.005). Other variables did not reach statistically significant differences between groups.

**Conclusions:** The use of this homeopathic medicine by COPD patients may have a beneficial impact at reducing the number of URTIs and its duration and can positively impact the number of COPD exacerbations in patients with the exacerbator phenotype. Confirmation with studies with a greater sample size and a longer follow-up should be pursued.

**Keywords:** COPD, homeopathy, URTI, exacerbation, cohorts

## Replication and meta-analysis of specific effects of homeopathically prepared tin (*Stannum metallicum* 30x) with a cress seedling, CuCl<sub>2</sub> crystallisation ‘fingerprint’ approach

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**Background and aims:** Basic homeopathic research requires stable and reliable test-systems to detect biological effects of homeopathic preparations. Baumgartner et al. (2012) described a test-system, which revealed specific effects of a potentized *Stannum met.* 30x preparation (nominal dilution of 10<sup>-30</sup> of the original substance) compared to water 30x as control in a bio-assay using cress (*Lepidium sativum* L.). The bio-assay is based on cress seed germination, CuCl<sub>2</sub>·x2H<sub>2</sub>O crystallization of the cress extracts, and subsequent computerized image analysis of the crystallization patterns.

In the present study we performed a replication trial at two independent laboratories, employing meticulous methodology, among which the integration of Systematic Negative Control experiments.

**Results:** Analysis of the data of the replication trial revealed the same data structure in both projects regarding directionality and relative effect-size of the homeopathic treatment. Systematic Negative Control experiments did not yield evidence for experimental instabilities, indicative of a robust test system. A meta-analysis of the pooled data of both trials revealed a highly significant treatment effect of *Stannum met.* 30x, and no interaction with experimental day. In a subgroup analysis we identified the spatial region of the crystallization patterns where the potency treatment effect manifests predominantly to be confined to the geometrical centre of the crystallization plates, which is in agreement with the precursor study.

**Conclusions:** We were able to establish a test-system yielding reproducible biological effects of an ultra-molecular homeopathic preparation when replicated in ten independent experiments in two laboratories. Meta-analysis of the data of both trials yielded a highly significant treatment effect.

These ground-breaking results point to a promising potential of the method to contribute to basic homeopathic research and call for developing a theoretical model to understand the effects observed.

**Keywords:** Pattern formation, bio-assay, meta-analysis, reproduction trial, systematic negative control experiments

**Prevalence and likelihood ratio of 6 common objective homeopathic signs in patients responding to muriatic medicines. Multicentre prospective observational study**

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Assessment of prevalence and likelihood ratio (LR) of symptoms in responders to specific homeopathic medicines appears currently to be the best scientific method to confirm or rule out guiding indicators for such medicines.

The aim of the present study is to assess these parameters for 6 common objective homeopathic signs, believed to be indicators of muriatic medicines. Each of these signs was defined in advance. Their presence was assessed in every new consecutive patient by 8 homeopathic physicians in 3 different countries. This group was considered as the control population.

The target population consisted in patients responding to a muriatic homeopathic medicine. Patients were considered as responders when fulfilling all the following criteria: more than 3 months of treatment with only one homeopathic muriatic medicine, no other intervention along this period, ORIDL score +2 or higher (as assessed by the patients themselves) and the physician's impression that clinical improvement was attributable to the medicine. The same signs were assessed in this population.

Up to the time of writing this abstract, 52 responders to a muriatic medicine, 39 of whom received *Natrum-mur*, were compared to 846 controls. LR significantly higher than 1 was found in 3 of the signs (LR, 95%CI): lips cracks (1.79, 1.14-2.82), recurrent herpes (1.96, 1.08-3.55) and skin eruptions on the frontal hairline (2.44, 1.42-4.18). In the *Natrum-mur* population, which exhibited similar results, a fourth sign showed LR>1, dry palms (1.89, 1.08-3.30). The remaining 2 signs, accentuated substernal fossa and geographic tongue, could not be associated to the responding population.

**Conclusions:** 3 of the 6 assessed homeopathic signs could be associated to muriatic homeopathic medicines, and a fourth one specifically to *Natrum muriaticum*, by using a relatively simple, fast and conservative protocol.

**Keywords:** Likelihood ratio, objective signs, muriatic

## Further data on wheat germination and silver nitrate ( $10e^{-3}$ to $10e^{-25}$ ): low and medium dilutions

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**Background:** In pilot studies (GIRI 2016, HRI 2016), wheat grains were observed under aqueous low solutions of silver nitrate, either diluted in distilled water in steps of 1:10 by pipetting only (“e”) or diluted and agitated (“x”). Untreated distilled water served as additional control (W0). Probes were applied blindly. Germination rates after 28h were higher under “x” than under “e” ( $p < 0.01$  in both studies). System stability was tested and found adequate (GIRI 2018a), silver nitrate concentrations were measured and found correctly prepared (GIRI 2019), and it was shown that agitated water did not lead to enhanced germination versus non-agitated water, thus excluding the possibility of an effect of higher oxygen saturation in x-probes (GIRI 2018a).

**Aim:** Following up on the pilot studies, the aim was to investigate the influence of silver nitrate on wheat germination at low ( $10e^{-3}$  to  $10e^{-11}$ ) and medium ( $10e^{-12}$  to  $10e^{-25}$ ) dilutions.

**Method:** Experiments were performed in Austria ( $10e^{-3}$  to  $10e^{-11}$ ) and Germany ( $10e^{-3}$  to  $10e^{-25}$ ). Experimental conditions were as similar as possible to those in the pilot study, apart from the fact that silver nitrate  $10e^{-3}$  (not  $10e^{-2}$ ) served as mother tincture.

**Result:** After 28h, germination rates (N grains = 2200) were  $54.5 \pm 16.04\%$  of W0 probes,  $44.76 \pm 17.16\%$  of e-probes (N=9100) and  $48.12 \pm 17.41\%$  of x-probes (N=9100). Germination rates were thus higher under x than under e, surpassing the e-values by 7.5% for the overall pooled data ( $10e^{-3}$  to  $10e^{-25}$ ) ( $p < 0.01$ ), and by +6.7% for  $10e^{-3}$  to  $10e^{-11}$ , +8.2% for  $10e^{-12}$  to  $10e^{-18}$ , and +13.7% for  $10e^{-19}$  to  $10e^{-25}$ .

**Conclusion:** The experiments suggest that agitation of molecular probes can have effects that would also deserve consideration in mainstream biology and medicine.

**Keywords:** Low dilution, silver nitrate, wheat



## Homeopathic treatment ameliorates fatigue and attentional deterioration in radiotherapy breast cancer patients

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Patients with breast cancer experience psychosocial distress such as anxiety, depression, fatigue, and cognitive disturbances. Both fatigue and cognitive dysfunction have been observed as post-treatment outcomes of chemotherapy and/ or radiotherapy.

The PPI test represents an operational measure of information-protective pre-attentional mechanisms. PPI is a neurological phenomenon in which a weaker acoustic pre-pulse (delivered via headphones) inhibits the reaction to a subsequent strong startling pulse. The reduction of the response amplitude (measured by electromyographic activity from the orbicularis oculi muscle) reflects the ability of the nervous system to temporarily adapt to a strong sensory stimulus when a preceding weaker signal is given. PPI is an objective tool for fatigue evaluation.

In randomized, double blind study, IBR approved, 57 female patients who underwent Chemotherapy and adjuvant whole breast radiation in the radiation department at Sheba Medical Center, and who give a written consent for participation, included in the study. 38 received homeopathic treatment and 19 received placebo in a double-blind method.

All patients evaluated at the beginning, during, end and one month after the end of radiotherapy for; (i) fatigue level utilizing the Fatigue Symptom Inventory (FSI); (ii) attention performance utilizing the Pre-Pulse Inhibition (PPI) task; and (iii) anxiety level utilizing both the startle response test and examining the Galvanic Skin Response (GSR) differences.

At baseline, both treated and placebo groups showed similar impaired level of auditory-sustained-attention (ASAT; measured by pre-pulse inhibition), probably as a consequence of recent chemotherapy.

One month post radiotherapy completion, while the placebo ASAT performant further deteriorate, a significant improvement (to normal performance) was observed in the homeopathic treatment group.

**Keywords:** Homeopathy, breast cancer, fatigue, radiotherapy

## Outcome-specific review of controlled clinical studies with homeopathic medicines

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**Background:** Though there exists a considerable amount systematic Reviews of clinical homeopathic studies, they are limited regarding literature sources and study type. Furthermore, a comprehensive update is needed.

**Aim:** The aim was to conduct an extensive systematic review focusing on the investigated indications and outcomes of the original studies in order to provide a clear view of the existing evidence for each particular indication, to reveal academic voids and to enhance the applicability of the results for therapeutic practice.

**Method:** In addition to available studies from previous reviews, an extended literature search was conducted considering also 'grey' literature (e.g. theses, conference proceedings). Six medical databases (Medline, Embase, Cochrane Central Register of Controlled Trials, SCOPUS, Science Citation Index Expanded and LILACS), four databases for complementary medicine (CORE-Hom and CAM-Quest<sup>®</sup>, AMED and CINAHL) as well as 25 databases for theses and dissertations were searched and complemented by manual references. Search limits have been set from 01.01.1980 to 30.06.2017. The study records have been managed by means of the citation manager Endnote<sup>®</sup> and were transferred into a previously piloted and standardized data-handling template (Excel<sup>®</sup>). Publication type, study aims and target population, study design, sample size and outcomes as well as intervention details such as potencies, dosage, type of homeopathy and comparator were extracted from the included reports.

**Results:** 600 original studies in 202 medical conditions could be included in the review. For 52 conditions at least two controlled studies for the same homeopathic intervention could be identified. They will be presented, using tables for the different clinical indications, and discussed regarding the study details (e.g. design, sample size, homeopathic method).

**Keywords:** Review, research methodology, clinical practice

## How homeopathy is treated in meta-analyses

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Many scientists reject homeopathy because there is no plausible mechanism of action. However, medical care today is evidence-based where a mechanism is not crucial. With abundant literature, evidence is obtained by meta-analyses and systematic reviews. Sadly, several meta-analyses authored by classical scientists and skeptics where homeopathic treatment is compared to placebo (water) show evidence of manipulation and bad judgment.

The story starts in 1997 when Klaus Linde and co-workers identified 89 clinical trials that showed an overall odds ratio of 2.45 in favor of homeopathy over placebo. This difference was statistically significant. Linde reported a trend toward smaller benefit from studies of the highest quality, but the 10 trials with the highest quality (highest Jadad score) still showed homeopathy had a statistically significant effect.

These results challenged academics to perform alternative analyses that, to demonstrate lack of effect, relied on extensive exclusion of studies, often to the degree that conclusions were based on only 5-10% of the material, or on virtual data. Such extensive exclusion exercises, created in retrospect, opens way for the authors to manipulate the outcome by creating statistical Type II errors and flip-flop phenomena. The ultimate argument against homeopathy is the “funnel plot” published by Shang’s group in 2005. However, the funnel plot model is flawed when applied to a mixture of diseases, because studies with expected strong treatments effects are, for ethical reasons, powered lower than studies with expected weak or unclear treatment effects.

To conclude that homeopathy lacks clinical effect, scientists must overlook more than 90% of the available clinical trials. Alternatively, flawed statistical methods must be applied.

**Keywords:** Homeopathy, study quality, meta-analysis, randomized controlled trials

**Effects of homeopathic preparations of *Mercurius corrosivus* on the growth rate of mercury-stressed duckweed *Lemna gibba* L. as a function of different stress levels**

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**Background and aims:** We developed a bioassay with mercury-stressed duckweed (*Lemna gibba* L.) to study potential effects of homeopathically potentised mercury(II) chloride (*Mercurius corrosivus*). Furthermore, the response of this bioassay to homeopathic treatments as a function of stress intensity was also of interest.

**Methods:** A bioassay with arsenic-stressed duckweed (*Lemna gibba* L.) was adapted for the use of mercury as stressor. Plants were poisoned with mercury(II)chloride at two different intensities (slight/severe) for 48 hours. Afterwards plants grew in either *Mercurius corrosivus* (24x to 30x) or water controls for seven days. Growth rates of the frond(leaf) area were determined using a computerised image analysis system. Six independent experiments with potentised *Mercurius corrosivus* were performed, three for each stress level. Additionally, six systematic negative control experiments with water were conducted (three for each stress level) to investigate the stability of the experimental set-up. All experiments were randomised and blinded.

**Results:** Highly standardised conditions were achieved by using a specific growth chamber, leading to very small coefficients of variance ( $\approx 2\%$ ). The systematic negative control experiments did not yield any significant effects, providing evidence for the stability of the experimental system. Growth rates of slightly stressed duckweed were significantly enhanced after application of *Mercurius corrosivus* 24x–30x compared to the controls. Growth rates of severely stressed duckweed were significantly reduced compared to the controls.

**Conclusion:** The test system with *Lemna gibba* L. yielded evidence for specific effects of *Mercurius corrosivus* 24x–30x, namely a growth enhancement for duckweed that was slightly stressed and a growth reduction for duckweed that was severely stressed by mercury. The *Lemna gibba* bioassay develops into a very useful tool for homeopathic basic research, since it revealed specific effects of potentized *Arsenicum album* after arsenic stress, and effects of potentized *Mercurius corrosivus* after mercury stress, and might be used in future for investigation of the Simile principle.

**Keywords:** Mercury-stressed plant bioassay, stress intensity, *Mercurius corrosivus*, duckweed, *Lemna gibba* L.

## Homeopathic preparations in the low potency range studied by means of pattern formation in evaporating droplets: influence of succussion stroke number

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**Background and aims:** Evaporation induced pattern formation in droplets has been applied to characterize homeopathic preparations in high and low potency levels. Here we investigated whether the droplet evaporation method (DEM) may identify differences in succussed vs. unsuccussed homeopathic preparations, and in potencies prepared with different succussion stroke numbers in the low potency range.

**Materials and methods:** In the present experimentation we analyzed five potencies (*Echinacea* 2x, *Baptisia* 3x, *Baptisia* 4x, *Luffa* 4x, and *Spongia* 6x) prepared in three variants each: potentized by the application of (i) 100 or (ii) 10 succussion strokes between the consecutive dilution steps, and (iii) prepared as an unsuccussed, only gently mixed control. The experimental set-up stability was examined by positive control experiments. DEM experimental protocol consisted in the evaporation of droplets of the analyzed potency per se, placed on microscope slides and under controlled conditions. The resulting patterns were photographed in dark field. The images (4'026 in total) were subjected to a computerized pattern evaluation consisting of the measurement of their grey level distribution, aspects of texture, and fractality.

**Results:** In all five analyzed homeopathic preparations, the succussed (100 and 10 times) and unsuccussed variants could be significantly differentiated by means of at least three of the five analyzed image evaluation parameters. Significant differences between all variants were found only in potency levels 4x and higher (*Baptisia* 4x, *Luffa* 4x, and *Spongia* 6x) in one parameter per preparation. In most cases, the application of succussion strokes reduced the size, homogeneity, and complexity of the DEM patterns. The control experiments showed reasonable experimental model stability.

**Conclusions:** Phenomenological study of homeopathic preparations in low potency range, prepared with different succussion stroke numbers, may contribute to a better understanding of the changes the material, which is still present in low potency range, undergoes during successive potentization steps.

**Keywords:** Evaporation, patterns, homeopathy, low potencies

## An assessment of a public health initiative of homeopathy for primary teething

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**Background:** A public health initiative, 'Homoeopathy for the Healthy Child', was undertaken focusing promotion of healthy teething by provision of home-based care through preidentified homeopathic medicines for complaints during primary teething. The paper reports the impact on teething and episodes of diarrhoea and upper respiratory tract infection (URTI) in children.

**Methods:** Accredited Social Health Activists (ASHAs) were trained in child care and usage of kit comprising six medicines, namely *Calcarea phosphoricum* 6X(CP), *Ferrum phosphoricum* 3X, *Magnesium phosphoricum* 6X, *Belladonna* 30C, *Chamomilla* 30C and *Podophyllum* 30C. Children received CP between 6 months to 1 year and having no teeth above age of 1 to 3 years.

Home-based care for diarrhoea, URTI and mild fever was provided using the other five medicines. Dentition pattern and Diarrhoea/URTI episodes as reported by parents to the ASHAs were recorded for 12 months. Outcome assessed was change in dentition pattern, diarrhea/URTI episodes and feedback by the ASHAs.

**Results:** 11426 children aged 6 months to one year and 100 children above one year age, with no teeth were followed up for 12 months and dentition pattern was recorded.

0.255 proportion of children ( $p < 0.001$ ) enrolled at 6 months as compared to 0.039, enrolled at 12 months had 6 teeth at 12 months. Incidence of diarrhoea showed progressive decline with *Podophyllum* or *Chamomilla* and *Belladonna* for URTI. Out of 581 ASHAs' feedback; 566 observed homeopathy as beneficial; 03 had no effect and from 12 ASHA's did not responded.

**Conclusion:** As per our knowledge, there is no study reporting dentition pattern in children after using CP. This program with regular use of CP and home-based care with homeopathy and accepted by the community, opens avenues for further validation with a comparator group.

**Keywords:** *Calcarea phosphoricum*, children, dentition, diarrhoea

## Demographic review of outcomes in an NHS homeopathy clinic

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This qualitative research project has been developed from a data-set whose primary objective was to provide a detailed factual profile of a fully functional NHS Homeopathy Clinic.

A six year statistical review of all patients seen at the NHS Tayside Homeopathy Clinic has involved the collation of a) socio-economic and demographic data, b) pre-existing conventional drug data c) and illness-category data, each measured against outcomes, established by: i) physician measured significance scores in an unselected cohort of 600 patients, and ii) a subset of 120 patient-reported outcomes from actively reviewed cases in 2018.

The observed patterns of outcome are presented in the context of detailed health, social and socioeconomic profiling of attenders at this NHS Clinic.

**Keywords:** Qualitative, socio-economic, NHS, homeopathy, demographic

## In vitro testing homeopathic drugs on bronchial cells

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The aim of the research is to assess any protective in vitro activity of homeopathic remedies, used in ailments characterized by cough symptoms, on bronchial epithelial cells (16HBE). We are studying the effects on healthy cells and cells intoxicated with cigarette smoke extract (CSE), where CSE-intoxicated should mimic the pathologic state of airway epithelium associated with cough.

The cells are seeded in 96-well microplates at a density of  $2.5 \times 10^4$  cells/well in 2% FBS-EMEM medium. Liquid extract of cigarette smoke (CSE) is prepared by bubbling smoke into PBS solution, diluted at suitable concentration to obtain sub-maximal toxic effects. Normal and CSE-treated cells are treated for 24h or 48h with various doses of homeopathic drugs (Hyland's, Los Angeles USA) traditionally indicated for people with upper respiratory tract infections, such as *Drosera rotundifolia*, *Pulsatilla pratensis*, *Nux vomica*, *Allium cepa*, *Natrum muriaticum* and *Kalium bichromicum* and others, or solvent ethanol/water as control. Parameters of cell viability (WST and Crystal violet) and cytokine production (IL8, IL6, TNF- $\alpha$ , IP-10 and others) are measured.

Preliminary findings from dose-response studies indicate that most tested drugs have no effects on cell viability, indicating that they are safe. *Drosera* low dilutions (2x -5x) exert small but significant protective effect in CSE-challenged cells. *Kalium bichromicum* 5x and *Nux vomica* at 3x dilution significantly decrease cell viability in both normal and CSE-treated cells, while the same dose increases the release of IL8 and IL6. Interestingly, the chemokine IP-10, (interferon-induced chemoattractant for monocytes/macrophages and T cells) decreases when the cells are treated with *Kalium b.* and also with *Drosera* 5x, suggesting that this chemokine may be a sensitive and specific new target in bronchial cells.

In conclusion, this model provides an interesting tool for the investigation of the therapeutic properties of common homeopathic drugs on normal and CSE-stressed bronchial epithelial cells.

**Keywords:** Bronchial-cells, in vitro, *Drosera*, *Kalium-bichromicum*



## The high-quality randomised controlled trials of homeopathic treatment, as defined by systematic review and meta-analysis

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**Background:** In our programme of systematic reviews, assessment of internal validity (IV) and model validity (MV) of randomised controlled trials (RCTs) of individualised and non-individualised homeopathic treatment (IHT and NIHT respectively) has enabled us to rate placebo-controlled RCTs as high, moderate or low study quality. Assessments of IV and external validity (degree of pragmatic or explanatory study attitude) have recently been achieved for other-than-placebo (OTP)-controlled RCTs of IHT and NIHT.

**Aims:** To examine the totality of clinical evidence in homeopathic treatment across the four RCT designs, with particular focus on high-quality studies and their meta-analysis.

**Methods:** The 90 RCTs that were included in our four prior meta-analyses comprised the data-set. A study was rated 'high quality' if it had high IV and acceptable MV (placebo-controlled trials) or if it had high IV and suitable pragmatic or explanatory attitude (OTP-controlled trials). One outcome measure per RCT was identified and used in sensitivity analysis based on high study quality.

**Results:** The quality rating was 'high' for 5 RCTs, 'moderate' for 31, and 'low' for 54. Four of the high-quality trials were placebo-controlled (3 IHT, 1 NIHT); 1 was OTP-controlled (a pragmatic study of IHT): Jacobs et al (*Pediatrics* 1994; childhood diarrhoea); Jacobs et al (*Pediatr Infect Dis J* 2001; otitis media); Bell et al (*Rheumatology* 2004; fibromyalgia); Colau et al (*Drugs RD* 2012; menopausal syndrome); Peckham et al (*Homeopathy* 2014; irritable bowel syndrome, IBS). Analysis identified a treatment effect favouring homeopathy over placebo (odds ratio=2.05; 95% confidence interval, 1.33 to 3.15; n=4;  $p=0.001$ ); there was no significant difference between homeopathy and usual care for IBS.

**Conclusions:** There are 5 high-quality RCTs of homeopathic treatment, containing evidence of a distinct effect of homeopathic medicines compared with placebo. Additional high-quality RCT research in homeopathy is necessary to enable more complete and decisive data interpretation.

**Keywords:** Individualised, non-individualised, randomised controlled trials, systematic review, meta-analysis

## Control of liver enzymes in Magellanic penguins (*Spheniscus magellanicus*) through ultradiluted medicine

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Magellanic penguins reproduce along the coast of Argentina, Chile and the Falkland Islands. Brazil is part of the migratory route of these animals, which are found in a debilitated state on the coast and sent to rehabilitation centers. When they are not able to be reinserted, they are sent to zoos and aquariums. At Sabina - Escola Parque do Conhecimento the penguins receive checkups every six months, including blood collection (hemogram and biochemistry).

**Objective:** show the results of homeopathic treatment on the liver enzymes (ALT-TGP/AST-TGO) of Magellanic penguins kept in zoos. ALT enzymes are mainly found in the cytosol of hepatocytes and muscle cells, and act on the catabolism of amino acids and the transport of nitrogen between organs (baseline values: 16-140 U/L). AST exists in multiple tissues, mainly in the liver and muscles (baseline values: 90-300 U/L).

**Methods:** Ten Magellanic penguins presented liver enzyme changes at their annual checkup and were treated with four globules of *Carduus marianus* 6 cH, once a day, for 30 days, and were assessed again through new tests. The data was analyzed using the Mann-Whitney U test, with  $p < 0.05$  considered a statistically significant difference.

**Results:** In animals treated with *Carduus*, there was a mean decrease in ALT values, from  $141.2 \pm 61.5$  U/L to  $65.3 \pm 28.7$  U/L ( $p < 0.05$ ), as well as a mean decrease in AST values, from  $394.7 \pm 113.7$  U/L to  $223.2 \pm 116.7$  ( $p < 0.05$ ). The response to the homeopathic treatment was similar to the allopathic treatment in previous checkups, but without any side effects and being easy to administer.

**Conclusion:** Homeopathic treatment for penguins living in zoos and aquariums is a good option, with excellent results and animal well-being.

**Keywords:** Homeopathy, *Carduus marianus*, high dilution

## Effect of adjuvant homeopathy with usual care in management of thrombocytopenia due to dengue – a comparative cohort study

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**Background:** Dengue is an emerging threat to public health. At present no clear modalities are available for prevention and management of thrombocytopenia due to dengue. This paper reports the clinical outcomes of integrative homeopathic care in a hospital setting during a severe outbreak of dengue in New Delhi, India, during the period October to December 2015.

**Methods:** Based on preference, 138 patients received a homeopathic medicine along with usual care (H+UC), and 145 patients received usual care (UC) alone. Assessment of thrombocytopenia (platelet count <100,000/mm<sup>3</sup>) was the main outcome measure. Kaplan-Meier analysis enabled comparison of the time taken to reach a platelet count of 100,000/mm<sup>3</sup>.

**Results:** There was a statistically significantly greater rise in platelet count on day 1 of follow-up in the H+UC group compared to UC alone [mean difference = 12,337; 95% confidence interval (CI) = 5,421 to 19,252; p=0.001]. This trend persisted until day 5 [mean difference = 14,809; 95%CI = 1,615 to 28,004; p=0.02]. The time taken to reach a platelet count of 100,000/mm<sup>3</sup> was nearly two days earlier in the H+UC group compared to UC alone [H+UC: 3.44 days ± standard error of the mean (SE) 0.18; 95% CI: 3.08 to 3.80; UC: 5.28 days ± SE 0.29; 95% CI: 4.71 to 5.86; p=0.0001].

**Conclusion:** These results suggests a positive role of adjuvant homeopathy in thrombocytopenia due to dengue. Randomised controlled trials may be conducted to obtain more insight into the comparative effectiveness of this integrative approach.

**Keywords:** Dengue, thrombocytopenia, homeopathy, *Crotalus horridus*

## Severity of radiodermatitis in breast cancer patients with preventive treatment with homeopathic/integrative protocol compared with a control group

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**Background:** To deal with the adverse effects of anti-cancer treatment, the Homeopathic Clinic of Lucca, in collaboration with the Oncology Department, has set up an Integrative Oncology Outpatient Unit in the Public Hospital Campo di Marte of Lucca (Italy).

**Aims:** To present the results of homeopathy and complementary integrative medicine treatment targeted towards reducing the radiodermatitis and other adverse effects of radiotherapy.

**Methods:** This is a retrospective observational study conducted on consecutive 30 breast cancer patients undergoing radiotherapy from September 2013 to December 2018. The severity of radiodermatitis was evaluated with the Radiation Therapy Oncology Group (RTOG) scale. One group was treated with *Radium bromatum* 6 CH before RT, then *Belladonna* 6 CH after RT, and also with application local an alkalinizing agent and *Calendula* ointment. The control group of patients undergoing RT without integrative treatment used only standard care, keratoplastic ointments as standard care to promote tissue repair and healing.

**Results:** The severity of radiodermatitis was evaluated at the beginning and at the end of the treatment; 17 patients with a homeopathic integrative protocol during RT were compared with a control group of 13 patients without treatment. Preliminary results show that 15 patients with integrative treatment had G1, 1 patient had G2 and 1 patient had G3 toxicity. In the group of patients who did not follow the treatment, 5 patients had G1; 2 patients G2; 3 patients G3, and finally 3 patients G4 (Mann-Whitney U test: two-tailed significance  $p \leq 0.01$ ).

**Conclusion:** The integration of evidence-based homeopathy and complementary treatments allows for an effective response to the demand coming from cancer patients to reduce many side effects of anti-cancer therapies, in particular radiodermatitis due to RT, as well as to improve their quality of life.

**Keywords:** Homeopathy, radiodermatitis, radiotherapy, integrative oncology, breast cancer patients

## **Effectiveness of homeopathic medicines as add-on to institutional management protocol for acute encephalitis syndrome in children: an open-label randomized placebo-controlled trial**

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**Background:** Acute encephalitis syndrome (AES) is endemic to certain parts of India, with limited treatment options. In our initial exploratory comparative observational study of 151 patients with AES, there was significantly reduced mortality with adjunctive homeopathy compared to institutional management protocol (IMP). The present randomized placebo-controlled trial brings more statistical rigor to this research program.

**Methods:** This study was conducted at a pediatric unit from 2013 to 2015. Children aged > 6 months and < equal to 18 years and receiving IMP were randomized to receive adjunctive homeopathy (n = 325) or placebo as control (n = 323). The primary effectiveness analysis was based on Glasgow Outcome Scale (GOS). Morbidity was assessed using the Liverpool Outcome Score for Assessing Children at Follow-up. Analysis was by intention to treat.

**Results:** A total of 612 children were analyzed (Homeopathy [H] = 304; Control [C] = 308). The primary outcome, GOS, differed significantly between H and C groups. There was 14.8% death/neuro-vegetative state in the H group compared to 29.8% in the C group. Relative risk was 0.49 (95% confidence interval [CI]: 0.36 to 0.68), with absolute risk reduction of 15.0% (95% CI: 8.6 to 21.6%). Number needed to treat to prevent one additional death/neuro-vegetative state was 6.6 (95% CI: 4.6 to 11.6). Proportional-odds analysis also revealed a greater effect in the H group: odds ratio, 0.40 (95% CI: 0.27 to 0.60). The most frequently used medicines were *Belladonna* (n = 116), *Stramonium* (n = 33), *Arsenicum album* (n = 25), *Sulfur* (n = 18), *Opium* (n = 17), and *Nux vomica* (n = 10).

**Conclusion:** Adjunctive homeopathic medicines may improve clinical outcomes associated with AES. Further randomized and controlled studies, using double-blinded trial design, are recommended to discover if the current findings may be corroborated.

**Keywords:** Acute encephalitis syndrome, adjunctive homeopathy, India, Glasgow outcome scale

## Randomised Controlled Trials

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There have been over 180 randomised controlled trials of homeopathy published in English language peer reviewed scientific journals since 1940. ***Do these trials prove that homeopathy works?***

Clare describes her 15-year journey to answer this and other related questions:

What are randomised controlled trials? How are they designed, conducted and interpreted? What is the difference between a randomised controlled trial and an observational study? What are pragmatic trials? What do 'Homeopathy' trials test? Treatment by homeopaths? Homeopathic medicines, or something else? Can we design trials that will help patients, clinicians, and homeopaths make the best decisions?

This talk illuminates this modern 'scientific' tool, and the economic, political and cultural forces that continue to shape trials, and concludes by offering suggestions for homeopathy trials in the future.

**Keywords:** Randomised controlled trials, pragmatic

## Challenging inaccurate influential literature on homeopathy

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In recent years, the science and politics of homeopathy have become closely intertwined, with public access to homeopathic treatment and training, as well as regulatory issues, becoming increasingly determined by how the evidence base is interpreted by decision-makers.

It is therefore of great concern that over the same period, we have seen an ever-increasing divergence between the actual status of the homeopathy evidence base as understood by experts in the field, and how this data is reported by academics from other disciplines and in the mainstream media.

The most striking example of academic misreporting is the Overview Report published by the National Health and Medical Research Council (NHMRC) in 2015. This report, commonly known as 'The Australian Report' found 'no reliable evidence' that homeopathy is effective.

Despite being scientifically flawed and highly inaccurate, the Australian Report is currently the most influential clinical research publication on homeopathy, having generated damning headlines and been cited by decision-makers worldwide.

In 2017 this trend of misreporting continued with publication of the European Academies' Scientific Advisory Council's anti-homeopathy position statement, *"Homeopathic products and practices: assessing the evidence and ensuring consistency in regulating medical claims in the EU"*.

Despite claiming to have based its conclusions on, 'excellent science-based assessments already published by authoritative and impartial bodies', the 'EASAC Statement' quotes the infamously flawed Shang et al. meta-analysis published in 2005, a non-scientific and widely criticised document produced by a UK Parliament Select Committee in 2010 and the 2015 Australian Report.

In this session we will review the key scientific flaws in the NHMRC Overview Report and EASAC Statement; look at the impact these publications have had on the homeopathy sector worldwide; and report on the status of strategies employed by the Homeopathy Research Institute and our international collaborators, to challenge their inaccurate findings.

**Keywords:** Homeopathy, Australian Report, NHMRC, EASAC

## Homeopathic treatment of atopic diseases: short and long-term results in a cohort of 563 atopic adult patients

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**Background and aims:** Atopic diseases are the most common chronic conditions in childhood but, in recent decades, asthma and allergy have reached epidemic proportions among adults in most Western societies.

**Aims:** To study the effect of homeopathic treatment on adult patients with atopic diseases visited at the Homeopathic Clinic of Lucca (Italy) and long-term evolution of the disease over approximately an 8-year period.

**Materials and Methods:** Data derive from an observational longitudinal study carried out on 563 atopic adult patients who were consecutively visited from 1998 to 2017; 202 (35.9%) suffered from atopic dermatitis, 204 (36.2%) from allergic rhinitis, and 157 (27.9%) from asthma. Moreover, a long-term study was conducted on a subset of 45/104 adult patients with at least  $\geq 5$  years follow-up, consecutively visited from 2006 to 2012. The study also investigated the evolution of overall symptoms in patients with a complex atopic symptomatology, that is, patients suffering of more than one atopic disease. The outcomes were evaluated according to the ORIDL (Outcome in Relation to Impact on Daily Living). Statistical evaluation was conducted via Wilcoxon's test applied to matched-pair samples, associated with a two-tailed significance test. The most frequently prescribed remedies were: in asthma *Nat-s* and *Ars*; in allergic rhinitis *Puls* and *Ars-j*; in atopic dermatitis *Sulph.* and *Nat-s*.

**Results:** 69.3% of atopic adults had moderate or major improvement (71.1% with asthma as the primary disease; 69.8% rhinitis; 67.1% dermatitis). At re-evaluation after 5-12 years, complete remission of atopic symptoms was observed in 69.6% of adult patients: dermatitis 100%; allergic rhinitis 59.2%; asthma 75% ( $p < 0,000$ ). Adult patients with more than one atopic disease at the first visit were completely cured in 54.3% of cases.

**Conclusion:** The results seem to confirm that homeopathic medicine produces positive therapeutic response not only in paediatric atopic patients, as expected, but also in adults.

**Keywords:** Homeopathy, atopic diseases, asthma, allergic rhinitis, dermatitis, short and long term results



## Subcutaneous isopathic immunotherapy of allergic asthma in a mouse model of allergic asthma

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**Background and aims:** Allergen immunotherapy is a promising potential disease-modifying treatment for allergic patients. Subcutaneous immunotherapy is more effective than sublingual immunotherapy, but subcutaneous immunotherapy is ineffective at a low dose, whereas at high doses, it can result in an unacceptably prominent level of systemic reactions. Isopathy is one of the approaches of homeopathy which means employing causative agents or products of a disease to treat the same disease. In the current study, we evaluated the efficacy of subcutaneous isopathic immunotherapy with high diluted ovalbumin (HD OVA) in the treatment of OVA-induced allergic asthma in BALB/c mice.

**Methods:** All the experiments were conducted in accordance with the Animal Care and Use Protocol of Urmia University of Medical Sciences, Urmia, Iran. HD OVA were prepared in 6C homeopathic dilutions, 10<sup>-12</sup> wt/vol, and succussed according to HPUS specifications for centesimal scale potencies. BALB/c mice were sensitized with OVA and alum. Two weeks later, the mice received HD OVA subcutaneously on days 21, 22, 32 and on day 41 (eight hours after the last challenge) as the treatment. The mice were challenged with OVA (5%) aerosols on days 35, 38 and 41 for 20 min using an ultrasonic nebulizer and sacrificed on day 42.

**Results:** Our results revealed that subcutaneous isopathic immunotherapy significantly reduced lung-tissue inflammation, number of eosinophils in bronchoalveolar fluid, allergen-specific IgE and IL-4 production. It also insignificantly increased the production of TGF- $\beta$  and specific regulatory T cells population against the allergen.

**Conclusion:** Such data suggest that subcutaneous isopathic immunotherapy may be a suitable candidate for the treatment of allergic asthma.

**Keywords:** Homeopathy, isopathy, asthma, allergy, immunotherapy

***Ferrum phosphoricum* D12 treatment affects J774A.1 and 3T3-L1 cells proliferation and gene expression of inflammation, oxidative stress and iron metabolism related proteins**

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Ferrum phosphoricum (FP), the so called "cell salt", is prescribed as homeopathic remedy to treat early stage of fever and inflammation in case of cold or flu, muscle fatigue and anemia. We aimed to analyze the molecular mechanisms of action of FP D12 tablet solution in vitro, on cell proliferation and gene expression of inflammation, oxidative stress and iron metabolism related proteins in mouse J774A.1 macrophages and 3T3-L1 preadipocytes.

Cell proliferation was examined using MTT test. RT qPCR analyzes followed by 2<sup>- $\Delta\Delta Ct$</sup>  calculation method were performed to estimate gene expression changes. Statistical analyses were done by GraphPad Prism V6 software, p<0.05 was considered as significant. FP effect was compared to placebo treatment (PT) and to untreated cells.

FP stimulated significantly proliferation of J774A.1 and 3T3-L1 cells by 11% and 15% respectively, in contrast to PT in the respective concentrations.

FP vs. PT induced significantly gene expression of ferritin Fth1 (by 8 fold), Beta-2-Microglobulin B2M (by 2.5 fold) proteins and Ireb2 transcription factor (by 4 fold) and induced a slight decrease in myosine MYO1E (by 0.4 fold) gene expression levels in macrophages, whereas in preadipocytes Fth1 (by 3 fold) and Ireb2 (by 15 fold) gene expression were induced. Significant stimulation of antioxidant enzymes GPx-1 (by 1.2 fold) in macrophages and GCL (by 11 fold) in preadipocytes by FP was observed. Significant induction in the gene expression of IL-1 $\beta$  (by 3.5 fold) in macrophages and of IL-6 (by 20 fold), TNF $\alpha$  (by 16 fold) and Noxo1 (by 17 fold) in preadipocytes were measured.

Results indicate that FP in D12 potency may exhibit an immunostimulatory, antioxidant and iron uptake potential possibly by inducing changes in gene expression levels.

**Keywords:** *Ferrum phosphoricum*, proliferation, gene expression, macrophages, preadipocytes

## Rethinking homeopathic research methodology: Why comparative effectiveness research matters

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In the last decades, a main focus of homeopathic research initiatives was experimental efficacy research to investigate specific effects of homeopathic drugs compared to placebo. Depending on inclusion and exclusion criteria, some meta-analyses have shown small specific effects of homeopathic drugs, but altogether evidence remains unreliable due to high risk of bias and methodological shortcomings.

Possible beneficial therapeutic strategies of the complex homeopathic therapeutic setting as “whole medical system”, such as therapeutic relationship, empathy, triggering expectations, hope, use of suggestions and metaphors, resource activation, lifestyle advice, changing conventional medication and others, were reduced to experimental comparators in the classical approach.

Homeopathic observational and outcome studies under real medical life conditions have repeatedly shown that homeopaths yield comparable effects than conventional therapists, but with less conventional drugs exposure and often less costs. Those “unspecific effects” are still a blind spot in the researchers eyes, but may in fact be highly beneficial for patients and a resource for the health care system.

Comparative effectiveness research (CER) strategies have been developed in the last decade to measure the extent to which an intervention, when deployed in the field in routine circumstances, does what it is intended to do for a specific population. CER methodology offers a wide range of research designs and advanced techniques, including pragmatic trials, cluster randomized trials, Bayesian approaches, observational research, and also registries. In addition, participatory stakeholder involvement is used to develop more practically relevant research questions, designs and outcomes. CER is a research strategy that would help homeopaths to better investigate and present its benefits and advantages under real life conditions, including the contribution of “unspecific effects”. Advantages and disadvantages of this approach will be presented and discussed.

**Keywords:** Comparative effectiveness research, homeopathy, outcome studies, pragmatic studies

**Cutting edge research – what are the priorities for clinical research and evaluation for homeopathy to become a valued part of the Integrative Medicine Model?**

Elizabeth Thompson

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Integrative Medicine is a model of healthcare which combines conventional, lifestyle and holistic approaches, informed by high quality evidence, to improve health and wellbeing. Homeopathic researchers can struggle to get ethical approval to deliver trials of homeopathic interventions and create the kind of evidence that will allow it to become part of this growing movement for change in health care across the globe.

Dr Thompson will review the politics of homeopathic research and share her experience of designing, running and publishing a range of clinical evaluation and research. Within the healing model that underpins homeopathic theory and practice, the challenge remains to identify underlying mechanisms for the action homeopathic dilutions and their specific effects which we aim to identify within a placebo-controlled trial. Dr Thompson will discuss how an understanding of complexity, models of healing and local or entanglement effects, is key to designing research in complex interventions and to test the hypothesis that homeopathy can stimulate self-regulating responses to build resilience.

This presentation will contribute to an overarching question about the direction of travel needed to activate high quality global homeopathy research programmes.

**Keywords:** Integrative medicine, homeopathy, trial design

## Safety and efficacy of individualised homeopathic treatment in sciatica – a phase I pre-post comparison study

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**Background:** Cochrane review in 2008 and 2016 both showed that the efficacy of NSAIDs in sciatica for pain reduction and disability were comparable to placebo. Systematic review in 2011 failed to show any long-term benefit from surgery after 1-2 years. A set algorithm was developed for the individualized homeopathic treatment from which can potentially contribute to the reproducibility of individualized homeopathic treatment. The algorithm was developed based on the principles of classical repertorization of local and general symptoms and differential diagnosis of 10 commonly used remedies in sciatica.

**Objectives:** It is a phase I trial of a set of algorithm for sciatica. The primary objective is to compare the difference in the pain intensity of the sciatica patients at baseline, day 3, day 7 and at 1 month. The secondary objectives include comparing the effect on acute, subacute and chronic sciatica, documenting the frequency and direction of any modification of the standardized dosage regime, any aggravation, adverse event, or rescue medications used.

An RCT focusing first on acute sciatica will be done when these data are available, and the potential of further studies in chronic cases will be revealed. The data from the study will be able to provide more information about the effect size and dosage regime for a more sensitive RCT design.

**Methods:** A prospective observational single group pre-post comparison study is being carried out from April 2018 to April 2019. The pain score pre- and post- treatment will be compared to baseline using paired sample t-test (normal distribution) or the Wilcoxon signed rank test (non-normal). Comparison with relevant controls in other studies will be referred in the discussion.

**Results:** In the data updated of Jan 2019, 42 participants were recruited and 34 (81%) of them finished the follow up at day 7. 64.5% of them reported improvement / significant improvement, the most commonly indicated remedies were *Rhus toxicodendron*, *Colocynthis*, and *Lycopodium clavatum*, representing 45.2% of all prescriptions. 16.7% of the subjects reported an aggravation, 2.4% reported the use of rescue medications. Final result will be available in May 2019.

**Keywords:** Homeopathy, sciatica, individualized, algorithm

## Physicochemical investigations of homeopathic preparations: a systematic review

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**Objectives:** The aim of our review program is to update and expand the current state of knowledge in the area of physicochemical properties of homeopathic preparations.

**Methods:** We identified relevant publications of sufficient reporting quality for further in-depth analysis. We reviewed all identified publications in terms of the individual experiments they describe. We extracted information regarding methodological criteria such as blinding, randomisation, statistics, controls, sample preparation, and replications, as well as regarding experimental design and measurement methods applied. Scores were developed to identify experimental techniques with most reliable outcomes.

**Results:** We identified 134 publications of sufficient reporting quality to be analysed in detail. These publications described 203 experiments. Less than 25% used blinding and/or randomisation, and about one third used adequate controls to identify specific effects of homeopathic preparations. The most promising techniques used so far are NMR relaxation, spectroscopy and electrical impedance measurements. In these three areas, several sets of replicated high-quality experiments provide evidence for specific physicochemical properties of homeopathic preparations.

**Conclusions:** For future experiments, we generally recommend using succeeded controls, or comparing different homeopathic preparations with each other to reliably identify any specific physicochemical properties. Further in-depth analysis of the experiments is necessary to explore different hypotheses regarding a possible mode of action of potentised remedies.

**Keywords:** Systematic review, homeopathy, physics

**Systematic review of plant-based homeopathic basic research: an update**

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**Background and aims:** Plant-based test systems have been described as a useful tool for investigating possible effects of homeopathic preparations. The last reviews of this research field were published in 2009/2011. Due to recent developments in the field, an update is warranted. Publications on plant-based test systems were to be analysed with regard to publication quality, reproducibility and potential for further research.

**Methods:** A literature search was conducted in online databases and specific journals, including publications from 2008 to 2017 dealing with plant-based test systems in homeopathic basic research. To be included, they had to contain statistical analysis and fulfil quality criteria according to a pre-defined manuscript information score (MIS), ranging from 0–10. Publications scoring at least five points were included. They were analysed for use of adequate controls, outcome and reproducibility.

**Results:** 74 publications on plant-based test systems were found. 26 reached a MIS of five or higher. Adequate controls were used in 13 of these publications. All of them reported on specific effects of homeopathic preparations. The publication quality is still varied: a substantial number of publications (23%) did not adequately document the methods used. Four reported on replication trials. One replication trial found effects of homeopathic preparations comparable to the original study; three replication trials failed to confirm the original study but identified possible external influencing factors. Five publications described novel test systems. Eight trials used systematic negative control experiments to investigate test system stability.

**Conclusions:** Quality of publications has increased continuously in the period investigated. Regarding research design, future trials should implement adequate controls to identify specific effects of homeopathic preparations and include systematic negative control experiments to document test system stability. Further external and internal reproduction trials, and control of influencing factors, are needed to verify results.

**Keywords:** Homeopathy, plant-based test systems, review

## Effects of individualized homeopathic intervention in stage I essential hypertension: a single blind randomized, placebo-controlled pilot trial

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**Background:** Hypertension is the fourth-leading risk factor for death and disability and responsible for over 1.6 million deaths in India. Clinical case reports, observational studies and RCTs shows its effectiveness in hypertension. The results of this study will add to the evidence of effectiveness of individualized homeopathic medicine in stage I hypertension.

**Material and methods:** A Randomised placebo-controlled single blind pilot trial was undertaken at five research institutes under Central Council for Research in Homoeopathy, New Delhi, India from October 2013 to March 2018. Out of 1946 patients screened, 217 patients suffering from Stage I hypertension fitting to the inclusion criteria were randomized to receive either Homeopathy plus Life style modification (LSM)=116 or Placebo + LSM=101. The patients in verum arm were administered individualized homeopathic medicine in Q potency. The primary outcome measure to evaluate the change in systolic blood pressure (SBP) and Diastolic blood pressure (DBP) were assessed every month for three months. Analysis was by intention to treat.

**Results:** Repeated measure ANOVA between the groups, showed statistically significant difference (Wilk Lambda 0.85, F= 12.12, dF =213, p= 0.0001), in both SBP and DBP favouring H plus LSM group. Post hoc independent t test showed a significant mean reduction of SBP [mean diff. 7.12, 95% CI 4.72 to 9.53, p= 0.0001] and mean reduction in DBP [mean diff 5.76, 95% CI 4.18 to 7.23, p=0.0001] favouring the H plus LSM group. Medicines found useful are *Sulphur* (n=24), *Natrum mur.* (n=21), *Lycopodium* (n=16), *Nux vom.* (n=12) and *Phosphorus* (n=10) were the most frequently prescribed medicines.

**Conclusion:** Individualized homeopathy plus LSM was found effective over placebo plus LSM in the patients suffering from Stage I hypertension. Further trials in a rigorous setting are warranted.

**Keywords:** Stage I hypertension, individualized homeopathy, Q potency



## Disperse and dissipative nature of aqueous systems – a possible foundation of homeopathy?

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One of the major claims against homeopathy is that ultra-high dilutions (UHD) of biologically active substances are identical to a pure solvent used and therefore cannot possess biological activity. Thus, it is necessary to find out if UHD differ from the solvent in their physical-chemical properties. Recently revolutionary discoveries concerning the properties of aqueous systems with “normal” concentrations of solutes, as well as of UHD prepared from them, were made.

Contrary to the current opinion that solutions are homogenous systems it turned out that sub-micrometer “domains” consisting of both solute and solvent molecules emerge after dissolution solutes in water. Upon dilution even to ultra-high degrees sub-micrometer structures do not disappear; on the contrary their size usually grows up.

These structures in UHD – called “nanoassociates” (NA) by A.I. Konovalov – are negatively charged; their charge and sizes change nonmonotonically with serial dilutions. Patterns of NA parameters correlate with biological effects produced by UHD. Shielding of UHD from ambient electromagnetic fields (EMF) prevents NA emergence in UHD; paradoxical properties differentiating them from pure water including biological activity also disappear. Therefore aqueous systems containing domains and NA (in UHD non-shielded from EMF) should be considered disperse systems rather than classical solutions.

Emergence of domains and NA in them represents the process of self-organization turning them into dissipative non-equilibrium entities. Dynamic structuring of aqueous disperse systems with charge separation in them is provided by energy supplied by environmental EMF and redox reactions with the participation of reactive oxygen species (ROS) permanently proceeding in aqueous systems.

We propose that newly discovered properties of UHD, representing disperse systems of a “water in water” kind, prove that they are basically different from a pure solvent, suggesting that homeopathy has a scientific foundation.

**Keywords:** Ultra-high dilutions, nanoassociates, EMF, ROS



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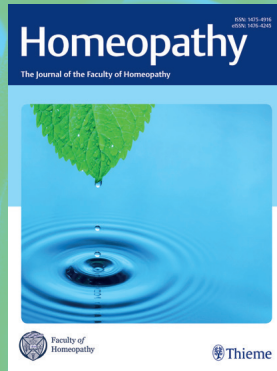
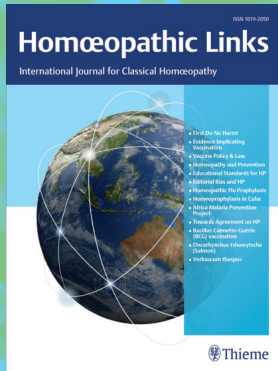
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# Poster Presentations

**P1 Peter Adams**

Fri 14 Jun, 17:00

## **A new area of scientific validation of homeopathy: systems theory**

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Homeopathy is gradually receiving scientific validation. But there is an area of science where validation is available, which is currently not being considered.

There are remarkable parallels between the homeopathic principles of health and disease and complex systems theory. The law of cure, the value of symptoms, organisms optimisation of their responses and other homeopathic principles can be derived from systems theory and cybernetics. These remarkable correlations provide extra scientific support for homeopathy and new ways of looking at some long-established homeopathic principles. They can also help to lead orthodox medicine to a new understanding of health and illness based on systems science.

**Keywords:** Systems science, scientific validation, cybernetics

## Biochemical bases of suppression

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A recent literature review provided a number of studies with experimental information to support the phenomenon of suppression proposed by Homeopathy. This phenomenon states that when a treatment is focused only towards local symptomatology, it may deepen the disease originating mental symptoms. Since the inflammation process could help understand the suppression phenomenon, this article will describe it in detail. Experimental studies reveal that inflammation is a cyclic process that does not end when the inflammatory stimulus disappears, but when specific mechanisms stop this process in order to return to homeostasis. For example, inflammatory cells can change their enzymatic systems from pro-inflammatory to anti-inflammatory producing molecules called lipoxins and resolvins. Such molecules cease inflammation generating anti-inflammatory mediators, promoting the exit of phagocytes from inflammation sites, eliminating chemokines and stimulating tissue repair. Using anti-inflammatory drugs (suppression) to stop inflammation may interfere with this physiological process, continuing with pro-inflammatory cytokine blood levels, such as IL-1, IL-6, IL-18, TNF- $\alpha$ , and INF- $\gamma$ , which activate receptors in the hypothalamus. Once these are released in the brain, they affect neural circuits that regulate behavior. The presence of these molecules decrease the availability of serotonin, dopamine and norepinephrine in the brain, increasing their reuptake and stopping their synthesis by inducing the enzyme indoleamine 2, 3-dioxygenase, which breaks tryptophan, a precursor of these amines. The events mentioned can cause significant emotional changes found in clinical depression, for instance, so much so it has been observed that the severity of depression is proportional to these cytokines levels. This mechanism could support the phenomenon of suppression whereby suppression of physical symptoms causes the appearance of mental symptoms, given that the suppression of a local inflammatory process is not solved at its origin.

**Keywords:** Suppression, mental symptoms, inflammation, cytokines

## **Systematic observations suggest an immaterial mode of action in substances diluted beyond inverse Avogadro's number – a pre-pilot study in human volunteers**

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**Background:** The mode of action of potentised substances beyond inverse Avogadro's number is yet unknown, despite proven effects on biological systems depending of their complexity as shown in plant and animal laboratory experiments, homeopathic drug provings and therapeutic use in humans.

**Objectives:** To demonstrate (i) individual susceptibility to homeopathic ultra high diluted remedies (HUHDR) and (ii) non-material effects of HUHDRs in humans.

**Method:** Healthy volunteers participated in an observational application trial of different HUHDRs in various potencies using a gas discharge visualisation camera (GDV, bio-well.com) for biometric measurement of changes in the bioelectric field taken from electrophotonic emissions of the fingertips.

**Results:** In all three participants without ingesting but holding the respective probes of HUHDRs (i) individual reactions to certain remedies, (ii) non material-transferred effects, (iii) time-related instant or post-withdrawal vanishing effects, and (iv) individual specific reaction patterns to so-called constitutional remedies were detected, on both, the psycho-emotional and physiological level.

**Conclusion:** This is the first published systematic approach to demonstrate an immaterial field-like mode of action of HUHDR in humans by GDV. This non-invasive, well-established and safe biometric method is a promising step of biomarker development in HUHDR research. Furthermore, these preliminary results might draw attention to this way of demonstrating effects of homeopathic ultra high diluted remedies and encourage further in-depth research in this field.

**Keywords:** Mode of action, ultra high dilution, biometric method, gas discharge visualisation

**Aspirin: from high doses to high dilutions – a historical critical review and new proposals**

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Platelets and vessel walls interact to keep the blood flow homeostasis during inflammatory conditions. Rebound effects of anti-thrombotic agents, such as prostanoids and COX inhibitors can lead to thrombosis, infarct and stroke. Aspirin has been prescribed for decades due to its powerful antiplatelet action, but it is also related to withdrawal syndrome peaks, resistance and thrombogenesis. Moreover, other paradoxical effects have also been described. A single high dose of aspirin can generate thrombus eight to ten days later, however, high diluted aspirin can also produce the same effect in one hour, by unknown pathways, although it is known that high dilutions of aspirin can reduce PGI<sub>2</sub> activity. Additionally, aspirin antithrombotic effects are also reversed by its high dilutions. Despite the fact that COX-2 selective inhibition and highly diluted aspirin have prothrombotic properties, the simultaneous administration of both does not further increase thrombus formation. Metabolic changes in platelets, rebound effect, delayed inhibition of COX-2 and residual endothelial aspirin accumulation are plausible hypotheses, since these patterns lead to the concept of hormesis. However, another fields of investigation, such as the characterization of nanostructures and electronic field properties of high dilutions have not been studied yet for aspirin. Further studies involving the participation of COX-2 in macrophages, the description of high dilution physicochemical properties and its putative relation are a promising follow up in this subject.

**Keywords:** Aspirin, high dilutions, experimental models

**High dilution medicine in the treatment of separation anxiety in dogs: a descriptive double-blind placebo-controlled study**

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Separation anxiety in dogs is caused by a great distress which leads to many clinical symptoms. Homeopathy diagnosis susceptibilities in sickness individuals and treat them globally with a single medicine through the law of similarity, according to Samuel Hahnemann's unicism. The aim of this study was to quantify behaviour changes caused by high dilution medicine on dogs' separation anxiety, variation in cortisol values and also set a demographic profile of the dogs. Twenty-three (23) separation anxiety diagnosed dogs by mean of a qualitative questionnaire filled in by their owners were selected and repertorized according to classical homeopathy and treated with *verum* high dilution medicine or placebo, besides blood collect. On the 30<sup>th</sup> day, dogs were reappraised and could undergo changes in their medicines and potencies. On the 60<sup>th</sup> day a new blood sample was collected for comparison. The pharmacist was responsible to randomize and dispense *verum* medicine or placebo. On *verum* group, 11 dogs (68,75%) were classified as effective treatment. Cortisol had no significant difference on statistical analysis ( $p < 0,05$ ) between groups. The mean age of the dogs was 4 years and 7 months and destructiveness was the most common clinical symptom. Most of dogs were male, mixed-breed, not neutered, living with a couple without children, hyperattached to their tutor and were obtained as puppies from pet stores. Although it was possible to conclude that high dilution medicine was able to modify dogs behaviours as a great alternative for separation anxiety treatment, it wasn't feasible to set any connection between high dilution medicine and cortisol.

**Keywords:** Homeopathy, High dilution, Dogs, Behavioural Disturbance, Hyper Attachment



## **A randomised control trial using individualised homeopathic treatment for modifying anger and thereby reducing blood pressure in patients with essential hypertension against standard care treatment**

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**Background:** Hypertension (HT) is the most pervasive disease worldwide causing multiple chronic conditions without apparent symptoms. Global burden of disease is extremely high due to HT. Framingham study tells us that about 90% people after the age of 65 years have lifetime risk of developing HT. Aetiology of hypertension is various and complex, involving both genetic and behavioural factors. More and more people experience increased anger, anxiety, depression brought on by globalization, cultural changes, socioeconomic changes, and stress at work place. Anger is a critical variable in EHT. In our research, we tried to correlate anger with essential hypertension and tried to treat anger with homeopathic simillimum and thereby bringing the hypertension down.

### **Objectives:**

1. To investigate relationship between anger and its component with hypertension.
2. To evaluate the safety and efficacy of homoeopathic treatment on anger and thereby on hypertension in comparison with standard care treatment for hypertension.

**Methodology:** 300 patients with EHT were screened. 172 patients with essential hypertension (108 men, 64 women) enrolled after informed, voluntary consent. Divided in to two equal groups by simple randomisation. Thorough case taking done, all patients were advised for DASH, life style modification and antihypertensives as per individual requirements. STAXI-2 scale applied to measure anger at the beginning and after six months' study period to measure anger. One group kept on placebo and other on individualised homoeopathic medicine. Regular follow up every two weeks. Data generated was analysed by SPSS v.21.

**Results:** Except state anger & its components, all other variables of anger as well as systolic & diastolic BP have remarkably reduced which is statistically significant since p value is <0.001 with 95% confidence interval. Also, 89% patients in intervention arm experienced relief in the symptoms of comorbidities like DM, RA, Psoriasis, GERD, COPD etc.

**Conclusion:** Standard antihypertensives have little impact on anger or general psychopathology of patients and no effect whatsoever on comorbidities unlike simillimum which treats patient as a whole.

**Keywords:** Essential hypertension, state, trait anger, STAXI-2

## 19th century homeopathic materia medica texts predict source materials whose physiology influences thyroid activity

Janice Block

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**Background:** The homeopathic materia medica contains hundreds of thousands of observations collected over the course of centuries. It includes both clinical observations of potentized medicines and also observations of the actions of potentized medicines on healthy subjects (provings). This study was undertaken to determine the degree to which observations within the materia medica could be correlated with the physiological mechanisms for thyroid inhibiting substances in their undiluted state.

**Method:** Four of the most specific symptoms for iodine deficiency were selected to describe the hypothyroid state. Symptom representation for the four selected symptoms within the homeopathic materia medica was compared for two halogen inhibitors, for three substances which influence thyroid hormone target tissues, for six substances known or suspected to increase thyroid stimulating hormone or decrease thyroid hormone levels, and for eleven substances not known to inhibit thyroid activity. To avoid knowledge bias, only those compilations of materia medica whose publication dates preceded the discoveries of crucial aspects of thyroid physiology were used as source materials for investigation.

**Result:** Homeopathic medicines derived from 11 substances with mechanisms for inhibition of thyroid activity were more likely to exhibit selected symptoms than the medicines derived from the 11 substances without known physiological mechanisms for thyroid inhibition. The difference between groups was analyzed *via* the Mann-Whitney non-parametric U test and was statistically significant to  $p < 0.01$ . After observations obtained from provings alone were removed from analysis, the difference between groups of clinical symptoms remained significant to  $p < 0.01$ . Only the two halogen inhibitors of iodine (bromine and fluoric acid) and one influencer of thyroid hormone target tissue (calcium carbonate) were significantly goitrogenic.

**Conclusion:** With respect to thyroid inhibition, there is a significant correlation between observations recorded within the homeopathic materia medica and the purported physiological mechanisms for the corresponding undiluted substances.

**Keywords:** Thyroid, hypothyroidism, homeopathy, materia medica

## Physical-chemical analysis of different homeopathic medicines using solvatochromic dyes as indicators of solvent dipole moment changes

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**Introduction:** Homeopathy is a recognized science throughout the world, but the lack of knowledge about its mechanism of action is still controversial. Currently, several theories are proposed, one of which is that specific electromagnetic fields of the solvents can convey information to biological systems, from the diluted raw material. Recently, the use of solvatochromic dyes has been proposed to identify changes in the solvent dipole moment, along successive dilutions, by solute interference. The present research proposes the evaluation of the dielectric activity of homeopathic drugs by means of the absorbance curve obtained by different solvatochromic dyes, using different potencies.

**Methods:** Samples of *Antimonium crudum*, *Phosphorus*, *Zincum metallicum* and *Silicea terra*, in potencies ranging from 6 to 200cH, as well as the controls: pure water, dynamized pure water and vehicle (30% ethanol solution), were analyzed by the solvatochromic dye method to establish an absorbance curve. The dyes used were: ET33; BDN and Violet methylene. The analysis was performed in a FEMTO™ (BRAZIL) spectrophotometer, with high sensitivity for optical density variations and with a wavelength scan of at least 1 nm. All samples were analyzed in triplicate and the results were evaluated by one-way ANOVA and Tukey's post-test, with  $p \leq 0.05$ .

**Results:** Preliminary data from tested samples of *Antimonium crudum* 120cH and Phosphorus 30cH showed an increase in the peak of absorbance of methylene violet, but not on the other dyes. On the other hand, only *Antimonium crudum* 30cH showed an increase in the absorbance of the ET33 dye. The analyses of other samples, potencies and dyes are still in progress.

**Conclusions:** Preliminary results indicate that variation of different solvatochromic dyes might be useful in the characterization of different potencies of homeopathic medicines, according to changes in the peak of absorbance obtained in the visible light spectrum.

**Keywords:** Ultradilutions, homeopathy, spectrophotometry, electrical resonance

## Understanding the extent and diversity of homeopathic practice in Australia

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The broad objective of this project is to understand the extent and diversity of professional homeopathic practice in Australia. A snapshot of clinical practice taken over an eight week period is reported. The demographics of patients, conditions treated and remedy prescriptions are studied. This pilot study is approved through the Ethics Committee process. Informed consent is obtained by both the homeopath and the patients in their practices. The data tool used to collect patient data, HomeoStats, is an online interface allowing homeopaths to enter limited information about their patients for the study. Data added included patients: age, gender, ethnicity, place of birth and current residence, presenting condition(s) as defined by the International Classification of Primary Care - II, and remedy and potency prescribed. All the patient data is de-identified at the point of collection. The population of homeopaths in Australia is an unknown number. The industry is unregulated. However, the Australian Register of Homoeopaths (ARoH) is a self regulating body defining minimum standard of practice for homeopaths in Australia. Registration with AroH is used as an essential requirement for homeopaths to participate in this study. The total population of ARoH members is 513 at the start of the survey. The projects secondary aims include practitioner education and research upskilling through the use of Practitioner Based Research Networks. The primary aim of these networks is to engage practitioners to increase their skills in research and transfer learning into clinical practice, contributing to an increase in capacity for homeopathy in Australia.

**Keywords:** Clinical practice, homeopathy survey, demographics, Australia, health conditions

## The use of telemedicine in complementary medicine consulting: a survey of homeopaths and naturopaths in Ontario Canada

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**Background and aims:** Telemedicine, defined as the use of online and telephone-based technologies in health service delivery, holds great potential for the delivery of care in both conventional biomedical care and in traditional, complementary and alternative medicine. These technologies have promise for reaching underserved populations, providing access to non-local specialists, and being convenient for patients. This research aims to investigate the extent of, rationale for, as well as strengths and challenges associated with, telemedicine-based consulting by homeopaths and naturopathic doctors in active clinical practice.

**Methods:** Using a census-based approach, state-regulated homeopaths (n=502) and naturopathic doctors (n=1502) in Ontario, Canada were surveyed using the online Qualtrics survey tool. Survey questions captured demographic and socio-economic data of respondents as well as opinions regarding respondents' motivations behind telemedicine use.

**Results:** The survey is ongoing with a current response rate for the homeopathy email respondents of over 30% and over 60% of homeopaths reporting having performed a homeopathic consultation with a patient using face-to-face online video in the past 6 months. Preliminary analysis indicates that for respondents who reported telemedicine use, the average percentage of their practice devoted to face-to-face online video was approximately 20%. In contrast, approximately 35% of naturopaths who have responded to date reported having performed a consultation with a patient using online video in the past 6 months with approximately 10% of their practice devoted to online video consultations.

**Conclusions:** Face-to-face online video appears to be used by a majority of homeopaths in Ontario, Canada. Ontario homeopaths are nearly twice as likely to engage in online video consultations as naturopaths. Future analysis of the data will explore the motivations behind telemedicine use amongst homeopaths and naturopaths in Ontario as well as any demographic or socio-economic factors influencing telemedicine usage.

**Keywords:** Homeopathy, naturopathy, telemedicine, survey

**Physico-chemical characterization of high dilutions of *Symphytum officinale* and therapeutic effect in hepatic and osteosarcoma cells**

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**Background and aim:** *Symphytum officinale* (SO) root and leaves extracts are used as remedy for bone fracture healing, anti-inflammation, also prescribed clinically in high dilution as a homeopathy medicine. These extracts have lycopsamine, rosmarinic acid, symphytine, coumaric acid as major pyrrolizidine alkaloids. Objective of this study is to characterize SO mother tincture (SOMT), 6c, 30c, 200c and study biological response with hepatic epithelial WRL-68 and osteosarcoma Saos-2 cells.

**Methods:** Physico-chemical characterization of SO were studied with high resolution liquid chromatogram mass spectrometer (HRLCMS), nuclear magnetic resonance spectroscopy (NMR), fourier transform infrared spectroscopy, scanning electron microscope and transmission electron microscope (TEM). In vitro drug efficacy were studied in WRL-68 and Saos-2 cells using confocal microscope, MTT cell viability assay and flow cytometer techniques with commercially available SOMT, 6c, 30c and 200c.

**Results:** Lycopsamine mass peak of 300.47 Da, symphytine 381.075 Da, symviridine 382.45 Da and other pyrrolizidine fragments were detected using HRLCMS for SOMT, 6c, and 30c. Chemical shift of 58.49ppm, 18.47ppm in <sup>13</sup>C NMR confirms presence of carbonyl, alkyl, amines, alkanes and alcohol functional groups. Silicates and microelements (K, Na, Mg, P, S) were detected in SO samples using HRTEM. Hepatotoxicity and anti-proliferative effect of SOMT were observed in WRL-68 and Saos-2 cells, whereas cell proliferation and hormesis confirmed when treated with 6c to 200c after 48hrs in MTT assay. Morphology of Saos-2 and WRL-68 cells showed cytoskeletal disorientation with intact plasma membrane and nucleus with SOMT, 6c, 30c after 24hrs in confocal micrographs.

**Conclusions:** SO retained lycopsamine, symviridine and other pyrrolizidine alkaloids in high dilution up to 30c potency. This attributes to silica encapsulation of starting material as shown in TEM micrographs. Significant cell proliferation of Saos-2 cells treated with SOMT to 200c confirms SO efficacy for bone healing.

**Keywords:** *Symphytum officinale*, HRLCMS, high dilution, lycopsamine, TEM

## Homeopathic immunotherapy against cancer

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**Introduction:** Our research team at Federal University have studied *in vitro* and *in vivo* cancer cells treated with homeopathy in the last 20 years. After using different products and analyzing the different results carefully, we arrived at two complexes produced with homeopathic techniques, coded as M1 and M8. The results obtained using these two products were surprising and some were even published in scientific journals with good impact.

**Methodology and results:** The most actual and diverse methodology was used, with several controls: Confocal, Histochemistry, Electron Microscopes, Flow Cytometer, Slide Scanner, Matrigel matrix invasion, ImageJ software, etc. Our studies, *in vitro* and *in vivo*, have demonstrated that these medicines prevent lung and subcutaneous melanoma growth, decreased angiogenesis inside tumor ( $p < 0.01$ ); decreased some extracellular matrix molecules, as Perlecan and Hyaluronic Acid, decreasing metastasis (in Transwell plates,  $p < 0.01$ ); activated macrophages, that can activated others in immune system and other structural as endothelial cells and fibroblasts; modulated cytokines as  $TNF\alpha$ , IFN $\gamma$ , IL10; increased not only the differentiation to NK cells (in flow cytometer  $p < 0.001$ ) but also the cytotoxicity of NK cells ( $p < 0.05$ ); reactive oxygen species (ROS) and nitric oxide (NO) production were modulated.

**Conclusion:** Therefore, M1 and M8 are homeopathic complex medicines (HCM) with immunomodulatory properties, without toxicity nor mutagenic effects. This homeopathic immunotherapy can kindly restore the immune system to recognize tumor cells; thus, can be used to help in all cancer immunophenotypes without acting on a specific molecular target and without toxicity, since the self-healing is stimulated through the immune system. However, the absence of clinical trials has limited its extensive use in cancer immunotherapy, despite promising results *in vitro* as well as *in vivo*. And because in homeopathy we do not have a molecule to track, the greatest difficulty remains, i.e., we know that homeopathy works, we may have many theories about, but we really do not know how it does it.

**Keywords:** Cancer, immunotherapy, homeopathic complexes, immune system answers

## Homeopathic treatment of psoriasis, a case series

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**Background and aims:** Psoriasis is a chronic disease frequently treated in homeopathic practice. However, there is only one prospective uncontrolled multicentric study published with 2 years of follow-up. The aim of this paper is to retrospectively evaluate the treatment results of patients with psoriasis in the Department of Homeopathy of Universidad Maimonides.

**Methods:** The totality of cases of psoriasis that attended to the Homeopathic clinic was searched. Forms were created and examined with EpilInfo software. Evaluated outcomes: Type of psoriasis, severity, presence of arthritic psoriasis, prescription criteria, Homeopathic remedy used, skin outcome, presence of aggravation, outcome of psoriatic arthritis, safety of the treatment. Follow up was evaluated for 1 year. Patients without at least 1 follow-up visit were discarded for analysis.

**Results:** A total of 94 patients presented a clinical record of psoriasis of which 49 presented one follow-up visit and 18 follow-up visits at one year. Plaque psoriasis was 86% and psoriasis guttata represented a 14%. Psoriatic arthritis was present in 15% of the cases. The predominant criteria for prescription was the totality of symptoms and the most frequently prescribed potency the 6 cH. A small or big improvement in psoriasis was observed in 57% of the patients in the second consultation and in 64.7% of the patients after 1 year of treatment. The most frequently used remedies were *Sulphur*, *Lycopodium*, *Pulsatilla* and *Arsenicum album*, but the dispersion was high. Four of 6 patients with arthritis reported to be better in the second consultation, but only 2 of 6 after one year of treatment. No serious adverse events were observed.

**Conclusions:** Homeopathic treatment of psoriasis appears to be safe and to have some positive outcome over psoriasis and over psoriatic arthritis. Prospective controlled trials should verify these results.

**Keywords:** Homeopathy, psoriasis, psoriatic arthritis



## Feasibility of homeopathic treatment for symptom reduction in an integrative oncology service

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**Background:** Homeopathy has the potential to reduce symptoms related to cancer treatment. The present study examined the feasibility of a homeopathic consultation and treatment program, provided as part of an integrative oncology service.

**Methods:** The electronic medical files of patients undergoing a homeopathic consultation in an integrative oncology service clinic were examined retrospectively. Adherence to the homeopathic treatment regimen and perceived response to the treatment were evaluated.

**Results:** The files of 124 patient (34 males, 90 females) were examined, of which two-thirds reported acquiring and self-administering the homeopathic remedy as prescribed, and nearly three-quarters reporting a beneficial effect. Adherence to the homeopathic treatment regimen was greatest among patients attending a second visit, as opposed to having only telephone/e-mail follow-up ( $P < .005$ ). An association was found between a perceived beneficial effect of treatment with attending a follow-up visit ( $P = .04$ ), female gender ( $P = .02$ ), younger age ( $P = .048$ ), diagnosis of breast cancer ( $P = .014$ ), and current radiation treatment (vs chemotherapy;  $P = .003$ ). Patients reporting chemotherapy-induced peripheral neuropathy were also more likely to report a beneficial effect ( $P = .004$ ), as were female patients reporting hot flashes ( $P = .005$ ) and those referred by an oncologist ( $P = .046$ ). No adverse effects were attributed to the homeopathic treatment.

**Conclusions:** Homeopathy can be successfully incorporated within a supportive care integrative oncology service. In addition to demographic and cancer-related characteristics, as well as symptoms, patients attending a second visit (vs only telephone/e-mail follow-up) were more likely to adhere to and perceive a beneficial effect from the homeopathic regimen.

**Keywords:** Homeopathy, oncology service, symptom reduction

## Individualized homeopathic treatment in women with recurrent cystitis: a retrospective case series

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**Background:** Approximately 13% of women develop recurrent urinary tract infections (RUTI) in their lifetime. Most clinicians are faced with repeated and long-term administration of broad-spectrum antimicrobial agents. This leads, however, to the increased presence of drug-resistant bacteria and the disruption of normal levels of intestinal and vaginal flora and might lead to persistent infections and/or damage of the urinary tract. A new strategy is therefore warranted.

### Methods:

Design: Case series of all patients treated with individualised homeopathy (iHOM) for RUTI at the Institute of Complementary Medicine, IKOM, at the University of Bern, Switzerland.

Subjects: Four females, aged 30-79.

Observation time: November 2013-August 2018

Analysis: Frequency of urinary tract infections (UTI) and of antibiotic treatment (AB) were documented in the patients' files. Additionally, treatment outcomes were assessed retrospectively in a validated questionnaire on Impact on Daily Living (ORIDL).

**Results:** The frequency of UTI and the need for AB has reduced from at least monthly to less than 3 times a year. Three of the four women had no cystitis and related intake of AB for more than 2 years. In two of these patients, a relapse of symptoms could be treated efficiently with a repetition of the same homeopathic remedy. The subjective outcome assessments of all patients resulted positive. Three patients appraised major improvement for the main complaint.

**Discussion:** The treatment options for RUTIs are limited and not always successful. Within this case series a new approach, iHOM, results in a positive outcome, both objectively (by reducing the frequency of UTI and the amount of AB courses) and subjectively as per patients' assessments.

**Conclusion:** The evolution of the disease in the analysed patients suggest that iHOM might be a reasonable approach for the treatment of RUTI. It should be further investigated with prospective open-label and controlled studies.

**Keywords:** Urinary tract infections, antibiotic resistance

## Analysing the conflict between biomedicine and homoeopathy

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The broad objective of this research project is to understand conflict and conflict management and to apply that knowledge to the conflict between biomedicine and homoeopathy. My presentation examines a variety of theoretical frameworks around conflict. Initially examining conflict as a topic and its historical role in war and politics alongside neoteric strategies used currently, I bring to light an understanding of conflict in general. Using the perspective of: Gandhi's *non-violent resistance*, Clausewitz strategy on war, *Machiavelli's political strategic* considerations and Sun Tzu's *Art of War*, I disclose how conflict has been managed historically, what strategies have been used to succeed and what mistakes have resulted in defeat. I have chosen to study military and political conflict strategies because biomedicine currently has the power to marginalise other therapeutic approaches, such as homoeopathy, using strategies usually reserved for war and politics.

Through the available body of information from the NHMRC report I will disclose how orthodox medicine is using its dominant position to write reports and make claims as a mechanism of exclusion, a strategic plan to marginalise homoeopathy. I will look at the strategies used by orthodox medicine to gain dominance and the deficiency of homoeopathy's approach culminating in its lost position.

Homoeopathy fundamentally challenges the implicit assumption of biomedicine; that disease is to be fought, with its intrinsic principle of symptom similarity. Ironically vaccination sits as a centerpiece expression of this principle. From my own experience as a homoeopath I suggest the law of similars as a mechanism for conflict resolution.

Conclusions drawn from this investigation may provide novel approaches to conflict resolution and a theoretical framework where rapprochement between biomedicine and homoeopathy may be possible.

**Keywords:** Conflict, strategy, biomedicine, homoeopathy, rapprochement

## Improving decision-making in homeopathic clinical practice

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**Background:** Decision-making in homeopathic practice is a highly complex process. Although guidelines for a successful prescription have been set, homeopathic practitioners consciously and unconsciously make use of heuristics ('rules of thumb' / mental shortcuts) in order to reduce this complexity and reach a remedy decision. Whilst biases affecting the reliability of repertory rubrics are now better understood, biases associated with the actual decision-making process are still under-researched.

### Objectives:

- To identify and explain the main biases affecting decision making in homeopathic practice
- To illustrate the role that decision support systems can play in reducing these biases

**Methods:** The literature on heuristics and biases that can affect decision-making was searched. Those deemed relevant for decision-making in homeopathic practice were identified. The role that a clinical decision support system (Vithoulkas Compass) can play in minimizing the identified biases was assessed.

**Outcomes:** The role and implications of the *availability heuristic*, the *representativeness heuristic*, the anchoring heuristic as well as confirmation bias will be explained. Repertory software and decision support systems are important tools for improving the quality of homeopathic decision-making. The most important proposed and illustrated innovations are:

- 1) Prompts about potential biases during the symptom selection process
- 2) Visualization of the prevalence (base rate) of the selected symptoms in the general patient population during the decision process
- 3) Prompts during the differential diagnosis not to exclude a particular remedy in the absence of particular keynote symptoms
- 4) Delaying the shortlisting of potentially indicated remedies, and to base the shortlist on multiple analytical strategies.

**Conclusions:** Vithoulkas Compass online homeopathic platform aims to integrate the latest knowledge on reducing biases in clinical decision-making. Optimal decision-making involves blending the useful aspects of heuristics with a slow thinking process that balances the tendency to 'jump to the wrong conclusions' as and when needed.

**Keywords:** Decision-making, heuristic, bias, Vithoulkas Compass

## Physicochemical characterization of dynamized solid drugs

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Homeopathic medicine is defined as the pharmaceutical form obtained by the method of dilutions followed by successive succussions or crushing. Clinical homeopathic results have proven the efficacy of these drugs by different experimental models. However, with regard to the dynamics of solid systems, scientific knowledge is still very incipient.

In this context, in 2013, a Multicentric Project (Brazil-Italy) was started with the objective of expanding the studies of this system using dynamized solid systems prepared with metallic zinc in lactose (ZnMet). In this way, the present work evaluated the physical-chemical and structural changes resulting from the trituration process. The X-ray diffraction results indicated no changes in the crystalline structure of the lactose after the grinding process and also the presence of the zinc signal in the first potency (ZnMet 1dH).

Evaluation of differential exploratory calorimetry data shows that both the presence of zinc and the dynamization process alter the enthalpy values of the solid system as well as the dehydration temperature. In the Raman spectroscopy analysis, the amplitude and area of ZnMet (3dH and 6dH) samples were observed, especially in the region with the highest truss vibration (from 200 cm<sup>-1</sup> to 500 cm<sup>-1</sup>).

In the infrared spectroscopy analyzes, a decrease in signal intensity due to the dynamization process and the presence of zinc was observed, suggesting the formation of a complex between the metal and lactose. The scanning electron microscopy evaluation showed small particles with rough appearance on the lactose surface, indicating the adsorption of zinc to lactose.

This set of results suggests that the presence of zinc and the grinding process alter the enthalpy, polarization and vibration of chemical bonds of the dynamized solid system, and these methodologies are sensitive enough to characterize these homeopathic systems.

**Keywords:** Physical-chemistry, Homeopathy, Zinc, lactose, dynamization.

## Wound healing following tooth extraction and *Arnica montana* C30

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**Background:** Pursuing suggestions from empirical medicine a pilot study in 2015 investigated and described effects of *Arnica montana* C30 on wound healing. 23 subjects received the verum, 23 received placebo. One day after tooth extraction 15 verum and 10 placebo-treated subjects were pain-free, 13 and 5 showed smooth (versus jagged) wound edges and 20 and 22 pink (versus livid) wound edges. After one week all 23 subjects in the verum group and 21 in the control group were pain-free, none had post-operative bleeding, 20 and 17 showed smooth and 19 and 6 showed pink wound edges. Although non-significant ( $p>0.05$ ), this outcome may indicate some beneficiary effect on wound healing of *Arnica* C30.

**Objective:** To replicate the pilot study on *Arnica* C30 and the course of healing after tooth extraction.

**Methods:** The study design was unicentric, controlled, randomised, double-blind. All of the 117 recruited subjects ended their participation, 58 received *Arnica* C30, 59 received non-medicinal globuli. We recorded pain, bleeding, and wound status postoperatively on day 2 and day 7.

**Results:** On day 2, 42 verum and 40 placebo-treated subjects were pain-free, 50 and 42 had no post-operative bleeding, 28 and 24 showed smooth and 8 and 4 pink wound edges. After one week all subjects were pain-free and had no post-operative bleeding, 40 and 43 showed smooth and 26 and 22 pink wound edges. None of these trends were significant ( $p>0.05$ ). On pooling the results of this and the pilot study, the only statistically significant trend was on pink wound edges ( $p<0.01$ ).

**Conclusion:** The trends found in the present study are largely in agreement with those of the pilot study. Further research on the effects of *Arnica montana* C30 thus appears worthwhile.

**Keywords:** Tooth extraction, wound healing, *Arnica montana*, high potency

## **Emotional and mental causes as catalysts in the development of cancer**

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Substances that cause cancer, called carcinogens, have been identified both by studies in experimental animals and by epidemiological analysis of cancer frequencies in human populations (e.g. the high incidence of lung cancer among cigarette smokers). Since the development of malignancy is a complex multistep process, many factors may affect the likelihood that cancer will develop, and it is overly simplistic to speak of single causes of most cancers. Nonetheless, many agents, including radiation, chemicals and viruses, have been found to induce cancer in both experimental animals and humans.

However, all the persons exposed to potential carcinogens do not necessarily develop cancer. Often it has been observed about some mental or emotional traumas act as trigger factor or act as catalysts in development of cancer. The present research focuses of studying the cancer cases by evaluating the time frame of some mental or emotional trauma patient have suffered and the time duration in which cancer developed. 100 patients are studied from time frame of some emotional or mental trauma and development of cancer within 0 – 6 months, 0-12 months, 0-24 months.

Appropriate non-paramateric test is applied to analyse the data.

The scope of the research is to widen the possibility of homeopathic treatment in cancer. Various homeopathic medicines are known to treat effects of mental trauma and its ailments. It can be a valuable tool for homeopaths to utilize the data and further enhance the management of cancer with homeopathy.

**Keywords:** Cancer, emotional causes, homeopathic management

## Homeopathic preparations in the low potency range studied by means of pattern formation in evaporating droplets: screening experiments, sample-differentiation, and repeatability

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**Background and aims:** Here we propose for the first time the droplet evaporation method (DEM) as a tool to distinguish low potencies prepared from different substances on a qualitative and quantitative basis. Low potencies ( $\leq 6x$ ) contain measurable quantities of the starting substance, and give so the possibility to study the changes this very substance undergoes in course of successive potentization steps.

**Materials and methods:** The experimentation consisted of (i) screening of 1x–6x potencies deriving from 19 different substances of mineral, vegetal, and animal origin, (ii) experiments aiming at the differentiation of homeopathic preparations at the same potency level prepared from 4 pre-chosen substances (*Echinacea*, *Baptisia*, *Luffa*, and *Spongia*) in the potency range 2x–6x, and (iii) control experiments. DEM experimental protocol consisted in the evaporation of droplets of the analyzed potency per se, placed on microscope slides and under controlled conditions. The resulting patterns were photographed. Images from main and control experiments (ii and iii; in total 2331 images) were evaluated by measuring their grey level distribution and texture.

**Results:** Potencies of mineral origin showed the greatest form variety, whereas potencies of vegetal origin in the potency range 2x–4x created fractal patterns, probably in course of diffusion limited aggregation. The differentiation of homeopathic preparations at the same potency level prepared from 4 pre-chosen substances (*Echinacea*, *Baptisia*, *Luffa*, and *Spongia*) was possible in the potency range 2x–4x, whereas patterns from higher potencies could no longer be differentiated and resembled the pattern of pure solute. The control experiments showed reasonable experimental model stability.

**Conclusions:** DEM seems to represent a promising tool for further studies of homeopathic preparations in the low potency range, like for instance comparison of potencies versus dilutions, or qualitative studies on complex homeopathic preparations regarding the influences of single compounds on the DEM patterns.

**Keywords:** Evaporation patterns, homeopathy, low potencies



## **Biphasic effects of ultradilute potentised oxaliplatin and cisplatin on cell viability and DNA damage**

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The effect of potentiation on the cytotoxic and genotoxic action of pharmaceutical compounds does not always follow the predictions of standard dose-response models. In the scientific literature there are various reports of low and ultra-low potencies of toxic agents reversing or protecting against the effects of toxic concentrations; occasionally a “biphasic” or “oscillatory” response is seen, wherein administering a serially diluted and succussed toxic compound to a biological system, results in alternating high and low peaks of the response parameter under study.

We report our findings from administering low and ultra-low potencies of two widely-used chemotherapeutic platinum compounds, cisplatin (“CDDP”) and oxaliplatin (“OXP”), to in vitro cell lines.

The Sulphorodamine B (“SRB”) and 3-(4,5)-dimethylthiazol-2-yl)-2,5-diphenyl tetrazolium bromide (“MTT”) cell viability assays, as well as the “Comet” genotoxicity assay, were used to measure the effect of various standard, low and ultra-low dilutions of CDDP and OXP on healthy and malignant (MRC5, DLD1, DPSC and NGF-differentiated PC12) cells maintained in culture. All dilutions were succussed. We used succussed vector as control.

Administering the low and ultra-low potencies to cells, either without pre-incubation or after pre-incubating them with a toxic concentration of the respective platinum compound, frequently resulted in a “biphasic” response with respect to the viability of cells and the extent of DNA damage; there appeared to be an alternating effect of protection and toxicity with respect to the control. In a number of cases the effect was statistically significant or highly statistically significant, with the most spectacular effect observed with human dental pulp stem cells (DPSC).

This “oscillatory” response was seen with both ultra-low and low molecular concentrations, thus suggesting a possible threshold for the commencement of the phenomenon, related either to the parameter of molarity or to the succession process itself.

**Keywords:** In vitro, cells, cytotoxicity, genotoxicity

## Reverse engineering the physicochemical properties and mode of action of homeopathic remedies

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Reverse engineering is an approach to problem-solving originating from hardware and software engineering analysis. It involves a backward thinking process that eliminates secondary or confusing elements of the system under study and focuses on decoding key functional features and connections. Reverse engineering is a valuable methodology not only in programming and engineering but also in the biomedical sciences, as seen by the early use of metaphors and classification theory to hypothesise the missing elements in systems under study. The concept of the “black box” is another well-known abstraction originating from engineering science. It consists of three simple elements; input, output and a structurally and functionally opaque element that somehow links the other two by means of a transformation.

There continues to be lack of clarity as regards the exact physicochemical properties and mode of action of homeopathic remedies; though the literature provides many hints, these have yet to be unified into an undisputed working model. We propose that a simplified “black box” model should be constructed and extensively probed by means of reverse engineering in order to arrive from the sum of all known “input” and “output” to a description of the likely mechanism itself.

In fact, two “black boxes” are involved in the homeopathic process: one concerns the remedy itself from a physicochemical perspective while the other relates to the response of the biological organism. We suggest that the two “black boxes” should be probed as little as possible within any single experiment combined, in order not to introduce two imponderables in the same equation.

Finally, using as examples our own experiments on *in vitro* cell cytotoxicity and genotoxicity, we discuss an application of reverse engineering in the context of the “biphasic” responses that are frequently reported to be elicited by homeopathic remedies.

**Keywords:** Reverse engineering, “black box” analysis

## Homeopathy in the NHS (National Health Service): Diluted but active

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**Background:** Despite being used satisfactorily by millions of people worldwide for a range of conditions, and the homeopathy community's efforts to integrate homeopathy into NHS services, homeopathy provision has been declining.

**Aim:** A pragmatic investigation of the integration of homeopathy in the UK NHS.

**Method:** A nationwide postal survey among 144 members of the Faculty of Homeopathy mapped demographic data and integration of homeopathy services in the NHS, building on a Canadian integration model proposed by Boon (2004). To enable a comprehensive understanding, 10 semi-structured interviews explored homeopaths' strategies to successfully integrate homeopathy into NHS services.

**Results:** A sample of 72 respondents revealed that 27 were actively offering homeopathy treatment in their NHS service. According to the continuum proposed by Boon, UK services integrating homeopathy treatment are characterised as collaborative and multidisciplinary. Seven profiles of homeopathic providers in the NHS could be distinguished. In the interviews, several suggestions were put forward to restore the badly damaged image of homeopathy. The interviewees disagreed about whether integration was the preferred strategy to reach this goal, or even whether integration was desirable at all, but the accreditation of homeopathy within the healthcare system was deemed vital for the survival of homeopathy, even for the success of private practices. A lack of resources and the dwindling numbers of newly trained homeopathy practitioners were mentioned as a matter of concern. A major frustration was the negation of existing evidence for homeopathy, leaving homeopaths questioning what kind of evidence - from fundamental research or from outcome studies - would be the best way forward.

**Conclusion:** Despite positive results regarding the integration of homeopathic services in the NHS, the information disclosed in the interviews revealed a concern about the survival of homeopathy.

**Keywords:** Health service, homeopathy, integration

## **Symptom severity and functional status in patients with joint pain, back pain, headache, and cough: A 10-year retrospective analysis of The Swaziland Homeopathy Project**

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**Background and Aims:** Over the past 10 years, The Swaziland Homeopathy Project has treated 9 866 patients in Eswatini and Mozambique in southern Africa. The patients ranged in age from under 10 to over 79 years and 79% were female. Most lived in rural areas. The Project practices classical homeopathy.

**Research Questions:** What are the most common presenting symptoms? What are the characteristics of the patients reporting these symptoms? Do these patients report improvement in their symptom intensity and functional scores?

**Method:** We conducted a retrospective analysis using de-identified chart data. We collapsed similar symptoms into categories and ascertained the most frequent presenting complaints. Patients reported symptom severity on a visual analogue scale and overall function on a modified Karnofsky Performance Scale Index at each visit. We extracted the scores as reported on initial and follow-up visits.

**Results:** The most common symptoms treated were joint pain, back pain, headache, and cough. These four symptoms were reported at 33 649 visits, 50% of which have at least one follow-up. Of the patients seen for each of these complaints, 11-19% were male and 81-89% were female. Symptom severity improved in 49-63% of patients with the complaint of headache showing the greatest improvement. Approximately 10% of patients reported a worsening of symptom severity. Regarding the functional scale, 41-49% of patients reported improvement while 11% reported deterioration in their overall function regardless the symptom. Those who were treated for cough reported the greatest functional improvement.

**Future direction:** In this retrospective chart analysis, patients reported improvement in their symptoms. Patients complaining of headache and cough possibly incurred the greatest benefit, so these symptoms will be the foci of the next phase. The future prospective study will investigate statistical significance and attempt to differentiate improvement beyond that expected from placebo.

**Keywords:** Symptoms, retrospective, pain, cough, Africa

## Usage protocol study of *Calendula officinalis* compared to Chlorhexidine in oral hygiene of patients admitted in the Intensive Care Unit (ICU)

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**Background:** Pneumonia is defined as the presence of pulmonary infiltrate of infectious origin, with the onset of fever, purulent sputum, leukocytosis and oxygenation reduction. Ventilation-associated Pneumonia (VAP) is the one that occurs after 48h of endotracheal intubation and affects 9-27% of patients in the Intensive Care Unit (ICU). In order to prevent patients from developing VAP, intervention protocols were drafted. One of which was oral hygiene using chlorhexidine (CLX) as mouthwash at the concentration of 0.2% or 2%, the last being more effective. Depending on the length of use and the concentration increase, the bacteria will develop resistance to CLX, while some studies show the use of *Calendula officinalis* (*Cal off*) has beneficial.

**Aims:** The present study aims to develop a pharmaceutical formulation in gel using *Call off* in the power 1DH and CLX for further evaluation of its physicochemical, microbiological and biological response characteristics in ICU patients.

**Methods:** The two formulations were prepared according to the Brazilian Pharmacopeia (FB) 5th ed and the Brazilian homeopathic Pharmacopeia (FHB) 3rd ed. The stability studies were made in greenhouse, shelf and refrigerator according to the 2nd-ed-FB form and IN #4.

**Results and conclusions:** Preliminary results show the mother tincture of *Calendula* presents all the quality parameters required for use in homeopathic medicine. The formulations developed, *Calendula* gel 1DH and CLX Gel 2%, presented a PH drop in all gels and viscosity value decrease for gels stored in the greenhouse over 30 days. The gels stored on the shelf did not have alterations in the organoleptic characteristics. The gels were applied in 8 ICU patients and it was observed that the treatment with *Calendula* gel was more effective, as it inhibited microbial growth in 50% of the patients, after 3 collections. The study is underway with an expected duration of 6 months.

**Keywords:** Intensive care unit, ventilator-associated pneumonia, chlorhexidine, *Calendula officinalis*, homeopathy

**In vitro antifungal activity of *Aloysia polystachya* essential oil in high dilution on *Aspergillus flavus* isolated from the Brazil nut (*Bertholletia excelsa*)**

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**Background:** *Bertholletia excelsa*, Brazil nut, has significant participation in the food and cosmetic industry, however, contamination by *Aspergillus flavus*, aflatoxin-producing fungus and causing post-harvest rot, is a serious impediment to its commercialization. Substances of plant origin are an important therapeutic resource and the dynamization of essential oils is a safe and efficient pharmacotechnical technique. *Aloysia polystachya* is a plant native to South America whose essential oil has a considerable biocidal effect.

**Aim:** To determine the ability of the original and dynamized essential oil of *A. polystachya* to inhibit the in vitro multiplication of the fungus *A. flavus* isolated from brazil nuts.

**Methods:** The essential oil of *A. polystachya*, obtained by hydrodistillation, was diluted with Tween 80 (1%) and then dynamized. The activity of the original and dynamized essential oils of *A. polystachya* was evaluated by the Minimum Inhibitory Concentration (MIC) and Minimum Fungicidal Concentration (MFC) method. The vehicle control was performed and rezazurin was used for the reading. The analyzes were performed in triplicate and the results were submitted to ANOVA, the means of the treatments being compared by the Scott-Knott test ( $p < 0.05$ ).

**Results:** The original essential oil of *A. polystachya* presented a MIC of  $1.56 \mu\text{g.mL}^{-1}$ , differing statistically from the MIC of the dynamized form, which was  $0.01 \mu\text{g.mL}^{-1}$ . In the MFC evaluation, both treatments presented fungistatic activity against *A. flavus*.

**Conclusions:** The highly diluted essential oil of *A. polystachya* presented significant fungistatic activity against *A. flavus* and, therefore, may be a promising resource in the control of post-harvest contamination in brazil nuts.

**Keywords:** *Aloysia polystachya*, *Aspergillus flavus*, *Bertholletia excelsa*, dynamization, antifungal activity

## Use of homeopathic complex in the control of dairy cattle ticks

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**Background:** *Rhipicephalus (Boophilus) microplus* parasitism causes large losses in bovine herds, and its control by means of synthetic carrapaticides causes resistance problems, as well as the risk of residues in food and environment.

**Aim:** To evaluate the effectiveness of the homeopathic complex in the control of the natural infestation of lactating dairy cows and its *in vitro* effect on engorged females.

**Methods:** The tests were carried out in two dairy farms between May and October 2018, being certified organic with 70 animals and the other using the conventional production model with 16 animals. The homeopathic formulation was composed of *Staphysagria* 3 DH, *Cina* 6 CH, *Sulphur* 6 CH and autoisoterapic of tick 30 CH. The bovine females received orally 10 grams per day of the homeopathic complex, incorporated into sucrose. The parameters determined by the producer's perception were: degree of infestation (%) and physical appearance of the parasites. For *in vitro* evaluation engorged females of *Rhipicephalus (Boophilus) microplus*, collected from naturally infested animals, were submitted to the immersion test.

**Results:** According to the producers' perception, in both properties there was a mean reduction of infestation by 80% in the treatment period and alteration in the coloration of the lighter parasites with a more wrinkled appearance. In the *in vitro* test, the homeopathic complex showed an efficacy of 13% and 55%, in the organic and conventional properties, respectively.

**Conclusion:** The homeopathic complex presented effective control in the natural infestation of ticks in dairy cows of organic and conventional property.

**Keywords:** *Rhipicephalus microplus*, high dilution, organic

## The homoeopathic approach to treatment of PCOS in a rural setup

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**Background:** PCOS (Polycystic Ovarian Syndrome) is a complex, chronic lifestyle linked disorder associated with hyperandrogenism, oligo-anovulation and polycystic ovarian morphology.

According to Indian Council of Medical Research, one out of ten women in India suffer from PCOS and the number is increasing alarmingly even in rural areas. Changing dietary habits (consumption of fatty, processed foods) and sedentary lifestyles result in decreased metabolism, insulin resistance and obesity – factors contributing to menstrual irregularities.

**Aim:** The objective of the study was to assess the efficacy of homoeopathy as a treatment option for PCOS.

**Methods:** A retrospective observational study of 72 patients, who were diagnosed cases of PCOS was carried out at a community hospital in rural Maharashtra.

In a mass setting with a large number of patients from poor socio-economic strata presenting with common symptoms of PCOS, there was paucity of characteristic symptoms. Therefore, the keynote method of prescribing was employed. The data regarding patient's presenting symptoms was noted. The protocol followed in this study was formed based on totality of common symptoms of PCOS (irregular menses, obesity, secondary hirsutism, lethargy, acne, infertility). One characteristic symptom (keynote) was selected as a differentiating rubric to choose the most similar remedy from the ones derived.

Patient's monthly progress and clinical outcomes up to one year of starting therapy were noted.

**Results:** Out of common symptoms of PCOS, lethargy, loss of general feeling of well-being and irregular menses were the first ones to get ameliorated which indicates the correct direction of homoeopathic action.

**Conclusion:** Homoeopathy as a treatment modality may add substantial value to the paradigm of PCOS management.

**Keywords:** PCOS, homoeopathy, keynote



## Homoeopathic management of tomato leaf curl virus using *Psorinum*

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**Background:** Tomato leaf curl virus (ToLCV) disease vectored by whitefly *Bemisia tabaci*, is the most devastating disease of cultivated tomato (*Lycopersicon esculentum*) causing 38-100% yield loss, depending on the stage of the crop at the time of infection. This has hooked up research to find suitable remedials. The use of homoeopathic nosode, *Psorinum* in agriculture was to validate the potential of agro-homoeopathy in viral infection. According to Dr. Samuel Hahnemann, '*Psorinum* is not a simple biotherapy, rather it is a homoeopathic remedy having been the object of experiment, according to the methodology of proving'.

**Methods:** The study was conducted in Sarada Krishna Homoeopathic Medical College, Kulasekharam, Kanyakumari district, Tamil Nadu, India during the year 2017-18. The study aims at producing variation in observations in *Psorinum* treated and untreated group of tomato plants susceptible to ToLCV infection. The observations considered for study were: Growth parameters, yield attributes such as durations of flowering and fruiting events, Fruit weight, yield/plant etc. were also calculated. Biochemical characters such as Lycopene, Ascorbic acid was inferred by suitable laboratory protocol. All parameters were expressed as Mean  $\pm$  SE. Disease incidence by ToLCV was observed at regular intervals by the appearance of key symptoms. Real-time PCR methods was used for the quantification of viral load in *Psorinum* 30 treated sets of tomato plant along with the control.

**Results:** Significant variation were observed in growth parameters especially in height of the plant and fruit weight, yield showed 42.67% increase than control group. Biochemical parameters especially Ascorbic acid has shown 12.4% increase when compared with the control group. Analysis of virus DNA by RT-PCR has showed 31.67% of viral load reduction when compared to control group. Statistical analysis of treatments has given significance at  $p < 0.001$ .

**Keywords:** Agro-homoeopathy, tomato leaf curl virus disease, ToLCV, real-time PCR

## Implication for hydrogen free radical formation in the presence of hydrogen nanobubbles

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Strong vertical shaking in the traditional homeopathic preparation can cause the generation of air nanobubbles in water. Nanoparticle Tracking Analysis (NTA) images of 4CH and 30CH water may reveal Brownian bubbles with the mean diameter of around 100nm and concentration of  $3\text{-}4 \times 10^7$  particles/mL. Nanobubble research may provide a new approach to understanding of Homeopathy as there exists a close parallelism between homeopathic dilution and nanobubble water.

We have studied a puzzling phenomenon of size dependent spontaneous combustion inside  $\text{H}_2/\text{O}_2$  nanobubbles in the mixture of hydrogen and oxygen nanobubble water with NTA. We measured time-dependent NTA size distributions of  $\text{H}_2/\text{O}_2$  nanobubbles after mixing  $\text{H}_2$  and  $\text{O}_2$  nanobubble water to determine the size of the mixed gas nanobubbles pertaining to the combustion. We find the initial increase and subsequent decrease in the total volume of the nanobubbles, showing a significant reduction in the number density of the nanobubbles with less than 100nm. This implies water formation at room temperature through hydrogen free radical generation that is conjectured from the experiments of hydrogen nanobubble effects found by ESR and fluorescence spectroscopies, and simulations.

**Keywords:** Hydrogen, nanobubble, water, hydrogen, free radical generation

## Urticaria and homeopathy: the unmet clinical needs

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**Background:** Chronic urticaria (CU) is a disturbing allergic condition of the skin, defined as the occurrence of hives, pruritus and/or angioedema for more than 6 weeks.

**Aim:** To assess the clinical outcome associated with individualised homeopathic remedies on CU symptoms in patients who had remained symptomatic despite concomitant antihistamine therapy.

**Methods:** We performed a clinical observational study of ten patients in the treatment of CU symptoms over a two-year period (2015 and 2016). Research Ethics Committee approval was secured and informed consent was obtained from each patient. End points were measured from a daily diary that reflected weekly hive score (WHS) and weekly itch score (WIS). QoL was evaluated using a CU quality of life questionnaire (CU-Q2oL) score.

**Results:** Overall average WHS at baseline was 18.2 (standard deviation, SD, 3.6) and WIS was 21 (SD, 0). At 4 weeks, 8 weeks and 12 weeks the mean (SD) change from baseline in the WHS was -9.7 (4.4), -13.3 (4.8) & -18.2 (3.6) respectively. Mean (SD) change from baseline in WIS after 4 weeks, 8 weeks and 12 weeks were -8.6 (2.4), -15 (2.8) & -20.9 (0.3) respectively.

Overall mean CU-Q2oL scores at baseline of all ten patients were 76.0 (1.0) which improved to 43.7 (0.5) at week 4, 28.2 (0.4) at week 8 and 23.9 (0.2) at week 12. In all patients, use of antihistamine decreased from 10 mg twice daily at study baseline to none at week 12.

**Conclusion:** Individualised homeopathic treatment was associated with alleviation of CU symptoms, enabling reduction in use of conventional treatment. The results presented in this study can be considered as a step towards a pilot pragmatic study using homeopathy.

**Keywords:** Chronic urticaria, WHS, WIS

## Exploring the tools for large scale data collection and analysis in clinical practice in Africa. Developing methodologies for measurement of patient outcome

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The utilization of data collection systems and analysis tools is a key component of health information systems and used to formulate health policy and analyse operational efficiencies and health outcomes. In the quest to find scientific evidence to validate homeopathy, emphasis on the clinical outcome of homeopathic treatments as part of operational research is a valid and important contribution to homeopathic research.

Two homeopathy projects have been exploring ways in which evidence from clinical practice can support homeopathy in their countries for ten years. The Swaziland Homeopathy Project (SHP) and the Kenya School for Integrated Medicine (KSIM) have been collaborating in producing clinical evidence and together have over 10,000 cases in their database system. SHP use Access database to evaluate outcomes, using a Visual Analogue Scale (VAS) which is a psychometric response scale which can be used in questionnaires. It also uses a Karnofsky/Lansky Performance Status to evaluate overall functionality. These scoring mechanisms were chosen to evaluate overall wellbeing and individual symptom scores in an African context.

KSIM is working on a five-year project sponsored through the European Union with the Ministry of Health, Kenya. It has introduced an innovative data collection system based on DHIS2, an open source health information system used by 55 countries worldwide. It has adapted DHIS2 to homeopathic data collection, using VAS and Karnofsky scores to evaluate homeopathic outcomes. This innovative data collection model has the potential to create a very large data base of clinical outcomes in homeopathy. Both systems are being evaluated and monitored for efficacy.

It has been shown that the VAS and Karnofsky scoring mechanisms are an efficient system of evaluation. Homeopathic outcomes show positive results and developing an online data collection system with DHIS2 shows potential in clinical situations in Africa and beyond

**Keywords:** Evidence, clinical, outcomes, information, systems

## Efficacy of homeopathic herd health management in antibiotic resistant dairy cattle in northern Spain

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**Background:** Milk yield in dairy farms worldwide has improved due to advances in genetics, feeding, and cattle handling. Maximum yields lead to stress and immunosuppression of the animal, having to heavily rely on antibiotics to preserve health. Consequently, there is an ever-increasing level of antibiotic resistance and chronic disease in dairy farms.

**Objectives:** To demonstrate the effectiveness of Homeopathy based treatments in dairy farms with above than average disease incidence and antibiotic resistance.

**Study design:** Longitudinal, observational, and prospective.

**Methods:** The study was conducted in three Holstein farms (mean average: 25 animals/farm) in semi extensive systems, fed concentrated feed, silage, and pasture. The variable was SCC (somatic cell count per millilitre), taken from the milk tank every 48 hrs. and analysed with SPSS software. The cut off number for an acceptable sample was at 250 Somatic Cells (SCC<250).

From 2013 to 2015 the animals were treated individually with classic homeopathy, and from 2015 until 2017 a preventative homeopathy herd health program was implemented. Choice of treatment program was based on disease aetiology in each herd, blood work, and SCC.

Treatment administration was the Plus Method (3 pills/125mls of mineral water) of 6, 30 or 200 CH potency. Administration route was P.O. or in concentrated feed.

**Results:** Prior to homeopathy treatment (2007-2013) only 22%, 25% and 27% of the samples from each farm had an scc below 250. Once homeopathy treatment was started (2013-2017) these farms reached 66%, 56% and 46% (respectively) of days with scc below 250.

**Main limitations:** Lack of proper assessment by the farmer and sub-optimal nutrition.

**Conclusions:** When comparing treatments in dairy farms homeopathy is a more effective at keeping somatic cell counts (scc) below the 250 threshold.

**Keywords:** Dairy, homeopathy, scc, antibiotic resistance.

## ***Hypericum perforatum* to improve post-operative pain outcome after lumbar monosegmental spinal microdiscectomy (HYPOS) – Preliminary results of a randomized controlled trial**

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**Background:** Potentiated *Hypericum perforatum* is known as a remedy for lancinating pain when nerval damage is involved. We aimed at investigating whether additional intake of *Hypericum* C200 might lead to a significant decrease of perceived pain and conventional pain medication compared to placebo in patients undergoing spinal microdiscectomy.

**Methods:** Between 2015 and 2018 a randomized controlled trial was conducted in the Department of Neurosurgery at the Community Hospital Herdecke. In-patients undergoing spinal microdiscectomy were randomly selected into homeopathic treatment vs. placebo both in addition to usual pain management. 3 globuli of either verum or placebo were administered after surgery every 12 hours for 3-5 days. The primary outcome was pain reduction after 3 resp. 5 days after surgery measured on a visual analogue scale. Statistical analysis was done by means of a repeated measures model.

**Results:** A total of 95 patients were included in this preliminary analysis of which 47 patients (49.5%) received homeopathic treatment. No significant between group difference was found with respect to patient demographics such as gender (Control: 25 (52.1%) versus Verum: 21 (44.7%) male patients), age (mean: 52.5 ± 14.2 versus 52.2 ± 13.5 years), body mass index (mean: 26.8 ± 4.2 versus 27.9 ± 5.2 years) and duration of surgery (mean: 62.5 ± 20.6 versus 66.4 ± 28.3 min). With respect to pain reduction there was almost a similar decrease in pain intensity from 5.6 ± 2.3 (Control) and 5.8 ± 2.6 (Verum) to 3.0 ± 2.6 (Control) and 3.0 ± 2.5 (Verum) with no significant group differences based on complete case analysis (N=66).

**Discussion:** This preliminary data analysis showed comparable sociomedical parameters between the two groups. The results however did not confirm any difference in pain reduction between them. Further analyses on the intake of pain medication and the evaluation of sensory and affective pain perception are currently performed.

**Keywords:** Microdiscectomy, *Hypericum perforatum*, pain, RCT

## **Clificol: First result of *Carcinosinum* patient cases**

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**Background and aims:** Clificol is an International databank able to store and analyse clinical cases collected from over 20.000 RadarOpus users and from You-Cure.

The homeopaths will first collect the data in WinCHIP which guarantees the completeness and the standardization of the information (thanks to the use of dedicated pick list).

The stored data will be validated by WinCHIP and after will be sent to Clificol databank where will be checked by a qualified staff to ensure the integrity of all the data.

The data, according the General Data Protection Regulation (GDPR) rules will be sent in anonymous way.

**Method:** We analyse the output of the data (4659 cases) from different side:

- Epidemiological: patient age, gender, acute and chronic illness distribution
- Homeopathic: we study the *Carcinosinum* most frequent pathologies treated and the frequency of the repertorial symptoms.

**Results and Conclusion:** The author will show the case studied with the help of technology to obtain high quality data.

The open problems that the homeopathic clinical research involves are described.

**Keywords:** Clificol, WinCHIP, RadarOpus, You-cure, methodology

## **A randomized controlled study on cognitive effects of anticancer therapy in patients with breast cancer treated with rehabilitation exercises, diet and add-on homeopathy and acupuncture/auriculotherapy**

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**Background and aims:** Chemotherapy-related cognitive impairment (CRCI) “chemobrain” includes mental fatigue, impairment in attention, processing speed, short-term memory.

**Aims:** This study evaluates the efficacy of complementary integrative medicine (CIM), acupuncture and homeopathy, compared to standard care in relieving CRCI.

**Material and methods:** Inclusion criteria: female aged 18 to 70 years, with a primary diagnosis of early BC (stage I-III A) treated with adjuvant chemotherapy regimens and/or endocrine therapy; written informed consent; educational level sufficient to understand the neurocognitive tests. Stratification: menopausal status; chemotherapy regimens; endocrine therapy.

**Treatment:** Acupuncture: basic acupuncture formulas Baihui (GB20), ExYintang1, Taixi (KI3). Sessions will be scheduled once a week for 4 weeks followed by one month of auriculotherapy, at the end other 4 weekly sessions of acupuncture. Homeopathy: a magistral preparation including: *Helleborus niger* 15CH, *Plumbum metallicum* 6 CH, *Phosphorus* 15 CH and *Cerebral cortex* 5 CH, *Nerves* 5 CH, three granules three times a day for 3 months.

All the patients will receive dietary advices to reduce body inflammatory state and at the end of chemotherapy undergo a neuropsychological visit performed by a psychologist properly trained for cognitive function assessment. During the study, blood samples for plasma/serum analysis of BDNF (brain-derived neurotrophic factor), IL-6 and TNF (at baseline and 12 months) will be also collected.

The number of patients recruited will be 300 divided in three groups: 1) 100 pts with rehabilitation exercises and dietary advices plus homeopathy; 2) 100 pts with rehabilitation exercises and dietary advices plus acupuncture and auriculotherapy; 3) 100 pts with rehabilitation exercises and dietary advices as control group.

**Results:** The study is currently in the early stages, so there are no results to show yet. We expect to produce the first preliminary results during the HRI congress in London.

**Keywords:** Breast cancer patients, anticancer therapy, cognitive impairments, homeopathy, complementary medicine



## **A quantitative analysis of the efficacy of homeopathic treatment in the management of allergic rhinitis in children**

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**Background:** Allergic rhinitis affects about 10-40% people globally. About three-fourth of Indian children suffering from allergic rhinitis are found to be symptomatic, hampering quality of life and emerging as leading cause of school absenteeism.

Homeopathy aims to boost immunity, alter susceptibility and decrease the predisposition towards allergies.

**Aim:** To determine the role of homeopathy in treating allergic rhinitis-reducing the frequency and intensity of attacks; boosting immunity and increasing tolerance towards the various allergens.

### **Methods:**

- A descriptive, observational study, including 30 cases
- An evaluation tool of ARIA (Allergic rhinitis & its impact on Asthma) was used to stage the Allergic rhinitis before and after treatment & paired T test was applied
- During Homeopathic treatment a 2 fold approach was used- medicine to boost immunity and modify the allergic tendency was given during symptom free periods and an acute remedy for the exacerbation of the allergic episode
- Outcome Measurement was done based on the post treatment stage. Symptoms persisting in stage 1 & 2 were considered as improvement and symptoms  $\leq 4$  days a week OR  $\leq 4$  weeks were considered as stage 0 or cured

**Results:** Analysis of the cases after 6 months of treatment revealed that 70% of included cases were cured, 27% showed improvement at 3% were drop outs.

### **Conclusion:**

- Based on the results, the Null hypothesis was rejected & it was concluded that Homeopathy is effective in treating paediatric Allergic Rhinitis by modifying the allergic tendency
- The objective of reducing the frequency & intensity of episodes after treatment with Homeopathy was attained as evident from the post treatment analysis
- Allergen tolerance towards weather change and coloured food was achieved.

**Keywords:** Allergic rhinitis, homeopathy, immunity, susceptibility

## **Prenatal symptom taking and remedy picture in children**

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**Background:** Observations in homoeopathy practice indicate that characteristic traits in infants assignable to a remedy picture already manifest themselves in the mother during pregnancy.

**Aim:** To investigate whether newly appearing symptoms in pregnant women correspond to the remedy picture of the child once born.

**Methods:** In the first phase (2015/2016) 15 pregnant women underwent homoeopathic case-taking (survey 1) without intervention. Symptoms newly appearing during pregnancy were repertorised to obtain a remedy picture ranking. In the second phase (2017) 13 of the children, now born, underwent symptom-taking by their own mother based on a standard questionnaire (survey 2) as well as an initial homoeopathic case-taking performed independently (survey 3). Again there was no therapeutic intervention. The symptoms found in the two postnatal surveys (performed by the mother and a homoeopath respectively) were repertorised in the same manner in order to obtain two postnatal remedy picture rankings. Then the degree of agreement between the prenatal and postnatal rankings was determined.

**Results:** Rankings contained on average 414 remedy suggestions. The first-ranked remedy suggestion for the pregnant mother (survey 1) also ranked first for the child in 4 of 13 cases (31%) and was among the 6 highest ranking for the child in 11 of 13 cases (84.6%) (survey 2). This points to a clear connection between the prenatal and postnatal homoeopathic surveys. Concurrence between the two postnatal surveys (performed by the mother and a homoeopath respectively) was also high.

**Conclusion:** The prenatal homoeopathic survey in the mother showed high agreement with the postnatal survey in the child. This could indicate that remedy pictures found in pregnant women correspond to traits of the child once born. Homoeopathic case-taking in pregnant women may facilitate remedy-finding in newborns.

**Keywords:** Prenatal, postnatal, symptoms, remedy-picture, correspondence

## Systematic review of conceptual criticism of homeopathy

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**Background:** Homeopathy with its long tradition as complementary medicine therapy is often a subject of debates, especially in non peer-reviewed media, in which its effects and plausibility are highly discussed. Due to the lacking knowledge of a remedy-specific mode of action, preclinical and clinical effects of homeopathy are questioned and lack of scientific evidence emphasized. This systematic review aims to summarize and evaluate peer-reviewed scientific articles regarding conceptual criticism of homeopathy.

**Methods:** Literature search strategy included original peer-reviewed scientific articles on conceptual criticism of homeopathy, following the current recommendations of Preferred Reporting Items for Systematic Reviews and Meta-Analysis Approach (PRISMA). The databases Cochrane Library, EMBASE, Europe PMC, PhilPapers, PubMed and Web of Science provided the basis of the literature search. Editorials, comments, reviews, meta-analyses, clinical trials and experimental studies were not considered.

**Results and Conclusion:** Only few articles were found. Implausibility of homeopathic basic principles (law of similars, potentization procedure) according to current state of scientific knowledge is stated. In some cases, further conclusions are drawn such as that homeopathy is ethically unacceptable. Based on the present analysis of scientific peer-reviewed literature, the current discussion in public media is not mirrored by a corresponding scientific debate.

**Keywords:** Homeopathy, conceptual criticism, scientific evidence

## Integration of homeopathy in Indian healthcare

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**Background (why to integrate):** WHO endorses health service delivery to become more integrated and people-centric by reorienting the model of care and coordinating services within and across sectors. It is thus, essential to integrate Homeopathy in national health programs of countries which can aid in reducing healthcare burden and diminish costs. India's current healthcare system is not sustainable for its population. With rapid health transition India is facing "Triple burden of disease" in form of unfinished cases of communicable diseases, rising non-communicable diseases which are related to lifestyle and emerging threat of infectious diseases. On other hand, there is lack of sufficient trained healthcare manpower.

**Method (how to integrate):** Homeopathy is playing a considerable role in meeting the health care needs of the population in India by its integration at appropriate levels, within specified areas of responsibility and functioning, in the over-all health care delivery system, especially with regard to the preventive, promotive and public health objectives. Government of India has launched several schemes and national programs where in Homeopathy is being utilized for its inherent advantages of patient centric approach, cost effective, easy to administer and gentle action.

**Result and Discussion (current integrated scenario in India):** The results of nationally representative health survey 2014, reveals that Homeopathy has significant presence in India and popularity more among children (under-five years), particularly in urban areas. Homeopathy is widely practiced in Uttar Pradesh, Kerala, West Bengal, Orissa, Andhra Pradesh, Maharashtra, Punjab, Tamil Nadu, Bihar, Gujarat and the North-Eastern States of India. India has very conducive infrastructure with 284,471 homeopathy doctors, 201 under-graduation and 50 post-graduation colleges, 7544 government-run clinics and 164 hospitals pertaining to Homeopathy which are run by state governments and municipal bodies – exists as a sustainable support to public health. The growth rate of Homeopathy has increased from 1935 doctors per crore population in 2007 and reached to 2136 doctors per crore population in the year 2017.

Through Indian model of meaningful integration of Homoeopathy in healthcare we are focusing on providing education through university system, adequate drug control measures, high quality research and participating in public health initiatives. Resulting improvement in health outcomes of country thereby assist in achieving Universal Health Coverage.

**Keywords:** Homeopathy, integrated health service, national health profile, universal health coverage

## **Medicinal and placebo effects of homoeopathic remedies: a comparative study on patients with somatoform low back pain and patients with pathological low back pain**

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**Introduction:** Low back pain is the most common musculoskeletal disorder reported in clinical practice. Chronic low back pain is also a leading symptom of somatoform pain disorder where the physical symptoms often are not physically explainable. The study was intended to know whether there was any difference in the effect of Homoeopathic medicines or Homoeopathic medicines when given along with Placebo or Placebo alone in pain and functional disability, anxiety, depression and wellbeing in patients with pathological low back pain and patients with somatoform low back pain.

**Methodology:** A pre-post experimental design was used for the study with pain as the primary outcome variable and anxiety, depression and wellbeing as the secondary outcome variables based on Oswestry low back pain scale (Fairbank 1980), Hamilton Anxiety Rating Scale (Hamilton 1959), Beck Depression Inventory (Beck 1961) and PGI General Wellbeing Measure (Verma & Verma 1989). 225 patients with pathological low back pain and 225 patients with somatoform low back pain were divided into three separate categories who received either homoeopathic medicine alone or placebo alone or individualized homoeopathic medicine with placebo. Institutional ethical committee clearance was obtained, and patients were enrolled only after giving their informed consent. Data were analysed using ANCOVA.

**Conclusions:** Major findings showed that homoeopathic medicine when used alone can be more effective in managing pain and other co morbid conditions in patients with low back pain of pathological nature. Homoeopathic medicine in combination with placebo had effect in some cases but placebo alone therapy was found to be mostly ineffective with pain and disability, anxiety and depression except on wellbeing of patients with somatoform low back pain.

**Keywords:** Homoeopathy, placebo, low back pain

## **A time-to-deterioration (TTD) N-of-1 clinical trial design for use in homeopathy research**

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**Background:** Application of the randomised controlled trial (RCT) in research into individualized homeopathy has several known limitations, such as selecting the appropriate individual remedy, and inherent ethical problems of placebo interventions.

**Methods:** Based on recent considerations on the possible use of N-of-1 trials in homeopathy and its limitations, we developed a modification of the N-of-1 trial design.

**Results:** The key element of the proposed study design is to select “time to deterioration” (TTD) after intervention as primary outcome in an N-of-1 trial. We assume a positive homeopathic treatment effect relative to baseline on a given measurement scale (e.g. Conners Global Index (CGI) in ADHD). If treatment consists e.g. of few doses of Q-potencies, deterioration can be expected after some time. After reaching a particular threshold value (TV) in the outcome scale (e.g. 30% decrease of CGI), the next trial medication is given. Verum and placebo are administered double-blind and randomly in time. Assuming that verum has stronger effects than placebo, the time span until TV is reached is longer after verum application compared to placebo. The adequate homeopathic remedy can be determined in an open or single blind screening phase with an adequate success criterion (e.g. 50% improvement in CGI). Data from TTD N-of-1 trials can be easily aggregated and synthesized in meta-analysis, since the outcome is always measured in time units.

**Discussion:** The TTD trial design is appropriate for chronic stable conditions. Major advantages are: placebo phases are self-limiting and as short as possible, thus minimising ethical problems and patient drop-out; carry-over-effects are limited by the choice of the threshold value; TTD data yield information on duration and time-course of homeopathic as well as placebo treatments. Placebo could be replaced by another homeopathic remedy to compare efficacy of different treatment options.

**Keywords:** N-of-1 trial, research methodology, homeopathy

## Ultradiluted *Viscum album* in the treatment of melanoma in dog (*Canis familiaris*) – case report

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**Introduction:** Melanoma is the sixth most common leading cancer worldwide and its incidence is continuously rising. The management of patients with melanoma has been historically challenging, with extremely low growth survival rate. Thus, the emergence of innovative treatments becomes a necessity. Homeopathy, suggested by Hahnemann, becomes an interesting treatment option, taking into account the levels of similarity, mainly. Ultradiluted *Viscum album* or mistletoe has been used, based on the anatomopathological similitude model for cancer control. The aim of this work involves the treatment of melanoma in dog, through peritumoral subcutaneous applications of the ultradiluted mistletoe.

**Material and Methods:** A 10-year-old, male, without breed, weighting 22Kg was attended at NaturalPet Vet Clinic, in Brasilia, Brazil, in August/2018. Physical examination showed a black skin wound, 2 cm in diameter, in the medial face of the scapula, present for 2 days. Material for biopsy was collected. The patient was medicated through *V. album* D3, peritumoral subcutaneous, each 7 days, for 4 weeks. After that time the animal was medicated through *V. album* D3, D6, D9, D12, D30 in association, 3 times per week.

**Results:** The biopsy resulted in Melanoma melanocytic. A reduction of the wound was observed at the end of 4 weeks. The patient was periodically assisted and returned to the veterinary's office once a month for a follow-up analysis. After 6 months of treatment, the animal remains unchanged and in perfect health care.

**Conclusion:** *V. album* proved to be important therapeutic tools for the treatment of canine Melanoma melanocytic and the therapy significantly reduced the wound manifestation of the disease, with no side effects, such as leucopenia. Throughout the treatment period the patient remained without physical, hematological and biochemical alterations. The patient's overall health was preserved and the quality of life was improved, with no alterations similar to the original lesion. However, further studies are needed to fully understand how homeopathic medicines act in the treatment of this disease.

**Keywords:** Mistletoe, cancer, homeopathy

**Mixed-Methods (MM) homeopathy research of the 3 Hs: History, Health-related Quality of Life (HrQoL) and Hearing the voices of the parents in Bulgaria**

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**Background:** Homeopathy is a charismatic medical practice but under-investigated clinical field. We present a research contribution from Bulgaria. The aim is threefold, named the 3H-frame: 1) to review the History of homeopathy in a post-communist country; 2) to investigate the HrQoL of chronically ill homeopathic patients; and 3) to Hear parents' voices.

**Methods:** The observational multi-centered study (Ethical approval, 2016) followed a MM-convergent-parallel design. The EQ-5D-3L instrument was used during the quantitative phase for assessing HrQoL of patients with individualized homeopathic medical treatment (IHMT) more than a year (n = 211, >18 years old); no restrictions on the consultation length and prescribed homeopathic remedies. The qualitative phases included a historical research and in-depth interviews with parents who choose homeopathy for their children (n = 19). The research settings were out-patient homeopathic clinics.

**Results:**

1) Homeopathy was introduced in Bulgaria by Dr Mirkovic in 1885; forbidden in 1944. The modern history began in 1992 with the first course; legal recognition- in 2001.

2) The HrQoL results: patients without any problems in all five dimensions represent 29.5% (n = 65), only 6.2% (n = 13) reported any extreme problem. The mean state of health/VAS is 75.31 (SD ± 18.227). More than half of the patients (n=137, 64%) used IHMT longer than 3 years. There is a positive correlation between longevity of IHMT and VAS-self-rated valuation (r=0.171; p=0.013). More than quarter of the patients (n=64, 30.3%) are using homeopathic remedies as complementary to the conventional (n=39, 18.5%) or to non-conventional therapies (n= 25, 11.8%). Further research is needed to prove causality.

3) Hearing parents' voices in four fields: Choice of homeopathy; Family dynamics; Supportive environment; Relationships "parent-child-homeopath".

**Conclusion:** The presented research promotes integration of homeopathy in the national healthcare.

**Keywords:** Homeopathy research, history, EQ-5D-3L, Bulgaria



## Proposal homeopathic treatment guidelines for patients with hepatitis C

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Hepatitis C has been studied for a long time. Despite being consensus that "overall, reduction in inflammatory activity prevents progression to fibrosis and increased mortality, is the reduction in inflammatory activity usually prevent progression to cirrhosis and hepatocellular carcinoma who improves the quality of life of patients. In the Hepatology Service of the Hospital Universitário Antonio Pedro, linked to the Faculty of Medicine of the Universidade Federal Fluminense (UFF), many patients, even though they are regularly followed remain unable to follow the recommendations conventional treatment - by medication side effects or because they have achieved cure criteria at the end of therapy. Faced with this demand, we assume the challenge of designing a homeopathic treatment guidelines for hepatitis C, based on the assumptions of this integrative practice and guided by the Carillo's Theory of Complex Systems, which initially involved the participation of 42 patients. As a result, we studied the materia medica of *Zincum metallicum* and *China officinalis* such as liver equalizers for its structural tropism for the liver, initiating one or another (or even combining both).

Of the 42 initial patients, 4 withdrew from the protocol for personal reasons, leaving 38 patients. In the first consultation we prescribe the liver equalizers. In addition, we proceeded with semi-structured interviews: asked the patients which the most significant change they had in their quality of life. We use to indicators based on major symptoms referred by them and used a Likert scale measurement, already validated instrument devoted to the Evaluation Questionnaire of Quality of Life-World Health Organization (WHO-QOL 100). After 14 months of homeopathic treatment, there was significant improvement in all symptoms reported by patients, in order 75 %, demonstrating that homeopathy is a possible adjuvant therapy, mainly in the quality of life gain of these patients, nessesitates wider studies.

**Keywords:** Homeopathy, hepatitis C, liver, welfare

## Constitutional homeopathic treatment in cases of prediabetes & insulin resistance at a primary health centre: a feasibility study

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**Background:** India, a recognized epicenter of the global diabetes mellitus pandemic, is witnessing an increasing number of people being diagnosed with prediabetes and insulin resistance. Having prediabetes, initiates the long-term damage of diabetes, and without intervention it is likely to become type 2 diabetes in 10 years or before.

**Aim:** To assess the feasibility of constitutional homeopathic treatment along with therapeutic lifestyle changes in cases of prediabetes and insulin resistance.

**Methods:** Between 1<sup>st</sup> April 2014 and 29<sup>th</sup> July 2016, all the patients who were diagnosed either as prediabetes [ICD10: R73.09; abnormal fasting blood glucose level (100-125 mg/dl), an elevated HbA1c level (between 5.7- 6.4%), or an abnormal glucose tolerance test (140-199 mg/dl)] or insulin resistance [ICD10: E88.81] at WUS Health Centre, South Campus, Delhi University [Primary Health Centre] were referred to the co-located Delhi Government Homeopathic Dispensary and enrolled after obtaining due consent. These registered patients were treated with constitutional homeopathic medicines along with therapeutic lifestyle changes and followed up every 4-6 weeks. They were not on any supplements or hormonal medications during the course of observation.

**Results:** Out of the 32 registered cases, results were analysed clinically and serologically in 25 cases [12 females and 13 males; age group of 14 years and 67 years] at 6 monthly intervals, based on the pre-defined inclusion criteria.

22 different remedies were prescribed in these cases, after individualization, in centesimal potencies. Only one person required same remedy in LM potency due to failure of response to centesimal. Serological markers normalized under homeopathic treatment in 88% cases.

**Conclusion:** The results of the study suggest feasibility of constitutional homeopathic treatment in cases of prediabetes and insulin resistance. However a pragmatic comparative study shall evaluate the role of homeopathic treatment in a better manner.

**Keywords:** Prediabetes, insulin resistance, homeopathy

## **An open-label pilot study to explore usefulness of homeopathic treatment in scabies in a primary health centre catering to low socioeconomic populace**

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**Background and aim:** Scabies affects around 200 million people at any one time, causes an intensely itchy rash, and may lead to secondary bacterial infection, autoimmune disease and poor QOL (quality of life). WHO recommends that scabies be added to the neglected tropical disease portfolio and calls for action to improve control efforts.

There are a number of medicines cited in homeopathic literature which can be used for treatment of scabious infestation. A pilot study was therefore undertaken to explore usefulness of homeopathic medicines in treatment of scabies.

**Methodology:** In this study, more than 5000 patients were screened at Delhi Government Homeopathic Dispensary Aali Village (DGHDAV), New Delhi, India, between 1<sup>st</sup> April 2014 and 31<sup>st</sup> March 2015 and 146 were enrolled on the basis of predefined inclusion criteria. A single homeopathic medicine was prescribed for each patient with the help of materia medica and/or repertory on the basis of presenting symptoms. Response to homeopathic treatment was assessed on VAS (visual analogue scale) for itching and ORIDL (Outcome in Relation to Impact on Daily Living) scores for QOL.

**Results:** Remedial response was gauged in most of patients within 48 hours and complete recovery was seen in 79.45% cases in a mean time of about 22 days. Significant differences were recorded in patients in their pre and post-treatment VAS and ORIDL scores.

**Conclusion:** Homeopathic medicines have potential to treat scabious infestation by removing pruritus, eradicating lesions, restoring sleep and improving QOL. Homeopathy may provide a cost-effective treatment for scabies and a randomized controlled trial should be considered.

**Keywords:** Scabies, homeopathy, pilot study

# Notes

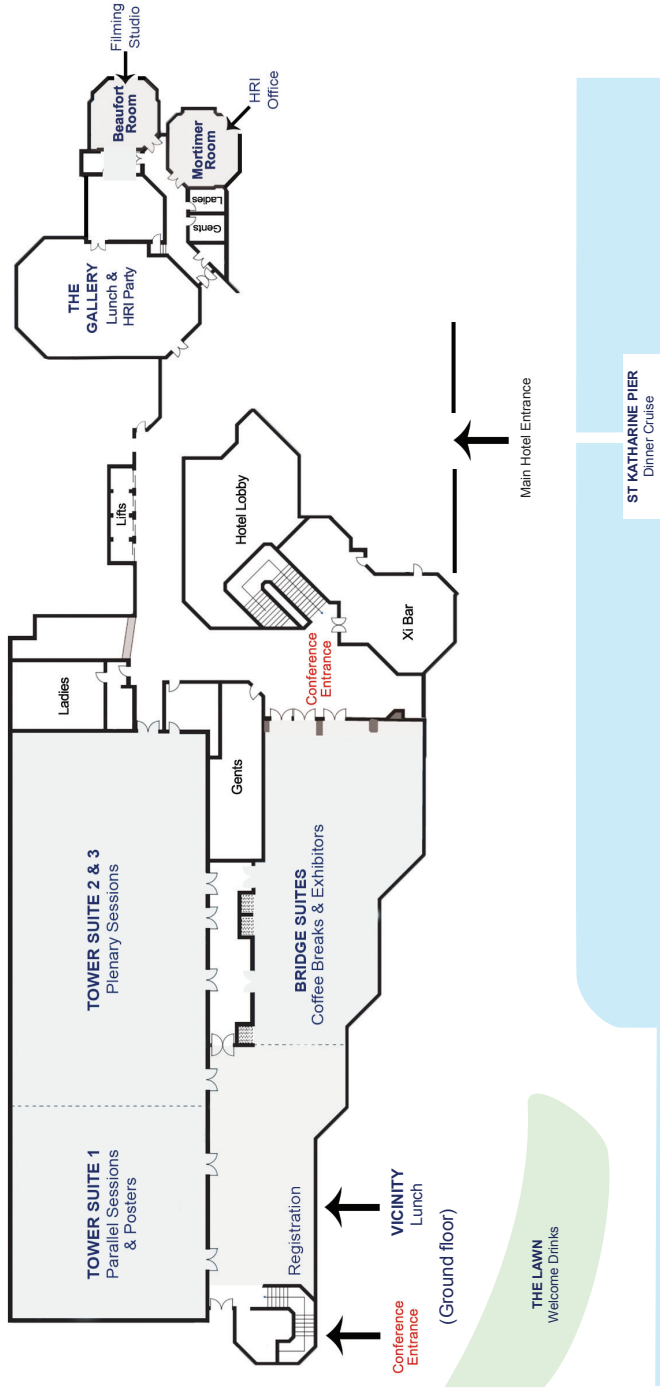
# Notes

# Notes



# Venue Plan

## Tower Hotel – Mezzanine Level





# Programme at a glance

## Thursday

- 18:00 – 20:00 Registration
- 18:30 – 20:00 Welcome Drinks  
The Lawn

## Friday

- 08:00 Registration
- Tower Suite 2 + 3 Plenary Sessions (full day)
- 09:00 — 09:25 Opening Ceremony  
David Tredinnick MP  
**Does homeopathy get a fair hearing?**  
09:25 Prof Robert Hahn  
10:05 Rachel Roberts
- 11:00 — 12:30 **Mixed Session 1**  
11:00 Dr Elizabeth Thompson  
11:40 Dr Alexander Tournier  
12:00 Dr Robert Mathie
- 14:00 — 15:20 **Mixed Session 2**  
14:00 Prof Vladimir Voeikov  
14:40 Dr Stephan Baumgartner  
& Sandra Würtenberger  
15:00 Dr Jean-Lionel Bagot  
& Dr Ingrid Theunissen
- 15:50 — 16:50 **Poster Talks**  
15:50 Dr Francisco Eizayaga  
16:00 Dr Amjith Naisam  
16:10 Dr Carlo Maria Rezzani  
16:20 Dr Leena Bagadia  
16:30 Dr Vaz do Cabo  
16:40 Prof Elizabeth Macera

- Tower Suite 1  
17:00 — 19:00

### Poster Session & Drinks

- 19:30 **Thames Dinner Cruise**  
St Katharine Pier

## Saturday

- Tower 2 + 3  
09:00 — 10:30 **Plenary Sessions (morning)**  
09:00 **Clinical Research 1**  
09:40 Dr Clare Relton  
10:20 Dr Raj Manchanda  
HRI

## 11:00 — 12:20

- 11:00 **Agrohomeopathy & Veterinary Research**  
11:40 Prof Leoni Bonamin  
12:00 Dr Cidéli Coelho  
Franscinne Narita

## Tower 1 14:00 — 15:20

- 14:00 **Parallel Sessions (afternoon)**  
14:00 **Cell & Plant Based Research**  
14:20 Dr Marta Marzotto  
14:40 Dr Oskan Tasinov  
15:00 Susann Buchheim-Schmidt  
Annekathrin Ücker

## 15:50 — 16:50

- 15:50 **Fundamental & Basic Research**  
16:10 Dr Steven Cartwright  
16:30 Dr Maria Olga Kokornaczyk  
Prof Shahram Shahabi

## Tower 2 + 3 14:00 — 15:20

- 14:00 **Parallel Sessions (afternoon)**  
14:00 **Clinical Research 2**  
14:00 Dr José Eizayaga  
14:20 Dr Russell Malcolm  
14:40 Dr Anil Khurana  
15:00 Aaron Ka Lun To

## 15:50 — 16:50

- 15:50 **Clinical Research 3**  
16:10 Dr Katharina Gaertner  
16:30 Dr Roja Varanasi  
Dr Elio Rossi

## 19:15 20:00 — 22:05

- Gala Drinks Reception**

**Gala Dinner**

Tower of London

## 21:30 — 01:00

- HRI 10<sup>th</sup> Birthday**  
Gallery, Tower Hotel

## Sunday

## Tower 2 + 3 09:20 — 10:40

- 09:20 **Plenary Sessions (morning)**  
09:20 **Basic Research & Oncology**  
09:20 Prof Christian Endler & Dr Corrine Kraus  
09:40 Paul Doesburg  
10:00 Dr Cristina Noberasco  
10:20 Dr Yakov Freed

## 11:10 — 12:30

- 11:10 **Clinical Research 4**  
11:10 Dr Debadatta Nayak  
11:30 Dr Gualberto Díaz-Saez  
11:50 Dr Michael Teut

## 12:30 — 12:40

- Closing ceremony**



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