

5th HRI International Homeopathy Research Conference 16-18 June 2023







HOMEOPATHY RESEARCH INSTITUTE

www.HRILondon2023.org

Sponsors

HRI would like to thank the following sponsors for their generous support:



Gesundheit erfahren.

Title Sponsor



Gala Dinner Sponsor



Filming Sponsor



Friday Dinner Sponsor



Poster Reception Sponsor



Welcome Drinks Sponsor



Printed Programme Sponsor



Gala Drinks Reception Sponsor



Session Sponsor and Speaker Sponsor Homöopathie-Stiftung des Deutschen Zentralvereins homöopathischer Ärzte (DZVhÄ)

Session Sponsor



Session Sponsor



Session Sponsor

Contents

	Page	
Welcome	6	
Programme	11	
Keynote speakers	16	
Partner events	18	
Exhibitors	19	
Oral presentation abstracts	27	
Poster presentation abstracts	63	
Participant list	96	
Notes	103	
Venue plans	106	
Programme at a glance	107	

Welcome

We would like to extend a warm welcome to HRI London 2023, the Homeopathy Research Institute's 5th International Research Conference.

In 2023, as always, we are proud to be showcasing the best of homeopathy research from around the world. HRI's events have demonstrated consistently and repeatedly to a wide audience that, contrary to claims in some circles, high quality evidence for homeopathy's effectiveness does exist. This is now undeniable, as evidenced by the multiple decades of experience of our keynote speakers in this year's programme, as well as the breadth of research on display across the collective content of a decade of HRI Conferences, including HRI Barcelona 2013, Rome 2015, Malta 2017, London 2019 and now HRI London 2023.

Having been unable to host our usual biennial event in 2021, we are especially pleased to be returning to a full, 2.5 day, in-person conference programme. This event provides an unrivalled forum for the sharing of ideas and the creation of international scientific collaborations. In light of the global economic uncertainty at this time, HRI London 2023 has been planned as a smaller event than in 2019, yet its scientific impact will be no less significant, with 61 researchers from 15 countries 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
- · Laboratory-based research
- Pathogenetic trials
- · Veterinary research

It only remains to invite you to join us in making the most of this opportunity to come together as a community, 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)

Machel Roberts

HRI London 2023 - Key facts

- · 140 abstracts submitted
- · 35 oral presentations and 33 poster presentations
- Presenters from 15 countries
- Over 210 delegates from 27 countries

Conference Organising Committee

HRI London 2023 has been organised by the HRI Core Team, with additional input from the HRI Scientific Advisory Committee (see overleaf).

Rachel Roberts (Chair) – Chief Executive, Homeopathy Research Institute Amy Hurlstone – Events Manager, Homeopathy Research Institute Chris Connolly – Communications Manager, Homeopathy Research Institute Jacky Johnson – Executive Assistant, Homeopathy Research Institute Dr Alexander Tournier – Executive Director, Homeopathy Research Institute

About HRI

HRI is a UK-based charity dedicated to promoting high quality research in homeopathy at an international level. The charity was founded by physicist, Dr Alexander Tournier, who previously worked as an independent researcher for Cancer Research UK, conducting interdisciplinary research at the boundaries between mathematics, physics and biology.

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. In addition to providing academic and financial support to multiple active research projects around the world, HRI plays a leading role in challenging misinformation about the scientific evidence base in homeopathy and developing strategic priorities for future research in this field.

The Institute's day-to-day operations and management are the responsibility of Rachel Roberts (Chief Executive) and Dr 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/integrative medicine research, provide the strong scientific foundations essential to our work.

For more information visit www.HRI-Research.org

HRI Core Team



Dr Esther van der Werf Clinical Research Lead MSc PhD Dip IACH



Chris Connolly Communications Manager



Jacky Johnson Executive Assistant & Company Secretary



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



Amy Hurlstone Events Manager

HRI Patrons

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?"

Scientific Advisory Committee



Prof 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



Prof Ashley Ross BMus PGDip MTech PhD Head of Department of Homeopathy, Durban University of Technology, South Africa



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, Switzerland*



Gesundheit erfahren.

Research needs precision. The manufacturing of homeopathic remedies too.



Deutsche Homöopathie-Union DHU-Arzneimittel GmbH & Co. KG, Karlsruhe

dhu.de

Conference Programme

Conference Registra	ation	THURSDAY 15 JUNE 2023
18:00 - 20:00 18:30 - 20:00	Registration – Foyer, Floor 1, L Welcome Drinks – Bartholomew,	
Day 1 – Cutting Edg	e Research in Homeopathy	FRIDAY 16 JUNE 2023
08:00 - 08:50	Registration – Atrium, Confere Full Day Plenary Sessions – W	
09:00 – 09:20	Opening Ceremony Opening remarks: Dr Michael D Medicine, Co-Chair National Soo Head of the Royal Medical Hous	cial Prescribing Network and
09:20 – 10:30	Insights from over 20 years' ex Chair: Dr Alexander Tournier Prof UBIRATAN ADLER, Brazil. for conducting clinical trials on his depression and cocaine/crack us Prof STEPHAN BAUMGARTNE Key results from 25 years of bas potentisation	. Challenges and solutions omeopathy for major se disorder ER, Switzerland.
10:30 – 11:00	Coffee	
11:00 – 12:30	Mixed Session 1 Chair: Prof Elio Rossi Rachel Roberts, UK. Scientific a research: context is everything Prof Thomas Ostermann, Germa evaluations in homeopathy: overv Dr Esther van der Werf, UK. Ca antibiotic use while maintaining a otitis media? A systematic review Dr Roja Varanasi, India. A comp trial of homoeopathy vs allopathy recurrence in children	any. Quality of health economic riew of the last 30 years an homeopathy reduce symptom control for w parative randomised controlled
12:30 – 14:00	Buffet Lunch	
14:00 – 15:10	Basic Research 1 – Warwick Chair: Prof Stephan Baumgarthe Prof Leoni Bonamin, Brazil. Ch chemical markers of homeopath	naracterization of physico

	Dr Christa Raak, Germany. A stud potentiated sulfur on neutrophil gra with periodontal inflammation and a Dr Leonardo Faedo, UK. The use agriculture and its plant biostimulat cropping system Dr Alexander Tournier and Rachel	nulocytes from patients a healthy control group of Homeopathy in ion effect on the strawberry
15:10 – 15:40	Coffee	
15:40 – 17:00	Clinical Research & Poster Talks Chair: Prof Ubiratan Adler Dr Anupriya Chaudhary, India. Ho therapy to standard medical manage Haemophilia (PWH) – a prospective, m Dr Michael Teut, Germany. Homeo believe in the evidence?	omoeopathy as adjuvant ement in persons with andomized double arm study
	Dr Deepti Singh, India. Evaluation treatment in COVID-19 hospitalised during the first wave of COVID-19. Christoph Dombrowsky, Switzerlan the mode of action of homeopathic rem Dr Philippa Fibert, UK. A service of treatment for those with long COVID Dr Yvonne Fok, Hong Kong. Clificol COVID-19 patients: findings of the Poster Talks. Four 7-minute poster	d patients in Gujarat state nd. Theories and models on nedies – a scoping review evaluation of homeopathic D. : Homeopathic treatment of Clificol case registry
17:00 - 19:00	Poster Reception – Bartholomew,	Floor 1
19:30	Dinner The Dickens Inn, St Katharine's Do	icks
Day 2 – Cutting Edge Re	search in Homeopathy	SATURDAY 17 JUNE 2023
	Morning Plenary Sessions – War	wick
09:00 – 10:30	Aqua-homeopathy & Fundament Chair: Dr Subhash Kaushik Dr ANTONIO LÓPEZ-CARVALLO bioactive compounds in marine aqu sustainable practices Dr Steven Cartwright, UK. Ten years dyes and homeopathic potencies: a together with recent results Dr Alexander Tournier, Switzerlan homeopathy: considerations and results	, Mexico. Highly diluted uaculture: looking for of research on solvatochromic a summary of findings so far, nd. Fundamental research in
10:30 - 11:00	Coffee	

11:00 – 12:20	Clinical Research 1 Chair: Prof Jennifer Jacobs Dr Katharina Gaertner, Germany. Critical appraisal tool of homeopathic intervention studies – CATHIS Dr Rajesh Shah, India. COVID-19 Nosode (BiosimCovex) research: development, safety and efficacy (Phase I,II,III) studies Panel discussion
12:30 – 14:00	Buffet Lunch
	Afternoon Parallel Sessions
14:00 – 15:20	 Basic Research 2 – Warwick Chair: Prof Leoni Bonamin Annekathrin Ücker, Germany. Standard deviation as outcome parameter in plant-based test systems investigating homeopathic preparations in high potency levels Dr Daniel Wrzałko, Switzerland. Effect of homeopathic potencies on chromatographic patterns of human blood in vitro (Kaelin's blood test) Dr Pritam Goswami, India. An in-vitro study exploring the therapeutic utility of Bryonia alba against SARS-CoV-2 Spike protein RBD induced cytokine imbalance in Gallus gallus domesticus embryo Dr Stéphanie Chanut, France. Dynamized dilution of Ruta Graveolens disrupts plasma membrane organization and decreases migration of melanoma cancer cell
14:00 – 15:20	Clinical Research 2 – Salisbury Chair: Dr Michael Teut Dr Raj Manchanda, India. Homeopathic medicines in COVID-19: prognostic factor research Dr Harleen Kaur, India. Homoeopathy as an adjuvant to standard care in moderate and severe cases of COVID-19: a single-Blind, randomized, placebo-controlled study Dr Debadatta Nayak, India. Efficacy of Arsenicum album 30C in prevention of COVID-19 in individuals residing in containment areas – a prospective, multicentre, cluster-randomized, parallel arm, community based, open-label study Dr Elizabeth Rice and Dr Eleni Krommidas, USA. Homeopathic treatment of post-acute COVID-19 syndrome – a pilot double-blind randomized controlled trial
15:20 – 15:50	Coffee

Afternoon Plenary Session – Warwick

15:50 - 17:10**Basic Research 3** Chair: Prof Carla Holandino Paul Doesburg, Switzerland. Cell phone emitted electromagnetic radiation nullifies specific effects of homeopathically prepared tin (Stannum metallicum 30x) Dr Francesca Truzzi, Italy. Effects of homeopathic treatments on human cellular inflammation in vitro Dr Maria Olga Kokornaczyk, Switzerland, Self-assembled patterns formed in evaporating droplets to analyze the simple homeopathic bi-component complex Luffa 4x – Mercurius bijodatus 9x Prof Oskan Tasinov, Bulgaria. Ferrum phosphoricum D12 affects J774A.1 cells proliferation and transcription of inflammation, oxidative stress and iron metabolism related genes in conditions of LPS stimulation

19:30 – 00:00 Gala Dinner – The Law Society Hall, 113 Chancery Lane

Day 3 – Cutting Edge Research in Homeopathy

SUNDAY 18 JUNE 2023

Morning Plenary Sessions – Warwick

09:10 – 10:30	Mixed Session 2 Chair: Dr Jean-Pierre Jansen Dr Irene Dorothee Schlingensiepen, Germany. Accuracy and comprehensiveness of provings can determine the quality and long-term outcomes of homeopathic prescriptions Dr Peter Smith, Ireland. Classical homeopathic provings in a highly-regulated environment: reflections on a recent proving of Galium mollugo Dr Petra Weiermayer, Austria. Recommendations for designing, conducting and reporting clinical observational studies in homeopathic veterinary medicine Dr Jean-Lionel Bagot, France. N-of-1 trials, a new clinical research methodology appropriate for homeopathic supportive care in oncology
10:30 - 11:00	Coffee
11:00 – 12:20	Clinical Research 3 Chair: Prof Thomas Ostermann Dr Pascal Trempat, France. Benefits of homeopathic complementary treatment in breast cancer patients: a retrospective cohort study based on the French nationwide healthcare database (SNDS) Dr Elio Rossi, Italy. Homeopathy and complementary medicine in oncology in Tuscany Region (Italy): a successful integration in Public Health Prof JENNIFER JACOBS, USA. 30 years of homeopathic research - lessons learned
12:30	Closing ceremony



ADVANCING RESEARCH

BENEFITS OF HOMEOPATHIC COMPLEMENTARY TREATMENT IN PATIENTS WITH BREAST CANCER: RETROSPECTIVE COHORT STUDY BASED ON THE FRENCH NATIONWIDE HEALTHCARE DATABASE

The study showed an increasing use of homeopathy in patients with BC following diagnosis. This use was maintained after surgery and seemed to play a role in helping patients to better tolerate the SEs of cancer treatments.

Oral session: Basic Research 2

Poster session: Basic Research

Sandra Tribolo PhD

SATURDAY 17 14:00 - 15:20

Stéphanie Chanut PharmD

Cell Adhesion & Migration 2022



DYNAMIZED ULTRA-LOW DILUTION OF RUTA GRAVEOLENS DISRUPTS PLASMA MEMBRANE ORGANIZATION AND DECREASES MIGRATION OF MELANOMA CANCER CELL

These results demonstrate, in *in vitro* and *in vivo* models of cutaneous melanoma, an anti-cancer and anti-metastatic activity of ultra-low dynamized dilution of *Ruto graveolens* and reinforce its interest as complementary medicine in oncology.

Oral session: Clinical Research 3 SUNDAY 18 11:00 - 12:30 Pascal Trempat PhD

International Journal of Pharmaceutical Research 2022

ACTION OF ULTRA-LOW DOSE MEDICINE ON OXIDATIVE STRESS AND CELL STIFFNESS OF MICROGLIAL CELLS IN VITRO WITH ACTIN FILAMENTS REORGANIZATION.

Atomic Force Microscopy data showed that Anas barbariae 200K dilution immediately increased the cell stiffness of microglial cells and enhanced the reorganization of actin filaments.

Keynote Speakers



Prof UBIRATAN ADLER Clinical Assistant Professor Federal University of São Carlos, Brazil

Prof Ubiratan Adler is a clinical assistant professor at the Federal University of São Carlos (São Paulo), Brazil, with a Post-Doctorate at the Institute of Social Medicine, Epidemiology and Health Economics, Charité University, Berlin. His PhD (Psychobiology) explored the benefits of individualized homeopathy compared with fluoxetine for Major Depression.

In integrative mental health, Dr Adler currently conducts N-of-1 trials for Depressive Disorders and an RCT on Homeopathy for cocaine (& crack) - related disorders. He is the leader of the Research Group "Homeopathy and Integrative Medicine in the Brazilian Unified Health System" (at the Brazilian National Council for Scientific and Technological Development) and Assistant Coordinator of the Homeopathy Committee of the Brazilian Academic Consortium for Integrative Health.



Prof JENNIFER JACOBS Clinical Assistant Professor in Epidemiology University of Washington, USA

Jennifer Jacobs, MD, MPH is a clinical assistant professor in epidemiology at the University of Washington School of Public Health and Community Medicine. She is also a retired family practice physician who specialised in homeopathic medicine. Prof Jacobs received her MD degree from Wayne State University and has a Masters in Public Health from the University of Washington.

She is a past-president of the American Institute of Homeopathy, has served on the advisory board of the NIH Office of Alternative Medicine, and co-founded the special interest group of the American Public Health Association on Complementary and Alternative Health Practices. Prof Jacobs has published numerous homeopathic research studies in peer-reviewed medical journals, such as Pediatrics, the Pediatric Infectious Disease Journal, and the European Journal of Integrative Medicine. She is also the co-author of Healing with Homeopathy and the author of several book chapters about alternative medicine. Her most recent book, Do You Really Need That Pill?, takes on the growing epidemic of over-medication.



Dr JESÚS ANTONIO LÓPEZ-CARVALLO

Postdoctoral research fellow Centro de Investigaciones Biológicas del Noroeste, Mexico

Dr López Carvallo works within the Aquaculture-Homeopathy group, under the academic direction of Dr Mazón Suástegui at Centro de Investigaciones Biológicas del Noroeste, La Paz, Mexico. He is also a member of the Baja California Sur State System of Researchers.

Dr López Carvallo received his Masters and Doctor of Science degrees from the Centro de Investigaciones Biológicas del Noroeste, La Paz, Mexico under the supervision of Dr. Mazón-Suástegui and Dr. Arcos-Ortega. He has experience evaluating aquatic organism's physiology related to reproduction, energetic metabolism and immune response using functional genomics.

His most recent research includes the evaluation of high-diluted bioactive compounds (homeopathy) to strengthen the immune response of Catarina scallop (Argopecten ventricosus) juveniles. This research included de novo transcriptome profile analysis using RNA-Seq technology, the validation of biomarkers at molecular level using real time qPCR, and received honorific mention in the X Ibero-American Forum on Marine Resources and Aquaculture. Dr. López is Co-inventor of two patents related to homeopathic treatments and has served as a reviewer in Aquaculture Research Journal. The main interest of Dr. López is to understand the interaction between high-diluted bioactive compounds (homeopathy) and biological systems in aquatic organisms.



Prof STEPHAN BAUMGARTNER

Senior Researcher Institut für Komplementäre und Integrative Medizin University of Bern, Switzerland

Prof Stephan Baumgartner holds a Masters in Experimental Physics (University of Basel, Basel, Switzerland). Research Fellow at the Dept. for Mathematics and Astronomy (Goetheanum, Dornach, Switzerland). PhD in Environmental Sciences (Federal Institute of Technology, Zurich, Switzerland). Post-Doc in the Dept. for Environmental Physics (EAWAG Aquatic Research, Dübendorf, Switzerland).

Since 1996 Senior Research Scientist in the Dept. for Basic Research (50% at the Hiscia Research Institute of the Society for Cancer Research, Arlesheim, Switzerland, as well as 50% at the Institute of Complementary Medicine IKOM, University of Bern, Bern, Switzerland). Lecturer at the University of Bern since 2009.

Partner Events

Forum for Young Researchers

Thursday 15 June, 13:00 - 18:00 America, Conference floor, Leonardo Hotel

The inaugural Forum for Young Researchers (FYR) meeting takes place on Thursday 15 June. The FYR initiative aims to create a platform for exchange, collaboration, and networking between young researchers who are at the beginning of their scientific career or new to the field of homeopathy research.

Supported by the Homeopathy Research Institute, FYR has organized a half-day seminar, taking place ahead of HRI London 2023. Dr Steven Cartwright will present a keynote lecture, alongside a range of other researchers who will showcase their work. The seminar offers an exciting opportunity for discussion and exchange of ideas for up and coming researchers.



Homoeopathie-Stiftung congratulate Prof Stephan Baumgartner, who was awarded a professorship at Witten/Herdecke University, March 2023.



President and co-president of the Homoeopathie-Stiftung with Prof Stephan Baumgartner

Sponsors & Exhibitors



World leader in homeopathy, Boiron laboratories have been contributing for 90 years to a more humane, more respectful, and more sustainable medicine. Since 1932, we have been involved in the manufacture of homeopathic medicines in order to provide everyone, patients and health professionals, with useful, safe and effective solutions. With rigor and professionalism, we cultivate a duty of excellence by systematically seeking to associate respect for the homeopathic tradition and innovation. Boiron laboratories are present in 50 countries, and have 2,769 employees worldwide.



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 - very traditional on the one hand, very innovative on the other. 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 Pharmacopea Homeopathica 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 about 40 years now. Our Terra Medica site is one of the largest of its kind in Europe, ecologically certified and sustainable.



Established for over 36 years, the passion and vision behind Helios was to create a new source of homeopathic remedies to bring profound healing and relief of suffering. Our remedies are made by homeopaths to traditional methods, using trituration and hand succession procedures as laid down in Hahnemann's 5th and 6th edition of the Organon, to ensure accuracy and remedies of quality and integrity. In 1994, after two years of research and development, we were the first UK manufacturer of homeopathic remedies to produce a high potency succussion machine, using the Korsakov method, enabling us to supply remedies in a wide range of high potencies. We supply over 3,800 remedies worldwide and have an award-winning range of remedy kits, individual and combination remedies, naatural plant based creams and a new range of the 12

Tissue Salts. These are available at trade prices for re-sale through clinics, pharmacies and health shops.

As one of the sponsors for this year's conference we are pleased to be able to offer a range of Helios products at very special prices to delegates and we have some wonderful books too. Everyone visiting our stand us will receive a gift and we look forward to meeting you.



Vithoulkas Compass

VithoulkasCompass is a comprehensive online toolbox organized to support effective practice and help elevate the success rate of any homeopath, from beginner to master. Our Vision is Building on what works in Homeopathy, using scientific methods, large scale clinical evidence and state-of-the-art technology.

- The most advanced homeopathy software representing unique, groundbreaking research.
- A complete toolbox of innovative functions to assist you in locating the optimum remedy case.
- A friendly system helping you to reach the maximum potential of success in your practice.

Conceived from the ground up to offer unparalleled decision support to the homeopath by combining results from an exhaustive statistical analysis of thousands of real-world successful prescriptions, with the experience and method of the internationally acclaimed master and pioneer of classical homeopathy, George Vithoulkas along with a dedicated team of homeopaths and researchers.

Every feature of the VC toolbox was designed to empower you in choosing and confirming the correct remedy, while at the same time improving your productivity and honing your skill.

Backed by a team of professional developers and researchers who continuously support and optimize all functions. Proven track record: used by thousands of homeopaths all around the world with great success since 2011.

Sponsors



Celebrating its 100th year, the American Association of Homeopathic Pharmacists (AAHP) has been the leading voice of the homeopathic industry since 1923. The non-profit association works to promote excellence and compliance in homeopathic pharmacy manufacturing, distribution, and marketing within the United States.

AAHP member companies of manufacturers, distributors, and marketers provide 80 percent of homeopathic products in the U.S. market. Membership is also open to pharmacists, individuals in the homeopathic field, and allied organizations. AAHP provides members with resources and knowledge to successfully operate in the marketplace. The association also represents the industry through positive and productive dialog with lawmakers and regulators to bring about effect legislation.

Members pledge to comply with requirements, criteria, and published guidelines in the Homeopathic Pharmacopoeia of the United States, relevant Federal statutes, as well as other industry regulations and compendia. Together, AAHP members ensure safe, effective homeopathic medicines for consumers, retailers, and healthcare practitioners across the United States — and elevate the reputation of homeopathic medicines.



des sciences

The purpose of the Foundation is to support and develop any activity of general interest of a scientific nature with the objectives of promoting scientific and technical research and development relating to Homeopathy (Analog medicine according to HAHNEMANN), modeling mathematics and the development of computerized diagnostic systems in this same field, the development of homeopathic medication for professionals in the health world (laboratories, prescribers, etc.), as well as for patients and the general public, the exploration of avenues opened up by Homeopathy, the advancement of scientific and medical knowledge in this field, and more generally the support of scientific research programs contributing to the development of both human and veterinary medicine, but also the development of plants and treatments promoting their growth, culture and defense, while respecting environment.



Homoeopathie-Stiftung des DZVhAE (Homeopathy Foundation of the Association of German Homeopathic Doctors)

OUR VISION is that homeopathy becomes an acknowledged, integrative part of modern medicine.

In collaboration with The German Association of Medical Doctors, DZVhAE*, and The Scientific Society for Homeopathy, WissHom e.V.**, we support:

RESEARCH IN HOMEOPATHY

Fundamental Research, RCT's, Meta-analysis, health

care studies with "real world data", ... Development of guidelines for reliable standards in research and publication.

HOMEOPATHY FOR PEOPLE, ANIMALS AND THE ENVIRONMENT In the face of increasing antibiotic resistance, findings indicate that homeopathy is one option to be seriously considered.

EDUCATION IN HOMEOPATHY FOR MEDICAL DOCTORS AND STUDENTS Providing online study programs and courses for medical students, and education for medical doctors, veterinarians and dentists preparing for the European Diploma of Homeopathy.

WORLD-WIDE AVAILABILITY OF HOMEOPATHIC LITERATURE

Digitalisation taking place in the European Library in Köthen, Germany, enabling people around the world to order scans of original books, dating back to Hahnemann's works.

INTEGRATION OF HOMEOPATHY

Collecting facts, benefits, desires of the public and informing decision makers of developments like: The Swiss Health Technology Assessment, HTA, found effectiveness, efficacy, safety and cost-effectiveness of homeopathic therapy, resulting in coverage by statutory health insurances since 2012.



Living Homeopathy was founded in 1994 by Prof. Aaron To Ka Lun, dedicated to the promotion of Classical Homeopathy, dedicated to understanding the concepts of holistic medicine, and redirecting patient's paths towards physical, emotional and spiritual health.



YouCure is an Artificially Intelligent online tool to help you find a first aid remedy with experts' experience anytime, anywhere!

It aims to bring its users closer to professional homeopaths by providing a first-aid experience, helping the user to gain knowledge on homeopathic remedies for acute prescription, then allowing the user to find a homeopath and develop their relationship into a healthier life.



The LCH UK was founded in June 2017 when a few philanthropists from the homeopathic fraternity came together at a platform and discussed the need for reforming homeopathic education. The journey started with the aim to promote the true essence of homeopathic education which is lacking in the majority of the globe.

The LCH UK, founded by homeopathic experts from the UK and India runs on a philosophy of quality education. It is more than an institute because it's a key connection amongst Homeopaths all across the world with the best teachers in Homeopathy. The mission of The LCH UK is to

spread the true essence of homeopathic Education and Practice to different countries and LCH UK wishes to achieve this by joining hands with different Homeopathic organizations across the world.

The LCH UK is accredited by the Registration Society of Homoeopathy, UK (www.rshuk. com) and has technical collaboration with Bakson Homoeopathic Medical College & Multi-speciality Hospital, India which is one of the reputed medical and research centre (www.bakson.net) and Homeopathy University, Jaipur, India which is the first exclusive Homeopathic University in the world (www.homoeopathyuniversity.com). LCH UK is a member of some of the reputed international organizations such as CMA, NASH, HT, etc.

LCH UK is probably amongst the few institutes having a worldwide connection and reach, and it is expanding its horizons.



RadarOpus is the world leader in homeopathic software solutions. Since 1982 we have inspired homeopaths with a suite of cutting edge tools, supporting all aspects of homeopathic clinical practice. Proudly providing Synthesis Repertory, the largest digitalised homeopathic library in the world, powerful Patient Management Systems, and modules from the great Masters of Homeopathy.



Similasan was founded in 1980 by pharmacists Walter Greminger, Herbert Marty and Armin Späni. Similasan stands for the combined power of humans and nature. The company was founded with the aim of making homeopathy accessible to the general public. Our name -Similasan - is

derived from the Latin "similia similibus curentur" and means "let like be cured by like". Thanks to Similasan, homeopathic remedies for everyday health issues can be used easily at home. In addition to focusing on natural products, including homeopathy, which are specifically tailored to the needs of families, our core focus extends to eye care, and we strive for excellence in the field of complementary medicine and science. We are an international company and distribute our Swiss products through regionally strong partners to more than 20 countries, first and foremost to the USA, where we are successfully established as one of the few suppliers of homeopathic medicines, along with other countries including South Africa, Holland, Austria and Canada.

Exhibitors



The Aurum Project is a not-for-profit organisation dedicated to improving health and wellbeing through natural medicine research and is the peak body for homeopathic research in Australia. Our Teal organisational model encourages us to be wholistic, collaborative and dynamic in our research conduct and because researchers are clinicians it means that the challenges encountered in every day practice

become a research topic. Practitioners work together in a Research Pod and the purpose of a Pod is twofold. Firstly it is to build relationships between colleagues, and increase resilience within our profession of homeopathy. The second is the research activity the Pod undertakes together. Pods are different to traditional research teams in the way they are self organising. Currents Pod topics include respiratory diseases, molluscum contagiosum, recurrent urinary tract infections, a systematic review of homeopathic research in Australia since 1990 and a workforce survey of Homeopathy in Australia. A recent past topic was a national survey to measure the demographics of homeopaths and their patients in Australia. This was the first time such a study had been conducted. Our operational capacity is funded through membership and running an online homeopathy book shop.



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 a workshop

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 group offers different membership options: regular and student membership (free options), and institutional membership.

The proceedings of GIRI meetings get published in a peer reviewed open-access journal (International Journal of High Dilution Research; IJHDR) hosted by GIRI (https://girisociety.org/next-meeting/). The next GIRI meeting (XXXVI GIRI) will take place together with the American Institute of Homeopathy (AIH) at the UConn, Connecticut, United States of America, from October 20-22, 2023, as a hybrid event (https://homeopathyusa.org/ education/2023-conference.html). The abstract submission will close on 15 August 2023. All of you are very welcome!



The Hahnemann House Trust is a charity originally established by a Deed of Trust made on 9 December 1920 by Mazzini and Orsini Stuart to house the relics and artefacts of Samuel Hahnemann and other prominent homeopaths in history, for the establishment of a permanent collection.

The charity works to make the history of homeopathy available to everyone across the globe. The Trust

established its website (www.Hahnemannhouse.org) in 2019 to allow virtual access to its collection of artefacts and now features hundreds of historical biographies. The biographies have been gifted to the Trust by Sue Young.

The Trust takes a travelling exhibit of a few special artefacts to global conferences and is pleased to have a display here at the HRI's conference. Stop by the table to see the artefacts, grab a post lecture treat and learn more about the Trust.



The Scientific Society for Homeopathy (WissHom) was founded in 2010 in Koethen (Anhalt) in Germany with the following goals:

- evaluate existing homeopathic knowledge
- create new homeopathic knowledge
- promote homeopathic research
- develop innovations in education and training and
- establish homeopathy in the academic discourse.

Recent highlights

- Guidelines for clinical & fundamental research in homeopathy are already published or submitted for publication
- Various articles submitted or published by homeopathy sceptics are countered & further research articles are published in cooperation with numerous professors and other colleagues
- Organization of annual ICE congresses on research, practice and education, symposia and online lecture series on potentiation research
- Conception of research projects in cooperation with universities & establishment of a university research team in the DACH region & participation of an international university One Health project (GIFTS-AMR)
- Development of an E-Learning program & lectures at universities on homeopathy in human and veterinary medicine



YOUR ADVANCED HOMEOPATHY EDUCATION

STARTS HERE

PROFESSIONAL | SCIENTIFIC | ACADEMIC EXPERTISE IN HOMEOPATHY



PG (HOM.) LONDON FOR PRACTICING HOMEOPATHS D (HOM.) LONDON FOR EVERYONE ELSE

Designed and delivered by expert faculty keeping in mind the classical knowledge and clinical practice in Homeopathy leading to Expert Academic Title(s) - D. Hom. (London) / PG (Hom.) (London)



LEARN AT YOUR OWN PACE ROUND THE CLOCK ACCESS

EXPERT COURSES

The course material can be accessed anytime, and at your pace. The duration of course remains defined according to the course opted.



A TEAM OF PROFESSIONAL & EXPERTS IN HOMEOPATHY

LCH UK is an elite homeopathic organization to impart quality homeopathy education. Based in UK, LCH is running online homeopathy courses successfully in many parts of the world.



For more information and registration write to us at courses@lchomeopathy.com or visit

www.lchomeopathy.com

Oral Presentations

Prof Ubiratan Adler

Fri 16 June, 09:20

Challenges and solutions for conducting clinical trials on homeopathy for major depression and cocaine/crack use disorder

Ubiratan Adler1

¹Federal University of São Carlos, Brazil

Correspondence: Prof Ubiratan Adler Federal University of São Carlos, Brazil Email: ubiratanadler@ufscar.br

The development of clinical trials on homoeopathic treatment for depression has been challenging in different settings. Difficulties in gathering enough participants, lack of clinical-pharmaceutical standards in classical (individualized) homoeopathy, and scarce funding are some of the problems that hinder Randomized Clinical Trials (RCTs) with large samples and favour N-of-1 trials as a possible path for assessing the effectiveness of homoeopathic strategies to help patients undergoing a depressive episode.

Crack/cocaine use disorder is a significant public health concern in Brazil, exhibiting parallels with heroin/opioid addiction in the United States. Previous results showed a significant decrease in cocaine-using days among cocaine users treated with homoeopathic fifty-millesimal (LM/Q) potencies of *Opium* and *Erythroxylum coca*, compared to placebo. However, the low adhesion of the participants might have biased the results. As a matter of fact, low adhesion of crack-cocaine users to treatment is a trend observed in clinical trials and practice.

At HRI London 2023, we would like to present and discuss the protocols of N-of-1 studies on classical homoeopathy for major depressive disorder and a new RCT assessing *Opium* and *Erythroxylum coca* on cocaine use disorder, which are currently being carried out by our team in Brazil.

Keywords: Clinical trials, major depression, addiction, cocaine

Dr Jean-Lionel Bagot

N-of-1 trials: a new clinical research methodology appropriate for homeopathic supportive care in oncology

Jean-Lionel Bagot¹, Ingrid Theunissen², Fabrice Sébastien Berna³

¹Groupe Hospitalier Saint Vincent, Strasbourg ²CHIREC Breast Cancer Clinic, Delta Hospital, Brussels ³Centre Hospitalier Régional Universitaire de Strasbourg, Strasbourg

Correspondence: Dr Jean-Lionel Bagot Groupe Hospitalier Saint Vincent, Strasbourg Email: jlbagot@orange.fr

Context: The significant financial and human cost of randomised controlled studies make them difficult to access outside the university hospital environment and/or partnership with the pharmaceutical industry. Many homeopathic physicians, grouped within the International Homeopathic Society for Supportive Care in Oncology (IHSSCO), practice outside hospital oncology departments. In order to evaluate and scientifically validate their practice, new research methodologies enabling the generation of conclusive studies appropriate for Homeopathic Supportive Care in Oncology (HSCO) are essential.

Material and method: We relied on the publications of clinical studies in HSCO and on the research methodology publications specific to complementary medicine. We compared the opinion of experts in clinical research with the experience of IHSSCO's experts. We also looked for the most suitable IT tools.

Results, discussion: Publications of clinical cases remain useful provided they comply with the recommendations of the Homeopathic Clinical Case Reports and the MODified NARanjo Criteria for Homeopathy (MONARCH). They are most often retrospective and offer a fairly low level of proof.

On the other hand, single case experimental studies of the N-of-1 type, or Single Case Experimental Studies (SCED) present a level of evidence 1. They make it possible to choose and evaluate the optimal homeopathic treatment for a given patient more powerfully than with group studies. This type of study, where patients are their own witnesses, is well suited to homeopathy, whether classical or clinical. Adding the Risk of Bias in N-of-1 Trials (RoBiNT) scale increases its scientific value. For the collection and analysis of data, the use of software which keeps health data secure makes it possible to invite several doctors to work on the same project in complete confidentiality.

Conclusion: We will present N-of-1 trial projects, supported by IHSSCO, focused on chronic diarrhoea, trauma, fatigue and joint pain induced by aromatase inhibitors in HSCO.

Keywords: N-of-1 studies, SCED, supportive care

Prof Stephan Baumgartner

Key results from 25 years of basic research into homeopathic potentisation

Stephan Baumgartner^{1,2,3}

¹Institute of Integrative Medicine, University of Witten/Herdecke, Witten, Germany ²Institute of Complementary and Integrative Medicine, University of Bern, Bern, Switzerland ³Society for Cancer Research, Hiscia Institute, Arlesheim, Switzerland

Correspondence: Prof Stephan Baumgartner Institute of Integrative Medicine, University of Witten/Herdecke, Witten, Germany Email: stephan.baumgartner@uni-wh.de

Over the past 25 years, our research group has developed and evaluated various laboratory models to investigate the effects of homeopathic preparations. To identify possible specific effects, homeopathic samples were generally compared to succussed or potentized negative controls in blinded and randomized experiments including multiple replicates and independent repetitions.

We introduced systematic negative control experiments in basic homeopathic research to monitor and statistically assess experimental model stability. Altogether these procedures allied with the use of state-of-the-art statistical techniques enabled us to reach robust conclusions in our analyses.

In total we worked with 18 different laboratory models. In 15 out of these 18 assays, we observed statistically significant empirical evidence for specific effects of homeopathic preparations over placebo. For three of these assays, homeopathic preparations were investigated using more than 14 independent experiments, performed by two independent researchers, at multiple locations.

These experiments involved *Arsenicum album* in potency levels between 17x and 45x as well as *Stannum metallicum* 30x, the effects of which were reproducible over time.

We thus conclude that we observed solid, statistically significant empirical evidence in favour of the existence of specific effects of homeopathic preparations in potency levels where direct material effects of the potentised material would not be expected. With this in mind, in the coming years, our working group will therefore focus on exploring the mode of action of homeopathy, on the level of the homeopathic preparations, as well as on the level of the treated organisms. This approach will be based on characterizing homeopathic preparations on a physicochemical level, determining the effects of physical interventions on homeopathic preparations, developing experimentally testable theories, and assessing physiological effects of homeopathic preparations on organisms *in vivo*.

Keywords: Potentisation, reproducibility, mode of action, homeopathy

Prof Leoni Bonamin

Characterization of physicochemical markers of homeopathic medicines

Leoni Bonamin¹, Renata Palombo¹, Sandra Augusta Pinto¹, Ivana Suffredini¹, Steven Cartwright²

¹Universidade Paulista – UNIP, São Paulo, Brazil ²Cherwell Laboratory for Fundamental Research in Homeopathy, Oxford, UK

Correspondence: Prof Leoni Bonamin Universidade Paulista - UNIP Email: leonibonamin@gmail.com

In recent years, we have dedicated ourselves to studying the effects of Antimonium crudum and Silicea terra on experimental infection, using in vivo and in vitro models. However, the mechanisms involved in this modulation are still unknown and prompt different questions, such as: a) do homeopathic dilutions keep antimony molecules from the raw material used as a starting point? b) to what extent are the observed effects specific? c) would there be changes in the physical-chemical properties of ultra-diluted preparations that could explain the biological effects? The present study aimed to answer, at least in part, such questions. To verify the existence of microparticles in suspension and their chemical nature, samples of medicines at different potencies were subjected to centrifugation for collecting the sediment, which was observed under a scanning electron microscope coupled to an EDS system (Energy Dispersion Spectroscopy) (JEOL 6510). Spectrophotometry using solvatochromic dyes was used to evaluate variations in the dipole moment of both homeopathic remedies. All measurements were performed in a controlled environment. Data were statistically analyzed for homoscedasticity and homogeneity (Shapiro-Wilk, Levene) and compared using parametric (ANOVA-Tukey Kramer) or non-parametric (Kruskal-Wallis/Dunn) methods, as appropriate. The significance level was set at p=0.05. The chemical composition of the solid sediment of the drugs showed a random pattern and no correspondence with the biological effects; however, the topography of the deposited particles showed agglomeration (or nucleation) only at the highest dilutions. On the other hand, the interaction of the drugs with the solvatochromic dyes ET33, BDN and Methylene Violet showed a periodic pattern in the potency-effect curve, as well as a close correspondence with the biological effects (p=0.0001 for Antimonium crudum and p≤0.05 for Silicea terra). These results suggest that the balance of charges in the liquid medium may be an essential factor in its mechanism of action, which corroborates the coherence domain hypothesis.

Keywords: Silicea terra, Antimonium crudum, microparticles, solvatochromic dyes, mechanisms of action

Dr Steven Cartwright

Ten years of research on solvatochromic dyes and homeopathic potencies: a summary of findings so far, together with recent results

Steven Cartwright1

¹Cherwell Laboratory for Fundamental Research in Homeopathy, Oxford, UK

Correspondence: Dr Steven Cartwright

Cherwell Laboratory for Fundamental Research in Homeopathy, Oxford, UK Email: steven.cartwright@oxford-homeopathy.org.uk

The use of solvatochromic dyes to investigate homeopathic potencies has provided, and continues to provide, a wealth of information about the fundamental nature of potencies. This summary of the last ten years research will look at the variety of results obtained so far. Almost sixty dyes have been examined during those ten years, under a range of conditions, and each has provided different and complementary information, thereby allowing a substantial body of physico-chemical evidence to be amassed. Recent results using immobilised dyes, which has added kinetic data to this body of evidence, will also be presented. It is now becoming possible to look at the trajectory of potency propagation, action and decay, and from this draw conclusions about how potencies may be exerting their effect. The challenges of using solvatochromic dyes will also be examined and how those challenges may be overcome. Significant results from the last ten years will be brought together to provide a short-list of the possible candidates for the physico-chemical identity of homeopathic potencies, and what experiments might be designed to test those hypotheses.

Keywords: Solvatochromism, potencies, spectroscopy, immobilisation, kinetics

Dr Stéphanie Chanut

Dynamized dilution of *Ruta graveolens* disrupts plasma membrane organization and decreases migration of melanoma cancer cell

Camille Fuselier¹, Eleonore Dufay², Alexandre Berquand³, Christine Terryn⁴, Arnaud Bonnomet⁴, Michael Molinari⁵, Pascal Trempat⁶, Laurent Martiny², Christophe Schneider²

¹Center Armand-Frappier Santé Biotechnologie of the INRS, University of Quebec, Laval, Quebec, ²CNRS UMR 7369 MEDyC, University of Reims Champagne-Ardenne, Reims, France ³LRN EA 4682, University of Reims Champagne-Ardenne, Reims, France ⁴Platform PICT, University of Reims Champagne-Ardenne, Reims, France ⁵Institute of Chemistry & Biology of Membranes & Nano-objects, Bordeaux, France ⁶Boiron, Lyon, France

Correspondence: Dr Pascal Trempat Boiron, Lyon, France Email: pascal.trempat@boiron.fr

Background: Cell migration is a complex and heterogeneous process performed by all eukaryotic cell types. Defects in this mechanism could be associated with severe pathologies such as cancer. Cutaneous melanoma is a cancer with poor prognosis mainly because of metastatic dissemination and therefore a deregulation of cell migration. In recent years, pre-clinical publications studied the effect of homeopathic dilutions such as *Ruta graveolens* in tumoral cell line and current therapies can benefit from homeopathy as supportive care in oncology. This study aimed to assess the effects of *Ruta graveolens* 9CH on plasma membrane reorganization and its influence on melanoma cell migration.

Methods: The overall stiffness of the cellular envelope in melanoma B16F10 cells was measured with Atomic Force Microscopy and calculated by the Young's modulus. *Ruta graveolens* 9CH impact on the plasma membrane and actin cytoskeleton organization of B16F10 cells was examined respectively through Laurdan two-photon microscopy for phospholipid organization, cholesterol quantification and immunofluorescence staining. Migration of *Ruta graveolens* 9CH-treated B16F10 cells was both assessed *in vitro* in dispersed cells assay as well as in transwell migration assay and *in vivo* with a melanoma metastasis model.

Results: *Ruta Graveolens* 9CH leads to an *in vitro* inhibition of migration on fibronectin of B16F10 melanoma cells, as well as a decrease of metastatic dissemination *in vivo*. These effects appear to be due to a disruption of plasma membrane organization, with a change in cell and membrane stiffness, associated with a disorganization of the actin cytoskeleton and a modification of the lipid composition of the plasma membrane.

Conclusion: Together, these results demonstrate an activity of dynamized dilution of *Ruta* graveolens 9CH in *in vitro* and *in vivo* models of cutaneous melanoma and reinforce its interest as complementary medicine in oncology.

Keywords: Homeopathy, melanoma, Ruta graveolens, migration, plasma membrane

Dr Anupriya Chaudhary

Homoeopathy as adjuvant therapy to standard medical management in persons with haemophilia - a prospective, randomized double arm study

Anupriya Chaudhary¹, Tapas Kundu², Vaishali Shinde³, Omkar Kumat³, Swati Pandey¹

¹Central Council for Research in Homoeopathy, New Delhi ²Motiwala Homoeopathic Medical College, Nasik ³Regional Research Institute (Homoeopathy), Mumbai

Correspondence: Dr Anupriya Chaudhary Central Council for Research in Homoeopathy, New Delhi Email: anupriyaccrh@gmail.com

Background and aim: Haemophilia is a hereditary bleeding disorder resulting from a deficiency of clotting factor VIII (Haemophilia A) or Factor IX (Haemophilia B). Haemophilia A occurs at a frequency of 1 in 5000 live male births and Haemophilia B at a frequency of 1 in 30000. A study comparing the effect of adjuvant homeopathic treatment given along with standard medical management and standard medical management alone in Persons with Haemophilia (PWH) with respect to Annualized Bleeding Rate (ABR) was undertaken.

Methods: A prospective, open-label, double-arm study was undertaken on males ≥10 years with severe & moderate haemophilia (A and B). After stratification for the severity of the disease, participants were randomized to receive Standard Medical Management alone (SMM) or adjuvant homeopathic treatment along with Standard Medical Management (SMM+H) for a period of 2 years. Mean ABR was compared at the end of each year. The difference in the number of bleeding episodes from the baseline year to each follow-up year was analyzed by independent t-test.

Results: 65 participants were enrolled after screening 201 patients. 40 participants (SMM= 17 and SMM+H= 23) which completed the 2 years follow-up were analyzed. Mean age was 17.62 ± 7.97 years. 85% of participants had Haemophilia A while 15% were Haemophilia B and the majority (n=39) suffered from severe factor deficiency. The mean ABR at the end of the 2nd year in the SMM+H group was 11.00 ± 7.12 (95% CI [8.09, 13.91]) compared to 15.59 ± 12.11 (95% CI [9.83, 21.34]) in the SMM group.

While the mean reduction in annual bleeds was 26.3% in the SMM group, a 64.7% decrease was observed in the SMM+H group after one year of treatment. A significant decrease in annual bleeds was found in SMM+H groups for baseline to 1^{st} year (mean difference =-14.68 (95% CI [-25.30 -4.05], p=0.008)) and for baseline to 2^{nd} year (mean difference = -15.87 (95% CI [-26.93 -4.81], p=0.006)) compared to the SMM group.

Conclusion: Adjuvant homoeopathic treatment was able to reduce the annual bleeds in PWH.

Keywords: Homeopathy, haemophilia, factor deficiency

Paul Doesburg

Cell phone emitted electromagnetic radiation nullifies specific effects of homeopathically prepared tin (*Stannum metallicum* 30x)

Paul Doesburg^{1,2}, Jens-Otto Andersen³, Claudia Scherr^{1,2}, Stephan Baumgartner^{1,2,4}

¹Institute of Integrative Medicine, University of Witten/Herdecke, Germany ²Society for Cancer Research, Arlesheim, Switzerland ³Biodynamic Research Association Denmark, Galten, Denmark ⁴Institute of Complementary and Integrative Medicine, University of Bern, Bern, Switzerland

Correspondence: Paul Doesburg

Institute of Integrative Medicine, University of Witten/Herdecke, 58313 Herdecke, Germany, Society for Cancer Research, 4144 Arlesheim, Switzerland Email: p.doesburg@vfk.ch

Background and aims: Previously we described a test system which revealed reproducible, specific effects of a potentised *Stannum met.* 30x preparation compared to water/ lactose 30x as control, in a bioassay using cress (*Lepidium sativum* L.). The bioassay is based on seed germination, CuCl₂x2H₂O crystallisation of the cress extracts, and subsequent computerised image analysis of the crystallisation patterns. Outcome parameters are cress seedling length, and the texture and fractal dimension of the crystallisation patterns.

Methods: In the present study we determined whether electromagnetic radiation, emitted by a cell phone due to a continuous vocal phone call for 14 h, affects the homeopathic *Stannum met.* 30x preparation regarding its biological effects. To this end, verum samples were either subjected to cell phone irradiation, or remained untreated. The stability of the experimental set-up was monitored throughout the entire investigation with SNC (Systematic Negative Control) experiments.

Results: *Stannum met.* 30x untreated resulted in a highly significant interaction between homeopathic treatment and experimental day for the cress seedling lengths, indicating a time-varying effect of *Stannum met.* 30x. Additionally, texture and fractal analysis of the subsequent crystallisation patterns demonstrated a significant homeopathic treatment effect. The exposure to cell phone emitted electromagnetic radiation nullified all treatment effects, both on the level of cress-seedling length and crystallisation patterns. SNC experiments did not yield evidence for experimental instabilities, indicative of a robust test system.

Conclusions: We observed that cell phone emitted electromagnetic radiation nullified specific effects of *Stannum met.* 30x in 20 independent experiments performed in two independent laboratories, both on the level of cress seedling length, and in the resulting crystallisation patterns. These results suggest a potential risk for homeopathic preparations due to the increased use of mobile communication systems. Furthermore, this result may help in specifying hypotheses on the mode of action of ultramolecular homeopathic preparations.

Keywords: Cell phone, electromagnetic radiation, pattern formation, bio-assay, systematic negative control experiments

Dr Leonardo Faedo

The use of Homeopathy in agriculture and its plant biostimulation effect on the strawberry cropping system

Leonardo Faedo¹, Rovier Verdi¹, Francis Rayns², Aike Kretzschmar³, Julia Wright², Pedro Boff⁴

¹Postgraduate Program in Plant Sciences, Santa Catarina State University (UDESC), Lages, Brazil and Postgraduate Program in Interdisciplinary Studies on Agroecology Water and Resilience, Coventry University, Coventry, UK

 ²Centre for Agroecology, Water and Resilience (CAWR), Coventry University, Coventry, UK
 ³Agroveterinarian Science Centre (CAV), Santa Catarina State University (UDESC), Lages, Brazil
 ⁴Agricultural Research and Rural Extension Service Agency of Santa Catarina State (EPAGRI), Lages, Brazil

Correspondence: Dr Leonardo Faedo

Postgraduate Program in Plant Sciences, Santa Catarina State University (UDESC), Lages, Brazil and Postgraduate Program in Interdisciplinary Studies on Agroecology Water and Resilience, Coventry University, Coventry, UKUJ Email: faedo.leonardo@gmail.com

Agriculture is facing a dramatic paradigm in its production model, where the necessity for sustainable farming methods is required to substitute the use of pesticides in agriculture. The strawberry (*Fragaria x ananassa*), one of the world's most important berries is facing serious issues related to the application of high volumes of pesticides, compromising food and environmental security. Homeopathy and Dynamized High Dilutions (DHD) have been showing promising results in plant-based research, particularly regarding plant bio-stimulation. Therefore, the objective of this study was to investigate the potential of Homeopathy in plant-based research to explore the plant bio-stimulation effect of DHDs and increase the potential for using this ecological method in strawberry cropping systems.

The experiment was carried out at the Agroveterinarian Science Centre, in Lages – Brazil, in 2019 and 2021, in a controlled environment following a Randomized Block Design and double-blind treatment application. The experiment tested the dynamized high dilutions of *Sulphur 12CH, Phosphorus12CH, Kali 12CH, Calcarea 12CH, Silicea 12CH, Natrum 12CH,* and *Mercurius 12CH,* using deionized water 12CH and deionized water as control. The treatments were applied every 15 days. The agronomical attributes assessed in this study were crop production, fruit quality, plant disease, plant growth and architecture, leaf chlorophyll content, and root system development.

Data were analyzed by ANOVA and when significant (≤0.05) by Dunnett's test. The DHDs of *Calcarea* and *Sulphur* increased of *Calcarea* and *Sulphur* increased root system development. Plants treated with DHDs of *Sulphur* and *Silicea* were less affected by *My-cosphaerella*. The DHDs of *Sulphur, Phosphorus, Kali* increased plant growth and crop yield. The DHDs of *Natrum* and *Mercurius* were not effective as plant bio-stimulators. The results of this study evidence the potential role of dynamized high dilutions as plant bio-stimulators and the contribution of Homeopathy to the mitigation of the use of pesticides in strawberry cropping systems.

Keywords: Agroecology, homeopathy, sustainability, plant-vitality

Dr Katharina Gaertner

Critical Appraisal Tool of Homeopathic Intervention Studies - CATHIS

<u>Katharina Gaertner</u>¹, Robert G. Hahn², Radmila Razlog³, Frauke Musial⁴, Stephan Baumgartner⁵, Martin Loef⁶, Harald Walach⁷

¹Witten/ Herdecke University, Germany
²Department of Clinical Sciences, Karolinska Institute, Stockholm, Sweden
³Department of Complementary Medicine, University of Johannesburg, South Africa
⁴National Research Center in Complementary and Alternative Medicine, Arctic University of Norway, Trømsø, Norway
⁵Institute of Complementary and Integrative Medicine, University of Bern, Switzerland
⁶Change Health Science Institute, Berlin, Germany
⁷Institute for Border Areas of Psychology and Mental Health (IGPP), Freiburg, Germany

Correspondence: Dr Katharina Gaertner Witten/ Herdecke University Email: katharina.gaertner@uni-wh.de

Background: Many clinical trials testing various forms of homeopathy have been reported in the literature. Systematic reviews and meta-analyses of these studies have only rarely considered whether the type of homeopathy applied or the way the study was conducted make the results relevant for clinical decisions. We constructed a critical appraisal tool to be employed for assessment of homeopathic intervention studies.

Method: Delphi feedback rounds were conducted to elicit responses on the feasibility of a draft appraisal tool. After the first round, a preliminary tool was pilot-tested by five research experts on five randomly selected studies. The tool was adapted and again used to assess in another five studies by the same experts. In addition, another three experts tested the second version.

Results: The interrater-reliability, calculated using Gwet's AC2, was 0.81 (95% CI 0.75 to 0.88) for five raters in round 2, or 0.64 (95% CI 0.49 to 0.79) for additional three raters in round 2, and thus had good to moderate interrater reliability. The instrument was evaluated as "easy to apply" by the raters.

Conclusion: We have developed a critical appraisal tool for the assessment of homeopathic intervention studies which has acceptable reliability and applicability. We recommend its use for systematic review and meta-analyses of homeopathic intervention studies.

Keywords: Homeopathic intervention studies, quality assessments
Dr Pritam Goswami

An in-vitro study exploring the therapeutic utility of *Bryonia alba* against SARS-CoV-2 Spike protein RBD induced cytokine imbalance in *Gallus gallus domesticus* embryo

Pritam Goswami¹, Debasmita Chatterjee², Sayak Ghosh², Krishnendu Paira², Satadal Das²

¹Mahesh Bhattacharyya Homoeopathic Medical College and Hospital, Howrah, West Bengal ²Genetic Research Unit, Heritage Institute of Technology, Kolkata

Correspondence: Dr Pritam Goswami

Mahesh Bhattacharyya Homoeopathic Medical College and Hospital, Howrah, West Bengal Email: pgoswami225@gmail.com

Introduction: *Bryonia alba* (BA) is a well-known medicine used in homeopathy and phytomedicine. The alcoholic extract of BA has demonstrated a crucial role in increasing the phagocytic property of human granulocytes and demonstrated adaptogenic, immuno-modulatory action by raising non-specific resistance. Ethno-pharmacological evidence supports anti-inflammatory properties of *Bryonia*, as an *in vitro* and *in vivo* study revealed that Bryonolic acid, an active component of the plant, up-regulates the expression of heme-oxygenase-1 (HO-1). It also down-regulates the expression of Nitric Oxide (NO), and inducible Nitric Oxide Synthase (iNOS). A study on molecular docking and virtual screening in addition to experimental tests revealed a highly strong and stable reaction between Bryonolic acid and the spike protein of SARS-CoV-2.

Methods: 13-day-old embryonated *Gallus gallus domesticus* eggs were procured from Government State Poultry Farm, Kolkata, India. The eggs were divided into nine groups on the 14th day when except for the control, all groups received 100µL of Ag and BA (30CH or 200CH) via the amniotic route. Harvesting of all the eggs was done after 48 h and 5-10 mL of allantoic fluids were collected in sterile vials and stored at - 80° C. Later Real Time-PCR (RT-PCR) was done to detect comparative cytokine gene expressions.

Results: When antigen was challenged and followed by administration of *Bryonia* 30CH, we observed remarkable change, IFN- α was increased more than 3-fold, and IL-10 was increased about 20 times in comparison to *Bryonia* 200CH. When antigen was challenged followed by administration of *Bryonia* 200CH, IFN- α and IL-10 were significantly increased but when antigen was challenged after administration of *Bryonia* 200CH, IL-10 was markedly increased while other cytokines were decreased.

Discussion: The analysis of the aforementioned data suggests that BA might have an anti-viral effect against the pathogenesis of SARS-CoV-2 and can be a potential therapeutic agent.

Keywords: SARS-CoV-2, cytokine imbalance, Bryonia, homeopathy

Dr Jennifer Jacobs

Thirty years of homeopathic research - lessons learned

Jennifer Jacobs¹

¹Department of Epidemiology, University of Washington, Seattle, WA, USA

Correspondence: Dr Jennifer Jacobs Email: jjacobs@igc.org

Conducting double-blind randomized controlled trials is difficult, even in the allopathic medical system. Doing so within the paradigm of classical homeopathy is even more challenging. More than thirty years of experience in carrying out such trials has taught me much about the pitfalls to avoid as well as the factors that can lead to success. The initial steps of putting together a research protocol, securing funding, and obtaining human subjects approval can be daunting. After that comes developing questionnaires and surveys, hiring study personnel, and recruitment of subjects. The actual implementation of the research comes with its own set of possible missteps. Sample size determination, entry criteria, as well as type, frequency and duration of treatment are all crucial. Finally, statistical analysis must be carried out to a high standard and a manuscript prepared to submit for publication. Even then there can be one or more manuscript revisions to make, based on feedback from reviewers, before a study is actually published. The entire process can take at least two years and is usually much longer.

Mistakes at any one of these steps can damage the outcome, as well as the impact of the study. With examples from my body of research, I will discuss some of the things that I wish I had done differently, as well as those that turned out to be correct. Homeopathic research is held to a much higher standard than conventional trials. Any flaws in study design, implementation, and analysis can be used by critics to negate the results. I am hopeful that the next generation of homeopathic researchers will learn from my experiences and carry on with great success.

Keywords: Clinical trials, publication, study design, classical homeopathy

Dr Harleen Kaur

Homoeopathy as an adjuvant to standard care in moderate and severe cases of COVID-19: a single-blind, randomized, placebo-controlled study

Harleen Kaur¹

¹Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India

Correspondence: Dr Harleen Kaur

Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India Email: dr.harleenkaur@gmail.com

Objectives: This study aimed to evaluate whether individualized homeopathic medicines have a greater adjunctive effect than adjunctive placebos in the treatment of moderate and severe cases of coronavirus disease 2019 (COVID-19).

Methods: The study was a randomized, single-blind, prospective, placebo-controlled clinical trial set in the clinical context of standard care.

Intervention: Patients of either sex, admitted in a tertiary care hospital, suffering from moderate or severe COVID-19 and above 18 years of age were included. In total, 150 patients were recruited and then randomly divided into two groups to receive either individualized homeopathic medicines or placebos, in addition to the standard treatment of COVID-19.

Outcome Measures: The primary outcome was time taken to achieve RT-PCR confirmed virus clearance for COVID-19. Secondary outcomes were changes in the Clinical Ordinal Outcomes Scale (COOS) of the World Health Organization, the patient reported MY-MOP2 scale, and several biochemical parameters. Parametric data were analyzed using unpaired t-test. Non-parametric data were analyzed using the Wilcoxon signed rank test. Categorical data were analyzed using Chi-square test.

Results: In total, 72 participants of the add-on homeopathy (AoH) group showed conversion of RT-PCR status to negative, in an average time of 7.53±4.76 days (mean±SD), as compared with 11.65±9.54 days in the add-on placebo (AoP) group (p=0.001). The mean COOS score decreased from 4.26±0.44 to 3.64±1.50 and from 4.3±0.46 to 4.07±1.8 in the AoH and AoP groups respectively (p=0.130). The mortality rate for the AoH group was 9.7% compared with 17.3% in the AoP group. The MYMOP2 scores between the two groups differed significantly (p=0.001), in favor of AoH. Inter-group differences in the pre- and post- mean values of C-reactive protein, fibrinogen, total leukocyte count, platelet count and alkaline phosphatase were each found to be statistically significant (p <0.05), favoring AoH; six other biochemical parameters showed no statistically significant differences.

Conclusion: The study suggests homeopathy may be an effective adjunct to standard care for treating moderate and severe COVID-19 patients. More rigorous, including double-blinded, studies should be performed to confirm or refute these initial findings.

Keywords: Moderate to severe COVID-19; coronavirus infection; homeopathy; integrative care; pandemic; RT-PCR

Dr Maria Olga Kokornaczyk

Self-assembled patterns formed in evaporating droplets to analyze the simple homeopathic bi-component complex *Luffa* 4x – *Mercurius bijodatus* 9x

Maria Olga Kokornaczyk^{1,3}, Sandra Würtenberger², Stephan Baumgarter^{3,4}

¹Society for Cancer Research, Arlesheim, Switzerland ²Scientific Society for Homeopathy, Köthen, Germany ³Institute of Complementary and Integrative Medicine, University of Bern, Switzerland ⁴Institute of Integrative Medicine, Witten/Herdecke University, Herdecke, Germany

Correspondence: Dr Maria Olga Kokornaczyk Email: m.kokornaczyk@vfk.ch

Background and aims: Homeopathic complex remedies are frequently used in the treatment of various common disorders. At the same time, there is only little basic research conducted in this field. The aim of the study was to analyze by means of patterns from evaporated droplets a specific complex (*Luffa* 4x - Mercurius bijodatus 9x, LMb) and to test what influence the complex's compounds have upon the patterns and if there are any interactions between the single compounds.

Materials and methods: In a series of 5 experiments conducted by means of the droplet evaporation method (consisting in evaporation induced self-assemble of structures in droplets) the complex LMb was compared to three control samples, in which one or both complex's compounds were replaced by potentized solute. The patterns were photographed and evaluated for their grey-level distribution and texture using the software ImageJ. The stability of the experimental set-up was tested by means of systematic control experiments.

Results: We found that the patterns of the complex LMb were significantly more homogenous than those of the combination "control – *Luffa* 4x", indicating that the addition of *Mercurius bijodatus* 9x to the complex increased its homogeneity. At the same time, the patterns of the combination "*Mercurius bijodatus* 9x – control" were characterized by lower homogeneity than those of the combination of the two controls, indicating that in this combination *Mercurius bijodatus* 9x acted oppositely and reduced the homogeneity.

Conclusions: In this phenomenological assay the complex LMb does not correspond to a simple addition of the two components *Luffa* 4x and *Mercurius bijodatus* 9x. Further investigations are needed to elucidate the exact nature of the underlying interaction.

Keywords: Homeopathic complex remedies, patterns, evaporated droplets, texture, homeopathy

Highly diluted bioactive compounds in marine aquaculture: looking for sustainable practices

Jesús Antonio López Carvallo^{1,2}

¹Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Ensenada, BC, México.

²Centro de Investigaciones Biológicas del Noroeste (CIBNOR), La Paz, BCS, México.

Correspondence: Dr Jesús Antonio López Carvallo Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Ensenada, BC, México Email: alopezcarvallo@gmail.com

Aquaculture production still faces high mortality events associated with the emergence and propagation of new diseases mainly related to bad aquaculture practices, organisms' transportation, and overstocking densities conditions. Traditionally, antibiotics and disinfectants have been used as conventional methods to avoid the presence of pathogens in cultured organisms, but these treatments damage organisms' health and the environment.

Recently, it has been suggested that highly diluted bioactive compounds (HDBC) can promote an integral response that allows marine organisms to improve their general condition and defense mechanisms, strengthening them against stressful factors (e.g. pathogens). The prophylactic use of these compounds on fish, mollusks and crustaceans have improved organisms' nutrition, growth, overall condition, defense mechanisms regulation and increased survival during challenge against pathogens. The HDBC used in marine organisms are mainly formulated by *Vibrio* spp. lysates, sodium metasilicates, phosphoric acid and homeopathic medicines for humans such as *Silicea terra*®, *Phosphoricum acidum*®, Passival® and VidatoX®, as well as homotoxic Heel® complexes. These compounds are used at different decimal and centesimal potencies. Because HDBC are innocuous, inexpensive and easy to use, they have been proposed as a potentially sustainable alternative to improve marine organism production under hatchery conditions.

Results suggest that HDBC can be defined as enhancers of marine organisms' health and strengtheners of the immune response where some compounds have been proposed to avoid massive mortalities of treated organisms by activating their self-defence systems rather than focusing efforts on killing pathogens. The use of HDBC brings a new insight on increasing productivity and cost effectiveness during hatchery operations of marine organisms. Findings in the mode of action of HDBC in Catarina clam using functional genomics will be discussed.

Keywords: Aquaculture, bioactive compounds, marine organisms, sustainable

Dr Raj Kumar Manchanda

Homeopathic medicines in COVID-19: prognostic factor research

Raj Kumar Manchanda¹, Anjali Miglani², Lex Rutten

¹Directorate of AYUSH, Government of Delhi ²Directorate of AYUSH, Health and Family Welfare Department, Government of NCT of Delhi

Correspondence: Dr Raj Kumar Manchanda Directorate of AYUSH, Government of Delhi Email: rkmanchanda@gmail.com

Background /Aims: Data collection studies were conducted during COVID-19 pandemic to identify useful homeopathic medicines with their prescribing indications.

Methods: Only confirmed cases with mild to moderate disease were treated with homeopathy as an add on to the standard conventional treatment. The data of about 2500 patients was analyzed retrospectively using prognostic factor research model. The data collection was challenging and could be made possible by training and Government's support.

Results: Six papers are published, and a 7th is under consideration. Initially, the symptomatology of Covid-19 was catalogued. Then the prescribing indications of *Bry*, *Ars*, *Gels* and *Puls* found useful in the 1st wave were identified. Biases noticed during data collection and their implications on big data were deliberated. A comparison between Indian and LMHI database reflected a strong consensus. The indications of medicines found useful during the 2nd wave i.e. *Bell*, *Hep-s*, *Phos*, *Rhus-t* and *Merc-s* were identified. An algorithm on COVID-19 was tested [English: https://hpra.co.uk/]. Our next publication is on the 3rd wave data, wherein the indications of *Nux-v* are added.

Conclusion: The real time practice-based data using prognostic factor research can help in improving the existing repertories, success rate of practice and can contribute to case repositories such as Clificol (www.clificol.net), Vithoulkas compass (www.vithoulkas compass.com) and HCCR (hccr.ccrhindia.in).

Keywords: COVID-19, homeopathy, prognostic factor research

Efficacy of *Arsenicum album* 30C in prevention of COVID-19 in individuals residing in containment areas – a prospective, multicentre, cluster-randomized, parallel arm, community based, open-label study

<u>Debadatta Nayak</u>¹, D Karthikeyan², Partha Pratim Pal³, Hima Bindu Ponnam⁴, Vipul Shastri⁵, Ramesh Bawaskar⁶, Raveendar Chinta⁷, Roja Varanasi¹, Anupriya Chaudhary¹, Anil Khurana¹

¹Central Council for Research in Homoeopathy, New Delhi ²Homoeopathy Research Institute for Disabilities, Chennai ³Dr. Anjali Chatterji Regional Research for Homoeopathy, Kolkata ⁴Homoeopathic Drug Standardisation Unit, Hyderabad ⁵C.D.Pachchigar Homoeopathic Medical College, Surat ⁶Regional Research Institute for Homoeopathy, Mumbai ⁷Regional Research Institute for Homoeopathy, Gudivada

Correspondence: Dr Debadatta Nayak Central Council for Research in Homoeopathy, New Delhi Email: drdnayak@gmail.com

Background & Aim: During the early part of the COVID-19 pandemic, non-pharmacologic interventions were the strategies for the prevention of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The Ministry of Ayush, Govt. of India, had advised *Arsenicum album* 30C, as a prophylactic to prevent COVID-19. This study was undertaken to evaluate the protective efficacy and safety of the *Arsenicum album* 30C.

Methods: We conducted a prospective, multicentre, cluster-randomized, parallel arm, community-based, open-label study involving apparently healthy individuals residing in containment areas of 7 cities of India. Clusters are defined as the population residing in the containment areas, who are under restriction for movement. 42 clusters were randomly assigned at 2:1 to the *Arsenicum album* 30C group (30 clusters) or to the control group (12 clusters, which received no specific therapy). The medicine was given twice daily for 7 days. The primary outcome was the incidence of COVID-19, as per the case definition notified by the National Centre for Disease Control, Government of India, during three weeks follow-up period.

Results: The analysis included 32186 individuals residing in 42 clusters. A total of 22693 individuals of 30 clusters received *Arsenicum album* 30C and 9493 individuals of 12 clusters were observed in the control group. Results were similar in the medicine and control groups for age, gender, and comorbidity. The overall protective effect of the *Arsenicum album* 30C was 80.22% (95% confidence interval [CI], 71.16 to 86.44; 40 cases per 22693 [6.04 per 10000 person-weeks] in the *Arsenicum album* 30C group vs. 84 cases per 9493 [29.78 per 10000 person-weeks] in the control group). The protective effect of the *Arsenicum album* 30C against laboratory-confirmed COVID-19 was 68.22% (95% [CI], 49.64 to 80; 32 cases per 24693 [4.83 per 10000 person-weeks] in the *Arsenicum album* 30C group vs. 42 cases per 9493 [14.93 per 10000 person-weeks] in the control group). Adverse effects observed in both groups were mild and resolved without medication and sequelae.

Conclusion: Homeopathic medicine *Arsenicum album* 30C was associated with a decrease in the incidence and provided some protection against COVID-19 as compared to non-treatment. Further, randomized, double-blind, placebo-controlled trials may be conducted to validate the results of this study.

Keywords: Arsenicum album, COVID-19, homeopathy, prophylactic

Prof Thomas Ostermann

Quality of health economic evaluations in homeopathy: overview of the last 30 years

Thomas Ostermann¹, Christa Raak², Sabine De Jaegere³, Julia Burkart³, Steven Simoens⁴

¹Department of Psychology and Psychotherapy, Witten Herdecke University, Witten, Germany ²Institute of Integrative Medicine, Witten/Herdecke University, Herdecke, Germany ³Deutsche Homöopathie-Union DHU-Arzneimittel GmbH & Co. KG, Karlsruhe, Germany ⁴Clinical Pharmacology and Pharmacotherapy, Department of Pharmaceutical and Pharmacological Sciences, KU Leuven, Leuven, Belgium

Correspondence: Prof Thomas Ostermann Department of Psychology and Psychotherapy, Witten Herdecke University, Witten, Germany Email: Thomas.Ostermann@uni-wh.de

Background and aims: To get a current picture of the health economic evidence base, an update of a review of economic evaluations of homeopathy from 2014 was conducted. In this preliminary analysis, the study quality was assessed and an increase of quality within the publication period was assumed.

Methods: Economic evaluations in the field of homeopathy published after 2012 were searched in the literature databases AMED, Cochrane Library, CRD, EMBASE and MEDLINE using the search terms "cost" and "homeopathy". Additionally, hand search was performed. Hits were checked by 2 independent reviewers who independently extracted and evaluated data of identified economic studies using the Consensus Health Economic Criteria (CHEC) list. Linear regression analysis for the CHEC-score (number of positively answered items) over publication year was performed.

Results: A total of 480 hits were retrieved from the literature search from January 2012 to August 2022. Of those, 8 studies were included and added to the 15 studies of the already existing review. Publication year of all 23 studies ranged from 1993 to 2021. Their mean CHEC-score was 7.65 ± 4.42 with newer studies ≥ 2009 (n=13) scoring higher (8.69 \pm 4.63) than older studies (6.30 ± 3.95) without being significant (p=0.21). Linear regression analysis confirmed this result and showed an increasing study quality over the years (beta=0.342; R²=11.7%) but again without being significant (p=0.12).

Conclusions: This preliminary analysis on study quality of economic evaluations of homeopathy found a heterogenous picture. Although a positive development over time was observed, more high-quality health economic studies are needed to successfully discuss the effects of homeopathy with stakeholders. Our upcoming update of the 2014 review will give more detailed insights and will add to the evidence base related to health economic aspects in homeopathy.

Keywords: Economic evaluation, homeopathy, systematic review

Dr Christa Raak

A study on stimulating effects of potentized *Sulfur* on neutrophil granulocytes from patients with periodontal inflammation and a healthy control group

<u>Christa Raak</u>¹, Linda Kauka², Stephan Baumgartner¹, Thomas Ostermann³, Anton Friedmann², Thomas Dittmar⁴

¹Institute of Integrative Medicine, Witten/Herdecke University, Herdecke, Germany ²Department of Dentistry, Oral and Maxillofacial Medicine, Department of Periodontology, Faculty of Health, Witten/Herdecke University, Witten, Germany ³Department of Psychology and Psychotherapy, Witten, Herdecke University, Witten, Germany

³Department of Psychology and Psychotherapy, Witten Herdecke University, Witten, Germany ⁴Chair of Immunology, Center for Biomedical Education and Research (ZBAF) Witten/Herdecke University, Witten, Germany

Correspondence: Dr Christa Raak

Institute of Integrative Medicine, Witten/Herdecke University, Herdecke, Germany Email: christa.raak@uni-wh.de

Background: Periodontitis is an inflammatory disease of the gingiva and periodontium. It can affect the general state of health, increase the predisposition to certain systemic diseases and have an unfavorable effect on their course. From an immunological point of view, certain leukocyte subpopulations are located at the site of the inflammatory response. Neutrophil granulocytes are among the inflammatory cells involved in the processes of the "first line of defense" of the immune system. In previous basic studies with potentized substances, an *in vitro* method using a three-dimensional migration assay was validated. By tracking the cell movement, it was possible to make statements about their migration and activation. In particular, an immunomodulatory effect of potentized *Sulfur* with human T-lymphocytes was demonstrated.

Aim: Since conclusions were limited due to the small sample size in the pilot study, we conducted a replication study with a larger number of patients.

Methods: From eight healthy and eight volunteers with periodontitis, whole blood was collected and neutrophil granulocytes were isolated. Using the 3-dimensional collagen matrix migration assay with subsequent cell tracking in time-lapse, the migratory properties of the granulocytes were investigated. The collagen connective tissue matrix used in this process closely resembles a physiological *in vivo* situation. By adding factors/inhibitors, their influence on cell migration and activity was investigated on granulocytes exposed with watery solution of *Sulfur* 8x, 12x and 24x potencies and placebo.

Results: The experiments were completed and statistical results are expected in January 2023. Detailed results of the experiments will be presented.

Discussion: Basic research with potentized substances has a long tradition but, in the past, has mainly focused on plant- or animal- based laboratory assays using duckweed or amphibian models. The approach presented here concentrates on human cells *ex vivo* and thus complements the results of previous basic research.

Keywords: Basic research, Sulfur, granulocytes, periodontitis, migration assay

Dr Elizabeth Rice and Dr Eleni Krommidas

Homeopathic treatment of post-acute COVID-19 syndrome - a pilot double-blind randomized controlled trial

Elizabeth Rice^{1,2}, Jennifer Jacobs^{2,3}, Iris Bell^{2,4}, Eleni Krommidas⁵

¹Homeopathy and Pharmacology Department, Sonoran University of Health Sciences, Tempe, AZ, USA ²Visiting Adjunct Research Faculty, Homeopathy and Pharmacology Department, Sonoran University of Health Sciences, Tempe, AZ, USA

³Clinical Assistant Professor, Epidemiology, University of Washington, Seattle, WA, USA ⁴Professor (retired), The University of Arizona College of Medicine, Department of Family and Community Medicine, Tucson, AZ, USA.

⁵Homeopathy and Pharmacology Department, Sonoran University of Health Sciences, Tempe, AZ, USA

Correspondence: Dr Elizabeth Rice

Homeopathy and Pharmacology Department, Sonoran University of Health Sciences, Tempe, AZ, USA, Email: e.rice@sonoran.edu

Background: Post-acute COVID-19 Syndrome, or Long COVID, is a serious public health concern. Previous clinical studies have shown classical homeopathy to be superior to placebo, including for chronic diseases with symptoms similar to Long COVID, such as fibromyalgia and chronic fatigue syndrome. Because homeopathy is a system that treats the whole person, it is likely to be of particular value to people suffering from the myriad symptoms associated with Long COVID.

Methods: This was a randomized, double-blind, placebo-controlled pilot study. Seventy-seven participants were randomized to receive an individually prescribed homeopathic verum medication or a placebo. Patients were treated via telemedicine by licensed homeopathic practitioners for 12 weeks. Primary outcome variables were the Fatigue Assessment Score (FAS) and the Physical Composite Score (PCS) and the Mental Composite Score (MCS) of the RAND-36 Item Health Survey. Baseline and follow-up ratings were evaluated at 4, 8, and 12 weeks.

Results: Linear regression models showed no significant differences in outcomes of the FAS, PCS, or MCS between placebo and verum at baseline, 4, 8, and 12 weeks. There was a near-significant difference in linear trend over the whole time period in favor of better outcomes for the placebo group for both the FAS (p-value=.093) and the PCS (p-value=.060). That is, the placebo group improved more quickly. There were 19 reported homeopathic therapeutic aggravations in the verum group compared to 10 in those receiving placebo. The wide variety of prescribing styles used by the practitioners precluded subgroup analysis.

Conclusions: The current pilot study confirms the feasibility of performing future studies of homeopathic treatment in Long COVID. The findings suggest that there was a biological difference in the pattern of response to treatment between those participants receiving verum versus placebo, possibly related to the phenomena of homeopathic aggravations.

Keywords: Posology, Long COVID, Homeopathic Aggravations, RCT

Fri 16 June, 11:00

Rachel Roberts

Scientific standards in homeopathy research: context is everything

Rachel Roberts¹, Angelina Mosley¹

¹Homeopathy Research Institute, London, UK

Correspondence: Rachel Roberts Homeopathy Research Institute, London, UK Email: rachelroberts@hri-research.org

In certain countries, homeopathy continues to be a controversial topic, with ongoing debate regarding the quality and status of scientific research in the field. In March 2022, this debate was fuelled by an article in BMJ Evidence Based Medicine entitled, 'Assessing the magnitude of reporting bias in trials of homeopathy'. This study by Gartlehner et al. claims that benefits of homeopathy may have been over-estimated due to high levels of reporting bias.

Gartlehner et al. focused on two key aspects of reporting bias: *'publication bias'* (failure to publish a study with unfavourable findings) and *'selective outcome reporting'* (changing the primary outcome from that stated in the protocol to give a more favourable result).

According to Gartlehner et al., 38% of registered trials in homeopathy remained unpublished and 25% of registered and published trials contained inconsistencies in primary outcomes, showing a "concerning lack of scientific and ethical standards in the field".

Yet, a thorough critique reveals significant concerns regarding the accuracy and reliability of these findings, and a fundamental failure to present them in sufficient context to be interpreted appropriately.

Since reporting bias is well-known to affect all areas of medical research, context is everything. In conventional medicine, studies have shown that on average half (range 23.6% to 83%) of registered trials do not publish their results on-time, and inconsistencies in primary outcomes occurs in a third of trials (range 18 to 43%). Therefore, according to Garlehner et al.'s data, homeopathy compares well to conventional medical research in terms of reporting bias.

In this presentation we will show how Gartlehner et al. were able to 'spin' their results into a strongly negative narrative, demonstrating that, contrary to these authors' claims, the clinical evidence base in homeopathy does not need any more "cautious interpretation" than other fields of medicine.

Keywords: Reporting, trials, registration, standards, bias

Prof Elio Giovanni Rossi

Homeopathy and complementary medicine in oncology in Tuscany Region (Italy): a successful integration in public health

Elio Giovanni Rossi¹, Francesca Bosinelli¹, Cristina Noberasco¹, Marco Picchi¹, Mariella Di Stefano¹

¹AUSL Tuscany North West, Lucca - Regional Center for Integrative Medicine, Region of Tuscany (Italy)

Correspondence: Prof Elio Giovanni Rossi AUSL Tuscany North West, Lucca - Regional Center for Integrative Medicine, Region of Tuscany (Italy) Email: e.rossi@mednat.it

Background: The Tuscan Healthcare System represents a virtuous example of Integrative Oncology (IO) practice both at the Italian and the international level.

Aims: To describe the integration process of Complementary Medicine (CM) including homeopathy in the Cancer Departments network within the Tuscan public healthcare system and the obtained results.

Methods: In 2010, the Tuscan Tumor Institute (ITT) and the Tuscan Network of Integrative Medicine (TNIM) established a working group consisting of CM experts and medical oncologists to review the literature on CM in cancer care. In 2013-2015, the TNIM participated in the European Partnership for Action Against Cancer-EPAAC with the purpose of collecting evidence concerning the use of CM in cancer care and of mapping the European cancer centers offering IO services.

Results: In 2015, a Resolution of the Tuscan Regional Government established in order to provide evidence-based CM to reduce cancer-related symptoms and adverse effects of conventional anticancer therapies. A Tuscan CM expert was also included in the Quality Assurance Scheme Development Group (QASDG) promoted by the European Commission Initiative on Breast Cancer (ECIBC), to draft European breast cancer guidelines and to perform quality assurance, managed by the Joint Research Centre (JRC) Ispra, Varese, Italy. In 2021, Tuscan Regional Guidelines (Diagnostic and Therapeutic Care Pathway-DTCP) on breast cancer were approved, with a section on complementary and integrative medicine as supportive cancer care. In November 2021, the DTCP "Integrative Medicine for Cancer Patients" defined a proper reference for IO practice in Tuscany. To date, 20 clinics provide CM services to patients with cancer in the public Tuscan Regional Healthcare System.

Conclusions: The integration of evidence-based complementary treatments as a part of a Comprehensive Cancer Care Network contributes to respond safely and effectively to the demand from cancer patients combining safety and equity of access in public healthcare systems.

Keywords: Integrative oncology, healthcare, Tuscany region

Dr Irene Dorothee Schlingensiepen

Accuracy and comprehensiveness of provings can determine the quality and longterm outcomes of homeopathic prescriptions

Irene Dorothee Schlingensiepen¹, Carola Schroeder², Knut Werner

¹International Academy of Science in Homeopathy and Integrative Medicine, Germany ²Klinikum Wahrendorf Hannover, Germany

Correspondence: Dr Irene Dorothee Schlingensiepen International Academy of Science in Homeopathy and Integrative Medicine, Germany

Background: How does the quality and documentation of provings influence the success of homeopathic prescriptions?

Methods: We evaluated long-term outcomes of our patients with different diseases according to evidence-based-practice criteria 1-3. We found that a small group of patients with a well-indicated classical homeopathic prescription did exceptionally well clinically. These outstanding outcomes only marginally depended on the severity of the underlying diagnosis. Throughout follow-up these patients needed no change of remedy.

We conducted several new provings, documented them with video and transcripts, then repeated them with different groups of provers to assess the impact of quality standards for homeopathic provings.

Results: Analysis of the case-taking transcripts and patient follow-ups, including the detailed prescription process, revealed that this best responding patient-group had one thing in common: all of their prescriptions were based on outstandingly clear provings and Materia medica.

Our analyses revealed that provings can form a decisive basis for best practice, provided that they fulfil the following criteria:

Exact and comprehensive compilation of

- · Individual symptoms in the category "Mind"
- Individual symptoms in "Generalities"
- Individual symptoms in body regions and organs
- The congruencies of such symptoms
- Exact documentation

High quality provings come from well-trained proving groups, who developed their own standards of precise questioning of the provers and response documentation.

Our own new and later replicated provings showed a high congruency of essential issues in main symptoms/themes in-between different groups of provers, bringing up the same issues in different ways and varying wording. This added new symptoms and helped to clarify the core-themes of the proven substance.

Conclusion: According to our findings the so-called "small remedies" might rather be narrowly proven remedies. Proving experience and high-quality proving-standards can essentially contribute to patients' outcome. Provings thus need to be developed and become part of homeopathic training.

Keywords: Proving standards, outcome measures, quality assurance, education, training

Dr Rajesh Shah

COVID-19 Nosode (BiosimCovex) research: Development, safety and efficacy (Phase I,II,III) studies

Rajesh Shah¹, Wayne B. Jonas², John A. Ives³, Joan Walter³

¹Director: BioSimilia and Life Force Homeopathy, Mumbai, India ²President: Healing Works Foundation, USA ³Samueli Foundation, USA

Correspondence: Dr Rajesh Shah Director: BioSimilia and Life Force Homeopathy, Mumbai, India Email: biosimilia@gmail.com

Background: Emergence of the SARS-CoV-2 virus in late 2019, and the ensuing pandemic, necessitated intense research efforts to create ways to protect people from infection. Within this context, we developed the BiosimCovex Coronavirus nosode using a scientific and systematic development approach, similar to that involved in new drug discovery.

Methods: We followed a stepwise process involving manufacture, preclinical testing, and clinical trial assessment according to regulatory processes. To begin, source material containing SARS-CoV-2 virus (Wuhan) was processed into the homeopathic BiosimCovex nosode at 30C, in a Biosafety Level-2 facility following all safety and ethical guidelines. Gene-sequencing and RT-PCR of intermittent potencies were done to standardize the product and ensure non-infectiousness. Animal toxicity studies as per OCED guidelines were then conducted. A Phase I study in healthy volunteers, a Homeopathy Pathogenetic Trial (HPT) and a randomized placebo-controlled study (RCT) in a quarantine facility were done during the active pandemic. Finally, an ICH-GCP compliant, Phase II feasibility RCT study with evaluation of biomarkers and Phase III multicentric study on 15 sites across India were conducted.

Results: The safety profile of BiosimCovex was documented. The Phase I study in healthy volunteers (n=10) showed a significant difference between IL-6 and CD4 values which directed us to conduct a feasibility RCT with assessment of additional biomarkers. In two HPTs (n=10 and n=30) the BiosimCovex nosode produced striking and specific symptoms which were deemed useful in clinical prescribing. The symptoms reported ranged from mild to severe but were reversible. The quarantine RCT study on 2233 high-risk individuals results reported a lower incidence of laboratory-confirmed COVID-19 (62% efficacy) and a shorter period of illness, with evidence of fewer hospitalizations in the BiosimCovex arm than those taking a placebo. Based on these preliminary findings a multicentric Phase III RCT was designed and recently completed (publications under review).

Conclusion: The safety and efficacy of a novel BiosimCovex SARS-CoV-2 nosode has been demonstrated following a stepwise development process. BiosimCovex is clearly able to safely protect against COVID-19.

Keywords: COVID-19, nosode, Biosimcovex, homeopathy, prevention

Dr Peter Smith

Classical homeopathic provings in a highly-regulated environment: reflections on a recent proving of *Galium mollugo*

Ashley Ross¹, Peter Smith²

¹Durban University of Technology, Durban, South Africa ²ResCo LTD, Carrickmacross, Republic of Ireland

Correspondence: Prof Ashley Ross Durban University of Technology, Durban, South Africa Email: docaross@gmail.com

Introduction: The evolution of a distinctly South African proving research milieu, characterised by formal academic review and independent research ethics board approval, has an almost 25-year history. Over the past eleven of these, there have been additional pressures to align an overtly classical proving methodology, implementation, and analysis to a range of international and local regulatory guidelines imperatives. These include the Homoeopathic Pharmacopoeial Convention of the United States (HPCUS) Proving Guidelines, the International Committee for Harmonisation (ICH) and South African Good Clinical Practice (SA-GCP) Guidelines, and formal review processes for approval by the Clinical Trials Committee of the South African Health Products Regulatory Authority (SAH-PRA).

The proving of *Galium mollugo*: The recently completed double-blind placebo-controlled proving of *Galium mollugo* is to the authors' knowledge the first classical homeopathic proving to have been reviewed and approved by a national (conventional) regulatory authority as a quasi-Phase 1 clinical trial. In pursuing this proving within a clinical trial milieu it was necessary to negotiate a critical balance between the essential components of a subtle and nuanced qualitative experimental methodology and the objective rigour and 'scientific' imperatives of the mainstream paradigm.

Results: The proving yielded a rich and nuanced materia medica of *Galium mollugo* that demonstrated clear internal coherence, a number of clinically useful generalities and peculiarities, and clear relationship to related substances at genus (*Galium*) and family (*Rubiaceae*) levels.

Conclusions: Some have argued that the highly subjective, artistic, and somewhat ephemeral nature of homeopathic provings is anathema to the harsh objectivity and rigour of objective regulatory review, placebo comparison and operational clinical trial imperatives. In this paper the authors will reflect upon the veracity of this position, and outline the critical considerations in reference to methodology, the supervisory team, prover training and accountable data analysis within a highly-regulated environment.

Keywords: Provings, clinical trial, medicines regulation

Prof Oskan Tasinov

Ferrum phosphoricum D12 affects J774A.1 cells proliferation and transcription of inflammation, oxidative stress and iron metabolism related genes in conditions of LPS stimulation

Oskan Tasinov¹, Yoana Kiselova-Kaneva¹, Deyana Vankova¹, Milena Pasheva¹, Diana Ivanova¹

¹Department of Biochemistry, Molecular Medicine and Nutrigenomics, Medical University of Varna,

Bulgaria

Correspondence: Assoc. Prof Oskan Tasinov

Department of Biochemistry, Molecular Medicine and Nutrigenomics, Medical University of Varna, Bulgaria

Email: oskan.tasinov@gmail.com

Ferrum phosphoricum (FP) is used as homeopathic remedy to treat the early stage of fever and inflammation in case of cold or flu, muscle fatigue and anemia. In this study we analyzed the action of FP D12 ethanol preparation *in vitro*, on cell proliferation and transcription levels of inflammation, oxidative stress and iron metabolism related genes in mouse J774A.1 macrophages +/- bacterial lipopolysaccharide (LPS, E. coli O26:B6).

Cell proliferation was examined using MTT test. RT qPCR analyses followed by the 2^{-ΔΔCt} calculation method were performed to estimate changes in gene transcription levels. GraphPad Prism V6 software was used for statistical analyses. FP effect was compared to ethanol treatment and to untreated cells in conditions of +/- LPS stimulation.

FP stimulated significantly proliferation of J774A.1 up to 158%, while ethanol caused gradual cell death reaching 65%, both vs. untreated cells. FP significantly neutralized ethanol related cell death. Both LPS and FP independently and significantly increased transcription of GCLC, IL-1 β , IL-6, TNF α , iNOS, Noxo1, MPO, Ireb2, CD86 genes, while only FP increased the transcription of Gpx and Fth1 vs. untreated cells. The pretreatment with FP additionally and significantly stimulated the LPS induced transcription of Gpx, GCLC, IL-1 β , IL-6, TNF α , iNOS, Fth1 and CD86 genes and decreased stimulatory effect of LPS on Ireb2 transcription.

The effect of FP onto transcription levels of Gpx, GCLC, IL-1 β , TNF α , iNOS, Ireb2, Fth1 and CD86 was significantly higher than the control ethanol treatment genes when calculated vs LPS treatment.

Our results are in accordance with previously reported immunostimulatory and iron uptake potential of FP in non-stimulated macrophages and support the application of FP in conditions of infections, oxidative stress and inflammation conditions.

Keywords: *Ferrum phosphoricum*, cell proliferation, gene expression, macrophages, lipopolysaccharide

Dr Michael Teut

Homeopathic research - do you believe in the evidence?

Michael Teut1

¹Charité Universitätsmedizin Berlin

Correspondence: Dr Michael Teut Charité Universitätsmedizin Berlin Email: michael.teut@charite.de

Background: The hypothesis of this presentation is that the narratives on the evidence of homeopathy and the plausibility of research data is based to a relevant degree on belief systems of the respective actors.

Methods: On the basis of qualitative data from interviews on the understanding of childhood illnesses of homeopathic, anthroposophic and conventional physicians, data from the Allbus-survey and an additional literature review hypotheses about basic belief systems of the actors were developed.

Results: Conflicting beliefs about mind-matter problem and nature versus technology may influence the interpretation of homeopathic research data, which may lead to "plausibility bias".

Conclusion: Understanding the debate from a meta-perspective might expand the understanding and lead to new solutions in the otherwise deadlocked discourse.

Keywords: Homeopathy, belief systems, plausibility bias

Dr Alexander Tournier

Fundamental research in homeopathy: considerations and recommendations

<u>Alexander Tournier</u>^{1,2,3}, Leoni Bonamin⁴, Susann Buchheim-Schmidt⁵, Steven Cartwright⁶, Christoph Dombrowsky¹, Paul Doesburg⁷, Carla Holandino⁸, Maria-Olga Kokornaczyk^{7,1}, Everine van de Kraats⁵, Jesús Antonio López-Carvallo⁹, Papyia Nandy¹⁰, José Manuel Mazón-Suástegui⁹, Fateme Mirzajani¹¹, Bernard Poitevin¹², Claudia Scherr^{7,13}, Karin Thieves, Sandra Würtenberger¹⁴, Stephan Baumgartner^{1,7,3}

¹Institute of Complementary and Integrative Medicine, University of Bern, Switzerland

²Homeopathy Research Institute, London, UK

³Institute of Integrative Medicine, Witten/Herdecke University, Herdecke, Germany

⁴Universidade Paulista. São Paulo - Brazil.

⁵Deutsche Homöopathie-Union, Germany

⁶Cherwell Laboratory for Fundamental Research in Homeopathy, Oxford, UK

⁷Society for Cancer Research, Arlesheim, Switzerland

⁸Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil

⁹Centro de Investigaciones Biológicas del Noroeste S.C., La Paz, BCS, Mexico.

¹⁰Centre for Interdisciplinary Research and Education, Kolkata, India

¹¹Protein Research Center, Shahid Beheshti University, G.C., Tehran, Iran

¹²Société Savante d'Homéopathie, Paris

¹³Institute of Integrative Medicine, Witten/Herdecke University, Germany

¹⁴Scientific Society for Homeopathy, Köthen, Germany

Correspondence: Dr Alexander Tournier

Institute of Complementary and Integrative Medicine, University of Bern, Switzerland, Homeopathy Research Institute, London, UK, Institute of Integrative Medicine, Witten/Herdecke University, Herdecke, Germany

Email: alexander.tournier@unibe.ch

Background: The homeopathic potentisation procedure, involving successive steps of dilution and succussion to arrive at pharmaceutical preparations with specific biomedical effects, is a core tenet of homeopathy. Dilution levels generated during the homeopathic manufacturing process often exceed well beyond Avogadro's limit. Accordingly, the scientific assessment of the potentisation procedure is of high importance. However, until now no specific guidelines in this research area existed.

Aim: To provide recommendations to promote highest quality, statistically sound, and reproducible basic research into specific effects of homeopathic preparations. Also, to provide a more uniform base upon which research protocols can be designed and discussed so as to make best use of existing knowledge and understanding in this field of research.

Methods: Input was gathered from experts (members of scientific societies dealing with homeopathic basic research) in a structured process seeking consensus as to what the most important aspects and considerations are when it comes to creating high-quality research into homeopathic potentisation.

Results: We present a series of recommendations on a number of topics such as: experimental controls, system stability, blinding and randomisation, environmental influences, and procedures for the production of homeopathic samples and controls, thereby taking specific challenges of the research field into account.

Conclusions: Different key aspects of homeopathy research are discussed. All together these provide a strong foundation for building meaningful research protocols, which take account of the latest thinking in the field and provide a backdrop for meaningful comparison of research protocols.

Keywords: Fundamental research, homeopathy, guidelines, basic research

Dr Pascal Trempat

Benefits of homeopathic complementary treatment in breast cancer patients: A retrospective cohort study based on the French nationwide healthcare database (SNDS)

Jacques Medioni¹, Daniel Simeca², Yecenia Lopez Marquez³, Emmanuelle Leray⁴, Nicolas Hoertel⁵, Mohammed Bennani⁶, <u>Pascal Trempat</u>⁷, Naoual Boujedaini⁷

¹APHP Hôpital Européen Georges Pompidou, Université Paris Cité, Paris, France
²Maisons-Alfort, France
³Service d'Hépatogastroentérologie, Hôpital de la Croix Rousse, Lyon, France
⁴Univ Rennes, EHESP, CNRS, Inserm, Rennes, France
⁵APHP Corentin Celton, Université Paris Cité, Paris, France
⁶Qualees, Paris, France
⁷Boiron, Lyon France

Correspondence: Dr Pascal Trempat Boiron, Lyon France pascal.trempat@boiron.fr

Background: There is a growing use of complementary therapies in oncology and homeopathy features prominently. Their purpose is to help patients better cope with the illness and the side effects (SEs) of cancer treatments that particularly affect quality of life (QOL). However, there are few comparative studies. This study aimed to assess the benefits of homeopathy treatment on the QOL for patients with non-metastatic breast cancer (BC), prescribed in post-surgical complementary therapy, compared to treatment without homeopathy.

Methods: An extraction from the French nationwide healthcare database targeted all patients who underwent mastectomy for newly diagnosed BC during 2012-2013. QOL was assessed through proxies, primarily the use of medication palliating the SEs of cancer treatments. Exposure to homeopathy and use of SEs medication were measured by the number of dispensing. The association was assessed using a Random Effect Poisson Count Model, with adjustment for co-factors.

Results: 98,009 patients were included (mean age 61±13). Patients taking homeopathy appeared to have less cardiovascular and diabetes comorbidities. Homeopathy was used in 11%, 26%, and 22% of patients respectively during the 7 to 12 months before surgery, the 6 months before, and 6 months after, then stable at 15% for 4 years. During the six months after surgery, there was a significant overall decrease (RR=0.88, CI95=[0.87; 0.89]) in the dispensing of SEs medication for patients with ?3 homeopathy dispensing vs none. Decrease appeared to be greater for immunostimulants (RR=0.79, CI95=[0.74; 0.84]), corticosteroids (RR=0.82, CI95=[0.79; 0.85]), antidiarrheals (RR=0.83, CI95=[0.77; 0.88]), systemic antifungals (RR=0.86, CI95=[0.8; 0.92]), and antiemetics (RR=0.9, CI95=[0.87; 0.93]).

Conclusion: The study showed an increasing use of homeopathy in patients with BC following diagnosis. This use was sustained after surgery and seemed to play an important role in helping to better tolerate SEs of cancer treatments.

Keywords: Homeopathy, breast cancer, complementary therapy, QOL

Dr Francesca Truzzi

Effects of homeopathic treatments on human cellular inflammation in vitro

Francesca Truzzi¹, Grazia Trebbi¹, Giovanni Dinelli¹

¹University of Bologna, Italy

Correspondence: Dr Francesca Truzzi University of Bologna, Italy Email: francesca.truzzi3@unibo.it

The reliability of homeopathic treatments can be analyzed through various experimental approaches, but the problems of standardization of pharmacological profiles have never been systematically resolved. However, recently, claims about the efficacy of homeopathic medicines have been revisited using validated pharmacological assays. The aim of this work was to study the effects of some selected homeopathic treatments in reference to oxidative stress by using standardized models of cellular toxicity and through a three-dimensional model of intestine. Since homeopathic Arsenic is one of the main remedies for inflammation following oxidative stress, the effects of some dilutions of Arsenic were studied. In particular, the dermal fibroblast cells L929, recognized as an official test at European level for toxicity studies, were treated with H₂O₂ and the effects of the different dilutions of Arsenic were evaluated on three cellular models. The "healthy" model, where the cells were treated with the different potencies of Arsenic, the "curative model", where the Arsenic stimuli were applied after the cellular treatment with H2O2, and the "preventive model", where the stimuli were added before the cellular treatment with H2O2. The effects of the treatments were evaluated by MTT cell proliferation assay, according to the standard ISO10993-5. A selection of the dilutions able to induce significant anti-oxidative effects, were then added to a reconstructed human intestine, obtained by seeding human intestinal cells on "equivalent dermis", where monocytes and fibroblasts were plated together with collagen I. Gut equivalent models were treated or not with H₂O₂ and one selected dilution of Arsenic was added to the samples. Hematoxylin and eosin analyses showed that the Arsenic dilution previously selected was able to partially recover the oxidative stress induced by H₂O₂

Keywords: Oxidative stress, Arsenic, cellular models, MTT, intestinal reconstructs

Annekathrin Ücker

Standard deviation as outcome parameter in plant-based test systems investigating homeopathic preparations in high potency levels

Annekathrin Ücker¹, Marcus Reif², Paul Doesburg^{1,3}, David Martin¹, Stephan Baumgartner^{4,1,3}

¹Institute of Integrative Medicine, University Witten/Herdecke, Witten, Germany ²Society for Clinical Research, Berlin, Germany ³Society for Cancer Research, Arlesheim, Switzerland ⁴Institute of Complementary Medicine, University of Bern, Switzerland

Correspondence: Annekathrin Ücker Institute of Integrative Medicine, University Witten/Herdecke, Witten, Germany Email: annekathrin.uecker@uni-wh.de

Based on an *a posteriori* analysis of a dataset consisting of seven independent experiments of a dwarf pea (Pisum sativum) bioassay investigating potentised Gibberellic acid 17x, a positive correlation of standard deviation standardised effect size was observed. This relationship seems counterintuitive since a higher standard deviation decreases the signal-to-noise-ratio. Although different investigations already had hypothesized an influence of a treatment with homeopathic preparations on standard deviation (Nani et. al. 2007: smaller standard deviation in treatment groups compared to control groups), a possible correlation to effect size had not been investigated. If the same relationship between standard deviation and standardised effect size is detectable in other datasets, it can be hypothesised that a corresponding correlation might be a specific characteristic of test systems reacting to homeopathic preparations. We therefore analysed two further datasets of plant-based test systems investigating homeopathic preparations (arsenic-stressed duckweed (Lemna gibba L.) treated with Ars alb potencies between 17x and 33x; and copper chloride crystallisation pictures of cress (Lepidium sativum) treated with Stannum met 30x) regarding a possible relationship between standardised effect size and standard deviation. Both test systems used systematic negative control experiments in parallel to main experiments that were analysed in the same way in this investigation. In both test systems (duckweed and cress), a positive correlation of standard deviation and standardised effect size was detected in the treatment groups of main experiments, but not in systematic negative control experiments. Therefore, there seems to be a pattern in the data that needs further in-depth investigation. We want to encourage other working groups to test their datasets for a similar correlation. Additionally, we propose different interpretations of the finding and its application in further test series.

Keywords: In vitro test-systems, standard deviation, standardized effect size, homeopathy

Dr Roja Varanasi

A comparative randomised controlled trial of homoeopathy versus allopathy in acute otitis media and its recurrence in children

Roja Varanasi¹, Rupali Bhalerao, Paul Sumithran, Kiranmayee Rompicherla GR, Pramodji Singh, Sunil S Ramteke, Karthikeyan D, Dubashi Ramesh, Bhuwaneswari S, Shraddha Chauhan, Jayakrishnan V, Shravani Kampilli, Ajay Meena, Arvind Kumar, VA Siddiqui, Praveen Oberai, Raj K Manchanda

¹Central Council for Research in Homoeopathy, New Delhi, India

Correspondence: Dr Roja Varanasi Central Council for Research in Homoeopathy, New Delhi, India Email: varanasiroja@gmail.com

Objective: Acute Otitis Media (AOM) is one of the most common acute infections in children and often injudiciously treated by antibiotics. Homoeopathy has been found efficacious but requires further comparison with allopathy in terms of efficacy and usage of antibiotics, hence, this study.

Method: This was an open label, randomized, controlled, parallel arm trial conducted on children (aged 0-12 years), suffering from AOM. The primary outcome was changes in Tympanic Membrane Examination scale (TMES) and Acute Otitis Media-Severity of Symptoms (AOM-SOS) scale, time to improvement in pain through Facial Pain Scale-Revised (FPS-R) over 10 days. The need for antibiotics in both groups and the recurrence of subsequent episodes of AOM over 12 months were also compared.

Results: Intention to treat analysis was carried out on 222 children; Homeopathy (n=117) (H-group), Allopathy (A-group) (n=105). There was a statistically significant reduction of scores in H-group compared to A-group at each time point: at day 3 (mean diff.±sd: 1.71±0.19; 95% CI: 1.34 to 2.07; p=0.0001), at day 7 (mean diff.±sd: 1.29±0.24; 95% CI: 0.82 to 1.76, p=0.0001) and at day 10 (mean diff. ±sd: 1.23±0.25; 95% CI= 0.74 to 1.71; p=0.0001) favoring homeopathy. Clinical failure by the third day of treatment was observed in 11% and 24% of children in H-group vs A-group (OR: 0.03; 95% CI:0.001 to 0.52 0.01, p=0.03). None of the children in the H group required antibiotics whereas 14 children in A group required them.

Conclusion: Both therapies seemed to produce comparable effects and appeared safe. The study consolidated the findings observed during a pilot study, i.e., homeopathy is non-inferior to allopathy in managing AOM in children and antibiotics in children can be avoided.

Keywords: Acute otitis media, homeopathy, allopathy, antibiotics

Dr Petra Weiermayer

Recommendations for designing, conducting and reporting clinical observational studies in homeopathic veterinary medicine

Petra Weiermayer¹, Philippa Fibert², Michael Frass³, Christien Klein-Laansma⁴, Susanne Ulbrich-Zürni⁵

¹WissHom: Scientific Society for Homeopathy, Wallstraße 48, DE-06366 Koethen, Germany ²Department of Psychology and Pedagogic Science, St Mary's University, Twickenham, UK ³Institute for Homeopathic Research, Columbusgasse 20, A-1100 Vienna, Austria ⁴Louis Bolk Institute, Health and Nutrition, Kosterijland 3-5, NL-3981 AJ Bunnik, The Netherlands ⁵Institute of Integrative Medicine, University of Witten/Herdecke, Gerhard-Kienle-Weg 4, DE-58313 Herdecke, Germany

Correspondence: Dr Petra Weiermayer WissHom: Scientific Society for Homeopathy, Wallstraße 48, DE-06366 Koethen, Germany Email: petra.weiermayer@outlook.com

Background: Clinical observational studies are an important methodological approach in human and veterinary research, examining and describing treatment experience with good external validity. There are currently few observational studies in the field of homeopathic veterinary medicine.

Aim: To develop recommendations for designing, conducting and reporting observational studies in homeopathic veterinary medicine.

Materials and Methods: A literature review was performed using various search strategies for guidelines and checklist tools relevant for observational studies, veterinary research, and homeopathy. Useful guidelines were selected. Prior recommendations for designing and conducting observational studies in human homeopathic medicine were supplemented with recommendations for homeopathic veterinary medicine that were evaluated by an expert panel.

Results: The veterinary extension of the Strengthening the Reporting of Observational Studies in Epidemiology statement, STROBE-Vet, was identified as a useful tool to improve the reporting quality of observational studies, and it has been supplemented here with additional recommendations that are applicable to homeopathy. STROBE-Vet is complemented in the literature by several reports, checklists and guidelines on veterinary medicine in general, such as the Checklist for One Health Epidemiological Reporting of Evidence (COHERE) and the Animal Health Surveillance Reporting Guidelines (AHSURED). Found items that related to laboratory animal research were excluded as non-relevant.

Conclusions: Clinical observational studies are an important methodological approach, having currently unrealized potential in the field of homeopathic veterinary medicine. With relatively minor adjustments, the practical guidelines and checklists available to researchers in designing, conducting and reporting observational studies in human homeopathic medicine have been adapted for homeopathic veterinary medicine, for which high quality can be assured by implementing recommendations such as those in STROBE-Vet. With the emergence of the One Health concept, the COHERE checklist can be viewed with growing significance.

Keywords: Clinical observational studies, homeopathic veterinary medicine, guidelines, recommendations

Dr Esther van der Werf

Can homeopathy reduce antibiotic use while maintaining symptom control for otitis media? A systematic review

Rachel Perry¹, Alyson Huntley², Michael Teut³, Nai Ming Lai⁴, David Martin^{5,6}, Esther van der Werf^{2,7}

¹Bristol Heart Institute and Bristol Trials Centre, Bristol Medical School, Bristol, United Kingdom. ²Centre For Academic Primary Care, Bristol Medical School, Bristol, United Kingdom. ³Institute for Social Medicine, Epidemiology and Health Economics, Charité Universitätsmedizin Berlin, Germany.

⁴School of Medicine, Faculty of Health and Medical Sciences, Taylor's University, Kuala Lumpur, Malaysia.

⁵Tübingen University Children's Hospital, Tübingen University, Tübingen, Germany

⁶Institute of Integrative Medicine, Department of Medicine, University of Witten/Herdecke, Witten, Germany ⁷Homeopathy Research Institute, London, United Kingdom.

Correspondence: Dr Esther van der Werf Homeopathy Research Institute, London Email: esthervanderwerf@hri-research.org

Background and aims: Effective and safe non-antibiotic treatment may contribute to reducing antibiotic use and antimicrobial resistance (AMR), and meeting doctors' and patients' desire for symptom relief in (acute) Otitis Media (OM). This systematic review aims to assess whether homeopathy can effectively reduce OM symptoms and the use of antibiotics.

Methods: A search of Pubmed, Embase, Cochrane Central Register of Controlled Trials, Web of Science, AMED, CINAHL, CORE-Hom and CAM-QUEST was conducted to identify all controlled trials (randomised (RCTs) and non-randomised (nRCTs) on individualised homeopathy (IH) and non-individualised homeopathy (non-IH)) in patients with OM. Data analysis and quality appraisal will be according to the Cochrane Handbook for Systematic Reviews of Interventions.

Primary outcomes are symptom relief (severity and duration) and antibiotic use. Secondary outcomes include antibiotic prescribing, hearing loss, recurrence, health service and medication use, quality of life, re-consultation and adverse events. Meta-analyses are planned to be performed on the highest level of available evidence available only (PROS-PERO 2022 CRD42022367188).

Results: The search identified 507 records. 84 full-text papers were screened for eligibility. 9 studies were identified, of which 4 reported on the effectiveness of IH (n=1: homeopathy vs placebo; n=3: homeopathy vs standard care and 5 on the effectiveness of non-IH (n=1: homeopathy vs placebo; n=4: homeopathy vs standard care).

The effect of homeopathy on symptom relief and antibiotic use, and whether effects can be demonstrated over and above those expected with placebo, will be presented. Additionally, we will present findings on secondary outcomes.

Conclusion: This systematic review will give the most up-to-date evidence for the effectiveness and safety of homeopathy for (acute) OM. It will also guide the conduct of further clinical trials in the important topic area of the role of homeopathy in AMR.

Keywords: Antimicrobial Resistance (AMR), Otitis Media (OM), Antibiotics, Homeopathy, Systematic Review

Dr Daniel Wrzałko

Effect of homeopathic potencies on chromatographic patterns of human blood *in vitro* using Kaelin's blood test

Daniel Wrzałko^{1,2}, Jürg Lehmann³, Marcus Reif⁴, Stephan Baumgartner^{1,2,5}, Maria Olga Kokornaczyk^{1,2}

¹Society for Cancer Research, Arlesheim, Switzerland ²Institute of Complementary and Integrative Medicine, University of Bern, Bern, Switzerland ³Arztpraxis Allgemeinmedizin FMH Arzt für Homöopathie SVHA, Basel, Switzerland ⁴Society for Clinical Research, Berlin, Germany ⁵Institute for Integrative Medicine, University of Witten/Herdecke, Herdecke, Germany

Correspondence: Dr Daniel Wrzałko Society for Cancer Research, Arlesheim, Switzerland, Institute of Complementary and Integrative Medicine, University of Bern, Bern, Switzerland Email: danielwrz@gmail.com

Background and aims: Kaelin's blood test (KBT) was developed by an anthroposophic physician, Werner Kaelin (1888-1973), as a potential method for cancer diagnostics. The test is an ascending paper-chromatography test with a full blood hemolysate as stationary phase and water as mobile phase. Our aim was to investigate if different homeopathic potencies vs. placebo would influence the chromatographic patterns.

Materials and methods: In a pilot study, *Pulsatilla* 30c, *Natrium muriaticum* 30c, *Phosphorus* 30c were compared against *Water* 30c. For the experiments, blood sample remnants from the Clinic Arlesheim / Switzerland were used. In the main experiments a remedy prescribed by a homeopath was tested against *Natrium muriaticum* and *Pulsatilla* (in same potency, 30c or 200c) and placebo globules. The study was approved by the Ethics Committee. The experimental system robustness was assessed by means of systematic control experiments. Final images were scanned, and the colour distribution was evaluated using the software ImageJ.

Results: In the pilot study we observed statistically significant differences in the colour distribution in a specific region in the upper part of the image, which was therefore defined as Region of Interest (ROI). In six out of nine blood samples there were significant differences in the colour distribution between the treatments. The systematic control experiments indicated a satisfactory model robustness. The results of the ongoing main study will be evaluated using the same approach.

Conclusions: The KBT seems to be a promising method for homeopathy basic research; moreover, it might develop into a treatment efficiency monitoring test. Nevertheless, further studies are needed to elucidate the test's sensitivity, robustness, repeatability, and applicability in practice.

Keywords: Individualized homeopathy, human blood model, ascending chromatography, colour analysis, patterns

European Central Council of Homeopaths

congratulates

on the 5th International Research Conference CUTTING EDGE RESEARCH IN HOMEOPATHY



To ensure the availability of high-quality homeopathic treatment to all European citizens



Vithoulkas**Compass**

Building on what works in Homeopathy.

The most **advanced homeopathy software** representing unique, groundbreaking research.

A complete toolbox of **innovative functions** to assist you in locating the **optimum remedy** for every case.

A **friendly system** helping you reach the maximum potential of **success in your practice**.



Try Vithoulkas Compass and experience the difference: www.vithoulkascompass.com

Poster Presentations

P1

Fri 16 June, 17:00

Nilima Bangar

Therapeutic efficiency of *Syzygium jambolanum* homeopathic dilutions in alleviating glycation-mediated diabetic nephropathy through Nrf2 signaling: mechanistic insights from *in vitro* and *in vivo* studies

Nilima Bangar¹, Mayura Apte¹, Rashmi Tupe¹

¹Symbiosis School of Biological Sciences, Symbiosis International (Deemed University), Maharashtra, India

Correspondence: Dr. Rashmi Tupe Symbiosis School of Biological Sciences (SSBS), Symbiosis International (Deemed University) (SIU), Lavale, Pune-412115, Maharashtra, India Email: rashmi.tupe@ssbs.edu.in

Background and Aim: Advanced glycation end products (AGEs) elevate oxidative stress with down-regulation of Nrf2 pathway and play a role in pathogenesis of diabetic nephropathy (DN). *Syzygium jambolanum (SJ)* dilutions such as Mother tincture (MT), 30C, and 200C are prescribed in homeopathy for the treatment of diabetes. This study aims to evaluate the role of *SJ* dilutions in Nrf2 activation and concomitant antiglycation potential in DN.

Methods: To investigate the antiglycation activity of *SJ* drug, albumin was glycated with methylglyoxal along with *SJ* dilutions. Further it was evaluated by multi-spectroscopic-microscopic approaches including circular dichroism (CD), fourier transform infrared spectroscopy (FTIR), transmission electron microscope (TEM), and surface plasmon resonance (SPR). Renal cells (HEK-293) were treated with glycated albumin and molecular mechanisms of Nrf2-Keap1 pathway on ARE gene (NQO 1, antioxidant, and detoxification) were analyzed. For *in vivo* studies of 40 days, streptozotocin-induced diabetic rats (n = 43) were given a treatment of respective *SJ* drugs (1:20 dilution) or metformin (45 mg/kg) intragastrically twice a day. DN was assessed by determining biochemical parameters and tissue histological examination. Kidney homogenate was used for implication of Nrf2 pathway through antioxidant (catalase, superoxide dismutase, glutathione peroxidase), detoxification enzymes (glyoxalase I, II, aldose reductase) activity, western blotting, and RT-qPCR.

Result: Based on fluorescence spectroscopy, CD, FTIR, TEM analysis *SJ* dilutions restrained glycation modification, maintained structural, functional integrity of the albumin and interaction between them was thermodynamically favourable. *SJ* dilutions maintained antioxidant, detoxification enzyme activity, elevated Nrf2, NQO 1 expression, and reduced Keap1 level in HEK-293 cells. Treatment of *SJ* drug in diabetic rats decreased the metabolic disturbances and maintained antioxidant-oxidant balance. This treatment upregulated gene expression of Nrf2 pathway and diminished renal cell damage.

Conclusion: These findings suggest that *SJ* drug (30C) acts as anti-glycating and Nrf2 activator which further prevents progression of DN.

Keywords: Glycation, nephropathy, Nrf2-signaling, Syzygium jambolanum

Prof Leoni Bonamin

P2

Solvatochromic dyes as a tool for tracking homeopathic complex activity in water reservoirs of a spring park in Brazil

Leoni Bonamin¹, Nathalia Salles¹, Sergio Frana¹, Monica Filomena Souza², Ivana Suffredini¹, Steven Cartwright³

¹Universidade Paulista – UNIP, São Paulo, Brazil ²SIGO Homeopatia, Campo Grande, Brazil ³Cherwell Laboratory for Fundamental Research in Homeopathy, Oxford, UK

Correspondence: Prof Leoni Bonamin Universidade Paulista – UNIP, São Paulo, Brazil Email: leonibonamin@gmail.com

Solvatochromic dyes are physicochemical markers of homeopathic medicines. Herein, methylene violet was selected from a pilot study to identify the homeopathic complex (Arnica montana 30cH, Phosphorus 30cH, Arsenicum album 30cH, Ignatia amara 30cH, and Staphysagria 30cH) designed specifically to be used in the park Nascentes do Rio Taquari at the request of IMASUL, intending to facilitate the ecosystem's bioresilience after being burned down in September 2020. In Brazil, there are no legal restrictions on using dynamized products in the natural environment. The complex was soaked in biodegradable inert gel set at nine strategic points in the park. Water samples were collected at each point at different times, before and after the insertion of the complex. Then, they were filtered through a 0.22 Micra mesh filter for sterilization and frozen. For analysis, 1cH potencies of each thawed water sample were prepared using 30% ethanol as solvent. The ready-made samples were added to methylene violet dye in a 1:60 ratio in microplates and read in an ELISA reader at a wavelength of 598 nm. Statistical analysis was performed by the Shapiro-Wilk normality test, and parametric or non-parametric ANOVA, being p≤0.05. Significant differences were seen between samples of the complex and controls (3% alcohol and ethylicum 1cH), both in the presence of methylene violet prepared or in water at pH=4.0 (p=0.015) or in ethanol P.A. (p=0.03). Only samples collected from the Point 02 showed statistical significance between times before and after treatment, using methylene violet prepared in water pH=4.0 (p≤0.05) or ethanol P.A. (p≤0.05). Given that point number 2 is close to the source and the others are points with greater water flow, one can speculate about the role of water turbulence in signal stability as a function of time. The findings partially reproduce those obtained previously.

Keywords: Environment, eco-homeopathy, solvatochromic dyes, water

Dr Anupriya Chaudhary

P3

Efficacy of individualized homeopathy as an adjunct to standard of care of COVID-19: a randomized, single-blind, placebo-controlled study

Debadatta Nayak¹, Juhi Gupta², <u>Anupriya Chaudhary</u>¹, Debolina Das¹, Abhishek Saha³, Deepak Kumar Chaudhary⁴, Ashwini Kumar Singh⁴, Abhijeet Deshmukh⁵, Ajay Goenka⁵, S K Mishra², Krishna Gopal Singh⁵, Sanjay Gupta², Anil Khurana¹

¹Central Council for Research in Homoeopathy, New Delhi ²Government Homeopathic Medical College and Hospital, Bhopal ³Intermediary Pharmacovigilance Centre (Homoeopathy), National Institute of Homoeopathy, Kolkata ⁴Epidemic Cell, Central Council for Research in Homoeopathy, New Delhi ⁵Chirayu Medical College & Hospital, Bhopal

Correspondence: Dr Anupriya Chaudhary Central Council for Research in Homoeopathy, New Delhi, India Email: anupriyaccrh@gmail.com

Background and Aim: As per World Health Organization (WHO), about 80% of infections are mild-to-moderate or asymptomatic; 15% develop severe disease and 5% have a critical disease with complications. In the initial part of pandemic, there was no anti-viral specific to COVID-19 available. Multiple different therapeutic options like antimalarial, HIV medications, antivirals, anti-helminthics, and steroids have been repurposed for the management of COVID-19 in various phases of the pandemic and studies have been undertaken to estimate their efficacy. Similarly, various homeopathic medicines were also suggested for prophylaxis and treatment of COVID-19, and research studies were undertaken. This study evaluates the clinical efficacy of adjunct individualized homeopathic care along with the standard of care in hospitalized COVID-19-positive patients.

Methods: This single-center, randomized, single-blind, placebo-controlled study involving 300 patients, was conducted at a dedicated COVID-19 hospital in Bhopal, India. Eligible patients were randomized to receive adjunct homeopathy [standard of care + homeopathy (SC + H), n = 151] or placebo [standard of care + placebo (SC + P), n = 149] along with the standard of care. The primary outcome was the change in the total symptom score over 10 days.

Results: GLM-ANOVA showed a statistically significant decrease in total symptom score in SC + H group compared to SC + P [$F_{(1,297)}$ = 56.13, P = 0.0001]. The clinical recovery was 2 days earlier in the SC + H group (SC + H: [5.95 ± 0.16 days], 95% CI: 5.63 to 6.27; SC + P: [7.69 ± 0.12 days]; 95% CI: 6.58 to 7.03; P = 0.0001). Time to fever clearance was 20 hours earlier in the SC + H group compared to the SC + P (SC + H: [35.04 ± 6.48 hours], 95% CI: 22.32 to 47.75; SC + P: [55.79 ± 9.05 hours]; 95% CI: 38.04 to 73.54; P = 0.04).

Conclusion: Adjunctive individualized homeopathic management with an integrated standard of care has resulted in better clinical outcomes in patients with COVID-19 in terms of early recovery. Further, double-blind, controlled studies are needed to confirm these results.

Keywords: Homeopathy, integrative medicine, COVID-19

Elena Dalrio

Treatment of acute cough with the homeopathic medicine "Similasan Cough Suppressant Syrup"

Felix Iten¹, Maria Scheuermann¹

¹Similasan AG, Chriesiweg 6 CH-8916 Jonen, Switzerland

Correspondence: Dr Felix Iten Similasan AG, Chriesiweg 6 CH-8916 Jonen, Switzerland Email: felix.Iten@similasan.swiss

Background and aims: While classical homeopathic remedies have only one single active substance, homeopathic complex remedies have multiple active substances and an indication that directly addresses the patient. Self-medication with homeopathic complex remedies is widespread but hardly investigated. The primary aim of the study was to evaluate patient satisfaction with the treatment of cold-related acute cough with the homeopathic complex remedy Similasan® cough suppressant syrup.

Methods: The study was a non-interventional collection of health-related patient data by means of a questionnaire given to patients during a cough-related doctor's visit. Patients were asked to record the frequency and intensity of their cold and cough symptoms and to indicate their satisfaction with the treatment. The questionnaire was based on 4-point Likert scales, which are easy to complete and time-saving.

Results: The average age of the 79 patients who participated in the study was 50 years. At the end of the treatment 87% of the patients were very satisfied with the treatment. On average, patients recorded symptoms after 0, 4 and 6 days of treatment. After the first 4 days, the overall symptom score decreased by 38%, and another 33% of symptoms disappeared after further two days. The decrease of total symptom scores was significant in both treatment periods (p<0.0001). Tolerability was rated as very good by 94% of patients. No adverse events were reported.

Conclusion: We can only speculate about a faster recovery due to the treatment, since the study design does not include a control group and common cold is a self-limiting disease. However, the very good tolerability, the high level of satisfaction with the treatment and the clear and rapid reduction in symptoms, seem to confirm that the cough syrup helped the patients.

Conflict of interest: The authors are employees of Similasan AG.

Keywords: Non-interventional study, acute cough, complex homeopathy, self-medication

P4

Christoph Dombrowsky

Theories and models on the mode of action of homeopathic remedies – a scoping review

<u>Christoph Dombrowsky</u>¹, Alexander Tournier¹, Stephan Baumgartner¹, Sabine Klein¹, Sandra Wuertenberger²

¹Institute of Complementary and Integrative Medicine, University of Bern, Switzerland ²Scientific Society for Homeopathy, Köthen, Germany

Correspondence: Dr. Alexander Tournier Institute of Complementary and Integrative Medicine, University of Bern, Switzerland Email: alexander.tournier@unibe.ch

Background: As of today, no systematic review on published theoretical approaches to understand the mode of action of homeopathic remedies has been presented. References to possible theoretical models therefore remain speculative and arbitrary. The need to accelerate theory building for scientific and political reasons is widely recognized.

Methods: Following scientific standards we searched Medline, Embase, Scopus, Web of Science, PhilPapers, the Gemeinsamer Verbundkatalog (GVK), swisscovery, CAMBase, several webOPACs (University Witten/Herdecke, IGM Bosch Stiftung, HBH, EBH) and personal libraries of the authors for original studies. All identified references were screened in duplicate and eligibility was determined according to pre-set criteria. Included references will undergo systematic data extraction and quality assessment. The results are planned to be published in two parts – the first containing a quantitative overview, the second a qualitative evaluation of the findings. We expect to identify theories and models on the mode of action of homeopathic remedies from different disciplines of natural science and arts humanities.

Results: Database searches resulted in several thousand unique references from which less than 2000 were found eligible for title and abstract screening. A few hundred eventually were considered relevant for thorough full text analysis which is currently ongoing.

Conclusions: The results of this ongoing systematic literature review, which will published in the coming years, will provide a thorough overview of theories and models on the mode of action of homeopathic preparations discussed in the scientific literature over the past 200 years and will serve as guidance for future theory building and development.

Keywords: Scoping review, theories, mode of action

67

P5

Dr Johannes Fahrentrapp

P6

Patterns from dried droplets as a tool to study combinations of plant and inorganic homeopathic preparations in low dilution range

Johannes Fahrentrapp^{1,2}, Stephan Baumgartner^{1,2,3}, Sandra Würtenberger⁴, Maria Olga Kokornaczyk^{1,2}

¹Society for Cancer Research, Arlesheim, Switzerland ²Institute of Complementary and Integrative Medicine, University of Bern, Bern, Switzerland ³Institute for Integrative Medicine, University of Witten/Herdecke, Herdecke, Germany ⁴Scientific & Regulatory Affairs, Hevert-Arzneimittel GmbH & Co. KG, Nussbaum, Germany

Correspondence: Dr Maria Olga Kokornaczyk Society for Cancer Research, Arlesheim, Switzerland, Institute of Complementary and Integrative Medicine, University of Bern, Bern, Switzerland Email: m.kokornaczyk@vfk.ch

Background and aims: Patterns from dried droplets were used to characterize homeopathic preparations of different origin in low potency levels, and the impact of different succussion modalities on homeopathic preparations. Here we studied the potential of this approach to investigate mixtures of plant extracts and salts in 2x and 3x and to determine which influence the plant and salt components have on the pattern.

Materials and methods: We tested either in 2x and 3x five salt solutions and seven plant extracts, and their 1/1 combinations. 28 drops of each mixture were evaporated and photographed with a dark field microscope in 25x and 100x magnifications. The images were qualitatively characterized and quantitatively analyzed by means of the computer program ImageJ for their texture parameters. Data were statistically evaluated.

Results: Patterns of 2x potencies showed more structures than those of 3x potencies. Patterns of plant-salt mixtures contained more structures than those of plant extracts and salt solutions separately. The addition of salt solutions to plant extracts increased sample discrimination for the plant extracts, particularly for KNO₃, NaCl, and CuCl₂. Qualitatively, the mixtures showed new kinds of patterns that were distinct from the patterns of the components analyzed separately.

Conclusions: This pilot study pointed at a good potential to use the patterns from evaporated droplets to study mixtures of homeopathic preparations in low dilution ranges. Discrimination of plant extracts might be improved by using other ratios than the applied 1:1 ratio or different potency combinations. Further research is needed in order to elucidate the methods' potential for homeopathy basic research and analytics based on a pattern formation process.

Keywords: Droplet evaporation method, method development, combination remedies, basic research, low dilution range

Dr Philippa Fibert

P7

A service evaluation of homeopathic treatment for those with long-COVID: the long-COVID POD (Patient's Own Data) project

Philippa Fibert¹, Anne Majumdar¹, Tony Pinkus^{2,3}

¹St Mary's University, UK ²Ainsworths Pharmacy, UK ³Faculty of Homeopathy, UK

Correspondence: Dr Philippa Fibert St Mary's University, UK Email: philippa.fibert@stmarys.ac.uk

Background: Long-COVID symptoms are those persisting for more than 12 weeks after acute coronavirus. The condition is a debilitating and increasing public health problem, with UK incidence increasing from 1.46% of the population in 2021 to 3.1% in May 2022 (https://www.ons.gov.uk). The lack of cost-effective interventions to improve symptoms is an on-going health issue. Homeopathy has demonstrated usefulness in previous epidemics and conditions similar to long-COVID.

Aim: To gather routine patient data regarding homeopathic treatment for long-COVID providing preliminary information to support more systematic research.

Methods: Homeopaths treating patients with self-reporting long-COVID were asked to record their patient's outcomes using Measure Your Own Medical Outcome Profile (MYMOP), for the first three consultations: two self-selected symptoms, an activity limited by the condition, and wellbeing (range 0-6). MYMOPs were forwarded to a central research point for analysis. The project was advertised to homeopaths at online information exchanges during COVID.

Results: Between January 2021 and May 2022 ten homeopaths provided anonymised MYMOP data from 48 patients. 43 patient's data was eligible for inclusion (because their acute COVID was more than 12 weeks prior to the homeopathic consultation). 39 completed a second MYMOP, and 20 completed a third MYMOP. Most homeopaths prescribed a COVID nosode, alongside over 17 different individualised remedies.

Patients recorded a 1.5 point (38%) improvement at their second consultation; and a 2 point (47%) improvement at their third. The most frequently reported symptom was fatigue, and most common activity rendered difficult by long-COVID was exercise.

Conclusions: Patients reported improvements with homeopathic treatment. Given the lack of therapeutic options for this condition, further research is warranted. A pilot RCT is underway to provide more systematic information. The POD project was a useful means of gathering preliminary information to support further, more robust research.

Keywords: Service evaluation, homeopathic treatment, long-COVID

Dr Yvonne Fok

P8

Homeopathic treatment of COVID-19 patients: findings of the Clificol international clinical case registry

Alexander Tournier^{1,2}, <u>Yvonne Fok</u>³, Robbert van Haselen⁴

¹Institute of Complementary and Integrative Medicine, University of Bern, Switzerland ²Institute of Integrative Medicine, Witten/Herdecke University, Germany ³Hong Kong Association of Homeopathy, Hong Kong ⁴International Institute for Integrative Medicine, UK

Correspondence: Dr Alexander Tournier Institute of Complementary and Integrative Medicine, University of Bern, Switzerland Email: alexander.tournier@unibe.ch

Background: The Clificol[®] COVID-19 Support Project is an innovative international clinical case registry project which aimed to collect experiences with the homeopathic treatment of COVID-19 patients. This paper describes and compares the reported findings from the 6 main contributing countries.

Methods: Observational clinical case registry study of patients with confirmed or suspected COVID-19. Participating homeopaths could freely enter symptoms that informed the remedy prescription. Additionally, in China use was made of a symptom questionnaire. The analyses were primarily descriptive.

Results: 1227 cases, as available by the 31st of October 2022, were used for the analyses. In total, 1606 prescriptions were analysed, 977 of which contained data on the symptoms used in the remedy selection process. Outcome data on 1310 prescriptions were available. Overall, *Bryonia alba* was the most commonly prescribed remedy, and this was particularly evident in India, Spain and Switzerland. Also, the prevalence of the 10 most commonly used rubrics in patients' prescriptions, varied significantly between countries. The highest percentage of rapid recovery (66%) was observed in those patients that had their symptoms for more than 30 days prior to initiation of homeopathic treatment.

Conclusions: Significant experience has been obtained with the homeopathic treatment of COVID-19 patients. We observed a high level of variability between countries. Future statistical analyses of aggregrated clinical case data will benefit from reducing unwanted variability as well as bias. This will further unlock the potential contribution of the Clificol project to improving homeopathy.

Keywords: Clinical case registry, Covid-19, Clificol, genus epidemicus

70

Dr Katharina Gaertner

Bibliography of Homeopathic Intervention Studies (HOMIS) in human diseases

<u>Katharina Gaertner</u>¹, Martin Loef, Michael Frass, Renu Mittal, Anil Khurana, Rajkumar Manchanda, Klaus von Ammon, Martin Frei-Erb, Harald Walach, Stephan Baumgartner

¹Witten/Herdecke University, Germany

Correspondence: Dr Katharina Gaertner Witten/Herdecke University Email: katharina.gaertner@uni-wh.de

Objectives: Homeopathy (HOM) is a therapeutic method, which is widely used by patients and medical professionals. The medical conditions as well as the homeopathic medical products investigated vary strongly. There is an extensive amount of research, and this necessitates a bibliography that comprehensively presents the entire body of clinical evidence grouped according to medical conditions.

Design: Thirty-seven online sources as well as print libraries were searched for HOM and related terms in eight languages (1980 to March 2021). We included studies that compared a homeopathic medicine or intervention with a control regarding the therapeutic or preventive outcome of a disease (classified according to International Classification of Diseases-10). The data were extracted independently by two reviewers and analyzed descriptively.

Results: A total of 636 investigations met the inclusion criteria, of which 541 had a therapeutic and 95 a preventive purpose. Seventy-three percent were randomized controlled trials (n = 463), whereas the rest were non-randomized studies (n = 173). The leading comparator was placebo (n = 400). The type of homeopathic intervention was classified as multi-constituent or complex (n = 272), classical or individualized (n = 176), routine or clinical (n = 161) and isopathic (n = 19), or various (n = 8). The potencies ranged from 1X (dilution of -10,000) to 10 M (100^{-10.000}). The included studies explored the effect of HOM in 223 medical indications. We present the evidence in an online database.

Conclusions: This bibliography maps the status quo of clinical research in HOM. The data will serve for future targeted reviews, which may focus on the most studied conditions and/ or homeopathic medicines, clinical impact, and the risk of bias of the included studies.

Keywords: Database, controlled studies, reviews



Sunny Goddard

Homeopathic treatment of urinary tract infection of women in Australia: a retrospective case series analysis

Sabina Vatter¹, Sunny Goddard¹, Ashraf Sharafi¹, Celeste Salter¹

¹The Aurum Project, Brookvale, Australia

Correspondence: Dr Sabina Vatter The Aurum Project, 107/20 Dale St, Brookvale, NSW 2100, Australia Email: utiresearch@aurumproject.org.au

Aim: To explore the impact of homeopathy on the intensity, frequency and duration of symptoms experienced with Urinary Tract Infections (UTI), including the mental and emotional state. Evaluate the experience of researching within Research Pods compared to conventional research teams.

Background: This research focuses on UTI and the scope of homeopathy in the management and treatment of UTI symptoms. Antibiotic resistance is a public health concern, and recurrent UTIs are a case in point. Alongside recurrent UTIs, women experience physical, emotional and mental discomfort, which creates a complex picture of disease that homoeopathy can effectively address. Secondly, The Aurum Project uses research Pods to bring together practising homoeopaths to undertake scientific research, inspire motivation and build social support.

Methods: To address our first aim, a retrospective case series analysis will be conducted with a minimum of 5 cases. Registered homeopaths in Australia will be invited to participate in this study by responding to an Expression of Interest form. The Pod will determine the eligibility of submitted cases based on a complete record of the mental, emotional and physical symptoms, using the HOM-CASE reporting guidelines (van Haselen, 2016). The inclusion criteria of the cases are: women 18 years and over, resident in Australia, cases taken within the last 5 years and with at least one follow-up visit. The second aim addresses the benefit to Pod members through surveying their experiences using the Connor-Davidson Resilience Scale (CD-RISC-25).

Discussion: Our Pod's intention is to better understand the homeopathic approach in treating UTI symptoms. Implications of this ongoing study include: providing further professional advice on case-taking and case-publishing; encouraging more practitioners to publish their cases; and evaluating the practitioner-patient relationship dynamic in the context of individualised treatment of UTI. This study will also examine the resilience of Pod members when undertaking this research.

Keywords: Urinary tract infection, women, inflammation, case studies, homeopathy


Hildegard Klingberg

"Regaining emotional awareness and finding back to inner structure." Phenomenology of homoeopathy in depression: a clinical study in mixed-methods design

Hildegard Klingberg¹, Terje Sparby¹, Ulrich Weger, PhD¹

¹Department of Psychology and Psychotherapy, Witten/Herdecke University, Witten, Germany

Correspondence: Hildegard Klingberg Dept. Psychology and Psychotherapy, Witten/Herdecke University, Alfred- Herrhausen-Str. 50, 58448 Witten, Germany Email: hildegard.klingberg@uni-wh.de

Background: According to the World Health Organisation (WHO), depression will become the main disease worldwide by 2030. Currently, depression is one of the most frequent indications for homeopathic treatment. The aim of this trial is to investigate the phenomenology and efficacy of individualized homeopathic treatment (IHT) on depressed patients.

Methods: A clinical study in mixed-methods design was conducted utilizing semistructured retrospective interviews with patients, suffering from mild to moderate depression. All patients were under IHT. Content analysis was used to develop categories and subcategories. Additionally, the depression scales of the Patients Health Questionnaire (PHQ-9) before (T1) and after (T2) IHT were analyzed using univariate statistics.

Results: Ten patients (*N*=10) with clinically relevant depression were interviewed. Two main categories were generated. In the first main category, closely linked to the ICD-10 Criteria, improvements in the sub-categories "Emotions", "Cognitions", "Energy", "Sleep" and "Somatic Ailments" were shown. In the second main category, titled Holistic Approach, three sub-categories with six themes compiled more specific changes during treatment. In the first sub-category, named "Perception", changes to a more appropriate inner distance towards negative emotions and life challenges as well as enhanced affectivity and affect differentiation occurred. In the second sub-category the "State of Health" ameliorated through a regain of lost substantial resources and structures with improved regenerative skills. In the third sub-category "Realization" a broader ability of self-realization and a deeper view of oneself was ascribed. Furthermore, the means of the PHQ-9 depression values decreased from T1 (*M*=14.30, *SD*=4.34) to T2 (*M*=3.50, *SD*=1.84) by 10.8 points highly significant (*p*= .000) towards clinical health.

Discussion: These results strengthen former IHT research outcomes. Moreover, these profound findings contrast with ascribed negative side effects of allopathic antidepressants and may serve to integrate IHT as a beneficial treatment for depression in health care systems.

Keywords: Depression, Individualized Homeopathic Treatment, phenomenology, clinical research, mixed-methods design

Renate Kuenne

Can Hahnemann's conceptualization of mode of action of homeopathic remedies be part of today's scientific discussion?

Renate Kuenne¹, Stephan Baumgartner^{1,2}, Peter Heusser¹, Sandra Wuertenberger³

¹Witten/Herdecke University, Germany

²Institute of Complementary and Integrative Medicine, University of Bern, Switzerland ³Wissenschaftliche Gesellschaft für Homöopathie (WissHom), Germany

Correspondence: Renate Kuenne Witten/Herdecke University, Germany Email: renate.kuenne@uni-wh.de

Background: Today's scientists have no generally accepted theory to explain specific effects of potentized substances in higher dilution levels. However, Hahnemann himself had a distinct idea on this point, characterizing the mode of action as '*geistartig*'. This term is difficult to translate and not commonly used in current scientific discussions. However, given the open question regarding how to understand this central concept of homeopathy, we pursued the following research questions:

- Can Hahnemann's conceptualization of mode of action be understood in a way, which is relevant to current scientific research?
- Does Hahnemann's conceptualization of mode of action comprise helpful aspects, hitherto neglected in homeopathy research?

Methods: We analyzed all printed texts by Hahnemann in German for the use of the term *geistartig*. In total, 76 documents were analyzed.

Results: After decades of research, Hahnemann coined the term *geistartig* by 1833, characterizing the mode of action as follows:

- It acts without transfer of matter (dynamically, comparable to a physical force)
- It (re)organizes physiological processes in organisms in a qualitative manner, specific for each substance. The specificity is fostered by potentization
- · It differs from known physical forces, acting only on animated matter.

Hahnemann justifies his statements by empirical observations, particularly by documented provings. He understands *geistartig* as an abstract idea derived from observations.

Hahnemann's conceptualization of mode of action can be seen as a *regulative idea of reason*, which Kant had introduced particularly for research into living organisms.

Conclusion: Hahnemann's conceptualization of mode of action of remedies as 'geistartig' is clearly defined and empirically and epistemologically justified. It appears suitable for current scientific use.

The concept essentially includes organizing effects on living organisms, alongside the claim that the remedy's mode of action differs from known physical forces. These properties can be tested empirically and thus provide a fruitful inspiration for future research.

Keywords: Geistartig, mode of action, theory of medicine, 19th Century history medicine 74



Dr Mariya Lilova

Evaluation of the role of homeopathy in an integrative care day hospital for oncology outpatients in Strasbourg (France): a qualitative study

Mariya Lilova¹, Valérie Feka, Jean-Lionel Bagot¹

¹Groupe Hospitalier Saint Vincent (GHSV) Strasbourg France

Correspondence: Dr Jean-Lionel Bagot Groupe Hospitalier Saint Vincent (GHSV) Strasbourg France Email: jlbagot@orange.fr

Context: In Strasbourg, an integrative care day hospital at the Clinique de la Toussaint receives patients with cancer, WHO performance status 2/ 3, presenting with symptoms of grade 2/ 3. A dozen different integrative treatments are practiced there. How was the homeopathic consultation perceived during this day of integrative care?

Material and method: Patients were included in this purely qualitative study in the order of their arrival between 18/02 and 08/04/22. The data collection was carried out by a physician unknown to the patients. No question was ever directly asked about the homeopathic consultation and the therapeutic effects obtained. Inclusions were made until data saturation was reached. The analysis of the verbatim account was made according to the interpretative phenomenological approach. NovaMind ^a software was used.

Results: Twenty patients, including 13 in a metastatic situation, responded to interviews lasting for an average of 23 minutes. The homeopathic consultation was commented on spontaneously by 17 patients.

Always very well received, the homeopathic consultation was described as a time of soothing listening, where people could speak in an atmosphere of trust, benevolence and "humanity". It was a time described as useful because the pathology and oncological treatments in progress were clearly explained. The clinical examination was felt to be thorough and informative.

The prescription was clearly perceived as complementary and not as an alternative to cancer treatments. Homeopathy was described as one of the most useful treatments of the day, because it is effective and long-lasting. It sometimes became possible to reduce conventional medicines.

Conclusion: The homeopathic consultation, given the time taken, the particular quality of listening to the patient and the careful clinical examination that it requires, was described as soothing, informative, benevolent and personal. The long-lasting therapeutic activity was appreciated by patients, particularly when concerning orphan symptoms.

Keywords: Qualitative study, homeopathy, integrative oncology



Dr Russell Malcolm

Outcomes from homeopathic treatment of male and female hormone deprivation syndromes in an integrated NHS setting - an observational study

Russell Malcolm^{1,2,3}

¹NHS Tayside, UK ²Faculty of Homeopathy, UK ³Centre for Integrative Medical Training, UK

Correspondence: Dr Russell Malcolm NHS Tayside, Faculty of Homeopathy, Centre for Integrative Medical Training, UK Email: russell.malcolm@tayside.nhs.scot

Abstract: In collaboration with Specialist Oncology and Primary Care Services for the Tayside Region, 312 patients (81 male, 231 female) were treated homeopathically for a range of symptoms linked to hormone deprivation.

The majority of patients (92%) were referred with requests to improve their tolerance of oestrogen/androgen blockade, as part of a treatment pathway for breast and prostate cancer.

The most commonly cited side effects were hot flushes/sweats.

Other corollary symptoms frequently encountered were: insomnia, fatigue, nocturia, mood changes, myalgia, and cognitive impairment.

Individualised, quasi-individualised or non-individualised homeopathic prescribing was applied, depending on the clinical presentation and the availability of treatment indicators in the case history. Treatment outcomes were tracked and scored.

Based on the case data and outcome scores (Glasgow Homeopathic Outcome Scale), two tentative treatment decision algorithms have been drafted, for both male and female hormone deprivation syndromes, and these will be presented for discussion.

Keywords: Cancer, drug-tolerance, homeopathy, androgen, oestrogen



Dr Andrea Corinna Mayer

Proving of Natrium arsenicosum and clinically confirmed symptoms

Andrea Corinna Mayer¹, Mohinder Singh Jus, Martine Jus², Nicoliene Potgieter³, Nathalie Huser⁴

¹Dr. B. K. Bose Stiftung, Zug, Switzerland ²SHI Homoeopathic School, Zug, Switzerland ³Khula Foundation, Zurich, Switzerland ⁴Practice for Classical Homoeopathy, Cham, Switzerland

Correspondence: Dr Andrea Corinna Mayer Dr. B. K. Bose Stiftung, Zug, Switzerland Email: andrea.mayer@omeopata.ch

In the 19th century, provings of Natrium arsenicosum were carried out revealing many interesting physical symptoms, but only few mental symptoms. In order to test the efficacy of Natrium arsenicosum, it was subject to a proving at SHI Homoeopathic Institute - a double-blind, placebo-controlled trial over the course of six weeks - using the potency 200K. For the proving, 19 healthy volunteers were chosen (homoeopaths and homoeopathy students). Fourteen of them received Natrium arsenicosum 200K, and five provers received placebo. In this proving of Natrium arsenicosum 200K, a total of 260 rubrics have been produced, of which 120 are new. The remaining 140 symptoms were taken from the Materia Medica of Allen, Hering and J.H. Clarke and were mostly confirmed by the provers. The proving both, confirmed the remedy's known action on the eyes, nose and respiratory tract, and revealed many interesting new symptoms, especially mental and sleep-related ones. Many of these symptoms have since been clinically confirmed, further broadening the beneficial use of Natrium arsenicosum. Due to the mental picture obtained by this proving, it is now easier to differentiate Natrium arsenicosum from other similar remedies, such as Arsenicum album, Natrium muriaticum, Kalium carbonicum and Psorinum. As demonstrated in exemplary cases, Psorinum has proven to be a valuable complement to Natrium arsenicosum. Since the proving of Natrium arsenicosum has been concluded, many clinically confirmed symptoms have been collected, based on retrospective case analyses of homoeopaths who collaborate with SHI. This work aims at presenting the results of the proving and the clinically confirmed symptoms of Nat-ar. For instance, the following symptoms have been clinically confirmed: the combination of extreme weakness with excellent appetite and amelioration after eating; dry cough with a feeling of oppression and tension in the upper third of the chest, aggravated by deep breathing and exertion.

Keywords: Natrium arsenicosum, experimentation, Covid-19, long covid



Dr Debadatta Nayak

Effectiveness of *Arsenicum album* 30C in prevention of COVID-19 in individuals residing in containment zones of Delhi - a prospective, community-based, parallel cohort study

<u>Debadatta Nayak</u>¹, Karanpreet Nahar¹, Rupali Bhalerao¹, Lovepreet Kaur¹, Tabassum Parveen¹, Ruchika Bhalla¹, James Michael¹, Swati Sharma¹, Parul Singh¹, Afsana Jainab², Hanuman Ram Chaudhary³, Abhishek Chaudhuri¹, Ummesalma Parvin¹, Nidhi Jain¹, Anil Khurana¹

¹Central Council for Research in Homoeopathy, New Delhi ²State Homoeopathic Dispensary, Pataria, Patwai ³Department of Materia Medica, Madhav Homoeopathic Medical College& Hospital, Madhav Hills

Correspondence: Dr Debadatta Nayak Central Council for Research in Homoeopathy, New Delhi Email: drdnayak@gmail.com

Background and Aim: With the outbreak of COVID-19, the Ministry of Ayush, Government of India declared *Arsenicum album 30C* as prophylactic for COVID-19. This work was designed as undertaken to evaluate the protective effect of *Arsenicum album* 30C against COVID-19.

Methods: The work was designed as a prospective parallel cluster cohort study. Intervention: participants were enrolled in a homeopathy intervention (HI) cohort (who received *Arsenicum album*) or in a non-intervention (NI) cohort (who received no systematic intervention) from COVID-19 containment areas of Delhi. Individuals of age 5 years or above were given four medicated pills of *Arsenicum album* 30C, while those from 1 to 5 years old were given two medicated pills in each dose.

Results: The analysis included 10,180 individuals residing in 11 COVID-19 containment areas in Delhi, out of which 6,590 individuals were in the homeopathic intervention (HI) cohort and 3,590 individuals were in the non-intervention (NI) cohort. The overall protective effect of *Arsenicum album* 30C was 83.43% (95% confidence interval [CI], 76.77 to 88.17): 45 cases per 6,590 (8.34 per 10,000 person-weeks) in the *Arsenicum album* 30C group versus 143 cases per 3,590 (45.01 per 10,000 person-weeks) in the NI cohort. The protective effect of *Arsenicum album* 30C against laboratory confirmed COVID-19 was 74.40% (95% CI, 55.08 to 85.41): 18 cases per 6,590 (3.32 per 10,000 person-weeks) in the *Arsenicum album* 30C group versus 38 cases per 3,590 (11.85 per 10,000 person-weeks) in the NI cohort.

Conclusion: The use of *Arsenicum album* 30C was associated with some protection against probable and laboratory-confirmed COVID-19 in a containment-zone setting. Randomized controlled trials are needed to confirm or refute these results.

Keywords: Arsenicum album, COVID-19, homeopathy, prophylactic



Dr Dora Pachova

A Bulgarian study on patients' and doctors' satisfaction with the homeopathic method of treatment

Dora Pachova^{1,2,3}, Mariana Angelcheva⁴

¹Association of Homeopathic Physicians in Bulgaria, ECH
²Centre for Health and Education "Edicta"
³ECH Education Coordinator, ECH
⁴Department of Physiotherapy and Rehabilitation Faculty of Public Health, Healthcare and Tourism, NSA"V. Levski", Sofia, Bulgaria

Correspondence: Dr Dora Pachova Email: dora_patchova@yahoo.com

Introduction: COVID-19 pandemic put the NHS to serious tests. A new model of sustainable health systems with a focus on disease prevention and salutogenesis is necessary. TCIM is recognized by WHO as an important resource for cure and prevention and achieving "health for all" since the 1978 Almaty Declaration. The WHO TM Strategy 2014-2023 imposes a knowledge-based policy as key to integrating TCIM into NHSs - more research on effectiveness, patient satisfaction, and individual resilience has to be performed.

In the spirit of this strategy, for the first time in Bulgaria, a study was conducted by the National Center for Public Health and Analysis (2015-2019), Ministry of Health.

Aim: To investigate patients' and doctors' attitudes and satisfaction with homeopathy, the organization and quality of homeopathic treatment.

Method: An empirical study- 547 patients, 527 doctors; direct individual questionnaires on paper, filled in anonymously.

Result: Almost 100% of the doctors think "conventional and unconventional methods of treatment should be complementary". Leading arguments for patients' satisfaction: the "positive results of the treatment" – 81%; "the individual attitude towards the patient as a person" - 44.2%; "the good attitude of the doctor - attention, responsiveness, understanding" - 33.3 %. Long-term amelioration is affirmed by 60.5% of the patients, and 26.7% feel completely cured.

Conclusion: The data analyzed show very high satisfaction in patients and good quality of homeopathic care in the country. There is a need for a legislative initiative to facilitate students' and doctors' education, better organization of homeopathic care, and more information to the general public. An introduction of mandatory training in medical education would be a good step forward.

The article is published in the proceedings of the International Scientific Congress "Applied Sports Sciences", Volume 2, 2-3 December 2022, Sofia, Bulgaria, DOI: 10.37393/ ICASS2022/97 where a poster was presented at the congress.

Keywords: Satisfaction, health, homeopathy, integrative medicine



P18

Dr Vinita Pandey

Post-COVID-19 fatigue & anxiety: can homeopathy help?

Vinita Pandey, Palak Shah, Amjith Naisam

Correspondence: Dr Vinita Pandey Email: vinitapandey@hotmail.co.uk

Background: The COVID-19 pandemic has caused a huge impact on the health of people across the globe. Many people after recovering from the disease suffered from post-COVID-19 fatigue, musculoskeletal, neurological, respiratory complaints, etc. Studies have shown that the pandemic has led to an increase in psychosomatic symptoms and negative emotions affecting the overall wellbeing.

Aim: The assessment of the clinical effectiveness of homeopathic remedies in the treatment of post-COVID-19 fatigue in usual clinical settings. To assess the efficacy of homeopathic simillimum modifying the underlying anxiety.

Methods: We performed a prospective clinical observational study of twenty-two patients in the treatment of post-COVID-19 fatigue symptoms over a period of two years (2020 and 2021) using Measure Your Medical Outcome Profile self-evaluation questionnaires (MYMOP) at baseline and again after one month and two months of homeopathic treatment. Anxiety was measured using VASA questionnaires at same periods.

Results: The average MYMOP scores for symptom 1, symptom 2, activity and wellbeing had improved significantly after 1 month and 2 months of homeopathic treatment. The overall average MYMOP profile score at baseline was 5.22 (standard deviation, SD, 0.11). After 1 and 2 months of treatment the average score had fallen to 3.29 (SD, 0.11; P<0.001) and 1.94 (SD, 0.06; P<0.001) respectively.

The average VASA score at baseline was 7.90 (SD, 1.68). After 1 and 2 months of treatment the average VASA score had fallen to 5.81 (SD, 1.62; P<0.001) and 3.9 (SD, 1.34; P<0.001) respectively.

Conclusion: Individualised homeopathic treatment was associated with significant alleviation in post-COVID-19 fatigue and anxiety in patients and the overall wellbeing improved. The results presented in this study can be considered as a step towards a pilot pragmatic study including larger number of patients.

Keywords: Post-COVID-19 fatigue, pandemic, anxiety



Dr Hima Bindu Ponnam

A retrospective study to assess the clinical efficacy of individualized homoeopathic medicine in the management of post-traumatic stress disorder

Hima Bindu Ponnam¹, Madhavi Botla², Prashanth Tamboli³, Devangini Broker³, Sonia Tuteja⁴

¹Regional Research Institute for Homoeopathy, Central Council for Research in Homoeopathy, Hyderabad, Telangana
²Fernandez Child Development Centre, Hyderabad, Telangana
³ML Dhawle Homoeopathic Medical College & Hospital, Palghar, Maharashtra
⁴Department of Materia Medica, Homoeopathy University, Jaipur, Rajasthan

Correspondence: Dr Hima Bindu Ponnam Regional Research Institute for Homoeopathy, Central Council for Research in Homoeopathy, Hyderabad, Telangana Email: drdewdrop@gmail.com

Background & Objective: Mental disorders are a major threat to public health posing a challenge to the medical fraternity. The sweep of COVID-19 has had a major psychological impact on the community. A recent survey of the Indian population showed a prevalence of 28.2% suffering from Post-traumatic Stress Disorder (PTSD) during the pandemic. The homoeopathic system offers a wide range of medicines for mental illnesses with the uniqueness of its holistic approach and this study aims to explore the usefulness of homoeopathic medicines in PTSD.

Methods: This is a retrospective observational study where the PTSD cases identified from the outpatient department case records treated with individualized homoeopathic medicine (IHM) from 2020-2022 were screened. The cases with IHM assessed by the Clinician administered PTSD scale-5 (CAPS-5) and completing at least six months of follow-up were enrolled. The trial was registered at CTRI: CTRI/2022/08/044948 before initiating the data collection.

Result: 50 cases were screened among which 30 fulfilled the pre-set inclusion criteria and were analyzed. CAPS-5 score showed statistical significance at different time points from baseline during the course of 6 months with IHM (p < .0001). In the post hoc analysis (Friedman's test), the score showed a significant reduction compared to pre- and post-treatment. For the clinical effect interpretation, the effect size elicited a large effect size (Kendall W = .964) which is a consistent and reliable effect found after the IHM in these cases. The causality of the outcome could be assessed and affirmed by the post-treatment application of the Modified Naranjo Criteria scientifically.

Conclusion: The PTSD cases treated with IHM prescribed with a holistic approach showed a beneficial effect. As it is a small sample size, the results may not establish evidence but the positive trend definitely would serve as a motivation to take up warranted research.

Keywords: CAPS-5, homoeopathy, MONARCH, PTSD, retrospective

Dr Bindu John Pulparampil

Cytotoxic and apoptotic effect of homoeopathic medicine *Conium maculatum* in mother tincture and 1M potency in breast cancer cell line - MDA MB 231

Bindu John Pulparampil1, Nisha Paul1, Lakshmi S2

¹Vinayaka Mission Deemed University, Salem, Tamilnadu, India ²Regional Cancer Centre, Thiruvananthapuram, Kerala, India.

Correspondence: Dr Bindu John Pulparampil Vinayaka Mission Deemed University, Salem, Tamilnadu, India Email: bindu.pulparampil@gmail.com

Cancer is a complex and heterogenous disease. In order to unravel the behavior of cancer cells and their heterogeneity at a molecular level, it needs to be analysed based on a thorough understanding of cancer biology. Cell-line study is the method used for understanding the molecular mechanisms. The prevalence of breast cancer among all age groups especially women of reproductive age is increasing alarmingly. Homeopathic system of medicine addresses cancers by evoking deeper levels of immune mechanisms to combat cellular disharmony. The clinically proven therapeutic efficacy of Conium maculatum in various cancers opened the possibilities for molecular analytical studies to understand the underlying mechanisms. The cytotoxic and apoptotic effects of Conium maculatum tincture and 1M potency in the breast cancer cell line MDA MB 231, were done to understand their mechanism of action. The MTT analysis done for a period of 48 hours showed the cytotoxic effects of these drugs. The significant reduction in live cells in both the drugs, as evidenced by flow-cytometry based FITC-Annexin V/PI staining, shows a significantly high early and late apoptosis in the breast cancer cell line MDA MB 231. The cell cycle analysis by flow cytometry showed that in G0-G1 there was significant increase in percentage of population when treated with Conium maculatum 1M, indicating a cell cycle arrest at that stage. The reactive oxygen species analysis done for a time point of 24 hours also showed significant increase in reactive oxygen species, upon treatment with Conium maculatum 1M. All these molecular profiling showed that Conium maculatum tincture and 1M potency exhibited anti-cancer properties in breast cancer cell line MDA MB 231.

Keywords: Cancer, apoptosis, homeopathy, cell line



Prof Elio Giovanni Rossi

Multicentric randomized study on the cognitive effects of anticancer therapy in breast cancer patients treated with rehabilitation, diet and add-on homeopathy and acupuncture: preliminary findings

Elio Giovanni Rossi¹, Francesca Bosinelli¹, Cristina Noberasco¹, Marco Picchi¹, Mariella Di Stefano¹

¹AUSL Tuscany North West, Lucca – Regional Center for Integrative Medicine, Region of Tuscany, Italy

Correspondence: Prof Elio Giovanni Rossi

AUSL Tuscany North West, Lucca – Regional Center for Integrative Medicine, Region of Tuscany, Italy Email: e.rossi@mednat.it

Background: In 2018 Tuscany Region promoted the Regional Call on Health Research, with a sub-line focused on research on the effectiveness of "integrative oncology" (IO). Among funding-winning projects, the CHEMOCIM Project aimed at comparing the effectiveness of add-on homeopathy, acupuncture, and homeopathy plus acupuncture on cognitive impairment ('chemobrain') in breast cancer patients undergoing cognitive rehabilitation and dietary advice.

Aims: This study will evaluate the effectiveness of complementary integrative medicine (CIM), acupuncture and homeopathy, compared to standard care (cognitive rehabilitation and diet advice) in chemobrain.

Methods: 320 patients (18 - 65 years) with a primary diagnosis of breast cancer (stage: I-III A) undergoing adjuvant chemotherapy and/or endocrine therapy after surgical treatment.

Treatment: Acupuncture: protocol basic points 17 CV; 4 CV; 20 GV; 25 ST; 7 HT; 3 KI; EX-YINTANG; SHENMEN AURICOLAR. Weekly sessions will be scheduled for 8 weeks followed by one month of pause, then other 8 weekly acupuncture sessions. Homeopathy: *Phosphorus* 30 CH and *BDNF 4 CH*. All patients will receive dietary advice to reduce inflammatory state and at the end of chemotherapy undergo a neuropsychological visit for cognitive function assessment (baseline). Blood samples for plasma/serum analysis of BDNF (brain–derived neurotrophic factor), IL-6 and TNF (at baseline and 12 months) will be collected.

Randomization: Patients will be randomized and assigned to 4 groups: 1) rehabilitation exercises and dietary advice plus acupuncture; 2) plus homeopathy; 3) plus homeopathy and acupuncture; 4) rehabilitation exercises and dietary advice only (control group). After 3 months, patients undergo clinical evaluation with Brief Cognitive Status Exam (BCSE); a long-term evaluation will be repeated at the 6th month. Expected results are improvement in chemobrain assessment tests after CIM treatment between 10 and 20% after 4-6 months and 20%-30% after 12 months.

Conclusions: Preliminary findings will be presented at the congress.

Keywords: Chemobrain, cancer, homeopathy, acupuncture, dietary



Dr Celeste Salter

Determining the quantity and focus of homeopathy research activity in Australia: a systematic literature review

Sabina Vatter¹, Linlee Jordan¹, Celeste Salter¹

¹The Aurum Project, Brookvale, NSW, Australia

Correspondence: Dr Celeste Salter The Aurum Project, 107/20 Dale Street, Brookvale 2100, NSW, Australia Email: celeste@aurumproject.org.au

Background: The 'Australian Research Priorities in Homeopathy 2018-2024' report identified the need for a literature review of the Australian publications of homeopathy research, as a review of this type did not exist. By summarising the amount, type and nature of previous research, strong foundations for future scientific research in homeopathy can be built. Identifying existing research areas as building blocks is part of that process. Therefore, a comprehensive systematic scoping review to determine the quantity, categorisation and focus of peer-reviewed research articles on homeopathy in Australia was conducted.

Methods: Online database search (OVID Medline, Embase, PsycINFO, PsycArticles, CINAHL, Web of Science, PubMed and Cochrane Library) between 1990 until December 2022 was performed. The following search terms in the title, abstract or keywords were included: 1) homeop* or homoeop* or homœop* AND 2) Austral* OR Australian Capital Territory OR New South Wales OR Northern Territory or Queensland or South Australia or Tasmania or Victoria or Western Australia. Furthermore, eligible articles from Similia were screened between 2005 until December 2022. Publications were eligible if they described research studies conducted in Australia, or papers about homeopathy written in Australia in the following categories: Case studies, Discussion, History, Homeoprophylaxis, *In vitrol* lab, Materia Medica, Philosophy, Provings, and Studies with participants. Papers were excluded if they were: not about homeopathy; not peer-reviewed; not written or conducted in Australia; or if they were editorials, book reviews or conference reviews. Two reviewers independently undertook screening, data extraction and quality assessment with disagreements resolved through discussion with the third reviewer.

Discussion: Our systematic literature review will lead to deeper understanding of research conducted about homeopathy in Australia. The building blocks approach can be applied for capacity building and upskilling of homeopathy practitioner researchers in Australia to engage in high-quality research activity.

PROSPERO ID: CRD42020207040

Keywords: Systematic literature review, homeopathy, Australia



Dr Ana Paula dos Santos Matos

Stability study of *Arsenicum album* homeopathic potencies storage in glass and PET primary containers

<u>Ana Paula dos Santos Matos</u>¹, Marcia Pietroluongo¹, Thiago Frances Guimarães¹, Alessandra Lifsitch Viçosa¹, Carla Holandino²

¹Instituto de Tecnologia em Fármacos – Farmanguinhos, Fundação Oswaldo Cruz (FIOCRUZ) ²Universidade Federal do Rio de Janeiro

Correspondence: Dr Ana Paula dos Santos Matos Instituto de Tecnologia em Fármacos – Farmanguinhos, Fundação Oswaldo Cruz (FIOCRUZ) Email: anapaulasmatos@gmail.com

Homeopathic medicines have their shelf life established according to the stability of dynamized preparations. The Brazilian Homeopathic Pharmacopoeia (BHP) recommends the use of glass amber type III as primary container of homeopathic liquids medicines storage. Although the glass has advantages, there are some disadvantages such as fragility, weight, and the presence of silicate particles, which has been described as critical components involved with the generation of silicon microparticles detected in homeopathic solutions. The present study investigated the stability of hydroalcoholic solutions of Arsenicum album dynamized in two different vials: class III hydrolytic amber glass and amber high-density polyethylene terephthalate (PET). Two potencies of Arsenicum album, 6cH and 30cH, were prepared according to BHP. The solutions were stored in glass and PET amber flasks of 30 mL. The stability study was carried out in a climatic chamber (30°C±2 °C /75%RH±5 %) according to the conditions described in the Brazilian official compendium and at room temperature (laboratory shelf) for 12 months. The samples were evaluated by density, pH, refractometry at 0, 3, 6, 9 and 12 months; conductivity at 0, 6 and 12 months and microbiological purity at 0 and 12 months. It was observed no statistical differences in density of samples stored in both conditions and packages. The pH of all samples remained around 6, and refractometry around 1.363, suggesting their chemical stability. The microbiological assays showed absence of pathogenic microorganisms after 12 months of all sample's storage. The results showed similar features of PET and glass amber packages, suggesting that PET can be used as a primary container for homeopathic medicines. However, the involvement of silicon microparticles in physicochemical properties of Arsenicum album potentized solutions should be investigated to increase the understanding about the chemical stability of these solutions.

Keywords: Arsenicum album, stability-study, glass, PET



Claudia Scherr

A whole plant-based bioassay with rice seedlings to test effects of homeopathic preparations

Rovier Verdi^{1,2}, Leonardo Felipe Faedo^{1,2}, Francis Rayns³, Claudia Scherr^{4,5}, Julia Wright³, Pedro Boff⁶

¹Postgraduate Program in Plant Science, Universidade do Estado de Santa Catarina (UDESC), SC, Brazil

²Postgraduate Program in Interdisciplinary Studies on Agroecology Water and Resilience, Coventry University, Coventry, UK

³Centre for Agroecology, Water and Resilience (CAWR), Coventry University, Coventry, UK

⁴Society for Cancer Research, Institute Hiscia, Arlesheim, Switzerland

⁵Institute of Integrative Medicine, Witten/Herdecke University, Herdecke, Germany

⁶Agriculture Research and Rural Extension Service Agency of Santa Catarina (EPAGRI), SC, Brazil

Correspondence: Dr Rovier Verdi

Postgraduate Program in Plant Science, Universidade do Estado de Santa Catarina (UDESC), SC, Brazil

Email: rovierverdi@hotmail.com

Agricultural production can be enhanced by plant-based research in order to better understand specific biological effects of homeopathic preparations. As a major crop for food supply and its environmental impact during cultivation, rice is an important crop globally. Therefore, the objective of this study was to investigate the potential of using rice seedlings in plant-based research to explore specific biological effects of homeopathic preparations and therefore increase the potential for using this eco-friendly approach in rice crops. The experimental series was carried out at the Centre for Agroecology, Water and Resilience, Coventry University, United Kingdom, between April and September 2020. The experimental series was repeated 8 times in total. Each experimental series was conducted in a growth chamber with a controlled environment for 13 days. The treatments were randomized and a double-blind approach to the preparation identity was used. Sil. and Calc. were applied, each from 5 to 30CH using deionised water and dynamized deionised water as the controls. During each repetition, each treatment was applied in a pot containing 15 seeds. The length of the two leaves, root, internode, shoot and the number of germinated seeds were evaluated. Data were analysed by ANOVA and when significant (≤0.05) by LSD test. The results showed that Calc. 5CH, 22CH and Sil. 15CH significantly increased while Calc. 18CH and 19CH decreased the root length of rice seedlings. The internode length was significantly improved by Calc. 21CH and Sil. 29CH and reduced by Calc. 26CH. Calc. 26CH and Sil. 13CH reduced the total length of rice plants. It was concluded that the biological effects of different potencies (CH) can be favourable or unfavourable for the growth of different organs of rice seedlings. Plant-based research on rice seedlings can provide useful information and understanding of the use of homeopathy in rice systems.

Keywords: Agroecology, agriculture, Silicea terra, Calcarea carbonica



Dr Irene Dorothee Schlingensiepen

Evaluating clinical evidence in daily medical practice. Systematic real-lifeevaluations of patient's long-term outcome can optimise the therapeutic results for patients and trigger effective research

Irene Dorothee Schlingensiepen¹, Carola Schroeder²

¹International Academy of Science in Homeopathy and Integrative Medicine ²Klinikum Wahrendorf Hannover

Correspondence: Dr. med. Irene Dorothee Schlingensiepen International Academy of Science in Homeopathy and Integrative Medicine

Background: In 1996 we began comparing the outcome of our patients treated with different integrative methods like herbal medicine, acupuncture, hypnotherapy and homeopathy, in-line with the criteria of Evidence-Based-Practice "EBP". EBP represents the integration of best research-evidence, clinical expertise and the patient's experience and values, with the aim of establishing best practices for patient-care.

Methodology: The following patient outcome data were systematically recorded and assessed:

- objective EBP1 included parameters like RR, CT, NMR, X-Ray, laboratory tests

- our professional medical assessment of the patient's clinical and psychologic state - EBP2

- the patient's own reporting on their physical, psychologic and social state of wellbeing – EBP3/PROM (Patient-Reported-Outcome-Measures)

Secondly we compared different homeopathic methodologies that we had thoroughly trained and practised for at least 5 years. Previous results showed significant differences between different integrative methods and also within different homeopathic methodologies. This led to a meta-evaluation of homeopathically treated cases with outstandingly good outcomes.

Results: Outstanding patient outcomes only marginally depended on the severity of the underlying diagnosis. In contrast, crucial predictors for excellent outcomes were found to be:

1. The exactness of the homeopathic prescription, determined by the availability of an excellent proving

2. The depth and exactness of the case-taking with respect to

- leading symptoms
- the in-depth-exploration of mental and general symptoms and their shared peculiar symptoms.

In these cases, we found a striking correlation between the scientifically objective characteristics of the drug source and the patient's own perception of their symptoms.

Conclusion: Homeopathic methodology can influence the long-term-outcome in severe diseases.

Further research on methodologies based on EBP1-3 criteria is needed, regarding the following questions:

- Do different types of prescribers exist, with access to differing - methods - patients - diseases? - Which long-term results do homeopathic prescription-methodologies yield? Do certain methodologies, if well practised, produce better results than others?

Keywords: Case-taking, methodologies, outcome, EBP1-3-research

Dr Deepti Singh

P26

Evaluation of adjunctive homoeopathy treatment in COVID-19 hospitalised patients in Gujarat state during the first wave of COVID-19: a multicentric single-arm retrospective data analysis study

Deepti Singh^{1,2}, Anil Khurana^{3,4}, Mehul Trivedi^{5,6}, Pinaken Trivedi⁷, Sarita Gola⁸, Parul Singh⁹

¹Research Officer (Homoeopathy), Central Council for Research in Homoeopathy
²Ministry of Ayush, Govt of India
³Former Director General, Central Council for Research in Homoeopathy, Govt of India
⁴Chairperson, National Commission for Homoeopathy, Govt. of India
⁵Associate Professor (Class-1), COVID-19 Nodal Officer for COVID-19 Treatment
⁶Data Collection & CRF Head of Office, AYUSH Department, Gujarat
⁷President, Board of Ethics and Registration for Homoeopathy, National Commission of Homoeopathy, Govt of India,
⁸Senior Research Fellow (Homoeopathy), Central Council for Research in Homoeopathy, Govt of India
⁶Former Junior Research fellow (Homoeopathy) Central Council for Research in Homoeopathy, Govt of India

Research Officer (Homoeopathy), Central Council for Research in Homoeopathy, Ministry of Ayush, Govt of India

Email: dr.deepti.2821@gmail.com

Background & Objective: This retrospective study aims to analyse the data collected during adjuvant homoeopathy treatment of COVID-19 patients by the Homoeopathic Medical Officers (HMO) in Gujarat state-dedicated COVID hospitals during the first wave of the pandemic.

Methods: The standard data collection forms/sheets were used by the HMO to record the demographic information, clinical symptoms, homoeopathic management, and outcome data from each patient. Data of all cases hospitalised with COVID-19 of any age, and both genders, were included, and entries with missing values or incomplete/ incorrect information were excluded from the analysis. The outcome measures are the recovery duration or time to clinical improvement, worsening symptoms, and commonly indicated homoeopathic medicines.

Results: Data from 2581 cases was analysed which showed clinical recovery time after adjuvant homoeopathy as five days (IQR: 3-7); the Mean was 5.19 days (SD:4.62), with 80% of patients (2063 out of 2581) discharged between 0-7 days out of which more than 20.4% patients (419 out of 2063) were having at least one of the comorbidities. Only 3 deaths of male patients above 50 years with comorbidities and 67 cases (2.6%) with worsening symptoms were reported. The homoeopathic medicines commonly used were *Arsenicum album* in 73.0% and *Bryonia alba* in 17.6% of cases.

Conclusion: The Gujarat model of utilising homoeopathy as an adjuvant for treating hospitalised COVID-19 patients in a pragmatic set-up has yielded some preliminary evidence supporting its promising role in the early relief of clinical symptoms and less progression into severity in the risk group of elderly patients with comorbidities. There were no reported adverse effects of taking the adjuvant homoeopathy, making it beneficial for integrated use in managing COVID-19 patients. Further prospective randomised double-blind, placebo-controlled trials are warranted.

Keywords: Adjuvant homeopathy, Ayush, COVID, Gujarat, India



Dr Sandra Tribolo

Anti-oxidative effects of *Arnica montana*, *Arsenicum album*, *Lachesis mutus* and *Oscillococcinum* homeopathic dilutions in microglial cells *in vitro*

Sandra Tribolo¹, Anne Paumier¹, Justine Verre¹, Gaël Runel², Anna Catte, Chlasta Julien², Naoual Boujedaini

¹Boiron, Lyon, France ²BioMeca, Lyon, France

Correspondence: Dr Sandra Tribolo Boiron, Lyon, France Email: sandra.tribolo@boiron.fr

Background: The level of oxidative stress is a known marker of inflammation. Microglial cells are macrophages present in the central nervous system and play important roles in inflammatory responses making microglial cells a powerful model for studying inflammation. Homeopathic medicines are often used to alleviate inflammation in clinical practice and *Oscillococcinum*® is indicated in the treatment of flu-like symptoms. However, to date the mechanism of action is unknown. The anti-oxidative effect of homeopathic dilutions of *Arnica montana*, *Arsenicum album*, *Lachesis mutus* and *Oscillococcinum* on the production of reactive oxygen species (ROS) was evaluated in inflamed microglial cells *in vitro*.

Methods: Microglial cells inflamed with lipopolysaccharide (LPS) were treated with *Oscillococcinum* and a large range of homeopathic dilutions of *Arnica montana*, *Arsenicum album*, *Lachesis mutus*. ROS were labelled using CellROX-DeepRed probe. Images were analysed by ImageJ software to quantify intracellular oxidative stress.

Results: LPS-inflamed microglial cells induced a high level of intracellular ROS. Homeopathic dilutions of *Oscillococcinum*, *Arnica montana* 1CH, 3CH, 5CH, 7CH, 9CH and 30CH, *Arsenicum album* 3CH, 5CH, 7CH, 15CH and 30CH, *Lachesis mutus* 3CH, 5CH, 7CH, 9CH, 15CH and 30CH significantly reduced the oxidative stress by decreasing the level of ROS produced.

Conclusion: *Oscillococcinum*, *Arnica montana*, *Arsenicum album* and *Lachesis mutus* alleviated inflammation by reducing the oxidative stress in LPS-inflamed microglial cells. The homeopathic preparations acted differently on ROS production and were not dose dependent. It is noteworthy that the cytoskeleton might play a key role in protecting cells against oxidative stress. Further investigations with *Oscillococcinum* would allow to check its effect on cell surface ultrastructure and cytoskeleton re-organization of microglial cells.

Keywords: Inflammation, ROS, homeopathic dilutions, microglial cells

Annekathrin Ücker

P28

Replication series of an arsenic-stressed *Lemna gibba* L. test-system investigating homeopathic preparations in high potency levels

Annekathrin Ücker^{1,2}, Stephan Baumgartner^{3,1,4}, David Martin¹, Tim Jäger^{3,1,2,5}

¹Institute of Integrative Medicine, University Witten/Herdecke, Witten, Germany ²Center for Complementary Medicine, Institute for Infection Prevention and Hospital Epidemiology, Faculty of Medicine, University of Freiburg, Freiburg, Germany ³Institute of Complementary Medicine, University of Bern, Switzerland ⁴Society for Cancer Research, Arlesheim, Switzerland ⁵deceased: 1st March 2019

Correspondence: Annekathrin Ücker

Institute of Integrative Medicine, University Witten/Herdecke, Witten, Germany, Center for Complementary Medicine, Institute for Infection Prevention and Hospital Epidemiology, Faculty of Medicine, University of Freiburg, Freiburg, Germany Email: annekathrin.uecker@uni-wh.de

This study presents an internal replication trial of an arsenic-stressed duckweed (Lemna gibba L. clone-number 9352) bioassay using homeopathic preparations of Arsalb (selected potency levels between 17x and 33x). With this test system, significant differences between treatment and water control groups were detected in 2010. The internal replication trial aimed at optimizing environmental parameters (specially designed growth chambers for higher test stability, change of light regime to 16h light: 8h darkness to mimic natural conditions more closely). The trial consisted of two experimental series of five independent, blinded, and randomized experiments each. In both series, systematic negative control experiments (SNC) were conducted in parallel to main experiments. After a pre-treatment with 158 mg/L AsNa, HO, (250 mg/L in series 2, respectively) for 48h, duckweed specimens were allocated to 16 treatment groups (4 groups succussed water, 4 groups unsuccussed water, and Ars-alb 17x, 18x, 21x, 22x, 23x, 28x, 30x, 33x), consisting of five beakers each. Plants grew for nine days. Relative growth rate (rgr) was determined from photos taken on day 0, 3 and 9. The difference between numerically pooled water control and treatment groups for rgr of the growth period day 3-9 were not significant in series 1 (p=0.10), significant in series 2 (p=0.04) and significant in pooled data of both series (p<0.01) as calculated in a two-way ANOVA with experimental day and treatment as independent factor and rgr as dependent factor. SNC experiments were analyzed in the same way, showing no significant differences and thereby confirming the test-system stability. In both series, the effect direction (increase of rgr day 3-9 in treatment groups) was comparable to experiments from 2010, but effect size was smaller. An influence on effect size by the changed light regime is hypothesized and needs further testing.

Keywords: Lemna gibba L., arsenic, homeopathy, replication, in vitro test-system



Dr Ana Catarina Viana Valle

Adenocarcinoma cells death after *in vitro* contact with homeopathic *Viscum album* D30

Ana Catarina Viana Valle^{1,2}, Hilana Brunel³, Patricia Malard⁴, Rosangela Vieira Andrade²

¹IDIS - Integrative Medicine, Brazil ²Catholic University of Brasilia, Brazil ³BIOINNOVA, Brazil ⁴BIOCELL, Brazil

Correspondence: Dr Ana Catarina Viana Valle IDIS - Integrative Medicine, Brazil, Catholic University Of Brasilia, Brazil Email: dranacatarina@gmail.com

Background: Adenocarcinomas can be of several types and SK-BR-3 is one adenocarcinoma of human breast cell line useful as preclinical model to screen for therapeutic agents as Homeopathic *Viscum album*, a European plant whose extract is commonly used in cancer therapy.

Aims: SK-BR-3 was used as a model to evaluate the *in vitro* cytotoxicity of homeopathic *Viscum album* 1x10⁻³⁰ (VAD30).

Methodology: Cells of SK-BR-3 were cultured for 24 hours in controlled environment $(37.5^{\circ}C \text{ and } 5\%CO_2)$ into two 96-well plates. After these hours, VAD30 was added to the culture medium in concentrations varying from 10 to 100ml/ml for MTT assay (evaluation of viability of cells) and 10 to 30ml/ml for alive cells counting. A control group was maintained with culture medium only. After 48 hours, the procedures of analyses of cells viability and counting were performed.

Results and discussion: MTT assay showed that the concentration of 38 ml/ml was capable of reducing cell viability to 50%, which means that half cells cultured were dead after 48 hours in contact with VAD30. Alive cell counting demonstrated a similar result, with approximately 60% of cell death with the concentration of 30ml/ml of VAD30 in adenocarcinoma cell culture. *Viscum album* is an extensively used plant against cancer and the possibility of using the homeopathic form of it brings new possibilities as no, or fewer adverse effects would be present. The selection for that medicine occurred through the anatomopathological similitude for the cancer treatment.

Conclusion: VAD30 was capable of acting in adenocarcinoma cells, making part of it inviable *in vitro*. This is a relevant result that can be better explored also *in vivo*, using this medicine in the treatment of breast cancer.

Keywords: Cell viability, homeopathy, apoptosis, cancer



Dr Ana Catarina Viana Valle

Cytotoxicity of homeopathic Viscum album (200CH) in breast cancer cells

Ana Catarina Viana Valle^{1,2}, Hilana Brunel³, Patricia Malard⁴, Rosangela Vieira Andrade²

¹IDIS - Integrative Medicine, Brazil ²Catholic University Of Brasilia, Brazil ³BIOINNOVA, Brazil ⁴BIOCELL, Brazil

Correspondence: Dr Ana Catarina Viana Valle IDIS - Integrative Medicine, Brazil, Catholic University Of Brasilia, Brazil Email: dranacatarina@gmail.com

Introduction: Studying adenocarcinoma cells and the new therapies for cancer is a promising area of interest. Adenocarcinoma of the breast can be of several types and MCF-7 cells are of interest because they maintain a number of characteristics similar to mammary epithelium, consolidated as an *in vitro* model to study breast cancer biology. As breast cancer is the commonest cause of cancer death in women worldwide, new possibilities of therapies should be studied, as the homeopathic VA, a medicine originated from a plant which extract has cytotoxic effects. In this study, MCF-7 cell line was cultured in the presence of homeopathic VA200CH and cell viability was evaluated by both MTT assay and cell counting.

Methods: The cell line MCF-7 was plated in two 96-well plates for 24hours with culture medium at 37.5° C and 5%CO₂. After this period, this medium was replaced by medium containing VA200CH in concentrations varying from 10 to 30ml/ml (cell counting) and 10 to 100ml/ml (MTT) and a control group. These plates were kept in culture for 48 hours. In one plate, the MTT assay was performed to evaluate the percentage of viable cells and in the other plate, cells were trypsinized and counted. Results were compared to the control group.

Results: Both MTT assay and cell counting showed that VA200CH was capable of reducing cell viability with the increasing of its concentration and 39ml/ml was responsible for the death of half cells cultured. The counting procedure showed that 30ml/ml was responsible for killing 75% of the cells.

Conclusion: This is a promising result that shows the action of VA200CH in MCF-7 lineage of breast cancer cells and brings the possibility of using this medicine in the treatment of these tumors, alone or at least associated with other medicines.

Keywords: Cellular activity, adenocarcinoma, homeopathy



Dr Gyandas Gurmukhdas Wadhwani

An observational study of patients treated with homeopathic nosode Typhoidinum

Gyandas Gurmukhdas Wadhwani^{1,2,3,4}, Aditi Chadha^{5,6}

¹Consultant Homeopathic Physician & Independent Researcher, Holistic Homoeopathic Clinic & Research Center, India.

²Former Chief Medical Officer (NFSG) (H), Directorate of AYUSH (Homeopathic Wing), Government of National Capital Territory of Delhi, India.

³Editorial Board Member: American Journal of Homeopathic Medicine, USA

⁴Member of Aude Sapere groups, South Africa and Delhi

⁵Program Associate, Department of Pharmacovigilance, Dr. D.P Rastogi Central Research Institute for Homeopathy, Noida, Ministry of AYUSH, Govt. of India ⁶Member Aude Sapere group, Delhi

Correspondence: Dr Gyandas Gurmukhdas Wadhwani

Consultant Homeopathic Physician & Independent Researcher, Holistic Homoeopathic Clinic & Research Center, India., Former Chief Medical Officer (NFSG) (H), Directorate of AYUSH (Homeopathic Wing), Government of National Capital Territory of Delhi, India., Editorial Board Member: American Journal of Homeopathic Medicine, Member of Aude Sapere groups, South Africa and Delhi Email: homoeopathygyan@gmail.com

Background and aim: Cases are cured if homeopathicity is established between the symptoms of the individual and the remedy prescribed. This is based on the law where a specific set of symptoms indicates a specific remedy. The prevalence of such symptoms is higher in a population responding well to a specific medicine than in the remainder of the population. *Typhoidinum* is a homeopathic remedy made from lysate of microorganism capable of producing bacterial endotoxins. This study aims to investigate the causality between the nosode *Typhoidinum* and improved health by developing a prognostic factor prediction model.

Methods: A pooled, individual patient data containing anamnestic symptoms "never being well since" or "a past history of recurrent episodes of typhoid" as key predefined prognostic factors were investigated by assessing treatment-by-symptom interactions on recovery outcome measure in a regression model.

Results: This study enrolled a total of 114 participants, out of which 85 (47 females and 38 males) responded to the remedy. According to the data, there was no statistically significant correlation between the recovery rate and gender, occupation or ethnicity. The remedy showed significant improvement in clinical conditions such as PCOS, molluscum contagiosum, osteoarthritis, plantar fasciitis, migraine, etc. While a few published symptoms have been clinically verified, a thread of common clinical features can be deduced from the cured cases.

Conclusion: The anamnestic symptoms "never being well since" and "a past history of recurrent episodes of typhoid" are of possible value as a homeopathic symptom (prognostic factor) predicting an increased likelihood of improvement in the given case. Although the homeopathic remedy *Typhoidinum* is neither adequately proven nor extensively used, this study highlights some promising therapeutic potential. However, further research could be helpful to determine its therapeutic potential.

Keywords: Typhoidinum, nosode, prognostic factor, anamnesis, homeopathy

Dr Esther van der Werf

Homeopathy and fever management: a scoping review

Sabina Vatter¹, Rachel Roberts², Esther van der Werf²

¹The Aurum Project, Brookvale, Australia ²Homeopathy Research Institute, 142 Cromwell Road, London SW7 4EF, United Kingdom

Correspondence: Dr Sabina Vatter Email: sabinavatter@gmail.com

Background and aims: Fever is frequently managed with antipyretic medication or other treatment methods, including homeopathy. Little is known about the nature of homeopathic interventions used for fever or their effectiveness in treating this symptom. This study aimed to identify studies assessing the effectiveness of homeopathy in managing fever, from which to characterise the homeopathic prescribing methods (individualised homeopathy (IH) /non-individualised homeopathy (non-IH)), specific homeopathic medicines, and populations studied.

Methods: The scoping review followed the Arksey & O'Malley framework (2005). Searches were conducted in OVID Medline, PubMed, Google Scholar and through hand-searching of references. Randomised controlled trials (RCTs), non-randomised controlled trials and observational studies were included if they were peer-reviewed and published in English between January 1975 and December 2022.

Results: We have identified 11 studies, of which three reported on IH and eight on non-IH. Four studies were placebo-controlled randomised clinical trials, two were usual care-controlled randomised clinical trials, and five were observational studies. The studies were conducted with infants, children and adults, and the sample size ranged from 92 to 1126 participants. The effectiveness of homeopathy in reducing fever compared to placebo or usual care was demonstrated in five RCTs and in three observational studies. One RCT and one observational study were inconclusive, showing no difference between homeopathy and placebo or usual care, respectively. One observational study concluded that paracetamol was more effective than homeopathy in reducing fever.

Conclusions: The majority of studies included in this scoping review report that homeopathy can be an effective treatment option for reducing fever. More high-quality studies are needed to assess the effectiveness of homeopathy in fever management with fever as a primary outcome across multiple populations. Studies on IH are specifically recommended for future research due to the overall positive direction of the effects observed with this treatment, but the low number of existing studies.

Keywords: Fever; homeopathy; antipyretic; body temperature



Ms Johanna Zeise

Screening of specific effects of different salt and heavy metal solutions on cress seedlings assessed by ${\rm CuCl}_2$ -biocrystallization to develop stress models for homeopathic basic research

Johanna Zeise^{1,2}, Paul Doesburg^{2,1}, Stephan Baumgartner^{2,3,1}

¹Institute of Integrative Medicine, University of Witten/Herdecke, Germany ²Society of Cancer Research, Switzerland ³Institute of Complementary and Integrative Medicine, University of Bern, Switzerland

Correspondence: Ms Johanna Zeise Institute of Integrative Medicine, University of Witten/Herdecke, 58313 Herdecke, Germany Email: Johanna.Zeise@uni-wh.de

Effects induced by homeopathic preparations are assumed to be more pronounced in impaired organisms. To develop preclinical models with abiotic stress we tested the effect of six different diluted salt and heavy metal solutions (sodium chloride, zinc chloride, lead nitrate, cadmium nitrate, calcium nitrate, cupric sulfate, and ferrous sulfate) on germinating cress seedlings (*Lepidium sativum* L.) in an ecotoxicological bioassay. The cress extracts were analysed by means of CuCl₂ crystallisation, followed by computerised image analysis of the crystallisation patterns. Outcomes were texture and structure analysis parameters of the crystallisation patterns. CuCl₂ crystallisation generates metabolomic fingerprints, which enables an estimation of a sample's 'resilience' in response to controlled stress.

By means of preliminary tests, the concentrations of the individual salt and heavy metal growing solutions were chosen to limit growth by approximately 20%, compared to untreated reference cress. Cress seeds germinated and grew for five days *in vitro* (n=240 seedlings per condition). In order to estimate and characterise the degree of stress induced by the salt and heavy metal solutions, three references were included: untreated cress, 2 days aged cress extract, 4 days aged cress extract. To control for possible adverse effects of the stressors on the crystallisation process, crystallisation experiments were performed with untreated cress extract to which, prior to the crystallisation, the salt and heavy metal solutions were added.

Significant effects were found for structural and textural criteria for sodium chloride, both when used as a stressor and when added to the extract prior to the crystallization, the latter pointing towards a potential interference with the crystallisation. Calcium nitrate and zinc chloride however, yielded significant effects only when used as a stressor. The results of the trial will be used to optimise the ecotoxicological bioassay, which will then be extended to trials with homeopathic preparations.

Keywords: Bioassay, biocrystallisation, cress, metabolomic fingerprint

Notes

Notes



Venue Plan





Programme at a glance

THURSDAY	
18:00 – 20:00	Registration
18:30 - 20:00	Welcome Drinks
FRIDAY	
08:00	Registration, Atrium
Warwick 09:00 – 09:20	Plenary Sessions Opening Ceremony Dr Michael Dixon
09:20 – 10:30 09:20 09:55	Insights from over 20 years' experience Prof Ubiratan Adler Prof Stephan Baumgartner
10:30 – 11:00	Coffee
11:00 – 12:30 11:00 11:20 11:40 12:00	Mixed Session 1 Rachel Roberts Prof Thomas Ostermann Dr Esther van der Werf Dr Roja Varanasi
12:30 - 14:00	Buffet Lunch
14:00 – 15:10 14:00 14:20 14:40 15:00	Basic Research 1 Prof Leoni Bonamin Dr Christa Raak Dr Leonardo Faedo HRI Update
15:10 – 15:40	Coffee
15:40 – 17:00 15:40 16:00	Clinical Research & Poster Talks Dr Anupriya Chaudhary Dr Michael Teut
16:20 16:30 16:40 16:50	Poster Talks Dr Deepti Singh Christoph Dombrowsky Dr Philippa Fibert Dr Yvonne Fok
17:00 - 19:00	Poster Reception
19:30	Dinner and Drinks The Dickens Inn, St Katharine's Way
SATURDAY	
Warwick 09:00 - 10:30	Plenary Sessions Aqua-homeopathy & Fundamental Research
09:00 09:40 10:05	Dr Antonio López-Carvallo Dr Steven Cartwright Dr Alexander Tournier

10:30 - 11:00 Coffee

11:00 - 12:30 11:00 11:20 11:40	Clinical Research 1 Dr Katharina Gaertner Dr Rajesh Shah Panel discussion
12:30 - 14:00	Buffet Lunch
Warwick 14:00 – 15:20 14:00 14:20 14:40 15:00	Parallel Session Basic Research 2 Annekathrin Ücker Dr Daniel Wrzałko Dr Pritam Goswami Dr Stéphanie Chanut
Salisbury 14:00 – 15:20	Parallel Session Clinical Research 2
14:00 14:20 14:40 15:00	Dr Raj Manchanda Dr Harleen Kaur Dr Debadatta Nayak Dr Elizabeth Rice & Dr Eleni Krommidas
15:20 – 15:50	Coffee
Warwick 15:50 – 17:10 15:50 16:10 16:30 16:50	Plenary Session Basic Research 3 Paul Doesburg Dr Francesca Truzzi Dr Maria Olga Kokornaczyk Prof Oskan Tasinov
19:30 – 00:00	Gala Dinner The Law Society Hall, 113 Chancery Lane
SUNDAY	
Warwick 09:10 - 10:30 09:10 09:30 09:50 10:10	Plenary Sessions Mixed Session 2 Dr Irene Dorothee Schlingensiepen Dr Peter Smith Dr Petra Weiermayer Dr Jean-Lionel Bagot
10:30 - 11:00	Coffee
11:00 – 12:30 11:00 11:20 11:40	Clinical Research 3 Dr Pascal Trempat Dr Elio Rossi Prof Jennifer Jacobs
12:30	Closing ceremony
12:40	Buffet Lunch



Homeopathy Research Institute International House 142 Cromwell Road Kensington London SW7 4EF

www.HRI-Research.org

Company registration number: 06230101 Charity registration: 1132901