replaced by *Lactose* 30x to control for the trituration of *Stannum metallicum*. In total 10 + 10 independent randomized, coded experiments were performed in two independent laboratories. In addition, 10 + 10 SNCs were performed to control experimental stability.

Meta-analysis of the data revealed the same data structure in both projects, i.e. a reproduction of the significant differences between the two homeopathic preparations. The SNCs showed no significant intra-day, inter-day or inter-lab differences, indicative of a robust and reproducible test system.

We were thus able to establish a test system yielding reproducible biological effects of an ultra-molecular homeopathic preparation. These ground-breaking results point to a promising potential of the method to contribute to basic homeopathic research.

Keywords: Bio-assay, Systemic properties, *Stannum metallicum* 30x, Systematic negative control experiments, Reproducible effects

The role of the research ethics committee in providing ethical approval for provings. The findings from a pilot study

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Background: Provings are a considered to be a cornerstone of homeopathic practice. Stuart Close notes how Hahnemann 'instituted "provings" of drugs upon himself, members of his family, friends, students and fellow practitioners, keeping all under the most rigid scrutiny and control, and carefully recording every fact and the conditions under which it was elicited'. This situation has remained constant over the years, with the majority of provings being conducted in the many homeopathy schools and colleges. Whilst the methodology employed in carrying out provings has developed over the last two decades, they have not generally been subject to a process of ethical review.

Aims: The presentation will commence with an examination of the ethical issues inherent in provings, before moving on to an analysis of the results and experience of taking a proving to a research ethics committee for ethical approval. The presenter, who is Chair of a Research Ethics Committee, will share the issues encountered and solutions found along the way, and will discuss the experience of both the research ethics committee and the proving organisers. The project offers an insight into how provings could be conducted in a way that is both congruent with the values of the profession and meet the requirements of research in the twenty-first century.

Keywords: Provings, Research ethics committee, Homeopathy

Repetitions of fundamental research models for homeopathically prepared dilutions beyond 10⁻²³: a bibliometric study

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Introduction: Repeatability of experiments is an important criterion of modern research and a major challenge for homeopathic basic research. In 2010 we presented an overview about basic research studies in high homeopathic potencies that have been subjected to laboratory-internal, multicenter or independent repetition trials. This overview was now updated.

Methods: We considered biochemical, immunological, botanical, cell biological and zoological studies on high potencies, i.e. beyond a dilution of 10⁻²³. Main sources of information were reviews, personal contact with members of the homeopathic basic research community, and the MEDLINE and HOMBREX databases. Studies were extracted from the publications and grouped into models. Studies were further sorted according to repetition type (laboratory-internal, multicenter, or independent) and results achieved.

Results: In 2010, a total of 107 studies have been found. From these, 30 were initial studies. In the attempt to reproduce one of these initial studies, 53 follow up studies yielded comparable effects (35 laboratory-internal, 8 multicenter, 10 independent repetitions), eight studies showed a consistent, yet different result from the initial study (2 laboratory-internal, 2 multicenter, 4 independent repetitions), and 16 studies yielded zero effects (5 laboratory-internal, 2 multicenter, 9 independent repetitions). When all repetitive studies are considered, 69% reported effects comparable to that of the initial study, 10% different effects, and 21% zero effects. Independently performed repetition studies reported 44% comparable effects, 17% different effects, and 39% zero effects. The update brought to the forth further studies, with approximately the same distribution regarding the categories.

Conclusions: We identified more than 20 experimental models in basic research on high homeopathic potencies, which were repeatedly investigated. Most of these were reproduced with comparable results, about ½ were also reproduced with different results, and other repetitions showed no results for more than half of the models. We encourage further repetition trials of published studies, in order to learn more about the model systems used and in order to test their repeatability.

Keywords: Homeopathy, High dilutions, Repetition, Review, Bibliometric

The clinical experience in the centre of integrated medicine, Pitigliano hospital using magistral homeopathic formulations: results in outpatients affected by chronic diseases and considerations on the chronic care model integrated with homeopathic approach

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This work aims to assess the rationale and the results of an integrated homeopathic protocol applied in the Ambulatory of a public Hospital for the treatment of chronic diseases among 1600 patients: we have classified them by age, sex, kind of chronic diseases and we have considered also the incidence of comorbidities; we have assigned an integrated protocol comprehensive of a magistral homeopathic formulation different for any conditions. Then we have collected the results after a fixed time of observation (different for any kind of disease) using Edmonton scale, SF12, family and work performance evaluations.

Results: Recurrent respiratory syndromes: 85% reduction of the use of conventional therapies (antibiotics, antiasthmatics, cortisonics); 75% in symptom reduction (at the start and then after 2 months).

- Rheumatic syndromes: reduction of pain (from 55% to 85%); reduction in the use of conventional drugs (after two months 28% less; after 4 months 57% less)
- Tinnitus (reduction of 45% symptoms based upon visual analogic scale)
- Allergic syndromes (75%—100% reduction of symptoms; reduction in the use of conventional therapies: 75% in perennial allergies and 100% reduction in seasonal allergies);
- Chronic pain syndromes (such as headache, migraine, etc.): (reduction of pain from 45% to 84%, depending upon the different pain syndromes).

Our experience confirms the possible role of homeopathy in chronic diseases as longlasting therapy, useful to take into account the full complexity of this kind of patients and to try to discharge, when it is possible, the use of conventional drugs.

Homeopathy and public health: multimorbidity, polypharmacy, antimicrobial resistance, adverse drug reactions and homeopathy

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Multimorbidity and the linked problems of polypharmacy, adverse drug reactions and antimicrobial resistance are among the greatest challenges facing public health in the UK and all developed countries. I have given evidence to the House of Commons Health Committee and to the Commons Science and Technology Committee on these issues. In low income countries infectious diseases remain a major challenge, often linked to antimicrobial resistance. There is growing evidence, particularly from clinical effectiveness studies, that homeopathy has potential to alleviate this crisis.

I will overview the evidence around the incidence, nature, correlates and consequences of multimorbidity. Also the connected issues of antimicrobial resistance, polypharmacy, adverse drug reactions and drug interactions.

I will then review the clinical evidence for homeopathy, focussing on comparative effectiveness research into its potential to reduce consumption of antibiotics and other undesirable treatments. This includes evidence that integrating homeopathy into primary care reduces prescriptions of potentially harmful medication for upper respiratory infections and musculoskeletal conditions with equivalent or greater clinical benefit. Integrating homeopathy is also associated with healthier lifestyles and greater participation in self-care.

I will also review the emerging evidence for homeopathy as an adjunctive treatment in life threatening infectious diseases in developing countries, including malaria and multiple drug resistant TB.

If homeopathy is to realise these opportunities to contribute to public health, a clear and focused strategy is required. Networks and collaboration must be developed; irresponsible and speculative claims must be avoided. Instead we should concentrate on well-established treatment strategies and explore the potential of constitutional treatment in multimorbidity, treating people as individuals with complex health problems, not as multiple diseases each to be treated with different, and often multiple, drugs.

Proving ethics: at the coalface

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