

Paulista University, Brazil

*Correspondence: Dr Thayná Neves Cardoso, Paulista University, Brazil.

E-mail: thayna.vet@gmail.com (T.N. Cardoso)

The quality of life in cancer patients is largely related to the activity of the immune system. Clinical reports show improvement in the quality of life of terminally ill patients treated with the homeopathic medicine *carbo animalis*, however, the literature on this subject is rare. The objective of this study was to propose an experimental model to study the possible effects of *carbo animalis* in the immune response to a highly malignant carcinoma, as well as their impact on the general condition of the sick animals. Male Balb/c mice were inoculated with Ehrlich ascites tumor and treated with *carbo animalis* 6cH or 6cH + 30cH (potency association). The control group was treated with the same succussed vehicle. Clinical signs, survival and the local immune response (peritoneal) were evaluated. T lymphocytes, B1 and B2, NK cells and phagocytes were identified and quantified by immuno-cytochemistry and flow cytometry. Animals treated with *carbo animalis* 6cH + 30cH showed increase of incidence in clinical signs comparing to the other groups. The local immune response, showed increase in the proportion of CD25+ cells in relation to total T cells and increase of B1 cells compared to B2 cells in the group treated with *carbo animalis* 6cH. In contrast, animals treated with *carbo animalis* 6cH + 30cH showed increase in the number of CD3+ cells and NK cells, both adhered to tumor cells. Although the clinical significance of these findings are still under discussion, this preliminary work provides a useful experimental protocol for the study of the mechanisms of this remedy and shows the possible relevance of homeopathic potencies association in the anti-neoplasm treatments.

Keywords: Ascites Ehrlich tumor, High dilutions, Homeopathy, *Carbo animalis*, Tumor immunology, Experimental oncology

Solvatochromic dyes detect the presence of homeopathic potencies

Steven Cartwright*

DiagnOx Laboratory, Cherwell Innovation Centre, Oxford, UK

*Correspondence: Dr Steven John Cartwright, DiagnOx Laboratory, Cherwell Innovation Centre, Oxford, UK.
E-mail: steven.cartwright@oxford-homeopathy.org.uk (S. Cartwright)

Evidence will be presented which demonstrates that environment sensitive solvatochromic dyes can be used to detect the presence of the full range of homeopathic potencies through changes in their visible spectra. These dyes

are characterised by possessing an oscillating dipole and it will be shown that this feature is essential for their interaction with potencies by comparison with structurally comparable non-solvatochromic dyes, which show no evidence of any sensitivity to homeopathic medicines.

It will be shown that changes in the spectra of solvatochromic dyes are due to the way these dyes aggregate, or order, in solution as a consequence of their interaction with potencies. Certain solvatochromic dyes appear to have their level of ordering enhanced by potencies, whereas others have their ordering diminished by potencies.

A hypothesis which explains the results presented will be offered and suggests that homeopathic potencies themselves may be oscillating dipoles.

Implications for clinical practice and possible connections between the relevant dye chemistry and some clinically observed effects of homeopathic medicines will be explored in the light of the discoveries being made using these fascinating and informative dyes.

The chemistry involved will be kept as simple as possible for those with a limited chemistry background, whilst maintaining the level of scientific detail necessary for an understanding of the results presented.

Keywords: Solvatochromic dyes, Homeopathic potencies, Oscillating dipoles

A retrospective cohort study on the efficacy of homeopathy compared to homeopathy plus conventional medicine in the treatment of hypertension

Teh Chye Phing*

Cyberjaya University College of Medical Sciences (CUCMS), Malaysia

*Correspondence: Teh Chye Phing, Cyberjaya University College of Medical Sciences (CUCMS), Malaysia.
E-mail: chyephing@gmail.com (T.C. Phing)

Hypertension currently affects nearly one billion people worldwide. It is a major cause of global morbidity and mortality, as well as a major risk factor of various chronic and fatal diseases. Individuals suffering from hypertension have increased over the years yet the rate of controlled blood pressure (<140/90 mmHg) remains poor. While the demand for traditional, complementary and alternative medicine (T/CAM) is on the rise, more evidence is needed to evaluate whether the clinical use of homeopathy will bring any beneficial effects to the community at large. The aim of this retrospective cohort study is to evaluate the effects of homeopathic treatment compared to integrated treatment using homeopathy plus conventional pharmacotherapy in terms of blood pressure control, in order to determine its efficacy in

the treatment of hypertension. Data was collected at the National Academy of Homoeopathy, India (NAHI) located in Nagpur, Maharashtra. Cases diagnosed and treated for hypertension in 2013 under the outpatient department affiliated to Shaad Homoeopathic Hospital Complex & Research Centre were assessed for eligibility, classified and analyzed. A total of 41 subjects were selected and classified into homeopathy group (N = 22) or integrated group (N = 19) according to the treatment they received. Statistical results with repeated measures ANOVA suggest that there is no significant difference between the homeopathy and the integrated group in terms of blood pressure reduction at week six of treatment. It is concluded that homeopathy on its own is as efficacious as homeopathy plus conventional pharmacotherapy in the treatment of hypertension.

Keywords: Hypertension, Homeopathy, Integrated treatment

Different approaches in homeopathic basic research: plant-based bioassays and evaporation-induced crystallization

Giovanni Dinelli*, Grazia Trebbi, Maria Olga Kokornaczyk, Ilaria Marotti, Valeria Bregola, Sara Bosi and Lucietta Betti

Department of Agricultural Science, University of Bologna, Italy

*Correspondence: Professor Giovanni Dinelli, Department of Agricultural Science, University of Bologna, Italy.
E-mail: giovanni.dinelli@unibo.it (G. Dinelli)

Two different approaches can be adopted in fundamental research in homeopathy to evaluate the effectiveness of homeopathic preparations: i) plant-based bioassays and ii) evaporation-induced crystallization. As concerns i), the classic test of wheat germination and growth has been quoted as a basic model for research on homeopathic potencies. Results of our experimentations showed that As₂O₃ 45x (As 45x) induced a significant increase of germination rate and stalk growth with respect to control. This simple model was used also to study the following aspects:

- effect of temperature: results show that As 45x heated at 20°, 40° and 70°C induced a significant increase of germination rate vs. control, losing its effectiveness at 100°C
- effect of aging-time: As 45x always induced a stimulating effect on germination, significant only after three months from treatment preparation
- effect of succussion number: a significant increase of germination was obtained starting from 32 succussions between each dilution step for As 45x
- effect of serial dynamizations (from 5x to 60x): data showed an oscillatory trend, with some potencies

inducing a significant decrease (35x), while others a significant increase of germination rate (5x, 30x, 40x, 45x, 55x, 60x)

- effect on gene expression profiles: a massive reduction of gene expression levels to values comparable to those of the control group, induced by As 45x, was observed for several functional classes of genes.

The second approach sought to verify whether the droplet evaporation method (DEM) can be applied to assess the effectiveness of homeopathic remedies. We studied the shape characteristics of the polycrystalline structures formed during droplet evaporation of wheat seed leakages. The results showed that As 45x increased the local connected fractal dimension levels and bilateral symmetry exactness values in the polycrystalline structures, as compared to the water treatment.

Keywords: Plant-based bioassays, Droplet evaporation method, Wheat seeds, Arsenic trioxide 45x

Replication of specific effects of a *Stannum metallicum* 30x preparation in a cress seedling/ biocrystallization test system

P Doesburg*, J-O Andersen, C Scherr and S Baumgartner

Crystal Lab – Focus on Food Quality, The Netherlands

*Correspondence: Paul Doesburg BSc, Crystal Lab – Focus on Food Quality, Kleefseweg 9, NL-6595NK, Ottersum, The Netherlands.

E-mail: p.doesburg@crystal-lab.nl (P. Doesburg)

One of the aims of basic homeopathic research is to reveal any specific mode of action of potentized preparations. This requires stable and reliable preclinical tests measuring either specific physicochemical properties or biological effects of homeopathic preparations.

Within a precursor project, we developed a bio-assay which yielded highly significant evidence for specific effects of an ultra-molecular *Stannum metallicum* 30x preparation relative to *Water* 30x, based on 15 independent randomized and blinded experiments performed at two independent laboratories. The test system is based on cress seed germination, biocrystallization and subsequent computerised image analysis of the biocrystallization patterns. The biocrystallization method is based on the phenomenon that self-organizing, additive-specific crystallization patterns emerge when a CuCl₂·2H₂O solution with additives is crystallized on a glass plate. The method acts as an indicator for systemic properties of the applied additive.

In the present project we investigated the reproducibility of the effects found in repeated experiments based on improved methodology towards: (i) optimization of the laboratory procedures to avoid any processing order effects, (ii) full implementation of blinded systematic negative control (SNC) experiments, and (iii) *Water* 30x was