

## Bridging the gap between the homeopathic world and the conservative medical world – test case in rats

Yakov Freed<sup>3,#,\*</sup>, Salman Zubedat<sup>1,4,#</sup>, Yuval Eshed<sup>3</sup>, Adi Cymerblit-Sabba<sup>1,4</sup>, Ami Ritter<sup>4</sup>, Maayan Nachmani<sup>4</sup>, Rom Harush<sup>4</sup> and Avi Avital<sup>1,2,4</sup>

<sup>1</sup>The Rappaport Faculty of Medicine, Behavioral Neuroscience Lab, Technion - Israel Institute of Technology, Haifa, Israel

<sup>2</sup>Emek Medical Center, Afula, Israel

<sup>3</sup>International Institute for Homeopathic Research, HodHasharon, Israel

<sup>4</sup>The Yezreel Valley College, Israel

\*Corresponding author.

E-mail: [dryfreed@gmail.com](mailto:dryfreed@gmail.com) (Y. Freed)

#Equal contribution

Sleep is an essential physiological process that underlies crucial cognitive functions as well as emotional reactivity. Thus, Sleep Deprivation (SD) may exert various deleterious effect.

In this study, we aimed to examine the adverse behavioral and hormonal effects of SD and a potential treatment with *Cocculusindicus* 30c (cocc 30C) – a homeopathic remedy.

SD was induced by using the Multiple Platform Method for 48 hours. The effects of SD were evaluated behaviorally (Pre-pulse inhibition, startle response, plus-maze and rotor-rod) at baseline as well as at 6, 12, 24 hours, and 14 days post deprivation. Cocc 30C treatment was administrated Per Os every three hours starting immediately after baseline tests and for a period of 24 hours. On day 14, blood samples were taken and serum levels of corticosterone, testosterone, serotonin and leptin were tested. We found that cocc 30C improved Pre-pulse inhibition 12 and 24 hours post deprivation. Likewise, cocc30C improved motor learning independently from locomotor activity. On day 14 though no behavioral effects were observed, SD led to increased levels of corticosterone and serotonin while decreasing testosterone and leptin. Interestingly, cocc 30C treatment has moderated these hormonal alterations. We conclude that the treatment with cocc 30C recovers both short-term behavioral and the long-term hormonal modulations following SD.

## Harnessing the un-mined data rich resources of homeopathic provings: an overview of replicated provings, creating a common language and a method forward.

Alastair Gray

*Endeavour College of Natural Health, Australia*

E-mail: [alastair@grayhomeopathy.com](mailto:alastair@grayhomeopathy.com) (A. Gray)

Generally conducted by homeopathy practitioners and advocates, rather than scientists, the emphasis of provings has always focused on determining accurate symptom profiles. These are then applied homeopathically in clinical practice – according to the law of similars. But significant questions arise as to their quality, and the inconsistencies in approach and method remains at issue for 19<sup>th</sup>, 20<sup>th</sup> and 21<sup>st</sup> century provings. For the vast majority of these experiments the fundamental hypothesis has been, ‘what symptoms and conditions might this substance be useful for’? But what about re-provings? Comparative evaluation of the data extracted from old and modern provings can reveal significant similarities. This paper explores a model of comparing subjective symptoms from provings which if robust enough challenges the idea that homeopathic responses are placebo. For example, a significant overlap of symptoms from a proving of *Culex* was noted compared to a previous one. Conducted in 2004 with sound design and method, the data is compared to a proving of *Culex* conducted in the 1800’s, more than 100 years apart. Repeated improved provings with better design, ethics approval and method have subsequently been conducted on substances from *Chamomilla*, *Tuberculinum*, *Blatta orientalis* to *Kangaroos Milk*. This paper explores four different points.

1. The findings of these trials are examined and analyzed discussing the implications for homeopathy as a whole. How is it possible that a homeopathic preparation, often dismissed as placebo, creates a statistically significant mirror of symptoms, especially conducted after such a passage of time? Further, how can placebo create clear affinities with clusters of symptoms in specific locations?

2. In addition, it explores the inherent difficulties in comparing symptoms between trials. How can accurate comparisons be made when a symptom is not a simple objective number per se, but rather a description of an experience by a healthy person involved in the trial? It can involve objective and subject perspectives, involve different parts of the body and above all is descriptive. This paper suggests a method and design around these challenges as we move forward.

3. It examines the challenges confronting scientists faced with poor proving protocols from the body of homeopathic literature and proposes a new model of conducting provings to directly address the contention that homeopathy a placebo response.

4. Further, it outlines the direction for further studies to be conducted to ensure reliable data. In terms of design – there are a number of variables at play, the quality of the trial, ethics, inclusion and exclusion criteria, randomisation, control, information on the relative health of provers and the method of extraction of reliable symptoms to ensure that provings meet the expectations of clinicians, academics and scientists.