

# **A COMPARATIVE ESTIMATION OF STIMULATORY INFLUENCE OF SMALL DOSE PREPARATIONS OF BIOLOGIC ACTIVE SUBSTANCE AND THEIR ELECTRONIC HOMEOPATHIC COPIES ON THE MODEL**

**T.N. Chernysheva<sup>1</sup>, E.L. Chaikina<sup>2</sup>, Sh.Sh. Afiyatulov<sup>2</sup>,  
M.M. Anisimov<sup>2</sup>, V.N. Galay<sup>1</sup>, R.P. Galay<sup>1</sup>, V.I. Korenbaum<sup>3</sup>**

<sup>1</sup> Clinics of Functional Medicine “Manus”,

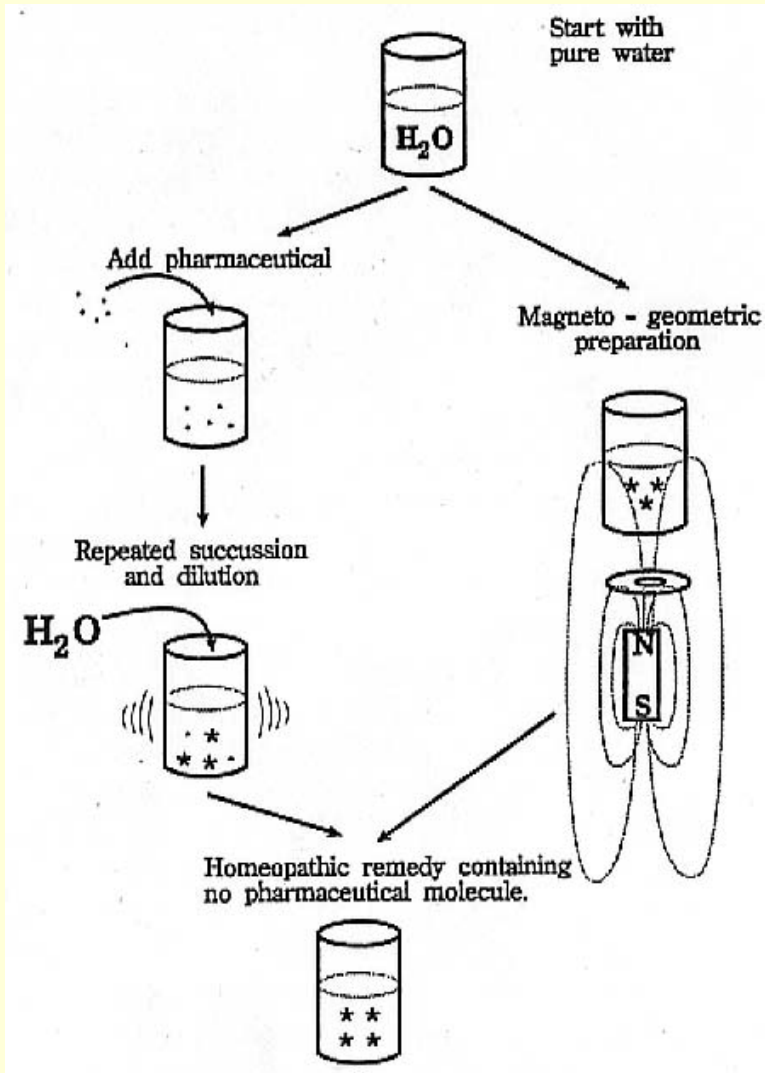
<sup>2</sup> Pacific Institute of Bioorganic Chemistry FEB RAS,

<sup>3</sup> Pacific Oceanologic Institute FEB RAS,

Vladivostok,

[v-kor@poi.dvo.ru](mailto:v-kor@poi.dvo.ru)

# Introduction



- There are 2 procedures of preparation of homeopathic remedies (Towsey M.W., Hasan M.Y. Homoeopathy - a biophysical point of view. Br Hom J 1995; 84: 218-228.):
- left branch – traditional dilution/succussion;
- right branch – electronic homeopathic copying ("imprinting") with M. Rae's apparatus.

# Introduction

Electronic-homoeopathic copies (EHCs) or so named nosodes, made by “imprinting” the parent substance onto water with the help of M. Rae’s black box or other electronic devices (for example J. Benveniste, 2000), have received a certain acceptance in some fields of complementary medicine.

EHCs are used in modern homeopathy, in Voll & Schimmel’s electro-puncture diagnostics, in Applied Kinesiology (see figure).



# Meripharm GmbH diagnostic nosodes kits



# Introduction

- From empirical considerations EHCs are treated by many investigators in the field of complementary medicine as functional analogs of traditional homeopathic preparations made by dilution/succussion (small doses) of biological active substances.
- However the common problems of studies in the field are a deficit of rigorous (double blind, randomized) experimental data and an absence of the urgent theoretic foundation.
- Authors believed that a strict comparative study of the effect of traditional homeopathic dilution (small doses) of biological active substance and its EHC by means of biologic model could constrict a sphere of search of possible mechanisms of water reply to chemical and physical factors of low intensity.

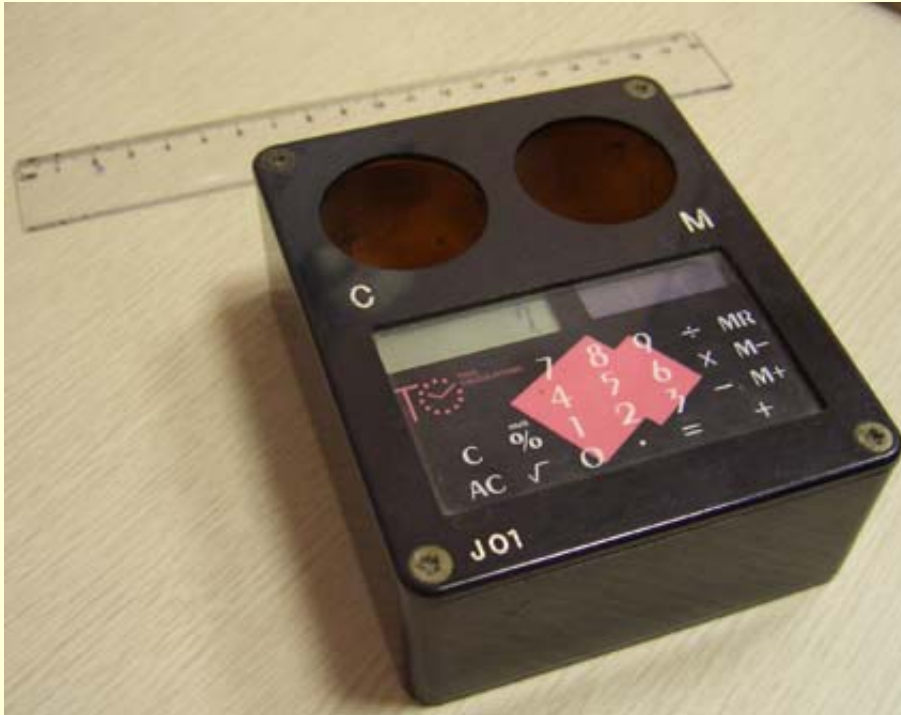
# THE OBJECTIVE

- The purpose was a comparative estimation of the effect of traditional homeopathic dilutions (small doses) of the biological active substance and their EHCs by means of biologic model during germination of roots of soy beans *Glycine max (L.) Merr.* “Prim–81” under controlled conditions.
- Tested biological active substance was alkaloid of spirotriprostatin F (from sea fungus *Aspergillius fumigates*) well known as growth stimulator.

# Method: tested preparations

- In each experiment all preparations were prepared from one portion of distilled water.
- Small (homeopathic) doses of the biological active substance were prepared with concentrations: 0.1 µg/ml ( $10^{-6}$  M); 0.001 µg/ml ( $10^{-8}$  M); 0.00001 µg/ml ( $10^{-10}$  M); there were also two known controls (pure distilled water) – total 5 glass bottles.
- These preparations were copied to five identical sealed bottles with distilled water. Thus 5 EHCs were prepared, randomly numbered from #1 to #5.
- The numbering protocol was not opened until finishing the experiment and listing its data. Persons made electronic copying and numbering (V.G., R.G.) did not participate in following germination of beans, measurements of roots length and data processing.
- Electronic homeopathic copying was made by means of apparatus Simulator (Metabolics, UK).

# Simulator (Metabolics, UK) a version of M. Rae black box

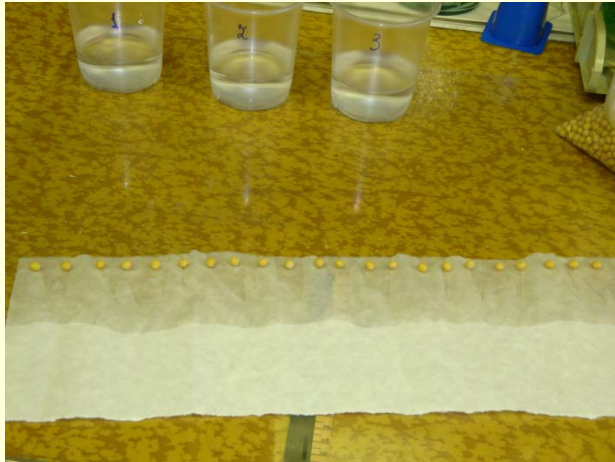


- Apparatus contains two copper tubular containers, the right of which (M) is for the substance copied, whereas the left one (C) for the prepared EHP.
- According to Towsey and Hasan (1995) there is a magnet under container C in the box.
- In accordance with “radionic” technique developed by M. Rae the effect of a substance copied is to ‘modulate’ magnetic field, which in turn “restructures” water crystalization.

## Method: biologic model

- Dry soy beans *Glycine max (L.) Merr.*, “Prim–81” (1-year harvest) were mixed, randomly sorted into subgroups of 20 beans, were placed to strips of filtration paper sized 12 x 42 cm, which were previously watered with the tested preparation.
- Three 20-beans subgroups were prepared for each preparation (n = 60).
- Paper strips with beans of each subgroup were wrapped and placed in glasses having small quantity (140 ml) of the tested preparation. All glasses were placed in the thermostat and they were exposed 3 days under temperature 26 - 27°C.
- After exposition the length of main soy bean root was measured for each specie.
- Eight independent experiments were made during a half of the year by identical procedure and by the same experimenter (E.C.).

# Materials: germinating soy beans, measuring length of roots



# Statistical processing of data in each experiment (Statistica, StatSoft)

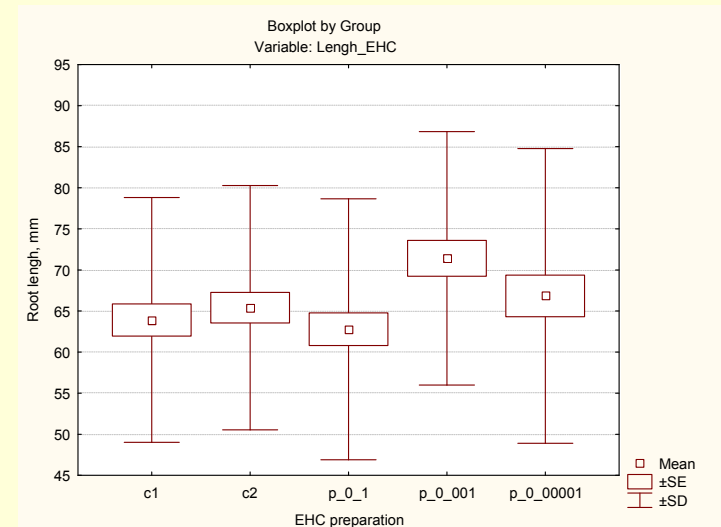
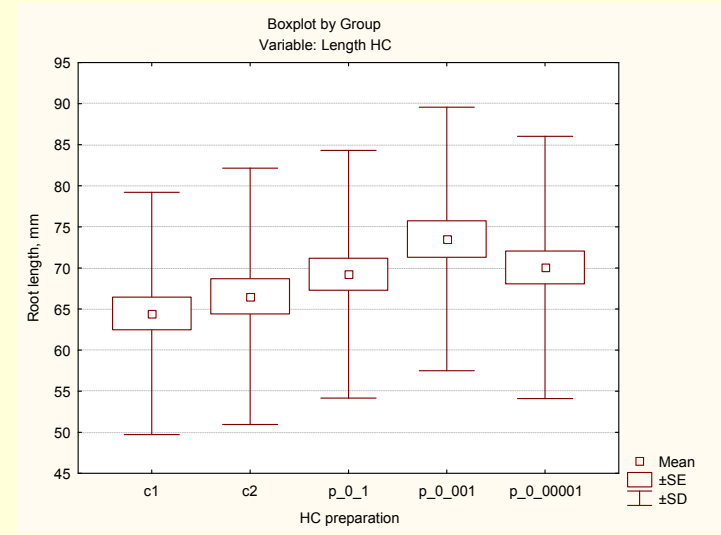
- Obtained data (root length) were pasted in columns of electronic table according to the numbers of preparations.
- Only after finishing that operation the numbering protocol was opened.
- Normal distribution of variants was tested by Shapira-Wilk's criterion.
- Normally distributed variants were described by average value (M) and standard deviation (SD). If distribution was not normal, median (Me) and quartiles ( $Q_{25}$ ,  $Q_{75}$ ) were used.
- The significance of differences between samples was tested by means of t criterion (normal distribution) or by means of nonparametric Mann-Whitney U criterion (not normal distribution).

# Considering results

- Thus in each experiment we had two groups of known control c1 and c2, and two groups of hidden (blinded) control ec1, ec2.
- Also there were three groups of small doses of biologically-active substance (known stimulating preparations):  
p\_0\_1, p\_0\_001, p\_0\_00001  
  
and three groups of blinded EHCs of these preparations:  
ep\_0\_1, ep\_0\_001, ep\_0\_00001.
- An experiment was considered successful only if the effect of at least one of the known stimulating preparations (small doses) was significantly higher than the effect in both groups of known control (c1, c2).

# Results: experiment #1

- Only small dose preparation p\_0\_001 ( $10^{-8}$  M) significantly increases length of roots in comparison with both known controls: c1 ( $p=0.003$ ), c2 ( $p=0.03$ ).
- Only its EHC ep\_0\_001 significantly increases length of roots in comparison with both hidden controls: ec1 ( $p=0.012$ ), ec2 ( $p=0.04$ ).
- Moreover the effects of small dose preparation p\_0\_001 and its EHC ep\_0\_001 are statistically indistinguishable ( $p=0.67$ ).



# Results of all 8 experiments

- Significant differences between one of the known stimulating preparations (small doses) and both groups of known control (c1, c2) were observed only in 5 experiments from 8 made (62.5%): #1 (p\_0\_001), #3 (p\_0\_1, p\_0\_001, p\_0\_00001), #5 (p\_0\_001), #6 (p\_0\_001), #7 (p\_0\_001). Thus these 5 experiments were interpreted as successful.
- Differences between EHCs of these small doses and real small doses (known stimulating preparations – known positive controls) are non significant in 4 experiments from 5 (80%). Only in the experiment #7 the effect of EHC ep\_0\_001 is significantly weaker than the effect of its original small dose p\_0\_001. It's a high likelihood of effects!

# Results of all 8 experiments

- However comparison of EHCs with hidden controls revealed significant distinctions only in 2 experiments (#1 и #7) from 5 successful experiments (40%). Moreover in experiment #7 EHC effect was weaker than effect of both hidden controls. Thus real positive effect of EHCs *re* hidden controls is seen only in 20% of the experiments.
- It is very low likelihood! Why? May be comparison of EHCs with known controls (real negative controls) would be more fruitful?

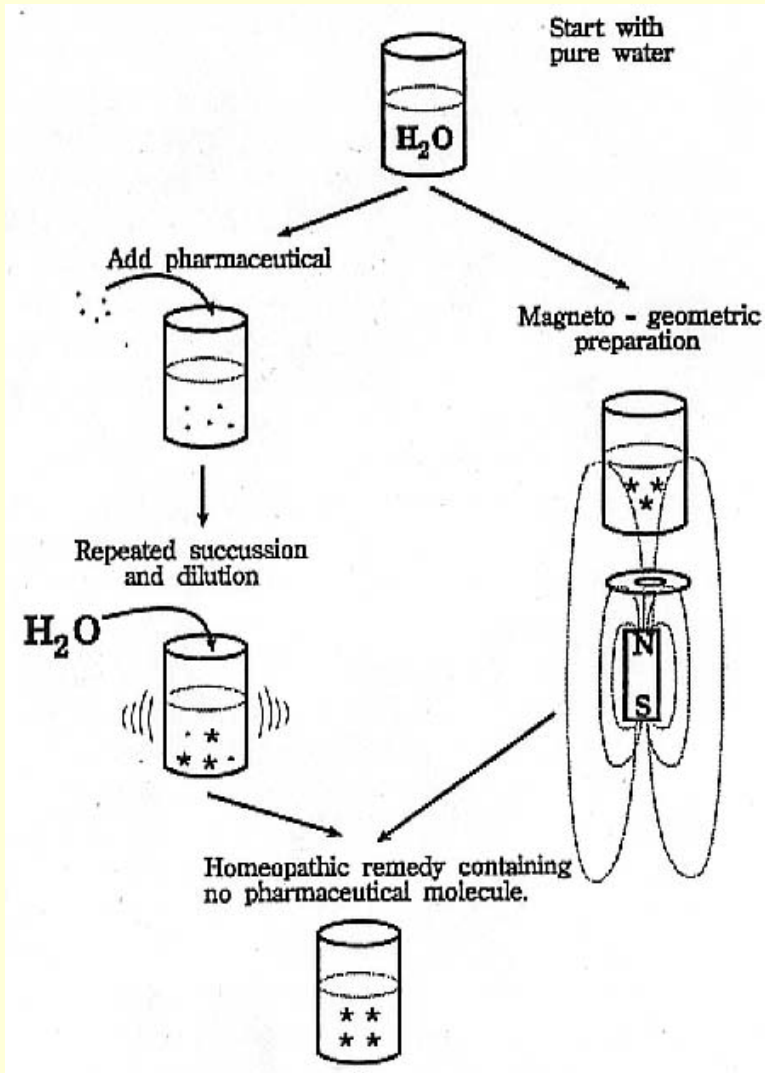
# Results of all 8 experiments

- Only in one (#3) of 5 successful experiments EHCs ep\_0\_1 and ep\_0\_001 showed significant action on the length of soy bean roots (20%).
- These observations made EHCs positive effect questionable both *re* hidden and known negative controls!
- However why EHCs are presumably indistinguishable from known positive controls (small doses)? Let's compare small doses preparations with hidden controls.
- Only in one (#6) of 5 successful by known controls experiments there is a significant difference between small doses preparation p\_0\_00001 and both hidden controls (20%). Moreover it's another preparation than revealed by comparison with known controls (p\_0\_001).

# Unexpected conclusions!

- Both traditional homeopathic preparations (small doses) and EHCs effect in biologic model is dependent on the consciousness of the experimenter working with species thus being a kind of reverse placebo effect!
- Thus double blind procedure in experimental studies of low intensity interactions (including water) is urgently necessary!
- On the other hand the biophysical mechanism of EHC production may be also applied to traditionally produced (dilution/succussion) homeopathic preparations instead of chemical one!

# Discussion



- There are 2 procedures of preparation of homeopathic remedies (Towsey M.W., Hasan M.Y. Homoeopathy - a biophysical point of view. Br Hom J 1995; 84: 218-228.):
- left branch – traditional dilution/succussion;
- right branch – electronic homeopathic copying (“imprinting”) with M. Rae’s apparatus.

# A hypothetical explanation of electronic copying

(Assuming actions of weak electromagnetic fields)

- Human body is a source of wide-band electromagnetic disturbances associated with the vital activity of cells and organs (electrical charge motions). Moreover, all this takes place against the background of a weakly-varying magnetotelluric field, and with a field of permanent magnet set in M. Rae's apparatus placed beside the operator's body (or coils in other apparatus).
- The preparation being copied, interpreted as a kind of passive resonator (Shaub, 1998), probably might modify the field of wide-band electromagnetic emission of the operator's organism or interaction between this field and external magnetic fields.
- In its turn this modified field is superimposed on EHC. **Thus EHC “commits to memory” not the self-field of the parent substance but an operator's organism physical response to it.**
- This concept seems to be in accordance with previously known operator's personality influence on therapeutic effectiveness of prepared EHCs or experimenter's effect of J. Benveniste's electronic preparations (Ives, et al., 2006), as well as with great variety of copying methods and copying apparatus types.

# Hypothetic explanation: Influence on plants

- Features of electronic homeopathic copying unspecific influence on water solutions were found by our spectral studies, reported here.
- Therefore EHCs could influence on soy beans via the “modified” water that finds its way into tissues and evidently stimulates (or, vice versa, inhibits) any membrane processes in the cells.
- However the results of current study may be treated in favor of presumably direct realized by consciousness influence of the experimenter on the biologic species of the model. Additional studies are necessary to confirm or reject this conclusion.