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# Homeopathic Drug Standardization

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Advancements in scientific techniques have enabled researchers to critically examine and scrutinize nonconventional therapies to either validate or reject them for routine clinical practice. The substantiation of the homeopathic system has been controversial since there is no standard drug dilution strength that can be subjected to clinical tests. Homeopaths usually claim to achieve curative effects by using homeopathic substances ranging in concentration from mother tinctures in crude forms to infinitesimal dilutions with a probability of almost zero active ingredients in them. The issue becomes further confused when different criteria are applied to drug dilution preparations that are inconsistent with any established scientific metric such as Avogadro's number. This fact was well known to its founder, Dr. Hahnemann, who tried to establish drug standardization around the 30th dilution during his last years of life. He even developed a semi-nonlinear method, known as LM potencies, which was revealed in his postmortem publication of *Organon of Medicine*, 6th edition, in 1921. Dr. Hering, founder of American Homeopathy, devised the decimal dilution method, which, like the earlier dilution methods, lacked any fundamental metric such as Avogadro's number. A literature search revealed that the drug dilution and standardization issues were never settled in homeopathy. The issues of miracle cures with different dilutions become questionable when such claims are examined in the absence of any placebo or control studies. In short, homeopathy has failed to establish validity of its dilutions' effects in general research settings. The common denominator to all such failures can be attributed to the absence of standardization of drug dilutions based on scientific metrics. Different drugs are composed of different numbers of atoms/molecules to start with. A single linear no-threshold method cannot standardize the heterogeneous drugs to a desired unique scale. A nonlinear method is needed to standardize homeopathic drugs to a single scale such as the 30th to either validate or reject them on scientific grounds. This issue becomes more important in the light of new emerging nanotechnology. Homeopathic drug standardization based on scientific metrics is needed for research and reproducibility for routine clinical practice.

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The British Broadcasting Corporation arranged a program on homeopathy, the Test, on November 26, 2002. James Randi, a magician turned "quackbuster," bet \$1 million that homeopathy would not work in the laboratory. James Randi was so confident that he risked \$1 million against a discipline that is over 200 years old and used by millions of people around the world. And to the surprise of millions of people, homeopathy did not work during this program.

One can argue that it took scientists 277 trials to clone the lamb, Dolly, which established that cloning is possible.<sup>1</sup> It did not work in fewer tries; even 276 tries could not do it. However, there is a fundamental difference between testing a method in a laboratory and administering a medicine to a

sick person in a routine clinical practice. You cannot test your theory on hundreds of patients before you cure one just to make your point. The medicine should be proven and well tested before it is given to a patient. Medicines need to be on such a foundation that they can be reproduced, ideally 100% of the time, so that no patient misses the chance of getting its benefits. Hence, in public, there is a great skepticism about homeopathy as a routine clinical medicine for the treatment of serious diseases.

Today the therapeutic effects from diluted drugs are no longer questioned. Even the mainstream allopathic journals acknowledge these fundamental scientific facts<sup>2</sup> and have published positive clinical results of homeopathy. Reports of results of extremely diluted substances by respected scientific journals have further suggested that some form of solution to this mystery should be sought.<sup>3</sup> Another debate is raging around the idea that subtoxic doses of radiation and other

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