

## Fundamental Research

### Homoeopathy: Science on the Brink of Revolution

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The term 'Homoeopathy' comes from the Greek words 'homoeos (similar) and 'pathos' (suffering or sickness). The fundamental principle on which Homoeopathy is based is the law of similars: "likes are cured by likes". It means, a medicine in small doses can cure a disease if in large doses it produces in a healthy person, symptoms similar to those of the disease. It involves stimulation of the life force to return the individual to health.

Hindu physicians had already recognized the law of similar as one of the healing principles in ancient India. For instance, in the Bhagwat Purana - a Sanskrit couplet says "Vishaya Vishmashashi" which is the basis of Homoeopathy. So for we Indians, its philosophy and principles are part of our belief and culture, though as an independent system of therapeutics it came from Germany. Mahatma Gandhi, the Father of our Nation, said: "Homoeopathy is the latest and refined method of treating patients economically and non-violently. Government must encourage and patronize it in our country".

It is ironical that Hippocrates (460-350 BC) whom orthodox medicine Allopathy takes as father of medicine actually wrote, "By similar things a disease is produced and through the application of the like, it is cured". He further wrote, "The nature of the human body can only be understood as a whole". This is one more basis of Homoeopathy, but unfortunately the orthodox medicine takes human body as made up of parts.

As a system, Homoeopathy was developed by Samuel Hahnemann (1755-1843). He was a brilliant German physician disillusioned by orthodox medicine. To him goes, the honour of being the first physician disillusioned by orthodox medicine. To him goes, the honour of being the first physician to connect biology and psychology with physics in a practical therapy taken from nature. This system of medicinal therapeutics gave an impulse to studies in biodynamics which has gained momentum ever since.

In spite of the brilliant cures made by Homoeopathy, objections have been raised against it, especially by orthodox medicine, which sees it as a powerful rival. The famous author Mark Twain said, "You may honestly feel grateful that Homoeopathy survived the attempts of the orthodox physicians to destroy it." The biggest objection against it has been its medicines, which are prepared through serial dilutions of the original drug material in a polar solvent (water, alcohol etc.) with violent strokes at each dilution. This process is known as potentisation and medicines so obtained are in potencies of the original drug. Thus a 12C potency of a medicine is obtained by diluting 12 times in 1:100. Avogadro's hypothesis states that there should be no molecule of the original drug present in the patient's dose of centesimal potencies higher than 12<sup>th</sup>. But even higher centesimal potencies like 200, 1000, 10000 etc. are routinely used in homoeopathic practice for achieving better results. These medicines retain the full memory of the absent original drug.

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These medicines contain nothing materially and thus contradict our materialistic commonsense. Thus from allopathic standards, all homoeopathic medicines are nothing but placebos to give a sort of *psychological satisfaction to patients*. But on the other hand, clinical results of time-tested Homoeopathy including those on infants and animals cannot be denied.

One may see here the wisdom in the words of Hippocrates that, "In medicine one must pay attention not to plausible theorizing but to experience and reason together". German scientist Fritz-Albert Popp concluded after five years of research in eighties that the proof for allopathic medicine is not more convincing than the one for homoeopathic medicines.

Homoeopathy is reviving in America as disillusionment with Allopathy is increasing. Including our country, Homoeopathy is practised widely in Brazil, Mexico, Germany, France, and Great Britain. In France, for instance, Homoeopathy is the first choice of people having five homoeopathic physicians to one allopathic physician. There 85% of all pharmacies carry homoeopathic medicines. Similarly, in the United Kingdom, the English Royal Family has been a great admirer of Homoeopathy using and endorsing it personally for three generations. Queen Elizabeth and Prince Charles are said to never travel without their personal homoeopathic kits with them. In U.K. and Germany, more than 50% of all pharmacies are involved in Homoeopathy. The WHO also recognizes Homoeopathy as a viable form of therapeutics.

In October 1986 issue of British medical journal the *Lancet*, *Reilly et al*<sup>1</sup> reported that homoeopathic dilutions of grass pollen showed significant reduction of hay fever in a randomized, double-blind, placebo-controlled trial. As a possible explanation for the observed results, they suggested that, ".....succession produces energy storage in the bonds of the diluent in the infra-red spectrum which 'downloads' in contact

with the water in living systems. Perhaps this information then spreads like a 'liquid crystal' through the body water, modifying receptor sites or enzyme action."

Such proofs are hardly going to satisfy die-hard skeptics. Well-known sceptic James Randi said, "Unusual claims require unusually good proof". Such a proof is possible only through fundamental research in Homoeopathy, which has been much neglected in the past due to reluctance of scientists to work in it. It is however very essential for the development of Homoeopathy and also of physics whose laws like the most fundamental 'the second law of thermodynamics' is at stake as Homoeopathy is violating it. Interestingly, D.P. Sheehan<sup>2</sup> of University of San Diego, giving four paradoxes in *Journal of Scientific Exploration*, has challenged this law in Physics itself in 1998.

We give below some important developments related to fundamental research in Homoeopathy:-

1. The famous pathologist W. Boyd<sup>3</sup> worked during 1946 to 1952 on the effect of Mercuric chloride on diastase measuring hydrolysis of starch. He also used higher potencies of Mercuric chloride in which not a single molecule of Mercuric chloride was likely to be present. The results were statistically significant in favour of Homoeopathy.
2. Nuclear Magnetic Resonance (NMR) study<sup>4</sup> shows clearly that homoeopathic medicines are different from water/alcohol but the interpretation and significance of results so obtained remain obscure.
3. The French scientists<sup>5</sup> have found that homoeopathic potencies prepared in an atmosphere of nitrogen are inactive. In 1991, Ender et al<sup>6</sup> found that the effect of potentised thyroxine on the developments of tadpoles still occurs even if it is sealed in a phial suspended in the tank but does not

- come into direct contact with the water in which the experimental tadpoles live. They suggested that electro-magnetic or electro-magnetic type signal is the cause of the effect from the homoeopathic medicine.
4. The first attempt of studying thermal properties regarding homoeopathic medicine came from one of the authors of this article Gupta and his associates<sup>7</sup>. They studied thermal degradation of lactose in different potencies showing that it plays an important role in bioavailability of the drug. The work was carried out with sensitive thermo gravimetric analyzer and was published in *British Homoeopathic Journal* in 1995.
  5. Physicists<sup>8</sup> in California and China (particularly Shui-Yin Lo) reported in 1996 the discovery of previously unknown type of crystals, which are formed in water when the homoeopathic method of diluting and shaking is followed to prepare a high dilution of a substance. These crystals increase in number as the source drug molecules decrease during the dilution and shaking process.
  6. In 2001, German chemist Kurt Geckeler and his colleague Shashadher Samal<sup>9</sup> were stunned to find that dissolved substances clustered together in polar solvents like water as dilution increased. Conventional wisdom says that the dissolved molecules simply spread further and further apart as a solution is diluted.
  7. K.Khanna and S.Chandra<sup>10</sup> successfully used homoeopathic medicines in the control of fruit rot disease in tomato, guava and mango. Their work was published in reputed journals during 1976 to 1978. There is also evidence that, if attempts are made, such source materials can be identified whose homoeopathic potencies can do vector control. Such homoeopathic preparation would be cheap, non-toxic and eco-friendly. One of the authors of this article Saxena and his student M.M.Mya etc.<sup>11</sup> have studied mother tinctures, derived from different parts, of several plants for achieving biological control of mosquitoes. Their work has been published in *International Pest Control* in 2002. (Mya has been awarded 1 lakh cash award for the best Ph.D. thesis in IIT, Delhi last year).
  8. In 2002, one of the authors of this article Upadhyay suggested<sup>12</sup> in *British Journal of Homoeopathy* that Homoeopathy seems to have two facets: one local and the other non-local, and that it appears to work through all pervading quantum vacuum. In the same year in *American journal Frontier Perspectives*, he suggested<sup>13</sup> that 'homoeopathic phenomenon' could be caught outside biology in material science to understand its intricacies with ease. For identification of the factor responsible for retention of memory in homoeopathic medicine, he puts forward<sup>14</sup> a simple idea to analyse those medicines that are prepared from variable sources, which exist in Homoeopathy. In another American journal, he hypothesised<sup>15</sup> that the chronic diseases are the results of fractured vital force with disease condensates and an acute disease is then a consequence of Meissner type effect of superconductivity.
  9. Swiss chemist Louis Rey<sup>16</sup>, using thermoluminescence attempted to challenge homoeopaths' claims that patterns of hydrogen bonds can survive successive dilutions. Instead, to his astonishment, he found that the structure of hydrogen bonds in pure water is very different from that in homoeopathic dilutions of salt solutions. This is a serious attempt from experimental physics and suggests taking the "memory" of water sincerely.

As more and more scientists are entering in, skepticism against Homoeopathy is losing face. Homoeopathy has already been included in academics in universities of many countries including European ones and funds are being made available to carry out research work. This will transform it from an empirical therapy to a scientific one ending stagnation in its progress. It has also become a hot subject in frontier science around which a paradigm shift is perceived lurking. It has a potential to catapult the whole science including its own present form and thus becoming truly the medicine of new era. The present laws seeming contradictory to a natural phenomenon, observed as Homoeopathy, will come out one day to be only rough approximations of some larger truth. Science progresses in this way.

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