

Unwrapping Homeopathic Principles in the Wake of Research: Serendipity, Placebo or True Therapeutic Milestones?

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Summary

For a long time the question remained without solution, because lack of scientific exactitude and approach. Knowledge of basic medical science rose up with advancement in a clinical literature, but due to deficiency of interdisciplinary & applied virtues homoeopathy is still in the wave of uncertainty of its own science. To unravel such mysteries we need to know the principles of not only homoeopathic system of medicine but also the true laws of physiology and biophysics.

The above fact is explained in the hypothetical manner in following write up with an attempt to solve the dilemma with a good physiological model. The present investigation designed to elucidate the working mechanism for possible *modus operandi* in homeopathy. Though it is a hypothetical study still it is well studied and supported with good and indicates previous research publications.

Keywords: Homeopathy, homeostasis, mechanism.

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Introduction

Ever since a dawn of mankind physicians, researchers and reformers have wondered means to alleviate the poignant state of human being. Various forms of medications have evolved from the realm of the science and technology, letting human health to take seismic steps to a brighter barrier and healthier tomorrow⁸.

In the light of present state of plethora of systems of medicines, homoeopathy bears a unique niche in the complementary system of medicine. Ever since its inception in the county of Saxony, in province of Germany as a school of thought in the mind of Dr. Samuel Hahnemann. Homoeopathy was targeted to ameliorate human sufferings ever since its birth.

It has been phenomenal journey for this mercurial system of medicine. Unlike allopathic system of medicine homoeopathy believes to expel out the malady from the very fabric of the life which is the classical essence of homoeopathic system of treatment.

Prima facie homoeopathy was a mellifluous confluence of embers of clinical experiences gained by Dr. Samuel Hahnemann which was engrained to forge the perimial principle of homoeopathy which is, "***Similia Similibus Curentur***". Homeopathy basked in the glory of therapeutic zenith in Asia, Europe, Australia, and America for over 250 years playing the role of a cryptic system of medicine which has condenciencious effect over other forms of medications. However in the wake of recent technological advancement and some machavallion practitioner homoeopathy appears piecemeal of the original form even considered to be a pertinent pariah of grey shed in its facet⁹. The onetime clamor , audacity and solidarity that patient had in the system of medicine quickly swiveled down the inextricable depths of inaptitude to match with modern medicine and is found in shards groping in darkness to rediscover and rise from ashes like a proverbial phoenix.

It has to evolve out of the shenegance to reach its previous pristine and rediscover its sacrosanct image as a potent robust reproducible precise system of medicine acceptable by modern scientific community. The plight of human race has been survival of fittest from times immemorial. The sands of the time have swiped across ages and apes evolved to homosapians in figment of genetic transformation enabling enlightenment and culminating in to the birth of the modern man. The peregrination of an embryo in the womb to a geriatric bundle of organ systems is punctuated with indispensable and inevitable catastrophic interventions causes as disease.

Health has been defined as physical, mental and spiritual soundness of human life and absence of any pain and disability. The healing and disabling properties of drugs and chemicals have been studied during the evolution of modern medicine. This has related to categorization of chemicals as disease inducers and ameliorators. These have led to the christening of the life saving chemical moieties in synthetic chemistry laboratories¹⁵. The led compound has its origin in the treasure of nature. It has evolved in to acceptable and expandable system of allopathic medicine which holds its fort by the classical dose of response. On the contrary homoeopathic system of medicine is devoid of such discrepancies. It targets the vital force and not the pathological transformation.

In today's blitzkrieg life drug induced catastrophic reactions are rearing up their ugly head posing a lethal bloody erroneous future of public health which at best can be described as melancholic and bleak. There are rampant cases of drug resistance and drug induced diseases which have forced us to revert back to the basic purpose of treatment. On the other hand homoeopathy has an illustrious past.

Homoeopathy had decoded the formula of healthy life very early. Hahnemann knew that it was a soul which needed to be healed and earthly body would follow¹¹. This instigated in him a moral novel sparks and slowly a revolutionerizing idea, dawned up on him. This school of thought had

a facet of anarchy and was in spark of position to the classical allopathic system of medicine and paradoxically treated patients with indications caused as poetized dilutions.

Statement of Hypothesis:

“Homeopathy acts through the mechanism of homeostasis which gives rise to homeodynamics.”

The human organism consists of trillions of cells all working together for the maintenance of the entire organism. While cells may perform very different functions, all the cells are quite similar in their metabolic requirements. Maintaining a constant internal environment with all that the cells need to survive (oxygen, glucose, mineral ions, waste removal, and so forth) is necessary for the well-being of individual cells and the well-being of the entire body⁶. The varied processes by which the body regulates its internal environment are collectively referred to as homeostasis.

- **Homeostasis** in a general sense refers to stability, balance or equilibrium. It is the body's attempt to maintain a constant internal environment. Maintaining a stable internal environment requires constant monitoring and adjustments as conditions change. This adjusting of physiological systems within the body is called homeostatic regulation³.

A variety of homeostatic mechanisms maintain the internal environment within tolerable limits. Either homeostasis is maintained through a series of control mechanisms, or the body suffers various illnesses or disease. When the cells in the body begin to malfunction, the homeostatic balance becomes disrupted. Eventually this leads to disease or cell malfunction. Disease and cellular malfunction can be caused in two basic ways: either, deficiency (cells not getting all they need) or toxicity (cells being poisoned by things they do not need)^{7,17}. When homeostasis is interrupted in your cells, there are pathways to correct or worsen the problem. In addition to the internal control mechanisms, there are external influences based primarily on lifestyle choices and environmental exposures that influence our body's ability to maintain cellular health¹⁴.

- **Nutrition:** If your diet is lacking in a specific vitamin or mineral your cells will function poorly, possibly resulting in a disease condition. For example, a menstruating woman with inadequate dietary intake of iron will become anemic. Lack of hemoglobin, a molecule that requires iron, will result in reduced oxygen-carrying capacity. In mild cases symptoms may be vague (e.g. fatigue), but if the anemia is severe the body will try to compensate by increasing cardiac output, leading to palpitations and sweatiness, and possibly to heart failure.
- **Toxins:** Any substance that interferes with cellular function, causing cellular malfunction. This is done through a variety of ways; chemical, plant, insecticides, and/or bites. A commonly seen example of this is drug overdoses. When a person takes too much of a drug their vital signs begin to waver; either increasing or decreasing, these vital signs can cause problems including coma, brain damage and even death.
- **Psychological:** Your physical health and mental health are inseparable⁴⁰. Our thoughts and emotions cause chemical changes to take place either for better as with meditation, or worse as with stress.
- **Physical:** Physical maintenance is essential for our cells and bodies. Adequate rest, sunlight, and exercise are examples of physical mechanisms for influencing homeostasis. Lack of sleep is

related to a number of ailments such as irregular cardiac rhythms, fatigue, anxiety and headaches.

- **Genetic/Reproductive:** Inheriting strengths and weaknesses can be part of our genetic makeup. Genes are sometimes turned off or on due to external factors which we can have some control over, but at other times little can be done to correct or improve genetic diseases. Beginning at the cellular level a variety of diseases come from mutated genes³⁹. For example, cancer can be genetically inherited or can be caused due to a mutation from an external source such as radiation or genes altered in a fetus when the mother uses drugs.
- **Medical:** Because of genetic differences some bodies need help in gaining or maintaining homeostasis. Through modern medicine our bodies can be given different aids, from anti-bodies to help fight infections³³, or chemotherapy to kill harmful cancer cells. Traditional and alternative medical practices have many benefits, but like any medical practice the potential for harmful effects is present. Whether by nosocomial infections, or wrong dosage of medication, homeostasis can be altered by that which is trying to fix it. Trial and error with medications can cause potential harmful reactions and possibly death if not caught soon enough²².
- By removing negative health influences, and providing adequate positive health influences, your body is better able to self-regulate and self-repair, thus maintaining homeostasis.

The causes listed above are described in a similar way in homeopathy by Dr.S.Hahnemann, in Organon of medicine (5th & 6th edition) as fundamental causes and exciting causes and on more augmentation he added maintaining causes in aphorism number five.

With comparison to above the genetic and reproductive factors are only the fundamental causes while all other in list are exciting causes which disturbs the health through negative influence on homeostasis ultimately which results into disease.

Homeostatic systems have several properties.

- They are ultra-stable, meaning the system is capable of testing which way its variables should be adjusted.
- Their whole organization (internal, structural, and functional) contributes to the maintenance of balance.
- Other important properties are adaptation (or homeostasis), communication, cooperation, specialization, spatial and temporal organization, and of course reproduction. They can be found on all levels: cells specialize, adapt and reproduce themselves just like larger organisms do. Communication and cooperation take place on all levels, from the agent to the system level.

Doctrine of vital force-(According to Homeopathy-Organon of medicine, 5th & 6th edition)

- In healthy condition of man the spiritual vital force (autocracy), the dynamics that animates the material body (organism), rules the unbounded sway, and retains all the parts of the organism in admirable, harmonious, vital operation, as regard both sensations and functions, so that our indwelling, reason-gifted mind can freely employ this living, healthy instrument for higher purpose of the existence.

- The material organism without the vital force, is capable of no sensation, no function, no self preservation, it derives all sensations and perform all the functions of life solely by means of immaterial being (the vital force) which animates the material organism in health and in disease.
- When a person falls ill, it is only this spiritual, self acting (automatic) vital force, everywhere present in his organism, that primarily deranged by the dynamic influence up on it of morbidic agent inimical to life; it is only the vital force, deranged to such an abnormal state, that can furnish the organism with its disagreeable sensations, and incline it to the irregular processes which we call disease; for as power invisible in itself, and only cognizable by its effect on the organism, its morbid derangement only makes itself known by the manifestation of disease in the sensations and functions of those parts of the organism exposed to the senses of observer and physician, that is, by morbid symptoms, and in no other way can it make itself known.
- It is the morbidly affected vital force alone that produces disease, so that morbid phenomena perceptible to our senses express at the same time all the internal change that is to say, the whole morbid derangement of internal dynamic; in a word they reveal the whole disease; consequently, also, the disappearance under treatment of all the morbid phenomena and all the morbid alterations that differ from healthy vital operations, certainly affects and necessarily implies the restoration of the integrity of the vital force and, therefore the recovered health of whole organism.

It is clear from above that fundamental properties of homeostasis are showing the similarity with the cardinal principle of homeopathy which is the most debatable one up till is the doctrine of vital force.

Because, what Hahnemann described in the aphorisms of Organon of medicine (5th & 6th) edition respectively; was written in dark ages because of evidence less science, when there was no significant development in fundamental science as well as applied. Homeostatic mechanism is the advance theory of physiology which was not very popular during Hahnemann's time. Concept of spiritualism was quite dominant and hence he gave an explanation related to it.

Now during the course of time the study of mechanisms and applied science develop so rapidly & universally which created a vacuum in between homeopathy and present day science. Scientific translation of Hahanemannian concept will be the true key to show the linearity of homeopathic laws to modern science literature.

If we compare the properties of homeostatic mechanism & vital force we find the scientific correlation in between which shows ultra stable behavior & function of auto regulation which is labeled as autocratic & automatic in homeopathic literature for vital force.

So here we can state that properties of vital force are congruent to properties of homeostasis which means the doctrine of vital force states nothing; but the homeostatic mechanism.

Positive and Negative Feedback

When a change of variable occurs, there are two main types of feedback to which the system reacts:

- **Negative feedback:** a reaction in which the system responds in such a way as to reverse the direction of change. Since this tends to keep things constant, it allows the maintenance of

homeostasis. For instance, when the concentration of carbon dioxide in the human body increases, the lungs are signaled to increase their activity and expel more carbon dioxide. Thermoregulation is another example of negative feedback. When body temperature rises (or falls), receptors in the skin and the hypothalamus sense a change, triggering a command from the brain. This command, in turn, affects the correct response, in this case a decrease in body temperature.

- **Positive feedback:** a response is to amplify the change in the variable. This has a destabilizing effect, so does not result in homeostasis. Positive feedback is less common in naturally occurring systems than negative feedback, but it has its applications. For example, in nerves, a threshold electric potential triggers the generation of a much larger action potential. Blood clotting and events in childbirth are other types of positive feedback.

- **'Harmful Positive Feedback'**

Although Positive Feedback is needed within Homeostasis it also can be harmful at times. When you have a high fever it causes a metabolic change that can push the fever higher and higher. In rare occurrences the body temperature reaches 113 degrees and the cellular proteins stop working and the metabolism stops, resulting in death¹⁹.

The concept of homeostasis was first articulated by the French scientist Claude Bernard (1813-1878) in his studies of the maintenance of stability in the "milieu interior." He said, "All the vital mechanisms⁵, varied as they are, have only one object, that of preserving constant the conditions of life in the internal environment" (from *Leçons sur les Phénomènes de la Vie Commune aux Animaux et aux Végétaux*, 1879). The term itself was coined by American physiologist Walter Cannon, author of *The Wisdom of the Body* (1932). The word comes from the Greek *homiois* (same like, resembling) and *stasis* (to stand, posture).

- **Homeopathic approach:** Every agent that acts upon the vitality, every medicine, deranges more or less the vital force, and causes a certain alteration in health of individual for a longer or a shorter period; this is termed as primary action. Although the products of the medicinal and vital powers conjointly, it is principally due to the former power. To its action vital force endeavors to oppose its own energy. This resistant action is property, is indeed an automatic action of our life preserving power, which goes by the name of secondary action or counteraction.

During the primary actions of the medicines on healthy body, vital force seems to conduct itself merely in passive (receptive) manner and appears. so to say, compelled to permit the impressions of the artificial power acting from without to take place in it and thereby alter its state of health, however appears to rouse itself again as it were, and to develop (A) Exact opposite condition of health (counter action, secondary action) to this effect (primary action) produced upon it, if there be such an opposite, and that in as great a degree as was the effect (primary action) of the artificial morbific or medicinal agent on it, or proportionate the opposite own energy. (B) If there be not in nature a state exactly the opposite of the primary action, it appears to endeavor to indifferntiate itself, that is to make the superior power available in the extinction of the change wrought in it from without (by the medicine), in the place of which it substitutes its normal state (secondary curative action). Actions described in terms of primary and secondary bears a similar relation to positive and negative feedback mechanism of homeostasis.

For instance:

Primary action of medicine is used for the process of drug proving where the stimulus cause progressive outcome in the form of pathogenesis and symptoms, similarly in positive feed-back mechanism does same with stimulus and effect which has no direct homeostatic effect but special effect of destabilizing which ultimately contribute the effect similar to homeopathic drug proving.

Secondary action or negative feed-back mechanism are one of the same phenomena which functions as direct homeostatic regulators which in turn responsible for maintaining health through improved cellular adaptations.

Negative feed-back mechanism is the physiological process to keep health in check, while secondary action of medicine is artificial form which helps to reverse the disorder of health in disease. Hence the modality of secondary action of medicine is used in homeopathic treatment.

➤ **Homeopathy Vs. homeostasis:**

Homeopathy is entirely based on similar principle which states like cures like. Therapeutic application of this law was first used by Dr. S.Hahnemann during period (1796-1810), and converted as let like be treated by like. This afterwards called as homeopathic system of medicine. Therapeutic law of similar is one part of similar principle; on the other hand the concept of similarity to the human organism and its complexity is not explained under the broad title of homeopathy.

One can explain on the basis of homeostasis again as follow:

➤ **Complex adaptive systems - Properties of CAS**

A CAS is a complex, self-similar collection of interacting adaptive agents. The study of CAS focuses on complex, emergent and macroscopic properties of the system. Various definitions have been offered by different researchers:

What distinguishes a CAS from a pure multi-agent system (MAS) is the focus on top-level properties and features like self-similarity, complexity, emergence and self-organization. An MAS is simply defined as a system composed of multiple, interacting agents. In CASs, the agents as well as the system are adaptive: the system is self-similar. A CAS is a complex, self-similar collectivity of interacting adaptive agents.

Complex adaptive systems are characterized as follows and the most important are:

- The number of elements is sufficiently large that a conventional description (e.g. a system of differential equations) are not only impractical, but cease to assist in understanding the system, the elements also have to interact and the interaction must be dynamic. Interactions can be physical or involve the exchange of information.
- Such interactions are rich, i.e. any element in the system is affected and affects several other systems.
- The interactions are non-linear which means that small causes can have large results.
- Interactions are primarily but not exclusively with immediate neighbors and the nature of the influence is modulated.

- Any interaction can feed back onto itself directly or after a number of intervening stages, such feedback can vary in quality. This is known as recurrency.
- Such systems are open and it may be difficult or impossible to define system boundaries
- Complex systems operate under far from equilibrium conditions, there has to be a constant flow of energy to maintain the organization of the system
- All complex systems have a history, they evolve and their past is co-responsible for their present behavior
- Elements in the system are ignorant of the behavior of the system as a whole responding only to what is available to it locally

Let us compare the characteristics of CAS with cardinal principles of homeopathy,

1) Self similar collection of interacting adaptive agents:

By applying deductive logic it shows that concept of similarity and similar behavior existed in human organism from cell level which ultimately contribute the homeostasis and in organism to health¹². This can be a new concept of law of similar. Because unless and until the self similarity is not maintained the equilibrium between interacting agents cannot be achieved through CAS and consequently no homeostasis. Similarly in homeopathy if similitum is not present between two interacting forces or more precisely the agents (human organism & medicine) there is no cure which is nothing but the supreme equilibrium of complex organism in health which is also termed as homeostasis²³.

So the law of similar stated by Dr. S. Hahnemann is now out dated and insufficient to explain the homeopathic philosophy because if we consider the law on physiological basis the only above explanation can prove it rational and logical giving rise to linearity with science³⁴.

2) The interactions are non-linear which means that small causes can have large results:

This characteristic of CAS is explaining the doctrine of potentisation.

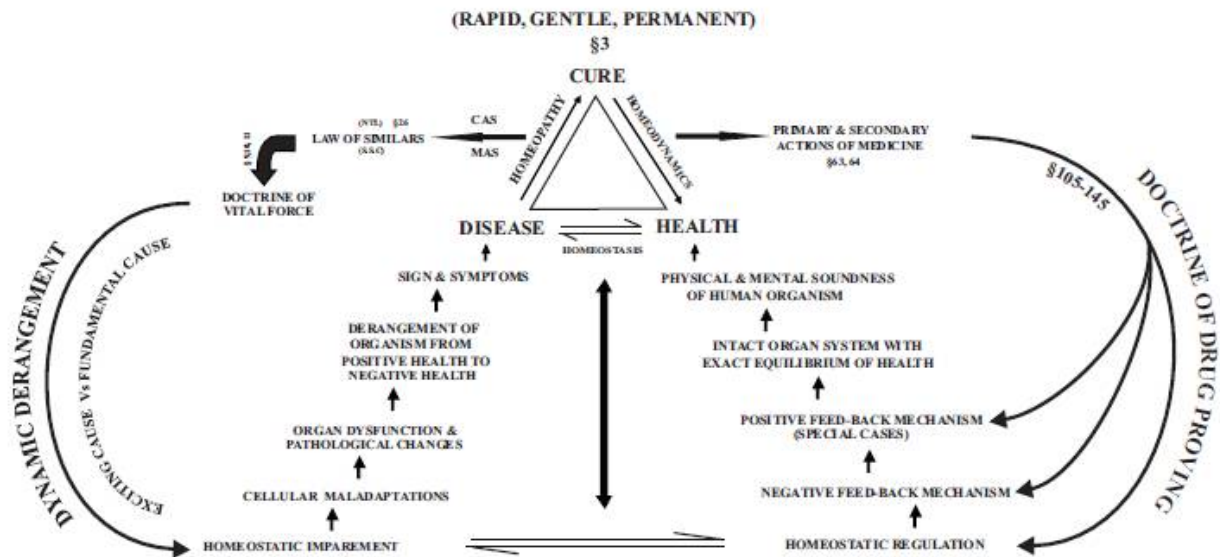
As we know that homeopathic dilutions can act beyond the Avogadro number and still capable of reproducing the clinical effects for many years. This is something nonlinear to laws of chemistry and physics, but physiological model and theory can explain the phenomena by this property of CAS⁷.

3) Complex systems operate under far from equilibrium conditions, there has to be a constant flow of energy to maintain the organization of the system:

No doubt it essentially states the doctrine of vital force; the same described by Dr.S.Hahnemann that body requires the dynamic energy to carry the operation and that's why dead cannot react to any stimulus¹⁴. And to carry the medicinal dynamics definitely the constant flow of energy is needed.

Model for hypothesis

HOMEOPATHY ACTS THROUGH THE MECHANISM OF HOMEOSTASIS WHICH GIVE RISE TO HOMEODYNAMICS



Abbreviations:

CAS- Complex Adaptive system

MAS- Multiple Agent system

NTL- Nature's Therapeutic law

S.S.C- Similia similibus Curenter

§- Aphorisms from Organon Of medicine(6th Edition), Dr.S.Hahnemann.

Proofs supporting hypothesis:

Recently the homoeopathic research in cytology as well as on cell lines shows the similar evidences of the concept. Out of which some are given as a proof.

- The experiment of Arsenicum with cell lines shows that action on heat-shock proteins (hsp90) is positive in response to the stimulus. (Ref: Mechanism of action of Arsenicum trioxide, Wilson H. Miller Jr.). For instance heat-shock protein where protective to cell which has been shown to be increased by the Arsenicum trioxide in response to treatment & stimulus.

- As cell is having the adaptive behavior it also has to undergo the programmed cell death the process called as the apoptosis. Many researchers and scientists have shown the pro-apoptotic effect of homoeopathic medicines in cancer cell lines as well as in vivo studies. (Ref: Synergistic effect of cell differential agent-II and arsenic trioxide on induction of cell cycle arrest and apoptosis in hepatoma cells. Jian-Wei Liu, Yi Tang, Yan Shen, Xue-Yun Zhong: World journal of gastro enterology).
- The role of homoeopathic medicine is also illustrated on gene regulation (Ref: Complement Therapeutic Med (1999) 7: 62-75. Efficacy of a potentized homoeopathic drug (Arsenicum Album-30) in reducing genotoxic effect, S Datta, P Mallick, AR Bukhsh) which states 'Arsenicum album reduces genotoxicity in arsenical poisoning'.
- The similia principle as a therapeutic strategy: a research program on stimulation of self-defense in disordered mammalian cells.
- The similia principle is considered to be the essence of homeopathy. This article describes a research program for study of the similia principle in cultured mammalian cells. This systematic program with its rather simple research model was set up ultimately to contribute to the design of studies of the similia principle with more complex organisms such as humans. With respect to application of the similia principle, the concepts of self-defense and self-recovery are central. At the cellular level, self-defense and recovery largely depend on the availability of proteins with a cell-protective function, most notably, stress or heat shock proteins; which ultimately conveying the homeostatic mechanism of cell.
- The foundation of homeopathic medicine is the 'Similia Principle', also known as the 'Principle of Similarity' or also as the 'Simile', which reflects the inversion of pharmacological effects in healthy subjects as compared with sick ones. This describes the inversion of effects, a widespread medical phenomenon, through three possible mechanisms: non-linearity of dose-response relationship, different initial patho-physiological states of the organism, and pharmacodynamics of body response to the medicine.
- Homeopathic medicines could interact with sensitive (primed) regulation systems through complex information, which simulate the disorders of natural disease. Reorganization of regulation systems, through a coherent response to the medicine, could pave the way to the healing of the cellular, tissue and neuro-immuno-endocrine homeodynamics. Preliminary evidence is suggesting that even ultra-low doses and high-dilutions of drugs may incorporate structural or frequency information and interact with chaotic dynamics and physical electromagnetic levels of regulation. From the clinical standpoint, the 'simile' can be regarded as a heuristic principle, according to which the detailed knowledge of pathogenic effects of drugs, associated with careful analysis of signs and symptoms of the ill subject, could assist in identifying homeopathic remedies with high grade of specificity for the individual case.(Ref: Immunology and Homeopathy. The Rationale of the 'Simile'; Paolo Bellavite¹, Riccardo Ortolani, Francesco Pontarollo, Giuseppina Pitari and Anita Conforti)

Hence with all these data we can conclude that the advance modus oprendi of homoeopathy with question of acceptance of the hypothesis which can arise only on comparison to Hahanemann's aphorism as mentioned in the Organon of medicine 6th edition, is straight and damn clear because in Hahanemannian as well as pre-Hahanemannian era there were no established rational methodology to prove not only clinical but besides clinical also.

Meta analysis of this preclinical & clinical trial helps us to evaluate global perspective as well.

Discussion

To the newer concept definitions of science are ever changing phenomenon. To my best I can define the homoeopathy as branch of biophysics, co branch of thermodynamics and part & parcel of the quantum physics or fluid dynamics. Discovery always happens with accident or serendipity. As we all know the discovery of famous sedative molecule; diazepam is nothing but the serendipity and hence cinchona bark bears the same relation²⁵. To the present science it is out of the detection limit for any instrument to show the dilution level or energy mechanism. So how can we are so pessimistic about science of homoeopathy which in turn will be the milestone of future health care and medical science. In science there are day to day changing advances based on experiments which in terms called as the research and development. Proposed theories or hypotheses and consequent experiments prove the science to be modern.

Conclusion

Besides the proposed hypothesis there are many other theories on which work is carried all over the world out of which hormesis, memory of water, the ethereal bodies, stable ice bonding, electronic dynamic networks, water cluster, cellular memories, current lock & key model, subtle forces etc... are known to homoeopathic community.

Finally we can arrive at the summation of all theories and experimentations which come to a step that reversal of order of economy of the cell by means of homoeostasis is achieved by homoeopathic medicines which is nothing but the cure.

The chronology of homoeopathic research shows the gap of methodological approach towards solving the problem statements. To the sum and total it's a trial for a good theory to solve at least minimum of the mechanism of homoeopathic medicines by which they act.

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