Epigenetics and homoeopathy: A brief overview of the scientific studies and reflection of the concept in homoeopathic literature

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The term Epigenetics was first used to refer to the complex interactions between the genome and the environment that are involved in development and differentiation in higher organisms. Today, this term is used to refer to heritable alterations that are not due to changes in DNA sequence [1]. Today it is being recognized by some as one of the missing pieces of scientific explanation which needs to be studied to begin investigating the mode of action of homoeopathic medicines. It has been proven in some studies that homoeopathic medication acts on the epigenome as well as the microbiota of the living human organism.

Epigenetics and Homoeopathy

Much research has shown the biological activities of ultra-highly-diluted drug materials; further, their capability to modulate different signal genes and proteins was also identified [2]. Therefore, Khuda-Bukhsh [3] and Pathak [4] advocated a working hypothesis claiming that the working principle of the homoeopathic remedy should be based upon a switch on/off mechanism of gene expression, particularly by causing epigenetic modifications.

In one study, it was checked whether the homoeopathically diluted remedy Condurango 30C (ethanolic extract of Gonolobus condurango diluted 10⁶⁰ times) was capable of arresting the cell cycles in cervical cancer cells HeLa by triggering an epigenetic modification through modulation of the activity of the key enzyme histone deacetylase 2 vis-à-vis the succussed alcohol (placebo) control. Conclusion was that Condurango 30C appeared to trigger key epigenetic events of gene modulation in effectively combating cancer cells, which the placebo was unable to do [5].

In another study, the effects of a wide range of Apis mellifica dilutions on gene expression profiles of human cells were investigated. RWPE-1 cells, a nonneoplastic adult human epithelial prostate cell line, were exposed to Apis mellifica preparations (3C, 5C, 7C, 9C, 12C, 15C, and 30C) or to the reference solvent solutions for 24 hours; non-exposed cells were also checked for gene expression variations. Results showed that
even the most diluted solutions retained the ability to trigger significant variations in gene expression demonstrating that extremely diluted Apis mellifica preparations retain effects on gene expression in human cells. Gene pathway analysis revealed consistent variations in gene expression induced by Apis mellifica when compared to nonexposed reference cells but not to reference solvent solutions. However, the biological effects of such modulations were not studied [6].

The findings of another study [7] clearly demonstrate that the expression profiles of certain genes of the drug-treated HeLa cells were significantly different from that of the placebo treated cells. This suggests that both drugs and placebo differed in their ability to trigger gene responses, some of which were implicated in cancer. Thus, although the drugs were ultra highly diluted, they still retained the ability to trigger gene responses in a cascade of reactions, giving support to Khuda-Bukhsh’s hypothesis [3, 8]. Epigenetic modifications are a hallmark of cancer, and a large number of genes remain in modified state of expression in cancer cells. Both Hydrastis Canadensis [9, 10] and Condurango [10, 11] had been previously reported to induce apoptosis in cancer cells, while “placebos” do not exhibit this property.

Incidentally, ultra-highly diluted preparations of glucose 30c, Arsenicum album 30c, and Arnica montana30c were shown to induce gene modulatory effects in bacteria, E. coli and yeast Saccharomyces cerevisiae, either subjected to insult with sodium arsenite or UV-irradiation [12-14]. The authors explained that the potentized homeopathic remedies carry specific “signals”/“information” that can be identified by certain cell receptors. Those “signals” may act as a “trigger” for turning “on” or “off” some relevant genes, initiating a cascade of gene actions, while the “placebo” failed to elicit any such favorable responses.

It has been previously documented that administration of a potentized homeopathic drug altered the expressions of a large number of signal proteins in mice induced to develop skin cancer [2].

Thus, we can infer from these studies that although the exact mechanism is unknown homoeopathic remedies do affect the epigenome. Whether these epigenetic alterations are temporary or permanent and whether these effects can be passed on to next generation is yet to be investigated.

Clues to Epigenetic inheritance in Homoeopathic Literature

In homoeopathic materiamedica, we can find many remedies being given for never been well since phenomenae. Grief, joy, trauma, puberty, menopause etc. all point to events which are capable of triggering epigenetic changes and we see the results after prescribing the indicated medicines in cases where such events can be identified as point of origin of deviations in health. This implies that our medicines must be capable of working at an epigenetic level or perhaps at a level which is prior to epigenetic changes.

In many of the works by the stalwarts, though the term epigenetics hasn’t been mentioned, yet we can see many examples of trans-generational inheritance of acquired parental states by the offspring being observed and quoted where the importance of environmental factors or miasms affecting one generation and the effects being observed in subsequent generations is recognized. Even during taking of the case history of a patient, it is vital for us to investigate the family history for tuberculosis, trauma or any inherited tendencies running in the family.

Dr. Hahnemann talked about protecting posterity from psora (the producer of most chronic diseases) in advance by administering anti-psoric medicine (Sulphur dynamizations in 50 millesimal potency) to
pregnant mothers in a footnote to §284 in the 6th edition of Organon of Medicine. He also claims that pregnant women treated in this way have given birth to children usually healthier and stronger [15].

It may be hypothesized that all miasms cause a series of epigenetic changes in the organism which then makes the person susceptible to disease.

Dr. Kent says, “If man has no chronic miasm he would not have acute disease. It is because he is susceptible to these outside influences.” also “If a man were in perfect health he would not be susceptible” [16].

If a person does have an epigenome which expresses all the good genes and silences all the bad genes for a particular environment, he can be said to be in perfect health and not susceptible to any influence.

Homoeopathic doctrine teaches us that pathology is not the disease but the result of diseases. As Dr. J. H. Allen says, “If we do not understand the laws governing the dynamis of life we are soon deceived, as we are apt to take the results of action for their cause: or, in other words, we take the finished or completed work of the miasm, the lesion or the pathological for the real disease. For instance, we say the tumor is the cause of pain or pressure or some reflex condition, which is true, perhaps but the tumor is never the first cause of the disease. No lesion or pathological condition is the first cause of any disease, for the disease process precedes them all, and the true cause always lies (outside the mechanical) in the disturbed or distressed life force itself. We must go back to the life force for all action and all change in the structures of the organism itself” [17].

Dr. Kent also says, “The finger is aided by the microscope to an elongated point, and the microscopic pathological results of disease are noted and considered to be the beginning and the ending, i.e., results without anything prior to them. That is a summary of allopathic teaching as to the nature of sickness. But Homoeopathy perceives that there is something prior to these results” [18].

If the physician cannot make a distinction between the symptoms that represent the disease per se and the symptoms that represent the result of disease, he will never practice homoeopathy successfully. Pathology gives us the results of disease, and not the language of nature appealing to the intelligent physician. Symptomatology is the true subject to know [18].

**Conclusion**

In view of the similarities found in homoeopathic philosophy with respect to the epigenetic mechanisms, it should be a fruitful endeavour to undertake more studies in this regard.

**References**


