Concluding Remarks
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From our earnest effort within very limited resources, what then could we achieve in the present study and what else remains to be done to arrive at a logistic conclusion about this rather mystic science of homeopathy? Firstly, perhaps we have been able to demonstrate convincingly the efficacy of the different potencies of the homeopathic drugs in the mammalian model by taking into consideration well organized experiments designed in manners acceptable to the scientific community. Secondly, the modulations or changes in parameters brought forward by dilutions beyond Avogadro's limit have broken down the myth that any drug without having physical existence of a single original drug molecule cannot really impart medicinal influences to alleviate clinical symptoms of the diseases. Thirdly, our works would point out to its potential of application in human beings, subject to verification, by human trials. Fourthly, this study would imply the detrimental or additive damaging effects of alcohol when used after ultrasonic exposure or in a state of liver ailment including liver dysfunction or liver cancer. On the other hand the effect of feeding of vitamin C, singly and in combination, with potentized homeopathic drugs would lead to a possibility of combined therapies in future, particularly against such dreadful diseases as cancer, but clearly much more remains to be done in order to understand the exact molecular mechanisms and pathways of action of the homeopathic drugs, particularly in its potentized forms. What then could be our future course of action to give a new dimension to meaningful research in this challenging field of science? A few ideas which can be realistically approached may be worth mentioning. There is ample scope of doing further research on effect of some homeopathic drugs on molecular chaperons like heat shock proteins (which incidentally are direct products of some specific genes) needed for polypeptide folding and transport under both normal conditions as well as in cells subjected to other environmental stress. Similarly, further studies on immunology can have important bearings on understanding the molecular mechanism of homeopathy. Studies on activities on various signal transduction pathways after administration of potentized homeopathic drugs in combating disease symptoms or in animal models subjected to abnormal/induced conditions could also be rewarding to understand if the homeopathic drugs generate specific signals to alleviate disease symptoms (e.g. by measuring the secondary messenger activity of c-AMP or role of G-proteins. Experiments may also be suitably designed to learn if these ultra-diluted drugs have specific ligand binding /receptor binding ability (for sending signals to specific cells through ion channels). Additionally the protective/ameliorating role of homeopathic drugs can be further tested on
modulations of activities of specific oncogenes or their gene products in artificially induced cancer in experimental animals keeping suitable controls. The activities of apoptotic genes and tumor suppressor genes (bcl-2, p53 etc) and their products or some marker enzymes indicating the onset of metastasis; (e.g. activity of matrix metalloproteinase (MMP) activity in artificially induced cancer in mice/rats can also give important clues for understanding the molecular mechanism(s) by which the homeopathic drugs can influence and rectify faulty expression of specific genes in abnormal/diseased state. Alternatively indepth studies to examine if the potentized homeopathic drugs act in some way to activate/ repress activity of specific transcription factors can also be helpful in understanding the molecular mechanism. Further, electron microscopic studies can also be helpful but most importantly the works of our kind should be replicated by independent group of workers to confirm or refute our findings. Hopefully, our small effort will arouse interest and stimulate further research to remove the tag of 'controversial' prefixing 'science' to qualify homeopathy as only "science".