

The Evidence: Scientific Studies on Homeopathic Cancer Treatment

By Manfred Mueller, MA, RSHom(NA), CCH

Introduction

Homeopaths have described observations that tumors recede from the use of homeopathic treatment and have, from time to time, documented long-term recoveries from cancer in response to homeopathic treatment.¹⁻²³ Some practitioners have reported observations like this in as many as several hundred patients.²⁴ Unfortunately, until about two decades ago, there were very few sound scientific studies corroborating these clinical observations. Citing this paucity of high-quality scientific evidence, regulatory agencies have been reluctant to endorse homeopathic treatment as an alternative or an adjunct treatment in cancer. However, the situation may be changing. Homeopathic treatment of cancer is now supported by state of the art laboratory studies.

Arsenic and Cancer

One of the new developments in homeopathic cancer research comes from an unlikely place. Prof. Anisur Rahman Khuda-Bukhsh, a researcher in the cytogenetics laboratory of the Department of Zoology, at the University of Kalyani, in Kalyani, West Bengal, India and his team have conducted several studies in the laboratory that, according to a recent Indian news reports, deserve our attention.²⁵

West Bengal has a widespread problem of arsenic poisoning that can lead to cancer.²⁶ According to Khuda Bukhsh, “conventional medicine does not have an effective evidence-based treatment for arsenic-induced toxicity, although some chelators, like DMSA and DTPA, have been tried without success.”²⁷ Chronic arsenic toxicity sets the stage for multi-system diseases due to hematological complications or hepatotoxicity. This may lead to malfunctioning or failure of organs, such as the lungs or the liver. Many of these cases will develop cancer of various organs.^{28, 29}

In a series of experiments,³⁰⁻³⁸ the West Bengal researchers found that *Arsenicum album* 30C can help remove arsenic from the body “The drug reduced arsenic levels in blood and urine of arsenic victims from Ghetugachhi village in Nadia district,” according to Khuda-Bukhsh. “The blood levels of the toxicity-denoting liver enzymes (like aspartate aminotransferase) returned to almost normal levels after three months,” he added.

The scientists found that the arsenic level in urine fell dramatically and levels in blood became normal by the 60th day. The researchers also observed an increase in the level of glutathione - a compound made up of amino acids, which demonstrates recovery of normal liver function.

In one of the studies,³¹ published in the March 2006 issue of *Evidence-based Complimentary and Alternative Medicine*, the researchers treated arsenic victims from another village in the Nadia district. They showed that two centesimal potencies (30 and 200) of the aforementioned medicine brought the high levels of anti-nuclear antibodies (a type of antibody that works against the body tissues) to normal levels. “We have already shown efficiency of homoeopathic drugs in protecting or repairing arsenic-induced DNA damage in mice,” then Khuda-Bukhsh concludes, “the homoeopathic drug may trigger a cascade action of relevant genes back to their normal functioning turning on the body’s recovery.”

A more recent study,³⁰ published in *Science of the Total Environment*, and conducted in collaboration with researchers of the Boiron Laboratory, Sainte-Foy-Lès-Lyon in France, once again confirmed biological action from treatment with homeopathic potencies. The researchers administered *Arsenicum album* 30C, succussed alcohol and placebo to groups of randomly selected, arsenic contaminated volunteers in Padumbasan, India.

The treatment apparently caused positive changes in elevated blood levels of ESR, creatinine, and eosinophils. In the treated group, *Arsenicum album* 30C increased the activities of various toxicity biomarkers indicating hepatotoxicity, the prime feature associated with arsenic poisoning, notably AST, ALT, LPO, and GGT. This therapy showed an increase in levels of hemoglobin, PCV, neutrophil percentages, GSH content, and lowered G-6-PD activity. Most of the subjects reported a better appetite and improvement in general health. It is interesting that the 14 volunteers who dropped out during this study were mostly from the placebo group. The authors concluded that *Arsenicum album* 30C could possibly provide interim health support to a large population at risk.

The results of these studies could lead to certain conclusions on the role homeopathy can play in mitigating the effects of a substance that, according to California's Proposition-65, is considered a potent carcinogen. If treatment with the drug *Arsenicum album* produces protective effects against arsenic trioxide or against arsenic in the groundwater that are measurable on multiple levels and even in the DNA, it may also be effective in preventing or reversing cancers induced by the poison. A review of the homeopathic clinical literature shows that *Arsenicum album* has been shown to counteract, and even reverse reliably, a broad spectrum of cancers.¹⁻²³

It is noteworthy that conventional medicine also uses arsenic trioxide for cancer and leukemia treatment, but in unpotentized form. Dr. Soignet of the Leukemia Service of the Memorial Sloan-Kettering Cancer Center states that "low doses of arsenic trioxide" are "standard treatment for acute promyelocytic leukemia (APL) in the relapsed disease," which induces differentiation and apoptosis of APL cells, and the role of arsenic trioxide of newly developed APL is under investigation.^{39,40}

More than one hundred years ago, Dr. J. Compton Burnett explored the difficulty of finding new cancer remedies with the standard proving method on healthy volunteers, because producing cancerous pathology during a proving was not feasible. He proposed searching for new cancer drugs by examining the toxicological and iatrogenic records for drugs that have caused cancer. He cited in an article published by the *British Medical Journal* that reported on data collected by Jonathan Hutchinson demonstrating that treatment with arsenic in crude form, under the allopathic model, had caused epithelial and other cancers. The article quoted Sir Paget stating that, "it cannot be doubted that arsenic had power, in persons predisposed to it, to determine the development of cancer."⁴¹

Tautopathy and Cancer

The tautopathic approach is a form of isotherapy with a drug in potentized form that caused the disorder being treated. Hahnemann, in his comment on the effect of potentized isopathics in *Chronic Diseases*, said, "For between idem and simillimum there is no intermediate for anyone that can think; or in other words between idem and simile only simillimum can be intermediate. Isopathic and aequale are equivocal expressions, which if they should signify anything reliable can only signify simillimum, because they are not idem (*ταυτον*)."⁴²

Thus, according to Hahnemann the simillimum is the idem (lat. the same), and thus the tauton (*ταυτον*; Greek for "the same"), meaning the curative and "most similar" drug is always the

substance that caused the disorder, provided it is administered in potentized form. In the English language we make a distinction between tautopathy and isopathy, reserving the name “tautopathy” for “suffering caused by the same thing that was habitually used previously”,⁴³ and thus treatment with a potentized drug made from a substance or pathogen that caused the respective disorder – I have coined the term pharmacode for such a remedy, as the word φαρμακον (pharmakon) in Greek means both poison and drug –; and “isopathy” for a the treatment with an infectious product of a disorder or disease, such as a discharge or tissue – a nosode.⁴⁴ There has been confusion in the use of these terms, and the word isopathy is often used for what properly should be called tautopathy.

The use of carcinogens as cancer medicine in both conventional and homeopathic practice seems to corroborate the truth of the homeopathic hypothesis, especially if you follow Hahnemann’s view that isopathy (and tautopathy) is, essentially, homeopathy: “Some wish to create a third method of applying medicines to a disease, called isopathy. This is the cure of an existing disease with the same infectious material. However, assuming it could do so, it would still effect the cure through a Simillimum juxtaposed the Simillimo, because it administers the infectious material only in a highly potentized and thus in an altered form.”⁴⁵ If drugs that can induce cancer have curative effects when given in “low doses” (simple dilutions), highly potentized drugs should be able to cure the disease while avoiding all negative side effects.

In the *Organon*, Hahnemann also stated that in addition to natural (miasmatic) chronic diseases, there also exist iatrogenic ones, which he deemed the most difficult to cure of all. (§74) We should add to these the chronic toxic environmental diseases. Tautopathy has been a widely used tool of the classical homeopath for over a century. Homeopaths reported using the tautopathic method in complicated cases where iatrogenic or environmental factors appeared to cause the present chronic disorder, or where exposure to these drugs or toxins was found in the anamnesis, and suspected to have triggered the disease.^{46,47}

This is especially true in cancer. Because of the sparsity of symptoms encountered in many cancer cases, some homeopaths have resorted to etiological prescribing, using tautopathic strategies. The tautopathic method has been used in cancer with apparent success. Its systematic use has led to the introduction of new cancer remedies made from carcinogens by Burnett, Cooper, Jr., Clarke, Grimmer, and others, using remedies such as *Cobaltum*, *Methylene Blue* and *Congo Red*, and *Benzoinone*. Many studies confirm the tautopathic hypothesis. If we accept Hahnemann’s view, tautopathy is simply homeopathy, however, strictly speaking, this is so only provided the drug is used on the basis of the symptoms. If given based on knowledge of the causative substance, using the etiological methodology, it is properly called tautopathy.

Much of “homeopathic” laboratory research is conducted using the tautopathic method. This is because the true homeopathic method would require case-taking and individualization of symptoms which is nearly impossible with laboratory animals. All of the West Bengal arsenic studies that employed *Arsenicum album* are obviously tautopathic studies, including those conducted on humans.

The most recent study by the West Bengal team in collaboration with researchers from Boiron Labs was published in the *Journal of Veterinary Medicine*.⁴⁸ The team injected arsenic trioxide into mice, and then treated one group with the homeopathic remedy *Arsenicum album* (a drug prepared from arsenic trioxide, by progressive succussion and dilution), another group with potentized alcohol, and a third group remained untreated. This trial used a double-blinded procedure. Oral administration appeared to show protective potential against arsenic trioxide

induced chronic poisoning in mice. There was a marked reduction of various chromosomal, nuclear, and sperm head abnormalities, which would signify an anti-genotoxic effect from the homeopathic remedy.

The West Bengal group had previously examined the effect of homeopathic treatment on cellular damage produced by another group of carcinogens. They tested whether two potencies of the homeopathic drug, *Cadmium sulphuricum* could reduce the genotoxic effects of Cadmium chloride (CdCl₂) in mice.⁴⁹ Genotoxic effects constitute damage to the DNA of a cell, including mutation and possibly neoplasms. The researchers also tried to determine the relative efficacy of three administrative modes, i.e. pre-feeding, post-feeding and combined pre- and post-feeding of the medicines.

The authors concluded that both *Cadmium sulphuricum* 30C and 200C were able to counteract cadmium-induced genotoxic effects in mice. They found that the combined pre- and post-feeding mode of administration was most effective in reducing the genotoxic effect of CdCl₂. These results are evidence that homeopathic treatment may be effective for prophylaxis and for the recovery from serious environmental and occupational disorders.

Another study by this group tested the drug *Mercurius solubilis* in the 30C and 200C potencies fed in three administrative modes to mice who had been poisoned with mercuric chloride.⁵⁰ The treatment caused amelioration of genotoxic effects, as measured by conventional endpoints, i.e. chromosome aberrations, micronuclei, mitotic index, and sperm head anomalies. The amelioration of *Mercurius* 200C seemed to be slightly more pronounced. The researchers concluded that potentized drugs can serve as possible anti-genotoxic agents against specific environmental mutagens, including toxic heavy metals.

One researcher wondered if homeopathic principles applied to the efficacy against cancer of the common drug, aspirin. Morgan reviewed the scientific evidence for a possible link between regular ingestion of aspirin and a reduced risk of both colorectal and esophageal cancers.⁵¹ He then proposed that a homeopathic mechanism was responsible for the correlation. Since homeopathy employs small doses of the mother compound, perhaps potencies of aspirin could be used to reduce the risk of cancer in the general population or in patients with precancerous colorectal and esophageal lesions. This approach would help to minimize the risk of adverse side-effects of larger doses of aspirin on the digestive system. It may lend support to the notion that the use of low-dose X-ray radiation and low doses of toxic or carcinogenic elements in cancer therapy, such as arsenic, cobalt, radium, etc., may actually constitute an unconscious quasi-homeopathic effect, although their effect, as well as the safety of these treatments, could presumably be increased applying the homeopathic methodology by individualization of the medicine according to symptoms and the dose according to the patient's sensitivity.

A trial supporting the use of tautopathy in cancer is found in an article from the April 2000 issue of the British Homeopathic Journal.⁵² It's author, Dr. Montfort, of the Instituto Superior de Medicina Homeopatica de Ensenanza e Investigacion, Monterrey, Mexico, claims that homeopathy does not have highly effective remedies for cancer in its literature, and has been limited to palliating the adverse effects of chemo/radiotherapy. As homeopaths, we could not disagree more with this assertion. He is apparently unfamiliar with the work of Kent, Burnett, Clarke, the Coopers, Grimmer, Nebel, Stauffer, Schlegel, Eizayaga, Patel, Ramakrishan, and many others who collectively report positive effects from more than a hundred drugs that are widely used in classical homeopathy.

Monfort studied a tautopathic treatment using environmental carcinogens in humans. He reports on results of his experiments using ultra-diluted 10C and 12C potencies of chemical carcinogens used for 3-24 months in cancer patients, usually in conjunction with conventional treatment. With this procedure, complete remission or life extension was achieved for some cancer cases. Three clinical cases are presented: a man with undifferentiated lung cancer; a child with an astrocytoma and a woman with

leiomyosarcoma. These results deserve to be studied further. The successful use of potentized carcinogens in cancer treatment appears to be an, as of yet, mostly untapped resource for new cancer drugs.

A study published in 1983 by Roberfroid in *Aspects of Research in Homeopathy* titled “Action of Hahnemannian Potencies upon Artificially Produced Cancer in Animals” confirmed the tautopathic strategy by testing the homeopathic drug *Phenobarbital* 9C on Phenobarbital-induced liver tumors in rats, yielding positive results.⁵³ Most of our classical homeopathic cancer drugs are, in fact, derived from carcinogens, such as *Arsenicum*, *Cadmium*, *Aluminum*, *Aluminum silicate*, etc., and many are listed in California’s Proposition 65 as carcinogens.

Other researchers tested the use of homeopathic/tautopathic treatment for the adverse effects of radiotherapy. Balzarini et al. assessed the effects of *Belladonna* 7C and *X-ray* 15C in the treatment of acute dermatitis associated with radiation treatment.⁵⁴ A randomized, double-blinded, placebo-controlled clinical trial was conducted involving 66 patients who had been operated on for breast cancer and were undergoing radiotherapy. The researchers found a statistically significant benefit from the active treatment compared to placebo. The homeopathic medicines appeared to have particular effectiveness in relieving the heat of the skin. Chemotherapy and hormonotherapy did not seem to interfere with the results.

There is a similarity between tautopathy and “hormesis”- which is the toxicological observation that small doses of a toxic substance can induce protective effects specifically against harmful doses from that same toxin. One researcher who collected data confirming the hormesis effect found hundreds of studies that appeared to show a hermetic effect.⁵⁵ Several studies have also confirmed this phenomenon for radiation exposure.⁵⁶ This evidence combined with the already cited studies lends further support to the use of potentized *Radium bromatum*, *X-ray*, etc, in treatment of radiation induced injuries, and also in the treatment of radiation induced cancer.

Effective Cancer Treatment without Side Effects?

Although in conventional medicine chemotherapies are used to treat patients with malignancies, adverse effects are common, and damage to normal cells is a widespread problem. Chemotherapy agents can do serious damage to the cells of the bone marrow that play an important role in blood-formation. In their search for potential alternative agents that can kill cancer cells without adverse effects on normal cells, scientists with the Departments of Cancer Biology and Laboratory Medicine at the University Of Texas Department of Molecular Genetics, at the M.D. Anderson Cancer Center, in Houston, Texas, have turned to evaluating homeopathic drugs. These researchers believe they may have found just such an agent in a common homeopathic remedy, *Ruta graveolens*.⁵⁷

They tried the drug *Ruta graveolens* 6C along with $\text{Ca}_3(\text{PO}_4)_2$ (calcium phosphate) in the 3X potency in vitro and in vivo. Of 15 patients, 6 of 7 glioma patients showed complete regression of tumors. The results of both in vivo and in vitro experiments showed that the drug induced “survival-signaling pathways in normal lymphocytes and death-signaling pathways in brain cancer cells” and that “telomere erosion initiated cancer cell death and mitotic catastrophic events completed the process.” The authors proposed that *Ruta graveolens* in combination with calcium phosphate could be used as an effective treatment for brain cancers, particularly gliomas.

Conventional cancer treatment can harm the DNA, and has the potential to cause mutations, tumors and neoplasms. Homeopathic cancer drugs, in the customary doses, apparently do not have these harmful effects. One study, conducted at the Laboratorio de Citogenetica Humana, Centro de Ciencias Biologicas, Universidade Federal do Para, Belem, PA, in Brazil, evaluated the genotoxic effects of a homeopathic

combination treatment labeling it the Canova Method (CM).⁵⁸ CM is a homeopathic medicine developed for the treatment of patients with cancer and for pathologies that involve a depressed immune system, such as AIDS. This product is composed of homeopathic dilutions of *Aconitum napellus*, *Arsenicum album*, *Bryonia alba*, *Lachesis mutus* and *Thuja occidentalis*. According to the author of the study, it stimulates the immune system by activating and accelerating the activity of macrophages and lymphocytes. Activated macrophages stimulate the lymphocytes so they will increase their cytotoxic action in response to tumoral growth or infection.

The study evaluated the genotoxic effects induced in human lymphocytes treated with this homeopathic medication in vitro. The team scored structural and numerical chromosomal aberrations for the assessment of induced genotoxic effects, while evaluating possible variations in the mitotic index as a monitor for induced cellular toxicity. Treatments with CM did not affect mitotic indexes, nor did they provoke chromosomal aberrations, when compared with untreated controls. There was no cytotoxicity or genotoxicity at the chromosomal level.

In evaluating cancer treatments, ethical considerations prevent using an allegedly “unproven” method, such as homeopathy, on humans. For this reason, most studies are conducted in animals. In those studies, researchers often resort to methods of inducing cancers with toxic substances. Several studies have found that homeopathic treatment with classical homeopathic drugs may be effective in protecting against, and even reversing, induced cancerous tumors. While more evidence is needed, studies such as these may be able to confirm homeopathic treatment as a viable method to reverse certain cancerous tumors.

The West Bengal group published a study in the July 2004 issue of the *Indian Journal of Experimental Biology*.⁵⁹ They used several cytogenetical and enzymatic protocols to test if *Chelidonium* 30C and *Chelidonium* 200C showed anti-tumor activity, and if the homeopathic drugs had any action on genotoxic damage produced by an -azo dye. Both potencies showed anti-tumor activity and also modulated favorably some toxicity marker enzymes in liver, kidney and spleen tissues of the carcinogen fed mice. The researchers concluded that the microdoses of *Chelidonium*, having no visible ill effects of their own, may be strong candidates for use in delaying development of or protecting against liver cancer.

It is, of course, impractical to determine in these laboratory experiments whether the choice of *Chelidonium* was in line with homeopathic methodology - that is, whether it was the simillimum of these afflicted mice. However, one may possibly conclude that if a generic treatment such as this proves effective because it uses drugs capable of producing a grossly similar disorder, it would be reasonable to conclude that a medicine chosen on the basis of similarity to the totality of symptoms for a single organism would be even more effective.

Biswas, et al., of the West Bengal group, conducted a study published in the *Journal of Alternative and Complementary Medicine* 2005 Oct;11:839-54, to examine whether the homeopathic drug *Carcinosinum* 200C, fed alone and in combination with *Chelidonium* 200C, had any differential protective effects against the development of liver cancer in mice induced by p-dimethylaminoazobenzene (p-DAB) – a carcinogenic aniline dye still widely used in the textile industry in many countries. Both *Carcinosinum* 200C and *Chelidonium* 200C when administered alone showed considerable ameliorative effect; but the conjoint feeding in alternation of these two drugs appeared to have had a slightly greater protective effect.

The researchers concluded that considering the toxic side effects of conventional chemo-preventive drugs, alternative agents with minimal side effects, such as homeopathic treatment, should be considered especially for palliative measures. As in the previous study, these remedies were chosen as generic treatment for liver cancer and no individualization was used. This study also appears to support the clinical strategy of alternating a “specific” drug homeopathic to the “disease” with a “constitutional” drug homeopathic to the “patient,” as advocated by some homeopathic authorities, notably Eizayaga.⁶¹

Pathak S, et al. once again collaborated with the West Bengal group to conduct a trial published in the April 2006 issue of *Molecular Cell Biochemistry* using the potentized homeopathic drug, *Lycopodium* 30C to analyze the protective potentials in mice by using cytogenetic endpoints. The animals were also chronically fed p-DAB to initiate and Phenobarbital (PB) to promote hepatic cancer.

The effects of chronic treatment of the carcinogens were assessed at different intervals of fixation, and compared with that of mice fed conjointly with the carcinogens and the homeopathic drug. Both the assay systems indicated considerable protective potentials of the homeopathic remedy against p-DAB induced hepatocarcinogenesis in mice.

Lycopodium is commonly recommended by homeopaths for chronic liver conditions and has been widely used as a “constitutional” cancer remedy to slow the evolution towards cancer or to prevent it in the precancerous stage. However, Fernior-Bernville cautioned of its efficacy once cancer had already developed, “In confirmed cancer it barely has any value since it has no power over the tumoral element as have in *Thuja*, *Iodium*, and *Silicea*. ... The *Lycopodium* the subject who becomes cancerous will localize his tumor preferentially on the liver, stomach or intestine.”⁶³ The results of this study seem to indicate that the effects of *Lycopodium* on cancer pathology may have been underestimated.

Drug and Dose Specificity of Homeopathic Cancer Treatment

Evaluating whether a treatment has an effect on tumors requires the most sensitive of tests. Ionic homeostasis is considered such a highly sensitive test for the evaluation of the functional state of a cell. The relative functional state of a cell is evaluated according to the criterion of sodium, potassium and calcium ion transfer across the cell membrane. The agents that promote elevation of ionic homeostasis, as well as those which suppress it, are well known.

The Russian scientist Nadareishvili (Georgian Med News. 2006 Jul) conducted a series of studies on the effect of homeopathy on the ionic homeostasis of cells in normal and tumor cells.⁶⁴ The goal of one study was tracing the possibilities for altering ionic homeostasis into one or another direction. This was done testing the combined influence of various factors: ionizing radiation, an electromagnetic frequency, and a homeopathic remedy. The homeopathic preparation *Phosphoricum acidum* 14C appeared to produce an increased effect over the combined effect of its constituents. *Phosphoricum acidum* 200C stopped a decrease in the action of its combined constituents under the same conditions. The researcher concluded that there exists a dose-response relationship.

In another study he assessed the action of homeopathic remedies on ionic homeostasis in the cells of Ehrlich carcinoma.⁶⁵ He used a method of continuous recording of sodium, potassium and calcium ions with selective electrodes in a Ringer solution. He also monitored the activity of the enzymes that control the transport of ions through the cell membrane.

The homeopathic preparation – stimulated phosphoric acid, at “dilutions” of 14C and 42C – promotes ionic transport and Na, K-ATPase in Ehrlich carcinoma cells. Non-stimulated phosphoric acid, in potencies of 200C and 400C, on the other hand, hampered these indices, thus corroborating an effect of homeopathic potencies on Ehrlich carcinoma cells. The author also draws some important conclusions on the nature of homeopathic potencies. He concludes that structuring of the preparation increases with an increased number of dilutions and, respectively, the “concentration of informational field” increases as well.

Walchli C et al. studied pretreatment of human leukemia cell lines compared to healthy cells with low concentrations and high potencies of *Cadmium* followed by intoxication with crude cadmium.⁶⁶ The study found pretreatment with low doses increased cell viability considerably in both cancerous and healthy cells, while high potencies only had significant effect on healthy cells. This finding may have important implications for selection of potency and dose in homeopathic treatment of leukemia and other cancers.

Several researchers have focused on the question of whether homeopathic drugs used in classical homeopathy are specific for certain types of cancer. Jonas WB of the Samuelli Institute, in Alexandria, VA, and his team conducted a series of laboratory studies evaluating the effects of commonly used homeopathic remedies in cell and animal models of prostate cancer.

MacLaughlin et al., of the Department of Physiology and Biophysics at Georgetown University Medical Center, studied the effects of homeopathic preparations on human prostate cancer growth in cellular and animal models.⁶⁷ They assessed if homeopathic potencies of *Sabal serrulata*, *Thuja occidentalis*, and *Conium maculatum* had anti-proliferative effects cancer cells. They conducted tests in vivo on mouse xenografts, and in vitro on human prostate cancer, as well as on human breast cancer cell lines. In the homeopathic literature, *Sabal* is a remedy that is used specifically for prostate cancer, whereas *Thuja* and *Conium* have sometimes been used successfully in treatment of certain types of breast cancer, where the symptoms fit.

Treatment with *Sabal serrulata* in vitro resulted in a 23 percent and 33 percent decrease of cell proliferation at 24 and 72 hours respectively, and a 23 percent reduction of DU-145 cell proliferation at 24 hours. The difference in reduction is likely due to the specific doubling time of each cell line. No effect was observed on human breast cancer cells with *Sabal*. *Thuja occidentalis* and *Conium maculatum* did not have any effect on human prostate cancer cell proliferation. In vivo, prostate tumor xenograft size was significantly reduced in *Sabal serrulata*-treated mice compared to untreated controls. No effect was observed on breast tumor growth from the other remedies.

The authors concluded that their study clearly demonstrates a biologic response to homeopathic treatment as manifested by cell proliferation and tumor growth. This biologic effect was (a) significantly stronger to *Sabal serrulata* than to controls and (b) specific to human prostate cancer. *Sabal serrulata* should thus be further investigated as a specific homeopathic remedy for prostate pathology, according to the authors.

Thangapazham RL, et al., with the Department of Pathology, Uniformed Services University of the Health Sciences, Bethesda, Maryland, investigated the effect of *Conium maculatum*, *Sabal serrulata*, *Thuja occidentalis*, *Asterias rubens*, *Phytolacca decantra*, and *Carcinosinum* on prostate and breast cancer cell growth, and on gene expression that regulates apoptosis - or cell death.⁶⁸

Apoptosis is programmed cell death triggered by a variety of factors and signals, and is one of the ways tumors may disappear, either naturally or as a result of treatment. According to the scientists, none of the “homeopathic” remedies tested in different potencies produced significant inhibitory or growth-promoting activity in either prostate or breast cancer cells. Also, gene expression studies by ribonuclease protection assay produced no significant changes after treatment with the homeopathic medicines. According to the author’s abstract, “the results demonstrate that the highly diluted homeopathic remedies used by homeopathic practitioners for cancer show no measurable effects on cell growth or gene expression in vitro using currently available methodologies.” The use of the term “highly diluted” is noteworthy for reasons illustrated below.

Another trial by Thangapazham RL, et al., examined the effects of *Sabal*, *Conium* and *Thuja*, and a specially prepared *Carcinosinum* nosode on the expression of cytokines and genes that regulate

apoptosis.⁶⁹ The researchers assessed this in prostate cancer tissues extracted from animals responsive to these drugs. The researchers noted no significant changes in the apoptotic genes or the cytokines, tumor necrosis factor, or interferon-gamma in prostate tumor and lung metastasis after treatment with homeopathic medicines.

According to the authors, “this study indicates that treatment with the highly diluted homeopathic remedies does not alter the gene expression in primary prostate tumors or in lung metastasis. The therapeutic effect of homeopathic treatments observed in the in vivo experiments cannot be explained by mechanisms based on distinct alterations in gene expression related to apoptosis or cytokines. Future research should explore subtle modulations in the expression of multiple genes in different biological pathways.” Note again the emphasis on “highly diluted.”

In another one of these studies, one hundred male Copenhagen rats were randomly assigned to either treatment or control groups after inoculation with prostate tumor cells.⁷⁰ Prostate tumor cells were exposed to five homeopathic remedies. In vitro outcomes included tumor cell viability and apoptosis gene expression. In vivo outcomes included tumor incidence, volume, weight, total mortality, proliferating cell nuclear antigen expression, apoptotic cell death, and gene expression.

The researchers found no effects on cell viability or gene expression in three prostate cell lines with any of the drugs at any exposure time. However, there was a 23 percent reduction in tumor incidence, and for animals with tumors, there was a 38 percent reduction in tumor volume in homeopathy-treated animals versus controls. Experimental animals with tumors had a 13 percent lower average tumor weight. Tumors in these treated animals showed a 19 percent increase in apoptotic cell death and reduced PCNA-positive cells.

The findings indicate that selected homeopathic remedies for the present study have no direct cellular anticancer effects but appear to significantly slow the progression of cancer and reduce cancer incidence and mortality in Copenhagen rats injected with prostate cancer cells – presumably by some other mechanism.

Conceptual Confusion in Homeopathic Cancer Research?

Several of the cited studies appear to show signs of confusion with regard to key homeopathic terms and concepts.⁶⁷⁻⁷⁰ One of these concepts is the Law of Similars. Applying this law means treatment with a medicine that was proven to cause symptoms similar to those being treated - for only such a use of a drug deserves to be called “homeopathic.” Frequently, terms like “homeopathically prepared” appear in lieu of the proper term, “potentized.” This indicates a possible confusion of definition, thus implying that these studies examine the efficacy of “homeopathic treatment.” Actually, they only examine whether or not “potentized drugs” are effective.

Accordingly, in his paper on the conceptual errors found repeatedly in peer-reviewed studies examining a central tenet of homeopathy, the “proving hypothesis,” this author explained in greater detail the common confusion between research testing the efficacy of “ultramolecular” drugs with research testing the “homeopathic” hypothesis.⁷¹ He showed that arguments against “high dilutions” cannot disprove the homeopathic effect, as it is also observed in low potencies and even in undiluted drugs.

It is clear that the studies cited here do not examine the efficacy of “homeopathic” treatment, as they claim, but of “potentized” drugs given on the basis of indications that are other than homeopathic (allopathic). Granted, it is difficult to examine the clinical efficacy of the homeopathic treatment method

in laboratory studies with animals, as individual case-taking of rodents would be impractical, if not impossible. There is also no evidence that homeopathic principles can be applied to the treatment of mere cell lines, as in studies that purport to examine the action of “homeopathic” drugs utilizing *in vitro* experiments. Given the significant deviation of these studies from standard homeopathic practice, it is surprising that the authors failed to mention this fact, especially in the context of their comment on negative results.

Furthermore, the authors of several of the cited studies referred to potentized drugs as “high dilutions,” without explaining the importance of the process of succussion.⁶⁷⁻⁷⁰ The term “high dilutions” is generally reserved for drugs in potency levels beyond Avogadro’s number, i.e. above the 12C potency. The use of high dilutions is by no means a requirement of homeopathic treatment, and many practitioners never use them. In scientific studies, the notion that these “high dilutions” have biological action is often referred to as the “ultramolecular hypothesis.” When such a reference to “high dilutions” is made in the context of negative results, as if to imply that the negative results are likely due to the “lack of substance” of these preparations, this is worthy of our attention.

This is especially true in those studies cited here where other factors that could explain the negative results are not mentioned. For example, in the MacLaughlin, et al. study, the authors failed to draw the most probable conclusion, that *Thuja* and *Conium* may not have had sufficient symptom affinity to the particular breast cancer cell lines tested to warrant any positive results.⁶⁷ The implication that the negative results would somehow be relevant to the “high dilutions” used, as implied in the above highly-publicized abstracts, is troubling. This is especially so because the same studies appeared to show efficacy of biological action from these potencies.

The premise for most efforts to examine homeopathic treatment or homeopathic concepts in controlled trials is to find evidence for or against claims that the homeopathic method is effective. However, it is important for these researchers to remember that homeopathic practitioners do not claim efficacy from “highly diluted drugs.” They claim efficacy from *potentized* drugs. This should be understood and acknowledged. The erroneous use of the term “high dilution” ignores the well-documented clinical observation that the higher the potency, the stronger the effect of the homeopathic drug. Early homeopaths believed that the “potency” or “power” of the medicine lay in the dynamic “field-like” effect produced during mechanical agitation – that is, during trituration or attenuation of the drug. Thus the term “dilution” for a potentized drug, without reference to succussion or trituration, negates the real nature of the potentized drug. If it is the object of a study to examine homeopathic treatment, it should be clear what the researchers are actually examining.

Hahnemann stated the matter as follows, “We still hear almost daily that the homeopathic potencies are referred to as ‘dilutions’, even though they are in fact the opposite. They constitute the actual disintegration of the source materials and the emergence and expression of specific medicinal forces buried in their innermost core, effected through rubbing and shaking, while the non-medicinal medium for dilution enters merely as an auxiliary condition.”§269⁷² Elsewhere in the same paragraph, he compared the production and propagation of a medicinal force within a non-medicinal medium, by shaking it between each step, to the production and propagation of a magnetic force field. Here, rubbing an iron or steel rod develops a latent potential, magnetizing the rod, and conveys, even at a distance, the magnetic force that attracts iron shavings or causes a compass needle to attract the South Pole and repel the North Pole.

Some scientists have proposed that the explanation for the effect encountered in highly potentized drugs must be sought in the restructuring of the solution with each repeated step of potentization,

as a result of adding mechanical energy during succussion.⁷³ Modern scientific studies have shed new light on the phenomenon of propagating information in solutions, and several working hypotheses have been proposed to explain the effect.⁷⁴ In one of the above cited studies, Nadareisvilii observed that the “concentration of the informational field” increases with increased dilution. It is this increased concentration of information, or structuring of the preparation, that accounts for the observed “increased” effect of the higher potencies.⁶⁴ Prof. Khuda-Bukhsh summarized the evidence with the words, “the question of transfer and retention of medicinal properties in the highly diluted homeopathic medicines has largely been satisfactorily explained within the confines of the physical sciences.”⁷⁵

It is unlikely that the scientists who use the misleading terminology are confused about the real nature of potentized drugs. What other possible reason might these researchers have to, nevertheless, keep promoting the false notion of “high dilutions?” The insistence on this terminology has all the characteristics of editorial control – a consistent, carefully orchestrated, semantic-ploy directed at homeopathy itself! Certainly, the recent widespread debunking campaign about homeopathy in the mainstream media would support such an interpretation. Do the interests that control editorial boards wish to steer researchers away from conducting research on the real nature of potencies, on the basis that since it is “implausible” and is no longer worth looking into?

The 2006 abstract of one of the Samueli Institute studies claims that “despite extensive use of homeopathy for cancer and other serious conditions with reported success, clinical and laboratory research has been equivocal and no rigorous research has been done on cancer.”⁷⁰ The term *equivocal* means: “ambiguous; doubtful; of uncertain significance.” The article ignored most of the studies cited here, presumably because they were not “rigorous” enough? A more credible approach would have been to cite the studies and to then show their shortcomings. One wonders why they failed to cite dozens of high-quality laboratory studies published in peer-reviewed journals, and yet they cited a controversial, two decade old editorial by Maddox, et al., entitled “High dilution experiments a delusion.”⁷⁶ A co-author of this editorial is James Randi, a magician, who along with Maddox and NIH scientist Walter Stewart, accused Jaques Benveniste of scientific fraud highly unusual circumstances. Are we being set up for another “implausibility because of high dilutions” hoax?

A published analysis of clinical studies on homeopathic cancer treatment appears to be laboring under similar editorial influence. According to Milazzo S, et al., at the Department of Complementary Medicine, University of Exeter and Plymouth, Exeter, UK, many cancer patients use homeopathic approaches “to increase their body's ability to fight cancer, improve their physical and emotional well-being, and alleviate their pain resulting from the disease or from conventional treatments.”⁷⁷ It strikes one as curious that the authors could not find patients who sought to use homeopathic treatment in hopes of actually curing the disease!

The authors stated aim in conducting a systematic review was to “summarize and critically evaluate the efficacy of homeopathic remedies used as a sole or additional therapy in cancer care.” They searched the literature using medical databases. They included randomized and non-randomized controlled clinical trials, including patients with cancer or past experience of cancer who received single or combined homeopathic interventions. The methodological quality of the trials was assessed. Six studies met their inclusion criteria (five were randomized clinical trials and one was a non-randomized study); but the methodological quality was variable, including some of the “high standard” studies. Their analysis of published literature on homeopathy found “insufficient evidence to support clinical efficacy of homeopathic therapy in cancer care.”

The authors claim that homeopathy is “highly controversial” because there is no “plausible mode of action for these “highly diluted remedies.” As in other studies, the authors appear to confuse, perhaps as a means to an end, the relative dilution of a drug with its increased level of organization. This, in turn, ignores the action of “information” propagated and transferred by repeated agitation in the solvent that then acts as a signal in biological systems, perceived by cell receptors and rapidly communicated throughout the organism via known pathways.

Conclusion

The hard evidence from most studies cited here corroborates what two hundred years of documented clinical observations have claimed: that homeopathy has efficacy in treating cancer. However, regulatory agencies are not likely to recommend homeopathic treatment any time soon because the clinical evidence is still insufficient.

Many more clinical studies are needed to convince the skeptics that homeopathy is a viable cancer treatment. Some states still have laws that provide for penalties for the unauthorized use of “unproven cancer therapies.”^{79,80} Fortunately, Courts in other states have ruled that the law “does not prohibit the terminally ill from receiving unorthodox treatment...” () Even the American Medical Association takes a more lenient stand towards alternative treatment - even in the hands of unlicensed practitioners - as compared to the past. Their Code of Ethics now states that while "treatment which has no scientific basis" is condemned (Opinion 3.01), under Opinion 3.04, physicians are free to refer a patient "for therapeutic or diagnostic services to another physician, limited practitioner or any other provider of health care services permitted by law to furnish such services, whenever he or she believes that this may benefit the patient."

But is homeopathic treatment of cancer unproven? One analysis of clinical studies showed insufficient evidence. However, insufficient clinical evidence does not mean proof of lack of efficacy, nor lack of a scientific basis for the treatment. The scientific evidence presented here is clear for all to see: homeopathic drugs have proven biological action in cancer; in vitro and in vivo; in animals and humans; in the lower as well as in the higher potencies. Cancer patients are faced with a life and death decision when choosing their treatment. Since most conventional treatments continue to be associated with severe and sometimes fatal adverse effects, while homeopathy has been found to be free from such effects, it would seem plausible and worthwhile, even urgent, to step up the research on, and even the provision of, homeopathic treatment of cancer and other diseases.

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