

# A major step in health and wellness

## Double-helix water

by David L. Gann



David Gann holds a Bachelor's Degree in Science UCM with post-graduate work in Physics. His scientific and engineering experience covers three decades as an integral member of numerous scientific teams. He has organised educational symposiums on global climate change and nuclear waste cleanup in conjunction with the U.S. Department of Energy and Los Alamos National Laboratories and developed cutting-edge technologies, notably the first ultra-high-density magnetic recording medium for Zwan Magnetics (early 1980s). During the late 1990s, in conjunction with UCLA, David Gann began his research into the detection and labelling of nano-sized particles found in homeopathic solutions.

Norman Shealy, MD, PhD and Founding President of the American Holistic Medical Association wrote a foreword to our book, *Double-Helix Water: Has the 200-year-old mystery of homeopathy been solved?*, and I have included the final paragraph here as an introduction for this article.

David and Yin have taken the concept of homeopathy into the 21st century with the most elegant experiments to date. Their demonstration of microscopic clusters in water is groundbreaking and revolutionary! Their purification of water, with the atmospheric purity described, places homeopathy on a scientifically valid foundation that is equal at least to the discovery of atomic energy. I had the privilege of testing some of the earliest clustered water and found statistically significant improvement in basic immune function. Their more refined products are even more exciting. Obviously further research is needed, as it has been with radiation for the past century. But we now have an equally exciting new frontier of science, infinitely safer and potentially radically more effective in redefining life and healing. Kudos, David and Yin! The world awaits the next step in the development of electrically and chemically pure homeopathy. Hahnemann would be as excited as I am to see the results of your work. You have made a great step forward in understanding the secret of life.

Along with my collaborator, good friend and research partner Dr Shui-Yin Lo, I embarked over 16 years ago upon an extensive investigation into the comprehensive understanding of the molecular structure of water. Recently, we were asked to present an article to *Homeopathy in Practice*. It is difficult to present our work in any detail within a single presentation, so instead we wish to offer here a brief synopsis in hopes that it encourages further reading.

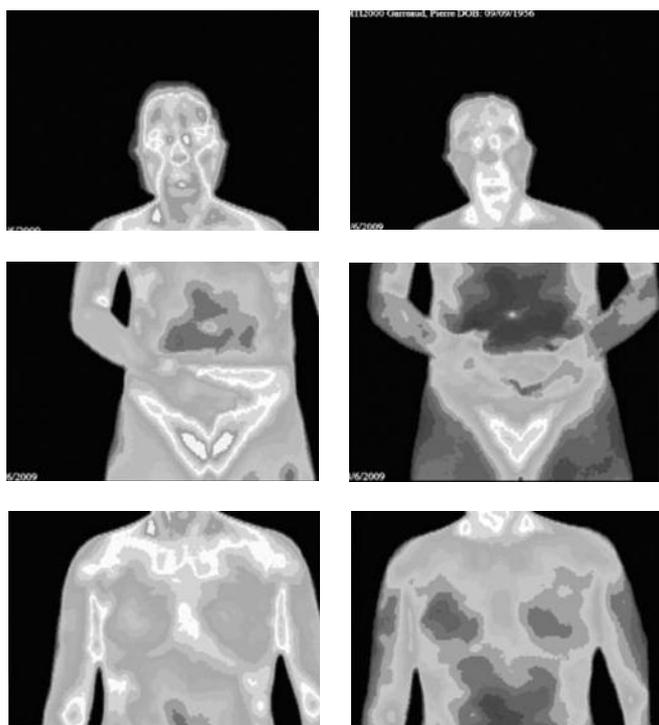
To begin, a concise and detailed explanation of the fundamental mechanism that underlies the basis of our research can be found in the October 2009 edition of the Elsevier International Journal of Physics, Physics Letters A: *Evidence for the existence of stable-water-clusters at room temperature and normal pressure*, by Dr Shui-yin Lo, former visiting faculty member, Caltech; Xu Gene, former Chair of Physics of Zhongshan (Sun Yet-Sen University);

and David Gann, D&Y Laboratories Inc. In that paper, we outline the steps to dilute a water-soluble particle to dilutions below one part-per-million. The procedure, if followed exactly, results in the birth of a solid water particle, and it is that particle that has become the central core of our studies. The Physics Letters A paper, as well as previously published papers, are included in our book. It is our belief that this particle represents a newly discovered state or phase of water and that this phase is one of the underlying mechanics for the demonstration of homeopathic workability.

As a bit of background, while working on developing a new form of catalyst for gasoline engines in 1995, Dr Lo (Yin) and I stumbled upon an unusual catalytic effect in a particular water sample. Because of numerous strange dielectric and analytical peculiarities of this particular water sample, Yin built a

mathematical model attempting to explain this hitherto undiscovered phenomenon of water. Describing it in the 1996 paper: Modern Physics Letters B. Vol. 10, No. 19 *Anomalous State Of Ice*, Yin outlined that model and predicted the discovery of the particle that he called **Ie** (ice formed from an electrical charge). The paper describes what would happen to a water-soluble substance in pure water if diluted to a concentration of one part-per-million or less. The calculations are based upon the Debye-Hückel set of equations (Nobel Laureate Peter Debye's definitive work on dilute solutions).

Yin's calculations expanded the Debye-Hückel model, as he wanted to understand what might occur if one continued to dilute to a point where the ions no longer consistently collided. His model predicted that there was a great probability that the dominant force within this interaction between the water molecule and the ion would be the Coulomb force. The Coulomb force surrounds a single charged particle and its electrical pressure can be calculated. If the ion was no longer free to exchange with its oppositely charged ion, Yin predicted that a collapsing inward force would be generated. That force, according to Yin's model, would cause an inward pull towards the centre of the ion and the resultant pressure of such an interaction could be calculated at approximately 100,000 psi. A known phase of ice (taking the form of a crystal) forms at such pressures, but Yin's particle forms because of an electrical pressure, not due to a sudden increase in atmospheric pressure. Consequently, such an interaction had to represent a new, undiscovered variety of



Infrared photographs (thermographs) of 63-year-old male with prostate cancer, hypertension, heart problems, before (left) and after (right) drinking double-helix water (see [www.doublehelixwater.com](http://www.doublehelixwater.com) for colour images)

particle, one that upon further examination proved to be made solely from H<sub>2</sub>O. The particle was then named 'stable-water-cluster'.

I took hundreds of photographs of this new particle using a scanning electron microscope and an atomic force microscope, and one particular photo seemed to indicate an antibacterial action. That discovery led to collaboration between myself, Dr Lo and Dr Benjamin Bonavida, at that time the Chairman of the Department of Immunology at UCLA. Using platinum (a known but toxic immunogen) as the water-soluble substance (diluted to a concentration of less than one part-per-million), Bonavida found that these extremely dilute solutions containing stable-water-clusters caused a selective triggering of TH1 vs. TH2 cytokines. In fact, the triggering was hundreds to thousands of times greater than controls.

That paper was published in 1998 and also appears in our book. Unbeknownst to either of us, that disclosure lit a fuse on a cruise missile which was pointed directly at Yin and me. We had inadvertently stepped into a raging battlefield between allopathic and complementary / alternative medicine. Our funding and quite frankly our nerves were suddenly shaken. Although we disappeared from the public eye, we continued our work.

Then in 2006, I was asked to give some of the Bonavida preparation to a family member of a business

associate who was familiar with the Bonavida study. This family member had pancreatic cancer, had not responded to conventional therapies, was in a hospice and was given only a few months to live. She began drinking a solution of the water and went into remission within four months and is today considered cancer-free. She was the first of, now, numerous people taking the water who have gone into cancer remission. We have also seen recoveries from a variety of other diseases including autism-related disorders and a variety of autoimmune diseases.

In 2007, following the premise of the Bonavida study, Yin and I together with Norman Shealy (a neurosurgeon and medical researcher) did a small clinical trial in which ten healthy subjects had baseline blood drawn to measure TNF-A, IL-1B; IL-6, and IFN- $\gamma$ . Each subject was asked to drink water that contained these stable-water-clusters four times a day for 45 days. The results were impressive. The subjects who drank the water showed large increases in Interferon- $\gamma$  at the end of 45 days. Dr Shealy stated in the summary of the results:

The water may produce a significant enhancement of immune function in human beings. Larger studies should be done with perhaps a broader overview of immune function. Dysfunctions of the immune system are major factors in allergies, autoimmune

diseases, cancer and even atherosclerosis and diabetes. The implications for immune health are obvious.

The study was unpublished because of the small numbers involved.

In 2009, we conducted a large study of this water cluster's immediate effect on the human body. The study consisted of 78 volunteers over the age of 45 and free of acute disease. An infrared image was taken of each volunteer. Each then drank plain distilled water. Ten minutes later, another infrared image was taken. The same volunteers then drank water containing stabilised water clusters. Another 20 minutes later a third infrared image was taken. The temperature changes detected with these infrared pictures were then calculated. Statistically significant differences in temperature responses were found in all 78 subjects. The body surface temperature differences found before and after drinking stabilised water cluster solution indicate that these molecules induce a rapid physiological response and the resulting infrared pattern is entirely different from that of ordinary water molecules. We believe this observation reflects an important role of these stabilised water clusters in cell-to-cell communication. This effect, if demonstrated with human cell culture experiments, could increase our understanding of signal and control processes among cells.

Our research and a significant amount of anecdotal data have shown that these nanometer-sized stable-water-clusters particles, with their strong electric polar fields, demonstrate impressive biological effects. Some of these effects have been accelerated fracture healing, and a reduction in cancerous tumour size in several people taking these water clusters daily. We have also seen substantial improvement in individuals with a variety of autoimmune disorders, some becoming symptom-free without any medication. We have seen cancer patients taking the water tolerate chemotherapy and radiation therapy with minimal discomfort, minimal constitutional side effects, and no appetite or weight loss. We have watched a number of children with autism-related disorders show substantial improvement on a regular regimen of this water coinciding with their other treatment programmes.

So the question arises, what exactly is this water? We call this phase of water 'double-helix water' >

➤ (DHW) because it forms a double-helix when concentrated as can be seen in atomic force photos. Double-helix water is formed by the realignment of ultra-pure water clusters into *solid* stable-water-clusters containing strong negative and positive charges due to the condensing of their geometric shape (the process described in the above-mentioned October 2009 Physics Letters A paper). Our understanding of the size and charge relationship of this particle leads us to the hypothesis that these highly-charged solid-water particles may somehow facilitate ATP production at the mitochondrial level, thus enhancing the production of cytokines, as seen in Bonavida's original study. It also may play a role in helping the body distinguish 'foreign' from 'non-foreign', as evidenced by its impact on both the diseases of cancer and various autoimmune phenomena. The water has shown some facilitation effect on cell-to-cell communication pathways. Those pathways in the brain may explain the positive

## **We believe this observation reflects an important role of these stabilised water clusters in cell-to-cell communication**

effects we are seeing in autism-related disorders. We have not tried this solution as a topical agent, but it would be interesting to see its effect on psoriasis and allergic dermatitis. We are currently developing a topical application for trials. The implications for the use of double-helix

water in healing are far-reaching, to say the least.

But we want to make it very clear that this is *water*, not a drug or a curative agent (medicine) in any respect. Yin Lo and I are not medical doctors and we want all to know that we make no claims that this water treats or cures anything, period. Our interest and our study has been, from the beginning, to simply develop a thorough understanding of the structure of water, strictly from a physics viewpoint.

With that being said, have numerous MDs and scores of other health-care professionals recommended this new phase of water to their clients, patients and family members for a healthy lifestyle? Absolutely. Health-care professionals, not only closely associated with our work in the U.S. but quite literally around the world, have joined in to work with us and are jubilant about the potential of this discovery for the good of all. And a long line of researchers who have approached this subject with a sincere and open mind – be they

# **Homeopathy, Healthy Medicine**



The ARH's free newsletter which can be downloaded from [www.a-r-h.org](http://www.a-r-h.org)



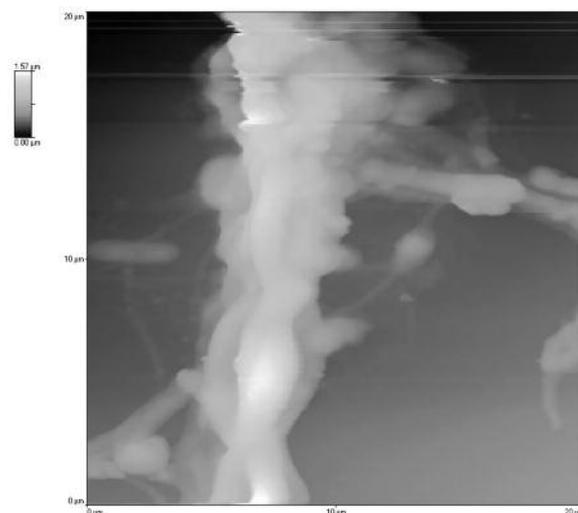
**Something of interest for everyone!**

scientists, MDs, chemists, biochemists, physicists, chiropractors, acupuncturists, homeopaths – have each felt compelled to help in some way. If one is a rational, sane individual and witnesses large numbers of people with many varied health problems experiencing remarkable changes in their wellness, something occurs deep inside oneself. It becomes more a crusade than a research line. And the people whose lives have been bettered want others to know of this discovery – so the word spreads.

There is no question that this particle exists and that it is simply water, but it is our belief that this phase of water is a central agent in the arsenal of the body's immune response. And because of its structure and polar charge, we theorise that this particle is somehow the molecular basis for what Chinese Medicine has suggested for over 2000 years. The Chinese maintain that an electrical matrix surrounds the body, and that this electrical matrix is the senior dominating factor in all health issues. This is evidenced by Electron and Atomic Force Microscope photographs, which demonstrate that these particles line up end to end to form circuit-like structures. Therefore it is very feasible that we have found a material basis for the Chinese meridians.

If you have a true interest in homeopathy, you owe it to yourself to understand this subject; and the way to do that is to read our book. The first section has only simple scientific terms and summarises the complete track of the research with the difficulties we experienced along the way. It also gives an overview of the valid published scientific experiments, all explained in layman's language. The second section is very detailed, as it contains the complete set of published papers and experiments and is definitely aimed at scientists and engineers. But, bottom line, we are not trying to commercialise a new product or pull the wool over anyone's eyes – we wrote the book to be completely out in the open. We want others to help; it is important to understand the molecule from which, we believe, life sprang.

This is an extremely beneficial discovery. Of course, water in general is essential to life; but this water – these little solid water particles – we believe, are the first particles or the first phase of water, the genesis



phase of water; it is of vital importance that this work continue.

You can find more information on our website, [www.doublehelixwater.com](http://www.doublehelixwater.com).

There you can find a link to send us any questions you may have.

### Glossary

**Atomic force microscope:** One of the foremost tools for imaging, measuring and manipulating matter on an atomic scale. Atoms are measured in units called angstroms (a hydrogen atom is approximately 2 to 3 angstroms tall); there are ten billion angstroms in a meter. The atomic force microscope has resolution down to 1 to 2 angstroms.

**ATP production:** ATP stands for adenosine triphosphate. Formed in the body from glucose and oxygen, it is the body's source of energy in all chemical reactions involving all body functions.

**Coulomb force:** The electrostatic force that exists between electrically charged particles. So named after Charles Coulomb, who described it. In physics, the Inverse-square Law (Coulomb's Law) states that a specific physical quantity of strength (charge) is inversely proportional to the square of the distance from the source of the force.

**Cytokines:** A wide variety of proteins in the body produced by the immune system. They are 'signalling cells', are involved in cell-to-cell communication and are essential in the body's immune function. Each cytokine has a corresponding cell-surface receptor. When the cytokine combines with its specific cell-surface receptor, a specific reaction occurs in the immune system pathways.

**Double-helix formation of stable-water-cluster-phase H<sup>2</sup>O at high concentration level in base of ultra-pure regular liquid phase H<sup>2</sup>O**

**Debye-Hückel Model:** Described by Peter Debye (Dutch physicist, chemist and Nobel laureate) and Erich Hückel (German physicist and chemist). The Debye-Hückel set of equations is the definitive study of ionic solutions.

**Double Helix Water®:** The registered trademark owned by D&Y Laboratories Inc. Double Helix Water® is an ultra-pure water preparation that contains high concentrations of stable-water-clusters.

**Interferon-γ:** A protein in the body involved in many actions. It is best known for its action as part of the anti-viral response.

**Pleomorphism:** The term is used to refer to the ability of certain bacteria to change shape or to exist in a number (changing) forms. For example *Helicobacter pylori* exists as both a helix-shaped form (classified as a curved rod) and a coccoid form. In science, pleomorphism means anything that exists in more than one form.

**PSI:** Stands for pounds per square inch. PSI is a measure of pressure.

**Stable-water-clusters:** Nanometer-sized, rigid, ice-like (but formed at room temperature) water clusters that demonstrate a measurable polar charge. Described in detail in October of 2009, International Journal of Physics, *Physics Letters A*, 'Evidence for the existence of stable-water-clusters at room temperature and normal pressure'.

**TH1 and TH2:** Refers to two classes of helper T-lymphocyte cells. T-lymphocytes are blood cells involved in the body's immune process. These helper cells direct the body's immune response along two separate pathways.

**TNF-A, IL-1, IL-6, IFN-γ:** TNF stands for tumour necrosis factor. IL stands for interleukin. IFN stands for interferon. All are cytokines involved in the human immune response. There are several forms of each factor, thus the numbers and letters following the letter abbreviations. These are known as pro-inflammatory cytokines.

**Ultra-high-density magnetic recording:** Increased proximity of magnetic domains on a given area thereby increasing the ability to write a closer proximity binary language.

### REFERENCE

Gann, DL & Lo, SY (2009) *Double-Helix Water: Has the 200-year-old mystery of homeopathy been solved?* D and Y Publishing □