

Mechanism of Activated Water's Biological Effect on Viruses

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According to the World Health Organization, SARS is a prodromal illness with a sudden onset of high fever. In many cases this sudden, high fever is associated with chills, myalgia, and dry cough. Many patients have characteristic changes on chest x-ray which continue to worsen and patients demonstrate interstitial infiltrations that produce x-rays with a characteristic cloudy appearance. Following the search for the cause of SARS co-ordinated by WHO, scientists have identified a new form of coronavirus to be most likely cause.

Doctors have treated SARS patients with all medicines traditionally used against pneumonia, with minimal success. Antibiotics have found to be ineffective in this case.

Viruses vary in size from 20 nm Enteroviruses to large pleomorphic Myxoviruses that may be greater in size than one micron in length. A virus consists of a nucleic acid core, either RNA or DNA, surrounded by a protein coat called a capsid. The size of a virus and its surface morphology are the main diagnostic features and viruses fall into two main morphological forms based on arrangement of capsids. The arrangement is either icosahedral or helical. Coronavirus has about 90 nm in length; it contains a single type of RNA nucleic acid core, protein coat, and has helical form. There are five major steps in the replication cycle of all viruses:

- a) attachment
- b) penetration
- c) nucleic acid and protein synthesis
- d) assembly of viruses
- e) release/egress

RNA serves a multitude of roles in living cells. These include: serving as a temporary copy of genes that is used as a template for protein synthesis (*mRNA*), functioning as adaptor molecules that decode the genetic code (*tRNA*) and catalyzing the synthesis of proteins (*rRNA*). There is much evidence implicating RNA structure in biological regulation and catalysis. For this reason, it has been postulated that RNA, or RNA-like molecules, were the basis of life early in evolution. RNA molecules are building from three

basic components: ribose, a five-carbon sugar, phosphate, and a family of four heterocyclic bases (see Figure 1). There are a variety of base modifications observed in naturally occurring RNA molecules.

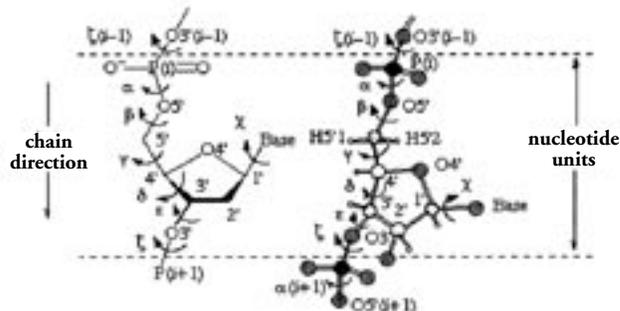


Figure 1. The structure of the RNA backbone is an alternating polymer of ribose and phosphate groups. (Source: UPAC-IUB Joint Commission on Biochemical Nomenclature, Abbreviations and Symbols for the Description of Conformations of Polynucleotide Chains)

Although RNA molecules are linear polymers, they fold back on themselves to make intricate secondary and tertiary structures that are essential for them to perform their biological roles. Taking into consideration that three dimensional structures of RNA molecules is specific and essential for each type of molecular complexes such as viruses, bacteria and other types of cells, it is possible to assume that the influence of the molecular structure of specific RNA polymers with subtle electromagnetic signals may lead to association or disintegration of RNA molecular structures, and as a result make possible to control mentioned above targeted molecular complexes such as viruses. There are a number of studies which show that the genetic macromolecules exposed to a variety of chemical and physical agents, including specific electromagnetic signals, can develop structural damages. Structural damages interfere with RNA replication and transcription, and thus can lead to the loss and distortion of information stored in RNA molecules. Biological consequences of such damage include the brake in the replication cycle of viruses, and eventually their death.

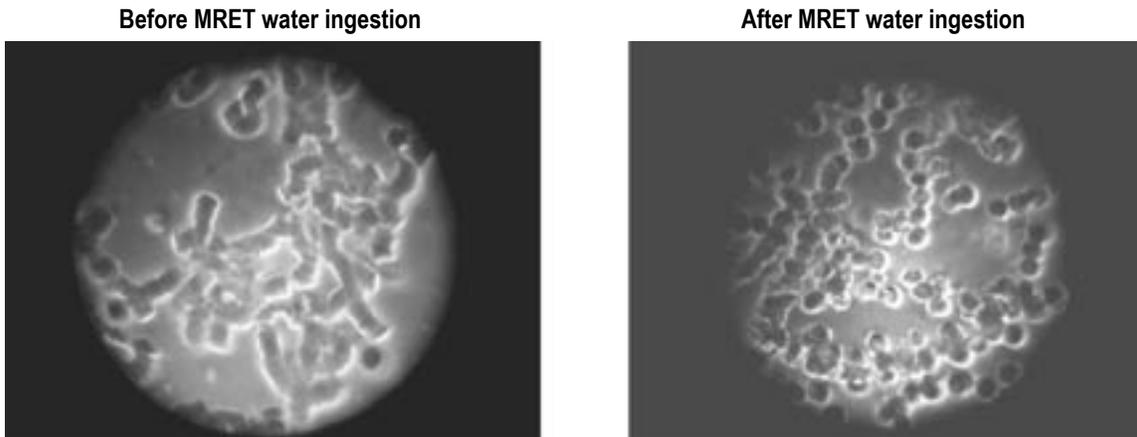


Figure 2. Before MRET water ingestion image shows so called Rauleau formation, when blood cells are stacked, forming worm-like patterns which indicate acute protein elevation in the blood. 30 minutes later, after MRET water ingestion, most of worm-like patterns broke up, forming normal individual patterns of the blood cells.

The best media to carry specially modified electromagnetic signals that are supposed to affect molecular complexes in the body is water, since living cell, on the average, is 70% water. The stable structural changes in water molecules were detected in experiments by the UV luminescence spectrophotometer. These stable structural changes were associated with microscopic orbital currents of protons in water molecular hexagons. The effects of memory of water interacting with electromagnetic fields were supposed to originate from the oscillations of water molecular hexagons. In compliance with patented Molecular Resonance Effect Technology (MRET) the structural changes in water that result from the influence of specially modified (resonance) external magnetic field can be further transmitted to the biological level, since water takes part in a variety of metabolic reactions.

Quantum electrodynamics calls for the existence of long-range electromagnetic fields that can be transmitted by large coherent domains existing in water (E. Del Giudice and E. Preparata, *Journal of Biological Physics*, vol. 20, p. 105, 1994). These long-range electromagnetic fields may transmit the electromagnetic signals (message) coming from molecules, thus generating specific attraction between molecules with matching spectra, excluding non-resonating, unwanted random events. The electromagnetic signal resulting from the aggregation of the two co-resonating molecules would obviously exhibit a different frequency that co-resonate with the next molecule or cluster of molecules which intervene in the next step of the biochemical reaction, and so forth and so on...

This in part can explain the selective effect of Activated water on normal cells (support of metabolism) and on the other hand on such harmful complexes as viruses or abnormal cells (suppression of metabolism). For instance, experiment conducted regarding the effect of Activated water on living cells show this water can influence mutated cells and normal cells in a different way: Activated water suppresses metabolism of mutated cells and restores normal function of abnormal blood cells (see Figures 2 and 3). Test on tumor cells was conducted by Dr. John Stelle at the laboratory

of Engene Biotechnologies Inc., Rancho Santa Fe. Live Blood Cell Analysis was conducted by Dr. Vincent Seet at headquarters of Health Manna Ltd. in Singapore.

The application of low frequency electromagnetic fields to control the function of biological systems is called Energy Medicine. The existing theory behind the Energy Medicine does not violate any current biological or physical basic principals. It is well known that:

1. Molecules emit specific frequencies;
2. All biological interactions occur in water, since there are 10,000 molecules of water per one molecule of protein in the human body.
3. Living cells can resonate (enhance their functions) only with low frequency oscillations. Human brain function waves (Delta, Theta, Alfa) are also in the spectrum of low frequencies. Interesting enough that natural Earth geomagnetic field has the same range of low frequencies. Living cells developed their normal metabolism being exposed to natural Earth geomagnetic field for millions of years of evolution.

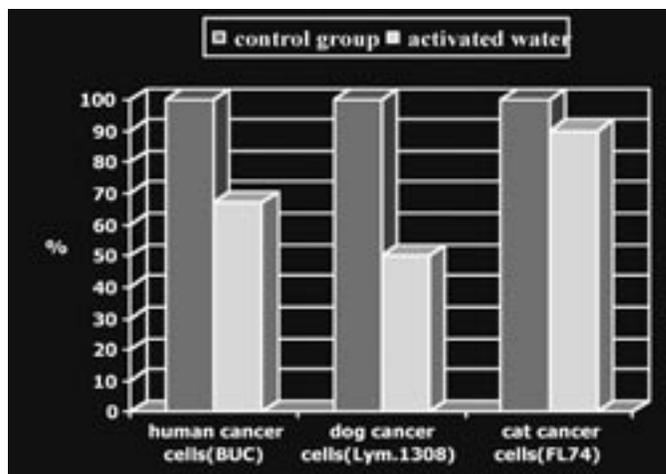


Figure 3. Tumor cells were incubated with MRET water for 24 hours. MRET water inhibited the tumor cells growth related to untreated control wells. Results for human and dog cancer cells are statistically valid with $p=0.99$.

It is a scientifically based fact that molecules vibrate and emit signals. Specific frequencies of simple or complex molecules are detected at the distances of billions of light-years, thanks to radio telescopes. For thousands of years human beings have been relating sound frequencies to biological mechanisms that evoke the emotions. These are fundamentally cerebral physico-chemical phenomena, triggered by defined frequencies. The basic idea of Energy Medicine is the direct transmission of pre-recorded molecular activities to biological systems. It makes possible to trigger different mechanisms in the immune system of the body by introducing to the cells specific low frequency electromagnetic oscillations.

Activated water is a liquid substance with pre-recorded molecular activities that support sophisticated mechanism required commanding the extraordinary complex and rapid cascade of intricate biochemical reactions in the body.

The fundamental physical phenomenon of electromagnetism such as resonance, constructive and destructive interference can explain effect of Activated water on molecular complexes of bacteria, viruses, etc. For instance, genetic macromolecules RNA of viruses have nucleic

structures which differ from nucleic structures of normal cells. As a result of these structural differences, genetic macromolecules of viruses generate molecular signals that differ from the signals of normal cells. When long-range electromagnetic fields transmitted by molecular clusters of Activated water interfere with electromagnetic fields generated by normal cells they create resonance effect that enhance biochemical processes in the cells. The interference of long-range electromagnetic field transmitted by molecular clusters of Activated water with abnormal electromagnetic fields generated by genetic macromolecules of viruses can create destructive interference and as a result suppress their replication cycle. Same mechanism can be adopted for other molecular complexes such as bacteria, fungus, mutated cells, etc. ♦

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