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THE BIOLOGICAL SIGNIFICANACE OF WATER STRUCTURED WITH NON-HERTZIAN TIME REVERSED WAVES

*T.A. Gagnon+ and G. Rein ph.D.**

+Raxco Company, Folosm,CA.
*Stanford University Medical Center,Stanford,CA

INTRODUCTION

Contemporary quantum physics has mathematically described and predicted the presence of a new kind of unified energy which underlies conventional transverse electromagnetic (EM) vectors. The concept of a subtle energy underlying EM fields was first introduced by Bohm and Aharonov 1 in describing quantum potentials as an implicate order "embedded in" our normal 3D space. It has recently been proposed that an additional implicate order is embedded in the quantum potentials. This higher dimensional space is composed of an energy which has been called time-reversed waves (2), non-Hertzian waves (3,4) , longitudinal waves (5) , scalar waves (2) or zero-point energy (6) . Although time-reversed waves (NHW) can not be measured by conventional EM detectors, several devices have been built which should theoretically generate them. The idea that NHW may have some biomedical applications was first suggested by Puharich and is supported by the recent findings that living systems are non-linear (7) and self-organizing (8) . Several anecdotal reports indicate that non-hertzian waves generated from the Teslar watch reduce stress and may improve clinical symptoms in a variety of diseases. More scientific studies indicate that the NHW generated from the Teslar watch enhance EEG brain waves (9) , alters neurotransmitter function (3) and enhances lymphocyte proliferation in vitro (4) . The results of these studies indicate that living systems are effected by NHW and at least in vitro, am approximately 3 fold more biologically active than corresponding transverse EM vectors.

Bearden (2) has proposed a theory based on a) Popp's observations that biophotons can be stored in DNA (10) and b) Puhanich's theory that NHW originate from quarks within protons in the nucleus (11) . According to Bearden, each cell has a biopotential in its nucleus which is composed of NHW. The biopotentials are scalar charged patterns which form a virtual substructure. Rein (12,13) has extended these ideas and proposed that NHW transmit information throughout the body via a complex extracellular lattice network composed of water and helical proteins like collagen. This subtle energy body could therefore regulate endogenous self healing mechanisms.

An extension of these ideas is presented here as the Intramolecular Matrix Theory. In addition to NHW interactions between protons of different molecules, proton-electron interactions are believed to be a source of NHW. These interactions which can occur

within each atom or between individual atoms form a NHW information lattice, which is unique for each molecule. Energy is stored as information at the interaction areas. The information in the lattice in turn forms the energy matrix of the molecule which is the EM blueprint for the physical/chemical properties of the molecule. According to Bohm's language, the information lattice is embedded in the energy matrix which is embedded in the physical structure.

The Intramolecular Matrix Theory predicts that specific exogenous NHW with amplitude and frequency envelopes corresponding to those in the internal information lattice can be used to modify the matrix. Matrix modification is accomplished by overlaying the exogenous signal characteristics onto the energy storage banks in the information lattice. This technique is analogous to frequency modulation of EM vector carriers. In Bearden's terminology, the exogenous envelopes charge or polarize the cell's biopotential with a structured pattern.

The purpose of this study was to test the Intramolecular Matrix Theory by intentionally emulating the internal information matrix of a molecule with a known biological function and directly comparing the biological effect of the NHW-emulated matrix with the actual chemical molecule. In addition, we attempted to manipulate the information of the NHW-emulated matrix with another set of NHW envelopes which was predetermined to either neutralize or inhibit the original information from the molecule.

MATERIALS AND METHODS

1) Biological Methods:

Lymphocyte proliferation was chosen as the biological endpoint since this system is known to respond to weak low frequency, transverse EM vectors (14,15) and Rein has shown that the system also responds to the subtle energies of homeopathic aconite imprinted into *water (16).* Cell proliferation was monitored using a highly quantitative, state-of-the art radiometric assay involving the incorporation of (3H)-thymidine into replicating DNA. The assay has been described in detail elsewhere (17). At the initiation of each experiment, 35mm petri dishes containing 1 x 10 5 cells and 1.OuCi/ml (3H)thymidine were exposed to 1) the NHW coil, 2) growth medium made from water which had been previously exposed to the NHW coil, 3) Interleukin-2 (IL-2) (25U/ml) or homeopathic aconite (40u1,200X) or 4) a combination of IL-2 or aconite and the NHW envelope frequencies. Cells which were directly exposed to the NHW coil, received four 15 minute. treatments during the 12 hour stimulation period. The cells were then returned to the C02 incubator for a 12 hour rest period.

For direct treatment of the water, 1000ml samples of spring water from Alhambra in a glass container were directly exposed to a coil with an input of a 9.Oma current continuously for 24 hours. Plastic containers did not allow NHW information to be imparted into the water as effectively. The charged water samples were then used to

make standard DMEM tissue culture medium. Control medium was made simultaneously with the same batch of spring water which was not charged. The cells were exposed to this medium for the total incubation period. At the end of the period DNA synthesis was measured in all samples and counted in a spectrophotometer. The raw data is expressed as counts per minute (CPM), which represents the amount of DNA synthesis, or as percent effect. Percent effect was calculated as the difference in the raw CPM between control and experimental dishes divided by the control values and multiplied by 100.

2) NHW Methodology:

NHW envelopes were generated using a specifically designed Caduceus-type coil (TR4) containing a complex monopolar DC square wave signal. The coil output is referred to as Structured-Electromagnetic Quotient Stimuli (S-EMQS) which has been used exclusively in equipment developed and marketed by T. A. Gagnon. The principle of the coil is to cancel the electric and magnetic vectors associated with the two currents flowing in opposite directions and to cause a helical vector to move in vertical opposition to the direction of current flow. These helical vectors are analogous to vortex rings known to occur in plasmas18. This was accomplished with two concentric Fig. 1 anti-parallel coils in the same plane. The coils were wound with 24 gauge wire to create a non-horizontal current flow with a final value of 8.2 ohms, each coil winding being the mirror of its counterpart. The entire transducer was then encapsulated in a non-conductive material.

The input current remained constant at 3ma for all studies involving direct stimulation of the cells. Each S-EMQS envelope was composed of several superimposed square waves varying in frequency from 2 to 6kHz.

The S-EMQS envelopes had a repetition rate of 930Hz. The interruption rate is a variable factor dependent upon the element under simulation and is not a constant. The entire envelope was then placed on a 6Hz sine wave carrier. Although 6 Hz is not the optimal carrier frequency it was used to establish a point of reference for future work. Optimum carrier frequencies should be below 10Hz.

The frequencies were generated via a CPU and downloaded into a 5-watt amplifier/mixer. The coils were directly connected to the amplifier by coax to eliminate any stray fields which might be active in the surrounding area.

The frequencies and interruption rates were predetermined for each biological application according to the prediction of the Intramolecular Matrix Theory. The of the appropriate NHW envelopes was based on 18 years experience using the S-EMQS technology to affect humans and plants. Frequencies were selected by a proprietary weighted system developed by T. A. Gagnon. The individual frequencies within each S-EMQS envelope used to emulate the information lattice of aconite and IL-2 were as follows.

a) Aconite envelope consisted of;

3347Hz, 5611Hz, 2791Hz
Interruption Rate :3.3Hz

b) Interleukin 2 envelope consisted of;

3448Hz, 2929Hz, 4O14Hz, 5611Hz, 2867Hz, 2855Hz, 2791Hz
Interruption rate: 2.0Hz

Some frequencies were selected to emulate specific chemicals known to be necessary for the maintenance of lymphocytes in tissue culture.

RESULTS AND DISCUSION

Initial experiments were designed to emulate the internal information lattice of aconite, an herbal extract with Immuno-enhancng properties. Previous research by Rein indicated that the mother tincture and serial dilution's of this herb effected the lymphocyte proliferation assay used in these experiments (16). The effect varied in magnitude and direction depending on the individual, but generally caused an increase in cell proliferation. Approximately 100% stimulation of proliferation was observed at the homeopathic dilution's of 200X, well beyond Avagadro's number. Therefore the energy matrix of this molecule could be homeopathically transferred to water and cause a biological effect. The information lattice of aconite was therefore emulated using the S-EMQS technology and used for either direct stimulation of the cultured lymphocytes or to structured medium (water) before measuring lymphocyte proliferation.

The data is presented in **Table 1 & 2** and shown graphically in **Graphs 1 & 2**. The results indicate that S-EMQS emulated aconite caused 87% stimulation of lymphocytes when applied directly to the cells, with a similar stimulation of 53% being observed using homeopathic aconite. Therefore, the frequency information within the atomic lattice of aconite was successfully emulated and shown to cause a similar biological effect as homeopathic aconite.

When both signals were tested simultaneously, no additivity or synergism was observed. This approach is frequently used in conventional pharmacology to determine whether two drugs are working by similar or different mechanisms. The absence of additivity indicates that emulated aconite and homeopathic aconite are effecting cell proliferation by similar mechanisms.

The results in Table I & 2 also indicate that the emulated frequency matrix information from aconite could be directly transferred to a medium (water) and that once charged, this

medium when added to the lymphocyte culture stimulated their proliferation by 61%. The results further indicate that the magnitude of this effect as was similar to that observed (87%) when the lymphocytes were directly stimulated with the S-EMOS signal. Although we are presently determining how long the frequency information will remain in the medium, preliminary studies indicate the water will remain charged for at least two weeks.

Effect of S-EMQS
Aconite(200x) vs 8-EMOS

DIRECT EXPOSURE Table 1

ELEMENT	CPM	%	CPM	%	CPM	%
Control	149	-	285	-	323	-
Aconite(200x)	172+-1	15	552+-18	191	437+-51	50
S-EMQS(Aconite)	201+-8	35	830+-83	191	437+-50	35
S-EMQS+Aconite	194+-12	30	579+-76	103	407+-43	36

STRUCTURED MEDIUM Table 2

ELEMENT	CPM	%	CPM	%
Control	457	1	640	-
S-EMQS Aconite	854+-108	87	858	35

S-EMOS emulation of a second molecule which is also known to stimulate lymphocyte proliferation was then tested. lnterleukin-2 (IL-2) was chosen since this growth factor is well known to stimulate lymphocyte growth 19. Emulation of the atomic information lattice of IL-2 using S-EMQS technology was tested by direct stimulation of the cells as described for aconite The results in Table 3, Graph 3 indicate that emulated IL-2 caused a 20 fold increase in lymphocyte proliferation compared to a similar 20 fold increase when the actual chemical was used. The results also indicate that the biological effects of the energetic and physical stimuli were not additive and therefore assumedly occur by similar mechanisms.

EFFECTS OF S-EMQS
IL-2 vs. S-MEDIUM

DIRECT EXPOSURE Table 3

ELEMENT	CPM	%
CONTROL	358	-
IL-2(Chemical)	8308+-316	1862
S-EMQS(IL-2)	6740+-22	1783
S-EMQS+IL-2	6880+-183	1822

The Intramolecular Matrix Theory was further tested by pre-determining a specific set of frequencies which were predicted to either neutralize or inhibit the NHW envelopes known to stimulate lymphocyte proliferation. This was accomplished by initially charging a medium (water) with the aconite or the IL-2 S-EMQS envelopes for 24 hours. A portion of this medium was then extracted and treated for an additional 24 hours with a neutralizing or inhibiting S-EMQS envelope. The results of these experiments are presented in Table 4, Graph 4; where neutralizing frequencies caused a 46% decrease (35 to 19) for aconite and a 29% decrease (58-41) for IL-2. Inhibitory frequencies showed even more profound effects. The emulated aconite effect came down to zero and the emulated IL-2 effect decreased to -58%. These results indicate that a pre-determined set of frequencies could be predicted from the Intramolecular Matrix Theory. Either neutralization or inhibition of the growth-stimulating effects were induced by re-structuring the matrix of the medium; a new NHW matrix envelope was embedded on the carrier for the aconite or IL-2 molecules.

STRUCTURED MEDIUM Table 4

ELEMENT	CPM(Aconite)	+%	CPM(IL-2)	%
Control	640	-	454	-
Stimulate	858+-148	35	715+-103	58
Neutralize	755+-71	19	642+-73	41
Inhibit	633+-205	0	189+-23	-58

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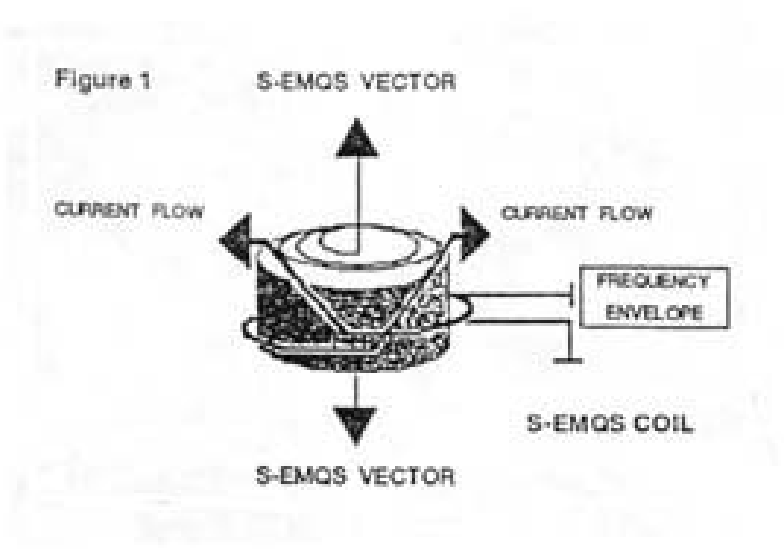
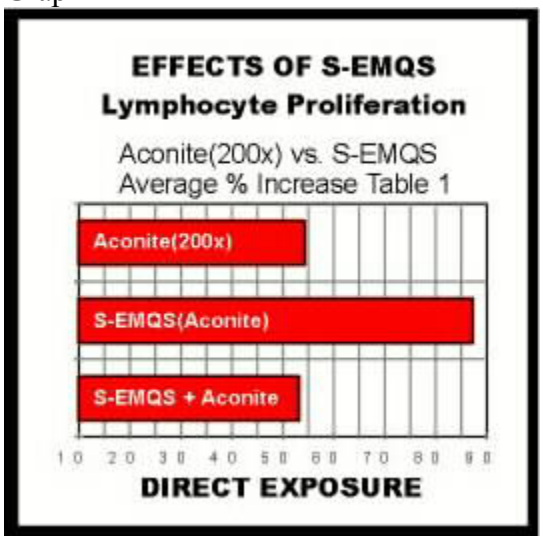
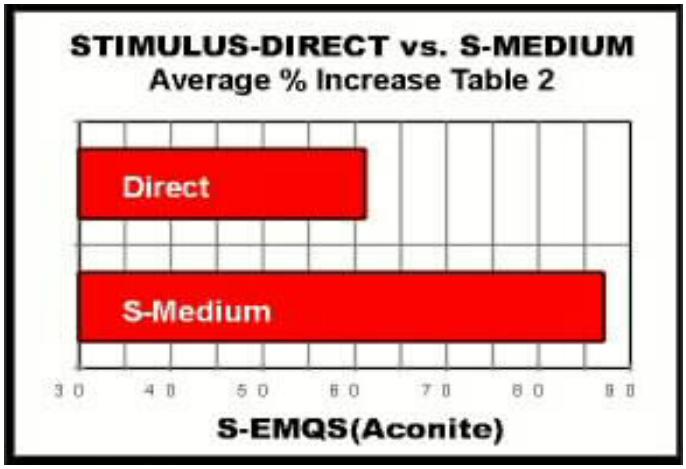
Figure 1



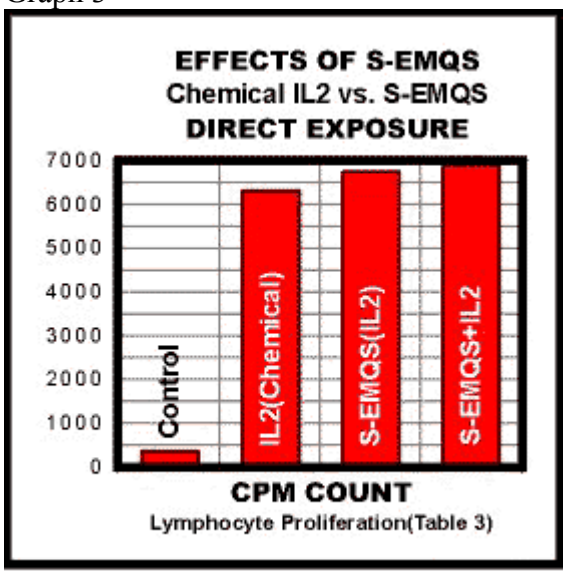
Graph 1



Graph 2

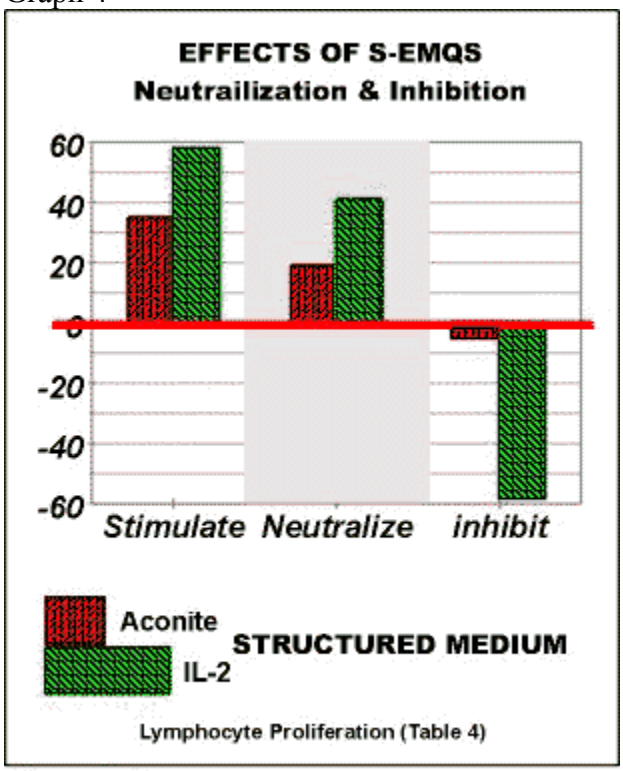


Graph 3



Graph 3

Graph 4



Graph 4