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#### **Review Article**

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# Causal Relationship of Energy Processes of Disintegration of Malignant Tumors and Viruses at the Micro Level of Biological Energy-Mass Compression

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#### **Abstract**

The paper considers the cause of disrupting the original vitality of structural physical and biological units of the organism of living entities at the micro level of biological energy-mass compression. It is proved that the change in the parameters of the human body's state depends on changes in the energy content of elementary particles of atoms and molecules in the structure of the human body's chemical elements. Examples are given of the occurrence of certain diseases depending on the violation of the original state of the human electric field. It is assumed that diseases can be treated by exposing the human body's electrical systems to a man-made energy field. It is proved that any molecule is an oscillatory system in the form of very rapidly changing micro dipoles. A concept of virus disintegration by bringing micro dipole oscillations to resonance of dipole moments and other indicators of electromagnetic waves that are elementary particles of atoms and molecules is presented. It is proved that the original state of the body structure can be restored by molenization.

**Keywords:** Cause of health disorder, Quantum compression level, Man-made electric field, Micro dipoles, Electromagnetic wave resonance, Vibration difference oscillator, Relative electronegativity, Polar and non-polar molecules, Dipole momentum, Molenization, Ion-dipole formations

#### **Review**

There is a growing body of new evidence suggesting that the structure of elementary particles cannot be understood using existing theories. We need a new revolution. We need an ideological re-weaponing. And such a new weapon is energy charge or magnetic monopole as an invisible energy substance of all things with a life expectancy comparable with the age of our Universe -AA Shadrin.

The modern academic community of researchers from all over the world has thoroughly investigated, studied and described in detail the state of transformation processes of chemical elements and their compounds in the course of metabolism in a human body. However, in their descriptions, they perceive the course and instruments of these processes as a consequence of impersonal efforts of properties involved in chemical reactions of the interacting elements. As a result, they put forward conclusions and axioms that do not meet the modern physical concepts. For instance, they assert that immunity decreases when the body is cooled, which entails an increased excitability of viral and other biological infections. Medicine immediately finds the virus as the causative agent of a diseased state in the human body and starts its disintegration. So, we begin to treat the effect, expressed by the cause visible in the macrocosm, of the source of changes in the original state, whereas the cause of



disturbance of states of the original vital activity of structural physical and biological units in the human body, as well as bacteriological and viral entities, is not at the macro level, but at the quantum level of energy-mass compression. In this case, the cause in the biological chain of pathological changes is a change in the equilibrium atomic-molecular state of the energy-mass in humans and viruses. As we know, a specific temperature at a given point in space is determined by the maximum set of photons. Accordingly, the thermal energy and temperature in a certain volume of space are created by photons as a result of changing the values of their electromagnetic fields. And vice versa, with a change in the photon's energy content, its wavelength changes; the mass or material density of the photon substance increases or decreases. We should understand that the fractal-wave structure of a photon implements the dualism of its quantum states, namely: any force is pressure, and pressure is specific energy, regardless of its origin. Accordingly, the energy density is a force, and, at the same time, it is energy-mass. This definition also applies to such a physical phenomenon as the electromagnetic wave pressure. Since the photon has mass and electromagnetic nature, it is unambiguously recognized that the photon mass is formed by its electromagnetic fields. Therefore, at the moment of emitting each photon, the electron loses energy that has transformed in the electron as energy-mass, namely: 6×10<sup>-16</sup> eV. It means that absorbing and emitting a photon by an electron changes the parameters of its state. It should be noted that the stock of internal energy of the magnetic field of a photon, as a free particle, is enough for it to fly through the entire depth of our Universe from beyond the invisible horizon; that is, a distance of 10<sup>28</sup> cm, for 14 billion years [1-3].

As the temperature changes, the photon mass increases or decreases; the density of its electromagnetic fields increases or decreases, and due to this fact, the electromagnetic forces increase or decrease that compress or expand the photon. In our case, we are considering the processes occurring in a water molecule. Doctor of Physics and Mathematics FM Kanarev [4] calculated the water temperature change gradient with a change in the photons' energy of the relic range, its value being equal to 0.03°C. Accordingly, we can calculate the energy that is released or absorbed with a change in the temperature of a water molecule in the human body and in a virus. For instance, the value by which the binding energy in a water molecule changes when it is heated by one degree is 0.00078 eV. FM Kanarev [4] determined how the wavelength or, which is the same thing, the photon radius, will change if the temperature changes by one degree. This will cause changes in the structure and energy state of atoms and molecules of water, which are associated with the rearrangement of photons.

Using the method of mathematical analysis, *FM Kanarev* [4] proved that when one liter of water is cooled by one degree, each of the four axial electrons of a water molecule will move away from the oxygen atom nucleus – the molecule center – and decrease its

binding energy with the proton of the oxygen atom nucleus by 0.00011 eV. Then the total binding energy that will be spent to expand the volume of one liter of water will be  $0.00011 \times 3.34 \times 10^{25} = 3.67 \times 10^{21}$  eV, whereas the work that the biological structure of the entity under consideration can expend can be as follows:

$$A = e \times U = 1.6 \times 10^{-19} \times 3.6 \times 10^{21} \text{ eV} = 576 \text{ J}$$

If the magnetic field energy is distributed evenly throughout the volume of the entity under consideration, then at a concentration of water molecules equal to  $3.34\times10^{25}$  units per liter, we get  $1.72\times10^{-23}$  J for every water molecule. This is  $10^5$  times less than it takes to ionize it and, accordingly, to bring it to its original state. However, due to the fact that water is in a volume limited by vessel walls or cell, the force that results from the produced work – 576 J, will increase pressure of the water composition in the human body, including the blood water flow pressure. This is the first negative factor that occurs at the quantum level of the energy-mass structure in the human body, which a human may get as a result of cooling his or her body.

Based on the concept by *FM Kanarev* [4], let us consider the processes that are induced in the blood water flow as a result of a temperature increase from 36.5°C to 37.5°C. If the temperature increases by 1°C, there will be an increase in the binding energy between an electron and a proton in a hydrogen atom due to the fact that each of the 4 axial electrons of each water molecule in the cluster will approach the oxygen atom nucleus and move to a new orbital with a smaller radius, while increasing, according to FM Kanarev's calculations, its binding energy with the proton of the oxygen atom nucleus by a value equal to 1.09×10<sup>-4</sup> eV per bond. Therefore, the change in the total energy of one liter of the blood aqueous solution will be as follows:

$$E_{37.5} - E_{36.5} = 1.09 \times 10^4 \times 3.34 \times 10^{25} = 3.674 \times 10^{21} \text{ eV,}$$

whereas the change in binding energy, or the magnitude of the emission and absorption energy of photons, per 5 liters of blood, will be

$$E_{\text{5 liters}} = 3.674 \times 10^{21} \times 5.0 = 1.84 \times 10^{22} \text{ eV}$$

As a result of this transformation of the energy content of a cluster of water molecules, they decrease in size, which can be represented by the ratio of the electron orbital radius at a temperature of  $36.5~^{\circ}\text{C}$  to the orbital radius at a temperature of  $37.5~^{\circ}\text{C}$ .

A new concept by *AA Shadrin* [5] denies the orbital motion of electrons in atoms around nuclei due to the lack of need to involve this pattern. However, the concentration of the density of photons that generate a certain temperature at a given point, per unit volume of space, corresponds to the energy gradient. *AA Shadrin*[5] asserts that the real picture in the dynamics of the instantaneous state of mutual arrangement for the nucleus and electrons can be

practically described only using the postulates of probability theory formulas. However, it has been established that spherical shells of negative grains – electrical potentials are grouped around the atom center with values decreasing towards the periphery. Therefore, a cloud of these grains creates a volumetric energy charge of a certain magnitude that is dispersed along the waveguides. So, each energy state of a unit volume of space surrounding the nucleus has its own energy-mass density parameters, whereas the transition of energy-mass along the nucleus radius towards the center affects the change in certain dimensions of the molecule. The "radius" of the maximum number of photons that generate a certain temperature, can be calculated for a given volume of the molecule space by the following formula:

#### R=C/Ti

Accordingly, the blood water flow decreases in volume to 4.26 liters; therefore, with an increase in the body temperature (the blood water flow) simultaneously with a decrease in the blood volume, its energy-mass is compressed (which is called blood clotting in medicine) with a decrease in its pressure. The occurrence of water deficiency disrupts the blood aqueous solution synthesis and metabolism required for human life activity and, accordingly, manifests itself in a morbid state of the human body.

It is quite obvious that, for the purpose of treatment, we need to bring the molecule to its original energy state by creating conditions for the water molecule ionization, namely, the electron detachment from the hydrogen atom nucleus by introducing the energy of an additional man-made magnetic field. The modern medicine implements this process by introducing chemical elements into the human body, which are capable of transferring their energy potential to a water molecule in order to create conditions for original ionization. This can be achieved due to the homeostasis of the body's internal environment to preserve constancy of its internal state of composition and physicochemical properties through coordinated reactions. The human body's original state (we are considering the body's healthy state without any morbid symptoms as its original state) is provided by self-ionization of water molecules that is an ionization reaction in aqueous solution.

In nature, ionization occurs in most cases as a result of spontaneous reactions where it is generated without involving any external factor. These are the processes of two ways to generate ionized particles, namely: auto ionization and autoprotolysis. Auto ionization is the process of water deposition by internal forces of the water molecule micro dipoles vibration oscillator with formation of a hydroxide ion  $OH^-$  and a hydrogen ion  $H^+$  (proton), which immediately protonates another water molecule and causes the formation of a hydronium ion  $(H_3O^+)$ . Initiation of auto ionization conditions of water molecules is achieved in blood vessels, in which the vessel cross-section and linear velocity to blood water flow correspond

to the value of the product of vessel radius and flow velocity equal to 5.8×10<sup>-5</sup> sq.m/s, as well as at interference of magnetic coherent waves of water molecules in the human body. Autoprotolysis is a spontaneous process of proton transfer between water molecules with formation of ionized particles. Self-ionization of water is an example of autoprotolysis. In nature, in all biological entities whose structure contains aqueous solutions, the water molecule is constantly deprotonating; that is, instantaneous ionization processes occur therein. Therefore, we can conclude that self-ionization of water molecules is a process of self-organization of biological species inhabiting the planet of Earth, including humans; and it plays the role of self-healing (bringing the human life activity state to its original quality). Constant renewal through the exchange of elementary particles in micro and, accordingly, in macro volume of the human body's structural units, filling them with a new electric charge through the input of free photons and electrons from the external space (Schumann electromagnetic field), allows the human body to heal itself [6].

Any molecule is a dynamic system with continuous oscillations of nuclei, movement of electrons, and interaction of atoms. A molecule can be considered as a collection of micro dipoles that change very rapidly in magnitude and direction. This is caused by micro-oscillations in the molar system of electrically charged particles as a result of micro-oscillations of the chemical bond polarity, which characterizes the change in the electron density distribution in the space between the atom nuclei in a binary molecule. For instance, the bond of atoms in a hydrogen molecule is created mainly by the outer electrons of colliding and combining atoms. The two outer electrons of two free atoms can combine into an electron pair of two outer electron shells. Each electron, in addition to an electric charge, has a spin (the intrinsic momentum of elementary particles) and behaves like a microscopic dynamic magnet (a dipole). Dipoles with opposite spins are attracted to each other and form pairs. Both positively charged atomic nuclei are attracted to a negative electron pair with a common charge located in the center of the sphere of the combined waveguides of these two electrons. AA Shadrin proved that this concept of a binary molecule structure does not imply the orbital motion of electrons; however, the calculations performed by FM Kanarev [4] on the change in the radii of atoms and molecules with a change in temperature, are applicable in this case as well.

A physicist E Yakubovsky, based on proofs of quantum mechanics, described in his article the conditions for the life expectancy and death of biological systems. He proved that life expectancy is conditioned by the frequency of processes occurring in the body. The frequency is affected by the share of vacuum particles that are in a free state, that is, not bound into elementary particles. Vacuum particles in a free state are the medium in which electromagnetic waves propagate. Moreover, their concentration in the free

state is huge. At the moments of the vacuum medium compression, an elementary particle, such as a photon, is formed from an electromagnetic wave. Therefore, vacuum particles in the collision of two gamma quanta, provided that the wavelength corresponds to the distance between such vacuum particles, form a particle-antiparticle pair and, in particular, a pair of electron-positron. Bound, grouped vacuum particles or elementary particles are the smallest particles of matter, subject to the condition that they are not atomic nuclei and atoms and cannot be split. One of the most important basic groups of elementary particles is a group of photons. Emission and absorption of photons initiate the frequency of oscillation of the density values of atomic formations. Due to scattering of photons during their emission and absorption, the energy-mass of the material part of our Universe changes in direct proportion. Therefore, the frequency of oscillation of elementary particles, their existence in a bound or free state, determines their ultimate strength and life expectancy. Moreover, elementary particles exist for a finite time, disintegrating into vacuum particles and forming elementary particles again. A large share of vacuum particles in a free state significantly increases the oscillations frequency while reducing the life expectancy. The decay of elementary particles into vacuum particles can be made massive by using man-made devices specially made for this purpose. As a result of this action, the whole body disintegrates, which can be used in the disintegration of biological entities. This process occurs at a resonance of the energy density value of the acting external electromagnetic field and the density value of the body subject to resonance. Yakubovsky found that vacuum particles with the smallest mass have the maximum effect on the oscillation frequency. The greater the share of vacuum particles in the energy-mass, the higher the frequency. With their share equal to 1, there is a very high frequency and rapid death. E Yakubovsky [7] has found out by a mathematical analysis that the normal share of vacuum particles is 4×10<sup>-61</sup>. With this share of vacuum particles in a biological body, the life expectancy will be equal to 84.2 years. The mathematical analysis has shown that this share of free vacuum particles determines the average length of a biological life.

The mass of one vacuum particle is  $m=1.42\times10^{-72}$  g. Micro dipoles resulting from micro-oscillations of the chemical bond polarity, have the smallest mass among all elementary particles. Polarity characterizes the change in the electron density distribution in space around the nuclei as compared to its distribution in neutral atoms. If we consider a photon as a micro dipole or as vacuum particles that have passed into a crystalline state in the form of elementary particles, we can calculate by approximation the sum of dipole momenta for free vacuum particles, which is necessary for disintegrating a virus body. Based on the calculations by E Yakubovsky, the disappearance of a body, or the free state of all vacuum particles of such a body, occurs during the time of existence of a stochastic electromagnetic field of a certain voltage. The world exists in the

balance of interests. On one hand, the induced weak stochastic electromagnetic field causes formation of free vacuum particles, which are necessary for the existence of energy-mass due to emission and absorption of photons. On the other hand, at a sufficiently high electromagnetic field value, elementary particles disintegrate into vacuum particles, which can lead to an imbalance in the photon interaction of atoms and molecule elements. However, in some cases of diseases, in order to bring the body back to its original state, we need to intensify the destruction of elementary particles in the organism body, which decreases the oscillation frequency due to a decrease in friction between particles and, accordingly, to an increase in the life expectancy.

In the absence of electromagnetic field, free vacuum particles are grouped in the body of a biological entity into "crystalline" formations that are unable to generate elementary particles, and the mathematical model determines the biological body's death. The purpose of our analysis of the physical state of molecules in a biological entity (namely, a virus) is to create a mathematical model of virus disintegration in the combination of the mathematical methods of quantum mechanics and definitions of physical and chemical operators. When doing so, it is important to identify the causal relationship for the morbid state of the human body at the micro and macro levels of energy-mass compression.

We know from mathematical calculations that micro dipoles have the maximum impact on reduced life expectancy, since their mass is 9 orders of magnitude less than that of any elementary particles. Therefore, corresponding to the rank of the principal quantum number (the determinant of the possible energy value, in our case - hydrogen), a micro dipole can, by the forces of its electromagnetic activity in a free turbulent state, capture a large number of elementary particles and bring energy-mass into turbulent motion, which is normal for a healthy life condition of the human body, in body's volume. However, a turbulent (comprehensive) complex mode is impossible for a body; it leads to death. To induce such a mode for the virus disintegration in its body's volume, we need to bring the state of its elementary particles and, accordingly, atoms and molecules, to a turbulent state of motion. This can be done by generating micro-oscillations of a temporal displacement of a common electron pair in a binary molecule (molecule of H<sub>2</sub>O) towards one of the neighboring atoms with the formation of instantaneous dipoles. This process can be carried out by ionization of hydrogen ions when exciting a stochastic electromagnetic field with an ionization potential of 13.59 eV while expending a work of 2×10<sup>-18</sup> J. In the monograph by EP Sidorov "Bénard's Vortices and Hydrogen Ions: Biohydrodynamics of the Origin of the Vital Activity of Nature and Humans", the author considers the methods of ionizing water molecules that make up the human blood flow [8-10]. As part of studying this process, of particular interest is the study by B.L.

Aleksandrov and A.B. Aleksandrov, researchers from the Krasnodar Agrotechnical University, entitled "Mechanism of Water Molecules Ionization in a Magnetic Field at Interference of Magnetic Coherent Waves" [11].

Based on the oscillation frequency of the shares of elementary particles and vacuum particles, we can determine the quantum state of a healthy biological organism by the integrity of its original structure. It provides for the level of ionization of water molecules, planned by nature, in a magnetic field under the uniform distribution of this field's energy. As stated above, the world exists in the balance of interests. With a uniform distribution of the magnetic field energy throughout the whole volume at a field strength equal to H=105A/m, each water molecule has an energy equal to  $E=1.9 \times 10^{-25}$  J, which is 10 times less than required for its ionization. However, with a certain probability, an electron can be at such a distance from the nucleus that brings it to a state with a minimum energy allowing for spontaneous ionization without introducing additional energy. This energy value provides in mathematics the solution of finding the value of the quantitative share of vacuum particles for the average life expectancy of a living biological organism. At the current development stage of our society, this share is equal to 4×10<sup>-61</sup>. Approximately, we can associate the possible ionization of molecules in a magnetic field with a uniformly distributed energy in surrounding space and the quantitative share of vacuum particles in the total sum of vacuum and elementary particles. The ionization level of molecules in 1 cu.m of water with an ionization potential of 1.18×10<sup>-6</sup> eV, in a uniformly distributed magnetic field, is 1×104 molecules, whereas the quantitative share of free vacuum particles is  $5 \times 10^{-61}$  in the total sum of vacuum and elementary particles. This association applies to the conditions with a uniform distribution of the energy of a stochastic magnetic field where the body under study is located. It means that low voltage electromagnetic fields are useful for the stable life of a human body, since they are sources of resonance waves of Schumann fields, which act as a constructive factor causing an increase in the coherence or order of a biological system. However, an electromagnetic field of a high and super high voltage is extremely dangerous for humans. As an example, we can cite the Philadelphia Experiment (the Rainbow project), which was carried out in the USA in 1943. In the summer of 1942, the Eldridge destroyer was equipped first with two, and later with two more huge electromagnetic magnetrons - generators of microwave radiation. The project manager, N. Tesla, strongly hesitated about involving people in the experiment, as he knew from his own experience and could foresee irreversible detrimental effects on their health. A crew of 181 people was on board the ship. After turning on the generators, the Eldridge began to blur and disappeared. During the experiment, some of the sailors died under unusually strange and terrible circumstances. Only 21 of 181 people returned unharmed, but they also experienced an unbearable fear. Some of the sailors "froze": they seemed to be frozen, standing completely still; others burned. They burned for a long time, much more than an hour. Twenty-seven sailors were "embedded" into the ship's hull, bulkheads, and structures. Some people walked through the walls.

E Yakubovsky, [7] when performing the mathematical analysis of the reasons for a decrease in the life expectancy of biological entities, found that a factor decreasing the life expectancy is the oscillation friction of free vacuum particles or their kinematic viscosity. Vacuum particles form elementary particles and electromagnetic fields; they are harmless in a bound state (of chemical elements), as they perform a directed "laminar" motion in chemical compounds. Their oscillation friction in the bound state is determined by the dependence ih/ $(2m_1)$ , where  $m_1$  is the elementary particle mass, which is much more than that of vacuum particles whose friction is also determined by the dependence ih/ $(2m_2)$ , where  $m_2$  is the vacuum particle mass. Therefore, a "healthy" state of the human body's vital activity requires a certain (set by nature) number of free vacuum particles in a given human body. For instance, the mass of one hydrogen ion ( $H^{+2}$ ) is  $1.672 \times 10^{-27}$  kg, which is  $10^{45}$  times more than that of a vacuum particle. So, imagine, E. Yakubovsky put forward the following mathematical dependence: with a share of vacuum particles equal to zero, the maximum life expectancy is 2,430 years, whereas the greater the share of vacuum particles, the higher the frequency, and with their share equal to one, there is a huge frequency and quick death. E. Yakubovsky found out that, at present, the oscillation frequency of the human body is approximately equal to w = $5 \times 10^{-3}$  Hz. In the Middle Ages, the body's frequency was w = 10<sup>-2</sup> Hz. The oscillation frequency of bacteria and viruses has not changed and corresponds to that of the modern human body; therefore, it is much easier today for viruses to integrate into our harmonic vibration oscillator and to use our metabolism. That is, the disease incidence rate is now an order of magnitude higher than that of previous generations of mankind. E. Yakubovsky established by calculations that the number of vacuum particles per human body for a normal, healthy life should meet the following dependence:  $28.5 (m_u) / m << 1$ .

Now, let us get back to the Philadelphia experiment. Free vacuum particles are generated by ionization of elementary particles that are bound into chemical elements within the volume of the body under consideration. We noted above that the normal stable functioning of a human body, as well as other biological entities, is possible subject to a uniform distribution of the magnetic field energy between all atoms (molecules), where each molecule must have a magnetic field energy equal to  $1.9\times10^{-25}$  J. This potential is enough to bring the human body to its original state due to self-exchange of elementary particles and chemical elements that are composed of them. From a mathematical point of view, this process corresponds to ionization of the normal share of vacuum particles (e.g., equal to

a=5×10<sup>-61</sup> particles), when the actual life expectancy is equal to 67.8 years. However, during the Philadelphia experiment, a very powerful magnetic field was generated which created in some places of the ship conditions for generating a share of free vacuum particles approaching to one, which contributed to generating friction that created an electron cluster accompanied by the emission of photons. It is quite possible that there was probably no burning (in the sense of fire), but a glow accompanying the emission of photons, which we can observe upon the occurrence of an electric spark. An electric spark is created by photons emitted by electrons during the formation of electron-ion clusters.

The main effect of a magnetic field, both weak and strong, is an increase in the oscillation velocity up to the values of starting the matter polarization and, along with this, formation of a cold plasma region. By definition, plasma is an ionized gas of excited molecules and atoms, where the densities of space charges created by positively and negatively charged particles are the same and perform chaotic motion, which affects the frequency and direction of micro dipole oscillations. At a relatively low oscillation velocity, the electric fields of atomic nuclei have time to recover, and the structure of the renewed matter is maintained. However, at a high oscillation velocity, the electric fields of atomic nuclei are destroyed because of resonance by the respondents of the flow of negative electric grains of potentials. As a result, matter disintegrates to the level of free elementary particles. The initial moment of the virus body disintegration process occurs when degree of turbulence of the elementary particles motion in the water molecule body of a virus is equal to the Reynolds number characterizing the beginning of turbulent motion (for water molecules, it is 2,000 to 3,000 units) [7]. The book by E. Sidorov, the author of this article, "A Case of Technogenic Interpretation of Natural Processes Inducing Conditions for Disintegration of Viruses in the Human Body" [12], presents the structure and the action principle of an operating unit for inducing the resonance conditions of micro-oscillations of biological elements having the identical degree of ionicity of chemical bonds on the L. Pauling's scale of relative electronegativity. In this structure, as a result of biological recombination of hydrogen molecules in a water molecule by the forces of a man-made stochastic electromagnetic field, within the boundaries of the harmonic oscillator of micro dipole vibrations, disintegration of a virus occurs. The destruction of the water molecule of a virus occurs as a result of resonance between the virus structure reduced to the density of projection of all functions, and the introduced emulsion, as well as the water molecules that make up viruses. This process is accompanied by the energy capture of the electron cloud of the virus by the electric field of emulsion and violation of the established magnetic, spin, and electric values of the dipole element in the virus structure. The virus' aqueous structure disintegrates into free elementary particles to be further synthesized into a new chemical element [13].

AA Shadrin [5] believes that the physical meaning of the ionization of electrons from atomic shells by photons is explained by the implosion of its energy charge by the interference of fields of magnetic monopoles comparable in magnitude but opposite in sign. The phenomenon of interference is the superposition of two waves (including electrons and photons) on each other. This process is accompanied by an induced resonance, whereas the resulting amplitude is equal to zero or the value of the indicator of the new wave is different from the interacting respondents. The result of this process is disintegration of the virus' molecular structure. The weakening of chemical bonds in a water molecule is especially affected by the generation of the oscillation frequency of the resulting micro dipoles, which change in magnitude and direction. We should take into account the special role of the electron's precession oscillation, since the amplitude of electron oscillations can increase by a factor of 108 due to resonance. A Aleksandrov [11] calculated that, when exposed to an external constant magnetic field, the electron's magnetic momentum vector and its orbit in the hydrogen atom of water will precess with the electromagnetic wave (electron) frequency and, if these frequencies are equal, the phenomenon of resonance will occur. In this case, all water molecules with the electron precess oscillation amplitude will be subject to ionization, since the oscillatory contour allows to select those frequencies from the set of oscillations that are close to the natural frequency of the induced electromagnetic wave. If, with a uniform distribution of the magnetic field energy over the entire volume under consideration, with a field strength H=10<sup>5</sup> A/m, each molecule has 1.9×10<sup>-25</sup> J, then 1 cu.m can contain only 1×10<sup>4</sup> water molecules subject to ionization. This is enough for the normal metabolism, but the complete disintegration of a biological organism due to the oscillation frequency resonance of the electromagnetic wave of hydrogen electrons in water molecules, requires an additional man-made electromagnetic field of the corresponding intensity. In "treatment" diseases of the human by "self-organization", nature uses the mechanism of synchronization of Schumann's energy weak fields. This mechanism operates with the so-called self-sustaining periodic vibration oscillators (systems that make oscillations that repeat over time). However, this process of the body "renewal" by ionization of hydrogen electrons is slow due to the insufficient intensity of water molecules renewal, since the number of ionized molecules does not reach the required power of the fractal set. Therefore, both "treatment" and disintegration require a strictly defined ionization "power", which corresponds to the ionization of number of fractal molecules according to the set theory.

When one says that an electron, in addition to corpuscular properties, has wave properties, it means that the electron motion is described at the same time as a corpuscular and wave process. At the same time, we should understand that specific energy of any elementary particle, regardless of its origin, is energy-mass. The elec-

tron energy is equal to -13.6 eV. The negative energy sign means the system stability, which is the more stable, the lower (the more negative) its energy; that is, the energy negativity is described by the value of electronegativity on the Linus Pauling's scale. In turn, the energy released or absorbed, when an electron is attached to an atom or molecule, is the electron affinity energy and is numerically equal and opposite in sign to the ionization energy. VM Yakovlev [14,7], taking into account the researcher's position regarding the scientific significance of the electronegativity parameter as a fundamental immutable property of a chemical element, presented a mathematical model of dependence of the chemical bond polarity and ionicity on the electronegativity of interacting atoms. He proved that an ionic bond occurs between atoms that differ quite a lot in electronegativity. MS Perfiliev [15], by mathematical modeling of micro-oscillation of the degree of chemical bond ionicity in a binary molecule (molecule of H<sub>2</sub>O), proved that, with an increase in the electronegativity difference, the degree of bond ionicity is increased, whereas with its decrease, the degree of bond ionicity is decreased. Both when the electronegativity difference decreases to the bond ionicity critical value, and when it increases, there is a temporary displacement of the common electron pair towards one of the neighboring atoms with the formation of instantaneous micro dipoles. The result is a change in the chemical compound polarity. In the first case, hydrogen atoms are ionized, and the virus' water molecules are decomposed into H<sup>+</sup> and OH<sup>-</sup>ions; if the measure of the multiplicity of fractals, that make up the aqueous structure of the virus molecule, is sufficient enough, the virus disintegration is possible. When the electron pair is displaced towards a more electronegative atom, a critical polarity is induced, which is expressed in continuous micro-oscillations of dipoles, and when the resonance of the dipole moments of the ionic bond oscillations is reached, as well as the measure of the multiplicity of fractals of the virus structure, the virus disintegrates. All these processes (for single molecules) occur over a period of time equal to 10<sup>-12</sup>-10<sup>-13</sup> second; however, the absolute, 100% disintegration effect depends on the necessary fractality degree of electrons in the structure of virus' water molecules that can ionize. In order to induce comprehensive ionization conditions for disintegration of viruses and malignant tumors, we should involve in this process a man-made stochastic electromagnetic field of the calculated value, in addition to the energy field uniformly distributed in the surrounding space.

Recreation of new chemical molecules of original quality (in our case, water molecules) from the virus' disintegrated water molecules and free ions is performed by molenization, after recombination of a hydroxide ion (H0-\*H $_2$ 0) and a hydronium ion (H\*\*H $_2$ 0). This pair of dissimilar complex ions is an electric dipole with dissimilar elementary electric charges on its poles. The recombination of these ions occurs when they sufficiently approach each other by electrostatic attraction due to transferring an electron from the hy-

droxide ion to the hydronium ion. As a result of recombination (the disappearance of a pair of elements of opposite charges with the release of energy), the hydrogen ion combines with the hydroxyl ion creating the "original" water molecule. This process releases two water molecules associated with these ions. It is expressed by the following chemical formula:

$$\{H^+. H_2O + HO^{--}. H_2O = H_2O (H^+ + HO^{--}) \text{ and } 2H_2O\}$$

The human body includes approximately 7.5 trillion cells, 3.5 trillion of which are bacteria, viruses, and other microorganisms that make up the human microbiome. In a broad sense, symbiosis (from the Greek "symbiosis" - living together) covers all forms of close cohabitation of organisms of different species, including viruses. By mathematical analysis, E. Yakubovsky identified the conditions for the symbiosis of a virus and a human body. We know that the virus that enters the human body is formed in the process of molenization from water molecules by recombination of a free hydronium cation and a hydroxide hydrate anion. Therefore, the water molecules of which it consists of have a harmonic vibration oscillator close in value to the biological elements of a human body. This allows a virus or a human body, at some point in the micro-oscillations of the water molecule bond ionicity, to generate a resonant frequency and be sources of vibrations for nonlinear harmonic oscillators. The result of this process is a symbiosis of the human body and viruses. In order to implement such a symbiosis, the virus, through "forced" adjustment of metabolism, requires the human body, into which it tries to enter, to disturb the existing balance of the energy state. Using mathematical formulas, E. Yakubovsky proved that there are two ways to induce the conditions for symbiosis of a human body and a virus. The first way is when the virus features, by its value, higher elastic properties of its harmonic oscillator than the human body. In this case, at the moment of resonance, the virus' energy parameters will increase due to the human electrical potential, and the latter will become ill. This is due to metabolic disorders expressed in violation of the sorption, desorption, reabsorption, and resorption processes (the supply of nutrients from the environment into the body's internal environment through cells, cell membranes). E Yakubovsky [7] explains the body's bad reaction to the virus by the existence of a negative resonance for the body. The virus' adaptation to symbiosis with a human is implemented by an increase in the elasticity of the human body's harmonic oscillator, which will change the resonant frequency from a bad effect to a good one. Depending on the elasticity of such resonant frequency, the positive or negative response of the system increases. It is quite obvious that treatment consists in changing the resonant frequency by increasing the elastic properties of the human body's harmonic oscillator or changing the dislocation site. In turn, a human body that has a resonant frequency with higher elastic properties of its harmonic oscillator than a virus, affects in the process of resonance

the change in the virus' resonant frequency, which will allow to implement symbiosis painlessly. It is clear that, to bring the human body infected with a virus to a healthy lifestyle, we need to change the resonance frequency if its harmonic oscillators in the direction of inducing its higher modulus of elasticity.

Researchers conducted successful experiments for disintegrating energy-mass (of matter) in the nineteenth and twentieth centuries using oscillation resonance. These were such American scientists as John Ernst Worrell Keely, who used a sound vibration resonance of a particular sound wave; Nikola Tesla, who used electromagnetic oscillation generators to create a resonant electromagnetic wave; John Hutchison, who further developed the Tesla effect, namely, the main property of the zone of cold massless plasma interacting with matter through energy-mass polarization by a high static electric potential, while achieving the removal of the atomic space equilibrium of one or another electric ether; and, finally, Royal Raymond Rife who invented a device to disintegrate the cancer virus by generating vibrations of light waves of the resonant frequency and the virus' wave. These and other "successful" experiments were "successfully" buried by medical businessmen and science retrogrades [16].

Russian physicist EG Yakubovsky proposed to introduce the concept of DISLOCATION into virology, whose elements, depending on the non-uniform distribution of the electromagnetic field in a separate material body (energy-mass), cause energy cracks, ruptures and partial chaotic formations of microscopic sizes since birth. The proposed mathematical model of dislocations in a biological organism assumes a relationship between the degree of vacuum particles impact on elementary particles with creation of low-density locations in the energy-mass structure. This density gives rise to neoplasms: malignant and non-malignant tumors. Based on the experience from inanimate nature, an increase in the density of dislocations in adults causes expansion of cracks and rupture of the substance. Therefore, finding and destruction of dislocations must begin with the birth of a human body. In order to stabilize the uniform distribution of the energy field, the method of dipole influence by resonance of ionized elementary particles of the hydrogen atom can be proposed. Hydrogen has a principal quantum number of 1; it will attach the dipole with reducing its share in the free state, thus decreasing the share of vacuum particles. This allows to measure the ability of vacuum particles to group into elementary particles and the degree of decay of elementary particles into vacuum particles. EG Yakubovsky [7] assumes that the commensurability of bound and free dipole particles is characterized by the ratio of the bound dipole arm to the generatrix of the vacuum particles corresponding to the dipole, which should be equal to 2.5×10<sup>-62</sup>, which means a life expectancy of 695 years.

It should be recognized that dislocations should include all diseases associated with degradation processes, where organic

substances disintegrate with the participation of microorganisms (including viruses), as well as those associated with the destruction of matter due to external impact. Therefore, in my opinion, in the dualism of scientists, biologists, physicians, mathematicians, and physicists, a scientific concept of living body's dislocations should be developed and called "Mathematical Model of the Quantum Theory of Dislocations and Disorganization of the Original (Healthy) State of a Biological Organism." At present, at the current development stage of physics at the quantum mechanics level, as well as mathematical analysis, we should develop medical concepts of a healthy lifestyle of the human body in the dualism of medicine and physics, medicine and mathematics, as well as in combining the scientific achievements of these discipline. As a primary basis for studying and developing a mathematical model of biological entities, we should adopt mathematical formulas that definitely would show the solutions to all problems set by nature, in a software implementation. A formula cannot be wrong, if it has the correct final result. At the same time, it concentrates both the structure and form of motion, as well as the image of vital activity of energy-mass at the micro and macro levels of compression. Therefore, it is time to develop a mathematical model for each unit of vital activity of biological entities, involving for this purpose the discoveries of the concepts of chaos theory in medicine, including the mathematical description of metabolic processes using a recurrent sequence, where a cascade of bifurcations occurs, as well as applying the theory of development of dynamic systems of natural origin, known in science as self-organization.

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## **Conflict of Interest**

None.

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