

Modern view on the mechanism of "thought" formation and its implementation "program" at the supramolecular level

Bitsoev Vladimit Dodyevich *

Doctor of Medicine, Medical and Technical Sciences Academy, City of Moscow, Russia

ABSTRACT

The paper considers one of the most important problems of modern medicine: corrective and guiding function of cardiovascular system in all manifestations of vital activity of an organism at the supramolecular level. A "thought" and its implementation "program" simultaneously appear in the left ventricle of the heart. In author's opinion, when a child is born, a place in the information bank of the biosphere is allocated for the constant receipt and storage of data on his or her vital activities, until the death. The author managed to discover a mechanism of information feedforward and feedback between an organism and the biosphere.

Keywords: Biosphere; Noosphere; "Superperfect energy" of the universe; Analytical and implementing organ

INTRODUCTION

The actual problem of the modern world science for all of its disciplines is recognition of existence in the whole Universe of a uniform "superperfect energy" of the universe, existing by the will of the God. The "superperfect energy" is one and always vital, but it's not seen, felt or sensible by a man. That means the perspiration taking place constantly and evenly from the body's entire surface is exactly the "superperfect energy". It fills all space between the elementary particles, atoms, molecules, cells, organs and systems. Therefore, all information of an organism is transferred to the biosphere and processed with the infinite options of speeds, with further emergence of a "thought" and its implementation "program" for its original source, i.e., for the organism. A man can see and feel the "superperfect energy" in the form of "matter" (minerals, mountains, seas etc.) only. Hence the division of the world into living and non-living matter is not correct, as the "superperfect energy" is the same for the whole Universe, being the "material substance of the universe".

The background shows that we need to widely study the functions of organs and systems at the subcellular level, based on fundamental research in all disciplines of the modern science. From this point of view, we can conceptually state the principles of hierarchy among the functional and biological systems and the influence of the world energy on the vital activity of the whole organism, by combining a contemporary view and experience of the empirical science.

Even before Christ, the existence of a primary matter, from which

everything is born and where everything returns, was asserted [1]. It should be reckoned that the physical characteristics of such environment are self-compensated i.e. the sum of positive charges is equal to the sum of negative charges, as the environment is neutral. However, the authors insist that a number of processes occur in such environment, thanks to which the self-generation of the substance can be observed in vacuum. The electrons and positrons occur "from nowhere" there. There is a hypothesis saying that the environment, from which everything is born and where everything returns, exists [1-4].

This is the vacuum, which represents this primary environment, which, as asserted by the physicists, does not have the rest mass. However, from this point of view, the vacuum ceases to be a neutral environment.

The density of the vacuum energy does not change at expansion of the Universe. This evidences the negative pressure of the vacuum [5].

GOAL OF RESEARCH

Research of a mechanism of guiding and corrective roles of the cardiovascular system, mechanism of a "thought" formation and its implementation program at the supramolecular level.

RESEARCH TASKS

1. Research of a mechanism of information link between the integral organism and the biosphere.
2. Experimental study of the unity of a man and the Biosphere.

Correspondence to: Bitsoev Vladimit Dodyevich, Doctor of Medicine, Medical and Technical Sciences Academy, City of Moscow, Russia; Tel: 9104652212; E-mail: bitsoev@mail.ru

Received: May 08, 2018, **Accepted:** February 28, 2019, **Published:** March 07, 2019

Citation: Dodyevich BV (2019) Modern view on the mechanism of "thought" formation and its implementation "program" at the supramolecular level. *Adv Tech Biol Med* 7:1

Copyright: © 2019 Dodyevich. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited

On the basis of existence of the uniform energy of the Universe.

3. Development of a mini nano-microscope sensor for blood spectral biopsy from the skin surface.
4. Development of a system for record of information exchange between the integral organism and the biosphere on the skin surface.

MATERIALS AND METHODS OF RESEARCH

The research was conducted in the Research Center of Fiber Optics (RCFO) of the Russian Academy of Sciences, Moscow. New non-toxic, non-hygroscopic optic guides made of silver halides with low transmission losses within a wide spectral band of 3-15 μm , developed by RCFO staff, enabled record spectra of skin in vivo with good signal-to-noise ratio, even on uncooled pyroelectric detector DNGS of Fourier-transform spectrometer Bruker.

This allowed a reliable determination of changes in light absorption spectra of antipodal side of physiotherapeutic actions (polychromatic visible and infrared polarized light 480-3400 nm). In order to research the feedforward and feedback between the cardiovascular system of integral organism and the biosphere, we studied in the volunteer the blood spectral biopsy from different areas of irradiated and non-irradiated skin surface of the upper limbs.

RESULTS AND DISCUSSION

In his theory of higher nervous activity of a man and animals, I.P. Pavlov asserted that the interaction and interdependence of internal and external manifestations of vital activity of an organism are coordinated by the central nervous system.

There are serious objections to that: unformed central nervous system of a newborn child can't regulate the functions of other organs and systems. However they duly function and interact.

Today we need to study wider the functions of organs and systems at the subcellular level, based on fundamental research in all disciplines of the modern science. From this point of view, we can conceptually state the principles of hierarchy among the functional and biological systems and the influence of the outside world energy on the vital activity of the whole organism, by combining the contemporary views and experience of the empirical science [6-8].

According to theory of Vernadsky, a man, having embraced the whole planet by the scientific thought, strives for gaining insight into the celestial laws [9].

Vernadsky was focused toward the biosphere and noosphere of Earth [10]. The biosphere, being the aggregate shell of Earth, consists of life. Under the influence of the human activities, it consistently merges into the noosphere, being a new state of the biosphere, which bears the results of the human labour. Vernadsky points at the evolutionary passage from the geochemical processes to biochemical ones and finally to the energy of thought. The human activity is comparable to the activity of the geological force. That is why a man should think and act not only at the level of an individual, but that of the planet as well. V.I. Vernadsky wrote: "As everything alive, a man can think and act in planet aspect in the field of life only, i.e. in the biosphere, in the certain terrestrial shell, with which he is always linked and which he can't leave.

His existence is a function of such shell: however the concept of noosphere still worth preserving, as it represents a unity between a man and nature in the form of a process - noogenesis, leading to an establishment of a uniform system "a man - natural environment". Noogenesis is one of the aspects of formation of a generic essence of a man and it can't be stopped. The concept of V.I. Vernadsky on noosphere is based on recognition of a critical role of the human activity during the evolution of the biosphere and through it, during the changes of human processes occurring on Earth and the image of Earth in general. The noosphere is the highest stage of biosphere development, connected with emergence and establishment of the civilized society therein, when the conscious activity of a man becomes the main factor of development on Earth [9, 10]. Both Vernadsky and Teilhard de Chardin were based in their research on the so called cephalization, i.e. the process of increasing of brain mass and as a result, evolutionary accelerated development of the nervous system of a man. This confirms our concept on the constant and fast moving improvement of "analytic and implementing" brain function with many options of speeds and scales. English physicist and astronomer James Jeans said: "The concept of the Universe as the world of pure thought illuminates many problems we faced in the contemporary research in the field of physics". It's possible to state from the point of view of physiology that a man "operates by electricity". The individual energy field of a man is like a "passport" for a surrounding world, this is a:

- Physical energy (body vibration);
- Emotional energy (vibration of feelings);
- Cognitive energy (vibration of thought).

The interaction between the energy of thought and that of the surrounding world can be substantiated by the theorem of John Bell, known in quantum physics, saying that there are no isolated systems; each particle of the Universe is in a "momentary" (more than the light velocity) link with all other particles. The whole System, even its parts are separated by a long distance, functions as an integral whole. A man is a part of such System. Taking into account that, there are grounds to believe that the dozens of thousands "thought-program" complexes come to the central nervous system from the left heart ventricle. The multiple options of thought implementation transfer to the Biosphere and implementation of the final decision of superperfect analytic and implementing system (CNS) are being studied. The transfer to energoinformational field of the Biosphere is carried out through the perspiration system of a body. We believe that our brain is a biocomputer facilitating the information exchange between the integral organism and the noosphere via the perspiration system. Complex modulated electromagnetic signals, constantly coming into the CNS, contribute to self-improvement of analytic and implementing brain function.

One of the most important notions in cybernetics is information, i.e., mean of communication between the systems. It relates to contiguous systems only, e.g., cardiovascular and nervous systems [11].

Interaction of all contents of the surrounding world is powered by information on such world. It represents a way of regulation and control of behaviour of all "units" making part of the world contents, thereby enabling the adequate relationships between them and the reality. Such statement is based on the existence of a uniform "superperfect energy" of the universe. Each "unit" of the total contents is attributed with its own energy with unique physical

properties, thereby ensuring the constant movement, passage from one state into another with infinite number of options of its (i.e., passage) velocities and scale. That means that each "unit" of the Universe is a unique "ergoinformational field". This field is not identical to any field known by the contemporary physics (e.g., magnetic field, electromagnetic field etc.) and remains a mystery for the mankind. In connection with the above, we conducted a number of experiments:

This experiment proves our concept that IR spectral biopsy of blood from the surface of diagnostic projection areas of the skin is individual and corresponds to morphological changes of internal organs and systems of an organism. This finding is very important for non-invasive diagnostics and monitoring of disease development in organs and systems.

The comparison between the results of this experiment and the previous ones. Figure 1 shows that the whole impact energy fully and promptly embraces the integral organism from the surface of diagnostic projection area with further correction of function of organs and systems, if necessary, in our case within spectrum band of 530-1448 cm⁻¹ (after irradiation of the palmar surface with the yellow light of 580 nm during 10 min).

The results of the experiment show that when the light impact approaches the capillary system of blood by removal of two layers of epidermis, the spectrum characteristics sharply grow, i.e., from the skin surface by IR spectral biopsy of blood by perspiration from the capillary system of blood, therefore the expression IR spectroscopy of skin is unscientific and not correct (Figures 2-4).

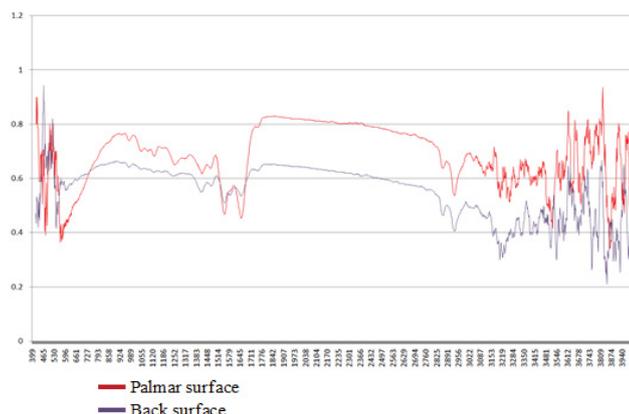


Figure 1: IR spectral biopsy of blood from the skin surface of non-irradiated right hand.

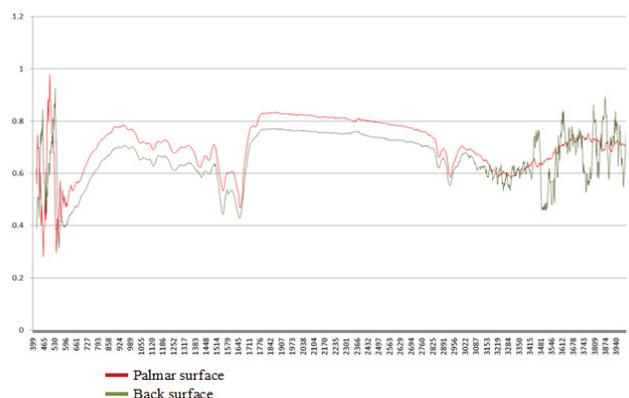


Figure 2: IR spectral biopsy of blood from the palmar skin surface of the right hand irradiated with yellow light during 10 minutes.

During research of Goncharenko [12] conducted in 1970s at the Institute of Experimental Pathology and Therapy of Academy of Medical Sciences of the USSR, the experiments on simulation of neurogenic infarctus in apes were performed. Under situation of stress, the unintentional closed injury of femoral artery with major subcutaneous hemorrhage occurred in male hamadryas.

He suddenly died during the ECG. The post-mortem examination showed the hemorrhage of cardiac apex. A thromb and six white thrombs (emboli) located one after another before the place of femoral artery rupture, were found under the place of hemorrhage. It is surprising that they come from all vessels of the apes' body to the place of trauma and formed in the same area of the inner surface of the left ventricle. The modern science couldn't explain how the targeted movement of blood portions through the vessel channel occurred, while such facts are known by the experimental physiology and medicine for hundreds of years [13].

Goncharenko believes that the link elements of the cardiovascular system shall be located in the vessels, as it can operate without participation of the nervous system.

Or they may be:

Firstly, the movement of the blood itself, which targeted flows, connects the local area of the heart with a certain part of the body. It is also known that 1 mm³ of blood contains 5 million erythrocytes

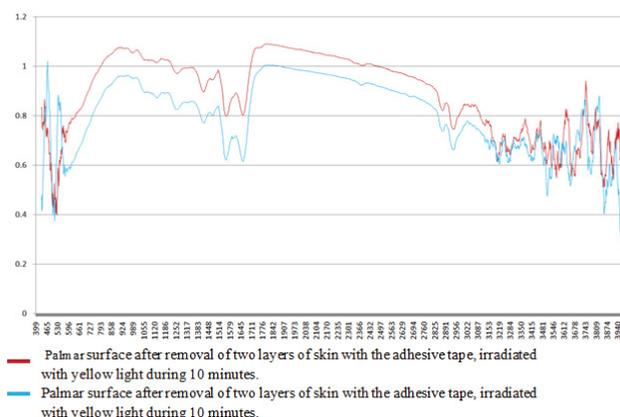


Figure 3: IR spectral biopsy of blood from the surface of the right hand after removal of two layers of epidermis with adhesive tape and irradiation with yellow light during 10 minutes.

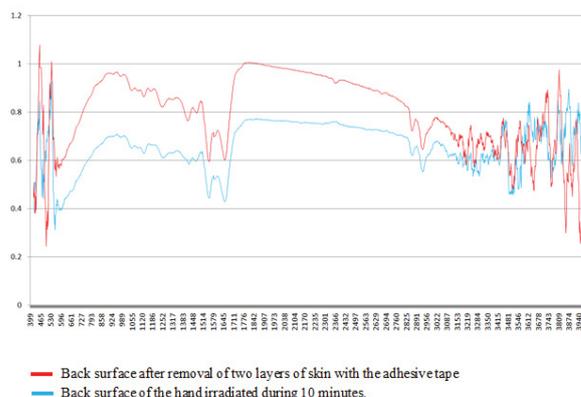


Figure 4: Comparison between IR spectral biopsy of blood from back surface of the right hand after removal of two layers of epidermis with the adhesive tape and IR spectral biopsy of blood of back surface of the right hand after irradiation with yellow light during 10 minutes.

and then it'll be 5 billion erythrocytes in 1 cm³. The volume of the left ventricle is 80 cm³; therefore it is filled with 400 billion erythrocytes. In addition, each erythrocyte bears at least 5000 information items. Having multiplied this number of information items by the number of erythrocytes in the ventricle, we obtain that the Heart processes 2×10^{15} information items per second, while the transfer of one item takes about a half of femtosecond.

The soliton forming erythrocytes are located within a distance varying from one millimeter to several centimeters from each other. Therefore, having divided this distance by the time, we obtain a value of operations speed for formation of solitons by the intracardial hemonica, which is more than the light velocity. That is why the cardiac haemodynamics processes are still not recorded, they can be only estimated [12,14].

The basis of our survival is created due to those super velocities. The heart gets to know about ionizing, electromagnetic, gravitation, temperature radiations, changes in pressure and composition of the gaseous environment long before the perception of the same by our feelings and consciousness and prepares the homeostasis to that expected impact, the organism gets the information from the biosphere through the perspiration system [15,16].

Secondly, the smooth muscle fiber of vessels, they are originated from the specific muscles of the trabecular cells of the heart, pass to aorta, extend to the vessel and ramify in capillaries.

Thirdly, perhaps intravascular electromagnetic frequency waveguides, emerging in the tissue cells passing to the capillaries and along intima layer, going towards blood flows. There are no other communication means in cardiovascular system.

Anatomist I.A. Kolomatsky was the first to separate the Thebesius vessels from the coronary arteries into a separate cardiac system and filmed the places, where their ostia penetrated exactly to the ventricles cavities by gushes of blood spouting from them during diastole.

The image of those gushes, twisted into the whirls, gave an idea that the system of the Thebesius vessels was intended for division of the blood flows inside the cardiac cavities into the separate whirl volumes [15,17].

It turned out that it's not just the gushes of blood spouting into the trabecular cells from the ostia of the Thebesius vessels, but already organized, torus-shaped solitons of erythrocytes, around which the blood elements coming from the auricles twirl.

Therefore it was found that the Thebesius vessels and trabecular cells have a clear function of erythrocytes collection into the local whirl-soliton structures in the cardiac cavities [17-19].

Role of the heart consists in coding of the organism's information for transmitting to the biosphere with further return with a code registered in the biosphere. This is a specific processing, coding of the organism's information for the purposes of formation of a "thought" and its implementation program in the left ventricle of the heart. That is why each heart possesses all information of its organism at the subcellular level. This is exactly the specificity for each individual of the emerged "thought" implementation with respect to the particular organism. That means that the data bank of each organism is located in the biosphere - noosphere.

The physicist Jiang Kanzheng substantiated the possibility of direct transmitting of information with the radio waves in his work "Theory of fields control" (1960-61). The achievements

of the contemporary physics enabled him to suggest that DNA is just a "tape" with the recorded information and its material media is represented by the bio electromagnetic signals. DNA is an aggregate genetic material existing in two forms: passive DNA and active form - electromagnetic field. The first preserves the genetic code, ensuring the stability of the organism. The second can change it. In order to do that, it's sufficient to make impact by the bioelectromagnetic signals, containing both information and energy at the same time. DNA is able to cure the damages by itself and if this opportunity is stimulated, the organism can be relieved from a substantial burden of "errors" and damages, accumulated in the molecules.

Jiang Kanzheng believes that such way of DNA rehabilitation may be the impact of bioelectromagnetic field of young organisms to the old ones.

In our opinion, this problem can be solved by DNA stimulation with information, which media can be a specially selected types of physical factors under the individual program, where the type, parameters, means, topography etc. of the applied physical factors are expressed, as we state that any bioelectromagnetic signal is a media of its own specific information and this is not acceptable to impose it upon the other damaged DNAs.

In order to defend my concept, I'll show one case of our research: treatment of patients with non-healing wounds of lower limbs.

The female patient M., 45 y.o., has been suffering the non-healing wounds of lower limbs for about 8 years. She was hospitalized many times, underwent 4 surgeries without substantial recovering.

We carried out a complex of physical therapy of one ulcer on the inner surface of the left shank (Figure 5) (magnetotherapy, d'Arsonval, ultrasound, laser therapy, EHF-therapy) while the ulcer on the outer surface of the same shank (Figure 6) was treated with the same set of procedures, but the radiator elements of the laser therapy devices and EHF-therapy devices were covered by 3 mm wide copper plate and we obtained better therapeutic results with that: the wound was healing more intensively and by 20-22 days faster, than with the first treatment option [20-22].

Based on the obtained results, we can assert that during the treatment by the physical factors, the crucial role is played by interaction between their specific information and the "superperfect energy".

It is worth noting that each elementary particle of the whole Universe consists of individual, unique infinite options of properties of the "superperfect energy", i.e., all the seas, oceans, fauna, flora,



Figure 5: Hard to heal wound on the inner surface of the left shin.



Figure 6: Hard to heal wound on the outer surface of the left shin.

mountains, planets etc., providing them with transition from one state into another. This is a base of infinite, eternal movement with infinite aggregate of velocities and scopes of contents of the whole Universe [6,8,23].

The uniform "superperfect energy" creates stability for interaction between the whole contents of the Universe in a free, obedient and submissive way.

It is arguable that the XXI century will become the century of recognition of the uniform "superperfect energy" of the Universe as a material substance of the Universe.

The coming of "thought" information from the biosphere to the integral organism and recognition on these grounds of "thought" generation in the "noosphere", i.e., in a new state of biosphere of the Earth according to Russian outstanding scientist Vladimir Vernadsky, may result in revolutionary changes not only in medical sciences, but in all global progressive Science as well [6].

The problem that has an actual meaning for the whole world progressive science follows from the above: Considering a fine differentiation between the difference and mutual impact of the cardiovascular system and brain during the "thought" generation in the biosphere (noosphere) and its implementation "program", the cardiovascular system acts as an intermediary between the biosphere and superperfect "analysing and implementing organ" i.e., the brain, complying with the hierarchy of specificity of structures of the central nervous system by degree of importance of their functional activity in such particular case, i.e., each "thought" has its inherent implementation program. This is a universality of a link between the biosphere and the integral organism with the help of cardiovascular system, i.e. a man enters the contents of the biosphere freely, obediently and submissively.

This is a new contemporary line of the world progressive science, consisting in research at the supramolecular level of the guiding role of cardiovascular system in an integral organism at the stage of emergence in the biosphere of a "thought" and its implementation "program" during interaction with the superperfect "analyzing and implementing organ" i.e., the brain with its infinite variety of possible options of velocities and scales of implementation [6,23,24].

In this connection we developed a mininano microscope sensor, enabling both feedforward to and feedback from all cells of the living organism thanks to the existence of the uniform "superperfect energy" of the whole Universe.

1. Upper glass plate.
2. Lower glass plate.
3. 4 Silver contact plates.
4. Silver contacts taps.

The mininano microscope sensor is made of two glass plates; place one above each other with displacement of 5 mm, as to provide space between the skin epidermis and upper glass plate, as well as of 7 μm of space between the glass plates for exchange between the integral organism and biosphere through the perspiration system and optical fiber cable.

The spectrum was obtained by pressing the bent with bending section of 16 mm shell-less infrared fiber of silver halide with section of 1 mm. The spectrum shows no absorbing organic layers on the outer surface and the presence of insignificant layer of monomolecular water. Noise on two narrow spectrum areas of 1400 cm^{-1} and 3200 cm^{-1} was caused by the water absorption, diffused into material of infrared fiber [21,6].

In light of the above, it shall be deemed correct that it was the first time, when the spectral image of the "superperfect energy" was recorded [6,25].

The inner surface of the left forearm was irradiated with yellow light during 10 minutes through the mininano microscope sensor and optical fiber cable (Figure 7).

We showed during the experiment that the wave leaving the lower glass plate passes through the air into the upper glass plate and "revives there in the form of normal, not decaying, wave, though with lower amplitude (when the width of air layer is lesser than the wave length).

This is the quantum tunnelling. It's also worth noting that the light passage into the integral organism is made possible by the perspiration system with the complete regeneration of the initial wave, thanks to action of erythrocytes as optical resonators, enhancing the light passing through them. The similar effects in physics of semiconductor heterostructures were described as far back as in 70s of the past century under the name of resonance tunneling (Leo Esaki, the Nobel prize winner of 1973, contributed a lot to such research). However, they haven't been observed in optics until now [6].

It worth noting that IR spectra of all experimental researches, contain by their form the same elements as the spectral images of the uniform energy shown on Figure 6, though during the experiments

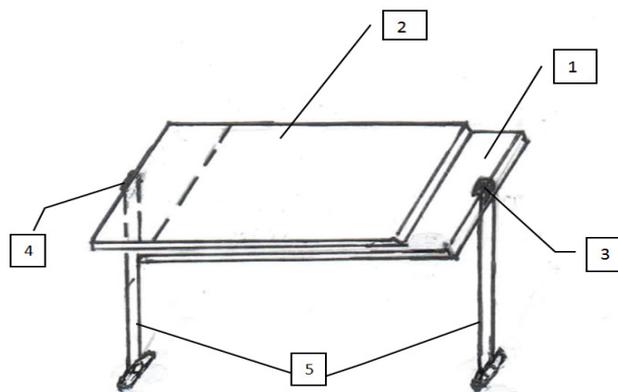


Figure 7: Mini nano microscope sensor for supramolecular information exchange between the integral organism and biosphere on the skin surface.

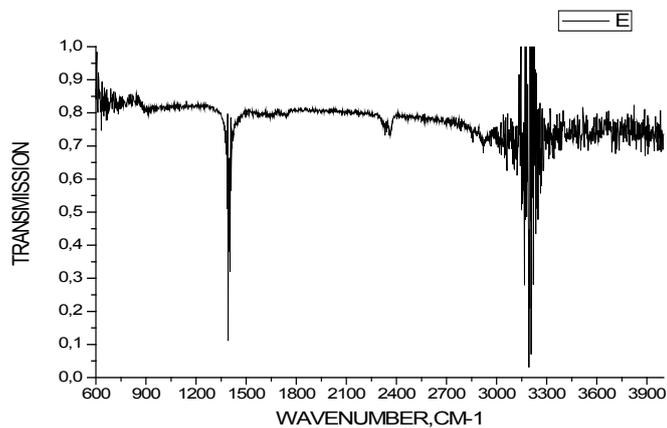


Figure 8: Spectral image of the uniform "super perfect energy" recorded with mini nano microscope sensor.

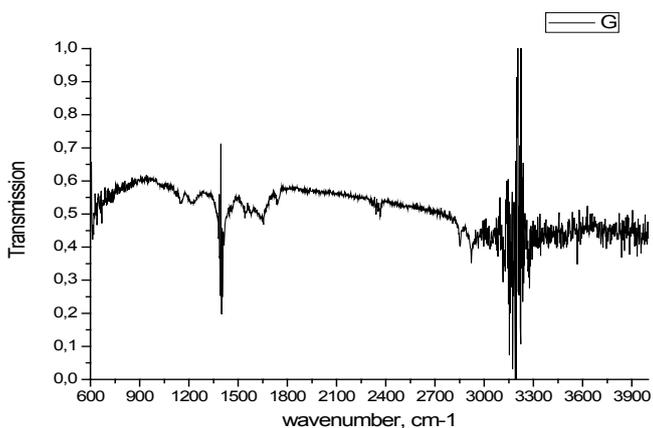


Figure 9: Spectral biopsy of blood from the inner surface of the right forearm after its irradiation with yellow light during 10 minutes.

shown on Figures 1-4, we used the source of yellow light with a radiation range of 11 cm, while during the experiments shown on Figures 6 and 7 – source of yellow light with radiation range of 2 cm. This supports our concept of existence of the uniform "superperfect energy of the Universe" - energy of the existence. That is to say - a man in the biosphere according to Vernadsky (Figures 1-9).

The thought can't emerge in a brain as the information of the internal world of the integral organism is transmitted with the help of perspiration system to the biosphere, where the "thought" and its implementation program for the brain are instantaneously generated. This happens simultaneously and for this reason a man can't determine the place, where the thought is generated at the ultrahigh speed. The place of thought generation has a global significance for the diagnostics and identification of the disease stage and treatment adjustment.

The brain, in its turn can't instantaneously and simultaneously transmit information on the generated thought and its implementation to each cell of the integral organism, as the nervous system is not designed to perform such function.

"The genius of V. Vernadsky as a founder of biosphere science, being the naturalist base of noosphere concept, consists in the fact that he was the first who understood and substantiated with an aggregate of scientific knowledge the unity of a man and the biosphere. This greatest discovery of V. Vernadsky is referred by its social consequences to the top achievements of the global natural science, to imperishable gains of contemporary and future human civilization.

The noosphere concept can't be created and its essence can't be understood without it now.

CONCLUSION

The above gave us the right to determine the unique nature and great prospects of the global science development in our conclusions:

1. There are grounds to assert the existence of the uniform "superperfect energy" in the whole Universe by the will of God.
2. The spectral image of the "superperfect energy" of the Universe as material substance of existence was recorded for the first time.
3. A "thought" is generated in the biosphere, contributing to regular cyclic development of the human civilization.
4. There is feed forward and feedback between the cardiovascular system of a man and the biosphere (thanks to insensible perspiration) for the transfer to it of a bioenergy property at the supramolecular level of the integral organism of an individual and as a result of a "thought" generation with its implementation "program" in brain – superperfect "analyzing and implementing organ".
5. There are great prospects for application in diagnostics and treatment of diseases by the "Energy of Planets", i.e. "planetary diagnostics" and "planetary therapy".

REFERENCES

1. Akimov AE, Shipov GI. Torsion fields and their experimental manifestations. 1996;1:28-43.
2. Andryushin E. Power of nanotechnologies: Science & business. Uspekhi Fizicheskikh Nauk. 2007;1-159.
3. Aldersons AA. Mechanism of electrodermal reactions. Riga: Zinatne. 1985;1-130.
4. Savinov VA, Samokhvalov EG. Energosistema cheloveka. Moskva: Asklepeion. 1997;Pp48.
5. Gorbunov DS, Rubakov VA. Introduction into the theory of early Universe. Hot big bang theory. Moskva. 2006.
6. Bitsoev VD. New approach in investigating the role of interaction between the organism and physical factors in complex patient therapy. Open Access Library Journal. 2016;3:1-12.
7. Makarovich BA. The nature of the time: hypothesis on emergence and physical nature of the time. AST. Astrel. 2002.
8. Nemtsov VI, Aleksandrov RA, Korotkov KG. European and eastern concepts of holistic medicine and prospects of gas-discharge imaging.
9. Vernadsky VI. Scientific thought as a planetary phenomenon. Dubna: Phoenix. 1997;303-538.
10. Vernadsky VI. Biosphere and noosphere. Moscow. Iris-press. 2004;1-576.
11. Volkov ES, Vlyalko VI. Electricity at service of health. K: Zdorovya. 1989;1-88.
12. Goncharenko AI. Zakonomernosti i mekhanizm selektivno-regionarnogo krovotoka [Common factors and mechanism of selective and regional blood flow]. 13th Congress of Pavlov Russian Society of Physiology. 1979;2:170.
13. Bogolyubov VM, Ponomarenko GN. General physiotherapy. SLP publication. 1997;1-480.
14. Gordetsov AS. Infrared spectroscopy of biologic liquids and tissues. Modern technologies in medicine. 2010;2: 84-98.

15. Rabinovich MI, Trubetskov DI. Introduction into the theory of oscillations and waves. Research and Publishing Center. 2000;1-560.
16. Ulaschik VS. Analytical reviews of general physiotherapy. Minsk, Nauka i tekhnika Publication. 1994;1-198.
17. Batanov GM, Bolotovskiy BM, Grigoryan SS, Kossyi IA, Sokolov IV. To the memory of G.A. Askaryan. Wydawnictwo Znak Publication. 1998;1-136.
18. Orzheshkovskiy VV. Clinical physiotherapy. K Zdorovya Publication. 1985;1-446.
19. Sosnina IN. Clinical physiotherapy. K. Zdorovya Publication. 1996;1-622.
20. Betsky OV, Goalant MB, Devyatkov ND. Low intensity millimeter waves in medicine and biology. Crit Rev Biomed Eng. 1988;28:247-68.
21. Bitsoev VD. System of rehabilitation treatment of degenerative and dystrophic lesions of spinal cord. Abstract of thesis of Doctor of Medicine, Moscow. 2012;1-40.
22. Ukhtomskiy AA. Theory of dominant. Collected works. 1950.
23. Lisa R. Knocking on Heaven's door: How physics and scientific thinking illuminate the universe and the modern world. Alpina non-fiction Publication. 2014;1-518.
24. Einstein A. Evolution of Physics. Simon & Schuster. Touchstone. 1967;1-336.
25. Len JM. Supramolecular chemistry: Concepts and perspectives. Wiley-VCH. 1995.