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CHAPTER-I BIOPHYSICAL BASIS OF FUNCTIONAL VEGETOLOGY AND TRADITIONAL CHZHEN -TSZYU THERAPY



LECTURE-1 (1-st problem of functional vegetation)

MAKATS V.G.

LEGAL BASIS OF THE TRAINING PROGRAM BASIS OF "FUNCTIONAL VEGETOLOGY - VEGETATIVE CHZHEN-SZYU THERAPY"

Expert of the highest level of the National Academy of Sciences of Ukraine,
Doctor of Medical Sciences, Professor (European Center for Postgraduate Education,
PA "Ukrainian National Academy of Natural Sciences").

The distance course of lectures on the innovative direction "Fundamentals of functional vegetology (vegetative Chzhen-tszyu therapy)" is recommended for students of medical schools based on the decisions: of the Academic Council of the Ministry of Health of Ukraine, the conclusions of scientific seminars (conducted on behalf of the Department of Science and Technology of the Ministry of Education and Science of Ukraine No13/5-100) and reviews of leading experts on the problems of oriental therapeutic philosophy and the solution...

The "Functional-vegetative human system" discovered in Ukraine (a biophysical analogue of Chinese acupuncture), turned out to be "an unknown vegetative link in classical physiology". She experimentally confirmed the reality and vegetative orientation of "acupuncture channels", revealed the mistakes of traditional Zhen-chiu therapy and requires its place in modern vegetation. The Academic Council of the Vinnitsa branch of the State Enterprise "Ukrainian Research Institute of Medicine of Transport of the Ministry of Health of Ukraine (Protocol No.1 dated 01.04.2020) recommends for publication in international electronic journals of the branch" Modern Rehabilitation Technologies "a distance course of lectures on the innovative direction" Fundamentals of Functional Vegetation - Vegetative tszyu therapy".

The legal basis for the distance education program. The proposed educational program is the final stage:

- State program "Two-stage system of rehabilitation of vegetative disorders in children living in the zone of radiation (environmental) control of Ukraine" (carried out on behalf of the Cabinet of Ministers of Ukraine No. 1861/4 and No. 12010/87;
- Implementation of the decision of the Government Commission for the elimination of the consequences of the Chernobyl accident No. 567 (5211-P0 dated 05/12/1989, on the introduction of means of vegetative diagnostics and bioactivation rehabilitation of injured children (Moscow);
- implementation of the decision of the Verkhovna Rada of Ukraine Commission on Biomedical Problems of the Chernobyl Catastrophe No. 06-10/424 dated 06.04.1994r;
- implementation of the decision of the joint meeting of the RPK MH of Ukraine No 1.08-01 dated January 11,1994...

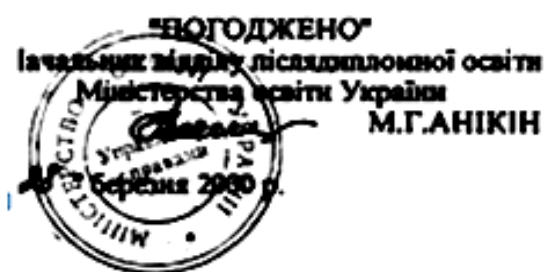
Its expediency coincides with the following information from WHO...

1) "Electro-acupuncture diagnostics and reflexotherapy" should become one of the foundations of medicine (WHO International Meeting, Yerevan, 2003) "...

2) "The V-th Congress of WHO officially announced their registration with the UN as a world resource for preserving the life and health of society (11/16/2010)"...

3) "At the World Health Assembly (January 11, 2014), WHO announced a strategy in the field of complementary medicine for 2014-2033 and appealed to the participating States with a recommendation to adapt it to National Health Programs" ... Therefore, our information is addressed to scientists of the relevant profile (primarily classical physiologists), medical students, specialists in traditional Zhen-chiu therapy and general practitioners...

The curriculum is coordinated with the Department of Postgraduate Education and the Scientific and Methodological Center for Higher Education of the Ministry of Education and Science of Ukraine.



Specificity of the program: in connection with the Chernobyl accident and its consequences for the child population of Ukraine, the implementation of the program is not limited in time...

The rosette of the curriculum and its interpretation during 1980-2021 are presented in the author's interpretation and are waiting for their followers. We will not enter into disputes and "prove something" (in the published volumes, everything is clear to us and does not raise doubts). But foreseeing the inevitable "correction of the traditional ideas" of the "old school" specialists, we note the following:

1. The theoretical basis of Eastern Zhen-chiu therapy is wrong ...

2. The hypothetical "acupuncture channels" and their functionally active zones (FAZ) are biophysically real and turned out to be a lost vegetative link in classical physiology ...

3. The published materials are biophysically determined, statistically reliable and available for any control (over 18,000 observations) ...

In order to disseminate previously unknown knowledge, the European Center for Postgraduate Education of Physicians (PA "Ukrainian National Academy of Natural Sciences") is working, electronic scientific journals "Modern Rehabilitation Technologies" (ISSN 2518-1904) and "Contemporary Rehabilitation Technologies" (ISSN 2523-4129). Eight modern monographs in Ukrainian, English and Russian were published (2015-2021) ... At the same time, we positively perceive any information that draws public attention to modern problems of Western "functional vegetation" and Eastern Chzhen-tszyu therapy (CTT).

And the last thing. In Ukraine, acupuncture is recognized as a medical specialty and

introduced into the curricula of the State Postgraduate Education. We train "reflexotherapists" on the basis of archaic theories and scientifically dubious practices that we do not understand ... At the same time, the "Functional-vegetative human system" claims to be a "lost biophysical link" between the autonomic nervous system and EM factors of the external and internal environment. Its discovery will sooner or later be in the center of attention of classical systemic physiology and will determine the revision of the rehabilitation canons, built on the principles of "Newtonian mechanics"... It remains to be hoped that the information published by us will attract the attention of the scientific community and will motivate further scientific searches under the Program "The information medicine of the future is the only way to survive." Today, other possibilities of "Functional Vegetology" remain unknown, about which it is still impractical to talk...

1.1. FOREWORD TO THE LECTURES ON THE "FUNCTIONAL PROGRAM VEGETOLOGY - VEGETATIVE CHZHEN-TSZYU THERAPY".

*FIND OUT THE TRUTH ... IT WILL MAKE YOU FREE ...
AND WILL INCREASE YOUR SORROW ... (ECCLESIASTES)*

**Best regards to our Chinese Teachers for
saved Knowledge of previous civilizations!**

The concept and the current state of Western therapeutic philosophy ... In the practical medicine of the last century, predominant importance was given to pharmacological drugs, which led to a negative attitude towards philosophy and the means of traditional oriental therapy. But recently, more and more therapeutic specialists began to note not only the stabilization of the consequences of drug therapy, but also a decrease in its clinical effectiveness, which indicates that the direction has been exhausted. Recently, academician A. Ugolev in his book "Natural technologies of biological systems" showed: "Among the medicinal substances there are not and cannot be those that would not cause side effects in biological systems." Therefore, it is not surprising that the insufficiently substantiated and uncontrolled use of chemotherapeutic drugs has led to a significant increase in functional autonomic and allergic complications, which forces us to look for new directions in solving the problems of practical health care of the child population of Ukraine. At the same time, the "ridiculous medical reforms" (2015-2021), which were initiated by previous administrations and continue to be implemented by the current Ministry of Health of Ukraine, determine a negative reality for the future of its population ...

В исторической практике здравоохранении существовали три терапевтических направления, которые по разным причинам не могут считаться функционально завершенным:

1) *Extreme therapy* (surgery, traumatology, disaster medicine), where the criterion of expediency is the need to immediately eliminate the causes that threaten the existence of the biological system. At the same time, if the expediency of the extreme intervention was not in doubt, then its consequences in many cases determined the following functional pathology (or disability) and remained without further attention...

2) *Clinical (syndromic) therapy*, where the need for urgent pharmacological elimina-

tion of the factor of outpatient (inpatient) treatment - "pain syndrome" prevails. It is clear that after his "elimination" the provision of medical care was considered "completed"...

3) *Rehabilitation therapy*, which declares the desire to reduce (eliminate) functionally dependent "therapeutic consequences". But where, what, how and whom are we rehabilitating (leave the question without comment)? ...

Today, the problem of functional autonomic disorders in the child population of Ukraine requires close attention. Therefore, we once again raise the issue of the possibilities of "Functional Vegetology", which is supported by the Instructions of the Cabinet of Ministers of Ukraine No. 12010/87 and at the same time is "successfully ignored" by its Ministries of Education and Health ... independently aimed at eliminating functional disorders. Therefore, the efforts of specialists should be aimed at restoring and maintaining its performance and activating adaptation mechanisms. Only under such conditions will the process of vegetative recovery become real.

Today, the basis of the previously unknown "Functional vegetology" is "Bioactivation" and "Functional vegetative diagnostics" - officially recognized directions based on the use of the ability of biological systems to generate weak currents. The active factor of bioactivation therapy (directed flow of free electrons, its transport activity, distribution and redistribution) is natural, individual and refers to physical (electro-magnetic) factors of low intensity. This, in particular, is evidenced by the voltage value in the external "bioelectronic circuit" (0.03-0.6 V), which is comparable with membrane potentials.

Today it is known that any biological object is a natural generator and is able to become a source of "directed (!) Energy". For this, as it turned out, only three components are needed: a biological object (a generator of natural energy); relatively chemically inert galvanic electrodes (donors and acceptors of free electrons); and conditions that form an externally controlled part of the bioelectric circuit.

The first systematic research on bioactivation therapy was initiated at the Bioenergy Central Scientific Research Laboratory of the Vinnitsa branch of the Scientific and Commercial Medical Center under the USSR, Academy of Medical Sciences, continued at the Ukrainian Research Center "Nadezhda" and the Vinnitsa branch of the state enterprise "Ukrainian Research Institute of Transport Medicine, Ministry of Health of Ukraine". Here, for the first time, previously unknown biophysical phenomena were discovered, studied and used in rehabilitation practice, which led to the development of "Functional Vegetology". The results of laboratory studies and clinical observations have confirmed the feasibility and prospects of using the direction in complex conservative therapy and rehabilitation of functional disorders. Due to the ease of use, economy, individuality of the acting factor, its diagnostic and rehabilitation efficiency, the developed means of control and influence attracted the attention of specialists, began to be introduced into inpatient, outpatient and sanatorium-resort practice, gradually transforming into an unknown "Functional Vegetation"... At the same time, it is noted that the open "Functional-vegetative human system" turned out to be a biophysical analogue of hypothetical "acupuncture channels (meridians)" and the basis of the eastern Chzhen-tszyu therapy (CTT) with its 5000-year history, which attract attention. Let us recall its fundamental provisions (problems)...

The problem of historical information about ZhTsT (cited by I.V. Shumov). Ac-

According to archival sources, acupuncture in China originated in the III-II centuries BC. (but London has an ancient Egyptian "Ebers papyrus" dated 1550 BC, with acupuncture points marked!). The emergence and development of theories in the field of "Chinese medicine" is attributed to the reign of the Han Dynasty (approximately II century BC - II century AD). Was developed "anatomical and physiological model" of man, built on analogies and agreed with the concept of philosophy and religion of Taoism. The book "Tu-Gensh-Xue-Zhenjie" (1026; atlas of points of a bronze man) was written, where methods of finding points of influence on the body were described. An outstanding scientist of that time, Wang-Wei-yi, painted 600 points known at that time on a bronze model of a human figure. Many ancient Chinese chronicles tell about the "yellow emperor" Huang-di (end of the reign of 2598 BC), who taught people to treat acupuncture (according to other sources, it was known even during the time of the Chinese emperor Fu-Xi (about 3000 BC? and as archeology shows before it). Archival sources cite five legendary rulers of China, related to the history of Chzhen-tszyu therapy: Baos (another name Fu-si; yy 2852-2737; Shen-nong (yy 2736-2699) Huang-di (yy 2698-2598); Yao (yy 2357-2255); Shun (yy 2255-2205).

The first information about acupuncture in Europe appeared in the 13th century, when the Portuguese Fernando Mendez Pinto (1618) visited Japan and was the first to master acupuncture. In 1671r. missionary (Jesuit) Harvey published in Grenoble the book "Secrets of Chinese Medicine" and after several unsuccessful attempts, acupuncture was recognized in France on the initiative of Georges Soul de Mora (1934). In Russia, it was first used by P. Charukovsky (1828) a professor at the Medical and Surgical Academy, who noted a positive therapeutic effect in rheumatism and lumboischialgia. Then came the works of A.Ya.Violin and V.V.Korsakov (1901-1903). The growth of interest in acupuncture in the USSR began in 1959.

The problem of hypothetical "acupuncture channels" (meridians). Like their predecessors, modern Teachers and followers of traditional Zhen-chiu therapy use 12 paired meridians in practice, although they note their "conventionality and relativity". So, at the request of the scientists of Loma Linda University (who lived in China and studied this topic) to show them the meridians on the human body, the reaction of the amazed Chinese Teachers was unambiguous: "How can we do this? After all, acupuncture points and their meridians are conditional?"... At the same time, some experimental studies have long been known, indicate the possibility of a functional connection between single-channel acupuncture points. Information has been published that sensory reactions occurring during acupuncture (Ji Zhongpu, 1981), electric current (V.Makats, 1984), visible electromagnetic waves (V.Kaznacheev et al., 1985), radioactive isotopes (P. De Vernejoul P. et al., 1985) and the like. Unfortunately, few people were interested in this... A question arises about their biophysical and functional reality?

The problem of the hypothetical "QI Energy". According to the ancient "barefoot doctors", the disease occurs when the energetic YANG-YIN balance between the body systems is disturbed due to the hypothetical energy of the cosmos (QI). To achieve energy balance, the so-called "folk methods" were used: piercing (acupuncture), pressure (acu-pressure) and cauterization of individual "acupuncture points". It seemed that the energy of the cosmos passes through conditional channels (meridians) to individual "12 organs"

of a person. Accordingly, their disease was considered as a local or generalized violation of the harmonious circulation of QI and blood through separate "imaginary acupuncture channels" (meridians). In other words, "the meridians were recognized as the trajectory of the directed movement of the QI energy along the human skin from one acupuncture point to another." The Chinese believed that the QI energy penetrates a person and comes close to the surface of the body at 365 points (the so-called Marma points)... A question arises about its field nature, biophysical reality and functional purpose?

Today we can confidently assert the following:

1. We have received universal information from previous civilizations about the unknown vegetative essence of living things, which has remained incomprehensible to the modern adepts of the CTT and their followers ...

2. The theoretical basis of the modern biophysical CTT is not supported, and its empirical provisions turned out to be incomprehensible and should not be used in clinical practice...

3. The hypothetical concepts of the traditional therapeutic philosophy Wu-hsing, Zhang-fu, the biological clock, the mysterious "Miraculous meridians" and much more remained fundamentally doubtful. And the reality of the Ching-Luo position (the theory of "acupuncture channels and acupuncture points") is generally denied by the authors of traditional Chinese Chzhen-tszyu therapy! The questions about the functional orientation of ZhTsT remained unclear, and the lack of scientifically substantiated support and today causes controversial problems. At the same time, despite unresolved problematic issues, the traditional ZhTsT (supported by WHO) in Ukraine is recognized as a medical specialty and introduced into the curricula of state postgraduate education (we train "reflexotherapists" on the basis of hypothetical theories we do not understand and unacceptable scientifically dubious practices). Nevertheless, we positively perceive the official statements of the WHO, which allow to draw the attention of the scientific community to the problems of Chinese ZhTsT (including the Ukrainian "Functional Vegetology"), and the lack of scientifically substantiated support is still causing controversial problems. At the same time, despite unresolved problematic issues, the traditional CTT (supported by WHO) in Ukraine is recognized as a medical specialty and introduced into the curricula of state postgraduate education (we train "reflexotherapists" on the basis of hypothetical theories we do not understand and unacceptable scientifically dubious practices).

- 1) At the International Meeting (Yerevan, 2003), WHO officially declared: "Electropuncture diagnostics and reflexotherapy should become one of the foundations of medicine ...

- 2) "The V-th Congress of the WHO officially announced the registration of the CCT in the UN as a world resource for preserving the life and health of society (16.11.2010)" ...

- 3) At the World Health Assembly, WHO announced the strategy in the field of complementary medicine for 2014-2033 and appealed to the participating States with a recommendation to adapt it to National Health Programs (11.01.2014)"...

A detailed study of the theoretical and practical provisions of Eastern Chzhen-tszyu therapy led to shocking conclusions. The information about "acupuncture" received from previous civilizations (Teachers) has remained incomprehensible to this day and prompted our research group to deal with its problems for many years (1975-2021). Long-

term studies were carried out in three interdependent areas: Bioactivation therapy and vegetative rehabilitation, functional age vegetation and functional ecological expertise. Scientific research has revealed theoretical and practical differences between the Ukrainian and Chinese (under the auspices of the WHO) CTT-schools. They are:

1) previously unknown "Functional-vegetative human system" - a biophysical analogue of the "acupuncture channels" of the traditional CTT...;

2) "Functional vegetative diagnostics without the use of external sources of current", which identified "acupuncture channels", their vegetative essence, complex organization and proved the inexpediency of the "electropunctural diagnostics" recommended by WHO ...;

3) "Vegetative Matrix of Systemic Dependence" (the theoretical basis of functional vegetative pathogenesis), which discovered CTT errors), combined Eastern therapeutic philosophy with Western evidence-based medicine and was officially hushed up... At the same time, the "Functional vegetative human system" (Functional vegetology) claims to be the place of the "lost biophysical link" between the autonomic nervous system and EM-factors of the external and internal environment. Its discovery will sooner or later be in the center of attention of classical systemic physiology and will cause the revision of the rehabilitation canons, built on the principles of "Newtonian mechanics"...

We published the information (2000-2021) about the biophysical reality of the "Functional-vegetative system" opened in Ukraine, positively assessed by leading experts, international scientific seminars and recommended for implementation into the public health and education system by order of the Cabinet of Ministers of Ukraine No 1861/4 and No 12010/87... In order to disseminate previously unknown knowledge, the European Center for Postgraduate Education of Physicians (PO "Ukrainian National Academy of Natural Science") is working, electronic international scientific journals "Modern Rehabilitation Technologies" (ISSN 2518-1904) and "Contemporary Rehabilitation Technologies" (ISSN 2523-4129) are published... Ten modern monographs in Ukrainian, English and Russian have been published (2015-2021)...

The previously unknown "Functional-vegetative human system" (the basis of "Information medicine of the future") was discovered, which is due to the electromagnetic identity of the external and internal environment of biological systems... Research conducted in Ukraine on the problem "Fundamentals of functional vegetation" include the following sections.

- 1) Electromagnetic (EM) fields as the basis of living...;
- 2) Functional vegetative diagnostics...;
- 3) Identification of acupuncture channels...;
- 4) Systemic reactions and their interdependence...;
- 5) Biophysical reality of functional complexes and their vegetative orientation...;
- 6) Biophysical reality of the "vegetative Matrix", matrix keys and matrix complexes...;
- 7) Daily vegetative biorhythms...;
- 8) Principles of Functional-vegetative pathogenesis...;
- 9) Electromagnetic basis of vegetative rehabilitation...;
- 10) Vegetative atlas of functionally active zones...

Hope remains that the published information will attract the attention of the scien-

tific community and will motivate further scientific research under the Program "Information Medicine of the Future - the Only Way to Survival"...

ОТЗЫВЫ ВЕДУЩИХ СПЕЦИАЛИСТОВ ПО РАЗРАБОТК НАПРАВЛЕНИЯМ



ZILOV V.G. - Academician of the Russian Academy of Sciences, Doctor of Medical Sciences, Professor (Department of "Integrative Medicine" of the 1st Moscow State Medical University named after IM Sechenov, Ministry of Health of the Russian Federation)... *Review of the monograph V.G.Makats. (et al.) Fundamentals of Functional Vegetology (Unknown Chinese Acupuncture). Vol.V // Ukraine, Scientific Initiative, NILAN LTD, 2018, 152 c., ISBN 978617 -7706-69-3*

The growing interest of practitioners in non-traditional therapeutic agents urgently requires the study of their therapeutic mechanisms. These include, in particular, the method of Chzhen-tsyu therapy - acupuncture (reflexology). Unfortunately, the explanation of the healing mechanisms of acupuncture by medical specialists from the standpoint of "the five elements, meridians, Chi energy, etc." do not satisfy European doctors. Individual studies on the role of the autonomic nervous system, endocrine factors, and immune mechanisms are far from creating a complete picture of the healing mechanisms of acupuncture. In this regard, we can only welcome the desire of the authors of the "Functional-vegetative human system" to identify the biophysical reality of hypothetical "acupuncture channels", their vegetative essence and functional consistency. The paper provides data on the identification of acupuncture channels and their direct relation to autonomic homeostasis. The authors discovered a systemic functional-vegetative dependence of "traditional channels" and developed age-specific standards for functional vegetative diagnostics using acupuncture points. On the basis of vegetative coefficients, the levels of vegetative activation were developed with their subsequent correction (Diploma for opening from 07.11.2000. "Functional energy system of biological objects"). In this work, theoretical and practical errors of traditional Chen-chiu therapy are experimentally proved. The "Vegetative Matrix" is presented, which is the theoretical basis of functional vegetology, as well as Matrix vegetative keys, which, according to the authors, are biophysical analogs of "miraculous channels (meridians)". The developed methodology for identifying "acupuncture channels" transforms the hypothetical Chinese Chen-chiu therapy into a biophysically evidence-based clinical discipline, for the first time brings together the concepts of Eastern and Western therapeutic philosophies and claims its place in systemic physiology.



VASILENKO A.M. – Doctor of Medical Sciences, Professor, Editor-in-Chief of the International Journal of Reflexology and Complementary Medicine, RF... *Review of the monograph V. Makats, E. Makats Unknown Chinese acupuncture (reality, mistakes, problems) Volume I // Ukraine, Scientific Initiative, NILAN LTD, 2016, 276C. ISBN 978-966-924-315-7*

...On the basis of a critical analysis of the existing theoretical basis of traditional Chen-chiu therapy and the results of their own research, the authors discovered the "Functional-vegetative human system". It allowed for the first time to identify hypothetical "acupuncture channels", biophysically prove their vegetative essence and consis-

cy. *The universal consistency and completeness of the open system testifies to the reality of Eastern therapeutic philosophy and reconciles the epistemological positions of traditional Chinese and modern Western medicine...*

In general, the reviewed book will undoubtedly serve the conflict-free existence of traditional Chinese medicine and the technologies developed on its basis for influencing the exteroceptive zones of the skin. Such a WHO-sponsored course will ensure the survival and further development of both directions to ensure a holistic person bath approach in healthcare.



GLIKMAN E.A. – Doctor of Medical Sciences, Professor, Honorary Scientist of Europe, Academician of the European Academy of Natural Sciences, President of the International Academy of Acupuncture. RF...

Review of the monograph V.G. Makats. (et al.) Fundamentals of Functional Vegetology (Unknown Chinese Acupuncture). Vol. V // Ukraine, Scientific Initiative, edited by Nilan LTD, 2018, 152 c., ISBN 978617-7706-69-3

Professor Makats V.G. and his co-authors (Ukraine) are known for their many years of research in the field of modern scientific and practical problems of Zhen-chiu therapy. They have published over 30 books in Russian, Ukrainian and English. Information about the latest of them, published by the Vinnitsa publishing house "Scientific Initiative" (edition Nilan LTD, 2018, ISBN 978-617-7706-69-3), readers can get from the presented short review...

The experimental material of the monograph and its analytical review are of professional interest. A lot of useful work has been done to verify the fundamental provisions of traditional medicine and their fairly complete analysis. The functional-vegetative system, which was discovered and interpreted by Ukrainian scientists, is the most important system, that connects the body into a single whole. Experimental verification of its main provisions (primarily the biophysical reality of "acupuncture channels" and their systemic dependence) showed that many systemic interactions do not correspond to the truth. With this, the team of authors made a great contribution as a researcher of oriental medicine. There is no doubt about the author's position that traditional oriental knowledge should become understandable through their scientific adaptation to evidence-based medicine. I consider it useful that all "reflexologists" and doctors of other profiles are familiar with this information. Based on the research conducted, guidelines should be published and a popular book published, because interest in oriental medicine is constantly growing...



NAGAYCHUK V.I. - expert of the highest level of the National Academy of Sciences of Ukraine, Doctor of Medical Sciences, Professor of the Department of General Surgery of Vinnitsa National Medical University named after N.I. Pirogova (Head of the Clinical Center for Thermal Trauma and Plastic Surgery)...

Feedback on the rehabilitation effectiveness of "Bioactivation" and "Functional vegetative diagnostics" in the burn clinic [38-44].

The developed directions of "bioactivation (BA)" and "Functional vegetative diagnostics" (by the method of prof. V.G. Makats) underwent long-term approbation in the conditions: of the Vinnytsia burn clinic, the burn center of the Kiev Research Institute of

Hematology and Blood Transfusion of the Ministry of Health of Ukraine and during the elimination of the consequences of the explosion of a product pipeline in the BASSR (our group worked there on the call of the Ministry of Health of the RSFSR, 1986). On behalf of the Cabinet of Ministers of Ukraine No. 12010/87, the Program "Two-stage system of rehabilitation of autonomic disorders in children affected by burn injury" was developed and implemented. To date, according to the results of the developed directions in burn practice, two doctoral and four candidate dissertations have been defended. This indicates the urgency of the problem raised, which is determined by the severity of the condition of patients with burns and frostbites, critical autonomic disorders, the duration of treatment, complications and high disability and mortality. At the same time, it is necessary to pay attention to the unsatisfactory results of conservative and surgical therapy and the lack of sufficient financial support from state structures...

Клиническая "биоактивации" термически поврежденной поверхности обеспечила высокую эффективность хирургической терапии на 2-3 сутки после тяжёлых обморожений и сохраняла жизнь пострадавшим от сверхкритических ожогов. The use of functional autonomic diagnostics (FVD) put under clinical control the sympathetic and parasympathetic orientation of autonomic homeostasis, the functional activity of individual body systems and the course of reparative processes in a thermal wound. The therapeutic and rehabilitative efficacy of "bioactivation" in burn practice has been proven using the "Parmokvant-2" device by "Karl-Zeiss-Jena" (Germany), according to the method of V.A. Baronenko. It is noted that after "bioactivation" for 40 minutes electrophoretic mobility of erythrocytes (EME) increased by 18%, which indicated an improvement in microcirculation in severely burned wounds. The introduction of strophanthin (10-5M) into the blood sample after the bioactivation inhibited EME, which indicated the normalization of the function of membrane potassium-sodium pumps. An increase in skin resistance after AD indicated the accumulation of charge carriers on the outer and inner membranes of cells, and an increase in its fluorescence in polarized light indicated the ordering of macromolecules with biosubstrates, an improvement in the course of the wound process, and the engraftment of transplanted grafts. At the same time, the antitoxic and antimicrobial effect of BA was experimentally proven in the colonies of hemolytic staphylococcus... BA of burn convalescents made it possible to accelerate the maturation of scars by 5-6 months, improve the functions of the musculoskeletal system and ensure significant elimination of burn contractures in 50% of patients (versus 35% without BA) and halve the number of unsatisfactory consequences. Thus, information about the clinical and rehabilitative effectiveness of BA and FVD will be useful to scientists, doctors, students of medical schools and cadets of the postgraduate education system.



POTAPOV A.I. - Corresponding Member Academy of Medical Sciences of the USSR, Doctor of Medical Sciences, Professor. Minister of the Ministry of Health of the RSFSR. *Feedback on the effectiveness of the rehabilitation direction "Bioactivation without the use of external current sources" in the elimination of the consequences of the explosion of a product pipeline in the BASSR (No 086/105 dated 04.16.86, * 025657)*

Devices of the VITA-01M type, operating without the use of external power sources and the author's means of "bioactivation" (V.G. Makats, V.I. Nagaychuk, Ukraine) were

used in medical institutions of Ufa in the complex therapy of patients with burn injuries, which arose in as a result of the explosion of the product pipeline in BARSR. Its use accelerated the removal of patients from a state of shock, had a pronounced analgesic effect, improved local blood circulation, accelerated the rejection of necrotic areas, stimulated tissue regeneration, bowel and bladder function during development after burn paresis, as a result of which the terms of rehabilitation of the burn surface were shortened. Additional studies carried out at the Bashkir State University and the Bashkir Medical Institute to determine the effectiveness of the method and the conclusions of the expert commission on the assessment of new means of diagnostics and treatment of burn patients of the Ministry of Health of the RSFSR confirmed the expediency of its widespread use. The author is encouraged to publish the relevant guidelines.



KURYK M.V. - expert of the highest level of the National Academy of Sciences of Ukraine, professor, Ph.D. sciences. Director of the Ukrainian Institute of Human Ecology... *Review of the monograph by V.G. Makats (et al.) Vegetative Atlas of the functional health of the child population of Ukraine. Volume-4 // Ukraine, Nilan LTD, 2013, 496 S., ISBN 978-966-2770-96-4*

For the first time, to assess the radiation (environmental) pollution of the regions of Ukraine, it is proposed to use the "Levels of functional and vegetative health of the child population". Attention is focused on the "endoeology" of children, which determines their functional health and requires a systematic vegetative clinical examination ... State programs for dosimetric and thyroid dosimetric examination of settlements are aimed at "minimizing the budgetary costs of modern official Ukraine." They do not give an answer to the main question: what is the threat of the radiation components of integral environmental pollution to the functional health of the child population (its Genepool)?

The conclusion about the significance of the "Functional-ecological expertise" as a component of radiation monitoring, which indicates the need for vegetative prophylactic medical examination of children, deserves official support. There are no analogues of this work. The problem deserves attention and concerns the preservation of the Gene pool of Ukraine...

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Zvenigorodsky E.L. - Doctor of Philosophy, Associate Professor at the University of Toronto (Canada);

Krusir G.V. - Doctor of Technical Sciences, Professor (Odessa National Academy of Food Technologies);

Masikevich Yu.G. - Doctor of Biological Sciences, Professor (Bukovina State Medical University);

Paranyak R.P. - Doctor of Agricultural Sciences, Professor (Lviv National University of Veterinary Medicine and Biotechnology named after S. Gzhitsky).

1.2. SCIENTIFIC SEMINARS ON THE PROBLEM "FUNCTIONAL-VEGETATIVE

HUMAN SYSTEM "(CONDUCTED ON THE RECOMMENDATION OF THE MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE NO. 13/ 5-100).



19.03.1988 Scientific seminar of the Republican Center of Reflexology of the Ministry of Health of the Ukrainian SSR and the Department of Nervous Diseases No.1 of KSUV. SOLUTION: Consider "Bioactivation without the use of external current sources" a promising direction. Inform the Scientific Councils of the Ministry of Health of the Ukrainian SSR and the USSR about it.



14.12.1993 Meeting of the RPK Ministry of Health of Ukraine (Pediatrics, Obstetrics and Gynecology, Quantum Medicine, Hematology and Transfusiology, New medical equipment and diagnostic methods). DECISION. Recommend the method for complex physiotherapy and reflexology.



23.11.1981 Scientific seminar of the Moscow Central Research Institute of Reflexology, Ministry of Health of the USSR (Moscow). DECISION. The discovered "Phenomenon of directional conduction between acupuncture points" is of absolute interest and requires further targeted research.



17.09.1992 Meeting of the Academic Council of Pyatigorsk Research Institute of Balneology and Physiotherapy (Russia). SOLUTION: "Biogalvanization in physiotherapy and reflexology" forms a new direction of rehabilitation.



14.12.1993 Meeting of problem commissions of the Ministry of Health of Ukraine (Pediatrics, Obstetrics and Gynecology, Quantum Medicine, Hematology and Transfusiology, New Techniques and Diagnostic Methods). RESOLUTION: Approve the "Biodiagnostics" method. Coordinate its use with RPK MH.



25.12.1991 (Kiev). Meeting of RPK "New medical equipment and new diagnostic methods ..." (Minutes No. 5). RESOLUTION: The Commission recommends the VITATEST and VITA-01-M functional biodiagnostics computer systems for serial production.



MH RSFSR (Letter No.085/105-025567 dated 06.16.1988). Expert commissions on diagnostic and treatment tools for burn patients recommend the use of the developments of Dr. med. V.Makats (Ukraine). Minister of Health of the RSFSR, Corresponding Member of the USSR Academy of Medical Sciences, Prof. A.I. Potapov.



MH BASSR (Letter to the Ministry of Health of Ukraine No.085/165 on July 16, 1984). On behalf of the Ministry of Health of the RSFSR, the Department of Physiology of the Bashkir State University (BSU) established: Bioactivation in burn practice (according to V.G.Makats, Ukraine) normalizes the function of sodium-potassium pumps of erythrocytes, which indicates their importance in the mechanism of the developed direction (Ph.D., Prof. V.A.Baronenko).



14.10.1988. V-th National Conference on Biomedical Physics and Technology with international participation (Bulgaria, Sofia). RESOLUTION: The Conference recommends to include "Bioactivation" in the international research program in radiation biophysics ...



24.04.2005. Scientific seminar of the International Congress "Traditional medicine as a direction of human health improvement" (Alushta). RESOLUTION: The seminar considers the materials reviewed as a discovery that requires a place in medicine of the XXI century.



23-26.09.2015p. Scientific seminar of the V-th All-Ukrainian Congress of Ecologists with international participation (Vinnytsia). RESOLUTION: The scientific seminar recognizes the expediency of introducing "Functional-ecological expertise" for the purpose of ecological certification of the child population of Ukraine.

The European scientific and production consortium, the Ukrainian, European and Russian academies of natural science, the developed directions are recognized by the scientific school of prof. V.G.Makats (Ukraine, Vinnitsa) and were awarded scientific awards for their significant contribution to the development of world science. The information was included in the encyclopedias "Russian Scientific Schools" and "Outstanding Scientists of Russia".



Founder of a scientific school (RF)



The order
Labore et scientia



The order
Labore et scientia



The order
Primus
inter pares



The order
Harmony of life



Medal Academician
V. Vernadsky



Medal Alfred Nobel



Medal USSR VDNH



Medal VDNH
Ukrainian SSR



USSR inventor



Laureate of the
Central Committee of
the Komsomol Prize



Laureate of the Central
Committee of the
LKSMU Prize

The discovery of previously unknown biophysical phenomena and the discovered errors of Eastern Chzhen-tszyu therapy (CCT, acupunctura) made it possible to develop a modern concept of its vegetative essence and substantiate two innovative directions: "Fundamentals of functional vegetation" and "Fundamentals of functional-ecological expertise"...

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