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Curriculum vitae

Mikhail Nikolaevich Zhadin was born in Leningrad (now Sankt-Petersburg, Russia) in 1935. He graduated from the Department of Physics of Moscow State University in 1960. Till 1968 he worked in the Institute of Higher Nervous Activity and Neurophysiology in Moscow. From 1968 to 1991 he worked in the Institute of Biological Physics of the USSR Academy of Science in Pushchino Center for Biological Research. Since 1980 he has been the Head of the Laboratory for Neurocybernetics in this institute. Since 1991, in connection with separation of the institute into two independent institutes, he and his Laboratory have worked in the Institute of Cell Biophysics of the Russian Academy of Science. The Laboratory for Neurocybernetics of Cellular Ensembles is a scientific unit integrating work of specialists in different areas. Prof. M. Zhadin and his laboratory study fundamental laws of brain functioning. Their basic scientific achievements are the following. 1. They have developed the new theory of formation of electroencephalogram (EEG) as a sum of correlated extracellular fields of cortical neurons spreading in the conducting media of the brain [5,7,10]. The main statements of this work came into textbooks for medical students [2,3,4]. 2. They have developed the new theory of formation of rhythmic processes in electric activity in the cerebral cortex, using the basic principles of cortex arrangement and influence of subcortical structures on the cortex [6,8,10,12,1]. The theory clarified a wide variety of EEG phenomena: ontogenetic and phylogenetic distinctions in EEGs and the nature of basic EEG reactions. It is described in a textbook for medical students [4]. 3. They have developed the new approach to synaptic mechanisms of reinforcement in the cerebral cortex at learning and memory formation based on the ideas of a role of the monoaminergic systems as main links mediating the reinforcement [9,10,18]. 4. They have advanced a new concept of cortical mechanisms of multiple sclerosis and new method for diagnostics of this disease [17,19,20]. 5. They have developed the new biophysical theory for biological action of combined weak low frequency alternating and static magnetic fields [13,14,15,16, 21]. Each of the above listed elaborations is the result of many years' experimental and theoretical works and contemplations.

Prof. M. Zhadin is the author of 170 publications in Biophysics and Neurophysiology. He is performing an active educational work, being a Professor of Pushchino State University. Under his chairmanship the Symposium "Electric Activity of the Brain: Mathematical Models and Analytical Methods" has been periodically held in Pushchino since 1982. He is a member of International Commission for Electromagnetic Safety, Italy. His data are published in international biographic reference books "Outstanding Europeans of the 21-st Century", Cambridge, UK, 2001, "Who's Who in the World 2001" USA и "Who's Who in Science and Engineering 2001" USA and in Encyclopedia "The Best Peoples in Russia", v. 4, Moscow, 2005.

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