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Helio gerontology at the epoch of cosmoplanetary and climate changes

There investigated the author's hypothesis for amount of the solar activity during prenatal development of the human organism, detecting gene expression responsible for the level of metabolism and age processes that can restrict man's lifespan and, specially, at periods of cosmoplanetary and climate change. Development of each person, since the prenatal period, proceeds in continuous interaction with helio-geophysical environment, depending on individual helio-magneto sensitivity of an organism. At the 6th European Congress of International Association of Gerontology and Geriatrics in St.-Petersburg, on July 5-8th, 2007 for the first time we have designated helio-biophysical aspects of geriatrics. Discussion proceeded at the 6th European Congress on biogerontology in the Netherlands on November 30-December 3, 2008. There were shown significant differences in mean values of solar activity (Wolf number; W) on the 8th month of prenatal development in the persons of 30-50 years old ($W=88.8 \pm 12.2$). On the other hand, in the persons of 51-70 years old ($W=88.4 \pm 8.4$) as compared with the group of the elderly people of 71-90 years old ($W=32.9 \pm 3.7$) and the long living people, older than 90 years ($W+32.9 \pm 3.7$), ($P<0.05$). The pronounced group differences in prenatal helio-geophysical environment, estimated by using the computer program HELIOS. Thus, the situation most favorable for long living arises in such cases that had shown the prenatal ontogenesis that runs in conditions of minor solar activity. It supposed that rate of organism aging in case of controversial helio-physical situation (high solar activity) may increase man lifespan restrictions. There was a task in view: To develop new generation of helio-protector means for people with high helio-sensitivity and high risk of accelerated aging at increasing of sun's protons streams at conditions of geomagnetic deprivation. Such means created and patented in Russia, and they were named helio-gero-protectors (the beverages «AquaHelios», «Altin-Suu», «Heliostar»). Tests on bio-objects show high efficiency of such protectors on water and holographic basic increase in life expectancy of plants, the survival rate of flies-drosophila. It increase in level steroid hormones, anabolic processes and reduction of speed of aging estimated on relation of stable isotopes of carbon¹³C/¹²C in tissues (hair) in males-rats ($n=30$), born at high activity of Sun and using special informational light-hologram or for drink within 1 month water helio-protectors. Change of the level of isotope ¹³C in tissues (hairs), where content was detected by mass- spectrometer Delta and the vector of correlation of the decreasing or increasing of this isotope with sun's protons streams may be a new marker of rate of human aging and criteria of helio-gero-protectors efficiency. The approbation of similar water-protectors (beverages created with using new hypo geomagnetic and light-holographic devices on healthy people-volunteers ($n=116$)). These volunteers prenatal ontogenesis passed on the background of high solar activity, showed significant changes in the vector of correlation dependence of their functional parameters from many factors (streams of protons, electrons, neutrons), i.e. reduction of helio-sensitivity of an organism. There are new helio-biophysical horizons of non-medical decrease in rate of human aging designated already.

Biography

Alexander Trofimov has completed his MD (Doctor of Medicine) in 1998 from Siberian Branch of Russian Academy of Medical Sciences. During many years he was (until 2010) Chief of Laboratory of Helio-climatopathology of Scientific Center of Clinical and Experimental Medicine. From 1994 till now he is the Director of International Scientific Research Institute of Cosmic Anthropoecology. He has 7 patents, published 6 monographs and more than 65 papers in reputed journals.

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