Pyatakovich F.A., Yakunchenko T.I., Makkonen K.F. , Bulgakova O.Yu.[1], Stagnaro S[2]., Caramel S[3].

Pyatakovich F.A., professor, chair of inner diseases and clinical informational technology. Belgorod State National Exploratory University, Belgorod. Email: piatakovich@gmail.com

[1]Bulgakova O.Yu., Head of Microbiology Laboratory Municipal Health Department, Clinical Hospital №1 Belgorod.

[2] Stagnaro S., honorary President of the International Society of Quantum Biophysical Semeiotics. Home Address: via E.Piaggio, Riva Trigoso (GE) – Italy. E-mail: dottsergio@semeioticabiofisica.it

[3] Caramel S., president of the International Society of Quantum Biophysical Semeiotics (SISBQ): via Doberdò 3, Fontane di Villorba (TV) – Italy. Email: simonecaramel@yahoo.it

In 2013, Betsky O.V. and his colleagues from the Institute of Radio Engineering and Electronics, Russian Academy of Sciences had performed the studies of the Gunn diode with using a highly sensitive radiometers. These investigations showed that the crystal of gallium arsenide device «CEM TECH» of any passive or active states does not "memorizes" the spectrum of low-intensity electro-magnetic oscillations in the millimeter frequency range. The question arises: is not whether the associated positive results of the using method of the so-called BRR-therapy with a short (60 seconds) exposure of super low-intensive EHF radiation?

To answer this question were carried out this study. The design included a realization of scientific researches in Russia and Italy, and consisted of five series of experiments: 1) study of the effect on the structure of the human heart rate of reception activated water, prepared by the EHF radiation in “BRR” mode; 2) a study of the influence of short-term radiation of millimeter waves on the nonlinear dynamics of the processes of biological systems in subjects with hereditary risk of coronary heart disease and in patients with coronary heart disease (CHD), and hypertensive patients; 3) an investigation the possibility of growth of colonies of microbes using a nutrient medium prepared on the basis of distilled water and pre-irradiated by means of Gunn diode; 4) an impact of EHF irradiation on colonies of Staphylococcus and E. coli in “BRR” mode; 5) an effect of EHF radiation in “BRR” mode on staphylococci and E. coli, which are placed in a liquid medium under the cover slip.

An influence of drinking water activated by means of device «CEM TECH» on the degree of activity of the autonomic nervous system was revealed. Acceptance of such water is accompanied by the mobilization of adrenergic regulation mechanisms. Herewith during 16 hours study a moderately pronounced predominance of the sympathetic nervous system is noted.

Results were obtained, indicating that the EHF irradiation of bacterial suspension for one minute leads to the short-term disorders of motor function of E.coli and the loss of the swaying movement oscillations (Brownian) of staphylococci. In the control experiments these movements of the microbes are preserved. However, this phenomenon does not affect the subsequent growth of colonies of microbes.

An experimental data also shows that short-term impact of EHF radiation modifies the parameters of the fractal dimension of the studied biological systems, improves hemodynamic parameters of microcirculation of the coronary vessels and exerts a positive effect on the risk of coronary heart disease.

Thus, our results and the results of earlier clinical observations of different authors on the basis of the so-called “BRR” therapy, evidences about their connection with the short-term impact super low-intensity millimeter waves on the person but not with the placebo effect. Analysis of the results indicates the need to conduct in-depth studies on the effect of super-low doses of EHF influence with the revision of the paradigm of interaction with biological objects of short-term and super low-intensity millimeter waves.