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Antioxidative system of the organism and thermo-initiated chemiluminescence method for quantitative evaluation of its state

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Evolutionary stages of the development of an antioxidative system within the human organism are shortly considered and the technique for measurement of blood plasma parameters, which reflect the state of antioxidative homeostasis, based on thermo initiated chemiluminescence of azo compounds in the presence of luminol, is described. Parameters suitable for quantitative estimation of the degree of oxidative stress and the efficiency control of causal and adjuvant antioxidative therapy in the course of primary and secondary prevention of civilization illnesses are recommended. A special attention is focused on sports activities as the most accessible and effective way of achieving the specified preventive purposes.

Biography

I N Popov completed his first physics study in the field electronics at the Voronezh State University (Russia) and the second college education in the field medical biology at the Russian State Medical University in Moscow. He obtained his PhD and DSc in Medicine from Humboldt-University. He joined the faculty there in 1977, and in 1991 he established the Research Laboratory for Antioxidative Therapy. The independent Research Institute for Antioxidative Therapy was founded 1994 under his participation and a grant support of the German Federal Ministry of Research and Technology. He is the inventor of the method of the photosensitized chemiluminescence for measurement of antioxidants and the developer of the measuring instruments "Photochem[®]" and "minilum[®]". He has published 70 papers in reputed journals, 14 patents and a book entitled "Handbook of Chemiluminescent Methods in Oxidative Stress Assessment".

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