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Thermodynamics of biological evolution and aging: Supramolecular thermodynamics is a key to understanding phenomena of life. What is life from a physical chemist's viewpoint

Georgi P. Gladyshev

N. N. Semenov Institute of Chemical, Physics, Russian Academy of Sciences, Kosygina 4, Moscow, 117977, Russia, E-mail: academy@endeav.org, http://www.endeav.org/evolut

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Abstract: The law of temporal hierarchies of the biological world allows us to pick out of the biomass quasi-closed thermodynamic systems within a specific hierarchy. The use of this law of Nature as applied to supramolecular structures of organisms allows us the opportunity of using the methods of equilibrium supramolecular thermodynamics in the examination of open living systems. It has been proven that the second law of thermodynamics in its classic formulation is easy to apply to specific aspects of living systems in order to make calculations, carried out through methods of chemical, supramolecular and overall hierarchical thermodynamics.

Keywords: Second law of thermodynamics, Law of temporal hierarchies, Supramolecular thermodynamics, Biological thermodynamics, Aging.

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"One of the principal objects of theoretical research in any department of knowledge is to find the point of view from which the subject appears in its greatest simplicity."
J. Willard Gibbs (1881) [1]