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# Practical use of Amino Acids in Oncology: Replacement Therapy as a Structural Components of Proteins and/or for Correction of Metabolism in Quantities Comparative with their Endogenous Concentrations?

**Nefyodov L***

Department of Biochemistry of Yanka Kupala Grodno State University, Belarus

***Corresponding author:** L. Nefyodov Department of Biochemistry of Yanka Kupala Grodno State University, Belarus, Email: l.nefyodov@mail.ru

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## Editorial

The aim of our research is the formulation of methodology creation for practical application of the regulatory action of endogenous (physiological) concentrations of separate amino acids or their pathogenetically justified compositions. Changes in amino acid pool in liquids and their tissues fund of oncology patients specifically characterize development of cancer and largely induced by metabolic competition between the tumor and the tumor carrier [1-9].

Correction of the intermediate metabolic changes in cancer can be reached by the use of certain amino acids or their combinations. Based on the positions of metabolomics, the free amino acid pool in biological fluids and tissues is regarded as a single information unit which is a kind of "a chemical projection" of the genome, the proteome realized through this approach not only develops ideas about the pool of amino acids as a dynamical system-generated supply of them from outside, but also due to endogenous synthesis, transport, degradation and excretion and allows the identification of "key points" in intermediate metabolic equilibrium shift that may reflect ratios at the individual levels of endogenous amino acids and related species (metabolically-related) compounds to achieve "metabolic comfort" [10-14].

On the basis of the experimental data we suggest that the differences discovered in certain amino acids concentrations in fluids and tissues are criteria in early diagnostics as in estimation of the efficacy of specific cancer treatment. Our clinical studies on biological fluids and tumors more than 1400 patients with cancer depending on the location and stage of the process showed significant changes in physiological concentrations of amino acids which either directly or indirectly regulate processes of antitumor response, oncogenesis, immunogenesis and apoptosis were shown [15-17]. The creation methodology of pathogenetic compositions of amino acids and their derivatives on the basis of their physiological concentration for practical application of their regulatory effects in oncology was discussed.

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