## EFFECT OF NUCLEOSIDE INHIBITORS OF REVERSE TRANSCRIPTASE ON THE LEVELS OF PROTEINOGENIC AMINO ACIDS IN THE SPLEEN OF RATS

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Introduction. Our studies are based on the intention to have exact knowledge on the regularities of renewal and differentiation of subpopulation of lymphocytes. This may be associated with functional state of the organ, including the ratio of T1/T2-response [1 - 4]. These lymphocytes functional changes can be found in diseases (AIDS), after exposure to damaging agents and factors (ionizing radiation. chemotherapy), as well as after bone marrow transplantation. In pathological condition, proportion of the cells undergoing apoptosis changes as well as the percentage of the cells exerting peripheral expansion. The ratio between both processes also change. Processes of recovery of T-cells after their depletion also call growing interest. We consider the informative value of the amino acid metabolism in the spleen to be very promising, especially under condition of exposure of the body to metabolic blockers of synthesis of nitrogen bases. Such blockers are represented by nucleoside inhibitors of reverse transcriptase, which held leading positions in the therapy of HIV-infection [1 - 4].

The aim of the investigation. The aim of our study is to characterize the pool of free proteinogenic amino acids in the spleen of rats after administration of nucleoside inhibitors of reverse transcriptase.

**Materials and methods.** The Object of the present study is spleen of rats and the Subject of the study is the pool of proteinogenic amino acids. The methods of the research includes the experimental modeling of antiretroviral therapy, High-performance liquid chromatography of free amino acids, and Statistical methods for evaluation the results. This investigation is carried on four groups of animals. Each group Has 8 specimens in total 32 specimen.

Methods of research include:

- 1. The experimental modeling of antiretroviral therapy;
- 2. High-performance liquid chromatography of free amino acids;
- 3. Statistical methods for evaluation the results.

**Results.** The figure represents the level of the free amino acids in the spleen of rats after administration of the nucleoside inhibitors of reverse transcriptase.



**Findings.** As the major results from each group of specimens show, the administration of nucleoside inhibitor of reverse transcriptase, Zidovudine, leads to an amino acid imbalance in the spleen of rats, depending on the functional significance of the individual amino acid.

## References

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