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## Immunophenotypical Aspects of Peritoneal and Liver Macrophages Derived Animals with the Model of Alloxan Diabetes (Type I) and Their Correction by Sodium Aminodiglydrophthalazindione *in vitro*

V. A. Pozdina<sup>a, \*</sup>, I. G. Danilova<sup>a</sup>, and M. T. Abidov<sup>b</sup>

<sup>a</sup>Institute of Immunology and Physiology of the Ural Branch of the Russian Academy of Sciences, Ecaterinburg, 620049 Russia

<sup>b</sup>Institute of Immunology and Preventive Medicine, Ljubljana, 1000, Slovenia

\*e-mail: varvara.pozdina@gmail.com

In this research morphological and functional characteristics of macrophage cell cultures obtained from different localization in intact animal (IA) and animal with the model of type 1 diabetes mellitus (DM1) were investigated. The research was carried out on the macrophage cell cultures isolated from rat liver and peritoneal cavity. The macrophages were stimulated *in vitro* for 24 and 72 hours with a sodium aminodiglydrophthalazindione *in vitro*. Cells, nucleus, cytoplasm area were measured and nuclear cytoplasmic ratio (NCR) were calculated. The phenotype was determined by expression of CD163 (M2-macrophages) and CD80 (M1-macrophages) receptors. Cytokine activity of macrophages was determined by IL-1 $\alpha$ , IL-10 и TNF-level. As a result, the ADPH changes morphometric parameters (a decrease in the size of the nucleus and cells, an increase in NCR) and synthetic cell activity (an increase in IL-10 in macrophages of the peritoneal cavity; IL-1 $\alpha$  and TNF- $\alpha$  in macrophages of the liver) in the first 24 hours of cultivation. ADPH stimulation for 72 hours leads to a decrease in the levels of IL-10, TNF- $\alpha$  and an increase in the level of IL-1 $\alpha$  in all cell populations. ADPH does not affect the expression level of markers of M1 and M2 macrophages.

**Keywords:** liver macrophages, peritoneal cavity macrophages, sodium aminodiglydrophthalazindione