**HYPOLIPIDEMIC EFFECT OF MANNAN IN ACUTE LIPEMIA IN MICE INDUCED BY LIPASE INHIBITOR POLOXAMER 407**

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*Objectives:* Mannan, belonging to immunomodulators of polysaccharide origin, was shown to stimulate macrophages in vivo via mannose receptor and can be used for stimulation and effective removing of circulating atherogenic lipoproteins.

*Background*: Wall yeast polysaccharide water-insoluble zymosan was shown to decrease atherogenic serum lipids in lipemia. Beta-Glucan and mannan are the main components of zymosan, however mannan hypolipidemic effect has not been studied precisely.The aim: to evaluate effect of immunomodulator mannan in murine model of lipemia induced by lipase inhibitor poloxamer 407 (P-407).

*Methods and Results*: Mannan C. albicans serotype A (Institute of Chemistry, SAN, Bratislava, Slovakia) was used in a dose 50 mg/kg (5-times) or 100 mg/kg (twice) before acute lipemia in CBA/Lac mice induced by the single administration of P-407 (300 mg/kg). In vitro mannan (50 mcg/ml) was shown to stimulate the proliferative potential (p<0.05) and NO production (p<0.05) of murine peritoneal macrophages, similar to beta-glucan. Preliminary administration of mannan significantly (p<0.001) reduced atherogenic LDL fraction, as well as total cholesterol and triglyceride concentrations (more significant in the dose of 50 mg/kg). In liver tissue total triglycerides level decreased in mannan pretreated group of mice with lipemia. Serum chitotriosidase activity increased in mice with lipemia and mannan administration as a result of macrophage stimulation.

*Conclusion*: The results obtained indicate significant protective activity of mannan and imply its potential study and application as hypolipidemic compound. It was concluded that mannan seems to be perspective hypolipidemic drug among other polysaccharide immunomodulators (like â-glucan).