**COMBINED TREATMENT BY LIPID-LOWERING DRUGS IN ACUTE LIPEMIA IN MICE**

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**Objective:**Mannans can be used to stimulate macrophages in order to effectively remove circulating atherogenic lipoproteins. Recently hypolipidemic effect of polysaccharide mannan A has been shown. The aim: to evaluate the hypolipidemic effect of combination of mannan A and statin/or fenofibrate in acute lipemia in mice. The combined therapy can be perspective in treatment of mixed hypercholesterolemia and hypertriglyceridemia (diabetes type 2, Wolman disease).
**Method:**Acute lipemia in male CBA/Lac mice was induced by the single administration of lysosomal acid lipase inhibitor poloxamer 407 (P-407, 250 mg/kg); Mannan A from *C. albicans* serotype A (Inst. Chem., SAS, Slovakia) was administered *i.p.* in a dose of 50 mg/kg; atorvastatin (70 mg/kg, Torvacard, Zentiva, Slovakia) or Tricor (50 mg/kg, Abbott, France) *per os* 24 h before P-407. Serum lipids were measured using Biochemical Analyzer Beckman Coulter (USA); cystatin C - by mouse ELISA kit (BioVendor, Czechia).

**Results:**In lipemia mannan A pretreatment significantly (p<0.01) reduced serum atherogenic LDL-cholesterol, total cholesterol, and TG (not to the control level). Combination of mannan A and Tricor normalized serum lipid profile in lipemia, decreasing serum cholesterol (p<0.001) and, especially TG (p<0.001). Cystatin C is associated with lipemia and atherosclerosis development. P-407-induced lipemia increased serum cystatin C and atorvastatin decreased cystatin C up to the normal level, while pretreatment with Tricor was followed by elevated cystatin C level.

**Conclusion:**Mannan A significantly improved lipid profile in Tricor-treated mice with lipemia. Mannans could potentially serve as adjunct therapy to more conventional hypolipidemic medications such as statins and fenofibrates.