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THE IMPACT OF THE PHOSPHATIDYLCHOLINE MIXTURE INJECTION ON CORTICAL
CYTOSKELETON OF RATS SOLEUS MUSCLE FIBERS DURING SHORT-TERM DISUSE**Abstract**

The aim of this study was to estimate the state of the soleus fibers cortical cytoskeleton in rats after 6 hours hindlimb suspension with previous 3 days of phosphatidylcholine mix (lecithin) injections dosing 100ug/day. Data of fiber perimeter, thickness, and size of the gaps in whole perimeter were obtained by using immunohistochemical staining with alpha-actinin-4 and fiber transversal stiffness data were obtained by using atomic force microscopy. Fibers perimeter remains unchanged in all experimental groups. At the same time gap part appeared to be higher in suspension groups in comparison with corresponding control groups. Colored layer thickness, depicting submembrane cytoskeleton thickness did not change in control groups and in suspension group without lecithin treatment, however, in suspension group subjected to lecithin injections it significantly grew, up to 27% The research was supported by Program of fundamental research of IBMP RAS and Program Molecular and cell biology of Presidium RAS.