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## Specificities of glycolipids metabolism in rat and lipid peroxidation during aging

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Oxidative processes and lipid metabolism were studied in young (4–5 months) and old (25–28 months) rats. The increased rate of lipid peroxidation (hydroperoxides, malondialdehyde, nitric oxide), as well as the accumulation of products of the oxidative modification of proteins, was observed in the mitochondrial fraction of rat brain tissues. The study of lipid diversity in brain tissues of old rats demonstrated that aging is accompanied by changes in the qualitative and quantitative phospholipid composition. It was found that changes in the metabolism of neutral glycolipids result in a decrease in the expression of cerebroside and sulfatides. Also, an increase was observed in the sphingosine level (a product of hydrolysis of neutral glycolipids). It was shown that disorders in lipid metabolism play a key role in pathological changes during aging. Thus, the data we obtained on changes in oxidation and lipid metabolism can be useful for better understanding the mechanisms of aging.

### Biography

Laura Hovsepyan since 1967 worked at the Institute of Biochemistry named Buniatyan, in 1967, enrolled in graduate school, she graduated with a thesis on the title "The changes in the absorption and release of brain phospholipids after unilateral removal of the superior cervical sympathetic ganglion" in 1970. After that, she was awarded the PhD degree. With 1987 she works at the Institute of Molecular Biology NAS RA. The main area of research is the study Hovsepyan regulatory role of lipids in the tissue respiration, changes in hydroxylation processes, processes of lipid peroxidation and protein. Hovsepyan head of the Laboratory of Molecular membranology. She is the author of 170 scientific papers. Hovsepyan Member of Scientific Council at the Institute of Molecular Biology, member of Armenian Association of Biochemists affiliated to Federation of the European Biochemical Societies (FEBS), Member Armenian Association of and Cellular Biology and Immunology.

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