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NEUROGLIA—ITS CONTRIBUTION TO PHYSIOLOGICAL AND PATHOLOGICAL BRAIN FUNCTION AND NEW PERSPECTIVES OF STUDIES

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ABSTRACT

The increasing number of publications concerning neuroglia morphology and function indicates its importance for both theoretical and clinical medical sciences. Initially regarded as passive, structural element of the nervous tissue, neuroglia gradually gains a position of an important and autonomic constituent of the brain structure, supporting and integrating the functions of neurons. In particular, modulatory function upon synaptic neuronal transmission, syncytial character of astrocytic connections and calcium ions oscillations, maintaining of the ionic homeostasis, gliotransmission, crucial role in regulation of the cerebral blood flow and generation of the inflammatory response to various pathological stimuli remain in the focus of interest of numerous authors. In this presentation the synthetic review of the current status of research on neuroglial function in both physiological and pathological conditions is presented. The perspectives of further studies are briefly discussed.