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Poster Presentation

The Roles of Microglia in Neurodegenerative Diseases

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Abstract

Microglia is a type of glial cell located throughout the central nervous system (CNS), which is sensitive to CNS injury and disease. Responsibility of microglia as the resident macrophage cells for injuries suggests that these cells have the potential to act as diagnostic markers of disease beginning or progression. Function of Microglia is strongly synchronized by the microenvironment of brain and spinal cord, many evidences suggest that neurodegeneration and ageing, can affect microglial phenotype and function. Distinctive potassium channels responsible for sensitivity of the cells to even small modifications in extracellular potassium after even small pathological changes in CNS .Microglia cells are very plastic, and undertake a variety of structural transformations based on location and needs. There are different forms and types of microglias in CNS such as Ramified, Non-phagocytic, Phagocytic, Amoeboid, Gitter cells, Perivascular and Juxtavascular. Microglia cells have a significant role in neurodegenerative disorders, for example there are numerous over expressing InterlukinL-1 microglia in the brains of person with Alzheimer's disease. This over expression of InterlukinL-1 leads to extreme tau phosphorylation that is associated with tangle development in Alzheimer's disease. So according to characteristics and behavior of these cells in different neurodegenerative diseases, activated microglia cells can be one of the main cellular target for therapy.

Keywords: Microglia, Central nervous system, Neurodegenerative

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