Special Issue

Advances in Memory and Cognitive Decline Associated with Aging and Alzheimer's Disease

Message from the Guest Editor

Alzheimer's disease (AD) is characterized by progressive memory impairments. Deficits in hippocampal neurogenesis, altered neuroinflammatory events, Tau pathology, loss of neuronal connection, and vascular senescence have been observed in human patients as well as in mouse models of familial Alzheimer's disease (FAD). Understanding the role of different risk factors associated with AD pathology is still warranted. Recent advancements in the scientific community are empowering us to reach milestones each day. Tracing the engram ensemble through calcium imaging and manipulating it through optogenetics/chemogenetics in freely moving animals during different behavioral tasks enable us to understand how AD pathology affects cognition. In addition, techniques such as spatial transcriptomics give us in-depth information on how gene profiles change in each cell in a healthy vs. AD brain. We invite the scientific community to participate in our Special Issue, "Advances in Memory and Cognitive Decline Associated with Aging and Alzheimer's Disease", in order to share their valuable research and ideas.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Brain Sciences* (ISSN 2076-3425). *Brain Sciences* is an open access, peer-reviewed scientific journal that publishes original articles, critical reviews, research notes, and short communications on neuroscience. The scientific community and the general public can access the content free of charge as soon as it is published.

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