Special Issue

Emerging Advances in Neurodegeneration: Innovations in Stem Cell and Organoid Research

Message from the Guest Editor

The rising prevalence of neurodegenerative diseases poses a significant public health challenge, requiring innovative research strategies. Despite advances in understanding the underlying molecular mechanisms, effective treatments are limited, partly due to the lack of cellular models that accurately replicate the physiological and pathological aspects of these diseases. Furthermore, differences between the human central nervous system and laboratory animal models complicate therapeutic development. In this scenario, the use of stem cells and brain organoids offers a promising approach to research and therapy. Induced pluripotent stem cells (iPSCs) can be derived from patients, providing a unique platform for in vitro modeling and drug testing. Brain organoids created from iPSCs simulate the human brain's architecture and functions, enabling deeper insights into neural development and disease mechanisms. This Special Issue aims to highlight recent advancements in stem cell and organoid research, emphasizing their potential to revolutionize our understanding of neurodegeneration and enhance the development of targeted, personalized treatments.

Guest Editor

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Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. Cells encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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