

Special Issue on The Role of Stem Cells, Epigenetics, and MicroRNAs in Parkinson's Disease

CALL FOR PAPERS

Parkinson's disease (PD) is a common, age-related, and progressive neurodegenerative disorder that affects 1-2% of people over 65. As mean population ages and life expectancies increase globally, the incidence of PD is projected to double by 2030. Two classical hallmarks of PD are the degeneration of substantia nigra (SN) dopaminergic neurons and presence of Lewy bodies in CNS and PNS subregions. Despite decades of research, our understanding of the pathophysiology and the diagnosis of PD remains limited, while no disease-modifying therapies presently exist. Current dopamine-replacement strategies and surgical interventions can provide symptomatic relief. However, they do not arrest or reverse underlying pathology, and their effectiveness wanes with time, typically producing disabling side effects. As such, there is an urgent clinical need to better understand and diagnose PD and to develop novel disease-modifying therapies.

A promising disease-modifying therapy involves the replacement of lost SN dopaminergic neurons with stem cell-derived replicas. Such neurons, particularly when derived from PD patients, can also be used to model and investigate human pathology or evaluate novel therapies/drugs. Furthermore, it is increasingly recognised that epigenetic disturbances and microRNA expression changes occur in PD, which may contribute to the pathophysiology and could serve as PD biomarkers or even provide novel pharmacological targets.

This special issue aims to publish high-quality research papers and state-of-the-art reviews covering the use of stem cells, epigenetics, and/or microRNA to better understand and diagnose PD and ultimately advance research with potential to produce novel intervention strategies for PD.

Potential topics include but are not limited to the following:

- ▶ Stem cell-based therapies for PD
- ▶ Use of stem cell-derived neurons to model PD
- ▶ Epigenetic and microRNA dysregulation in PD: pathological mechanism and/or potential biomarkers
- ▶ Targeting epigenetic pathways or microRNA(s) to treat PD

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/pd/scpd/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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Submission Deadline

Friday, 24 November 2017

Publication Date

April 2018