

4th World Congress on Cell Science & Stem Cell Research

June 24-26, 2014 Valencia Conference Centre, Valencia, Spain

Neurons derived from iPS cells improve the symptoms in MPTP model of Parkinson's disease in male albino mice

M Sabesan

Annamalai University, India

Parkinson's disease is a common neurodegenerative disorder characterized by the motor symptoms of bradykinesia, rigidity and tremor. The understanding of the molecular mechanism of Parkinson's disease is hampered by a lack of access to affected human dopaminergic (DA) neurons on which the experimental research is based. The recent PD model used induced pluripotent stem cells providing exciting promises for the elucidation of PD etiology and the development of potential therapeutics. However, the therapeutic potential of iPS cells for neural cell replacement strategies remained unexplored. It is established that iPS cells can be efficiently differentiated into neural precursor cells giving rise to neuronal and glial cell types in culture. Upon transplantation into mouse brain the cells migrate into various brain regions and differentiate into neurons, glial cells, glutamatergic, GABAergic and catecholaminergic subtypes and it can improve the motor behaviour in the mouse model of PD.

sabesan1956@gmail.com