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(54) Title: DERIVATION OF TERMINALLY DIFFERENTIATED DOPAMINERGIC NEURONS FROM HUMAN EMBRYONIC STEM CELLS

(57) Abstract: The present disclosure is directed to improved methods for efficiently producing neuroprogenitor cells and differentiated neural cells such as dopaminergic neurons and serotonergic neurons from pluripotent stem cells, for example human embryonic stem cells. Using the disclosed methods, cell populations containing a high proportion of cells positive for tyrosine hydroxylase, a specific marker for dopaminergic neurons, have been isolated. The neuroprogenitor cells and terminally differentiated cells of the present disclosure can be generated in large quantities, and therefore may serve as an excellent source for cell replacement therapy in neurological disorders such as Parkinson's disease.

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