

## عنوان مقاله:

Dopaminergic Neuronal Differentiation Method for Adipose Stem Cells

## محل انتشار:

چهارمین کنگره بین‌المللی تولیدمثل (سال: 1397)

تعداد صفحات اصل مقاله: 1

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## خلاصه مقاله:

Background: Adipose stem cells (ASCs) have been proposed as a promising source of stem cells in nerve regeneration due to their close embryonic origin and ease of access. The generation of dopaminergic neurons from stem cells holds great promise for future research and in the clinical treatment of neurodegenerative diseases, such as Parkinson s disease . The aim of this study was to evaluate the efficacy of dopaminergic and motor neuronal inductive media on transdifferentiation of ASCs into dopaminergic-like cells. Methods: Isolation, cultivation, and identification of ASCs were performed with morphological analyses and flow cytometry. Differentiation media for the induction of dopaminergic neurons containing sonic hedgehog (SHH), fibroblast growth factor 8 (FGF8), and basic fibroblast growth factor (bFGF) were prepared. The efficacy of neural induction was evaluated by detecting the expression of neuron cell-specific cell markers by immunocytochemistry. Results: The ASCs-derived dopaminergic neurons express dopamine-specific markers, synthesize, and secrete dopamine. The described method could be used to generate dopaminergic neurons for various model systems in which dopaminergic cells are implicated in pathophysiological conditions. Conclusion: These findings suggest that in response to the neuronal inductive stimuli, ASCs acquire a phenotype resembling dopaminergic neurons. Such ASCs-derived dopaminergic neurons may provide an alternative stem cell source for therapy-based treatments of neuronal disorders like PD

## کلمات کلیدی:

Adipose Stem Cells, Dopaminergic Neurons, Transdifferentiation

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