

عنوان مقاله:

Differentiation of mesenchymal stem cells derived from amniotic membrane into neuronal cells and studying its characteristic

محل انتشار:

سومین کنفرانس ملی تازه های سلولی مولکولی و اولین سمپوزیوم بین المللی ژنو میکس و پروتئومیکس (سال: 1396)

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خلاصه مقاله:

Mesenchymal stem cells have variety of sources such as bone marrow, amniotic membrane and fluid. MSC have immunomodulatory properties. With these kind of cells, we can treatment many of diseases such as neurological diseases. Amniotic stem cells, in the transplantation have not any immunological or tumorigenic reactions and lacks any blood vessels and nerve fibers and this is a reasons that they are useful for treatment. In this study, we isolated mesenchymal stem cells from amniotic membrane, then used flow cytometry for study of surface markers. These cells Differentiate to osteoblasts and adipocytes. Finally, differentiate to nerve cell with bFGF and EGF as differentiate medium. After extracting RNA and synthesis CDNA we studied the expression of PAX2 and NURR1 genes with real time PCR. Then used Immunofluorescence and in this way studying the presence of β -tubulin III and MAPII protein. In conclusion, MCS differentiated to the each two type of osteoblasts and adipocytes. Studying MCS after treatment showed that these cells morphologically differentiate to nerve cell and the level of expression of mRNA of PAX2 and NURR1 was higher than the cells without differentiation treatment. Protect of Neurons is important in neurological diseases and Expression of mRNA such as PAX2, Nurr1, β -tubulin III and MAPII play an effective role on neural differentiation

کلمات کلیدی:

Mesenchymal stem cell, Differentiate, Nerve cell, Amniotic membrane

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