

عنوان مقاله:

Imprinting Cell Membrane: Recent Progress and Future Perspective

محل انتشار:

چهاردهمین کنگره بین المللی سلول های بنیادی رویان (سال: 1397)

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خلاصه مقاله:

Imitating the natural environment of isolated cells is well believed as an important criteria for regulation of cell fate. Previous reports showed that cell imprinted substrates can offer invaluable simple means of investigation in cell differentiation. In this method, micro/nano-scale features of cell membrane are transferred to a culture surface. Afterwards, this substrate is utilized as substitute for prevalent polystyrene tissue culture plate. It was observed that cell imprinted substrates can be utilized for induction of chondrogenic, keratinogenic, tenogenic, myogenic and osteogenic differentiation in adipose derived mesenchymal stem cells. In addition, the results also showed promising outcomes in migration, proliferation and differentiation of other cell types. Therefore, safety and efficiency of cell imprinting method can enhance the quality of tissue regeneration both in cell free and cell based strategies. Taking together, cell imprinting method can be applied to improve the development of next generation stem cell culture materials and implant interfaces.

کلمات کلیدی:

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