

В заключение, следует отметить, что в силу сложности и многофакторности процесса репрограммирования пока не существует универсальных протоколов культивирования клеток в течение всего процесса. Каждый эксперимент требует начальной оптимизации условий культивирования клеток для повышения количества и качества получаемых колоний и ПСК.

ФИНАНСИРОВАНИЕ РАБОТЫ

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СОБЛЮДЕНИЕ ЭТИЧЕСКИХ СТАНДАРТОВ

Настоящая статья не содержит каких-либо исследований с использованием животных или людей в качестве объектов.

КОНФЛИКТ ИНТЕРЕСОВ

Авторы заявляют об отсутствии конфликта интересов.

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THE DUAL EFFECT OF LITHIUM CHLORIDE ON THE EFFICIENCY OF GENERATING MOUSE-INDUCED PLURIPOTENT STEM CELLS

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Somatic cells can be reprogrammed into induced pluripotent stem cells (iPSCs) using certain factors. The low efficiency of the reprogramming, as well as the heterogeneity of iPSCs, limits the potential application for iPSCs in cell therapy. Here, we show that lithium chloride (LiCl), a known activator of the Wnt signaling pathway, reduces or enhances the efficiency of iPSC generation from mouse embryonic fibroblasts (MEFs) depending on the timing of its addition during the reprogramming. Our results not only demonstrate a method to improve the efficiency of iPSC formation by LiCl, but also indicate its dual role in this process.

Keywords: induced pluripotent stem cells (iPSCs), LiCl, embryonic fibroblasts (MEF), reprogramming, vitamin C