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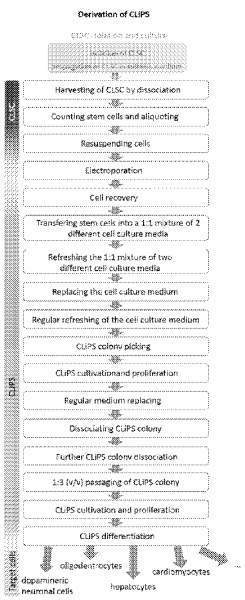
(54) Title: A METHOD OF GENERATING AN INDUCED PLURIPOTENT STEM CELL, AN INDUCED PLURIPOTENT STEM CELL AND METHODS OF USING THE INDUCED PLURIPOTENT STEM CELL

Figure 1:



(57) Abstract: The invention relates to a method of generating an induced pluripotent stem cell. The method of the disclosure comprises expressing exogenous nucleic acids encoding the proteins *OCT3/4, SOX2, KLF4, LIN28* and *L-MYC* and the *p53-shRNA* in a stem cell of the amniotic membrane of the umbilical cord under conditions suitable to reprogram the stem cell, thereby generating the induced pluripotent stem cell. The present invention also refer to an induced pluripotent stem cell population obtainable by the method and an induced pluripotent stem cell population obtained by the method. Further, a pharmaceutical composition comprising the induced pluripotent stem cell of the present invention is concerned. The present invention also relates to a method of differentiating the induced pluripotent stem cell of this invention. In addition, a pharmaceutical composition comprising a differentiated induced pluripotent stem cell obtained by the method is also concerned. Further, the present invention concerns a method of treating a congenital or acquired degenerative disorder in a subject, comprising administering to a subject a target cell differentiated from pluripotent stem cell.

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