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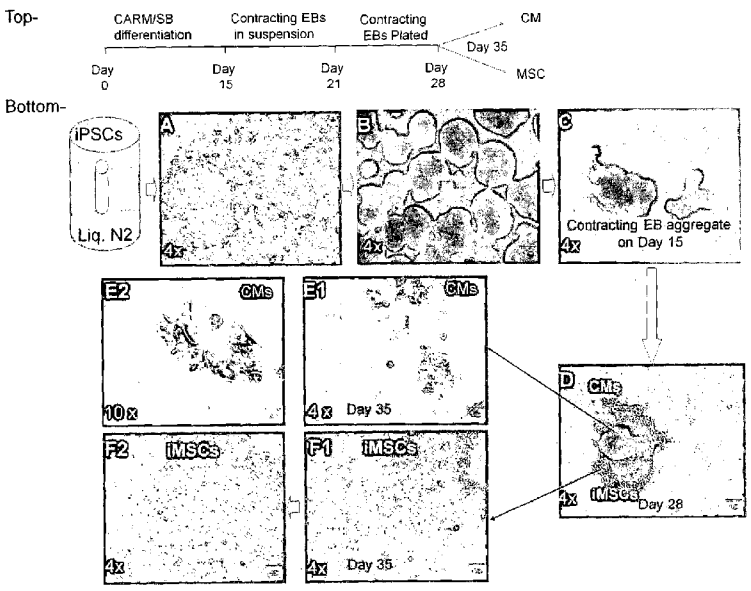
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(54) Title: METHOD FOR PREPARING MESENCHYMAL STEM CELL-LIKE CELLS AND CARDIOMYOCYTE-LIKE CELLS



(57) Abstract: The present invention provides a method for preparing mesenchymal stem celllike cells and cardiomyocyte-like cells from induced pluripotent stem cells. With the method, embryoid bodies are first formed from induced pluripotent stem cells in a non-adherent substrate. The embryoid bodies are then contacted with a serum-free and insulin-free medium comprisng a p38-MAPK inhibitor to form aggregates of contracting embryoid bodies. The contracting embryoid body aggregate(s) are then induced to form mesenchymal stem-cell-like cells and aggregates of cardiomyocyte-like stem cells with a medium comprising ≤ 5 % serum in a cell-culture treated substrate. The cardiomyocyte-like cells and the mesenchymal stem-cell like cells may be separated to give isolated populations of each cell type. The population of cardiomyocyte-like cells and mesenchymal stem-cell like cells and the isolated population of each cell type may be used for replacing cells. In particular, the cells may be used for replacing cells in cardiac repair and/or cardiac therapy.

WO 2013/055297 A1