Title (en)
SUSPENSION AND CLUSTERING OF HUMAN PLURIPOTENT STEM CELLS FOR DIFFERENTIATION INTO PANCREATIC ENDOCRINE CELLS

Title (de)
AUFHÄNGUNG UND GRUPPIERUNG MENSCHLICHER PLURIPOTENTER STAMMZELLEN ZUR DIFFERENZIERUNG IN ENDOKRINE PANKREASZELLEN

Title (fr)
MISE EN SUSPENSION ET AGRÉGATION DE CELLULES SOUCHES PLURIPOTENTES HUMAINES AUX FINS DE DIFFÉRENCIATION EN CELLULES ENDOCRINES DU PANCRÉAS

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Abstract (en)

[origin: WO2015065537A1] The present invention provides methods of preparing aggregated pluripotent stem cell clusters for differentiation. Specifically, the invention discloses methods of differentiating pluripotent cells into beta cell, cardiac cell and neuronal cell lineages using suspension clustering. The methods involve preparing the aggregated cell clusters followed by differentiation of these clusters.

IPC 8 full level
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CPC (source: EP KR RU)
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Citation (search report)
- [E] WO 2014106141 A1 20140703 - JANSSEN BIOTECH INC [US]
- [A] WO 2011019092 A1 20110217 - UNIV KYOTO [JP], et al
- [A] WO 2013056072 A1 20130418 - WISCONSIN ALUMNI RES FOUND [US], et al
- [X] SCHULZ T C ET AL: "A Scalable System for Production of Functional Pancreatic Progenitors from Human Embryonic Stem Cells", PLOS ONE, vol. 7, no. 5, E37004, 18 May 2012 (2012-05-18), pages 1 - 17, XP055261113, DOI: 10.1371/journal.pone.0037004
- [XA] CÔME J ET AL: "Improvement of culture conditions of human embryoid bodies using a controlled perfused and dialyzed bioreactor system", TISSUE ENGINEERING: PART C, vol. 14, no. 4, 4 December 2008 (2008-12-04), pages 289 - 298, XP002513847, ISSN: 1937-3384, DOI: 10.1089/ten.tec.2008.0029
- [XPA] MOHAMAD O ET AL: "Efficient neuronal differentiation of mouse ES and iPS cells using a rotary cell culture protocol", DIFFERENTIATION, vol. 86, no. 4-5, November 2013 (2013-11-01), pages 149 - 158, XP055416405, ISSN: 0301-4681, DOI: 10.1016/j.diff.2013.12.002
- [XA] LÜ S ET AL: "Bioreactor Cultivation Enhances NTEB Formation and Differentiation of NTES Cells into Cardiomyocytes", CLONING AND STEM CELLS, vol. 10, no. 3, 26 June 2008 (2008-06-26), pages 363 - 370, XP055416384, ISSN: 1536-2302, DOI: 10.1089/clo.2007.0093
- [XA] RUNGARUNLERT S ET AL: "Slow Turning Lateral Vessel Bioreactor Improves Embryoid Body Formation and Cardiogenic Differentiation of Mouse Embryonic Stem Cells", CELLULAR REPROGRAMMING, vol. 15, no. 5, 27 September 2013 (2013-09-27), pages 443 - 458, XP055416424, ISSN: 2152-4971, DOI: 10.1089/cell.2012.0082

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