

Title (en)
OBTAINING BRAIN REGION-SPECIFIC NEURONAL CULTURES FROM THREE-DIMENSIONAL TISSUE CULTURES OF STEM CELLS

Title (de)
GEWINNUNG VON GEHIRNREGION-SPEZIFISCHEN NEURONALEN KULTUREN AUS DREIDIMENSIONALEN GEWEBEKULTUREN VON STAMMZELLEN

Title (fr)
OBTENTION DE CULTURES NEURONALES SPÉCIFIQUES À UNE RÉGION CÉRÉBRALE À PARTIR DE CULTURES TISSULAIRES TRIDIMENSIONNELLES DE CELLULES SOUCHES

Publication
EP 3137598 A1 20170308 (DE)

Application
EP 15708820 A 20150310

Priority
• DE 102014003465 A 20140311
• EP 2015054879 W 20150310

Abstract (en)
[origin: WO2015135893A1] The invention relates to neuronal cell culturing methods, to the use thereof and to cell cultures produced accordingly. The invention relates more particularly to a method for producing a neuronal planar cell culture by carrying out preliminary differentiation of stem cells, e.g. human induced pluripotent stem cells, in a three-dimensional cell assembly which comprises at least two regions corresponding to different regions of the brain, and which is termed a cerebral organoid, and taking progenitor cells from a region corresponding to a defined brain region, and carrying out further culturing on a planar support, e.g. an MEA neurochip. This produces a neuronal planar cell culture in which the cells form a neuronal network and have an electrical or electrophysiological activity which is specific for the defined brain region. A cell culture of this kind may be used, for example, in high-throughput screening for testing substances for neurological activity.

IPC 8 full level
C12N 5/0793 (2010.01); **C12N 5/074** (2010.01); **G01N 33/50** (2006.01)

CPC (source: EP)
C12N 5/0619 (2013.01); **G01N 33/5058** (2013.01); **C12N 2513/00** (2013.01); **C12N 2531/00** (2013.01); **C12N 2533/32** (2013.01); **C12N 2533/52** (2013.01); **C12N 2533/90** (2013.01)

Citation (search report)
See references of WO 2015135893A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
DE 102014003465 A1 20150917; EP 3137598 A1 20170308; WO 2015135893 A1 20150917

DOCDB simple family (application)
DE 102014003465 A 20140311; EP 15708820 A 20150310; EP 2015054879 W 20150310