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ning of each regular issue of the PCT Gazette.

(54) Title: NEURONAL CELL LINEAGES AND METHODS OF PRODUCTION THEREOF

(57) Abstract: Methods are provided in which a sterol-depleting agent such as  $\beta$ -cyclodextrin ( $\beta$ CD), is used to modulate signaling by a differentiation signaling protein such as Hedgehog protein or a BMP *in vitro*. As illustrated herein, the use of  $\beta$ CD in conjunction with Sonic Hedgehog N-terminal peptide (ShhN) causes substantially all of the cells in neural plate explants to differentiate as neurons, such as motor neurons. Also provided are cell therapy methods and screening methods that rely on the modulation of signaling of a differentiation signaling protein such as Hedgehog, by a sterol-depleting agent such as  $\beta$ CD.



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**INTERNATIONAL SEARCH REPORT**

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**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC: C12N 5/06( 2006.01),5/08( 2006.01)  
  
 USPC: 435/377  
 According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**  
 Minimum documentation searched (classification system followed by classification symbols)  
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 EAST; Medline, Embase, Caplus, Biosis

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Yanagisawa, M et al., Roles of lipid rafts in integrin-dependent adhesion and gp130 signalling pathway in mouse embryonic neural precursor cells. Genes to Cells. September 2004, Volume 9 Page 801-809. whole document	
A	US 6207718 (PAPADIMITRIOU, A et al.) 27 March 2001 (27.03.2001). abstract.	
A	US 20040092010 (Altaba, A. et al) 13 May, 2004 (13.05.2004) section[0172]	

Further documents are listed in the continuation of Box C.  See patent family annex.

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