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(54) Title: COMPOSITIONS AND METHODS FOR ISOLATION, PROPAGATION, AND DIFFERENTIATION OF HUMAN
STEM CELLS AND USES THEREOF

(57) Abstract: The invention is directed to the field of human stem cells and includes methods and compositions for isolating, prop-
agating, and differentiating human stem cells. The invention provides therapeutic uses of the methods and compositions, including
autologous transplantation of treated cells into humans for treatment of Parkinson's and other neuronal disorders.



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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER														
IPC(7) : C12N 5/00; A01N 63/00; A61K 48/00														
US CL : 435/ 375, 377, 404, 405, 408; 424/93.2														
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) U.S. : 435/ 375, 377, 404, 405, 408; 424/93.2														
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, CHEMICAL ABSTRACTS, BIOSIS, EMBASE														
C. DOCUMENTS CONSIDERED TO BE RELEVANT														
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.												
A	SHAMIM, H. et al. Sequential Roles for Fgf4, En1 and Fgf8 in Specification and Regionalization of the Midbrain. Development. 1999, Vol. 126, pages 945-955.	1-30												
A	VESCOVI, A. L. et al. Isolation and Cloning of Multipotential Stem Cells from the Embryonic Human CNS and Establishment of Transplantable Human Neural Stem Cell Lines by Epigenetic Stimulation. Experimental Neurology. 1999, Vol. 156, pages 71-83.	1-30												
X	CARPENTER, M. K. et al. In Vitro Expansion of a Multipotent Population of Human Neural Progenitor Cells. Experimental Neurology. 1999, Vol. 158, 265-278, see pages	26												
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Y		1-7, and 28-30												
A	GRITTI, A. et al. Epidermal and Fibroblast Growth Factors Behave as Mitogenic Regulators for a Single Multipotent Stem Cell-Like Population from the Subventricular Region of the Adult Mouse Forebrain. Journal of Neuroscience. 01 May 1999, Vol. 19, No. 9, pages 3287-3297.	1-30												
A	HAIJHOSSEINI, M. K. et al. A Subset of Fibroblast Growth Factors (Fgfs) Promote Survival, but Fgf-8b Specifically Promotes Astroglial Differentiation of Rat Cortical Precursor Cells. Molecular and Cellular Neuroscience. 1999, Vol. 14, pages 468-485.	1-7 and 28-30												
☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.														
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INTERNATIONAL SEARCH REPORT

PCT/US02/25191

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,071,889 A (WEISS et al) 06 June 2000, column 3, lines 10-67; column 16, line 56 to column 17, line 9; and column 32, lines 32-36.	1-30
Y	US 5,753,506 A (JOHE) 19 May 1998, column 16, line 40 to column 17, line 60 and column 22, lines 17-46.	1-30