(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 2 913 393 B8**

(12) **CORRECTED EUROPEAN PATENT SPECIFICATION**

(15) Correction information:
Corrected version no 1 (W1 B1)
Corrections, see
Bibliography INID code(s) 73

(48) Corrigendum issued on:
26.02.2020 Bulletin 2020/09

(45) Date of publication and mention of the grant of the patent:
08.01.2020 Bulletin 2020/02

(21) Application number: **15156823.5**

(22) Date of filing: **17.11.2005**

(51) Int Cl.:
C12N 5/0797 *(2010.01)* ***A61K 35/30*** *(2015.01)*
A01N 63/00 *(2020.01)* ***A61K 9/00*** *(2006.01)*
A61P 25/00 *(2006.01)*

(54) **Transplantation of human neural cells for treatment of neurodegenerative conditions**

Transplantation menschlicher Nervenzellen zur Behandlung neurodegenerativer Erkrankungen

Transplantation de cellules neurales humaines pour le traitement d'affections neurodégénératives

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

(30) Priority: **17.11.2004 US 629220**

(43) Date of publication of application:
02.09.2015 Bulletin 2015/36

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
05851748.3 / 1 814 979

(73) Proprietor: **Seneca Biopharma, Inc.**
Germantown, MD 20876 (US)

(72) Inventors:
- **Marsala, Martin**
  Solana Beach, CA 92075 (US)
- **Johe, Karl K.**
  Sunny Isles, Florida 33160 (US)
- **Hazel, Thomas G.**
  North Potomac, MD 20878 (US)
- **Kakinohama, Osamu**
  San Diego, CA 92122 (US)
- **Koliatsos, Vassilis**
  Ruxton, MD 21104 (US)
- **Yan, Jun**
  Annandale, VA 22003 (US)
- **Reier, Paul J.**
  Gainesville, FL 32607 (US)
- **Velardo, Margaret J.**
  Falls Church, VA 22044-2723 (US)

(74) Representative: **MacLean, Martin Robert et al**
Mathys & Squire LLP
The Shard
32 London Bridge Street
London SE1 9SG (GB)

(56) References cited:
WO-A2-03/046141

- **LLADO J ET AL: "Neural stem cells protect against glutamate-induced excitotoxicity and promote survival of injured motor neurons through the secretion of neurotrophic factors", MOLECULAR AND CELLULAR NEUROSCIENCES, SAN DIEGO, US, vol. 27, no. 3, 1 November 2004 (2004-11-01), pages 322-331, XP004613831, ISSN: 1044-7431**

Printed by Jouve, 75001 PARIS (FR)

(Cont. next page)

- **OKA S ET AL: "Autologous transplantation of expanded neural precursor cells into the demyelinated monkey spinal cord", BRAIN RESEARCH, ELSEVIER, AMSTERDAM, NL, vol. 1030, no. 1, 5 November 2004 (2004-11-05), pages 94-102, XP004657006, ISSN: 0006-8993**
- **MARSALA MARTIN ET AL: "Spinal implantation of hNT neurons and neuronal precursors: graft survival and functional effects in rats with ischemic spastic paraplegia", EUROPEAN JOURNAL OF NEUROSCIENCE, vol. 20, no. 9, 12 October 2004 (2004-10-12), pages 2401-2414, XP002488033, ISSN: 0953-816X**
- **JAIN MEENA ET AL: "GABAergic immunoreactivity is predominant in neurons derived from expanded human neural precursor cells in vitro.", EXPERIMENTAL NEUROLOGY, vol. 182, no. 1, July 2003 (2003-07), pages 113-123, XP002488034, ISSN: 0014-4886**
- **CUMMINGS BRIAN J ET AL: "Human neural stem cells differentiate and promote locomotor recovery in spinal cord-injured mice", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, vol. 102, no. 39, September 2005 (2005-09) , pages 14069-14074, XP002488035, ISSN: 0027-8424**
- **LEPORE A C ET AL: "Neural precursor cells can be delivered into the injured cervical spinal cord by intrathecal injection at the lumbar cord", BRAIN RESEARCH, ELSEVIER, AMSTERDAM, NL, vol. 1045, no. 1-2, 31 May 2005 (2005-05-31), pages 206-216, XP004904364, ISSN: 0006-8993**
- **FUJIWARA YASUSHI ET AL: "Intravenously injected neural progenitor cells of transgenic rats can migrate to the injured spinal cord and differentiate into neurons, astrocytes and oligodendrocytes", NEUROSCIENCE LETTERS, vol. 366, no. 3, 19 August 2004 (2004-08-19), pages 287-291, XP002488036, ISSN: 0304-3940**

Remarks:

The file contains technical information submitted after the application was filed and not included in this specification