(19) World Intellectual Property Organization

International Bureau



) | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1

(43) International Publication Date 18 March 2004 (18.03.2004)

PCT

(10) International Publication Number WO 2004/022039 A3

(51) International Patent Classification:

A61K 31/708 (2006.01) **A61P 25/16** (2006.01) **A61P 25/14** (2006.01) **A61P 25/28** (2006.01)

(21) International Application Number:

PCT/CA2003/001291

(22) International Filing Date:

3 September 2003 (03.09.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/407,310

3 September 2002 (03.09.2002) U

- (71) Applicant (for all designated States except US): NEU-ROLOGICAL TECHNOLOGIES INC. [CA/CA]; 120 Newkirk Road, Unit #2, Richmond Hill, Ontario L4C 9S7 (CA).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CACIAGLI, Francesco [IT/IT]; Via Dei Vestini, 172-C, I-66013 Chieti (IT). CICCARELLI, Renata [IT/IT]; Via Dei Sabelli, N. 40, I-66100 Chieti (IT). DI IORIO, Patrizia [IT/IT]; Via Dei Vestini, 172/C, I-66013 Chieti (IT). KLEY-WEGT, Sonya [CA/CA]; 31 Carrington Place, Guelph, Ontario N1G 5C2 (CA). WERSTIUK, Eva, Susanne [CA/CA]; 38 Whitton Road, Hamilton, Ontario L8S 4C7 (CA). RATHBONE, Michel, P. [CA/CA]; 15 Ricardo Court, Hamilton, Ontario L8W 2S1 (CA). VERTES, Eva

[CA/CA]; 5 Highland Park Drive, Dundas, Ontario L9H 3L7 (CA).

- (74) Agent: BERESKIN & PARR; 40 King Street West, 40th Floor, Toronto, Ontario M5H 3Y2 (CA).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

(88) Date of publication of the international search report: 3 January 2008

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: USE OF GUANOSINE OR INOSINE AS ANTI-APOPTOTIC AGENTS IN THE TREATMENT OF I. A. NEURODE-GENERATIVE DISEASES OR INJURIES AT THE NERVOUS SYSTEM

(57) Abstract: Methods and compositions for preventing apoptosis are described. The method involves administering an effective amount of a purine nucleoside to a cell or an animal in need thereof. The methods are useful in treating diseases of the nervous system including neurodegenerative diseases, stroke or spinal cord injuries.



INTERNATIONAL SEARCH REPORT

International Application No PCT/CA 03/01291

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61K31/708 A61P25/14 A61P25/16 A61P25/28 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) A61K A61P 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 practical, search terms used) EPO-Internal, WPI Data, PAJ, MEDLINE, BIOSIS, EMBASE, CHEM ABS Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No. Citation of document, with indication, where appropriate, of the relevant passages WO 94 00132 A (PF MEDICAMENT; PEETERS MARIE A (FR); LEJEUNE JEROME (FR)) 6 January 1994 (1994-01-06) page 1, line 22-28 page 6, line 15-19 claims 1-12 1-14 Х LITSKY M L ET AL: "INOSINE AND GUANOSINE 1-3,13, X PRESERVE NEURONAL AND GLIAL CELL VIABILITY INMOUSE SPINAL CORD CULTURES DURING CHEMICAL HYPOXIA" BRAIN RESEARCH, AMSTERDAM, NL, vol. 821, no. 2, 1999, pages 426-432, XP000995702 ISSN: 0006-8993 4-12 Υ abstract -/--Patent family members are listed in annex. Further documents are listed in the continuation of box C. ° Special categories of cited documents : "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when document is combined with one or more other such do "O" document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled in the art. *P* document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 5 January 2004 15/01/2004 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentiaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Herrera, S

INTERNATIONAL SEARCH REPORT

International Application No
PCT/CA 03/01291

		PCT/CA 03/01291					
C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT							
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.					
X	JUURLINK B H J ET AL: "AIT-082 (A HYPOXANTHINE DERIVATIVE), GUANOSINE AND METABOLITES STIMULATE NEURITE FORMATION IN HIPPOCAMBIAL NEURONS" DRUG DEVELOPMENT RESEARCH, NEW YORK, NY, US, vol. 43, no. 1, January 1998 (1998-01), page 55 XP002166458	1-3,13, 14					
γ	ISSN: 0272-4391 abstract	4-12					
Х	WO 99 11274 A (BENOWITZ LARRY I ;CHILDRENS MEDICAL CENTER (US))	1-4,7-14					
Y	11 March 1999 (1999-03-11) page 8, line 15-20 page 8, line 32 -page 9, line 30 claims 1-14	5,6					
		^					

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/CA 03/01291

110 0400400	1	i	member(s)		date
WO 9400132 A	06-01-1994	FR	2692784	A1	31-12-1993
		ΑT	169500	T	15-08-1998
		ΑU	4333893	Α	24-01-1994
		DE	69320349	D1	17-09-1998
		DK	646009	T3	17-05-1999
		EP		A1	05-04-1995
		WO	9400132	A1	06-01-1994
WO 9911274 A	11-03-1999	US	6440455	B1	27-08-2002
		ΑU	748961	B2	13-06-2002
		ΑU	6656898	Α	22-03-1999
		CA	2302156	A1	11-03-1999
		CN		T	07-03-2001
		ΕP	1009412	A1	21-06-2000
		JP	2001516695	T	02-10-2001
		NZ		A	26-11-2002
		WO		A1	11-03-1999
		US		A1	26-09-2002
		US		A1	12-09-2002
		US		A1	09-05-2002
		US	2002042390	Al	11-04-2002