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05736034.9 / 1 745 149

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(54) Neural proteins as biomarkers for nervous system injury and other neural disorders

(57) The present invention identifies biomarkers that are diagnostic of nerve cell injury and/or neuronal disorders. Detection of different biomarkers of the invention are also diagnostic of the degree of severity of nerve injury, the cell(s) involved in the injury, and the subcellular localization of the injury.

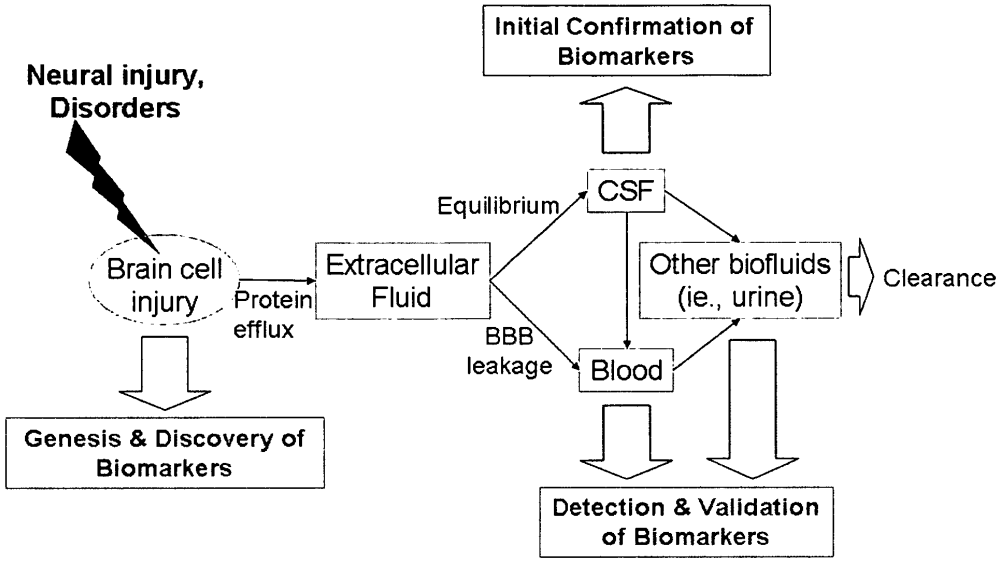

FIGURE 1

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EUROPEAN SEARCH REPORT

Application Number
EP 10 00 1581

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A,P	WO 2005/004794 A2 (ALNYLAM PHARMACEUTICALS INC [US]; MAYO FOUNDATION [US]; BUMCROT DAVID) 20 January 2005 (2005-01-20) * abstract * * claims 13, 21, 26 *	1-26	INV. G01N33/53 C12Q1/68
X	JP 2003 070498 A (PHARMA DESIGN INC) 11 March 2003 (2003-03-11) * abstract *	1-17, 22-26	
A	WO 03/019181 A2 (SYN X PHARMA INC [CA]) 6 March 2003 (2003-03-06) * claims 1-5 *	1-26	
T	PAPA LINDA ET AL: "Ubiquitin C-terminal hydrolase is a novel biomarker in humans for severe traumatic brain injury." CRITICAL CARE MEDICINE JAN 2010 LNKD-PUBMED:19726976, vol. 38, no. 1, January 2010 (2010-01), pages 138-144, XP009132536 ISSN: 1530-0293 * the whole document *	1-26	TECHNICAL FIELDS SEARCHED (IPC) G01N C12Q
T	LIU MING C ET AL: "Ubiquitin C-terminal hydrolase-L1 as a biomarker for ischemic and traumatic brain injury in rats." THE EUROPEAN JOURNAL OF NEUROSCIENCE FEB 2010 LNKD- PUBMED:20384815, vol. 31, no. 4, February 2010 (2010-02), pages 722-732, XP002579053 ISSN: 1460-9568 * the whole document *	1-26	

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	27 August 2010	Weijland, Albert

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

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EUROPEAN SEARCH REPORT

Application Number
EP 10 00 1581

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	SMITH D H ET AL: "Protein accumulation in traumatic brain injury" NEUROMOLECULAR MEDICINE, HUMANA PRESS, US LNKD- DOI:10.1385/NMM:4:1-2:59, vol. 4, no. 1-2, 1 October 2003 (2003-10-01), pages 59-72, XP008097564 ISSN: 1535-1084 * abstract * * page 64, right-hand column, last paragraph * * page 65, right-hand column, paragraph 2 *	22-26	
X	ARAKI MASASUKE ET AL: "Developmentally regulated expression of Neuro-p24 and its possible function in neurite extension." NEUROSCIENCE RESEARCH DEC 2002 LNKD-PUBMED:12445626, vol. 44, no. 4, December 2002 (2002-12), pages 379-389, XP002598262 ISSN: 0168-0102 * abstract *	22-26	TECHNICAL FIELDS SEARCHED (IPC)
X	MILLER L P ET AL: "Excitatory amino acid receptor subtype binding following traumatic brain injury." BRAIN RESEARCH 27 AUG 1990 LNKD-PUBMED:1964103, vol. 526, no. 1, 27 August 1990 (1990-08-27), pages 103-107, XP002598263 ISSN: 0006-8993 * abstract * * page 325, paragraph 3 - paragraph 4 *	22-26	

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	27 August 2010	Weijland, Albert

CATEGORY OF CITED DOCUMENTS

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Application Number
EP 10 00 1581

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	HANSEN L A ET AL: "Frontal cortical synaptophysin in Lewy body diseases: relation to Alzheimer's disease and dementia." JOURNAL OF NEUROLOGY, NEUROSURGERY, AND PSYCHIATRY MAY 1998 LNKD- PUBMED:9598683, vol. 64, no. 5, May 1998 (1998-05), pages 653-656, XP002598264 ISSN: 0022-3050 * abstract * -----	22-26	

TECHNICAL FIELDS SEARCHED (IPC)

The present search report has been drawn up for all claims

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Munich	27 August 2010	Weijland, Albert

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Application Number
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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

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LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 10 00 1581

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-26(partially)

   methods for determining the presence of traumatic brain injury using ubiquitin C-terminal hydrolase L1 (UCH-L1) as biomarker and compositions and kits therefore

   ---

2. claims: 1-16, 19, 21-26(all partially)

   methods for determining the presence of traumatic brain injury using p24 as biomarker and compositions and kits therefore

   ---

3. claims: 1-16, 18, 21-26(all partially)

   methods for determining the presence of traumatic brain injury using alpha-synuclein as marker and compositions and kits therefore

   ---

4. claims: 1-16, 18, 21-26(all partially)

   methods for determining the presence of traumatic brain injury using beta-synuclein as marker and compositions and kits therefore

   ---

5. claims: 1-16, 20-26(all partially)

   methods for determining the presence of traumatic brain injury using synaptophysin-1 as biomarker and compositions and kits therefore

   ---

6. claims: 1-16(partially)

   methods for determining the presence of traumatic brain injury using NMDA-receptor units as biomarker and compositions and kits therefore

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 10 00 1581

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

27-08-2010

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2005004794 A2	20-01-2005	AU 2004255557 A1	20-01-2005
		CA 2542232 A1	20-01-2005
		EP 1635763 A2	22-03-2006
		JP 2007528367 T	11-10-2007
JP 2003070498 A	11-03-2003	NONE	
WO 03019181 A2	06-03-2003	AU 2002325105 A1	10-03-2003
		US 2006051814 A1	09-03-2006
		US 2003040660 A1	27-02-2003

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	神经蛋白作为神经系统损伤和其他神经疾病的生物标志物		
公开(公告)号	EP2207033A3	公开(公告)日	2010-11-03
申请号	EP2010001581	申请日	2005-04-15
[标]申请(专利权)人(译)	佛罗里达大学研究基金会有限公司		
申请(专利权)人(译)	佛罗里达州研究基金会，Inc.的大学. BANYAN生物标志物，INC.		
当前申请(专利权)人(译)	佛罗里达州研究基金会，Inc.的大学. BANYAN生物标志物，INC.		
[标]发明人	HAYES RONALD WANG KA WANG KEVIN LIU MING CHEN OLI MONIKA		
发明人	HAYES, RONALD WANG, KA-WANG, KEVIN LIU, MING-CHEN OLI, MONIKA		
IPC分类号	G01N33/53 C12Q1/68 G01N33/537 G01N33/543 G01N33/68		
CPC分类号	C12Q1/6883 G01N33/6896 G01N2800/28 G01N2800/52		
优先权	60/562944 2004-04-15 US		
其他公开文献	EP2207033B1 EP2207033A2		
外部链接	Espacenet		

摘要(译)

本发明鉴定了诊断神经细胞损伤和/或神经元病症的生物标志物。检测本发明的不同生物标志物还可以诊断神经损伤的严重程度，涉及损伤的细胞和损伤的亚细胞定位。

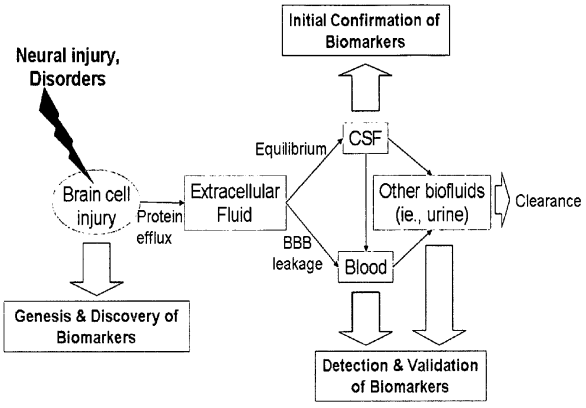

FIGURE 1