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(54) Title: VGP PEPTIDE FRAGMENTS AS BIOMARKERS FOR SCHIZOPHRENIC AND BIPOLAR DISORDERS

(57) Abstract: The present invention provides biomarkers for schizophrenic and bipolar disorders and methods of diagnosis, monitoring and screening associated with the biomarkers and kits for performing such methods.

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER INV. G01N33/08 C07K14/47 A61P25/00 A61K38/00		
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) G01N C07K		
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, BIOSIS, MEDLINE, EMBASE, FSTA, Sequence Search, CHEM ABS Data, BIOTECHNOLOGY ABS, PASCAL, SCISEARCH		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/082075 A (BIOVISION AG; LAMPING, NORBERT; ZUCHT, HANS-DIETER; HEINE, GABRIELE; J) 17 October 2002 (2002-10-17) claims 17-19	18-20
A	the whole document	1-51
A	MIYATAKE Y ET AL: "THE SIGNAL TRANSDUCTION PATHWAY FOR VGF EXPRESSION DUE TO NGF IS DIFFERENT FROM THAT DUE TO BFGF IN PC12H CELL" BIOCHEMISTRY AND MOLECULAR BIOLOGY INTERNATIONAL, ACADEMIC PRESS, LONDON, GB, vol. 30, no. 2, June 1993 (1993-06), pages 231-236, XP000953021 ISSN: 1039-9712 page 232, paragraph 1 - paragraph 5	18-24
	-/--	
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents : *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *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) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *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 invention *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 *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
26 September 2006		18/10/2006
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Strobel, Andreas

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2006/050034

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>VERCAUTEREN ET AL: "Proteomic approaches in brain research and neuropharmacology" EUROPEAN JOURNAL OF PHARMACOLOGY, AMSTERDAM, NL, vol. 500, no. 1-3, 1 October 2004 (2004-10-01), pages 385-398, XP005480430 ISSN: 0014-2999 abstract page 391, right-hand column, paragraph 2 - page 392, left-hand column, paragraph 2; table 2</p>	1-17
A	<p>BERRY NEERAJ ET AL: "Molecular genetics of schizophrenia: A critical review." JOURNAL OF PSYCHIATRY & NEUROSCIENCE, vol. 28, no. 6, November 2003 (2003-11), pages 415-429, XP002400361 ISSN: 1180-4882 page 422, right-hand column, last paragraph - page 424, left-hand column; table 2</p>	1-17
A	<p>CARRETTE O ET AL: "A PANEL OF CEREBROSPINAL FLUID POTENTIAL BIOMARKERS FOR THE DIAGNOSIS OF ALZHEIMER'S DISEASE" PROTEOMICS, WILEY - VCH VERLAG, WEINHEIM, DE, vol. 3, no. 8, August 2003 (2003-08), pages 1486-1494, XP008022060 ISSN: 1615-9853 abstract page 1493, right-hand column, last paragraph - page 1494, left-hand column, paragraph 1</p>	1-17
A	<p>BAHN S: "Functional genomics studies of schizophrenia and bipolar disorder" INTERNATIONAL JOURNAL OF NEUROPSYCHOPHARMACOLOGY, vol. 7, no. Suppl. 1, June 2004 (2004-06), page S11, XP009072799 & 24TH CINP CONGRESS; PARIS, FRANCE; JUNE 20 -24, 2004 ISSN: 1461-1457 abstract</p>	1-51
P,X	<p>YUAN XIANGLIN ET AL: "Human cerebrospinal fluid peptidomics" JOURNAL OF MASS SPECTROMETRY, vol. 40, no. 2, February 2005 (2005-02), pages 176-181, XP002400363 ISSN: 1076-5174 table 3</p>	2
P,A	<p>abstract</p>	1-17

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Although claims 11-17 and 35-39 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box II.2

Claims Nos.: 18, 19, 22-27, 29-34 and 44-51 all in part

The present claims 18, 19, 22-27, 29-34 and 44-51 encompass ligands defined only by their desired function, contrary to the requirements of clarity of Article 6 PCT, because the result-to-be-achieved type of definition does not allow the scope of the claim to be ascertained. The fact that any ligands could be screened does not overcome this objection, as the skilled person would not have knowledge beforehand as to whether it would fall within the scope claimed, except for ligands that are antibodies. Undue experimentation would be required to screen compounds randomly. This non-compliance with the substantive provisions is to such an extent, that the search was performed taking into consideration the non-compliance in determining the extent of the search for said claims.

Further, the description does not provide support and disclosure in the sense of Article 6 and 5 PCT for any such ligands having the said property or effect and there is no common general knowledge of this kind available to the person skilled in the art. This non-compliance with the substantive provisions is to such an extent, that the search was performed taking into consideration the non-compliance in determining the extent of the search of the claim (PCT Guidelines 9.19 and 9.20).

The search of claims 18, 19, 22-27, 29-34 and 44-51 was consequently restricted to antibodies binding to a VGF peptide fragment defined by SEQ ID No:1 or fragments of this peptide fragment.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 11-17 and 35-39 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. Claims Nos.: 18, 19, 22-27, 29-34 and 44-51 all in part
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

see FURTHER INFORMATION sheet PCT/ISA/210
3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2006/050034

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02082075	A	17-10-2002	CA 2446886 A1	17-10-2002
			DE 10291524 D2	01-07-2004
			EP 1373905 A2	02-01-2004
			JP 2004531250 T	14-10-2004
			US 2004142388 A1	22-07-2004
