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(71) Applicant (for all designated States except US):
ARES TRADING S.A. [CH/CH]; Zone Industrielle
de l'Ouriettaaz, CH-1170 Aubonne (CH).

(72) Inventors; and

(75) Inventors/Applicants (for US only): FAGAN, Richard,
Joseph [GB/GB]; Inpharmatica Limited, 4th Floor Com-
monwealth House, 1-19 New Oxford Street, London
WC1A 1NU (GB). POWER, Christine [GB/FR]; 10, Rue
des Jonquilles, F-01710 Thoiry (FR).

(74) Agents: GOODFELLOW, Hugh, Robin et al.; Carp-
maels & Ransford, 43-45 Bloomsbury Square, London
WC1A 2RA (GB).

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LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX,
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RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM,
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(54) Title: INTEGRAL MEMBRANE PROTEIN OF THE PMP-22/EMP/MP20/ CLAUDIN-LIKE FAMILY

(57) Abstract: This invention relates to a novel protein, termed INSP219, herein identified as a protein, in particular, as a PMP-22/EMP/MP20/Claudin-like molecule and to the use of this protein and nucleic acid sequence from the encoding gene in the diagnosis, prevention and treatment of disease.

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2007/002703A. CLASSIFICATION OF SUBJECT MATTER
INV. C07K14/47

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)
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, Sequence Search, WPI Data, EMBASE, CHEM ABS Data, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE UniProt [Online] 1 March 2003 (2003-03-01), "12 days embryo spinal ganglion cDNA, RIKEN full-length enriched library, clone:D130077N03 product:hypothetical protein, full insert sequence." XP002463235 retrieved from EBI accession no. UNIPROT:Q8BNC6 Database accession no. Q8BNC6 the whole document	1,5-9, 12,13, 15-17
X	US 2006/084794 A1 (ROSEN CRAIG A [US] ET AL) 20 April 2006 (2006-04-20) the whole document	1,5-9, 11-13, 15-19, 23, 34-41, 43,47,49
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 Further documents are listed in the continuation of Box C. 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
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- *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
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- * & * document member of the same patent family

Date of the actual completion of the international search

21 December 2007

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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

Armandola, Elena

INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2007/002703

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	<p>-& DATABASE Geneseq [Online] 15 June 2006 (2006-06-15), "Therapeutic protein HAJCL25, SEQ ID 1979." XP002463236 retrieved from EBI accession no. GSP:AEH08770 Database accession no. AEH08770 the whole document</p> <p>-& DATABASE Geneseq [Online] 15 June 2006 (2006-06-15), "Therapeutic protein HAJCL25, SEQ ID 1978." XP002463237 retrieved from EBI accession no. GSP:AEH08769 Database accession no. AEH08769 the whole document</p>	
X	<p>----- WO 03/054152 A (HYSEQ INC [US]; TANG Y TOM [US]; ASUNDI VINOD [US]; GOODRICH RYLE W [U]) 3 July 2003 (2003-07-03)</p> <p>the whole document</p> <p>-& DATABASE Geneseq [Online] 29 January 2004 (2004-01-29), "Novel protein (useful for identifying genetic disorders) #522." XP002463238 retrieved from EBI accession no. GSP:ADE08367 Database accession no. ADE08367 the whole document</p> <p>-& DATABASE Geneseq [Online] 29 January 2004 (2004-01-29), "Novel protein (useful for identifying genetic disorders) #521." XP002463239 retrieved from EBI accession no. GSP:ADE08366 Database accession no. ADE08366 the whole document</p>	1, 3, 5-9, 11-13, 15-19, 23-43, 47-49
X	<p>----- WO 02/18412 A (HUMAN GENOME SCIENCES INC [US]; ROSEN CRAIG A [US]; KOMATSOU LIS GEORGE) 7 March 2002 (2002-03-07)</p> <p>the whole document</p> <p>-& DATABASE Geneseq [Online] 5 June 2002 (2002-06-05), "Human secreted protein sequence #25." XP002463240 retrieved from EBI accession no. GSP:AAU91105 Database accession no. AAU91105 the whole document</p> <p style="text-align: center;">-/--</p>	1, 5-9, 11-13, 15-19, 23-49

INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2007/002703

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	<p>-& DATABASE Geneseq [Online] 5 June 2002 (2002-06-05), "Human secreted protein sequence #53." XP002463241 retrieved from EBI accession no. GSP:AAU91133 Database accession no. AAU91133 the whole document</p> <p>-& DATABASE Geneseq [Online] 5 June 2002 (2002-06-05), "Human secreted protein sequence #24." XP002463242 retrieved from EBI accession no. GSP:AAU91104 Database accession no. AAU91104 the whole document</p>	
X	<p>----- DATABASE UniProt [Online] 30 May 2006 (2006-05-30), "Novel protein (Zgc:92710)." XP002463243 retrieved from EBI accession no. UNIPROT:Q1L8F4 Database accession no. Q1L8F4 the whole document</p>	1,5-10, 12,13, 15-17
X	<p>----- DATABASE UniProt [Online] 16 August 2004 (2004-08-16), "Zgc:92710." XP002463244 retrieved from EBI accession no. UNIPROT:Q6DGZ4 Database accession no. Q6DGZ4 the whole document</p> <p>-----</p>	1,5-10, 12,13, 15-17

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2007/002703

Box No. 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.: 20-22, 50, 51
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210

2. Claims Nos.: 20-22, 50, 51
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 No. 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 allsearchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

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 and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Although claims 24 and 29-33 are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Although claims 39-41 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.1

Claims Nos.: 20-22, 50,51

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy

Rule 39.1(iv) PCT - Diagnostic method practised on the human or animal body

Continuation of Box II.2

Claims Nos.: 20-22,50,51

Present claims 20-22 relate to a compound which has a given desired property or effect, namely the increasing or decreasing the level of expression or activity of the polypeptide of claims 1-11. However, the description does not provide support and disclosure in the sense of Article 6 and 5 PCT for any such compound 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 20-22 was consequently restricted to the specifically disclosed compound having the desired property or effect, namely antibodies, and to the broad concept of a compound having the desired property or effect.

Present claims 50 and 51 refer to a polypeptide that is not defined by structural features, such as its sequence, but only by an arbitrary definition (i.e. a name). Such an arbitrary definition does not allow a search for a defined polypeptide

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

INTERNATIONAL SEARCH REPORT

International Application No. PCT/GB2007 /002703

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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, 8.2), should the problems which led to the Article 17(2)PCT declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/GB2007/002703

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2006084794	A1	20-04-2006	NONE	
WO 03054152	A	03-07-2003	AU 2002366951 A1 CA 2469941 A1 EP 1504099 A2	09-07-2003 03-07-2003 09-02-2005
WO 0218412	A	07-03-2002	AU 2950301 A CA 2420392 A1 EP 1317472 A1	13-03-2002 07-03-2002 11-06-2003