(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
16 April 2009 (16.04.2009)

PCT

(10) International Publication Number
WO 2009/046865 A3

(51) International Patent Classification:
A61K 38/17 (2006.01) *A61K 38/22* (2006.01)

(21) International Application Number:
PCT/EP2008/008031

(22) International Filing Date:
9 September 2008 (09.09.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
07017755.5 11 September 2007 (11.09.2007) EP

(71) Applicant *(for all designated States except US)*: **MONDOBIOTECH LABORATORIES AG** [LI/LI]; Herrengasse 21, FL-9490 Vaduz (LI).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **BEVEC, Dorian** [DE/DE]; Kriegerstrasse 62, 82110 Germering (DE). **CAVALLI, Fabio** [CH/CH]; Via Pasquée, 23, CH-6925 Gentilino (CH). **CAVALLI, Vera** [CH/CH]; Via Pasquée, 23, CH-6925 Gentilino (CH). **BACHER, Gerald** [DE/DE]; Masurenweg 5, 82110 Germering (DE).

(74) Agent: **ARTH, Hans-Lothar**; ABK, Jasminweg 9, 14052 Berlin (DE).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

— *with international search report (Art. 21(3))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:
11 September 2009

WO 2009/046865 A3

(54) Title: CHOLECYSTOKININ-33 ALONE OR IN COMBINATION WITH TRAP-14 AS THERAPEUTIC AGENT

(57) Abstract: The present invention is directed to the use of the peptide compound Lys-Ala-Pro-Ser-Gly-Arg-Met-Ser-Ile-Val-Lys-Asn-Leu-Gln-Asn-Leu-Asp-Pro-Ser-His-Arg-Ile-Ser-Asp-Arg-Asp-Tyr(SO_3H)-Met-Gly-Trp-Met-Asp-Phe-NH_2 as a therapeutic agent for the prophylaxis and/or treatment of cancer, autoimmune diseases, fibrotic diseases, inflammatory diseases, neurodegenerative diseases, infectious diseases, lung diseases, heart and vascular diseases and metabolic diseases. Moreover the present invention relates to pharmaceutical compositions preferably in form of a lyophilisate or liquide buffer solution or artificial mother milk formulation or mother milk substitute containing the peptide Lys-Ala-Pro-Ser-Gly-Arg-Met-Ser-Ile-Val-Lys-Asn-Leu-Gln-Asn-Leu-Asp-Pro-Ser-His-Arg-Ile-Ser-Asp-Arg-Asp-Tyr(SO_3H)-Met-Gly-Trp-Met-Asp-Phe-NH_2 optionally together with at least one pharmaceutically acceptable carrier, cryoprotectant, lyoprotectant, excipient and/or diluent.

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2008/008031

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61K38/17 A61K38/22

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, BIOSIS, CHEM ABS Data, EMBASE, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DOI R ET AL: "Effect of synthetic human cholecystokinin-33 on exocrine pancreas" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, ACADEMIC PRESS INC. ORLANDO, FL, US, vol. 150, no. 3, 15 February 1988 (1988-02-15), pages 1251-1255, XP024848179 ISSN: 0006-291X [retrieved on 1988-02-15]	1,6-15
Y	abstract	1-15
X	US 2006/177438 A1 (KOPIN ALAN S [US] ET AL) 10 August 2006 (2006-08-10)	1,6-15
Y	paragraphs [0005], [0022], [0037]	1-15

-/--

[X] Further documents are listed in the continuation of Box C.

[X] 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
13 July 2009	23/07/2009

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Winger, Rudolf

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2008/008031

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	EP 1 522 856 A1 (BIOVISION AG [DE]) 13 April 2005 (2005-04-13) claim 22; sequence 22	1,6-15 1-15
Y	US 5 256 766 A (COUGHLIN SHAUN R [US]) 26 October 1993 (1993-10-26) claims 1-4	1-15
Y	WO 99/42483 A1 (HADASIT MED RES SERVICE [IL]; BAR SHAVIT RACHEL [IL]) 26 August 1999 (1999-08-26) claims 7-9,16-18	1-15
Y	WO 03/079978 A2 (BETH ISRAEL HOSPITAL [US]; SUKHATME VIKAS P [US]; MERCHAN JAIME [US];) 2 October 2003 (2003-10-02) page 42, line 16 - page 43, line 15; claims 1,15; figure 12	1-15
Y	DATABASE WPI Week 200435 Thomson Scientific, London, GB; AN 2004-369110 XP002536576 & JP 2004 137195 A (FUSO YAKUHIN KOGYO KK) 13 May 2004 (2004-05-13) abstract	1-15
Y	LIPPUNER NADINE ET AL: "Proteinase-activated receptors induce nonoxidative, antimicrobial peptides and increased antimicrobial activity in human mononuclear phagocytes" JOURNAL OF LEUKOCYTE BIOLOGY, vol. 81, no. 2, February 2007 (2007-02), pages 465-473, XP002536577 ISSN: 0741-5400 abstract	1-15

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2008/008031

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2006177438 A1	10-08-2006	NONE	
EP 1522856 A1	13-04-2005	WO 2005038463 A1	28-04-2005
US 5256766 A	26-10-1993	US 5688768 A	18-11-1997
WO 9942483 A1	26-08-1999	AU 2542999 A	06-09-1999
		CA 2321197 A1	26-08-1999
		EP 1054902 A1	29-11-2000
		US 6461611 B1	08-10-2002
WO 03079978 A2	02-10-2003	AU 2003218213 A1	08-10-2003
JP 2004137195 A	13-05-2004	JP 4249970 B2	08-04-2009