

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 July 2009 (30.07.2009)

(10) International Publication Number
WO 2009/094577 A3

PCT

(51) International Patent Classification:

C07F 3/04 (2006.01) **A61K 31/325** (2006.01)
C07C 271/22 (2006.01) **A61P 25/00** (2006.01)

(21) International Application Number:

PCT/US2009/031884

(22) International Filing Date:

23 January 2009 (23.01.2009)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/023,813	25 January 2008 (25.01.2008)	US
61/023,808	25 January 2008 (25.01.2008)	US
61/121,859	11 December 2008 (11.12.2008)	US

(71) Applicant (for all designated States except US): **XENOPORT, INC.** [US/US]; 3410 Central Expressway, Santa Clara, California 95051 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **YAO, Fenmei** [CN/US]; 1902 Rock Street, A, Mountain View, California 94043 (US). **GALLOP, Mark A.** [NZ/US]; 3410 Central Expressway, Santa Clara, California 95051 (US). **BARRETT, Ronald W.** [US/US]; 12900 Arroyo de Arguello, Saratoga, California 95070 (US). **VIRSIK, Peter A.** [US/US]; 131 Escanyo Way, Portola Valley, California 94028 (US).

(74) Agents: **WORRALL, Timothy, A.** et al.; 370 Seventeenth Street, Suite 4700, Denver, Colorado 80202 (US).

(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, MK, 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 identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- 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:

22 October 2009

(54) Title: MESOPHASIC FORMS OF CALCIUM-SALTS OF (3S)-AMINOMETHYL-B-METHYL-HEXANOIC ACIDS AND METHODS OF USE

(57) Abstract: Mesophasic forms of Ca-salts of (3S) -aminomethyl-5-hexanoic acids and methods of preparing and methods of using mesophasic forms of (3S) -aminomethyl-5-hexanoic acids are provided.



WO 2009/094577 A3

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2009/031884

A. CLASSIFICATION OF SUBJECT MATTER

INV. C07F3/04 C07C271/22 A61K31/325 A61P25/00

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)

C07C A61K A61P C07F

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, BEILSTEIN Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 972 341 B2 (GALLOP MARK A [US] ET AL) 6 December 2005 (2005-12-06) cited in the application Formula VIII; column 11, lines 6-16; claim 1; examples 32-34, 44 column 14, lines 3-29 column 37, lines 1-16	1-24
Y	WO 2004/054565 A (WARNER LAMBERT CO [US]; TAYLOR CHARLES PRICE JR [US]; THORPE ANDREW JO) 1 July 2004 (2004-07-01) page 12, line 32 - page 13, line 22; claim 1	1-24
Y	WO 2007/027476 A (XENOPORT INC [US]; TRAN PIERRE V [US]) 8 March 2007 (2007-03-08) paragraphs [0038], [0092]; claim 1	1-24
	----- -/--	

☒ 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
- *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.
- *G* document member of the same patent family

Date of the actual completion of the international search

10 August 2009

Date of mailing of the international search report

19/08/2009

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Steinreiber, J

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/031884

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 7 227 028 B2 (GALLOP MARK A [US] ET AL) 5 June 2007 (2007-06-05) cited in the application the whole document -----	1, 9, 17
E	WO 2009/061934 A (XENOPORT INC [US]; BENSON JOSEPH C III [US]; VIRSIK PETER [US]; CANAFA) 14 May 2009 (2009-05-14) paragraph [0219] -----	1-8

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2009/031884

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6972341	B2	06-12-2005	US 2003176398 A1	18-09-2003
			US 2004077553 A1	22-04-2004
			US 2004006132 A1	08-01-2004
			US 2004014940 A1	22-01-2004
WO 2004054565	A	01-07-2004	AU 2003286300 A1	09-07-2004
			BR 0317263 A	08-11-2005
			CA 2508297 A1	01-07-2004
			EP 1572187 A1	14-09-2005
			JP 2006511604 T	06-04-2006
			KR 20050084236 A	26-08-2005
			MX PA05006209 A	19-08-2005
WO 2007027476	A	08-03-2007	EP 1928450 A2	11-06-2008
US 7227028	B2	05-06-2007	CA 2551859 A1	21-07-2005
			EP 1716115 A2	02-11-2006
			JP 2007518723 T	12-07-2007
			US 2005222431 A1	06-10-2005
			WO 2005066122 A2	21-07-2005
WO 2009061934	A	14-05-2009	US 2009118365 A1	07-05-2009