



(51) International Patent Classification:

A61K 31/495 (2006.01) *A61K 31/135* (2006.01)
A61K 31/137 (2006.01) *A61P 15/00* (2006.01)

(21) International Application Number:

PCT/US2012/031991

(22) International Filing Date:

3 April 2012 (03.04.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/471,505 4 April 2011 (04.04.2011) US

(71) Applicant (for all designated States except US): **S1 PHARMACEUTICALS, INC.** [US/US]; 1 Independence Way, #102, Jersey City, NJ 07305 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **SITCHON, Nicolas, G.** [US/US]; 1 Independence Way #102, Jersey City, NJ 07305 (US).

(74) Agents: **HSI, Jeffrey, D.** et al.; Edwards Wildman Palmer LLP, P.O. Box 55874, Boston, MA 02205 (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, CL, 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, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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:

6 December 2012



WO 2012/138653 A3

(54) Title: TREATMENT REGIMENS

(57) Abstract: The invention further relates to compounds, pharmaceutical compositions and methods for treating hypoactive sexual desire disorder (HSDD) in a subject.

A. CLASSIFICATION OF SUBJECT MATTER*A61K 31/495(2006.01)i, A61K 31/137(2006.01)i, A61K 31/135(2006.01)i, A61P 15/00(2006.01)i*

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 31/495; A61K 31/496; A61K 31/137; A61K 45/06; A61K 31/551

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 practicable, search terms used)

eKOMPASS (KIPO internal), NCBI (PubMed, MeSH), Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MARILYN CRAVEN et al., `What are the alternatives to Nefazodone ?`, Canadian Psychiatric Association Bulletin, 2004, Vol. 36, No. 4, p. 21, ISSN 0832-0470	1,3-7,20-24,28-29
Y	See practical tips of p. 21.	2
X	ALEXANDRA ZOURKOVA et al., `The efficacy of bupropion and trazodone in the treatment of hypoactive sexual desire disorder and orgasm dysfunction in non-depressed women`, Ceska a slovenska Psychiatrie, Praha, CLS JEP., 2008, Vol. 104, No. suppl.2, pp. 1068, ISSN 1212-0383 See p. 1068.	1-7,20-24,28-29
Y	RAMEZ GHANBARI et al., `Sustained administration of Trazodone enhances serotonergic neurotransmission: in vivo electrophysiological study in the rat brain`, The Journal of Pharmacology and Experimental Therapeutics, 2010, Vol. 335, No. 1, pp. 197-206, ISSN 1251-0103 See p. 198, left column, line 14 ~ right column, line 11; table 1; abstract.	2
A	US 2006-0211685 A1 (ROBERT PYKE et al.) 21 September 2006 See the whole document.	1-7,20-24,28-29

 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 application or patent 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 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

10 OCTOBER 2012 (10.10.2012)

Date of mailing of the international search report

12 OCTOBER 2012 (12.10.2012)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
189 Cheongsa-ro, Seo-gu, Daejeon Metropolitan
City, 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

SUNG Sun Young

Telephone No. 82-42-481-8405



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.: 8-19, 25-27
because they relate to subject matter not required to be searched by this Authority, namely:
The claims 8-19 and 25-27 pertain to methods for treatment of the human body by therapy, and thus relate to a subject matter which this International Searching Authority is not required, under Article 17(2)(a)(I) of the PCT and Rule 39.1(iv) of the Regulations under the PCT, to search.
2. Claims Nos.:
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:
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 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 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.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2012/031991

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2005-102342 A1 (BOEHRINGER INGELHEIM INTERNATIONAL GMBH et al.) 03 November 2005 See the whole document.	1-7,20-24,28-29

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/031991

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2006-0211685 A1	21.09.2006	EP 1858516 A1	28.11.2007
		JP 2008-538741 A	06.11.2008
		WO 2006-096435 A1	14.09.2006
WO 2005-102342 A1	03.11.2005	AR 048705 A1	17.05.2006
		AU 2005-235422 A1	03.11.2005
		AU 2005-235422 B2	11.08.2011
		CA 2563743 A1	03.11.2005
		CN 1946404 A	11.04.2007
		EP 1740181 A1	10.01.2007
		IL 178730 D0	08.03.2007
		JP 2007-533686 A	22.11.2007
		KR 10-2007-0014184 A	31.01.2007
		NZ 551340 A	29.10.2010
		PE 04642006 A1	12.06.2006
		RU 2006140962 A	27.06.2008
		US 2005-0245539 A1	03.11.2005
		US 2008-0103155 A1	01.05.2008
		US 2011-0105519 A1	05.05.2011
		UY 28862 A1	30.11.2005