

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 January 2009 (29.01.2009)

PCT

(10) International Publication Number
WO 2009/015366 A3

- (51) International Patent Classification:
A61K 31/19 (2006.01) *A61K 31/00* (2006.01)
- (21) International Application Number:
PCT/US2008/071253
- (22) International Filing Date: 25 July 2008 (25.07.2008)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/952,169 26 July 2007 (26.07.2007) US
- (71) Applicant (for all designated States except US): **PARAMOUNT BIOSCIENCES LLC** [US/US]; 4365 Executive Drive, Suite 1500, San Diego, CA 92121 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **SAFER, Joshua, D.** [US/US]; 223 Bonad Road, Chestnut Hill, MA 02467 (US). **HOLIC, Michael, F.** [US/US]; 31 Bishop Lane, Sudbury, MA 01776 (US).
- (74) Agent: **HART, Daniel**; KNOBBE MARTENS OLSON & BEAR LLP, 2040 Main Street, 14th Floor, Irvine, CA 92614 (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, 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).

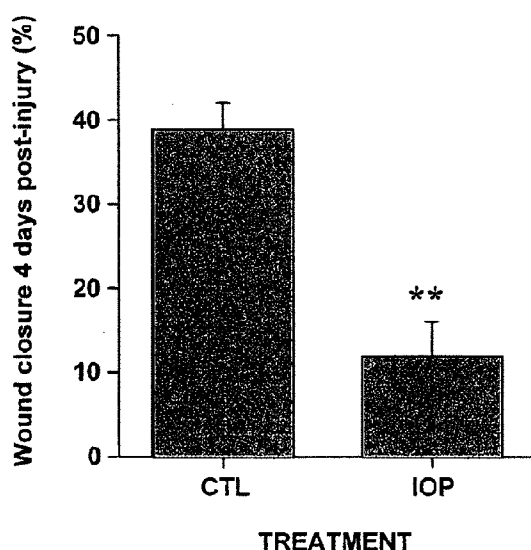
Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv))

[Continued on next page]

(54) Title: USE OF THYROID HORMONE CONVERSION INHIBITORS TO TREAT HYPERPROLIFERATIVE DISORDERS

Figure 21



** p=0.001 vs. control

(57) Abstract: Methods of treating conditions associated with hyperproliferation of cells, such as hirsutism, hypertrichosis, scar formation, ocular hyperproliferative disease, and pulmonary hyperproliferative disease, comprising administering to a subject in need thereof an effective amount of a thyroid hormone conversion inhibitor.

WO 2009/015366 A3



Published:

— *with international search report*

(88) Date of publication of the international search report:

22 May 2009

A. CLASSIFICATION OF SUBJECT MATTER*A61K 31/19(2006.01)i, A61K 31/00(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)

IPC 8 as above

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)

eKIPASS(KIPO internal), PubMed, NCBI, Esp@snet, PAJ, USPTO, Google

Keyword: (iopanoic | ipodate | propranolol | thyroid) & (prolifer* | scar | psoriasis)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2006-028835 A2 (TRUSTEES OF BOSTON UNIVERSITY) 2006.03.16 See claims 1-13 and pages 16-17	16-30
A	ELIAS A N, Anti-thyroid thioureylenes in the treatment of psoriasis, MEDICAL HYPOTHESIS, vol. 62, no. 3, 2004, pages 431-437 See pages 434-435	16-30
A	WO 2003-092617 A2 (COMBINATORX, INCORPORATED) 2003.11.13 See pages 4-6.	16-30
A	EP 0513832 A1 (SQUIBB BRISTOL MYERS CO.) 1992.11.19 See pages 3-4.	16-30



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

19 FEBRUARY 2009 (19.02.2009)

Date of mailing of the international search report

19 FEBRUARY 2009 (19.02.2009)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-
gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

YANG, In Soo

Telephone No. 82-42-481-5049



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2008/071253

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 06-028835 A1	16.03.2006	CA 2578999 A1	16.03.2006
		CN 101090740	19.12.2007
		EP 1789032 A2	30.05.2007
		JP 2008-511660	17.04.2008
		KR 10-2007-0083612	24.08.2007
WO 03-092617 A2	13.11.2003	AU 2003-228819 A1	17.11.2003
		US 2006-100181 A1	11.05.2006
EP 0513832 A1	19.11.1992	AT 194919 T	15.08.2000
		AU 660017 B2	08.06.1995
		CA 2068763 C	31.07.2001
		DE 69231287 T2	15.03.2001
		DK 513832 T3	18.09.2000
		EP 0513832 B1	26.07.2000
		ES 2148158 T3	16.10.2000
		GR 3034417 T3	29.12.2000
		IE 921573 A1	18.11.1992
		JP 3331414 B2	07.10.2002
		MX 9202235 A1	01.05.1993
		PT 513832 T	30.11.2000
		SG 67292 A1	21.09.1999
		US 5326566 A	05.07.1994
		ZA 9203399 A	27.01.1993

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2008/071253**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.: 1-15
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 1 to 15 are directed to a method for treatment of the human or animal body by therapy, and thus relate to a subject matter which this International Searching Authority is not required to search under PCT Article 17(2)(a)(i) and Rule 39.1(iv).
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.