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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
31 January 2008 (31.01.2008)

PCT

(10) International Publication Number
WO 2008/013861 A3

(51) International Patent Classification:
G01N 33/53 (2006.01)

(21) International Application Number:
PCT/US2007/016748

(22) International Filing Date: 26 July 2007 (26.07.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/833,481 27 July 2006 (27.07.2006) US

(71) Applicant *(for all designated States except US)*: **REDPOINT BIO CORPORATION** [US/US]; 7 Graphics Drive, Ewing, NJ 08628 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **S. Paul, Lee** [US/US]; 1801 Buttonwood Street Apartment 1219, Philadelphia, PA 19130 (US). **YANG, Qifeng** [US/US]; 10 Boice Lane, Belle Mead, NJ 08502 (US). **BRYANT, Robert, W.** [US/US]; 7 Graphics Drive, Ewing, NJ 08628 (US). **BUBER, Tulu** [US/US]; 7 Graphics Drive, Ewing, NJ 08628 (US).

(74) Agents: **SHEA, Timothy, J., Jr.** et al.; Sterne, Kessler, Goldstein & Fox P.L.L.C., 1100 New York Avenue, N.W., Washington, DC 20005-3934 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, 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, 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, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

(88) Date of publication of the international search report:
4 December 2008

WO 2008/013861 A3

(54) Title: SCREENING ASSAY FOR INHIBITORS OF TRPA1 ACTIVATION BY A LOWER ALKYL PHENOL

(57) Abstract: The invention relates an assay useful for screening and identifying compounds as modulators of lower alkyl phenol activation of TRPA1. Thymol, a lower alkyl phenol anti-infective and the active ingredient in, e.g., mouthwashes, is stringent and has an objectionable burning taste sensation. Thymol activates the transient receptor potential like ion channel TRPA1. The assay described and claimed herein involves measurement of activation of TRPA1 and enables the screening of compounds that inhibit lower alkyl phenol, or thymol activation of TRPA1. Inhibitors of thymol activation of TRPA1 can be used to prevent the objectionable taste of thymol in medical uses where taste limits acceptance.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US07/16748

A. CLASSIFICATION OF SUBJECT MATTER
IPC: G01N 33/53(2006.01)

USPC: 435/7.1
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)
U.S. : 435/7.1

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Xu. H. Camphor Activates and Strongly Desensitizes the Transient Receptor Potential Vanilloid Subtype 1 Channel in a Vanilloid-Indenpendent Mechanism. The Journal of Neuroscience. September 2005, Vol 25. No. 39, pages 8924-8937, whole document.	1-72

☐ 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 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
10 July 2008 (10.07.2008)	12 AUG 2008
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer BIN SHEN Telephone No. 571-272-0522

Form PCT/ISA/210 (second sheet) (April 2007)