

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
9 December 2004 (09.12.2004)

PCT

(10) International Publication Number
WO 2004/106279 A3

(51) International Patent Classification⁷: **C07C 233/43**,
A61K 31/167, A61P 11/08

(21) International Application Number:
PCT/US2004/016602

(22) International Filing Date: 26 May 2004 (26.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/473,423 27 May 2003 (27.05.2003) US

(71) Applicant (for all designated States except US): **THER-
AVANCE, INC.** [US/US]; 901 Gateway Boulevard, South
San Francisco, CA 94080 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **STERGIADES,**
Ioanna [US/US]; 1515 Sutter Street, Apt. 325, San
Francisco, CA 94109 (US). **YOST, Edward** [US/US];
3492 Flora Vista Avenue, Santa Clara, CA 95051 (US).
HUBBARD, Cristin [US/US]; 345 Franconia Street, San
Francisco, CA 94110 (US). **ZHANG, Weijiang** [US/US];
1282 Montecito Drive, Concord, CA 94521 (US).

(74) Agents: **HAGENAH, Jeffrey, A.** et al.; Theravance, Inc.,
901 Gateway Boulevard, South San Francisco, CA 94080
(US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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, IT, LU, MC, 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
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
3 February 2005

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: CRYSTALLINE FORM OF β_2 ADRENERGIC RECEPTOR AGONIST

(57) Abstract: The invention provides a novel β_2 adrenergic receptor agonist in crystalline salt form. The invention also provides pharmaceutical compositions comprising the novel β_2 adrenergic receptor agonist in crystalline salt form, formulations containing the pharmaceutical compositions, methods of using the crystalline salt to treat diseases associated with β_2 adrenergic receptor activity, and processes useful for preparing such crystalline compounds.



WO 2004/106279 A3