

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
5 January 2006 (05.01.2006)

PCT

(10) International Publication Number
WO 2006/002185 A1

(51) International Patent Classification⁷: **C07C 65/26**,
59/72, 255/54, 311/21, 311/08, 311/09, C07D 211/62,
295/104, C07C 235/34, C07F 9/38, A61K 31/216, 31/235,
A61P 5/30

(21) International Application Number:
PCT/US2005/021963

(22) International Filing Date: 21 June 2005 (21.06.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/581,913 22 June 2004 (22.06.2004) US

(71) Applicant (for all designated States except US):
SMITHKLINE BEECHAM CORPORATION
[US/US]; One Franklin Plaza, P.O. Box 7929, Philadel-
phia, PA 19101 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HEYER, Den-
nis** [US/US]; GlaxoSmithKline, Five Moore Drive, PO
Box 13398, Research Triangle Park, NC 27709 (US).
FANG, Jing [CN/US]; GlaxoSmithKline, Five Moore
Drive, PO Box 13398, Research Triangle Park, NC 27709
(US). **NAVAS III, Frank** [US/US]; GlaxoSmithKline,
Five Moore Drive, P.O. Box 13398, Research Triangle
Park, NC 27709 (US). **KATAMREDDY, Subba, Reddy**
[IN/US]; GlaxoSmithKline, Five Moore Drive, PO Box
13398, Research Triangle Park, NC 27709 (US). **PECK-
HAM, Jennifer, Poole** [US/US]; GlaxoSmithKline, Five
Moore Drive, PO Box 13398, Research Triangle Park, NC
277090 (US). **TURNBULL, Philip, Stewart** [US/US];
GlaxoSmithKline, Five Moore Drive, PO Box 13398,
Research Triangle Park, NC 277090 (US). **MILLER,
Aaron, Bayne** [US/US]; GlaxoSmithKline, Five Moore
Drive, PO Box 13398, Research Triangle Park, NC 277090
(US). **AKWABI-AMEYAW, Adwoa** [US/US]; Glaxo-
SmithKline, Five Moore Drive, PO Box 13398, Research
Triangle Park, NC 277090 (US).

(74) Agents: **DADSWELL, Charles, E.** et al.; GlaxoSmithK-
line, Five Moore Drive, Post Office Box 13398, Research
Triangle Park, NC 27709 (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, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ,
OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,

SM, 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, IS, IT, LT, 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).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii)) for the following designations 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, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,
MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO,
NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,
SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU,
ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW,
MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent
(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent
(AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB,
GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG)
- as to the applicant's entitlement to claim the priority of the
earlier application (Rule 4.17(iii)) for the following desig-
nations 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, KM, KP, KR, KZ, LC, LK, LR, LS,
LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG,
NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,
SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC,
VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE,
LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- of inventorship (Rule 4.17(iv)) for US only

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

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: CHEMICAL COMPOUNDS

(57) Abstract: The present invention relates to novel compounds with a variety of therapeutic uses, more particularly novel naphthalene compounds that are particularly useful for selective estrogen receptor modulation.

WO 2006/002185 A1