PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 :
C07D 311/58, A61K 31/495, 31/535

A1

(11) International Publication Number: WO 99/14213

(43) International Publication Date: 25 March 1999 (25.03.99)

(21) International Application Number: PCT/SE98/01604

(22) International Filing Date: 9 September 1998 (09.09.98)

(30) Priority Data:
9703378-1 18 September 1997 (18.09.97) SE

(71) Applicant *(for all designated States except US)*: ASTRA AKTIEBOLAG [SE/SE]; S-151 85 Södertälje (SE).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: BERG, Stefan [SE/SE]; Astra Arcus AB, S-151 85 Södertälje (SE). LINDERBERG, Mats [SE/SE]; Astra Production Chemicals AB, S-151 85 Södertälje (SE). ROSS, Svante [SE/SE]; Astra Arcus AB, S-151 85 Södertälje (SE). THORBERG, Seth-Olov [SE/SE]; Astra Arcus AB, S-151 85 Södertälje (SE). ULFF, Bengt [SE/SE]; Ägostigen 19, S-151 52 Södertälje (SE).

(74) Agent: ASTRA AKTIEBOLAG; Patent Dept., S-151 85 Södertälje (SE).

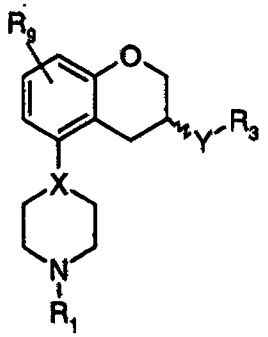
(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, 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 the receipt of amendments.

(54) Title: SUBSTITUTED CHROMAN DERIVATIVES

(57) Abstract

The present invention relates to new piperidinyl- or piperazinyl-substituted-3,4-dihydro-2*H*-1-benzopyran derivatives having formula (I) wherein X is N or CH; Y is NR_2CH_2, CH_2NR_2, NR_2CO, $CONR_2$ or NR_2SO_2 wherein R_2 is H or C_1–C_6 alkyl; R_1 is H, C_1–C_6 alkyl or C_3–C_6 cycloalkyl; R_3 is C_1–C_6 alkyl, C_3–C_6 cycloalkyl or $(CH_2)_n$–aryl, wherein aryl is phenyl or a heteroaromatic ring containing one or two heteroatoms selected from N, O and S and which may be mono- or di-substituted; n is 0-4; R_9 is C_1–C_6 alkyl, C_3–C_6 cycloalkyl, OCF_3, $OCHF_2$, OCH_2F, halogen, $CONR_6R_7$, CN, CF_3, OH, C_1–C_6 alkoxy, NR_6R_7, SO_3CH_3, SO_3CF_3, $SO_2NR_6R_7$, an unsubstituted or substituted heterocyclic or heteroaromatic ring containing one or two heteroatoms selected from N and O, wherein the substituent(s) is(are) C_1–C_6 alkyl; or COR_8; wherein R_6, R_7 and R_8 are as defined above, as (*R*)-enantiomers, (*S*)-enantiomers or racemates in the form of a free base or pharmaceutically acceptable salts or solvates thereof, a process for their preparation, pharmaceutical compositions containing said therapeutically active compounds and to the use of said active compounds in therapy.



(I)