



(51) International Patent Classification:

C07D 233/60 (2006.01) **A61K 31/4439** (2006.01)
C07D 401/14 (2006.01) **A61P 25/28** (2006.01)
C07D 403/10 (2006.01) **C07D 405/14** (2006.01)
C07D 487/04 (2006.01) **C07D 471/04** (2006.01)
A61K 31/4178 (2006.01) **C07D 498/04** (2006.01)
A61K 31/4196 (2006.01)

(21) International Application Number:

PCT/EP2010/060083

(22) International Filing Date:

13 July 2010 (13.07.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

09165585.2 15 July 2009 (15.07.2009) EP
 10164625.5 1 June 2010 (01.06.2010) EP

(71) Applicant (for all designated States except US): **ORTHO-MCNEIL-JANSSEN PHARMACEUTICALS, INC** [US/US]; 1125 Trenton-Harbourton Road, Titusville, New Jersey 08560 (US).

(72) Inventors; and

(75) **Inventors/Applicants (for US only): WU, Tongfei** [CN/BE]; c/o Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE). **GIJSEN, Henricus, Jacobus, Maria** [NL/NL]; c/o Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE). **ROMBOUTS, Frederik, Jan, Rita** [BE/BE]; c/o Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE). **BISCHOFF, François, Paul** [FR/BE]; c/o Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE). **BERTHELOT, Didier, Jean-Claude** [FR/BE]; c/o Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE). **OEHLRICH, Daniel** [GB/BE]; c/o Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE). **DE CLEYN, Michel, Anna, Jozef** [BE/BE]; c/o Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE).

Beerse (BE). **PIETERS, Serge, Maria, Aloysius** [NL/NL]; c/o Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE). **MINNE, Garrett, Berlond** [BE/BE]; c/o Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE). **VELTER, Adriana, Ingrid** [RO/BE]; c/o Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE). **VAN BRANDT, Sven, Franciscus, Anna** [BE/BE]; c/o Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE). **SURKYN, Michel** [BE/BE]; c/o Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE).

(74) **Agent: QUAGHEBEUR, Luc**; Turnhoutseweg 30, B-2340 Beerse (BE).

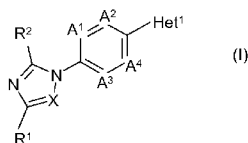
(81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) **Title:** SUBSTITUTED TRIAZOLE AND IMIDAZOLE DERIVATIVES AS GAMMA SECRETASE MODULATORS



(57) **Abstract:** The present invention is concerned with novel substituted triazole and imidazole derivatives of Formula (I) where in R^1 , R^2 , A^1 , A^2 , A^3 , A^4 , X , and Het^1 have the meaning defined in the claims. The compounds according to the present invention are useful as gamma secretase modulators. The invention further relates to processes for preparing such novel compounds, pharmaceutical compositions comprising said compounds as an active ingredient as well as the use of said compounds as a medication.