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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
21 December 2007 (21.12.2007)

PCT

(10) International Publication Number
WO 2007/145571 A1

(51) International Patent Classification:
C07D 487/04 (2006.01) *A61P 25/28* (2006.01)
A61K 31/519 (2006.01)

(21) International Application Number:
PCT/SE2007/000574

(22) International Filing Date: 12 June 2007 (12.06.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/813,539 14 June 2006 (14.06.2006) US
60/896,984 26 March 2007 (26.03.2007) US

(71) Applicants *(for all designated States except US)*: **ASTRAZENECA AB** [SE/SE]; S-151 85 Södertälje (SE). **ASTEX THERAPEUTICS LTD** [GB/GB]; 436 Cambridge Science Park, Milton Road, Cambridge CB4 0QA (GB).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **BERG, Stefan** [SE/SE]; AstraZeneca R & D Södertälje, S-151 85 Södertälje (SE). **HOLENZ, Jörg** [DE/SE]; AstraZeneca R & D Södertälje, S-151 85 Södertälje (SE). **HÖGDIN, Katharina** [SE/SE]; AstraZeneca R & D Södertälje, S-151 85 Södertälje (SE). **KOLMODIN, Karin** [SE/SE]; AstraZeneca R & D Södertälje, S-151 85 Södertälje (SE). **PLOBECK, Niklas** [SE/SE]; AstraZeneca R & D Södertälje, S-151 85 Södertälje (SE). **ROTTICCI, Didier** [FR/SE]; AstraZeneca R & D Södertälje, S-151 85 Södertälje (SE). **SEHGELMEBLE, Fernando** [SE/SE]; AstraZeneca R & D Södertälje, S-151 85 Södertälje (SE). **WIRSTAM, Maria** [SE/SE]; AstraZeneca R & D Södertälje, S-151 85 Södertälje (SE).

(74) Agent: **ASTRAZENECA AB**; Global Intellectual Property, S-151 85 Södertälje (SE).

(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, 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*
— *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 "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) **Title:** AMINO- IMIDAZOLONES AND THEIR USE AS A MEDICAMENT FOR TREATING COGNITIVE IMPAIRMENT. ALZHEIMER DISEASE, NEURODEGENERATION AND DEMENTIA.

(57) **Abstract:** This invention relates to novel compounds having the structural formula I below: [Chemical formula should be inserted here. Please see paper copy] and to their pharmaceutically acceptable salt, compositions and methods of use. These novel compounds provide a treatment or prophylaxis of cognitive impairment, Alzheimer Disease, neurodegeneration and dementia.

WO 2007/145571 A1