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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
27 May 2004 (27.05.2004)

PCT

(10) International Publication Number
WO 2004/043465 A1

(51) International Patent Classification[7]: A61K 31/501, A61P 25/28

(21) International Application Number:
PCT/HU2003/000096

(22) International Filing Date:
13 November 2003 (13.11.2003)

(25) Filing Language: English

(26) Publication Language: English

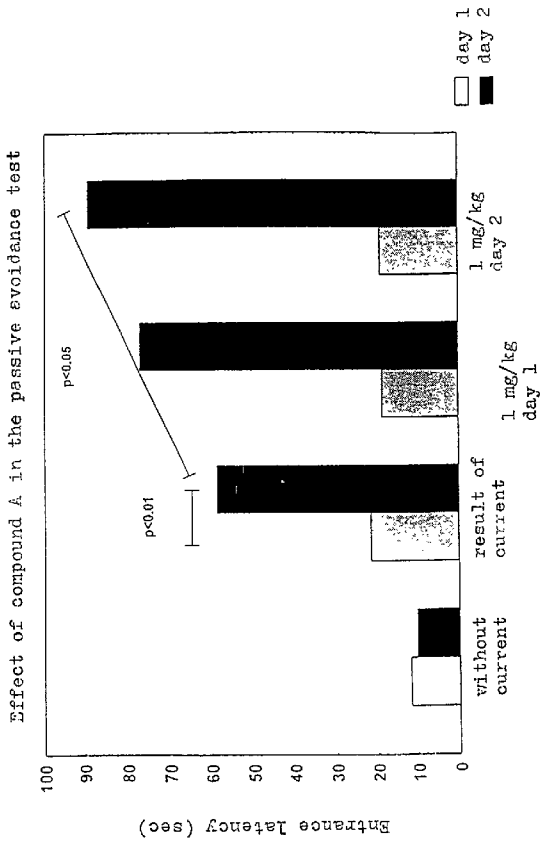
(30) Priority Data:
P0203929 13 November 2002 (13.11.2002) HU

(71) Applicant *(for all designated States except US)*: **EGIS GYÓGYSZERGYÁR RT.** [HU/HU]; Keresztúri út 30-38, H-1106 Budapest (HU).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **LÉVAY, György** [HU/HU]; Gábor Áron u. 10, H-2092 Budakeszi (HU). **GACSÁLYI, István** [HU/HU]; Baross u. 67, H-1201 Budapest (HU). **MARKÓ, Bernadett** [HU/HU]; Pásztorfalva u. 14, H-1171 Budapest (HU). **SCHMIDT, Éva** [HU/HU]; Széher u. 51/B, H-1021 Budapest (HU). **EGYED, András** [HU/HU]; Újvidék u. 58, H-1145 Budapest (HU). **KOMPAGNE, Hajnalka** [HU/HU]; Kőérberki u.5/b, H-1221 Budapest (HU). **LEVELEKI, Csilla** [HU/HU]; Tárkony u. 47., H-1029 Budapest (HU). **MIKLÓSNÉ KOVÁCS, Anikó** [HU/HU]; Vágújhely u. 10, H-1141 Budapest (HU). **SZÉNÁSI, Gábor** [HU/HU]; Vízimolnár u. 9, H-1031 Budapest (HU). **WELLMANN, János** [HU/HU]; Toroczkó u. 12., H-1026 Budapest (HU). **HÁRSING, László Gábor** [HU/HU]; Dembinszky u. 8, H-1071 Budapest (HU). **BARKÓCZY, József** [HU/HU]; Szirom u. 4-6/B, H-1016 Budapest (HU). **SIMIG, Gyula** [HU/HU]; Hollósy S. u. 25, H-1126 Budapest (HU). **KÓTAY NAGY, Péter** [HU/HU]; Nagymező u. 73, H-2600 Vác (HU).

[Continued on next page]

(54) Title: SUBSTITUTED ALKYL-PYRIDAZINONES FOR THE TREATMENT OF MEMORY AND LEARNING MALFUNCTIONS



(57) Abstract: The compounds of the general Formula I, wherein R^1 stands for hydrogen or lower alkyl; one of symbols X and Y stands for hydrogen or halogen and the other represents a group of the general Formula II, R^2 is hydrogen or lower alkyl; n is 1, 2 or 3; R^3 is hydrogen, lower alkyl or aryl-lower alkyl; Z is -0-; or R^3 and Z together with the intermediate atoms form a piperazino ring; Q and W independently from each other stands for -CH= or -N=; and R^4, R^5 and R^6 can be the same or different and stand for hydrogen, halogen, trifluoromethyl or lower alkoxy; or R^4 and R^5 together form an ethylenedioxy group) and pharmaceutically acceptable salts thereof can be used for the treatment or prophylaxis of malfunctions of memory and/or cognitive decline or prevention of decline of learning abilities.

WO 2004/043465 A1

(74) **Agent: ADVOPATENT**; P.O. Box 11, Office of Patent and Trademark Attorney, H-1251 Budapest (HU).

(81) **Designated States** *(national)*: 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, 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, 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** *(regional)*: ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, 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, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

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.