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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
12 April 2012 (12.04.2012)

PCT

(10) International Publication Number
WO 2012/045882 A2

(51) International Patent Classification:
C07K 16/18 (2006.01) *A61K 39/00* (2006.01)
G01N 33/68 (2006.01)

(21) International Application Number:
PCT/EP2011/067604

(22) International Filing Date:
7 October 2011 (07.10.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10186810.7 7 October 2010 (07.10.2010) EP
11174248.2 15 July 2011 (15.07.2011) EP

(71) Applicants *(for all designated States except US)*: **AC IMMUNE S.A.** [CH/CH]; EPFL-PSE Building B, CH-1015 Lausanne (CH). **K. U. LEUVEN RESEARCH & DEVELOPMENT** [BE/BE]; Waaistraat 6, Box 5105, B-3000 Leuven (BE).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **PFEIFER, Andrea** [DE/CH]; Route de Fenil 16A, CH-1806 St-Légier (CH). **MUHS, Andreas** [DE/CH]; Avenue des Cerisiers 39b, CH-1009 Pully (CH). **VAN LEUVEN, Fred** [BE/BE]; Hertogenlaan 18, B-3210 Linden (BE). **PIHLGREN, Maria** [SE/CH]; Chemin du Tessin 6B, CH-1052 Mont-sur-Lausanne (CH). **ADOLFSSON, Oskar** [IS/CH]; Chemin de Larry 16, CH-1038 Bercher (CH).

[Continued on next page]

(54) Title: PHARMACEUTICAL COMPOSITION

(57) Abstract: The present invention relates to methods and compositions for the therapeutic and diagnostic use in the treatment of diseases and disorders which are caused by or associated with neurofibrillary tangles. In particular, the invention relates to antibodies, which specifically recognize and bind to phosphorylated pathological protein tau-conformers and to methods and compositions involving said antibodies for the therapeutic and diagnostic use in the treatment of tauopathies including Alzheimer's Disease (AD).

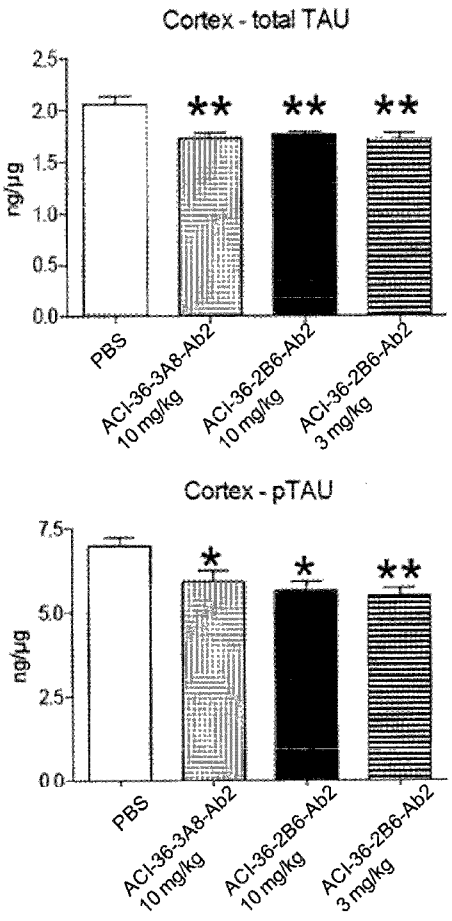


FIGURE 3

WO 2012/045882 A2

(74) **Agent**: **WERNER BASTIAN**; Vossius & Partner, Siebertstrasse 4, 81675 München (DE).

(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, QA, RO, RS, RU, RW, 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, RW, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*

— *with (an) indication(s) in relation to deposited biological material furnished under Rule 13bis separately from the description (Rules 13bis.4(d)(i) and 48.2(a)(viii))*

— *with sequence listing part of description (Rule 5.2(a))*