Title (en)

USE OF CALCILYTIC DRUGS AS A PHARMACOLOGICAL APPROACH TO THE TREATMENT AND PREVENTION OF ALZHEIMER'S DISEASE, ALZHEIMER'S DISEASE-RELATED DISORDERS, AND DOWN'S SYNDROME NEUROPATHIES

Title (de)

VERWENDUNG KALZILYTISCHER MEDIKAMENTE ALS PHARMAKOLOGISCHER ANSATZ ZUR BEHANDLUNG UND VORBEUGUNG VON MORBUS ALZHEIMER, MIT MORBUS ALZHEIMER ZUSAMMENHÄNGENDEN ERKRANKUNGEN UND DOWN-SYNDROM-NEUROPATHIEN

Title (fr)

UTILISATION DE MÉDICAMENTS CALCILYTIQUES EN TANT QU'APPROCHE PHARMACOLOGIQUE VIS-À-VIS DU TRAITEMENT ET DE LA PRÉVENTION DE LA MALADIE D'ALZHEIMER, DE TROUBLES ASSOCIÉS À LA MALADIE D'ALZHEIMER ET DE NEUROPATHIES ASSOCIÉES AU SYNDROME DE DOWN

Publication

EP 2797591 A1 20141105 (EN)

Application

EP 11817420 A 20111227

Priority

IB 2011055967 W 20111227

Abstract (en)

[origin: WO2013098588A1] A pharmacological treatment of both familial early onset and sporadic late onset Alzheimer's disease (AD), AD-related disorders and Down's syndrome-coupled neuropathies involves the use of a class of drugs, the calcilytics, which by inhibiting the calcium-sensing receptor (CaSR)signaling in all types of brain cells prevent: (i) the overproduction of cell-harming nitric oxide (NO) and peroxynitrite (ONOO-), and most importantly (ii) the intracellular overproduction, accumulation, and secretion of Amyloid beta (Abeta) peptides in response to the extracellular presence of exogenous Abetapeptides and/or proinflammatory cytokines, and (iii) the Abeta peptide-related hyperphosphorylation of the Tau (tau) protein on the part of an Abeta/Ca SR-signaling activated glycogen synthase kinase-(GSK)-3beta w i t h the resulting formation of neurofibrillary tangles (NTFs), the latter known to cause such severe dysfunctioning of the microtubular cytoskeleton as to eventually favor (iv) the death of human cerebral cortex neurons.

IPC 8 full level

A61K 31/277 (2006.01); **A61P 25/28** (2006.01)

CPC (source: EP)

A61K 31/277 (2013.01); **A61K 45/06** (2013.01); **A61P 25/28** (2017.12)

Citation (search report)

See references of WO 2013098588A1

Citation (examination)

- ILARIA DAL PRA ET AL: "Roles of Ca2+ and the Ca2+-sensing receptor (CASR) in the expression of inducible NOS (nitric oxide synthase)-2 and its BH4 (tetrahydrobiopterin)-dependent activation in cytokine-stimulated adult human astrocytes", JOURNAL OF CELLULAR BIOCHEMISTRY, vol. 96, no. 2, 1 October 2005 (2005-10-01), US, pages 428 - 438, XP055373660, ISSN: 0730-2312, DOI: 10.1002/jcb.20511
- DANIELA RICCARDI ET AL: "The Calcium-Sensing Receptor Beyond Extracellular Calcium Homeostasis: Conception, Development, Adult Physiology, and Disease", ANNUAL REVIEW OF PHYSIOLOGY, vol. 74, no. 1, 17 March 2012 (2012-03-17), pages 271 - 297, XP055032725, ISSN: 0066-4278, DOI: 10.1146/annurev-physiol-020911-153318

Designated contracting state (EPC)

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