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(71) Applicant *(for all designated States except US)*: **F. HOFFMANN-LA ROCHE AG** [CH/CH]; Grenzacherstrasse 124, CH-4070 Basel (CH).

(71) Applicant *(for US only)*: **HOFFMANN-LA ROCHE INC.** [US/US]; 340 Kingsland Street, Nutley, New Jersey 07110 (US).

(72) Inventors: **BORRONI, Edilio**; Dammerkirchstrasse 70, CH-4056 Basel (CH). **GOBBI, Luca**; Unterer Lehmattweg 19, CH-4463 Buus (CH). **HONER, Michael**; Rebbergstrasse 37, CH-8037 Zuerich (CH). **KNUST, Henner**; Im Ortsetter 26a, 79618 Rheinfelden (DE). **KOERNER, Matthias**; Kolpingstrasse 10, 79639 Grenzach-Wyhlen (DE). **MURI, Dieter**; St. Johanns-Ring 108, CH-4056 Basel (CH).

(74) Agent: **POPPE, Regina**; Grenzacherstrasse 124, CH-4070 Basel (CH).

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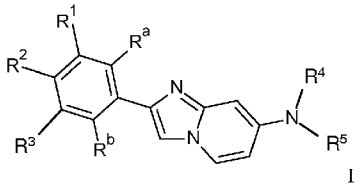
(54) **Title**: 2-PHENYL OR 2-HETARYL IMIDAZOL[1,2-a]PYRIDINE DERIVATIVES



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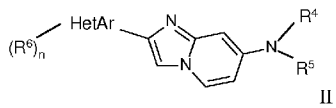

II

(57) **Abstract**: The invention relates to compounds of formulas I and II, formula I or formula II wherein R^1 is hydrogen, lower alkyl, lower alkoxy, halogen, S-lower alkyl, lower alkoxy substituted by halogen, di-lower alkyl amino, C(O)O-lower alkyl, lower alkyl substituted by hydroxy or hydroxy; R^2 is hydrogen, lower alkyl, halogen, lower alkoxy, S-lower alkyl, lower alkoxy substituted by halogen, $O(CH_2)_2$-lower alkoxy substituted by halogen, di-lower alkyl amino, alkyl amino, NH-lower alkyl substituted by halogen, N(lower alkyl)-benzyl, lower alkyl substituted by hydroxy, heterocycloalkyl optionally substituted by halogen, CH_2-lower alkoxy, CH_2-lower alkoxy substituted by halogen or hydroxy; or R^1 and R^2 form together with the carbon atoms to which they are attached a ring containing $-OCH_2CH_2O-$, OCH_2O-, $OCH_2CH_2CH_2O-$ or $-NHC(O)CH_2O-$; R^3 is hydrogen or lower alkoxy; R^4 is hydrogen or lower alkyl; R^5 is lower alkyl, cycloalkyl, lower alkyl substituted by hydroxy or lower alkyl substituted by halogen; or R^4 and R^5 form together with the nitrogen atom to which they are attached a ring containing $-CH_2CH_2CHRCH_2CH_2-$, $-CH_2CHRCH_2CH_2-$, $-CH_2CH_2OCH_2CH_2-$, $-CH_2CH_2NR'CH_2CH_2-$, CH_2CHR- or $-CH_2CH_2CH_2-$; wherein R is hydrogen, halogen, lower alkyl, lower alkoxy or lower alkyl substituted by halogen; R' is lower alkyl substituted by halogen; R^a is hydrogen or H; R^b is hydrogen, hydroxy or ^3H; R^6 is hydrogen, halogen or lower alkyl; HetAr is selected from the group consisting of thiophenyl, furanyl, thiozolyl, benzofuranyl, pyrazolyl, benzoimidazolyl or pyridinyl; n is 1 or 2; or to a pharmaceutically acceptable acid addition salt, to a racemic mixture or to its corresponding enantiomer and/or optical isomers thereof. The present compounds are suitable as imaging tool, which will improve diagnosis by identifying potential patients with excess of tau aggregates in the brain, which may be likely to develop Alzheimer's disease.