

R^a is hydrogen or ³H;

R^b is hydrogen, hydroxy or ³H;

R⁶ is hydrogen, halogen or lower alkyl;

5 HetAr is selected from the group consisting of thiophenyl, furanyl, thiazolyl, benzofuranyl, pyrazolyl, benzoimidazolyl or pyridinyl;

n is 1 or 2;

or a pharmaceutically acceptable acid addition salt, a racemic mixture or its corresponding enantiomer and/or optical isomers thereof.

10 In another aspect, there is provided a compound of formula I or II as defined herein for use in binding and imaging tau aggregates, beta-amyloid aggregates or alpha-synuclein aggregates.

~~In another aspect, there is provided a compound of formula I or II as defined herein for use in binding and imaging tau aggregates in Alzheimer patients.~~

~~In another aspect, there is provided a compound of formula I or II as defined herein for use in a tau binding study.~~

~~In another aspect, there is provided a compound of formula I or II as defined herein for use in diagnostic imaging of tau aggregates in the brain of a mammal.~~

In another aspect, there is provided a pharmaceutical preparation comprising a compound of formula I or II as defined herein and a pharmaceutical acceptable carrier.

20 In another aspect, there is provided a method of imaging tau-aggregate deposits, comprising detecting a compound of formula I or II that has associated with one or more tau-aggregate deposits, wherein the compound of formula I or II was from a detectable quantity of a composition as defined herein that had been introduced into a mammal.

25 In another aspect, there is provided the use of a compound as defined herein in the manufacture of a diagnostic imaging agent for diagnostic imaging of tau-aggregate deposits in the brain of a mammal.

The following definitions of the general terms used in the present description apply irrespective of whether the terms in question appear alone or in combination.

30 As used herein, the term "lower alkyl" denotes a saturated, i.e. aliphatic hydrocarbon group including a straight or branched carbon chain with 1 – 7 carbon atoms. Examples for "alkyl" are methyl, ethyl, n-propyl, and isopropyl.

The term "cycloalkyl" denotes a non aromatic hydrocarbon ring, containing from 3 to 6 carbon atoms.

The term "alkoxy" denotes a group -O-R' wherein R' is lower alkyl as defined above.

35 The term "halogen" denotes chlorine, bromine, fluorine or iodine.

n is 1 or 2;

or a pharmaceutically acceptable acid addition salt, a racemic mixture or its corresponding enantiomer and/or optical isomers thereof.

12. A compound of formula II according to claim 11, which compounds are

- 5 methyl-(2-thiophen-3-yl-imidazo[1,2-a]pyridin-7-yl)-amine
N-(2-furan-2-yl-imidazo[1,2-a]pyridin-7-yl)-methyl-amine
N-(2-thiophen-2-yl-imidazo[1,2-a]pyridin-7-yl)-methyl-amine
methyl-(2-thiazol-2-yl-imidazo[1,2-a]pyridin-7-yl)-amine
N-[2-(3-bromo-thiophen-2-yl)-imidazo[1,2-a]pyridin-7-yl]-methyl-amine
10 N-[2-(3-chloro-thiophen-2-yl)-imidazo[1,2-a]pyridin-7-yl]-methyl-amine
methyl-[2-(5-methyl-furan-2-yl)-imidazo[1,2-a]pyridin-7-yl]-amine
N-[2-(benzofuran-2-yl)-imidazo[1,2-a]pyridin-7-yl]-methyl-amine
N-[2-(2,5-dimethyl-2H-pyrazol-3-yl)-imidazo[1,2-a]pyridin-7-yl]-methyl-amine
methyl-[2-(1-methyl-1H-benzimidazol-2-yl)-imidazo[1,2-a]pyridin-7-yl]-amine
15 methyl-(2-pyridin-3-yl-imidazo[1,2-a]pyridin-7-yl)-amine
N-[2-(5-chloro-thiophen-2-yl)-imidazo[1,2-a]pyridin-7-yl]-methyl-amine
methyl-[2-(1-methyl-1H-pyrazol-4-yl)-imidazo[1,2-a]pyridin-7-yl]-amine or
N-(2-fluoroethyl)-2-(furan-2-yl)imidazo[1,2-a]pyridin-7-amine.

- 20 13. A compound of formula I or II according to any one of claims 1 – 12 for use in binding and imaging tau aggregates, beta-amyloid aggregates or alpha-synuclein aggregates.

~~14. A compound of formula I or II according to any one of claims 1 – 12 for use in binding and imaging tau aggregates in Alzheimer patients.~~

~~15. A compound of formula I or II according to any one of claims 1 – 12 for use in a tau-binding study.~~

~~16. A compound of formula I or II according to any one of claims 1 – 12 for use in diagnostic imaging of tau aggregates in the brain of a mammal.~~

1714. A pharmaceutical preparation comprising a compound of formula I or II according to any one of claims 1 – 12 and a pharmaceutical acceptable carrier.

1815. A method of imaging tau-aggregate deposits, comprising
5 - detecting a compound of formula I or II that has associated with one or more tau-aggregate deposits, wherein the compound of formula I or II was from a detectable quantity of a composition according to claim 1714 that had been introduced into a mammal.

1916. The use of a compound as defined in any one of claims 1 – 12 in the manufacture of
10 a diagnostic imaging agent for diagnostic imaging of tau-aggregate deposits in the brain of a mammal.
