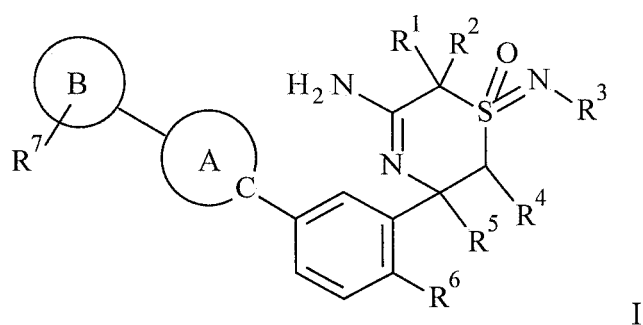
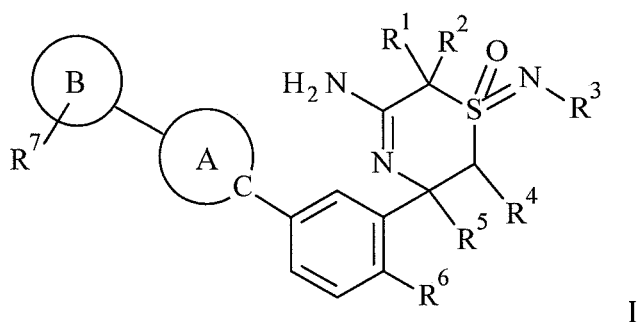




wherein the substituents and variables are as described below and in the claims, or a pharmaceutically acceptable salt thereof.

In one aspect, the present disclosure relates to a compound of formula I,



A is a heteroaryl group,

B is a heteroaryl group,

R¹ is selected from the group consisting of

- i) C₁₋₆-alkyl and
- ii) halogen-C₁₋₆-alkyl;

R² is selected from the group consisting of

- i) C₁₋₆-alkyl, and
- ii) halogen-C₁₋₆-alkyl;

or R¹ and R² form together with the C-atom they are attached to, a C₃₋₆-cycloalkyl-, wherein the C₃₋₆-cycloalkyl- is optionally substituted by one or more substituents selected from the group consisting of halogen and hydroxyl;

R³ is selected from the group consisting of

- i) hydrogen,
- ii) CD₃,
- iii) C₃₋₆-cycloalkyl,
- iv) halogen-C₁₋₆-alkyl, and
- v) C₁₋₆-alkyl;

R⁴ is selected from the group consisting of

i) hydrogen, and

ii) C₁₋₆-alkyl;

R⁵ is selected from the group consisting of

i) C₁₋₆-alkyl, and

ii) halogen-C₁₋₆-alkyl;

R⁶ is halogen;

R⁷ is selected from the group consisting of

iii) amino,

iv) cyano,

v) hydrogen,

vi) OH,

vii) halogen,

viii) C₁₋₆-alkyl,

ix) C₁₋₆-alkyl-C₃₋₆-cycloalkyl,

x) halogen-C₁₋₆-alkyl,

xi) C₁₋₆-alkoxy-C₁₋₆-alkyl,

xii) C₂₋₆-alkynyl,

xiii) C₂₋₆-alkynyl-C₁₋₆-alkyl,

xiv) C₂₋₆-alkynyl-C₁₋₆-alkoxy

xv) C₁₋₆-alkoxy, and

xvi) halogen-C₁₋₆-alkoxy;

or pharmaceutically acceptable salts thereof.

The present compounds have Asp2 (β -secretase, BACE1 or Memapsin-2) inhibitory activity and may therefore be used in the therapeutic and/or prophylactic treatment of diseases and disorders characterized by elevated β -amyloid levels and/or β -amyloid oligomers and/or β -amyloid plaques and further deposits, particularly Alzheimer's disease.

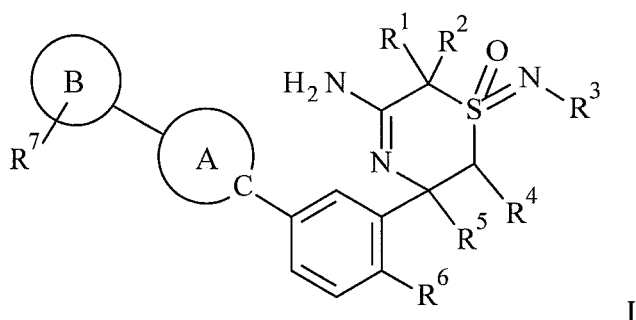
In another aspect, the present disclosure relates to a compound of formula I as defined herein for use as therapeutically active substance.

In another aspect, the present disclosure relates to a compound of formula I as defined herein for use as therapeutically active substance for the therapeutic and/or prophylactic treatment of diseases and disorders characterized by elevated β -amyloid levels and/or β -amyloid oligomers and/or β -amyloid plaques and further deposits or Alzheimer's disease.

In another aspect, the present disclosure relates to a pharmaceutical composition comprising a compound as defined herein.

Claims

1. A compound of formula I,



A is a heteroaryl group,

B is a heteroaryl group,

R¹ is selected from the group consisting of

- i) C₁₋₆-alkyl and
- ii) halogen-C₁₋₆-alkyl;

R² is selected from the group consisting of

- i) C₁₋₆-alkyl, and
- ii) halogen-C₁₋₆-alkyl;

or R¹ and R² form together with the C-atom they are attached to, a C₃₋₆-cycloalkyl-, wherein the C₃₋₆-cycloalkyl- is optionally substituted by one or more substituents selected from the group consisting of halogen and hydroxyl;

R³ is selected from the group consisting of

- i) hydrogen,
- ii) CD₃,
- iii) C₃₋₆-cycloalkyl,
- iv) halogen-C₁₋₆-alkyl, and
- v) C₁₋₆-alkyl;

R⁴ is selected from the group consisting of

- i) hydrogen, and
- ii) C₁₋₆-alkyl;

R⁵ is selected from the group consisting of

- i) C₁₋₆-alkyl, and
- ii) halogen-C₁₋₆-alkyl;

R⁶ is halogen;

R⁷ is selected from the group consisting of

(1R,3S)-5-amino-3-(5-(3-(5-(2,2-difluoroethoxy)pyrazin-2-yl)isoxazol-5-yl)-2-fluorophenyl)-3-(fluoromethyl)-6,6-dimethyl-1-(methylimino)-3,6-dihydro-2H-1,4-thiazine 1-oxide trifluoroacetate,

(1R,3S)-5-amino-3-(5-(3-(5-chloropyrimidin-2-yl)isoxazol-5-yl)-2-fluorophenyl)-3-(fluoromethyl)-6,6-dimethyl-1-(methylimino)-3,6-dihydro-2H-1,4-thiazine 1-oxide trifluoroacetate,

(1S,3R)-5-amino-3-(5-(3-(5-(2,2-difluoroethoxy)pyrazin-2-yl)isoxazol-5-yl)-2-fluorophenyl)-3,6,6-trimethyl-1-(methylimino)-3,6-dihydro-2H-1,4-thiazine 1-oxide trifluoroacetate,

(1S,3R)-5-amino-3-(5-(3-(5-chloropyrimidin-2-yl)isoxazol-5-yl)-2-fluorophenyl)-3,6,6-trimethyl-1-(methylimino)-3,6-dihydro-2H-1,4-thiazine 1-oxide trifluoroacetate,

(1S,3S)-3-[2-fluoro-5-[3-(5-methoxypyrazin-2-yl)isoxazol-5-yl]phenyl]-3-(fluoromethyl)-6,6-dimethyl-1-methylimino-1-oxo-2H-1,4-thiazin-5-amine trifluoroacetate,

(1S,3S)-3-[5-[3-(5-chloropyrimidin-2-yl)isoxazol-5-yl]-2-fluoro-phenyl]-3-(fluoromethyl)-6,6-dimethyl-1-methylimino-1-oxo-2H-1,4-thiazin-5-amine trifluoroacetate,

2-[5-[3-[(1R,3R)-5-amino-3,6,6-trimethyl-1-methylimino-1-oxo-2H-1,4-thiazin-3-yl]-4-fluorophenyl]isoxazol-3-yl]pyrimidine-5-carbonitrile trifluoroacetate, and

6-[4-[3-[(1R,3R)-5-amino-3,6,6-trimethyl-1-methylimino-1-oxo-2H-1,4-thiazin-3-yl]-4-fluorophenyl]triazol-1-yl]pyridine-3-carbonitrile trifluoroacetate.

24. A compound of formula I according to any of claims 1-23 for use as therapeutically active substance.
25. A compound of formula I according to claims 1-23 for use as therapeutically active substance for the therapeutic and/or prophylactic treatment of diseases and disorders characterized by elevated β -amyloid levels and/or β -amyloid oligomers and/or β -amyloid plaques and further deposits or Alzheimer's disease.
26. A pharmaceutical composition comprising a compound as described in any one of claims 1-23.