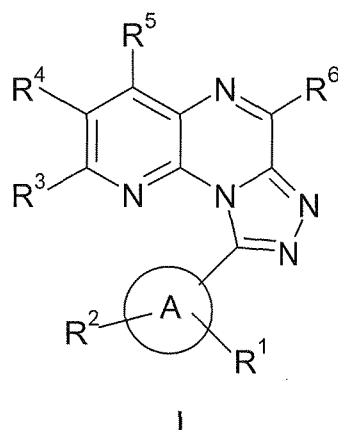
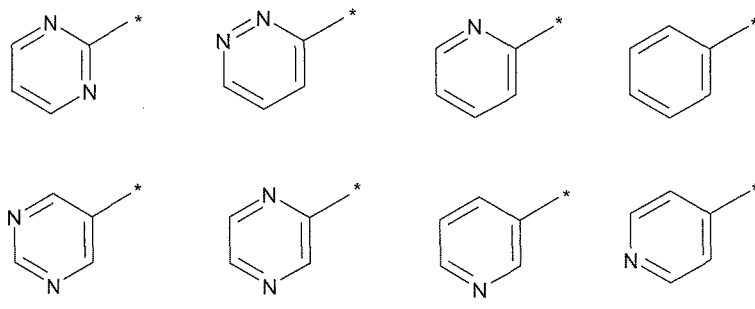


According to a first aspect, there is provided compounds of formula I



wherein

A is selected from the group A^a consisting of



wherein above mentioned phenyl-, pyridinyl-, pyrimidinyl-, pyridazinyl and pyrazinyl groups are substituted with R¹ and R²;

5

R¹ is selected from the group R^{1a} consisting of H, halogen, NC-, C₁₋₆-alkyl-, C₁₋₆-alkyl-O-, C₃₋₆-cycloalkyl and R⁸-(CH₂)_n-O- with n = 0, 1, 2, 3 or 4,

wherein above mentioned C₁₋₆-alkyl-, C₁₋₆-alkyl-O-, C₃₋₆-cycloalkyl and R⁸-(CH₂)_n-O- groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, HO- and optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-;

R² is selected from the group R^{2a1} consisting of H, HO-, halogen, C₁₋₆-alkyl-, C₁₋₆-alkyl-O-, C₃₋₆-cycloalkyl, C₃₋₆-cycloalkyl-C₁₋₃-alkyl-, heterocyclyl, heterocyclyl-C₁₋₃-alkyl-, phenyl, heteroaryl, R⁸-(CH₂)_n-O- with n = 0, 1, 2, 3 or 4, and R⁸-(CH₂)_m-(CH)(CH₃)-(CH₂)_o-O- with m = 0, 1 or 2 and o = 0, 1 or 2,

10

wherein above mentioned C_{1-6} -alkyl-, and C_{1-6} -alkyl-O-, C_{3-6} -cycloalkyl-, heterocyclyl, heterocyclyl- C_{1-3} -alkyl-, phenyl, heteroaryl, $R^8-(CH_2)_n$ -O- and $R^8-(CH_2)_m-(CH)(CH_3)-(CH_2)_6$ -O-groups may optionally be are substituted with 1 to 5 substituents independently selected from the group consisting of halogen, HO-, and optionally with 1 to 7 fluorine atoms substituted C_{1-3} -alkyl-O-, and optionally with 1 to 7 fluorine atoms substituted C_{1-3} -alkyl-;
 wherein above mentioned C_{1-6} -alkyl- and C_{1-6} -alkyl-O-groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, and optionally with 1 to 7 fluorine atoms substituted C_{1-3} -alkyl-,

and

wherein above mentioned C_{3-6} -cycloalkyl, C_{3-6} -cycloalkyl- C_{1-3} -alkyl-, heterocyclyl, heterocyclyl- C_{1-3} -alkyl-, phenyl, heteroaryl, $R^8-(CH_2)_n$ -O- and $R^8-(CH_2)_m-(CH)(CH_3)-(CH_2)_6$ -O-groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, HO-, optionally with 1 to 7 fluorine atoms substituted C_{1-3} -alkyl-O-, and optionally with 1 to 7 fluorine atoms substituted C_{1-3} -alkyl-;

R^3 is selected from the group R^{3a} consisting of H, halogen, NC-, C_{1-4} -alkyl- and C_{3-6} -cycloalkyl-, wherein the above mentioned C_{1-4} -alkyl- and C_{3-6} -cycloalkyl-groups may optionally be substituted with 1 to 9 substituents independently selected from the group consisting of halogen, NC-, HO-, C_{1-3} -alkyl- and C_{1-3} -alkyl-O-;

R^4 , R^5 are selected independently of each other from the group R^{4a}/R^{5a} consisting of H, halogen, NC-, HO-, C_{1-6} -alkyl-, C_{1-6} -alkyl-O-, C_{3-8} -cycloalkyl-, C_{3-8} -cycloalkyl- C_{1-3} -alkyl-, C_{3-8} -cycloalkyl-O-, heterocyclyl-O-, heterocyclyl, heteroaryl, R^7-CH_2 -O- and $R^7-(CH_2)_2$ -O-, wherein above mentioned C_{1-6} -alkyl-, C_{1-6} -alkyl-O-, C_{3-8} -cycloalkyl-, C_{3-8} -cycloalkyl- C_{1-3} -alkyl-, C_{3-8} -cycloalkyl-O-, heterocyclyl-O-, heterocyclyl, heteroaryl, R^7-CH_2 -O- and $R^7-(CH_2)_2$ -O-groups, may optionally be

substituted with 1 to 5 substituents independently selected from the group consisting of halogen, optionally with 1 to 5 halogen atoms, substituted C₁₋₂-alkyl-, and optionally with 1 to 5 halogen atoms substituted C₁₋₂-alkyl-O-;

R⁶ is selected from the group R^{6a} consisting of
H, NC-, C₁₋₆-alkyl-, C₃₋₈-cycloalkyl-, C₃₋₈-cycloalkyl-C₁₋₃-alkyl- and C₃₋₈-cycloalkyl-O-
wherein above mentioned C₁₋₆-alkyl- groups may optionally be substituted with 1-3 halogen atoms;

R⁷ is selected from the group R^{7a} consisting of
H, carbocyclyl, heterocyclyl and heteroaryl,
wherein above mentioned carbocyclyl, heterocyclyl and heteroaryl-groups may optionally be substituted with 1 to 4 substituents independently selected from the group consisting of HO-, optionally with 1 to 3 halogen atoms substituted C₁₋₄-alkyl-, optionally with 1 to 3 halogen atoms substituted C₁₋₄-alkyl-O- and halogen;

R⁸ is selected from the group R^{8a} consisting of
C₃₋₆-cycloalkyl, heterocyclyl, heterocyclyl-C₁₋₃-alkyl-, phenyl and pyridyl,
wherein above mentioned C₃₋₆-cycloalkyl, heterocyclyl, heterocyclyl-C₁₋₃-alkyl-, phenyl and pyridyl groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of HO-, fluorine and optionally with 1 to 7 halogen atoms substituted C₁₋₃-alkyl-;

the tautomers thereof, the stereoisomers thereof, the mixtures thereof, the solvates thereof, the hydrates thereof and the salts thereof.

disorders; (9) disorders of adult personality and behaviour; (10) mental and behavioural disorders due to psychoactive substance use; (11) extrapyramidal and movement disorders; (12) episodic and paroxysmal disorders, epilepsy; (13) Systemic atrophies primarily affecting the central nervous system, ataxia; (14)

- 5 Behavioural syndromes associated with physiological disturbances and physical factors; (15) sexual dysfunction comprising excessive sexual drive; (16) factitious disorders; (17) Treatment, amelioration and / or prevention of cognitive impairment being related to perception, concentration, cognition, learning or memory; (18) Treatment amelioration and / or prevention of cognitive impairment being related to
- 10 age-associated learning and memory impairments; (19) Age-associated memory losses; (20) Vascular dementia; (21) Craniocerebral trauma; (22) Stroke; (23) Dementia occurring after strokes (post stroke dementia); (24) Post-traumatic dementia; (25) General concentration impairments; (26) Concentration impairments in children with learning and memory problems; (27) Alzheimer's disease; (28) Lewy
- 15 body dementia; (29) Dementia with degeneration of the frontal lobes; including Pick's syndrome; (30) Parkinson's disease; (31) Progressive nuclear palsy; (32) Dementia with corticobasal degeneration; (33) Amyotrophic lateral sclerosis (ALS); (34) Huntington's disease; (35) Multiple sclerosis; (36) Thalamic degeneration; (37) Creutzfeld-Jacob dementia; (38) HIV dementia; (38) Schizophrenia with dementia or
- 20 Korsakoff's psychosis; (39) Sleep disorders; (40) Bipolar disorder; (41) Metabolic syndrome; (42) Obesity; (43) Diabetes mellitus; (44) Hyperglycemia; (45) Dyslipidemia; (46) Impaired glucose tolerance; (47) Disease of the testes, brain, small intestine, skeletal muscle, heart, lung, thymus or spleen and (48) pain disorders.

25

According to a fifth aspect, there is provided a compound as defined herein, or a pharmaceutically acceptable tautomer thereof, stereoisomer thereof, mixtures thereof, solvate thereof, hydrate thereof or salt thereof or a pharmaceutical composition as defined herein for use in symptomatic treatment of Alzheimer's

30 Disease, symptomatic treatment of prodromal and/or mild-to-moderate Alzheimer's Disease and/or for the treatment of cognitive impairment associated with schizophrenia.

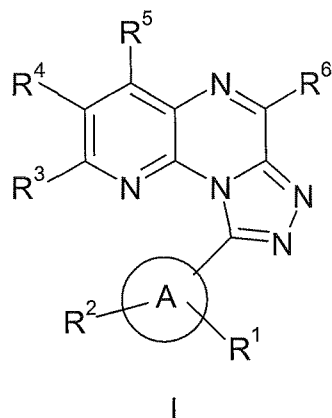
Other aims of the present disclosure will become apparent to the skilled man directly from the foregoing and following remarks.

Detailed description

- 5 In a first aspect the present invention relates to compounds of general formula I

Claims

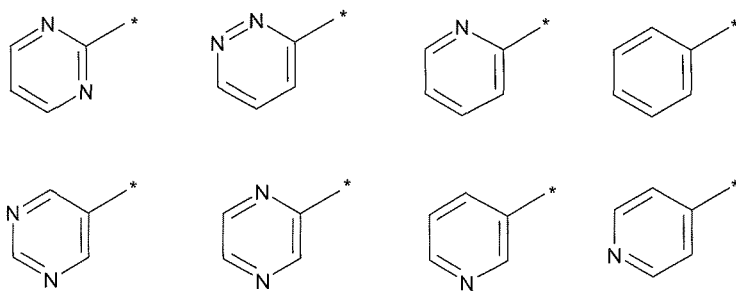
1. Compounds of formula I



5

wherein

A is selected from the group A^a consisting of



wherein above mentioned phenyl-, pyridinyl-, pyrimidinyl-, pyridazinyl and pyrazinyl groups are substituted with R¹ and R²;

R¹ is selected from the group R^{1a} consisting of

H, halogen, NC-, C₁₋₆-alkyl-, C₁₋₆-alkyl-O-, C₃₋₆-cycloalkyl and R⁸-(CH₂)_n-O- with n = 0, 1, 2, 3 or 4,

wherein above mentioned C₁₋₆-alkyl-, C₁₋₆-alkyl-O-, C₃₋₆-cycloalkyl and R⁸-(CH₂)_n-O- groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, HO- and optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-;

R² is selected from the group R^{2a1} consisting of

H, HO-, halogen, C₁₋₆-alkyl-, C₁₋₆-alkyl-O-, C₃₋₆-cycloalkyl, heterocycl-

C₃₋₆-cycloalkyl-C₁₋₃-alkyl-, heterocyclyl, heterocyclyl-C₁₋₃-alkyl-, phenyl, heteroaryl, R⁸-(CH₂)_n-O- with n = 0, 1, 2, 3 or 4, and R⁸-(CH₂)_m-(CH)(CH₃)-(CH₂)_o-O- with m = 0, 1 or 2 and o = 0, 1 or 2,

wherein above mentioned C₁₋₆-alkyl-, and C₁₋₆-alkyl-O-, C₃₋₆-cycloalkyl, heterocyclyl, heterocyclyl-C₁₋₃-alkyl-, phenyl, heteroaryl, R⁸-(CH₂)_n-O- and R⁸-(CH₂)_m-(CH)(CH₃)-(CH₂)_o-O-groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, HO-, and optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-O-, and optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-;

wherein above mentioned C₁₋₆-alkyl- and C₁₋₆-alkyl-O-groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, and optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-,

and

wherein above mentioned C₃₋₆-cycloalkyl, C₃₋₆-cycloalkyl-C₁₋₃-alkyl-, heterocyclyl, heterocyclyl-C₁₋₃-alkyl-, phenyl, heteroaryl, R⁸-(CH₂)_n-O- and R⁸-(CH₂)_m-(CH)(CH₃)-(CH₂)_o-O-groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, HO-, optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-O-, and optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-;

R³ is selected from the group R^{3a} consisting of

H, halogen, NC-, C₁₋₄-alkyl- and C₃₋₆-cycloalkyl-,

wherein the above mentioned C₁₋₄-alkyl- and C₃₋₆-cycloalkyl-groups may optionally be substituted with 1 to 9 substituents independently selected from the group consisting of halogen, NC-, HO-, C₁₋₃-alkyl- and C₁₋₃-alkyl-O-;

R⁴, R⁵ are selected independently of each other from the group R^{4a}/R^{5a} consisting of

H, halogen, NC-, HO-, C₁₋₆-alkyl-, C₁₋₆-alkyl-O-, C₃₋₈-cycloalkyl-, C₃₋₈-

cycloalkyl-C₁₋₃-alkyl-, C₃₋₈-cycloalkyl-O-, heterocyclyl-O-, heterocyclyl, heteroaryl, R⁷-CH₂-O- and R⁷-(CH₂)₂-O-,

wherein above mentioned C₁₋₆-alkyl-, C₁₋₆-alkyl-O-, C₃₋₈-cycloalkyl-, C₃₋₈-cycloalkyl-C₁₋₃-alkyl-, C₃₋₈-cycloalkyl-O-, heterocyclyl-O-, heterocyclyl, heteroaryl, R⁷-CH₂-O- and R⁷-(CH₂)₂-O-groups, may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, optionally with 1 to 5 halogen atoms, substituted C₁₋₂-alkyl-, and optionally with 1 to 5 halogen atoms substituted C₁₋₂-alkyl-O-;

R⁶ is selected from the group R^{6a} consisting of
H, NC-, C₁₋₆-alkyl-, C₃₋₈-cycloalkyl-, C₃₋₈-cycloalkyl-C₁₋₃-alkyl- and C₃₋₈-

cycloalkyl-O-

wherein above mentioned C₁₋₆-alkyl- groups may optionally be substituted with 1-3 halogen atoms;

R⁷ is selected from the group R^{7a} consisting of
H, carbocyclyl, heterocyclyl and heteroaryl,
wherein above mentioned carbocyclyl, heterocyclyl and heteroaryl-
groups may optionally be substituted with 1 to 4 substituents
independently selected from the group consisting of HO-, optionally
with 1 to 3 halogen atoms substituted C₁₋₄-alkyl-, optionally with 1 to 3
halogen atoms substituted C₁₋₄-alkyl-O- and halogen;

R⁸ is selected from the group R^{8a} consisting of
C₃₋₆-cycloalkyl, heterocyclyl, heterocyclyl-C₁₋₃-alkyl-, phenyl and pyridyl,
wherein above mentioned C₃₋₆-cycloalkyl, heterocyclyl, heterocyclyl-
C₁₋₃-alkyl-, phenyl and pyridyl groups may optionally be substituted
with 1 to 5 substituents independently selected from the group
consisting of HO-, fluorine and optionally with 1 to 7 halogen atoms
substituted C₁₋₃-alkyl-;

the tautomers thereof, the stereoisomers thereof, the mixtures thereof, the solvates
5 thereof, the hydrates thereof and the salts thereof.

~~2. A compound according to claim 1, wherein~~

~~R² is selected from the group R^{2a1} consisting of
HO-, C₁₋₆-alkyl-, C₁₋₆-alkyl-O-, C₃₋₆-cycloalkyl-, C₃₋₆-cycloalkyl-C₁₋₃-alkyl-,
heterocyclyl, heterocyclyl-C₁₋₃-alkyl-, phenyl, heteroaryl, R⁸-(CH₂)_n-O-
with n = 0, 1, 2, 3 or 4, and R⁸-(CH₂)_m-(CH)(CH₃)-(CH₂)_o-O- with m = 0, 1
or 2 and o = 0, 1 or 2~~

~~wherein above mentioned C₁₋₆-alkyl- and C₁₋₆-alkyl-O- groups are
substituted with 1 to 5 substituents independently selected from the
group consisting of HO-, and optionally with 1 to 7 fluorine atoms
substituted C₁₋₃-alkyl-O-,~~

and

~~wherein above mentioned C₁₋₆-alkyl- and C₁₋₆-alkyl-O-groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, and optionally with 1 to 7 fluorine atoms substituted C₄₋₃-alkyl-,~~

and

~~wherein above mentioned C₃₋₆-cycloalkyl-, C₃₋₆-cycloalkyl-C₄₋₃-alkyl-, heterocyclyl, heterocyclyl-C₄₋₃-alkyl-, phenyl, heteroaryl, R⁸-(CH₂)_n-O- and R⁸-(CH₂)_m-(CH)(CH₃)-(CH₂)₆-O-groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, HO-, optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-O-, and optionally with 1 to 7 fluorine atoms substituted C₄₋₃-alkyl-.~~

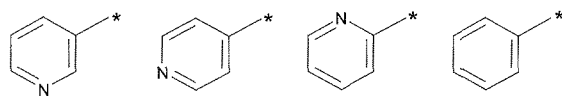
32. A compound according to claim 1, wherein

R³ is selected from the group R^{3a1} consisting of
C₃₋₆-cycloalkyl-,

wherein the above mentioned C₃₋₆-cycloalkyl-group may optionally be substituted with 1 to 9 substituents independently selected from the group consisting of halogen, NC-, HO-, C₁₋₃-alkyl- and C₁₋₃-alkyl-O-.

43. A compound according to any one or more of claims 1 to 32, wherein

A is selected from the group A^b consisting of

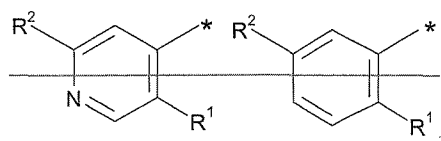


wherein above mentioned phenyl- and pyridinyl- groups are substituted with R¹ and R².

5

~~5. A compound according to any one or more of claims 1 to 3, wherein~~

~~A is selected from the group A^e consisting of~~



~~64.~~ A compound according to any one or more of claims 1 to ~~53~~, wherein

R^1 is selected from the group R^{1b} consisting of

H, halogen, C_{1-6} -alkyl- and C_{3-6} -cycloalkyl

wherein above mentioned C_{1-6} -alkyl- and C_{3-6} -cycloalkyl-groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, HO- and optionally with 1 to 7 fluorine atoms substituted C_{1-3} -alkyl-.

~~7.~~ A compound according to any one or more of claims 1 to 5, wherein

R^1 is selected from the group R^{1c} consisting of

~~H, H_3C , F_3C , F_2HC , FH_2C , fluorine, chlorine and bromine.~~

5

~~85.~~ A compound according to any one or more of claims 1 to ~~74~~, wherein

R^2 is selected from the group R^{2b1} consisting of

HO-, C_{1-4} -alkyl-, C_{1-4} -alkyl-O-, C_{3-6} -cycloalkyl, C_{3-6} -cycloalkyl- C_{1-3} -alkyl-, heterocyclyl, heterocyclyl- C_{1-3} -alkyl-, phenyl, heteroaryl, $R^8-(CH_2)_n-O-$ with $n = 0, 1, 2$ or 3 and $R^8-(CH_2)_m-(CH)(CH_3)-(CH_2)_o-O-$ with $m = 0$ or 1 and $o = 0$ or 1

wherein above mentioned C_{1-4} -alkyl- and C_{1-4} -alkyl-O- groups are substituted with 1 to 3 substituents independently selected from the group consisting of HO- and optionally with 1 to 7 fluorine atoms substituted C_{1-3} -alkyl-O-,

and

wherein above mentioned C_{1-4} -alkyl- and C_{1-4} -alkyl-O-groups may optionally be substituted with 1 to 3 substituents independently selected from the group consisting of halogen, and optionally with 1 to 7 fluorine atoms substituted C_{1-3} -alkyl-,

and

wherein above mentioned C_{3-6} -cycloalkyl-, C_{3-6} -cycloalkyl- C_{1-3} -alkyl-,

heterocyclyl, heterocyclyl-C₁₋₃-alkyl-, R⁸-(CH₂)_n-O- and and R⁸-(CH₂)_m-(CH)(CH₃)-(CH₂)_o-O-groups may optionally be substituted with 1 to 3 substituents independently selected from the group consisting of halogen, HO-, optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-O-, and optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-.

~~9. A compound according to any one or more of claims 1 to 7, wherein~~

~~R² is selected from the group R^{2d1} consisting of~~

~~HO-, C₁₋₄-alkyl-, C₁₋₄-alkyl-O-, C₃₋₆-cycloalkyl-, C₃₋₆-cycloalkyl-C₁₋₃-alkyl-, a saturated 5 or 6 membered monocyclic heterocycle containing one heteroatom selected from N or O, R⁸-(CH₂)_n-O- with n = 0, 1 or 2, and R⁸-(CH₂)_m-(CH)(CH₃)-(CH₂)_o-O- with m = 0 or 1 and o = 0 or 1~~

~~wherein above mentioned C₁₋₄-alkyl- and C₁₋₄-alkyl-O- groups are substituted with 1 to 5 substituents independently selected from the group consisting of HO-, and optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-O-,~~

~~and~~

~~wherein above mentioned C₁₋₄-alkyl- and C₁₋₄-alkyl-O- groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, and optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-,~~

~~and~~

~~wherein above mentioned C₃₋₆-cycloalkyl-, C₃₋₆-cycloalkyl-C₁₋₃-alkyl-, saturated 5 or 6 membered monocyclic heterocycle containing one heteroatom selected from N or O, R⁸-(CH₂)_n-O- and and R⁸-(CH₂)_m-(CH)(CH₃)-(CH₂)_o-O- groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of halogen, HO-, optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-O-, and optionally with 1 to 7 fluorine atoms substituted C₁₋₃-alkyl-.~~

~~406. A compound according to any one or more of claims 1, 2 and 43 to 95, wherein~~

R^3 is selected from the group R^{3b} consisting of
 H, C_{1-3} -alkyl-, cyclobutyl- and cyclopropyl-,
 wherein the above mentioned C_{1-3} -alkyl-, cyclobutyl- and cyclopropyl-
 groups may optionally be substituted with 1 to 7 substituents
 independently selected from the group consisting of halogen, C_{1-3} -
 alkyl-O-, NC- and HO-.

~~11. A compound according to any one or more of claims 1, 2 and 4 to 9, wherein~~

~~R^3 is selected from the group R^{3c} consisting of~~

~~H, and H_3C - and cyclopropyl-,~~

~~wherein the above mentioned H_3C - and cyclopropyl-groups may
 optionally be substituted with 1 to 3 fluorine atoms.~~

~~127. A compound according to any one or more of claims 1 to 116, wherein~~

R^4, R^5 are selected independently of each other from the group R^{4b}/R^{5b} consisting
 of

H, halogen, HO-, H_3C -, F_3C -, H_3C -O-, F_2HC -O-, FH_2C -O-, F_3C -O-, C_{1-4} -
 alkyl-O-, R^7 -CH₂-O- and R^7 -(CH₂)₂-O-,

wherein above mentioned C_{1-4} -alkyl-O-, R^7 -CH₂-O- and R^7 -(CH₂)₂-O-
 groups, may optionally be substituted with 1 to 5 substituents
 independently selected from the group consisting of halogen,
 optionally with 1 to 5 halogen atoms substituted C_{1-2} -alkyl-, and
 optionally with 1 to 5 halogen atoms substituted C_{1-2} -alkyl-O-.

5

~~13. A compound according to any one or more of claims 1 to 11, wherein~~

~~R^4, R^5 are selected from the group R^{4d}/R^{5d} consisting of~~

~~H-.~~

~~148. A compound according to any one or more of claims 1 to 13, wherein~~

R^6 is selected from the group R^{6b} consisting of

H, C_{1-4} -alkyl- and cyclopropyl-,

wherein above mentioned C_{1-4} -alkyl-group may optionally be
 substituted with 1-9 fluorine and/or chlorine atoms.

~~15. A compound according to any one or more of claims 1 to 13, wherein~~

~~R⁶ is selected from the group R^{6a} consisting of~~

~~H and C₁₋₂-alkyl-,~~

~~wherein above mentioned C₁₋₂-alkyl-group may optionally be substituted with 1-5 fluorine and/or chlorine atoms.~~

~~16. A compound according to any one or more of claims 1 to 13, wherein~~

~~R⁶ is selected from the group R^{6a} consisting of~~

~~H₃C-, FH₂C-, F₂HC- and F₃C-.~~

5

~~179. A compound according to any one or more of claims 1 to 12 8 and 14 to 16, wherein~~

~~R⁷ is selected from the group R^{7b} consisting of~~

~~H, phenyl, heteroaryl, cycloalkyl and heterocyclyl~~

~~wherein above mentioned phenyl, heteroaryl, cycloalkyl and heterocyclyl-groups may optionally be substituted with 1 to 4 substituents independently selected from the group consisting of halogen, and optionally with 1 to 3 halogen atoms substituted C₁₋₃-alkyl-O-.~~

~~18. A compound according to any one or more of claims 1 to 12 and 14 to 16, wherein~~

~~R⁷ is selected from the group R^{7c} consisting of~~

~~H and phenyl,~~

~~wherein above mentioned phenyl group may optionally be substituted with 1 to 4 substituents independently selected from the group consisting of halogen and optionally with 1 to 3 halogen atoms substituted C₁₋₃-alkyl-O-.~~

10

~~1910. A compound according to any one or more of claims 1 to 18 9, wherein~~

~~R⁸ is selected from the group R^{8b} consisting of~~

~~C₃₋₆-cycloalkyl, heterocyclyl and heterocyclyl-C₁₋₃-alkyl-,~~

wherein above mentioned C₃₋₆-cycloalkyl, heterocyclyl and heterocyclyl-C₁₋₃-alkyl-groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of HO-, fluorine and optionally with 1 to 7 halogen atoms substituted C₁₋₃-alkyl-.

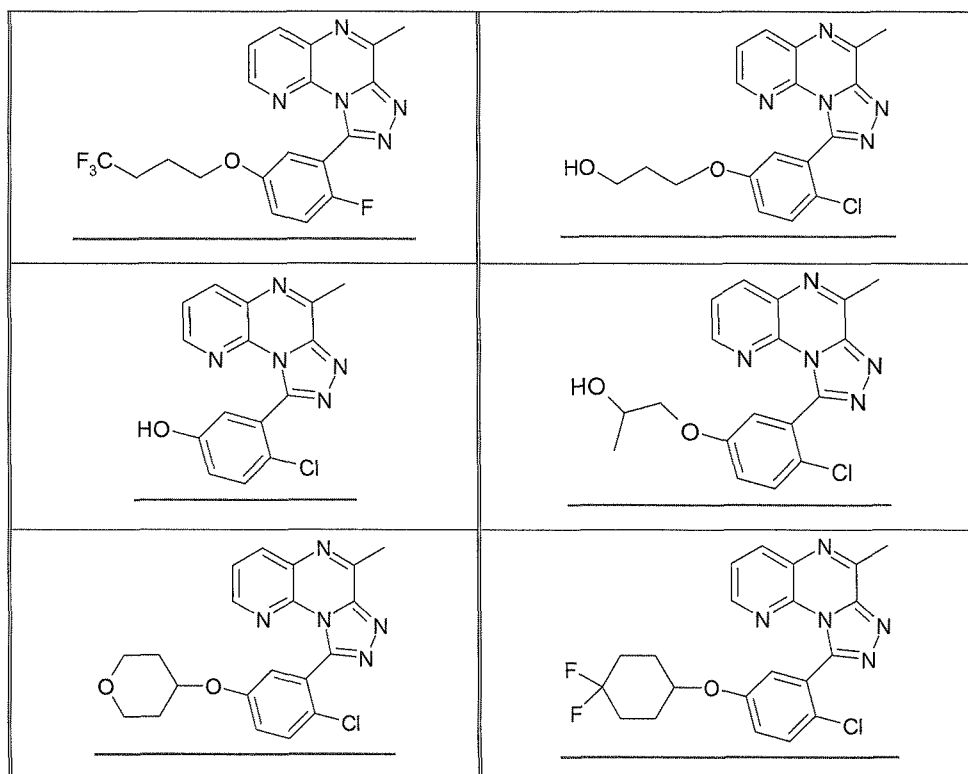
2011. A compound according to any one or more of claims 1 to 18, wherein

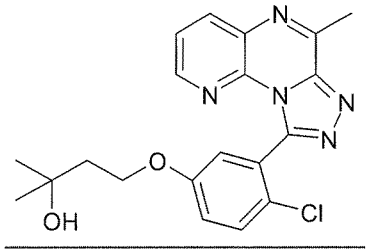
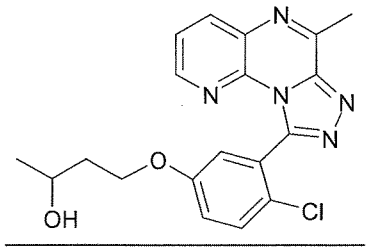
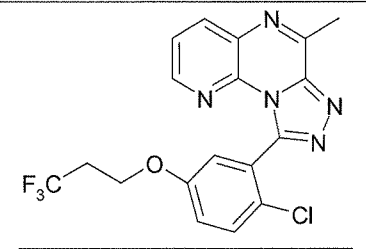
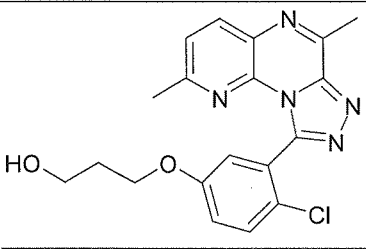
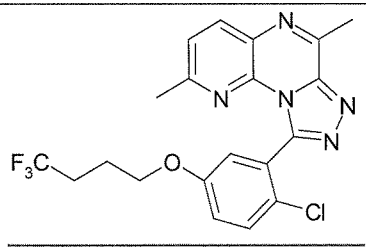
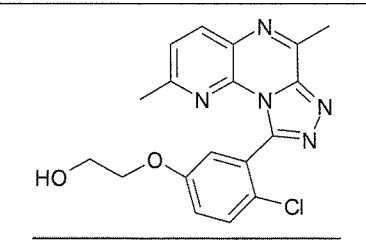
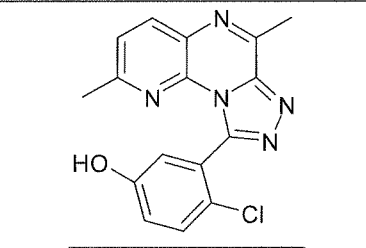
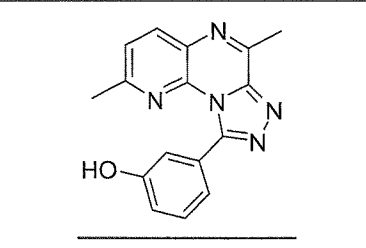
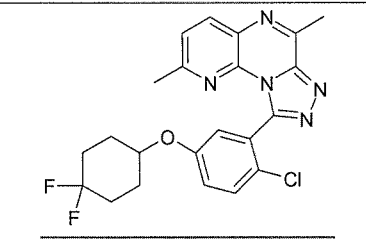
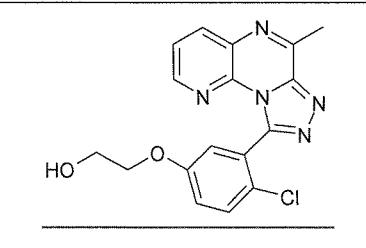
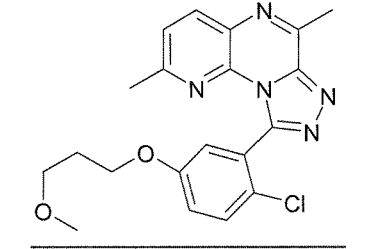
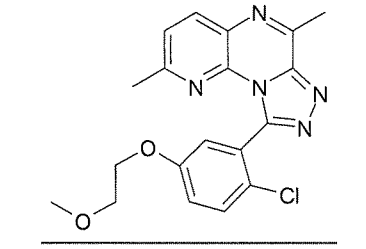
R⁸ is selected from the group R^{8c1} consisting of

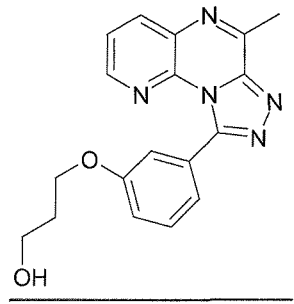
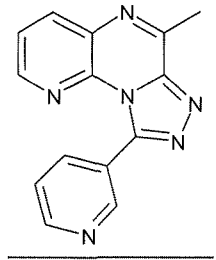
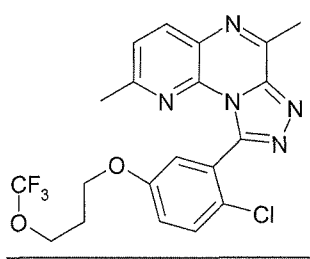
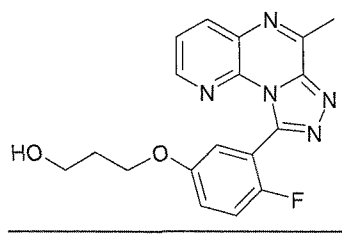
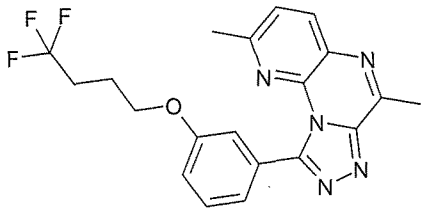
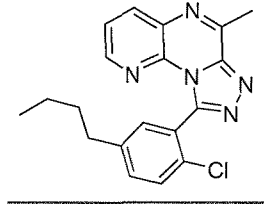
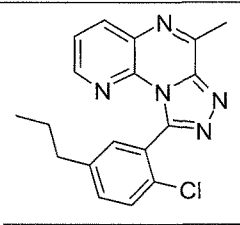
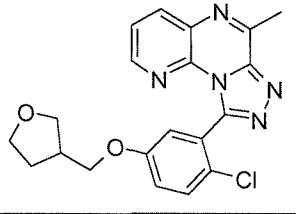
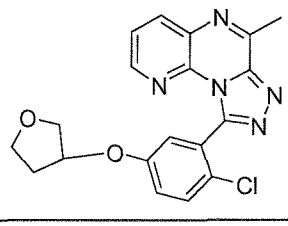
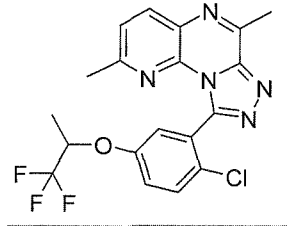
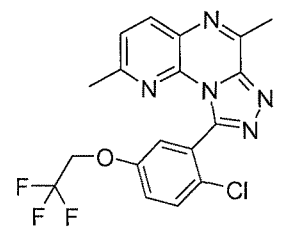
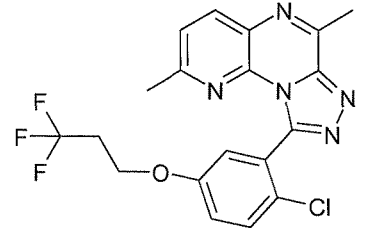
C₃₋₆-cycloalkyl and a saturated 4 to 6 membered monocyclic heterocycle containing one or two heteroatoms selected from N or O,

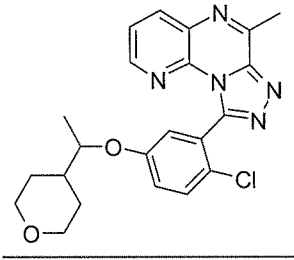
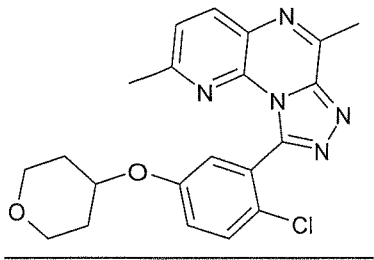
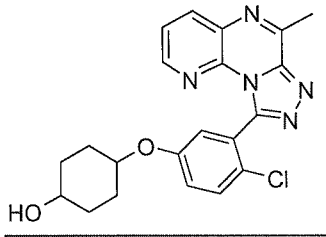
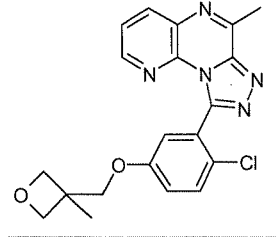
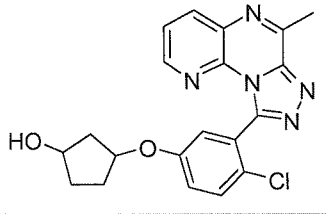
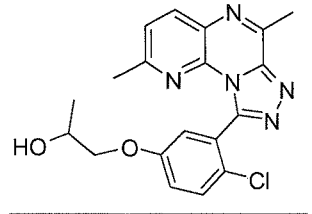
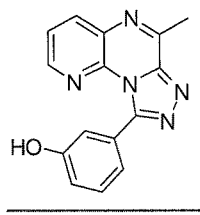
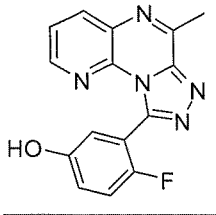
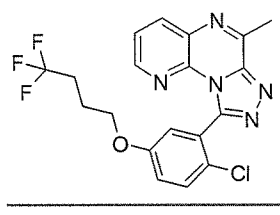
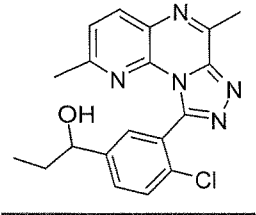
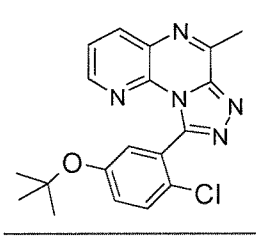
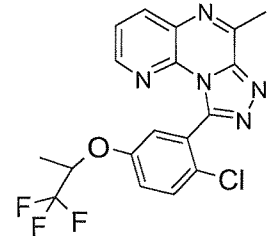
wherein above mentioned C₃₋₆-cycloalkyl and heterocyclyl-groups may optionally be substituted with 1 to 5 substituents independently selected from the group consisting of HO-, fluorine and optionally with 1 to 7 halogen atoms substituted C₁₋₃-alkyl-.

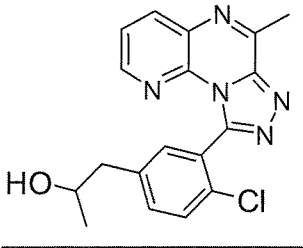
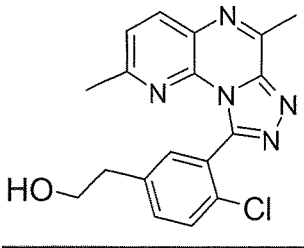
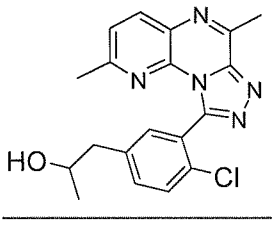
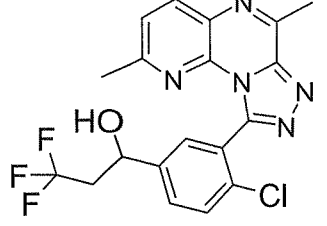
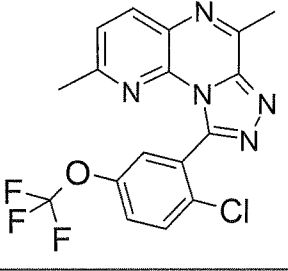
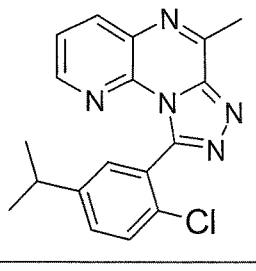
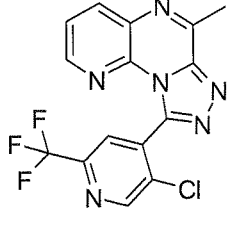
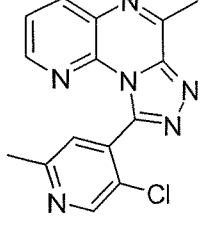
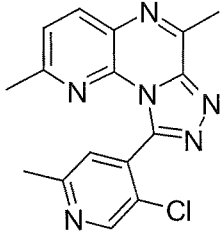
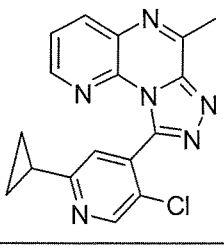
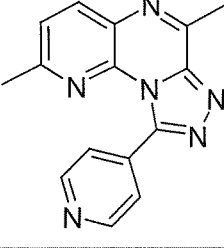
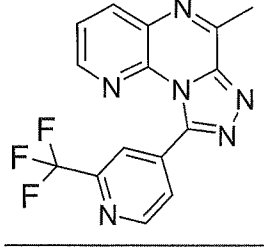
12. A compound according to any one or more of claims 1 to 11 selected from the group consisting of

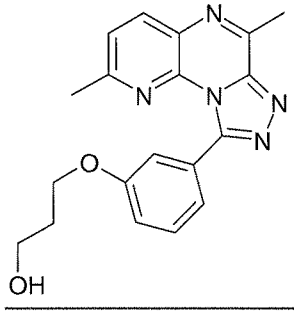
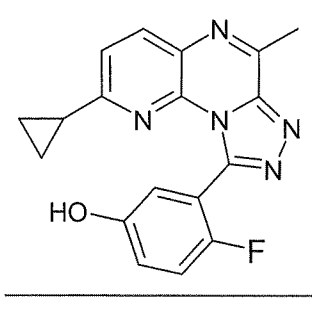
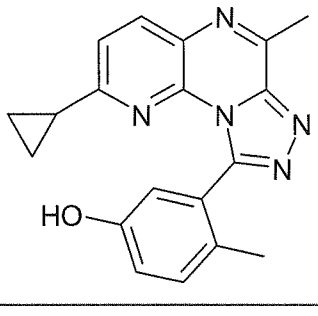
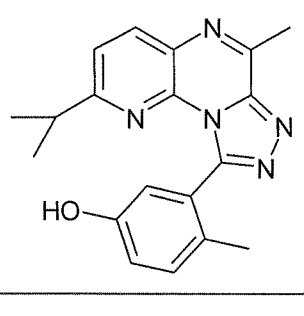
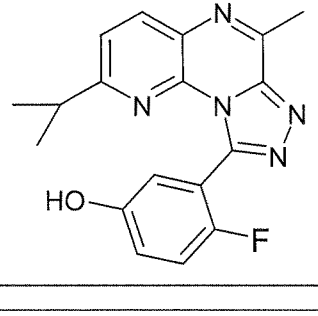
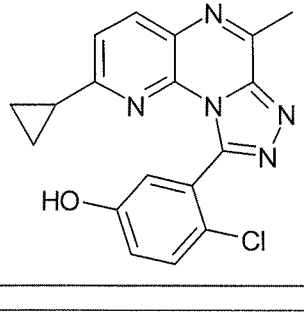
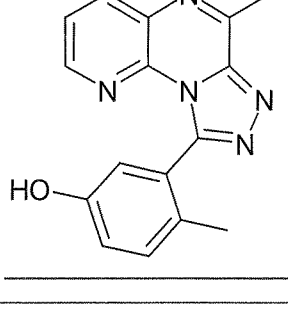
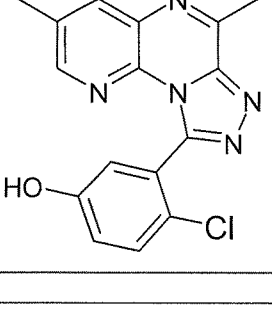
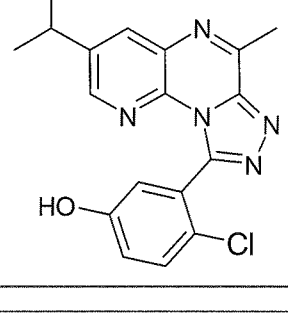
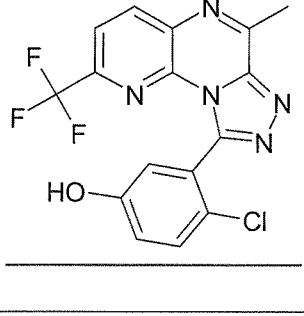


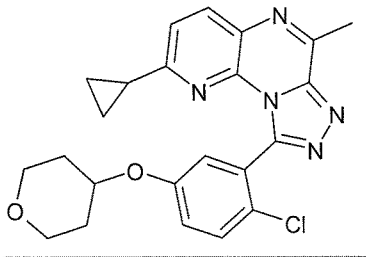
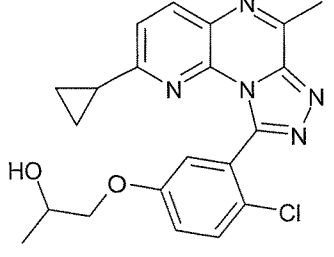
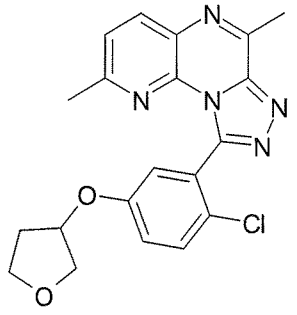
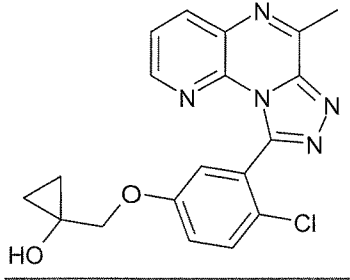
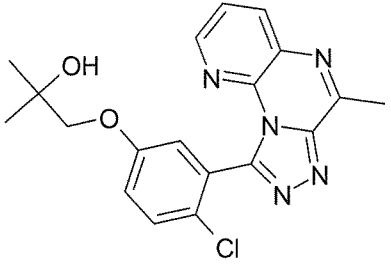
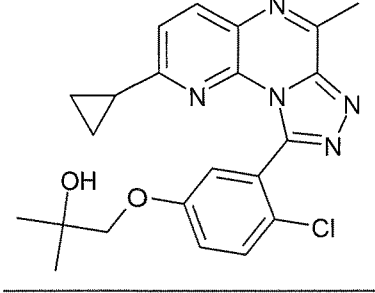
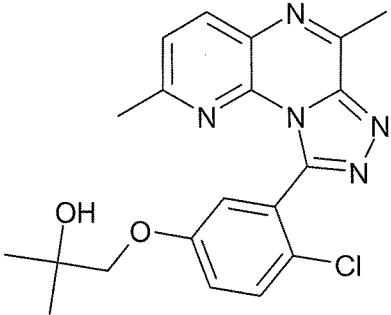
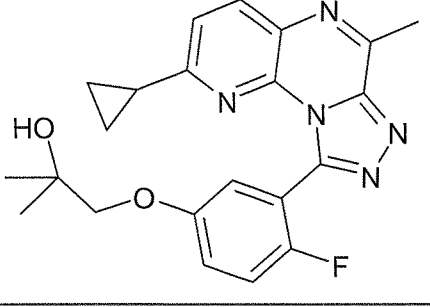
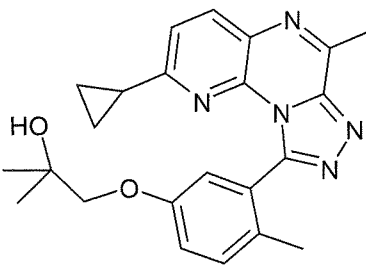
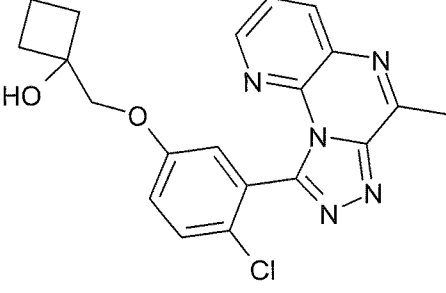
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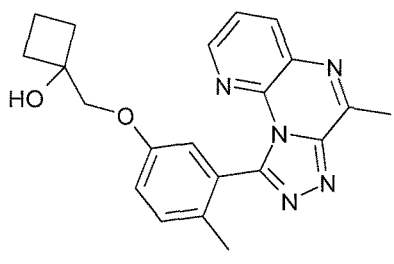
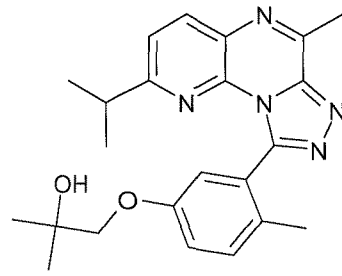
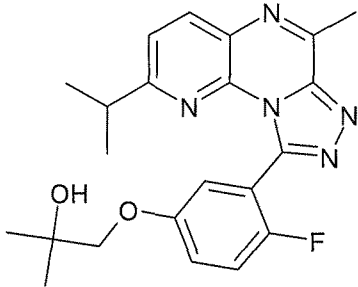
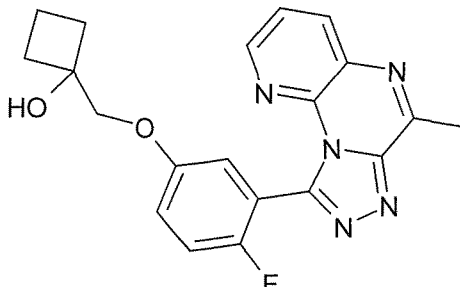
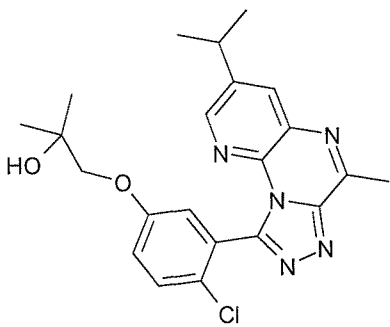
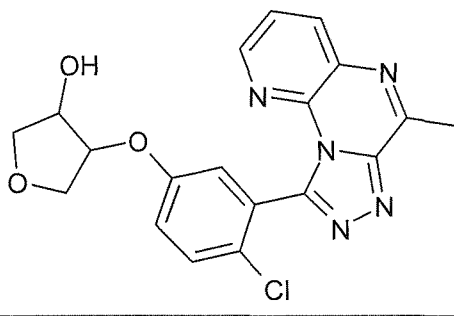
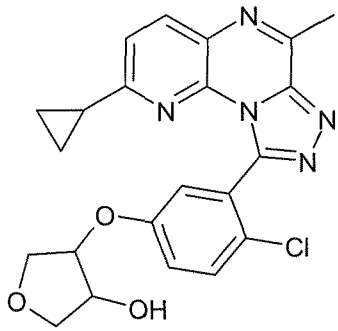
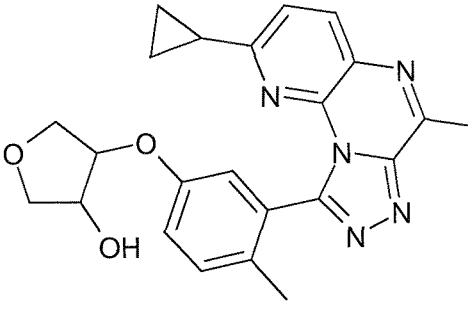
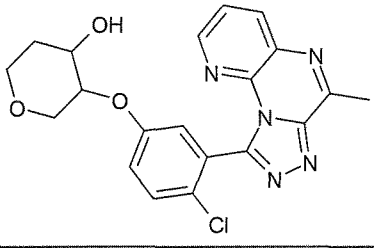
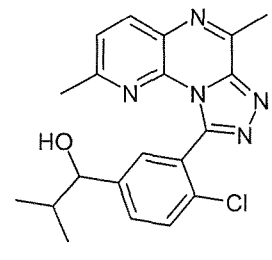
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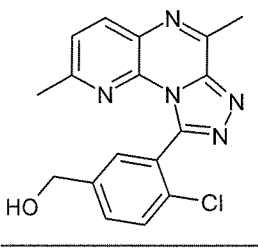
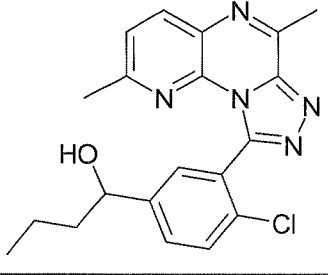
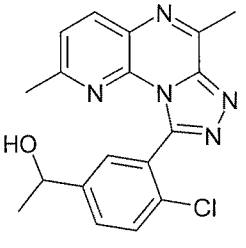
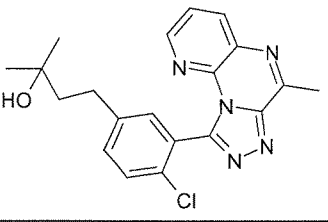
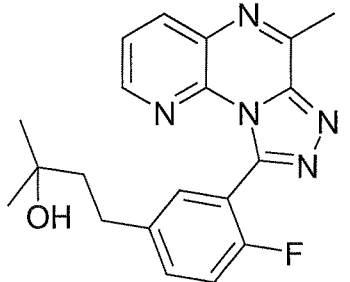
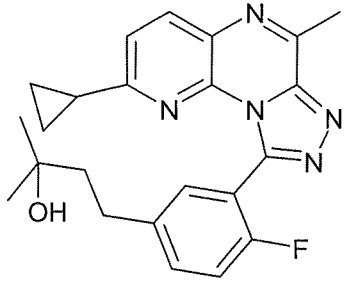
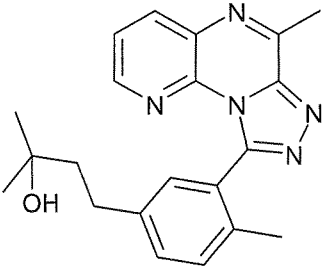
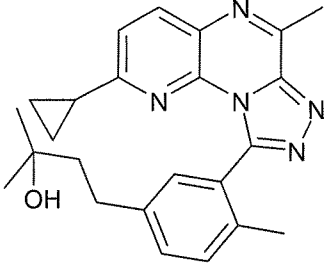
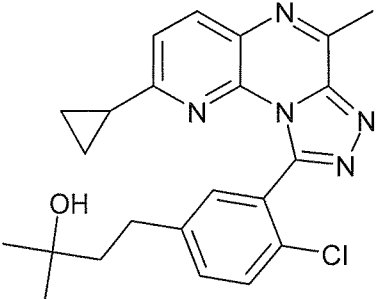
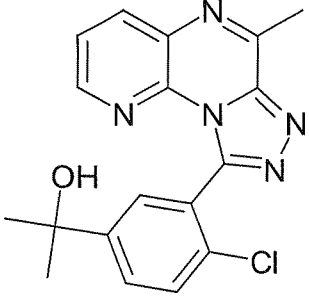
 <chem>CC1=CN2C(=N1)c3ccccc3N2C4=CC(=CC=C4)OC(C5CCCCC5)C</chem>	 <chem>CC1=CN2C(=N1)c3ccccc3N2C4=CC(=CC=C4)OC(C5CCCCC5)C</chem>
 <chem>CC1=CN2C(=N1)c3ccccc3N2C4=CC(=CC=C4)OC5CCCC(O)C5</chem>	 <chem>CC1=CN2C(=N1)c3ccccc3N2C4=CC(=CC=C4)OC5C(C)OC5</chem>
 <chem>CC1=CN2C(=N1)c3ccccc3N2C4=CC(=CC=C4)OC5CCCC(O)C5</chem>	 <chem>CC1=CN2C(=N1)c3ccccc3N2C4=CC(=CC=C4)OC(C)C(O)C</chem>
 <chem>CC1=CN2C(=N1)c3ccccc3N2C4=CC(=CC=C4)O</chem>	 <chem>CC1=CN2C(=N1)c3ccccc3N2C4=CC(=CC=C4)O</chem>
 <chem>CC1=CN2C(=N1)c3ccccc3N2C4=CC(=CC=C4)OCC(F)(F)F</chem>	 <chem>CC1=CN2C(=N1)c3ccccc3N2C4=CC(=CC=C4)C(O)CC</chem>
 <chem>CC1=CN2C(=N1)c3ccccc3N2C4=CC(=CC=C4)OC(C)(C)C</chem>	 <chem>CC1=CN2C(=N1)c3ccccc3N2C4=CC(=CC=C4)OC(C)(F)F</chem>

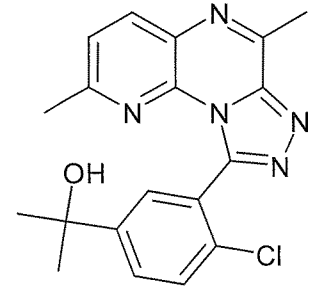
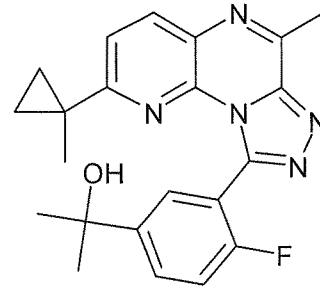
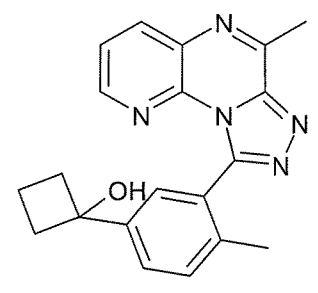
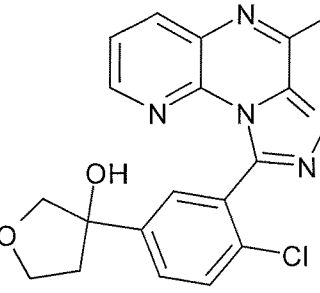
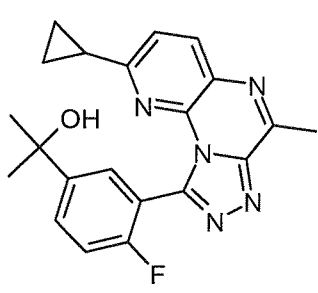
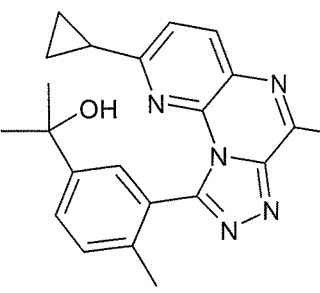
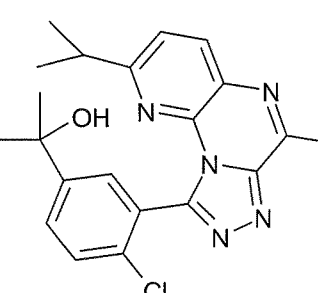
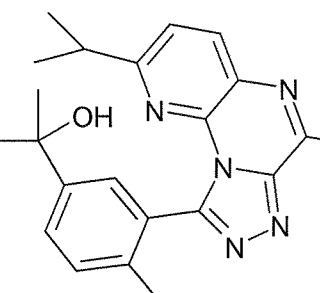
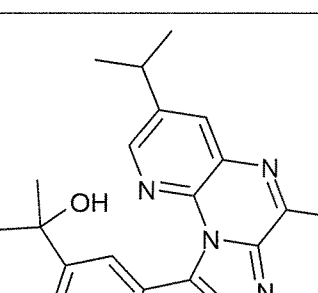
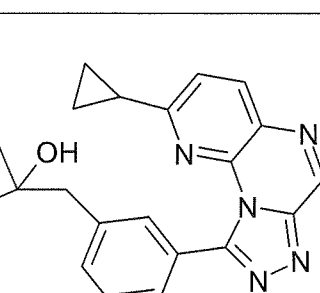
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 <chem>CC1=CN=C(C2=CC=C(C=C2)C(C)C(C)O)N1</chem>	 <chem>CC1=CN=C(C2=CC=C(C=C2)C(C)C(C)O)N1</chem>
 <chem>CC1=CN=C(C2=CC=C(C=C2)C(C)C(C)O)N1</chem>	 <chem>CC1=CN=C(C2=CC=C(C=C2)C(C)C(C)O)N1</chem>
 <chem>CC1=CN=C(C2=CC=C(C=C2)C(C)C(C)O)N1</chem>	 <chem>CC1=CN=C(C2=CC=C(C=C2)C(C)C(C)O)N1</chem>
 <chem>CC1=CN=C(C2=CC=C(C=C2)C(C)C(C)O)N1</chem>	 <chem>CC1=CN=C(C2=CC=C(C=C2)C(C)C(C)O)N1</chem>
 <chem>CC1=CN=C(C2=CC=C(C=C2)C(C)C(C)O)N1</chem>	 <chem>CC1=CN=C(C2=CC=C(C=C2)C(C)C(C)O)N1</chem>

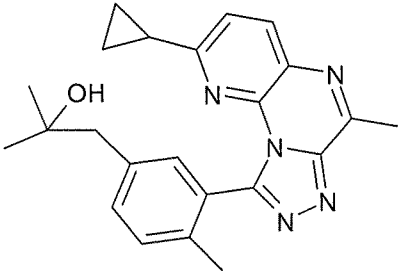
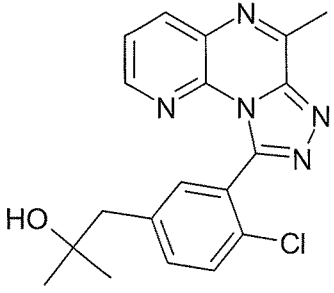
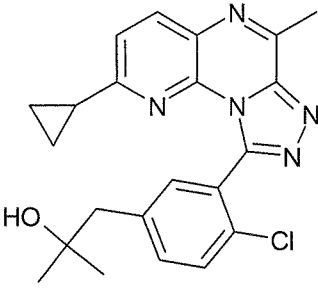
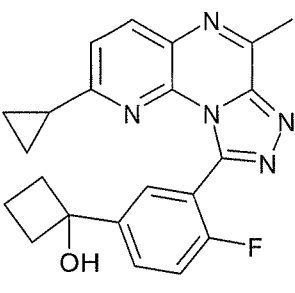
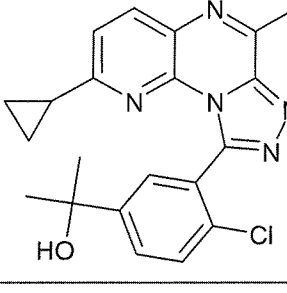
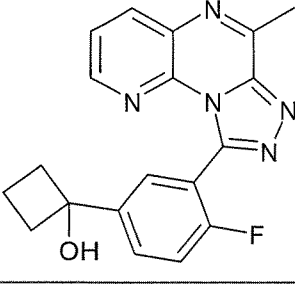
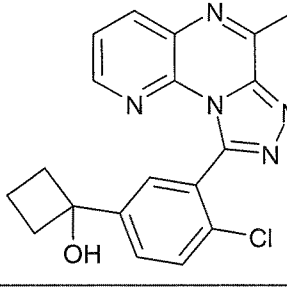
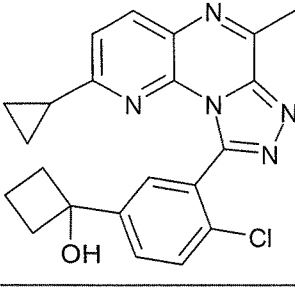
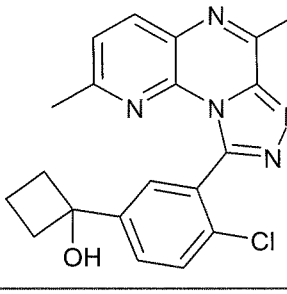
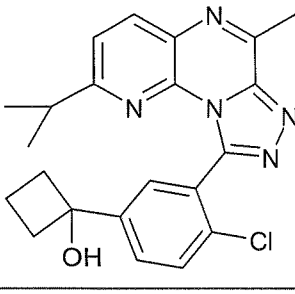
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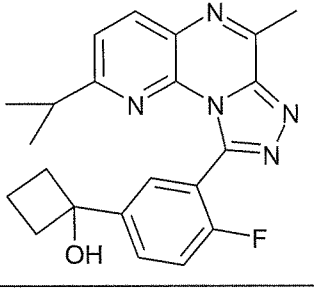
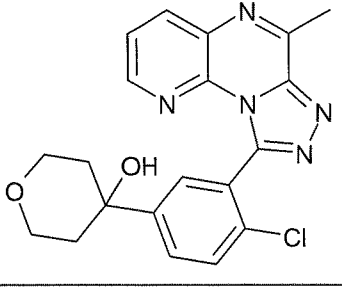
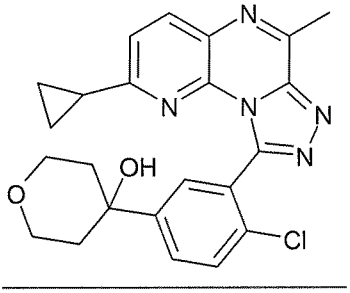
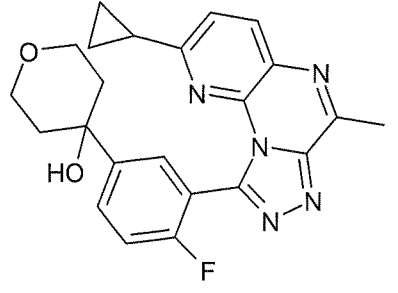
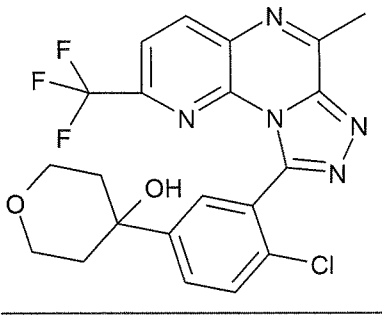
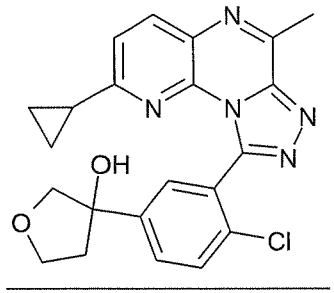
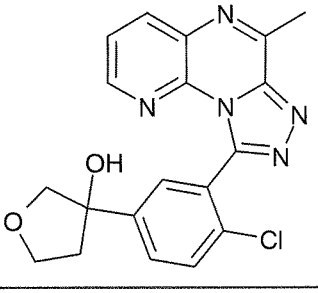
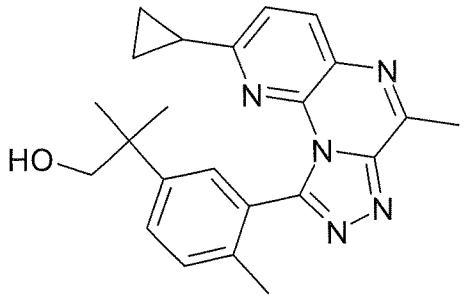
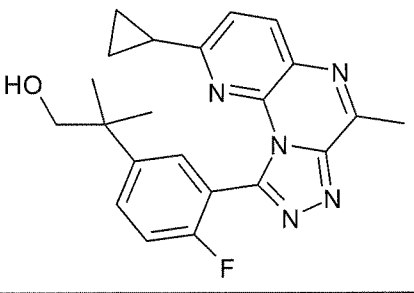
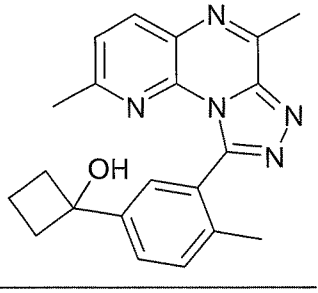
	
	
	
	
	

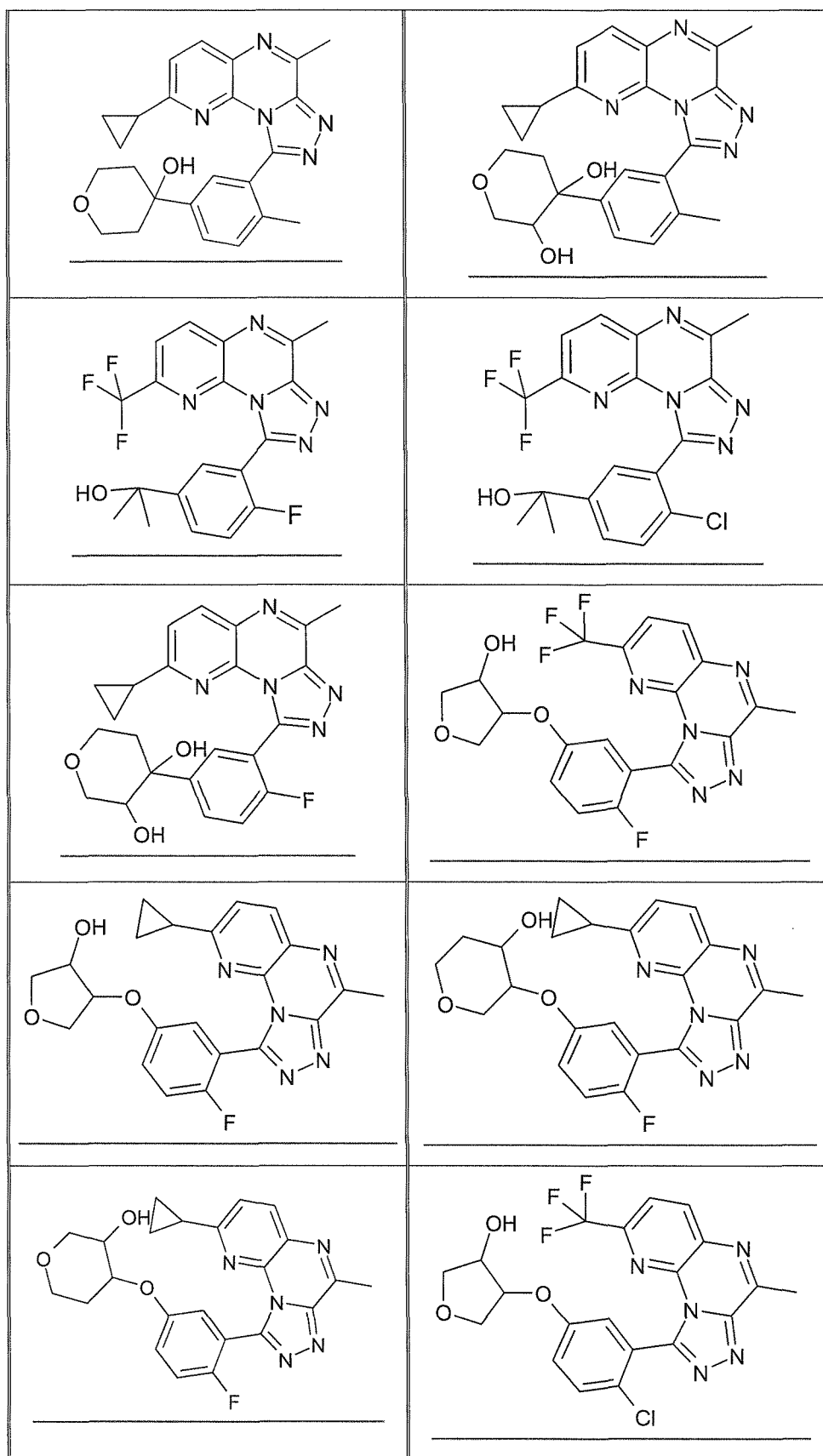
	
	
	
	
	

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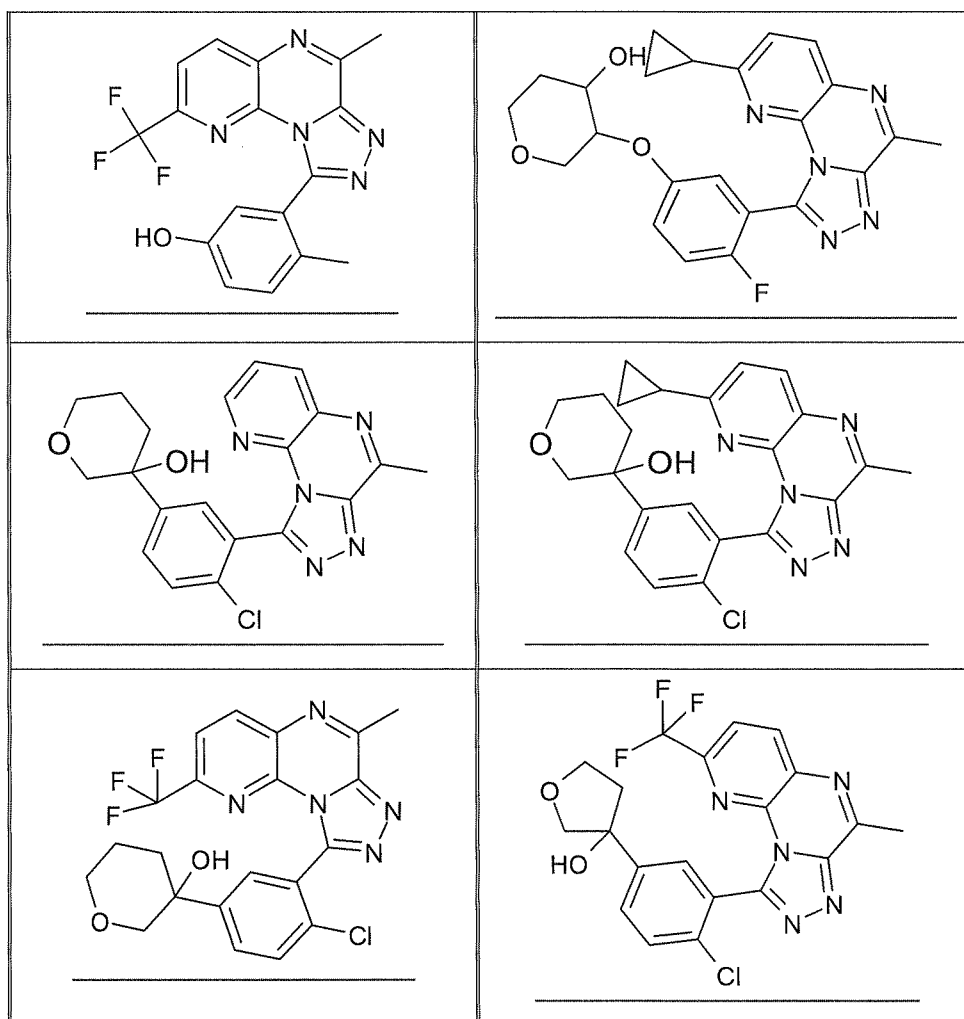
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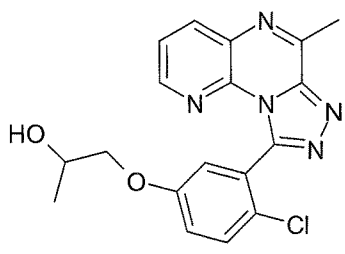


182m



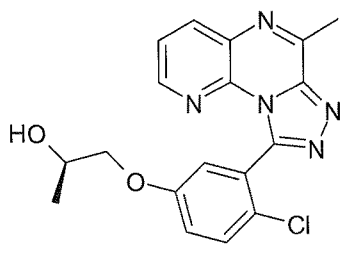
the tautomers thereof, the stereoisomers thereof, the solvates thereof, the hydrates thereof and the salts thereof.

- 5 13. A compound according to any one or more of claims 1 to 12 of the formula



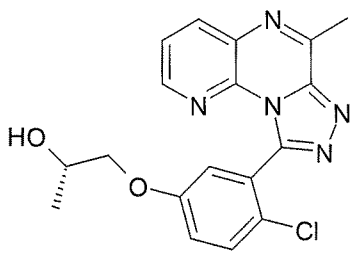
the tautomers thereof, the stereoisomers thereof, the solvates thereof, the hydrates thereof and the salts thereof.

14. A compound according to any one or more of claims 1 to 12 of the formula



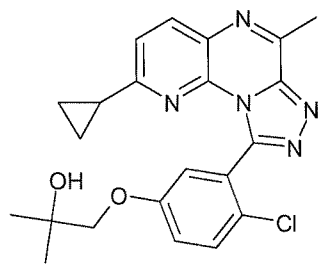
the tautomers thereof, the solvates thereof, the hydrates thereof and the salts thereof.

5 15. A compound according to any one or more of claims 1 to 12 of the formula



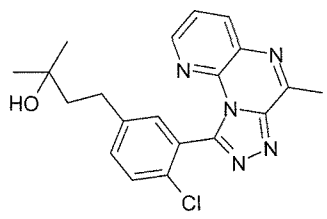
the tautomers thereof, the solvates thereof, the hydrates thereof and the salts thereof.

16. A compound according to any one or more of claims 1 to 12 of the formula



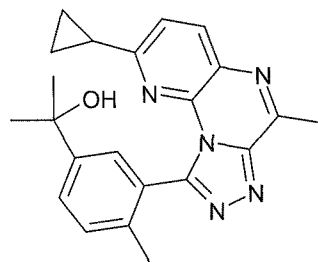
the tautomers thereof, the solvates thereof, the hydrates thereof and the salts thereof.

17. A compound according to any one or more of claims 1 to 12 of the formula



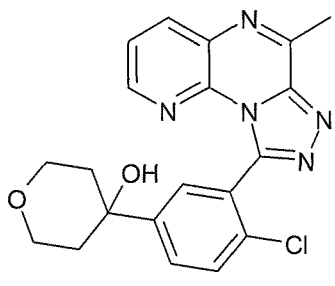
the tautomers thereof, the solvates thereof, the hydrates thereof and the salts thereof.

18. A compound according to any one or more of claims 1 to 12 of the formula



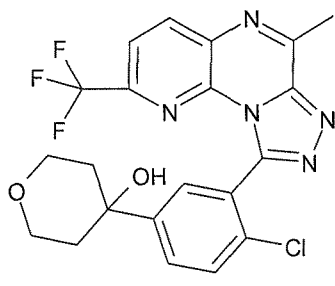
the tautomers thereof, the solvates thereof, the hydrates thereof and the salts thereof.

5 19. A compound according to any one or more of claims 1 to 12 of the formula



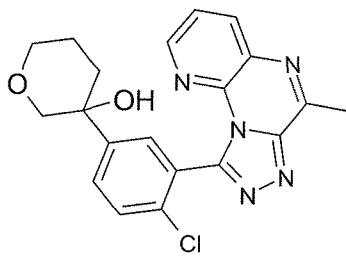
the tautomers thereof, the solvates thereof, the hydrates thereof and the salts thereof.

20. A compound according to any one or more of claims 1 to 12 of the formula



the tautomers thereof, the solvates thereof, the hydrates thereof and the salts thereof.

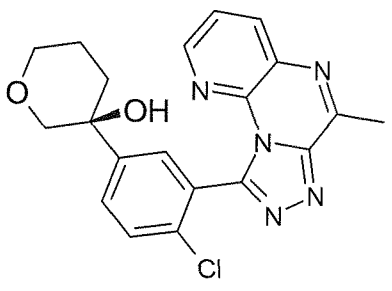
21. A compound according to any one or more of claims 1 to 12 of the formula



the tautomers thereof, the stereoisomers thereof, the solvates thereof, the hydrates thereof and the salts thereof.

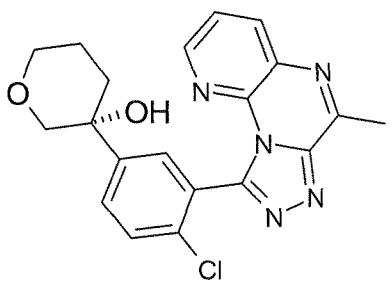
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22. A compound according to claim 21 of the formula



the tautomers thereof, the solvates thereof, the hydrates thereof and the salts thereof.

10 23. A compound according to claim 21 of the formula



the tautomers thereof, the solvates thereof, the hydrates thereof and the salts thereof.

15 24. A compound according to any one or more of claims 1 to 23, or a pharmaceutically acceptable tautomers thereof, stereoisomer thereof, mixtures thereof, solvate thereof, hydrate thereof or salt thereof for use as a medicament.

25. Pharmaceutical compositions containing at least one compound according to one or more of the claims 1 to 23 or a pharmaceutically acceptable tautomers thereof,

stereoisomer thereof, mixtures thereof, solvate thereof, hydrate thereof or salt thereof together with one or more pharmaceutically acceptable carrier.

- ~~23~~26. A compound according to one or more of claims 1 to ~~20~~23, or a pharmaceutically acceptable tautomer thereof, stereoisomer thereof, mixtures thereof, solvate thereof, hydrate thereof or salt thereof or a pharmaceutical composition according to claim ~~22~~25 for use in the prevention or treatment of (1) disorders comprising the symptom of cognitive deficiency; (2) organic, including symptomatic, mental disorders, dementia; (3) mental retardation; (4) mood [affective] disorders; (5) neurotic, stress-related and somatoform disorders including anxiety disorders; (6) behavioural and emotional disorders with onset usually occurring in childhood and adolescence, attention deficit hyperactivity syndrome (ADHD) and Autism spectrum disorders; (7) disorders of psychological development, developmental disorders of scholastic skills; (8)

schizophrenia and other psychotic disorders; (9) disorders of adult personality and behaviour; (10) mental and behavioural disorders due to psychoactive substance use; (11) extrapyramidal and movement disorders; (12) episodic and paroxysmal disorders, epilepsy; (13) Systemic atrophies primarily affecting the central nervous system, ataxia; 5 (14) Behavioural syndromes associated with physiological disturbances and physical factors; (15) sexual dysfunction comprising excessive sexual drive; (16) factitious disorders; (17) Treatment, amelioration and / or prevention of cognitive impairment being related to perception, concentration, cognition, learning or memory; (18) Treatment amelioration and / or prevention of cognitive impairment being related to age- 10 associated learning and memory impairments; (19) Age-associated memory losses; (20) Vascular dementia; (21) Craniocerebral trauma; (22) Stroke; (23) Dementia occurring after strokes (post stroke dementia); (24) Post-traumatic dementia; (25) General concentration impairments; (26) Concentration impairments in children with learning and memory problems; (27) Alzheimer's disease; (28) Lewy body dementia; 15 (29) Dementia with degeneration of the frontal lobes; including Pick's syndrome; (30) Parkinson's disease; (31) Progressive nuclear palsy; (32) Dementia with corticobasal degeneration; (33) Amyotrophic lateral sclerosis (ALS); (34) Huntington's disease; (35) Multiple sclerosis; (36) Thalamic degeneration; (37) Creutzfeld-Jacob dementia; (38) HIV dementia; (38) Schizophrenia with dementia or Korsakoff's psychosis; (39) Sleep 20 disorders; (40) Bipolar disorder; (41) Metabolic syndrome; (42) Obesity; (43) Diabetic mellitus; (44) Hyperglycemia; (45) Dyslipidemia; (46) Impaired glucose tolerance; (47) Disease of the testes, brain, small intestine, skeletal muscle, heart, lung, thymus or spleen and (48) pain disorders.

27. A compound according to one or more of claims 1 to 23, or a pharmaceutically 25 acceptable tautomer thereof, stereoisomer thereof, mixtures thereof, solvate thereof, hydrate thereof or salt thereof or a pharmaceutical composition according to claim 25 for use in symptomatic treatment of Alzheimer's Disease, symptomatic treatment of prodromal and/or mild-to-moderate Alzheimer's Disease and/or for the treatment of cognitive impairment associated with schizophrenia.