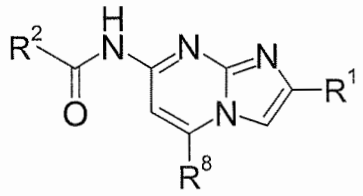
Claims

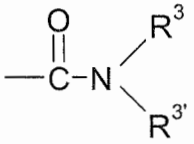
1. A compound of formula (I)



(I)

wherein

R^1 is phenyl or thienyl, wherein said phenyl and said thienyl are optionally substituted by 1 to 3 substituents independently selected from the group consisting of hydroxyl, halogen, ~~lower~~ C_{1-7}-alkyl, C_{1-7}-~~lower~~ alkoxy, C_{1-7}-~~lower~~ haloalkyl, C_{1-7}-~~lower~~ haloalkoxy, C_{1-7}-~~lower~~ alkoxy C_{1-7}-~~lower~~ alkyl, -OC(O)-C_{1-7}-~~lower~~ alkyl, -OCH2C(O)-C_{1-7}-~~lower~~ alkoxy and phenyl;

R^2 is 5- or 6-membered monocyclic heteroaryl having 1 to 3 heteroatoms independently selected from N and O, wherein said heteroaryl is optionally substituted by 1 to 3 substituents independently selected from the group consisting of , halogen, hydroxyl, nitro, C_{1-7}-~~lower~~ alkyl, C_{2-7}-~~lower~~ alkenyl, C_{1-7}-~~lower~~ alkoxy, C_{1-7}-~~lower~~ alkoxy-C(O)-, C_{1-7}-~~lower~~ hydroxyalkyl, C_{1-7}-~~lower~~ haloalkyl, C_{1-7}-~~lower~~ alkoxy C_{1-7}-~~lower~~ alkyl, C_{1-7}-~~lower~~ alkyl-C(O)-, C_{3-10}-cycloalkyl, heterocyclyl, aryl, heteroaryl and amino optionally substituted by heteroaryl, wherein two substituents of R^2, together with said heteroaryl to which they are attached, may form a 9- or 10-membered bicyclic ring;

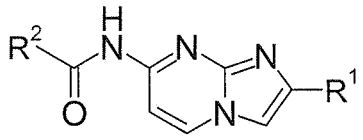
R^3 and $R^{3'}$ are independently hydrogen, C_{1-7}-~~lower~~ alkyl, C_{1-7}-~~lower~~ hydroxyalkyl, C_{1-7}-~~lower~~ cyanoalkyl, C_{1-7}-~~lower~~ haloalkyl, C_{1-7}-~~lower~~ alkoxy C_{1-7}-~~lower~~ alkyl, C_{3-10}-cycloalkyl, cyano- C_{3-10}-cycloalkyl, heterocyclyl or aryl, wherein said C_{1-7}-~~lower~~ alkyl is optionally substituted by C_{1-7}-~~lower~~ haloalkoxy, C_{3-10}-cycloalkyl, aryl or heteroaryl, wherein said heteroaryl is optionally substituted by 1 to 3 substituents independently selected from the group consisting of halogen, nitro, cyano, C_{1-7}-~~lower~~ alkyl, C_{1-7}-~~lower~~ haloalkyl, C_{1-7}-~~lower~~ alkoxy and C_{3-10}-cycloalkyl, and wherein said heterocyclyl is optionally substituted by C_{1-7}-~~lower~~ alkyl, or

R^3 and $R^{3'}$, together with the nitrogen atom to which they are attached, form a heterocyclyl, 2,5-dihydro-1H-pyrrole, 2-methyl-2,4,5,6-tetrahydropyrrolo[3,4-c]pyrazole or 2-oxa-6-azaspiro[3.3]heptane, wherein said heterocyclyl is optionally substituted by 1 to 3 halogen, hydroxyl, oxo, C_{1-7}-~~lower~~-alkyl or heteroaryl;

R^8 is hydrogen, C_{1-7}-~~lower~~-alkyl, C_{1-7}-~~lower~~-alkoxy or C_{1-7}-~~lower~~-alkoxy C_{1-7}-~~lower~~ alkyl;

or a pharmaceutically acceptable salt thereof,
wherein the term "heteroaryl" refers to an aromatic 5- or 6-membered monocyclic ring or 9- or 10-membered bicyclic ring which comprises 1 to 4 atoms independently selected from nitrogen, oxygen and/or sulphur,
the term "heterocyclyl" refers to a monovalent saturated 4- to 6-membered monocyclic ring containing one, two or three ring heteroatoms independently selected from N, O and S, the remaining ring atoms being carbon atoms, wherein the point of attachment can be through either a carbon atom or a heteroatom, and
the term "aryl" refers to a monovalent aromatic hydrocarbon ring having 6 to 10 carbon atoms.

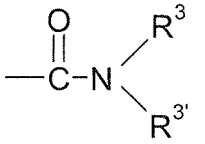
2. A compound of formula (I') according to claim 1,



(I')

wherein

R^1 is phenyl or thienyl, wherein said phenyl and said thienyl are optionally substituted by 1 to 3 substituents independently selected from the group consisting of halogen, C_{1-7}-~~lower~~-alkyl, C_{1-7}-~~lower~~-alkoxy, C_{1-7}-~~lower~~-haloalkyl, C_{1-7}-~~lower~~-haloalkoxy and C_{1-7}-~~lower~~-alkoxy C_{1-7}-~~lower~~-alkyl;

R^2 is 5- or 6-membered monocyclic heteroaryl having 1 to 3 heteroatoms independently selected from N and O, wherein said heteroaryl is optionally substituted by 1 to 3 substituents independently selected from the group consisting of , halogen, hydroxyl, nitro, C_{1-7}-~~lower~~-alkyl, C_{1-7}-~~lower~~-alkoxy, C_{1-7}-~~lower~~-alkoxy-C(O)-, C_{1-7}-~~lower~~-hydroxyalkyl, C_{1-7}-~~lower~~-haloalkyl, C_{1-7}-~~lower~~-alkoxy C_{1-7}-~~lower~~-alkyl,

C_{1-7}-~~lower~~ alkyl-C(O)-, C_{3-10}-cycloalkyl, heterocyclyl, aryl, heteroaryl and amino optionally substituted by heteroaryl, wherein two substituents of R^2, together with said heteroaryl to which they are attached, may form a 9- or 10-membered bicyclic ring;

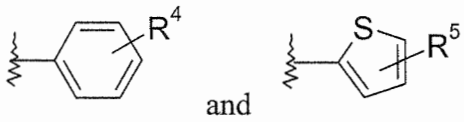
5

R^3 and $R^{3'}$ are independently hydrogen, C_{1-7}-~~lower~~ alkyl optionally substituted by C_{3-10}-cycloalkyl, C_{1-7}-~~lower~~ hydroxyalkyl, C_{1-7}-~~lower~~ cyanoalkyl, C_{1-7}-~~lower~~ haloalkyl, C_{1-7}-~~lower~~ alkoxy C_{1-7}-~~lower~~ alkyl, C_{3-10}-cycloalkyl or heterocyclyl, or

R^3 and $R^{3'}$, together with the nitrogen atom to which they are attached, form a heterocyclyl optionally substituted by 1 to 3 halogen, hydroxyl or oxo;

or a pharmaceutically acceptable salt thereof.

3. A compound or a pharmaceutically acceptable salt thereof according to claim 1, wherein R^1 is selected from the group consisting of:



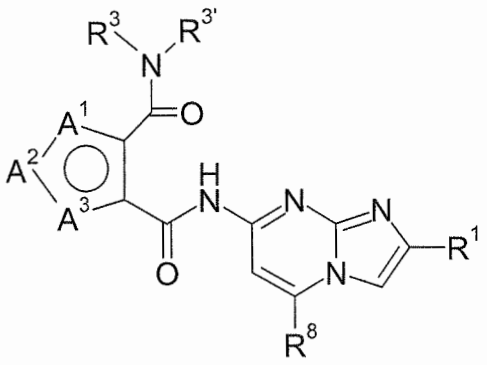
wherein

R^4 is hydrogen, hydroxyl, halogen, C_{1-7}-~~lower~~ alkoxy, C_{1-7}-~~lower~~ haloalkoxy, -OC(O)-C_{1-7}-~~lower~~ alkyl, -OCH2C(O)-C_{1-7}-~~lower~~ alkoxy or phenyl;

R^5 is halogen.

4. A compound or a pharmaceutically acceptable salt thereof according to any of claims 1 and 3, wherein R^8 is hydrogen or C_{1-7}-~~lower~~ alkoxy C_{1-7}-~~lower~~ alkyl.

5. A compound or a pharmaceutically acceptable salt thereof according to any of claims 1, 3 and 4, having formula (Ia)



(Ia)

wherein

A^1 is -NH-, -N=, -NR^6- or -CH=;

A^2 is -N= or -$NR^{6'}$-;

A^3 is -N=, -$NR^{6''}$- or -CH=;

R^6 is C_{1-7}-~~lower~~ alkyl;

$R^{6'}$ is C_{1-7}-~~lower~~ alkyl;

$R^{6''}$ is C_{1-7}-~~lower~~ alkyl or C_{2-7}-~~lower~~ alkenyl;

R^1 is phenyl or thienyl, wherein said phenyl and said thienyl are optionally substituted by 1 to 3 substituents independently selected from the group consisting of hydroxyl, halogen, C_{1-7}-~~lower~~ alkoxy, C_{1-7}-~~lower~~ haloalkoxy, -OC(O)-C_{1-7}-~~lower~~ alkyl, -OCH2C(O)-C_{1-7}-~~lower~~ alkoxy and phenyl;

R^3 and $R^{3'}$ are independently hydrogen, C_{1-7}-~~lower~~ alkyl, C_{1-7}-~~lower~~ hydroxyalkyl, C_{1-7}-~~lower~~ cyanoalkyl, C_{1-7}-~~lower~~ haloalkyl, C_{1-7}-~~lower~~ alkoxy C_{1-7}-~~lower~~ alkyl, C_{3-10}-cycloalkyl, cyano- C_{3-10}-cycloalkyl, heterocyclyl or aryl, wherein said C_{1-7}-~~lower~~ alkyl is optionally substituted by C_{1-7}-~~lower~~ haloalkoxy, C_{3-10}-cycloalkyl, aryl or heteroaryl, wherein said heteroaryl is optionally substituted by 1 to 3 substituents independently selected from the group consisting of halogen, nitro, cyano, C_{1-7}-~~lower~~ alkyl,

C_{1-7}-~~lower~~ haloalkyl, C_{1-7}-~~lower~~ alkoxy and C_{3-10}-cycloalkyl, and wherein said heterocyclyl is optionally substituted by C_{1-7}-~~lower~~ alkyl, or

R^3 and $R^{3'}$, together with the nitrogen atom to which they are attached, form a heterocyclyl, 2,5-dihydro-1H-pyrrole, 2-methyl-2,4,5,6-tetrahydropyrrolo[3,4-c]pyrazole or 2-oxa-6-azaspiro[3.3]heptane, wherein said heterocyclyl is optionally substituted by 1 to 3 halogen, hydroxyl, oxo, C_{1-7}-~~lower~~ alkyl or heteroaryl;

R^8 is hydrogen, C_{1-7}-~~lower~~ alkyl, C_{1-7}-~~lower~~ alkoxy or C_{1-7}-~~lower~~ alkoxy C_{1-7}-~~lower~~ alkyl.

6. A compound according to claim 5, selected from the group consisting of:

5-(Azetidine-1-carbonyl)-1H-[1,2,3]triazole-4-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

1H-[1,2,3]Triazole-4,5-dicarboxylic acid 5-(ethyl-methyl-amide) 4-[(2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide],

4-(Azetidine-1-carbonyl)-2-methyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

2-Methyl-4-(morpholine-4-carbonyl)-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

2-Methyl-2H-pyrazole-3,4-dicarboxylic acid 4-methylamide 3-[(2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide],

2-Methyl-2H-pyrazole-3,4-dicarboxylic acid 3-{[2-(3-chloro-phenyl)-imidazo[1,2-a]pyrimidin-7-yl]-amide} 4-methylamide,

2-Methyl-2H-pyrazole-3,4-dicarboxylic acid 3-{[2-(4-fluoro-phenyl)-imidazo[1,2-a]pyrimidin-7-yl]-amide} 4-methylamide,

4-(3,3-Difluoro-azetidine-1-carbonyl)-2-methyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

2-Methyl-2H-pyrazole-3,4-dicarboxylic acid 4-[(2-hydroxy-ethyl)-amide] 3-[(2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide],

4-(3-Hydroxy-azetidine-1-carbonyl)-2-methyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

4-(1,1-Dioxo-1λ6-thiomorpholine-4-carbonyl)-2-methyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

N4-((3-ethylisoxazol-5-yl)methyl)-1-methyl-N5-(2-phenylimidazo[1,2-a]pyrimidin-7-yl)-1H-pyrazole-4,5-dicarboxamide,
N4-((2-methoxypyridin-3-yl)methyl)-1-methyl-N5-(2-phenylimidazo[1,2-a]pyrimidin-7-yl)-1H-pyrazole-4,5-dicarboxamide,
N4-benzyl-1-methyl-N5-(2-phenylimidazo[1,2-a]pyrimidin-7-yl)-1H-pyrazole-4,5-dicarboxamide,
1-methyl-N4-((2-methylthiazol-4-yl)methyl)-N5-(2-phenylimidazo[1,2-a]pyrimidin-7-yl)-1H-pyrazole-4,5-dicarboxamide,
1-methyl-N5-(2-phenylimidazo[1,2-a]pyrimidin-7-yl)-N4-((1-propyl-1H-pyrazol-3-yl)methyl)-1H-pyrazole-4,5-dicarboxamide,
N4-((2-cyclopropyl-5-methyloxazol-4-yl)methyl)-1-methyl-N5-(2-phenylimidazo[1,2-a]pyrimidin-7-yl)-1H-pyrazole-4,5-dicarboxamide,
N4-((5-cyclopropyl-1,2,4-oxadiazol-3-yl)methyl)-1-methyl-N5-(2-phenylimidazo[1,2-a]pyrimidin-7-yl)-1H-pyrazole-4,5-dicarboxamide,
N4-((3-cyclopropyl-1,2,4-oxadiazol-5-yl)methyl)-1-methyl-N5-(2-phenylimidazo[1,2-a]pyrimidin-7-yl)-1H-pyrazole-4,5-dicarboxamide,
1-methyl-N4-((5-methyl-1,2,4-oxadiazol-3-yl)methyl)-N5-(2-phenylimidazo[1,2-a]pyrimidin-7-yl)-1H-pyrazole-4,5-dicarboxamide,
1-methyl-4-(2-methyl-2,4,5,6-tetrahydropyrrolo[3,4-c]pyrazole-5-carbonyl)-N-(2-phenylimidazo[1,2-a]pyrimidin-7-yl)-1H-pyrazole-5-carboxamide,
N4-(benzo[d]oxazol-2-ylmethyl)-1-methyl-N5-(2-phenylimidazo[1,2-a]pyrimidin-7-yl)-1H-pyrazole-4,5-dicarboxamide,
N4-((3-isopropyl-1,2,4-oxadiazol-5-yl)methyl)-1-methyl-N5-(2-phenylimidazo[1,2-a]pyrimidin-7-yl)-1H-pyrazole-4,5-dicarboxamide,
or a pharmaceutically acceptable salt thereof.

7. A compound or a pharmaceutically acceptable salt thereof according to claim 5,

wherein

R^1 is phenyl or thienyl, wherein said phenyl and said thienyl are optionally substituted by halogen or C_{1-7}-~~lower~~ alkoxy;

R^3 and $R^{3'}$ are independently C_{1-7}-~~lower~~ alkyl or C_{1-7}-~~lower~~ alkoxy C_{1-7}-~~lower~~ alkyl, or

R^3 and $R^{3'}$, together with the nitrogen atom to which they are attached, form an azetidine ring, pyrrolidine ring or piperidine ring, wherein said azetizine ring is optionally substituted by 1 or 2 substituents independently selected from the group consisting of hydroxyl and halogen.

8. A compound according to claim 7, selected from the group consisting of:

4-(Azetidine-1-carbonyl)-2-methyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

2-Methyl-4-(morpholine-4-carbonyl)-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

4-(3,3-Difluoro-azetidine-1-carbonyl)-2-methyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

4-(3-Hydroxy-azetidine-1-carbonyl)-2-methyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

4-(Azetidine-1-carbonyl)-2-methyl-2H-pyrazole-3-carboxylic acid [2-(3-methoxy-phenyl)-imidazo[1,2-a]pyrimidin-7-yl]-amide,

2-Methyl-4-(pyrrolidine-1-carbonyl)-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

2-Methyl-2H-pyrazole-3,4-dicarboxylic acid 4-(ethyl-methyl-amide) 3-[(2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide],

2-Methyl-4-(piperidine-1-carbonyl)-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

2-Methyl-2H-pyrazole-3,4-dicarboxylic acid 4-[(2-methoxy-ethyl)-methyl-amide] 3-[(2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide],

4-(Azetidine-1-carbonyl)-2-methyl-2H-pyrazole-3-carboxylic acid [2-(3-chloro-phenyl)-imidazo[1,2-a]pyrimidin-7-yl]-amide,

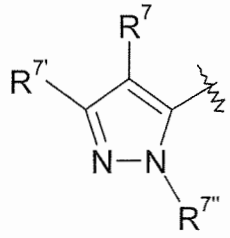
4-(Azetidine-1-carbonyl)-2-ethyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

2-Ethyl-2H-pyrazole-3,4-dicarboxylic acid 4-(ethyl-methyl-amide) 3-[(2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide],

4-(Azetidine-1-carbonyl)-2-methyl-2H-pyrazole-3-carboxylic acid [2-(5-chloro-thiophen-2-yl)-imidazo[1,2-a]pyrimidin-7-yl]-amide,

2-Methyl-2H-pyrazole-3,4-dicarboxylic acid 4-dimethylamide 3-[(2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide],

or a pharmaceutically acceptable salt thereof.

9. A compound or a pharmaceutically acceptable salt thereof according to any of claims 1, 3 and 4, wherein R^2 is ,

wherein

R^7 is hydrogen, halogen, C_{1-7}-~~lower~~-alkoxy-C(O)- or heteroaryl;

$R^{7'}$ is hydrogen, C_{1-7}-~~lower~~-alkyl or nitro;

$R^{7''}$ is C_{1-7}-~~lower~~-alkyl, C_{3-10}-cycloalkyl or aryl.

10. A compound according to claim 9, selected from the group consisting of:

4-Chloro-2-methyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

4-Chloro-2,5-dimethyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

2-Phenyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

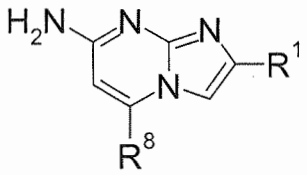
4-Bromo-2,5-dimethyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

4-Bromo-2-methyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

4-Chloro-2-ethyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

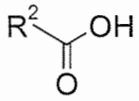
4-Chloro-2-propyl-2H-pyrazole-3-carboxylic acid (2-phenyl-imidazo[1,2-a]pyrimidin-7-yl)-amide,

reacting a compound of formula 3



3

with a compound of formula 2



2

wherein R^1, R^2 and R^8 are as defined in any of claims 1 - 12, and if desired, converting the compound into a pharmaceutically acceptable salt thereof.

~~15. A compound or a pharmaceutically acceptable salt thereof according to any of claims 1 - 13, when manufactured by a process according to claim 14.~~

~~16~~15. A pharmaceutical composition comprising a compound or a pharmaceutically acceptable salt thereof according to any of claims 1 - 13 and a pharmaceutically acceptable carrier and/or adjuvant.

~~17~~16. A compound or a pharmaceutically acceptable salt thereof according to any of claims 1 - 13 for use as therapeutic active substances.

~~18~~17. A compound or a pharmaceutically acceptable salt thereof according to any of claims 1 - 13 for use as a therapeutic active substance for the treatment and/or prophylaxis of psychotic disorders, schizophrenia, positive, negative and/or cognitive symptoms associated with schizophrenia, delusional disorder, substance-induced psychotic disorder, anxiety disorders, panic disorder, obsessive/compulsive disorders, acute stress disorder, generalized anxiety disorder, drug addictions, movement disorders, Parkinson's disease, restless leg syndrome,

~~19. The use of a compound or a pharmaceutically acceptable salt thereof according to any of claims 1 - 13 for the preparation of a medicament for the therapeutic and/or prophylactic treatment of diseases which are modulated by PDE10A inhibitors.~~

~~20~~18. The use of a compound or a pharmaceutically acceptable salt thereof according to any of claims 1 - 13 for the preparation of a medicament for the therapeutic and/or prophylactic treatment of psychotic disorders, schizophrenia, positive, negative and/or cognitive symptoms associated with schizophrenia, delusional disorder, substance-induced psychotic disorder, anxiety disorders, panic disorder, obsessive/compulsive disorders, acute stress disorder, generalized anxiety disorder, drug addictions, movement disorders, Parkinson's disease, restless leg syndrome, cognition deficiency disorders, Alzheimer's disease, multi-infarct dementia, mood disorders, depression, bipolar disorders, neuropsychiatric conditions, psychosis, attention-deficit/hyperactivity disorder, attentional disorders, diabetes and related disorders, type 2 diabetes mellitus, neurodegenerative disorders, Huntington's disease, multiple sclerosis, stroke, spinal cord injury, solid tumors, hematological malignancies, renal cell carcinoma or breast cancer.

~~21~~19. A compound or a pharmaceutically acceptable salt thereof according to any of claims 1 - 13 for the treatment or prophylaxis of psychotic disorders, schizophrenia, positive, negative and/or cognitive symptoms associated with schizophrenia, delusional disorder, substance-induced psychotic disorder, anxiety disorders, panic disorder, obsessive/compulsive disorders, acute stress disorder, generalized anxiety disorder, drug addictions, movement disorders, Parkinson's disease, restless leg syndrome, cognition deficiency disorders, Alzheimer's disease, multi-infarct dementia, mood disorders, depression, bipolar disorders, neuropsychiatric conditions, psychosis, attention-deficit/hyperactivity disorder, attentional disorders, diabetes and related disorders, type 2 diabetes mellitus, neurodegenerative disorders, Huntington's disease, multiple sclerosis, stroke, spinal cord injury, solid tumors, hematological malignancies, renal cell carcinoma or breast cancer.