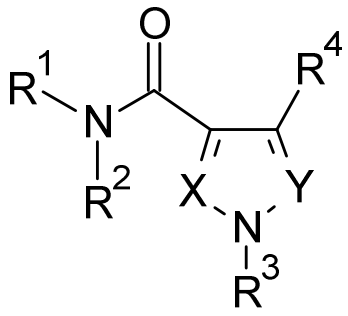
**CLAIMS**

1. A compound of Formula (1):



(1)

or a salt thereof, wherein;

X is N or $CR^5$;

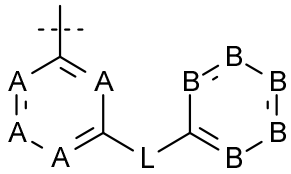
Y is N or $CR^6$;

$R^1$ is H, $C_{1-6}$ alkyl optionally substituted with OH or 1 to 6 fluorine atoms, $C_{3-6}$ cycloalkyl optionally substituted with OH or 1 to 6 fluorine atoms, wherein when the $C_{1-6}$ alkyl or $C_{3-6}$ cycloalkyl group is not substituted with OH, one atom of the $C_{1-6}$ alkyl or $C_{3-6}$ cycloalkyl group may be optionally replaced by an O atom which is not directly attached to the N or attached to a carbon atom which is directly attached to the N; or $R^1$ is joined to $R^2$ to form a 4, 5, 6 or 7-membered ring which is optionally substituted with OH or 1 to 6 fluorine atoms;

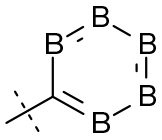
$R^2$ is H or $C_{1-3}$ alkyl optionally substituted with OH or 1 to 6 fluorine atoms; or $R^2$ is joined to $R^1$ to form a 4, 5, 6 or 7-membered ring which is optionally substituted with OH or 1 to 6 fluorine atoms;

$R^4$, $R^5$ and $R^6$ are independently selected from H, CN, halo, $C_{1-6}$ alkyl optionally substituted with OH or 1 to 6 fluorine atoms, $C_{3-6}$ cycloalkyl optionally substituted with OH or 1 to 6 fluorine atoms and $C_{1-6}$ alkoxy optionally substituted with 1 to 6 fluorine atoms, wherein when the $C_{1-6}$ alkyl or $C_{3-6}$ cycloalkyl group is not substituted with OH, one atom of the $C_{1-6}$ alkyl or $C_{3-6}$ cycloalkyl group may be optionally replaced by O;

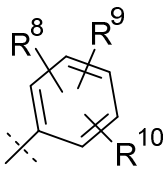
$R^3$ is a group of the formula:



wherein the group:



is:

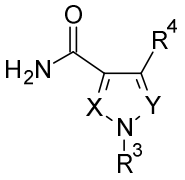


wherein $R^8$, $R^9$ and $R^{10}$ are independently selected from H, F, $CHF_2$ and $CF_3$;
one A is N and each remaining A is $CR^7$;
L is $CH_2$ or CHOH;
$R^7$ is selected from H, halo, CN and $C_{1-3}$ alkyl optionally substituted with 1 to 6 fluorine atoms.

2. The compound according to claim 1, wherein $R^1$ is selected from: H, methyl, oxetanyl, $CH_2CH_2OH$ and $CH_2CH_2OCH_3$, or wherein $R^1$ is joined to $R^2$ to form a 5-membered ring.

3. The compound according to claim 1 or claim 2, wherein $R^2$ is H or methyl, or is joined to $R^1$ to form a 5-membered ring.

4. The compound according to claim 1, which is a compound of formula (2a):



(2a);

or a salt thereof.

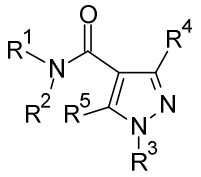
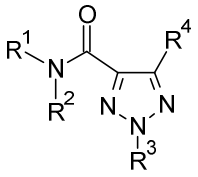
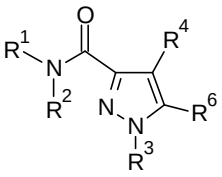
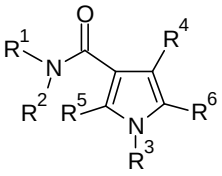
5. The compound according to any one of claims 1 to 4, wherein X is N, CH, $CCH_3$ or $CCH_2OH$.

6. The compound according to any one of claims 1 to 5, wherein Y is N, CH or $CCH_3$.

7. The compound according to any one of claims 1 to 6, wherein $R^4$ is selected from: H, methyl, methoxy, Cl, $CHF_2$, $CF_3$, ethyl, CN, cyclopropyl, $CH_2OH$ and $CH_2OCH_3$.

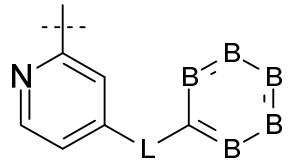
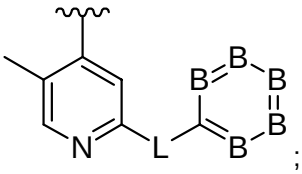
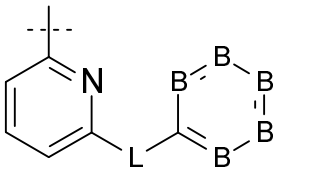
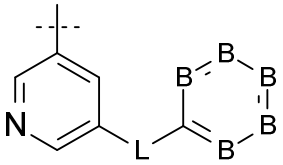
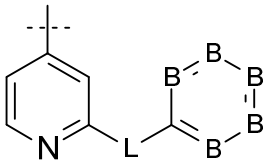
8. The compound according to any one of claims 1 to 4, wherein, $R^5$ and $R^6$ are independently selected from H, methyl and $CH_2OH$.

9. The compound according to claim 1, which is a compound of formula (3a), (3b), (3c) or (3d):


(3a);

(3b);

(3c);

(3d);

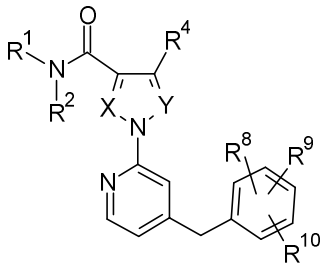
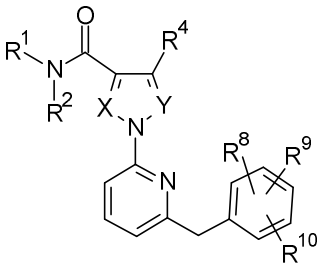
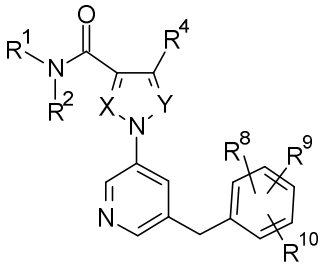
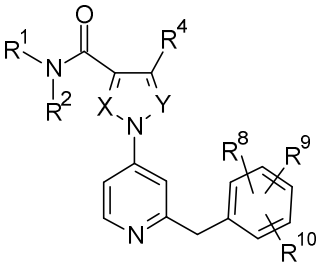
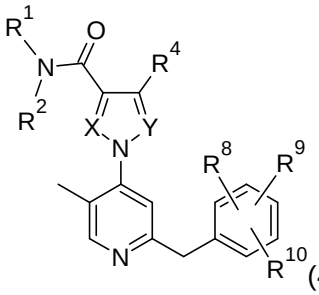
or a salt thereof.

10. The compound according to any one of claims 1 to 9, wherein $R^3$ is:


;

;

;

; or

.

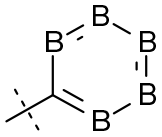
11. The compound according to any one of claims 1 to 10, wherein L is $CH_2$.

12. The compound according to claim 1 which is a compound of formula (4b), (4c), (4d), (4e) or (4f):

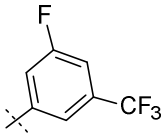
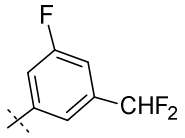

(4b);

(4c);

(4d);

(4e);

(4f);

or a salt thereof.

13. The compound according to any one of claims 1 to 11, wherein the group:



is:


or

.

14. The compound according to claim 1 which is selected from the group consisting of:

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-1*H*-pyrazole-4-carboxamide;

1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-1*H*-pyrazole-4-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-*N*-methyl-1*H*-pyrazole-4-carboxamide;

2-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-2*H*-1,2,3-triazole-4-carboxamide;
1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-3-methyl-1*H*-pyrazole-4-carboxamide;
1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-3,5-dimethyl-1*H*-pyrazole-4-carboxamide;
1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-5-methyl-1*H*-pyrazole-4-carboxamide;
1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-3-methyl-1*H*-pyrazole-4-carboxamide;
1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-1*H*-pyrazole-3-carboxamide;
1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-4-methyl-1*H*-pyrazole-3-carboxamide;
1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-3-methoxy-1*H*-pyrazole-4-carboxamide;
2-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-5-methyl-2*H*-1,2,3-triazole-4-carboxamide;
2-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-5-methyl-2*H*-1,2,3-triazole-4-carboxamide;
1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-3-methoxy-1*H*-pyrazole-4-carboxamide;
1-(6-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-4-methyl-1*H*-pyrazole-3-carboxamide;
(1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-3-methyl-1*H*-pyrazol-4-yl)(pyrrolidin-1-yl)methanone;
1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-*N*,3-dimethyl-1*H*-pyrazole-4-carboxamide;
1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-*N*,*N*,3-trimethyl-1*H*-pyrazole-4-carboxamide;
1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-3-methyl-*N*-(oxetan-3-yl)-1*H*-pyrazole-4-carboxamide;
1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-*N*-(2-hydroxyethyl)-3-methyl-1*H*-pyrazole-4-carboxamide;
1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-*N*-(2-methoxyethyl)-3-methyl-1*H*-pyrazole-4-carboxamide;
3-chloro-1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-1*H*-pyrazole-4-carboxamide;
3-(difluoromethyl)-1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-1*H*-pyrazole-4-carboxamide;
1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-3-(trifluoromethyl)-1*H*-pyrazole-4-carboxamide;
3-ethyl-1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-1*H*-pyrazole-4-carboxamide;
3-cyano-1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-1*H*-pyrazole-4-carboxamide;
3-cyclopropyl-1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-1*H*-pyrazole-4-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-*N*,5-dimethyl-1*H*-pyrazole-3-carboxamide;

1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-1*H*-pyrazole-3-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-5-methyl-1*H*-pyrazole-3-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-*N*-methyl-1*H*-pyrazole-3-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-*N*,*N*-dimethyl-1*H*-pyrazole-3-carboxamide;

(1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-1*H*-pyrazol-3-yl)(pyrrolidin-1-yl)methanone;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-*N*-(oxetan-3-yl)-1*H*-pyrazole-3-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-*N*-(2-hydroxyethyl)-1*H*-pyrazole-3-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-*N*-(2-methoxyethyl)-1*H*-pyrazole-3-carboxamide;

1-(4-(3-(difluoromethyl)-5-fluorobenzyl)pyridin-2-yl)-3-methyl-1*H*-pyrazole-4-carboxamide;

1-(4-(3-(difluoromethyl)-5-fluorobenzyl)pyridin-2-yl)-1*H*-pyrazole-3-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-5-(hydroxymethyl)-3-methyl-1*H*-pyrazole-4-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-*N*-(2-hydroxyethyl)-5-(hydroxymethyl)-3-methyl-1*H*-pyrazole-4-carboxamide;

1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-5-(hydroxymethyl)-3-methyl-1*H*-pyrazole-4-carboxamide;

1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-*N*-(2-hydroxyethyl)-5-(hydroxymethyl)-3-methyl-1*H*-pyrazole-4-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-5-(hydroxymethyl)-*N*,3-dimethyl-1*H*-pyrazole-4-carboxamide;

1-(4-(3-(difluoromethyl)-5-fluorobenzyl)pyridin-2-yl)-5-(hydroxymethyl)-3-methyl-1*H*-pyrazole-4-carboxamide;

1-(4-{[3-(difluoromethyl)-5-fluorophenyl]methyl}pyridin-2-yl)-*N*,3-dimethyl-1*H*-pyrazole-4-carboxamide;

1-(4-(3-(difluoromethyl)-5-fluorobenzyl)pyridin-2-yl)-*N*-methyl-1*H*-pyrazole-3-carboxamide;

1-(6-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-3-(hydroxymethyl)-1*H*-pyrazole-4-carboxamide;

1-(6-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-3-(hydroxymethyl)-*N*-methyl-1*H*-pyrazole-4-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-4-(hydroxymethyl)-1*H*-pyrazole-3-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-4-(hydroxymethyl)-*N*-methyl-1*H*-pyrazole-3-carboxamide;

1-(6-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-4-(hydroxymethyl)-1*H*-pyrazole-3-carboxamide;

1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)-5-methylpyridin-4-yl)-3-methyl-1*H*-pyrazole-4-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-3-(hydroxymethyl)-5-methyl-1*H*-pyrazole-4-carboxamide;

1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-5-(hydroxymethyl)-1*H*-pyrazole-3-carboxamide;

1-(2-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-4-yl)-*N*-methyl-1*H*-pyrazole-3-carboxamide;

2-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-*N*-methyl-2*H*-1,2,3-triazole-4-carboxamide;

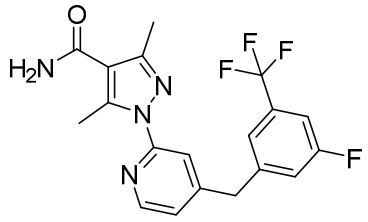
1-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-*N*,4-dimethyl-1*H*-pyrazole-3-carboxamide;

2-(4-(3-fluoro-5-(trifluoromethyl)benzyl)pyridin-2-yl)-*N*,5-dimethyl-2*H*-1,2,3-triazole-4-carboxamide;

1-(2-((3-fluoro-5-(trifluoromethyl)phenyl)(hydroxy)methyl)pyridin-4-yl)-3-methyl-1*H*-pyrazole-4-carboxamide;

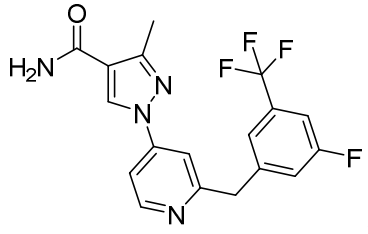
or a salt thereof.

15. The compound according to claim 1 wherein said compound is:



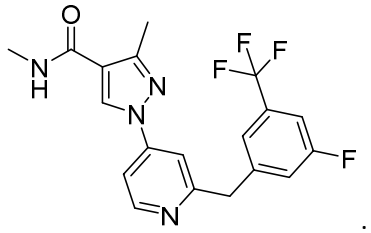
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16. The compound according to claim 1 wherein said compound is:



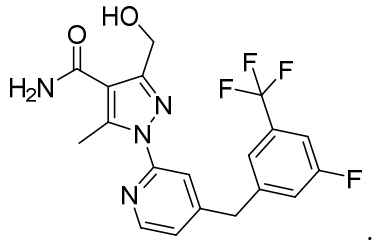
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17. The compound according to claim 1 wherein said compound is:



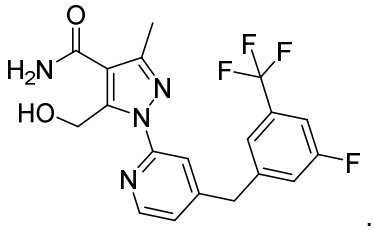

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18. The compound according to claim 1 wherein said compound is:



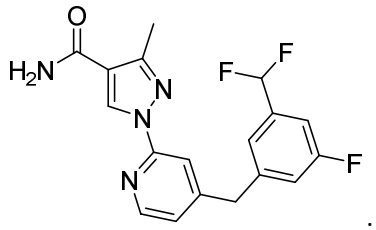

.

19. The compound according to claim 1 wherein said compound is:



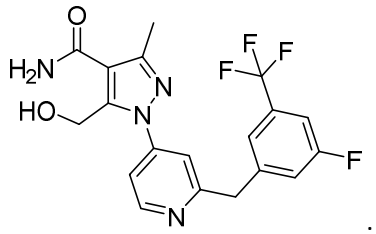

.

20. The compound according to claim 1 wherein said compound is:



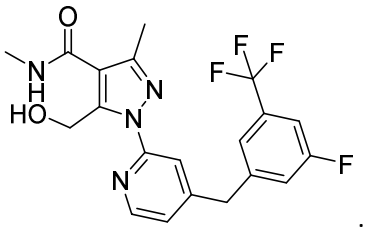

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21. The compound according to claim 1 wherein said compound is:

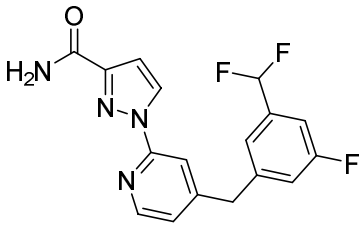



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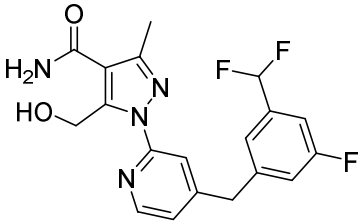
22. The compound according to claim 1 wherein said compound is:



23. The compound according to claim 1 wherein said compound is:



24. The compound according to claim 1 wherein said compound is:



25. A pharmaceutically acceptable salt of a compound as defined in any one of claims 15 to 24.

26. The compound or salt according to any one of claims 1 to 25 having GPR52 receptor modulator activity.

27. The compound or salt according to any one of claims 1 to 25 for use as a GPR52 receptor agonist.

28. A pharmaceutical composition comprising a compound or salt as defined in any one of claims 1 to 25 and a pharmaceutically acceptable excipient.

29. The compound or salt according to any one of claims 1 to 25 or composition according to claim 28 for use in medicine.

30. Use of the compound or salt according to any one of claims 1 to 25 or composition according to claim 28 for the manufacture of a medicament for the treatment of psychiatric disorders; neuropsychiatric disorders; neurodegenerative disorders; psychotic disorders;

cognitive disorders; neurocognitive disorders; extrapyramidal disorders; movement disorders; motor disorders; hyperkinetic movement disorders; catatonia; mood disorders; depressive disorders; anxiety disorders; obsessive-compulsive disorder (OCD); autism spectrum disorders; depressive disorders; hypothalamic disorders; pituitary disorders; prolactin-related disorders; trauma- or stressor-related disorders; disruptive, impulse-control or conduct disorders; sleep-wake disorders; substance-related disorders; addictive disorders; behavioral disorders; hypofrontality; abnormalities in the tuberoinfundibular, mesolimbic, mesocortical, or nigrostriatal pathway; decreased activity in the striatum; cortical dysfunction; neurocognitive dysfunction or conditions or symptoms related thereto.

31. The use according to claim 30, wherein the disorder or symptom is selected from schizophrenia, positive symptoms of schizophrenia, negative symptoms of schizophrenia, cognitive symptoms of schizophrenia, depression, attention-deficit hyperactivity disorder (ADHD), generalised anxiety disorder, obsessive-compulsive disorder (OCD), panic disorder, bipolar disorder, addiction/impulse-control disorders, autism spectrum disorders, psychosis, anhedonia, agitation, Alzheimer's disease, Parkinson's disease, Huntington's disease, vascular dementia, Lewy body disease, frontotemporal dementia, Tourette's syndrome, hyperprolactinemia, pituitary adenoma, prolactinoma, craniopharyngioma, Cushing's disease, diabetes insipidus, non-functioning tumours, obesity, posttraumatic stress disorder (PTSD), akathisia and associated movements, athetosis, ataxia, ballismus, hemiballismus, chorea, choreoathetosis, dyskinesia, tardive dyskinesia, neuroleptic-induced dyskinesia, myoclonus, mirror movement disorder, paroxysmal kinesigenic dyskinesia, restless legs syndrome, spasms, stereotypic movement disorder, sterotypy, Tic disorder, tremor, Wilson's disease, schizotypal personality disorder, delusional disorder, brief psychotic disorder, schizophreniform disorder, schizoaffective disorder, substance- or medication-induced psychotic disorder, delusions, hallucinations, disorganized thinking, grossly disorganized or abnormal motor behavior, catatonia, major depressive disorder, bipolar I disorder, bipolar II disorder, cyclothymic disorder, substance- or medication-induced bipolar and related disorders, bipolar and related disorders due to another medical condition, separation anxiety disorder, selective mutism, specific phobia, social anxiety disorder, panic disorder, agoraphobia, generalized anxiety disorder, substance- or medication-induced anxiety disorder, anxiety disorders due to another medical condition, delirium, major neurocognitive disorder, minor neurocognitive disorder, amnesia, dementia, developmental coordination disorder, stereotypic movement disorder, a post-stroke effect, dentatorubral-pallidoluysian atrophy, diminished emotional expression, avolition, alogia and asociality.

32. The use according to claim 30, wherein the disorder or symptom is selected from schizophrenia, positive symptoms of schizophrenia, negative symptoms of schizophrenia, cognitive symptoms of schizophrenia, depression, attention-deficit hyperactivity disorder (ADHD), generalised anxiety disorder, obsessive-compulsive disorder (OCD), panic disorder, bipolar disorder, addiction/impulse-control disorders, autism spectrum disorders, psychosis, neurocognitive disorder, delirium, anhedonia, agitation, Alzheimer's disease, Parkinson's disease, Huntington's disease, vascular dementia, Lewy body disease, frontotemporal dementia, Tourette's syndrome, hyperprolactinemia, obesity, and posttraumatic stress disorder (PTSD).