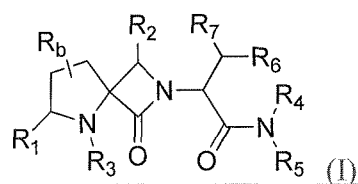


selected from the group consisting of halogen, cyano, C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, and -N(R')R';

R<sub>6</sub> is selected from the group consisting of -OH, C<sub>1</sub>-C<sub>6</sub> alkoxy, -OC(O)-C<sub>1</sub>-C<sub>6</sub> alkyl, -OC(O)phenyl, and -N(R')R'; and

5 R<sub>7</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl.

[0008a] In one aspect of the present disclosure, there is provided a compound represented by formula I:



or a pharmaceutically acceptable salt thereof, wherein

10 R<sub>b</sub> is selected from the group consisting of H, halogen, hydroxyl, cyano and C<sub>1</sub>-C<sub>6</sub> alkyl;

R<sub>1</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl;

R<sub>2</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl;

15 R<sub>3</sub> is selected from the group consisting of H, C<sub>1</sub>-C<sub>6</sub> alkyl and a nitrogen protecting group;

R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of H, C<sub>1</sub>-C<sub>6</sub> alkyl, X, and -C<sub>1</sub>-C<sub>6</sub> alkylene-X, wherein X is selected from the group consisting of:

(i) C<sub>3</sub>-C<sub>6</sub> cycloalkyl;

20 (ii) heteroaryl including from 5 to 6 ring atoms wherein 1, 2, or 3 of the ring atoms are independently selected from the group consisting of N, NH, N(C<sub>1</sub>-C<sub>3</sub> alkyl), O, and S;

(iii) heterocyclyl including from 3 to 6 ring atoms wherein 1, 2, or 3 of the ring atoms are independently selected from the group consisting of N, NH, N(C<sub>1</sub>-C<sub>3</sub> alkyl), O, and S; and

(iv) phenyl;

25 wherein C<sub>3</sub>-C<sub>6</sub> cycloalkyl and heterocyclyl are each optionally substituted with from 1-3 substituents independently selected from the group consisting of halogen, cyano, oxo, C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, and -N(R')R', wherein R' is independently selected for each occurrence from H and C<sub>1</sub>-C<sub>6</sub> alkyl; and heteroaryl and phenyl are each optionally substituted

with from 1-3 substituents independently selected from the group consisting of halogen, cyano, C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, and -N(R')R';

or R<sub>4</sub> and R<sub>5</sub> together with the nitrogen to which they are attached form:

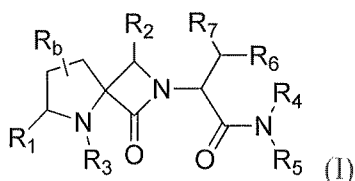
heterocyclyl including from 4 to 6 ring atoms; wherein the heterocyclyl includes not more than two ring heteroatoms (including the nitrogen atom attached to R<sub>4</sub> and R<sub>5</sub>), and the second ring heteroatom, when present, is independently selected from the group consisting of N, NH, N(C1-C3 alkyl), O, and S; and wherein the heterocyclyl is optionally substituted with from 1-3 substituents independently selected from the group consisting of halogen, cyano, oxo, C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, and -N(R')R'; or

heteroaryl including from 5 to 6 ring atoms; wherein the heteroaryl includes not more than four ring heteroatoms (including the nitrogen atom attached to R<sub>4</sub> and R<sub>5</sub>), and each additional ring heteroatom, when present, is independently selected from the group consisting of N, NH, N(C1-C3 alkyl), O, and S; and wherein the heteroaryl is optionally substituted with from 1-3 substituents independently selected from the group consisting of halogen, cyano, C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, and -N(R')R';

R<sub>6</sub> is selected from the group consisting of -OH, C<sub>1</sub>-C<sub>6</sub> alkoxy, -OC(O)-C<sub>1</sub>-C<sub>6</sub> alkyl, -OC(O)phenyl, and -N(R')R'; and

R<sub>7</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl.

[0008b] In another aspect of the present disclosure, there is provided a compound represented by formula I:



and pharmaceutically acceptable salts, stereoisomers, and N-oxides thereof, wherein

R<sub>b</sub> is selected from the group consisting of H, halogen, hydroxyl, cyano and C<sub>1</sub>-C<sub>6</sub> alkyl;

R<sub>1</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl;

R<sub>2</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl;

R<sub>3</sub> is selected from the group consisting of H, C<sub>1</sub>-C<sub>6</sub> alkyl and a nitrogen protecting group;

R<sub>4</sub> and R<sub>5</sub> are independently H or C<sub>1</sub>-C<sub>6</sub> alkyl, or R<sub>4</sub> and R<sub>5</sub> taken together with the nitrogen to which they are attached form a 4-, 5- or 6-membered heterocyclic or heteroaryl ring optionally substituted with one or more substituents selected from the group consisting of halogen, cyano, oxo, C<sub>1</sub>-C<sub>6</sub> alkyl, -OH, C<sub>1</sub>-C<sub>6</sub> alkoxy, and -N(R')R', wherein R' is independently selected for each occurrence from H or C<sub>1</sub>-C<sub>6</sub> alkyl;

R<sub>6</sub> is selected from the group consisting of -OH, C<sub>1</sub>-C<sub>6</sub> alkoxy, -OC(O)-C<sub>1</sub>-C<sub>6</sub> alkyl, and -OC(O)phenyl; and

R<sub>7</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl.

**[0009]** In a further aspect of the present disclosure, there is provided~~Also provided herein~~  
are pharmaceutically acceptable compositions comprising a disclosed compound, and a pharmaceutically acceptable excipient. For example, such compositions may be suitable for oral or intravenous administration to a patient.

**[0009a]** In another aspect of the present disclosure, there is provided a use of a compound disclosed herein in the manufacture of a medicament for treating depression, Alzheimer's disease, attention deficit disorder, schizophrenia, or anxiety, in a patient in need thereof.

**[0010]** There is also disclosed~~In another aspect,~~ a method of treating a condition selected from the group consisting of autism, anxiety, depression, bipolar disorder, attention deficit disorder, attention deficit hyperactivity disorder (ADHD), schizophrenia, a psychotic disorder, a psychotic symptom, social withdrawal, obsessive-compulsive disorder, phobia, post-traumatic stress syndrome, a behavior disorder, an impulse control disorder, a substance abuse disorder, a sleep disorder, a memory disorder, a learning disorder, urinary incontinence, multiple system atrophy, progressive supra-nuclear palsy, Friedrich's ataxia, Down's syndrome, fragile X syndrome, tuberous sclerosis, olivio-ponto-cerebellar atrophy, cerebral palsy, drug-induced optic neuritis, ischemic retinopathy, diabetic retinopathy, glaucoma, dementia, AIDS dementia, Alzheimer's disease, Huntington's chorea, spasticity, myoclonus, muscle spasm, Tourette's syndrome, epilepsy, cerebral ischemia, stroke, a brain tumor, traumatic brain injury, cardiac arrest, myelopathy, spinal cord injury, peripheral neuropathy, acute neuropathic pain, and chronic neuropathic, in a patient in need thereof is provided. Such methods may comprise administering to the patient a pharmaceutically effective amount of a disclosed compound or pharmaceutically acceptable salts, stereoisomers, N-oxides, and hydrates thereof.

**[0011]** In some embodiments, a contemplated method includes treating depression. For example, depression may include one or more of major depressive disorder, dysthymic

disorder, psychotic depression, postpartum depression, seasonal affective disorder, bipolar disorder, mood disorder, or depression caused by a chronic medical condition. In other embodiments, a contemplated method may treat schizophrenia. Such schizophrenia may be, for example, paranoid type schizophrenia, disorganized type schizophrenia, catatonic type schizophrenia, undifferentiated type schizophrenia, residual type schizophrenia, post-schizophrenic depression, or simple schizophrenia.

heteroaryl including from 5 to 6 ring atoms wherein 1, 2, or 3 of the ring atoms are independently selected from the group consisting of N, NH, N(C<sub>1</sub>-C<sub>3</sub> alkyl), O, and S; each optionally substituted with from 1-3 substituents independently selected from the group consisting of halogen, cyano, C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, and -N(R')R'.

28. The compound of any one of claims 1-27, wherein R<sub>6</sub> is selected from the group consisting of -OH, C<sub>1</sub>-C<sub>6</sub> alkoxy, -OC(O)-C<sub>1</sub>-C<sub>6</sub> alkyl, and -OC(O)phenyl.

29. The compound of claim 28, wherein R<sub>6</sub> is -OH.

30. The compound of any one of claims 1-29, wherein R<sub>7</sub> is C<sub>1</sub>-C<sub>6</sub> alkyl.

31. The compound of claim 28, wherein R<sub>7</sub> is -CH<sub>3</sub>.

32. The compound of claim 1, wherein the compound is selected from the compounds delineated in Table 1.

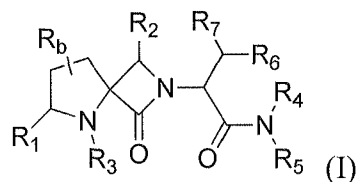
33. A pharmaceutical composition comprising a compound of any one of claims 1-32, and a pharmaceutically acceptable excipient.

34. The pharmaceutical composition of claim 33, suitable for oral administration.

35. The pharmaceutical composition of claim 33, suitable for intravenous administration.

36. Use of a compound of any one of claims 1-32 in the manufacture of a medicament for  
~~method of treating of~~ treating depression, Alzheimer's disease, attention deficit disorder, schizophrenia, or anxiety, in a patient in need thereof, ~~comprising administering to said patient:~~  
~~a pharmaceutically effective amount of a compound of any one of claims 1-32.~~

37. A compound represented by formula I:

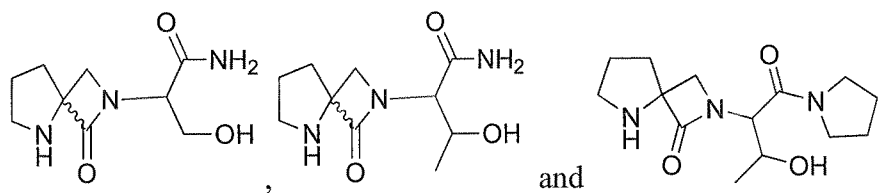


and pharmaceutically acceptable salts, stereoisomers, and N-oxides thereof, wherein

R<sub>b</sub> is selected from the group consisting of H, halogen, hydroxyl, cyano and C<sub>1</sub>-C<sub>6</sub> alkyl;

R<sub>1</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl;

R<sub>2</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl;



48. A pharmaceutical composition comprising a compound of any one of claims 37-47, and a pharmaceutically acceptable excipient.
49. The pharmaceutical composition of claim 48, suitable for oral administration.
50. The pharmaceutical composition of claim 48, suitable for intravenous administration.
51. Use of a compound of any one of claims 37-47 in the manufacture of a medicament for  
~~A method of treating or treating depression, Alzheimer's disease, attention deficit disorder,~~  
~~schizophrenia, or anxiety, in a patient in need thereof, comprising administering to said patient:~~  
~~a pharmaceutically effective amount of a compound of any one of claims 37-47.~~