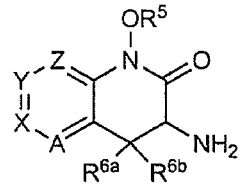
1. A compound of Formula X:



X

wherein:

A, X, Y, and Z are defined as follows:

(i) A is N or CR^1, X is N or CR^2, Y is N or CR^3, and Z is N or CR^4, provided that no more than two of A, X, Y, and Z are N;

R^1 is H, halo, alkyl, alkoxy, or cyclopropyl;

R^2, R^3, and R^4 are independently H, halo, alkyl, aryl, aralkyl, heteroaryl, alkoxy, aryloxy, aralkyloxy, heteroaryloxy, cycloalkyl, CN, wherein each said alkyl, aryl, aralkyl, heteroaryl, alkoxy, aryloxy, aralkyloxy, and cycloalkyl, may be substituted with one or more substituents selected from hydroxy, amino, halo, alkyl, haloalkyl, CN, alkoxy, haloalkoxy, and alkylamino;

R^5 is H, $C(=O)R^9$, $C(=O)OR^9$, $C(=O)NR^{9a}R^{9b}$, or $(CH_2)R^{10}$;

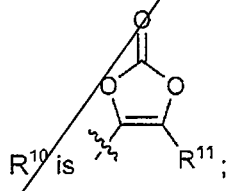
R^{6a} and R^{6b} are independently H, methyl, halomethyl, fluoro, or methoxy;

each R^7 and R^8 is independently H, alkyl, haloalkyl, aryl, or heteroaryl;

each R^{7a} is independently alkyl, haloalkyl, aryl, or heteroaryl;

R^9 is alkyl, aryl, heteroaryl, or cycloalkyl, wherein each said alkyl, aryl, heteroaryl, and cycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, and alkoxy;

each R^{9a} and R^{9b} is independently H, alkyl, aryl, heteroaryl, or cycloalkyl, wherein each said alkyl, aryl, heteroaryl, and cycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, and alkoxy, or, when R^5 is $C(=O)NR^{9a}R^{9b}$, R^{9a} and R^{9b}, together with the nitrogen atom to which they are attached, form a 5- or 6-membered N-containing heterocyclic ring;



R^{10} is R^{11};

R^{11} is H, alkyl, aryl, heteroaryl, or cycloalkyl, wherein each said alkyl, aryl, heteroaryl, and cycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, and alkoxy;

or a pharmaceutically acceptable salt thereof;

wherein each of the alkyl or the alkyl moiety of alkoxy or alkylamino is C_{1-6} alkyl, each of the cycloalkyl or the cycloalkyl moiety of cycloalkyloxy is selected from cyclopropyl, cyclobutyl, cyclopentyl and cyclohexyl; each of the aryl or the aryl moiety of the aryloxy is phenyl or naphthalenyl; each of aralkyl or the aralkyl moiety of aralkyl is selected from benzyl, phenylethyl, indenylmethyl, and naththalenylethyl; each of the haloalkyl or the haloalkyl moiety of haloalkyloxy is C_{1-6} alkyl substituted with at least one halogen substituent; each of the heteroaryl or the heteroayl moiety of heteraryloxy is selected from furanyl, thiophenyl, pyrrolyl, imidazolyl, pyrazolyl, triazolyl, tetrazolyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, thiadiazolyl, oxadiazolyl, oxatriazolyl, pyridinyl, diazinyl, pyrimidinyl, or pyrazinyl, 1,2,4-triazinyl and 1,2,3-triazinyl;

provided that the compound of Formula X or a pharmaceutically acceptable salt thereof is not (3*S*)-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; (3*R*)-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; 3-amino-1-hydroxy-7-methoxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-8-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-7-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; rac-3-amino-7-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-6-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-5-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-6-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; rac-3-amino-6-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-1-hydroxy-4-methyl-3,4-dihydroquinolin-2(1*H*)-one; (3*S*)-3-amino-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; or (3*R*)-3-amino-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, or a pharmaceutically acceptable salt thereof.

2. A compound according to claim 1 wherein:

A is CR^1;

X is CR^2;

Y is CR^3;

Z is CR^4;

R^2, R^3, and R^4 are independently H, halo, alkyl, aryl, aralkyl, heteroaryl, alkoxy, aryloxy, aralkyloxy, heteroaryloxy, cycloalkyl, or CN, wherein each said alkyl, aryl, aralkyl, heteroaryl, alkoxy, aryloxy, aralkyloxy, heteroaryloxy, and cycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, and alkoxy;

R^{6a} and R^{6b} are independently H, methyl, halomethyl, fluoro, or methoxy;

each R^7 and R^8 is independently H, alkyl, haloalkyl, aryl, or heteroaryl;

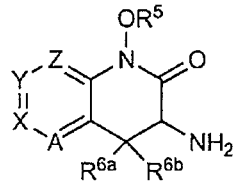
or a pharmaceutically acceptable salt thereof.

3. A compound according to claim 1 wherein:

R^5 is $C(=O)R^9$, $C(=O)NR^{9a}R^{9b}$, or $(CH_2)R^{10}$;

or a pharmaceutically acceptable salt.

4. A compound of Formula X:



according to Claim 1, wherein:

A is CR^1;

X is CR^2;

Y is CR^3;

Z is CR^4;

R^1 is H;

R^2 is arylalkyl that is benzyl, aryloxy that is phenoxy, or heteroaryloxy, wherein each of said aryl or heteroaryl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkyl, haloalkyl, CN, alkoxy, haloalkoxy, and alkylamino;

R^3 is H or alkoxy where alkyl may be substituted with one or more halo;

R^4 is H;

R^5 is H, $C(=O)R^9$, $C(=O)OR^9$, $C(=O)NR^{9a}R^{9b}$, or $(CH_2)R^{10}$;

R^{6a} and R^{6b} are independently H, methyl, halomethyl, fluoro, or methoxy;

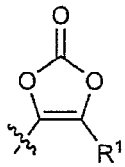
each R^7 and R^8 is independently H, alkyl, haloalkyl, aryl, or heteroaryl;

each R^{7a} is independently alkyl, haloalkyl, aryl, or heteroaryl;

R^9 is alkyl, aryl, heteroaryl, or cycloalkyl, wherein each of said alkyl, aryl, heteroaryl, and cycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, and, alkoxy,

each R^{9a} and R^{9b} is independently H, alkyl, aryl, heteroaryl, or cycloalkyl, wherein each of said alkyl, aryl, heteroaryl, and cycloalkyl may be substituted with one or more substituents

selected from hydroxy, amino, halo, and alkoxy, or, R^{9a} and R^{9b}, together with the nitrogen atom to which they are attached, form a 5- or 6-membered N-containing heterocyclic ring;

R^{10} is  ; and

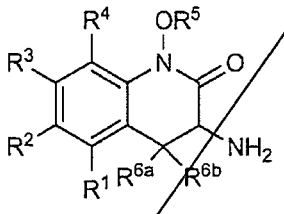
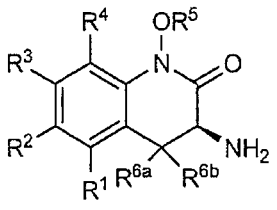
R^{11} is H, alkyl, aryl, heteroaryl, or cycloalkyl, wherein each of said alkyl, aryl, heteroaryl, and cycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, and alkoxy;

or a pharmaceutically acceptable salt thereof.

5. A compound according to claim 4 wherein R^2 is benzyl, and pharmaceutically acceptable salts thereof.

6. A compound according to claim 5 wherein R^3 is H, or a pharmaceutically acceptable salt thereof.

7. A compound according to claim 1 or a pharmaceutically acceptable salt thereof, wherein the compound of Formula X is a compound of Formula XII or Formula XIIA:

 XII or  XIIA

wherein:

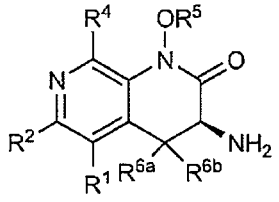
R^1 is H, halo, C_{1-3} alkyl, C_{1-3} alkoxy, or cyclopropyl; and

one of R^{6a} and R^{6b} is H and the other is H, methyl, fluoromethyl, fluoro, or methoxy.

8. A compound according to claim 7 or a pharmaceutically acceptable salt thereof, wherein R^1, R^2, R^3, and R^4 are independently H, F, Cl, Br, CH_3, or CF_3; and one of R^{6a} and R^{6b} is H and the other is H or CH_3.

9. A compound according to claim 8 or a pharmaceutically acceptable salt thereof, wherein R^1 is H; R^2 is H, arylalkyl that is benzyl, aryloxy that is phenoxy, or heteroaryloxy, wherein said aryl or heteroaryl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkyl, haloalkyl, CN, alkoxy, haloalkoxy, alkylamino, and aminoalkyl; R^3 is H or alkoxy, wherein said alkoxy may be substituted with one or more halo; and R^4 is H.

10. A compound according to claim 1 wherein the compound is of Formula XVA:



XVA

wherein:

R^1 is H;

R^2 is arylalkyl that is benzyl, aryloxy that is phenoxy, or heteroaryloxy, wherein said aryl or heteroaryl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkyl, haloalkyl, CN, alkoxy, haloalkoxy, and alkylamino;

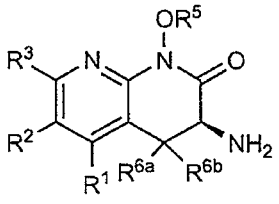
R^4 is H;

R^5 is H, $C(=O)R^9$, $C(=O)OR^9$, $C(=O)NR^{9a}R^{9b}$, or $(CH_2)R^{10}$; and

one of R^{6a} or R^{6b} is H and the other is H, methyl, fluoromethyl, fluoro, or methoxy;

or a pharmaceutically acceptable salt.

11. A compound according to claim 1 wherein the compound is of Formula XVIA:



XVIA

wherein:

R^1 is H, halo, alkyl, alkoxy, or cyclopropyl;

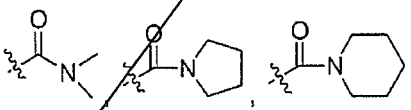
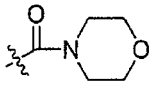
R^2 is arylalkyl that is benzyl or aryloxy, wherein said aryl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkyl, haloalkyl, CN, alkoxy, haloalkoxy, alkylamino, and alkylamino;

R^3 is H or alkyl;

R^5 is H, $C(=O)R^9$, $C(=O)OR^9$, $C(=O)NR^{9a}R^{9b}$, or $(CH_2)R^{10}$; and
R^{6a} and R^{6b} are independently H, methyl, halomethyl, fluoro, or methoxy;
or a pharmaceutically acceptable salt.

12. A compound according to claim 8 wherein R^3 is H or methyl; or a pharmaceutically acceptable salt.

13. A compound according to claim 3 wherein R^5 is $C(=O)NR^{9a}R^{9b}$, or a pharmaceutically acceptable salt.

14. A compound according to claim 10 wherein R^5 is , or , or a pharmaceutically acceptable salt.

15. A compound selected from:
(3*S*)-3-amino-1-hydroxy-8-(trifluoromethyl)-3,4-dihydroquinolin-2(1*H*)-one;
3-amino-6-cyclopropyl-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-1-hydroxy-7-isopropoxy-3,4-dihydroquinolin-2(1H)-one;
3-amino-7-ethyl-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-5-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
3-amino-7-cyclopropyl-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-6-chloro-8-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-1-hydroxy-6-(trifluoromethoxy)-3,4-dihydroquinolin-2(1H)-one;
3-amino-1-hydroxy-2-oxo-1,2,3,4-tetrahydroquinoline-8-carbonitrile;
(3S)-3-amino-8-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-1-hydroxy-8-(trifluoromethoxy)-3,4-dihydroquinolin-2(1H)-one;
(3*S*)-3-amino-1-hydroxy-6-phenoxy-3,4-dihydroquinolin-2(1*H*)-one;
(3*S*)-3-amino-1-[(dimethylcarbamoyl)oxy]-6-phenoxy-3,4-dihydroquinolin-2(1*H*)-one;
(3*S*)-3-amino-1-[(dimethylcarbamoyl)oxy]-3,4-dihydroquinolin-2(1*H*)-one;
(3*S*)-3-amino-6-benzyl-1-hydroxy-7-methoxy-3,4-dihydroquinolin-2(1*H*)-one;
(3S)-3-amino-1-hydroxy-8-(2,2,2-trifluoroethoxy)-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-5,6-difluoro-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-6-chloro-5-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;

(3S)-3-amino-8-(difluoromethyl)-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;

(3S)-3-amino-6,8-difluoro-1-hydroxy-3,4-dihydroquinolin-2(1H)-one; and

3-{[(3S)-3-amino-1-hydroxy-7-methoxy-2-oxo-1,2,3,4-tetrahydroquinolin-6-yl]methyl}benzonitrile;

or a pharmaceutically acceptable salt thereof.

16. A compound selected from:

(3*S*)-3-amino-1-hydroxy-8-(trifluoromethyl)-3,4-dihydroquinolin-2(1*H*)-one;

3-amino-6-cyclopropyl-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;

3-amino-7-cyclopropyl-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;

(3S)-3-amino-1-hydroxy-6-(trifluoromethoxy)-3,4-dihydroquinolin-2(1H)-one;

3-amino-1-hydroxy-2-oxo-1,2,3,4-tetrahydroquinoline-8-carbonitrile;

(3S)-3-amino-1-hydroxy-8-(trifluoromethoxy)-3,4-dihydroquinolin-2(1H)-one;

(3*S*)-3-amino-1-hydroxy-6-phenoxy-3,4-dihydroquinolin-2(1*H*)-one;

(3*S*)-3-amino-1-[(dimethylcarbamoyl)oxy]-6-phenoxy-3,4-dihydroquinolin-2(1*H*)-one;

(3*S*)-3-amino-1-[(dimethylcarbamoyl)oxy]-3,4-dihydroquinolin-2(1*H*)-one;

(3*S*)-3-amino-6-benzyl-1-hydroxy-7-methoxy-3,4-dihydroquinolin-2(1*H*)-one;

(3S)-3-amino-1-hydroxy-8-(2,2,2-trifluoroethoxy)-3,4-dihydroquinolin-2(1H)-one;

(3S)-3-amino-8-(difluoromethyl)-1-hydroxy-3,4-dihydroquinolin-2(1H)-one; and

3-{[(3S)-3-amino-1-hydroxy-7-methoxy-2-oxo-1,2,3,4-tetrahydroquinolin-6-yl]methyl}benzonitrile;

or a pharmaceutically acceptable salt thereof.

17. A compound that is (3*S*)-3-amino-1-hydroxy-7-(2-methoxyethoxy)-3,4-dihydroquinolin-2(1*H*)-one, or a pharmaceutically acceptable salt thereof.

18. A pharmaceutical composition comprising a compound according to any one of claims 1 to 17, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

19. A compound according to any one of claims 1 to 17, or a compound selected from (3*S*)-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, (3*R*)-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, *rac*-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, *rac*-3-amino-8-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, 3-amino-1-hydroxy-7-methoxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-7-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one,

rac-3-amino-7-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, *rac*-3-amino-6-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, *rac*-3-amino-5-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, *rac*-3-amino-6-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, rac-3-amino-6-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, *rac*-3-amino-1-hydroxy-4-methyl-3,4-dihydroquinolin-2(1*H*)-one, (3*S*)-3-amino-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, or (3*R*)-3-amino-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, or a pharmaceutically acceptable salt thereof, for use in the treatment or prevention in a mammal of a condition selected from the group consisting of acute neurological and psychiatric disorders; stroke; cerebral ischemia; spinal cord trauma; cognitive impairment; head trauma; perinatal hypoxia; cardiac arrest; hypoglycemic neuronal damage; dementia; Alzheimer's disease; Huntington's Chorea; amyotrophic lateral sclerosis; ocular damage; retinopathy; cognitive disorders; idiopathic and drug-induced Parkinson's disease; muscular spasms and disorders associated with muscular spasticity; epilepsy; convulsions; migraine; urinary incontinence; substance tolerance; substance withdrawal; psychosis; schizophrenia; negative symptoms associated with schizophrenia; autism, including autism spectrum disorders; bipolar disorder; depression, including but not limited to Major Depressive Disorder and treatment-resistant depression; cognitive impairment associated with depression; cognitive impairment associated with cancer therapy; anxiety; mood disorders; inflammatory disorders; sepsis; cirrhosis; cancer and/or tumors associated with immune response escape; trigeminal neuralgia; hearing loss; tinnitus; macular degeneration of the eye; emesis; brain edema; pain; tardive dyskinesia; sleep disorders; attention deficit/hyperactivity disorder; attention deficit disorder; disorders that comprise as a symptom a deficiency in attention and/or cognition; and conduct disorder.

20. The use of a compound according to any one of claims 1 to 17, or a compound selected from (3*S*)-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, (3*R*)-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, *rac*-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, *rac*-3-amino-8-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, 3-amino-1-hydroxy-7-methoxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-7-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, rac-3-amino-7-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, *rac*-3-amino-6-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, *rac*-3-amino-5-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, *rac*-3-amino-6-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, rac-3-amino-6-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, *rac*-3-amino-1-hydroxy-4-methyl-3,4-dihydroquinolin-2(1*H*)-one, (3*S*)-3-amino-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, or (3*R*)-3-amino-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one, or a pharmaceutically acceptable salt thereof,

in the manufacture of a medicament for the treatment or prevention in a mammal of a condition selected from the group consisting of acute neurological and psychiatric disorders; stroke; cerebral ischemia; spinal cord trauma; cognitive impairment; head trauma; perinatal hypoxia; cardiac arrest; hypoglycemic neuronal damage; dementia; Alzheimer's disease; Huntington's Chorea; amyotrophic lateral sclerosis; ocular damage; retinopathy; cognitive disorders; idiopathic and drug-induced Parkinson's disease; muscular spasms and disorders associated with muscular spasticity; epilepsy; convulsions; migraine; urinary incontinence; substance tolerance; substance withdrawal; psychosis; schizophrenia; negative symptoms associated with schizophrenia; autism, including autism spectrum disorders; bipolar disorder; depression, including but not limited to Major Depressive Disorder and treatment-resistant depression; cognitive impairment associated with depression; cognitive impairment associated with cancer therapy; anxiety; mood disorders; inflammatory disorders; sepsis; cirrhosis; cancer and/or tumors associated with immune response escape; trigeminal neuralgia; hearing loss; tinnitus; macular degeneration of the eye; emesis; brain edema; pain; tardive dyskinesia; sleep disorders; attention deficit/hyperactivity disorder; attention deficit disorder; disorders that comprise as a symptom a deficiency in attention and/or cognition; and conduct disorder.

21. The use according to claim 19 or 20 wherein said compound is a compound according to any one of claims 1 to 17, or a pharmaceutically acceptable salt thereof.

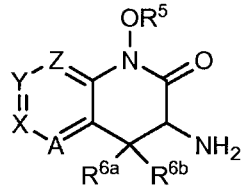
22. The use according to claim 21 wherein the condition is dementia; cognitive deficit symptoms of Alzheimer's disease; attention deficit symptoms of Alzheimer's disease; multi-infarct dementia, alcoholic dementia or other drug-related dementia, dementia associated with intracranial tumors or cerebral trauma, dementia associated with Huntington's disease or Parkinson's disease, or AIDS-related dementia; delirium; amnestic disorder; post-traumatic stress disorder; mental retardation; a learning disorder (e.g., reading disorder, mathematics disorder, or a disorder of written expression); attention-deficit/hyperactivity disorder; age-related cognitive decline; cognitive deficits associated with psychoses; or cognitive deficits associated with schizophrenia.

23. The use according to Claim 22 wherein the condition is selected from mild cognitive impairment, tremors, autism spectrum disorders, Major Depressive Disorder, and treatment-resistant depression.

24. The use according to Claim 22 wherein the condition is reading disorder, mathematics disorder, or a disorder of written expression.

CLAIMS

1. A compound of Formula X:



X

wherein:

A, X, Y, and Z are defined as follows:

(i) A is N or CR^1, X is N or CR^2, Y is N or CR^3, and Z is N or CR^4, provided that no more than two of A, X, Y, and Z are N;

(ii) A and X together form a 5- or 6-membered aromatic, N-containing heteroaromatic, or O-containing heterocycloalkyl ring fused to the ring containing A and X, Y is N or CR^3, and Z is N or CR^4, wherein the 5- or 6-membered aromatic, N-containing heteroaromatic, or O-containing heterocycloalkyl ring is substituted by R^1 and R^2;

(iii) X and Y together form a 5- or 6-membered aromatic, N-containing heteroaromatic, or O-containing heterocycloalkyl ring fused to the ring containing X and Y, A is N or CR^1, and Z is N or CR^4, wherein the 5- or 6-membered aromatic, N-containing heteroaromatic, or O-containing heterocycloalkyl ring is substituted by R^2 and R^3; or

(iv) Y and Z together form a 5- or 6-membered aromatic, N-containing heteroaromatic, or O-containing heterocycloalkyl ring fused to the ring containing Y and Z, A is N or CR^1, and X is N or CR^2, wherein the 5- or 6-membered aromatic, N-containing heteroaromatic, or O-containing heterocycloalkyl ring is substituted by R^3 and R^4;

R^1 is H, halo, alkyl, alkoxy, or cyclopropyl;

R^2, R^3, and R^4 are independently H, halo, alkyl, aryl, aralkyl, heteroaryl, alkoxy, cycloalkyloxy, alkoxyaryl, aryloxy, aralkyloxy, heterocycloalkyloxy, heteroaryloxy, cycloalkyl, alkylaryloxy, alkylheterocycloalkyl, alkylheteroaryloxy, heterocycloalkyl, CN, $CH_2NR^7R^8$, NR^7R^8, $C(=O)NR^7R^8$, $SO_2NR^7R^8$, SO_2R^{7a}, $NR^7SO_2R^{7a}$, and $NR^7C(=O)R^{7a}$, wherein each said alkyl, aryl, aralkyl, heteroaryl, alkoxy, cycloalkyloxy, alkoxyaryl, aryloxy, aralkyloxy, heterocycloalkyloxy,

heteroaryloxy, cycloalkyl, alkylaryloxy, alkylheterocycloalkyl, alkylheteroaryloxy, heterocycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkyl, haloalkyl, CN, alkoxy, haloalkoxy, alkylamino, and aminoalkyl;

R^5 is H, $C(=O)R^9$, $C(=O)OR^9$, $C(=O)NR^{9a}R^{9b}$, or $(CH_2)R^{10}$;

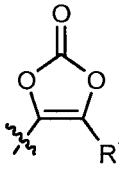
R^{6a} and R^{6b} are independently H, methyl, halomethyl, fluoro, or methoxy;

each R^7 and R^8 is independently H, alkyl, haloalkyl, aryl, or heteroaryl;

each R^{7a} is independently alkyl, haloalkyl, aryl, or heteroaryl;

R^9 is alkyl, aryl, heteroaryl, or cycloalkyl, wherein each said alkyl, aryl, heteroaryl, and cycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkoxy, and aminoalkyl;

each R^{9a} and R^{9b} is independently H, alkyl, aryl, heteroaryl, or cycloalkyl, wherein each said alkyl, aryl, heteroaryl, and cycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkoxy, and aminoalkyl, or, when R^5 is $C(=O)NR^{9a}R^{9b}$, R^{9a} and R^{9b}, together with the nitrogen atom to which they are attached, form a 5- or 6-membered N-containing heterocyclic ring;

R^{10} is ;

R^{11} is H, alkyl, aryl, heteroaryl, or cycloalkyl, wherein each said alkyl, aryl, heteroaryl, and cycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkoxy, and aminoalkyl;

or a pharmaceutically acceptable salt thereof;

provided that the compound of Formula X is not (3*S*)-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; (3*R*)-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-8-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-7-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; rac-3-amino-7-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-6-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-5-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-6-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; rac-3-amino-6-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-1-hydroxy-4-

methyl-3,4-dihydroquinolin-2(1*H*)-one; (3*S*)-3-amino-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; or (3*R*)-3-amino-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one;
and provided that the compound is not 3-amino-3,4-dihydro-1-hydroxycarbostyril; 3-amino-3,4-dihydro-1-hydroxycarbostyril hydrochloride; 7-methoxy-3-amino-3,4-dihydro-1-hydroxycarbostyril hydrochloride or *cis*- or *trans*-3-amino-3,4-dihydro-1-hydroxy-4-methylcarbostyril hydrochloride.

2. A compound according to claim 1 wherein:

R^5 is H;

A, X, Y, and Z are defined as follows:

(i) A is N or CR^1, X is N or CR^2, Y is N or CR^3, and Z is N or CR^4, provided that no more than two of A, X, Y, and Z are N;

(ii) A and X together form a 5- or 6-membered aromatic or N-containing heteroaromatic ring fused to the ring containing A and X, Y is N or CR^3, and Z is N or CR^4, wherein the 5- or 6-membered aromatic or N-containing heteroaromatic ring is substituted by R^1 and R^2;

(iii) X and Y together form a 5- or 6-membered aromatic or N-containing heteroaromatic ring fused to the ring containing X and Y, A is N or CR^1, and Z is N or CR^4, wherein the 5- or 6-membered aromatic or N-containing heteroaromatic ring is substituted by R^2 and R^3; or

(iv) Y and Z together form a 5- or 6-membered aromatic or N-containing heteroaromatic ring fused to the ring containing Y and Z, A is N or CR^1, and X is N or CR^2, wherein the 5- or 6-membered aromatic or N-containing heteroaromatic ring is substituted by R^3 and R^4;

R^1, R^2, R^3, and R^4 are independently H, halo, alkyl, aryl, aralkyl, heteroaryl, alkoxy, alkoxyaryl, aryloxy, aralkyloxy, heteroaryloxy, cycloalkyl, alkylaryloxy, alkylheteroaryloxy, heterocycloalkyl, CN, NR^7R^8, $C(=O)NR^7R^8$, $SO_2NR^7R^8$, $NR^7SO_2R^8$, and $NR^7C(=O)R^{7a}$, wherein each said alkyl, aryl, aralkyl, heteroaryl, alkoxy, alkoxyaryl, aryloxy, aralkyloxy, heteroaryloxy, cycloalkyl, alkylaryloxy, alkylheteroaryloxy, and heterocycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkoxy, and aminoalkyl;

R^{6a} and R^{6b} are independently H, methyl, halomethyl, fluoro, or methoxy;

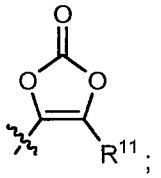
each R^7 and R^8 is independently H, alkyl, haloalkyl, aryl, or heteroaryl;

or a pharmaceutically acceptable salt thereof.

3. A compound according to claim 1 wherein:

R^5 is $C(=O)R^{9a}$, $C(=O)NR^{9a}R^{9b}$, or $(CH_2)R^{10}$;

each R^{9a} and R^{9b} is independently H, alkyl, aryl, heteroaryl, or cycloalkyl, wherein each said alkyl, aryl, heteroaryl, and cycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkoxy, and aminoalkyl, or, when R^5 is $C(=O)NR^{9a}R^{9b}$, R^{9a} and R^{9b}, together with the nitrogen atom to which they are attached, form a 5- or 6-membered N-containing heterocyclic ring;

R^{10} is ;

R^{11} is H, alkyl, aryl, heteroaryl, or cycloalkyl, wherein each said alkyl, aryl, heteroaryl, and cycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkoxy, and aminoalkyl;

(i) A is N or CR^1, X is N or CR^2, Y is N or CR^3, and Z is N or CR^4, provided that no more than two of A, X, Y, and Z are N;

(ii) A and X together form a 5- or 6-membered aromatic, N-containing heteroaromatic, or O-containing heterocycloalkyl ring fused to the ring containing A and X, Y is N or CR^3, and Z is N or CR^4, wherein the 5- or 6-membered aromatic, N-containing heteroaromatic, or O-containing heterocycloalkyl ring is substituted by R^1 and R^2;

(iii) X and Y together form a 5- or 6-membered aromatic, N-containing heteroaromatic, or O-containing heterocycloalkyl ring fused to the ring containing X and Y, A is N or CR^1, and Z is N or CR^4, wherein the 5- or 6-membered aromatic, N-containing heteroaromatic, or O-containing heterocycloalkyl ring is substituted by R^2 and R^3; or

(iv) Y and Z together form a 5- or 6-membered aromatic, N-containing heteroaromatic, or O-containing heterocycloalkyl ring fused to the ring containing Y and Z, A is N or CR^1, and X is N or CR^2, wherein the 5- or 6-membered aromatic, N-containing heteroaromatic, or O-containing heterocycloalkyl ring is substituted by R^3 and R^4;

R^1 is H, halo, alkyl, alkoxy, or cyclopropyl;

R^2, R^3, and R^4 are independently H, halo, alkyl, aryl, aralkyl, heteroaryl, alkoxy, cycloalkyloxy, alkoxyaryl, aryloxy, aralkyloxy, heterocycloalkyloxy, heteroaryloxy, cycloalkyl, alkylaryloxy, alkylheterocycloalkyl, alkylheteroaryloxy, heterocycloalkyl, CN, $CH_2NR^7R^8$, NR^7R^8, $C(=O)NR^7R^8$, $SO_2NR^7R^8$, SO_2R^{7a}, $NR^7SO_2R^{7a}$, and $NR^7C(=O)R^{7a}$, wherein each said alkyl, aryl, aralkyl, heteroaryl, alkoxy, cycloalkyloxy, alkoxyaryl, aryloxy, aralkyloxy, heterocycloalkyloxy, heteroaryloxy, cycloalkyl, alkylaryloxy, alkylheterocycloalkyl, alkylheteroaryloxy, heterocycloalkyl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkyl, haloalkyl, CN, alkoxy, haloalkoxy, alkylamino, and aminoalkyl;

R^{6a} and R^{6b} are independently H, methyl, halomethyl, fluoro, or methoxy; and

each R^7 and R^8 is independently H, alkyl, haloalkyl, aryl, or heteroaryl;

each R^{7a} is independently alkyl, haloalkyl, aryl, or heteroaryl;

or a pharmaceutically acceptable salt thereof.

4. A compound according to claim 1 wherein:

X is CR^2;

Y is CR^3;

Z is CR^4;

R^1 is H;

R^2 is H, arylalkyl that is benzyl, aryloxy that is phenoxy, or heteroaryloxy, wherein said aryl or heteroaryl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkyl, haloalkyl, CN, alkoxy, haloalkoxy, alkylamino, and aminoalkyl;

R^3 is H or alkoxy where alkyl may be substituted with one or more halo;

R^4 is H; and

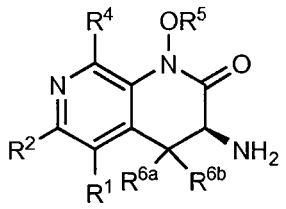
R^5, R^{6a}, and R^{6b} are as defined in claim 1;

or a pharmaceutically acceptable salt thereof.

5. A compound according to claim 4 wherein R^2 is H or benzyl, or a pharmaceutically acceptable salt thereof.

6. A compound according to claim 5 wherein R^3 is H, or a pharmaceutically acceptable salt thereof.

7. A compound according to claim 1 of Formula XVA:



XVA

wherein:

R^1 is H;

R^2 is arylalkyl that is benzyl, aryloxy that is phenoxy, or heteroaryloxy, wherein said aryl or heteroaryl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkyl, haloalkyl, CN, alkoxy, haloalkoxy, alkylamino, and aminoalkyl;

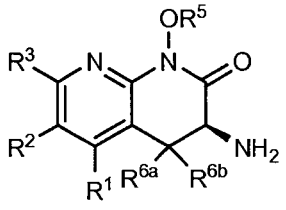
R^4 is H;

one of R^{6a} or R^{6b} is H and the other is H, methyl, fluoromethyl, fluoro, or methoxy; and

R^5 is as defined in claim 1;

or a pharmaceutically acceptable salt thereof.

8. A compound according to claim 1 of Formula XVIA:



XVIA

wherein:

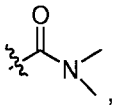
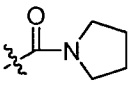
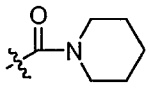
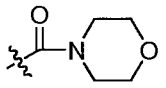
R^2 is arylalkyl that is benzyl or aryloxy, wherein said aryl may be substituted with one or more substituents selected from hydroxy, amino, halo, alkyl, haloalkyl, CN, alkoxy, haloalkoxy, alkylamino, and aminoalkyl; and

R^3 is H or alkyl;

or a pharmaceutically acceptable salt thereof.

9. A compound according to claim 8 wherein R^3 is H or methyl; or a pharmaceutically acceptable salt thereof.

10. A compound according to claim 3 wherein R^5 is $C(=O)NR^{9a}R^{9b}$, or a pharmaceutically acceptable salt thereof.

11. A compound according to claim 10 wherein R^5 is , , , or , or a pharmaceutically acceptable salt thereof.

12. A compound according to claim 1 which is selected from:
(3*S*)-3-amino-1-hydroxy-8-(trifluoromethyl)-3,4-dihydroquinolin-2(1*H*)-one;3-amino-6-cyclopropyl-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-1-hydroxy-7-isopropoxy-3,4-dihydroquinolin-2(1H)-one;
3-amino-7-ethyl-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-5-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
3-amino-7-cyclopropyl-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-6-chloro-8-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-1-hydroxy-6-(trifluoromethoxy)-3,4-dihydroquinolin-2(1H)-one;
3-amino-1-hydroxy-2-oxo-1,2,3,4-tetrahydroquinoline-8-carbonitrile;
(3S)-3-amino-8-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-1-hydroxy-8-(trifluoromethoxy)-3,4-dihydroquinolin-2(1H)-one;
(3*S*)-3-amino-1-hydroxy-6-phenoxy-3,4-dihydroquinolin-2(1*H*)-one;
(3*S*)-3-amino-1-[(dimethylcarbamoyl)oxy]-6-phenoxy-3,4-dihydroquinolin-2(1*H*)-one;
(3*S*)-3-amino-1-[(dimethylcarbamoyl)oxy]-3,4-dihydroquinolin-2(1*H*)-one;
(3*S*)-3-amino-6-benzyl-1-hydroxy-7-methoxy-3,4-dihydroquinolin-2(1*H*)-one;
(3S)-3-amino-1-hydroxy-8-(2,2,2-trifluoroethoxy)-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-5,6-difluoro-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-6-chloro-5-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-8-(difluoromethyl)-1-hydroxy-3,4-dihydroquinolin-2(1H)-one;
(3S)-3-amino-6,8-difluoro-1-hydroxy-3,4-dihydroquinolin-2(1H)-one; and

3-{[(3S)-3-amino-1-hydroxy-7-methoxy-2-oxo-1,2,3,4-tetrahydroquinolin-6-yl]methyl}benzonitrile;
or a pharmaceutically acceptable salt thereof.

13. A compound according to claim 1 which is (3*S*)-3-amino-1-hydroxy-7-(2-methoxyethoxy)-3,4-dihydroquinolin-2(1*H*)-one, or a pharmaceutically acceptable salt thereof.

14. A pharmaceutical composition comprising a compound according to any one of claims 1 to 13, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

15. A compound or a pharmaceutically acceptable salt thereof according to any one of claims 1-13 for use in the treatment or prevention in a mammal of a condition selected from the group consisting of acute neurological and psychiatric disorders; stroke; cerebral ischemia; spinal cord trauma; cognitive impairment, including mild cognitive impairment; head trauma; perinatal hypoxia; cardiac arrest; hypoglycemic neuronal damage; dementia; Alzheimer's disease; Huntington's Chorea; amyotrophic lateral sclerosis; ocular damage; retinopathy; cognitive disorders; idiopathic and drug-induced Parkinson's disease; muscular spasms and disorders associated with muscular spasticity including tremors; epilepsy; convulsions; migraine; urinary incontinence; substance tolerance; substance withdrawal; psychosis; schizophrenia; negative symptoms associated with schizophrenia; autism, including autism spectrum disorders; bipolar disorder; depression, including but not limited to Major Depressive Disorder and treatment-resistant depression; cognitive impairment associated with depression; cognitive impairment associated with cancer therapy; anxiety; mood disorders; inflammatory disorders; sepsis; cirrhosis; cancer and/or tumors associated with immune response escape; trigeminal neuralgia; hearing loss; tinnitus; macular degeneration of the eye; emesis; brain edema; pain; tardive dyskinesia; sleep disorders; attention deficit/hyperactivity disorder; attention deficit disorder; disorders that comprise as a symptom a deficiency in attention and/or cognition; and conduct disorder.

16. A compound or a pharmaceutically acceptable salt thereof which is selected from (3*S*)-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; (3*R*)-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-7-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-8-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-7-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; rac-3-amino-7-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-6-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-5-chloro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-6-bromo-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; rac-3-amino-6-fluoro-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one; *rac*-3-amino-1-hydroxy-4-methyl-3,4-dihydroquinolin-2(1*H*)-one; (3*S*)-3-amino-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one or (3*R*)-3-amino-1-hydroxy-3,4-dihydroquinolin-2(1*H*)-one for use in the treatment or prevention in a mammal of a condition selected from the group consisting of acute neurological and psychiatric disordrs; stroke; cerebral ischemia; spinal cord trauma; cognitive impairment, including mild cognitive impairment; perinatal hypoxia; cardiac arrest; hypoglycemic neuronal damage; dementia; Alzheimer's disease; Huntington's Chorea; amyotrophic lateral sclerosis; ocular damage; retinopathy; cognitive disorders; idiopathic and drug-induced Parkinson's disease; muscular spasms and disorders associated with muscular spasticity including tremors; epilepsy; convulsions; migraine; urinary incontinence; substance tolerance; substance withdrawal; psychosis; schizophrenia; negative symptoms associated with schizophrenia; autism, including autism spectrum disorders; bipolar disorders; depression, including but not limited to Major Depressive Disorders and treatment-resistant depression; cognitive impairment associated with depression; cognitive impairment associated with cancer therapy; anxiety; mood disorders; inflammatory disorders; sepsis; cirrhosis; cancer and/or tumors associated with immune response escape; trigeminal neuralgia; hearing loss; tinnitus; macular degeneration of the eye; emesis; brain edema; pain; tardive dyskinesia; sleep disorders; attention deficit/hyperactivity disorder; attention deficit disorder; disorders that comprise as a symptom a deficiency in attention and/or cognition and conduct disorders.

17. A compound or a pharmaceutically acceptable salt thereof for use according to claim 15 or 16 wherein the condition is dementia; cognitive deficit symptoms of

Alzheimer's disease; attention deficit symptoms of Alzheimer's disease; multi-infarct dementia, alcoholic dementia or other drug-related dementia, dementia associated with intracranial tumors or cerebral trauma, dementia associated with Huntington's disease or Parkinson's disease, or AIDS-related dementia; delirium; amnestic disorder; post-traumatic stress disorder; mental retardation; a learning disorder (e.g., reading disorder, mathematics disorder, or a disorder of written expression); attention-deficit/hyperactivity disorder; age-related cognitive decline; cognitive deficits associated with psychoses; or cognitive deficits associated with schizophrenia.