

X is an optionally substituted C₁₋₆ alkylene group,

A is an optionally substituted phenyl group,

Z¹ is CH,

Z² is a group represented by CR^{Z2} wherein R^{Z2} is an optionally
5 substituted C₁₋₆ alkyl group, an optionally substituted C₁₋₆ alkoxy
group or an optionally substituted C₃₋₈ cycloalkyl group, and
Z³ is CH.

11. 7-Methoxy-N-((1S)-2-methoxy-1-(4-
10 (trifluoromethoxy)phenyl)ethyl)-2-oxo-2,3-dihydropyrido[2,3-
b]pyrazine-4(1H)-carboxamide or a salt thereof.

12. N-((1S)-1-(3-Fluoro-4-(trifluoromethoxy)phenyl)-2-
methoxyethyl)-7-methoxy-2-oxo-2,3-dihydropyrido[2,3-b]pyrazine-
15 4(1H)-carboxamide or a salt thereof.

13. 7-Cyclopropyl-N-((1S)-2-hydroxy-2-methyl-1-(4-
(trifluoromethoxy)phenyl)propyl)-2-oxo-2,3-dihydropyrido[2,3-
b]pyrazine-4(1H)-carboxamide or a salt thereof.

20

14. 7-Cyclopropyl-N-(1-(3-fluoro-4-(trifluoromethoxy)phenyl)-2-
hydroxy-2-methylpropyl)-2-oxo-2,3-dihydropyrido[2,3-b]pyrazine-
4(1H)-carboxamide or a salt thereof.

25 15. N-(1-(3-Fluoro-4-(trifluoromethoxy)phenyl)-2-hydroxy-2-
methylpropyl)-7-methyl-2-oxo-2,3-dihydropyrido[2,3-b]pyrazine-
4(1H)-carboxamide or a salt thereof.

30 16. A medicament comprising the compound or salt according to any
one of claims 1 to 15~~of claim 1~~.

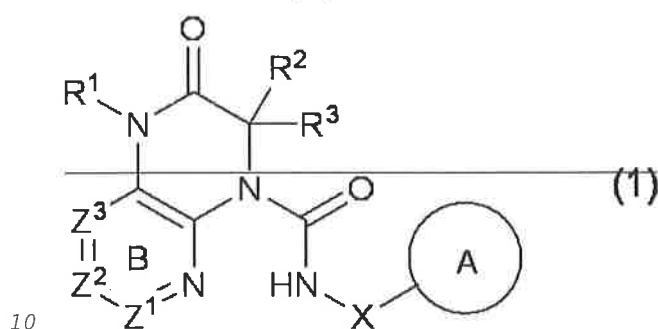
17. The medicament of claim 16, which is a phosphodiesterase 2A
inhibitor.

35 18. The medicament of claim 16, which is an agent for the

prophylaxis or treatment of schizophrenia, ~~and/or~~ attention-deficit/hyperactivity disorder, Alzheimer's disease and/or autism.

19. Use of the compound or salt according to any one of claims 1-
5 15, for inhibition of phosphodiesterase 2A.

19. A method of inhibiting phosphodiesterase 2A, which comprises administering an effective amount of a compound represented by the formula (1):



wherein—

R¹ is a hydrogen atom or an optionally substituted C₁₋₆ alkyl group,
R² and R³ are each independently a hydrogen atom or an optionally substituted C₁₋₆ alkyl group, or R² and R³ in combination
15 optionally form, together with the adjacent carbon atom, an optionally substituted ring,

X is a bond or an optionally substituted C₁₋₆ alkylene group,

A is an optionally substituted cyclic group,

Z¹ is a group represented by CR^{Z1} wherein R^{Z1} is a hydrogen atom, a
20 halogen atom, an optionally substituted C₁₋₆ alkyl group, an optionally substituted C₂₋₆ alkenyl group, an optionally substituted C₂₋₆ alkynyl group, an optionally substituted C₁₋₆ alkoxy group, an optionally substituted amino group, a cyano group or an optionally substituted cyclic group, or a nitrogen
25 atom,

Z² is a group represented by CR^{Z2} wherein R^{Z2} is a hydrogen atom, a halogen atom, an optionally substituted C₁₋₆ alkyl group, an optionally substituted C₂₋₆ alkenyl group, an optionally substituted C₂₋₆ alkynyl group, an optionally substituted C₁₋₆ alkoxy group, an optionally substituted amino group, a cyano
30

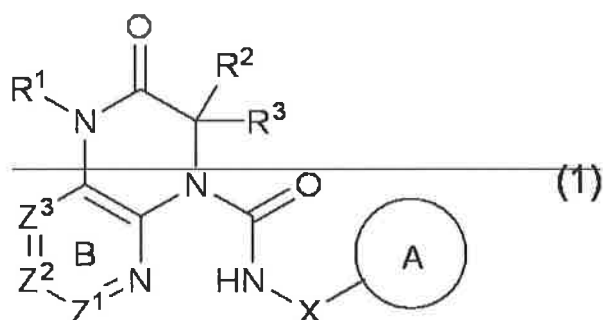
~~group or an optionally substituted cyclic group, or a nitrogen atom,~~

~~Z³ is a group represented by CR^{Z3} wherein R^{Z3} is a hydrogen atom,~~

a halogen atom, an optionally substituted C₁₋₆ alkyl group, an optionally substituted C₂₋₆ alkenyl group, an optionally substituted C₂₋₆ alkynyl group, an optionally substituted C₁₋₆ alkoxy group, an optionally substituted amino group, a cyano group, an optionally substituted C₁₋₆ alkyl-carbonyl group or an optionally substituted cyclic group, or a nitrogen atom, and B is a nitrogen-containing aromatic heterocycle containing 1 or 2 nitrogen atoms, or a salt thereof, to a mammal.

10

20. A method for the prophylaxis or treatment of schizophrenia, which comprises administering an effective amount of a compound represented by the formula (1):



15 wherein

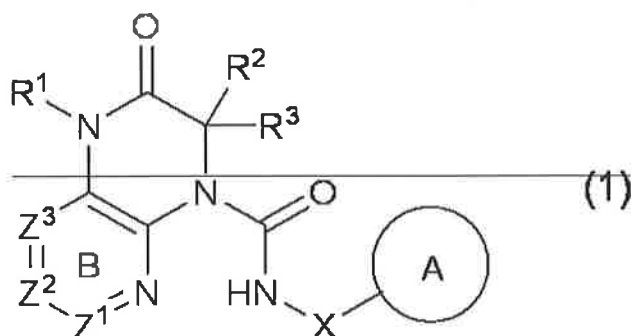
R¹ is a hydrogen atom or an optionally substituted C₁₋₆ alkyl group, R² and R³ are each independently a hydrogen atom or an optionally substituted C₁₋₆ alkyl group, or R² and R³ in combination optionally form, together with the adjacent carbon atom, an optionally substituted ring, X is a bond or an optionally substituted C₁₋₆ alkylene group, A is an optionally substituted cyclic group, Z¹ is a group represented by CR²¹ wherein R²¹ is a hydrogen atom, a halogen atom, an optionally substituted C₁₋₆ alkyl group, an optionally substituted C₂₋₆ alkenyl group, an optionally substituted C₂₋₆ alkynyl group, an optionally substituted C₁₋₆ alkoxy group, an optionally substituted amino group, a cyano group or an optionally substituted cyclic group, or a nitrogen atom,

Z^2 is a group represented by CR^{Z2} wherein R^{Z2} is a hydrogen atom, a halogen atom, an optionally substituted C_{1-6} alkyl group, an optionally substituted C_{2-6} alkenyl group, an optionally substituted C_{2-6} alkynyl group, an optionally substituted C_{1-6} alkoxy group, an optionally substituted amino group, a cyano group or an optionally substituted cyclic group, or a nitrogen atom,

Z^3 is a group represented by CR^{Z3} wherein R^{Z3} is a hydrogen atom, a halogen atom, an optionally substituted C_{1-6} alkyl group, an optionally substituted C_{2-6} alkenyl group, an optionally substituted C_{2-6} alkynyl group, an optionally substituted C_{1-6} alkoxy group, an optionally substituted amino group, a cyano group, an optionally substituted C_{1-6} alkyl-carbonyl group or an optionally substituted cyclic group, or a nitrogen atom, and

B is a nitrogen-containing aromatic heterocycle containing 1 or 2 nitrogen atoms, or a salt thereof, to a mammal.

2120. Use of the compound or salt according to any one of claims 1-15a compound represented by the formula (1):



wherein

R^1 is a hydrogen atom or an optionally substituted C_{1-6} alkyl group, R^2 and R^3 are each independently a hydrogen atom or an optionally substituted C_{1-6} alkyl group, or R^2 and R^3 in combination optionally form, together with the adjacent carbon atom, an optionally substituted ring,

X is a bond or an optionally substituted C_{1-6} alkylene group,

A is an optionally substituted cyclic group,

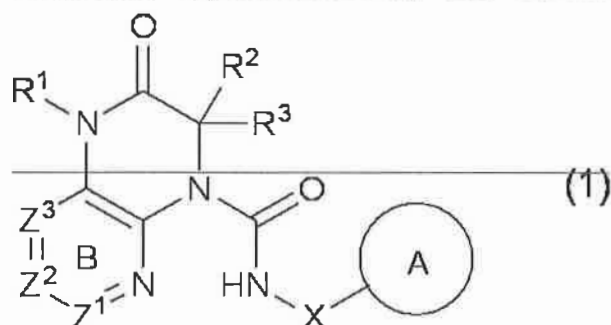
Z^1 is a group represented by CR^{Z1} wherein R^{Z1} is a hydrogen atom, a halogen atom, an optionally substituted C_{1-6} -alkyl group, an optionally substituted C_{2-6} -alkenyl group, an optionally substituted C_{2-6} -alkynyl group, an optionally substituted C_{1-6} -alkoxy group, an optionally substituted amino group, a cyano group or an optionally substituted cyclic group, or a nitrogen atom,

Z^2 is a group represented by CR^{Z2} wherein R^{Z2} is a hydrogen atom, a halogen atom, an optionally substituted C_{1-6} -alkyl group, an optionally substituted C_{2-6} -alkenyl group, an optionally substituted C_{2-6} -alkynyl group, an optionally substituted C_{1-6} -alkoxy group, an optionally substituted amino group, a cyano group or an optionally substituted cyclic group, or a nitrogen atom,

Z^3 is a group represented by CR^{Z3} wherein R^{Z3} is a hydrogen atom, a halogen atom, an optionally substituted C_{1-6} -alkyl group, an optionally substituted C_{2-6} -alkenyl group, an optionally substituted C_{2-6} -alkynyl group, an optionally substituted C_{1-6} -alkoxy group, an optionally substituted amino group, a cyano group, an optionally substituted C_{1-6} -alkyl-carbonyl group or an optionally substituted cyclic group, or a nitrogen atom, and B is a nitrogen-containing aromatic heterocycle containing 1 or 2 nitrogen atoms,

or a salt thereof, for the production of an agent for the prophylaxis or treatment of schizophrenia, attention-deficit/hyperactivity disorder, Alzheimer's disease and/or autism.

2221. The compound or salt according to any one of claims 1-15A-
compound represented by the formula (1):



wherein

~~R¹ is a hydrogen atom or an optionally substituted C₁₋₆ alkyl~~

group,

~~R² and R³ are each independently a hydrogen atom or an optionally substituted C₁₋₆ alkyl group, or R² and R³ in combination optionally form, together with the adjacent carbon atom, an optionally substituted ring,~~

~~X is a bond or an optionally substituted C₁₋₆ alkylene group,~~

~~A is an optionally substituted cyclic group,~~

~~Z¹ is a group represented by CR^{z1} wherein R^{z1} is a hydrogen atom, a halogen atom, an optionally substituted C₁₋₆ alkyl group, an optionally substituted C₂₋₆ alkenyl group, an optionally substituted C₂₋₆ alkynyl group, an optionally substituted C₁₋₆ alkoxy group, an optionally substituted amino group, a cyano group or an optionally substituted cyclic group, or a nitrogen atom,~~

~~Z² is a group represented by CR^{z2} wherein R^{z2} is a hydrogen atom, a halogen atom, an optionally substituted C₁₋₆ alkyl group, an optionally substituted C₂₋₆ alkenyl group, an optionally substituted C₂₋₆ alkynyl group, an optionally substituted C₁₋₆ alkoxy group, an optionally substituted amino group, a cyano group or an optionally substituted cyclic group, or a nitrogen atom,~~

~~Z³ is a group represented by CR^{z3} wherein R^{z3} is a hydrogen atom, a halogen atom, an optionally substituted C₁₋₆ alkyl group, an optionally substituted C₂₋₆ alkenyl group, an optionally substituted C₂₋₆ alkynyl group, an optionally substituted C₁₋₆ alkoxy group, an optionally substituted amino group, a cyano group, an optionally substituted C₁₋₆ alkyl-carbonyl group or an optionally substituted cyclic group, or a nitrogen atom, and B is a nitrogen-containing aromatic heterocycle containing 1 or 2 nitrogen atoms,~~

~~or a salt thereof, for use in the prophylaxis or treatment of schizophrenia, attention-deficit/hyperactivity disorder, Alzheimer's disease and/or autism.~~