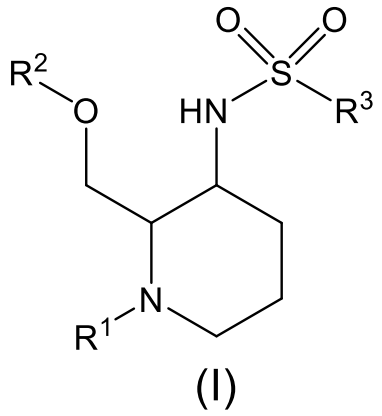
Claims

1. A compound represented by the formula:



(I)

wherein

R^1 is

(1) a hydrogen atom,

(2) a C_{1-6} alkyl-carbonyl group optionally substituted by 1 to 7 substituents selected from

(i) a halogen atom, (ii) a cyano group, (iii) a hydroxy group, (iv) a C_{3-10} cycloalkyl group, (v) a C_{1-6} alkoxy group, (vi) a C_{6-14} aryl group, (vii) a C_{6-14} aryloxy group, (viii) a pyrazolyl group, a thiazolyl group, a pyrimidinyl group or a pyridazinyl group, each of which is optionally substituted by an oxo group, (ix) a pyrazolyloxy group optionally substituted by 1 to 3 C_{1-6} alkyl groups, (x) a C_{1-6} alkyl-carbonyl group, (xi) a C_{1-6} alkoxy-carbonyl group, (xii) a C_{1-6} alkyl-carbonyloxy group, (xiii) a C_{1-6} alkylsulfonyl group, (xiv) a mono- or di-C_{1-6} alkylamino group, (xv) a C_{1-6} alkyl-carbonylamino group and (xvi) a (C_{1-6} alkyl)(C_{1-6} alkyl-carbonyl)amino group,

(3) a C_{3-10} cycloalkyl-carbonyl group optionally substituted by 1 to 3 substituents selected from a halogen atom, a cyano group, a hydroxy group, an oxo group and a C_{1-6} alkyl group,

(4) a C_{1-6} alkoxy-carbonyl group optionally substituted by 1 to 6 substituents selected from deuterium, a halogen atom and a C_{6-14} aryl group,

(5) a C_{3-10} cycloalkyloxy-carbonyl group optionally substituted

by 1 to 3 substituents selected from a C_{1-6} alkyl group,
(6) a C_{6-14} aryl-carbonyl group optionally substituted by 1 to 3 substituents selected from a halogen atom and a C_{6-14} aryl group,
(7) a C_{6-14} aryloxy-carbonyl group,
(8) a furylcarbonyl group, a thienylcarbonyl group, a pyrazolylcarbonyl group, an isoxazolylcarbonyl group or a pyridylcarbonyl group, each of which is optionally substituted by 1 to 3 substituents selected from a C_{1-6} alkyl group,
(9) an azetidinylcarbonyl group, an oxetanylcarbonyl group, a pyrrolidinylcarbonyl group, a tetrahydrofuranylcarbonyl group, a tetrahydropyranylcarbonyl group or a morpholinylcarbonyl group, each of which is optionally substituted by 1 to 3 substituents selected from an oxo group, a C_{1-6} alkyl-carbonyl group, a C_{1-6} alkoxy-carbonyl group and a C_{1-6} alkylsulfonyl group,
(10) a mono- or di-C_{1-6} alkyl-carbamoyl group optionally substituted by 1 to 3 substituents selected from a halogen atom, a cyano group, a hydroxy group and a C_{1-6} alkoxy group,
(11) a mono- or di-C_{3-10} cycloalkyl-carbamoyl group,
(12) a mono- or di-C_{6-14} aryl-carbamoyl group,
(13) a C_{1-6} alkylsulfonyl group,
(14) a C_{3-10} cycloalkylsulfonyl group,
(15) a C_{6-14} arylsulfonyl group optionally substituted by 1 to 3 halogen atoms,
(16) a thienylsulfonyl group, a pyrazolylsulfonyl group, an imidazolylsulfonyl group, a pyridylsulfonyl group or a dihydrochromenylsulfonyl group, each of which is optionally substituted by 1 to 3 substituents selected from a C_{1-6} alkyl group,
(17) a mono- or di-C_{1-6} alkyl-sulfamoyl group or
(18) a C_{1-6} alkyl-carbonyl-carbonyl group;

R^2 is a C_{3-6} cycloalkyl group, a pyrrolidinyl group, a piperidinyl group or a dioxanyl group, each of which is optionally substituted by 1 to 3 substituents selected from

(1) deuterium,

(2) a halogen atom,

(3) a hydroxy group,

(4) a C_{1-6} alkyl group optionally substituted by 1 to 3 substituents selected from a halogen atom and a C_{6-14} aryl group,

(5) a C_{3-10} cycloalkyl group,

(6) a C_{1-6} alkoxy group optionally substituted by a C_{3-10} cycloalkyl group,

(7) a C_{6-14} aryl group optionally substituted by 1 to 3 substituents selected from a halogen atom, a cyano group, a C_{1-6} alkyl group optionally substituted by 1 to 3 halogen atoms, a C_{1-6} alkoxy group optionally substituted by 1 to 3 halogen atoms and a hydroxy group,

(8) a C_{6-14} aryloxy group,

(9) a tri-C_{1-6} alkylsilyloxy group,

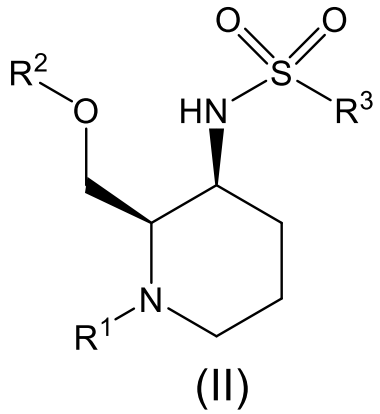
(10) a pyrazolyl group, a thiazolyl group, a pyridyl group, a pyrimidinyl group, a quinazolinyl group, a benzothiazolyl group or an isoquinolinyl group, each of which is optionally substituted by 1 to 3 substituents selected from a halogen atom, a C_{1-6} alkyl group and a C_{1-6} alkoxy group, and

(11) a C_{6-14} aryl-carbonyl group; and

R^3 is C_{1-6} alkyl group, or a mono- or di-C_{1-6} alkylamino group,

or a salt thereof.

2. The compound according to claim 1, which is represented by the formula:



(II)

wherein R^1, R^2 and R^3 are as defined in claim 1, or a salt thereof.

3. The compound according to claim 1, wherein R^1 is

(1) a hydrogen atom,

(2) a C_{1-6} alkyl-carbonyl group optionally substituted by a hydroxy group,

(3) a cyclopropanecarbonyl group,

(4) a C_{1-6} alkoxy-carbonyl group or

(5) a mono- or di-C_{1-6} alkyl-carbamoyl group;

R^2 is

(A) a cyclohexyl group optionally substituted by 1 to 3 substituents selected from

(1) a C_{1-6} alkyl group and

(2) a phenyl group optionally substituted by 1 to 3 substituents selected from a halogen atom, a C_{1-6} alkyl group optionally substituted by 1 to 3 halogen atoms and a C_{1-6} alkoxy group or

(B) a piperidinyl group optionally substituted by 1 to 3 pyrimidinyl groups; and

R^3 is a C_{1-6} alkyl group or a di-C_{1-6} alkylamino group, or a salt thereof.

4. The compound according to claim 1, wherein R^1 is
(1) a C_{1-6} alkyl-carbonyl group optionally substituted by a hydroxy group,
(2) a C_{1-6} alkoxy-carbonyl group or
(3) a mono- or di-C_{1-6} alkyl-carbamoyl group;
R^2 is a cyclohexyl group optionally substituted by 1 to 3 substituents selected from
(1) a C_{1-6} alkyl group and
(2) a phenyl group optionally substituted by 1 to 3 halogen atoms; and
R^3 is a C_{1-6} alkyl group, or a salt thereof.

5. Methyl (2R,3S)-3-((methylsulfonyl)amino)-2-(((cis-4-phenylcyclohexyl)oxy)methyl)piperidine-1-carboxylate or a salt thereof.

6. N-((2R,3S)-1-glycoloyl-2-(((cis-4-(2,3,6-trifluorophenyl)cyclohexyl)oxy)methyl)piperidin-3-yl)methanesulfonamide or a salt thereof.

7. (2R,3S)-N-ethyl-2-(((cis-4-isopropylcyclohexyl)oxy)methyl)-3-((methylsulfonyl)amino)piperidine-1-carboxamide or a salt thereof.

8. A medicament comprising the compound according to claim 1 or a salt thereof.

9. The medicament according to claim 14, which is an orexin type 2 receptor agonist.

10. The medicament according to claim 14, which is a prophylactic or therapeutic agent for the prophylaxis or treatment of narcolepsy.

11. The compound according to claim 1 or a salt thereof for use in the prophylaxis or treatment of narcolepsy.

12. Use of the compound according to claim 1 or a salt thereof in the manufacture of a prophylactic or therapeutic agent for the prophylaxis or treatment of narcolepsy.