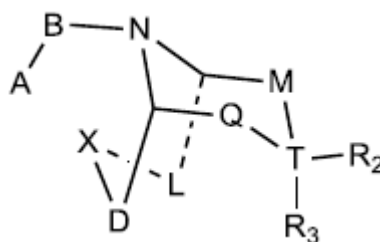


Claims

1. A compound of formula (I), or a pharmaceutically acceptable salt thereof,



(I)

5 wherein:

A is selected from an optionally substituted 3-12 membered cyclohydrocarbyl or heterocyclohydrocarbyl or cyclic heterohydrocarbyl;

B is selected from C(=O) or S(=O)₂;

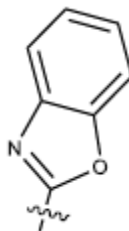
X is a single of bond linkage;

10 D and L are independently selected from optionally substituted CH₂, wherein the substituent is selected from F, Cl, Br, OH, NH₂, halogen-substituted, or unsubstituted C₁₋₆ alkyl;

T is C;

15 M is selected from C(Y)(R_{1a}) when Q is selected from C(R_{1b})(R_{1c}), or M is selected from C(R_{1b})(R_{1c}) when Q is selected from C(Y)(R_{1a});

Y is selected from -(CH₂)_{r4}(G)_{r5}(CH₂)_{r6}-Y₁, wherein Y₁ is selected from -O-E or a structure of formula (Y₂₂) which is optionally substituted,



(Y₂₂)

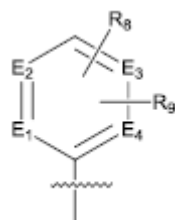
20 wherein the substituent is selected from F, Cl, Br, halogen-substituted, or unsubstituted C₁₋₆ alkyl;

G is selected from halogen-substituted, or unsubstituted CH₂;

r₄ and r₆ are 0, r₅ is selected from 0 or 1, and when r₄, r₅ and r₆ are all 0, it means the corresponding structure is a single bond of linkage;

25 E is selected from optionally substituted 6 membered cyclohydrocarbyl or heterocyclic group, wherein the substituent is selected from F, Cl, Br, CN, OH, NH₂, halogen-substituted, hydroxy-substituted, amino-substituted or unsubstituted C₁₋₆ alkyl;

wherein the E is selected from a structure unit of formula (E_a):



(E_a)

wherein:

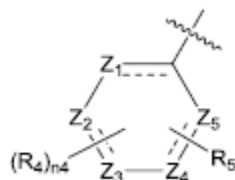
E₁, E₂, E₃, and E₄ are independently selected from halogen-substituted or unsubstituted
 5 CH, N; and

R₈ and R₉ are independently selected from H, F, Cl, Br, CN, OH, NH₂,
 halogen-substituted, hydroxy-substituted, amino-substituted or unsubstituted C₁₋₆ alkyl;

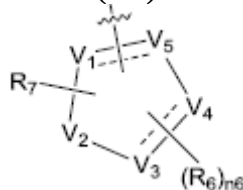
each of R_{1a}, R_{1b}, R_{1c}, R₂, and R₃ is independently selected from H, F, Cl,
 halogen-substituted, hydroxy-substituted, amino-substituted or unsubstituted C₁₋₆ alkyl; and

10 the compound or the pharmaceutically acceptable salt thereof comprises one or more
 chiral center;

wherein A is selected from a structure unit as shown in formula (A₁) or (A₂):



(A₁)



(A₂)

wherein:

Z₁, Z₂, Z₃, Z₄, and Z₅ are independently selected from CH, CH₂, NH, or N;

V₁, V₂, V₃, V₄, and V₅ are independently selected from CH, CH₂, C, N, or S, and at least
 20 one of V₁ to V₅ is C or N;

----- represents a single bond or a double bond;

R₄ and R₆ are independently selected from H, F, Cl, Br, halogen-substituted,
 hydroxy-substituted, amino-substituted or unsubstituted C₁₋₆ alkyl;

R₅ and R₇ are independently selected from optionally substituted 5-6 membered
 25 cyclohydrocarbyl or heterocyclic group, while the substituent is selected from F, Cl, Br, CN,
 OH, NH₂, halogen-substituted, hydroxy-substituted, amino-substituted or unsubstituted C₁₋₆
 alkyl; wherein the 5-6 membered cyclohydrocarbyl or heterocyclic group are each
 independently selected from phenyl, pyridyl, furyl, thienyl, thiazolyl, pyrimidinyl, pyrazolyl,
 1,2,3-triazolyl or 1,2,5-triazolyl;

30 the heterocyclohydrocarbyl is a cyclized heterohydrocarbyl which comprising cyclic
 hydrocarbon radical and comprises a certain number of carbon atoms and at least one hetero
 atoms, and connects with the rest of the molecule via a carbon atom;

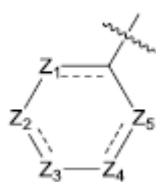
the cyclic heterohydrocarbonyl is a cyclized heterohydrocarbonyl which comprising cyclic hydrocarbon radical and comprises a certain number of carbon atoms and at least one hetero atoms, and connects to the rest of the molecule via a heteroatom;

the heterocyclic means a stable monocyclic ring or bicyclic ring or bicyclic heterocyclic ring which may be saturated, partially unsaturated, unsaturated or aromatic, and comprises carbon atoms and 1, 2, 3 or 4 ring heteroatoms independently selected from N, O and S;

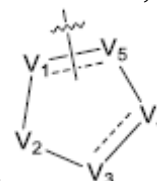
n_4 is selected from 0, 1, 2, 3, 4; and

n_6 is selected from 0, 1, 2, 3.

- 10 2. The compound of claim 1 or the pharmaceutically acceptable salt thereof, wherein the



structure unit is selected from phenyl or pyridyl:
from furyl, thienyl or thiazolyl.



is selected

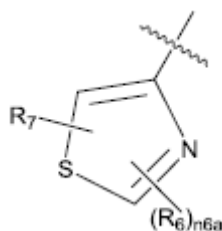
- 15 3. The compound of claims 1 or 2 or the pharmaceutically acceptable salt thereof, wherein formula (A₂) is selected from a structure of formula (A₂₁):



(A₂₁)

wherein the V₁, V₂, V₃, V₄, V₅, R₆, R₇ and n₆ are defined as in claim 1.

- 20 4. The compound of claim 3 or the pharmaceutically acceptable salt thereof, wherein A is selected from a structure unit of formula (A₂₂):

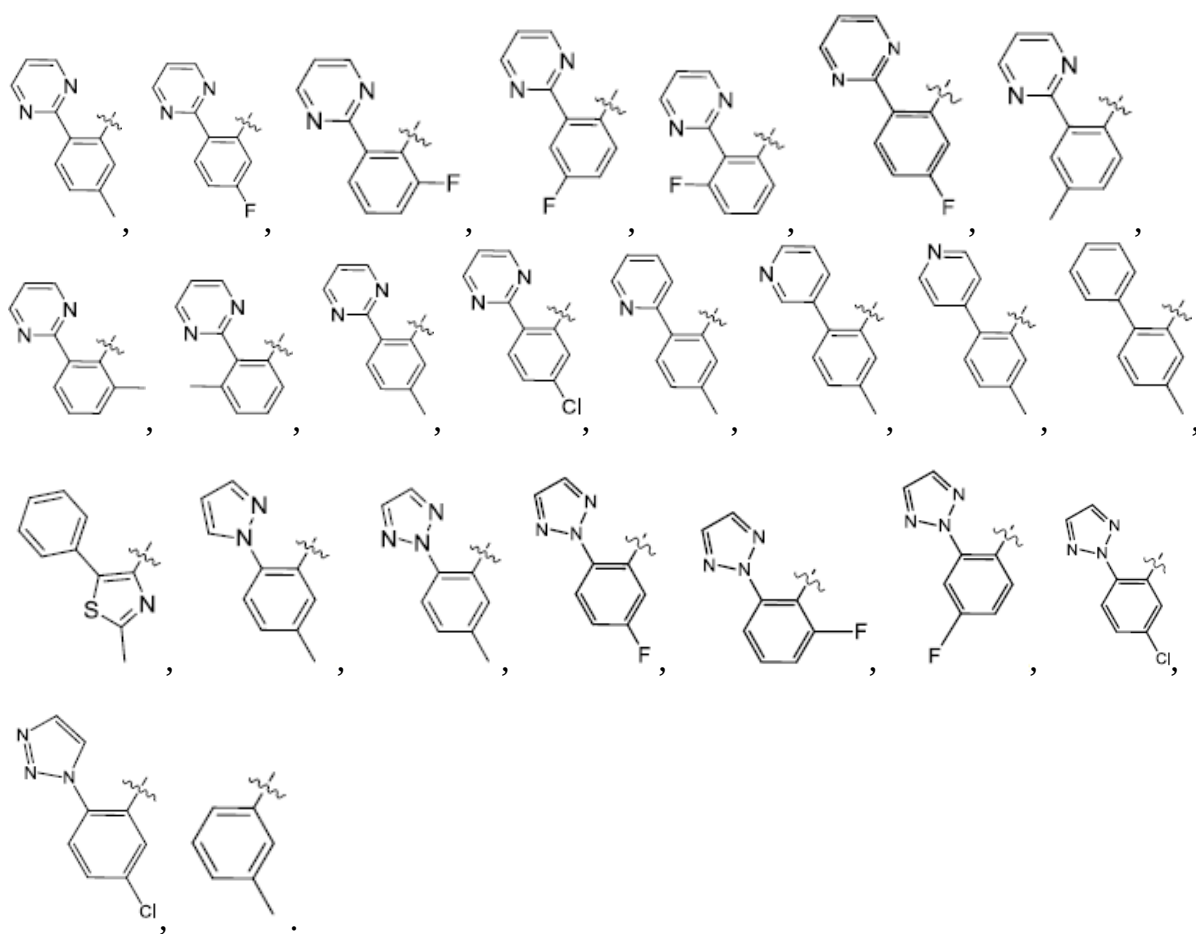


(A₂₂)

wherein R₆ and R₇ are defined as in claim 1; and n_{6a} is selected from 0 or 1.

25

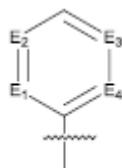
5. The compound of any of claims 1-4 or the pharmaceutically acceptable salt thereof, wherein A is selected from:



5

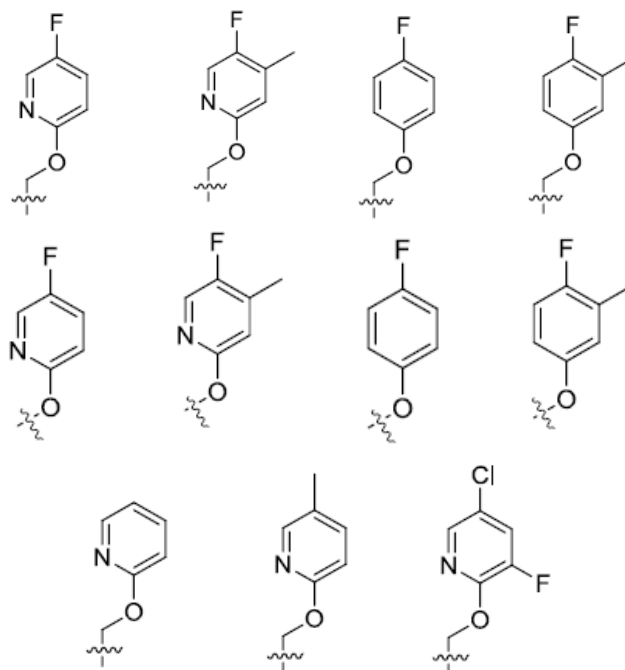
6. The compound of claim 1 or the pharmaceutically acceptable salt thereof, wherein Y is selected from $-\text{CH}_2\text{-O-E}$ or $-\text{O-E}$, wherein E is defined as in claim 1.

7. The compound of claim 1 or the pharmaceutically acceptable salt thereof,



10 wherein the structure unit is defined as phenyl or pyridyl.

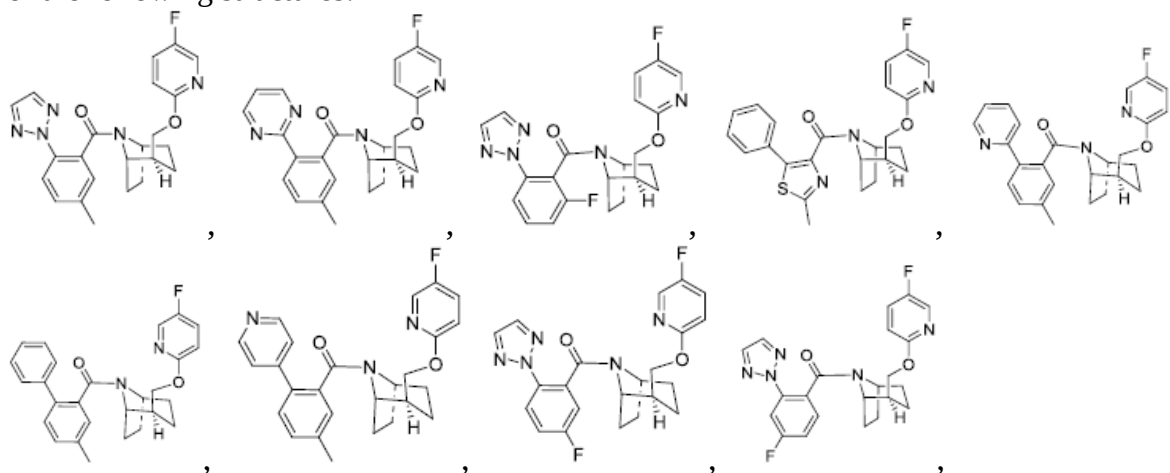
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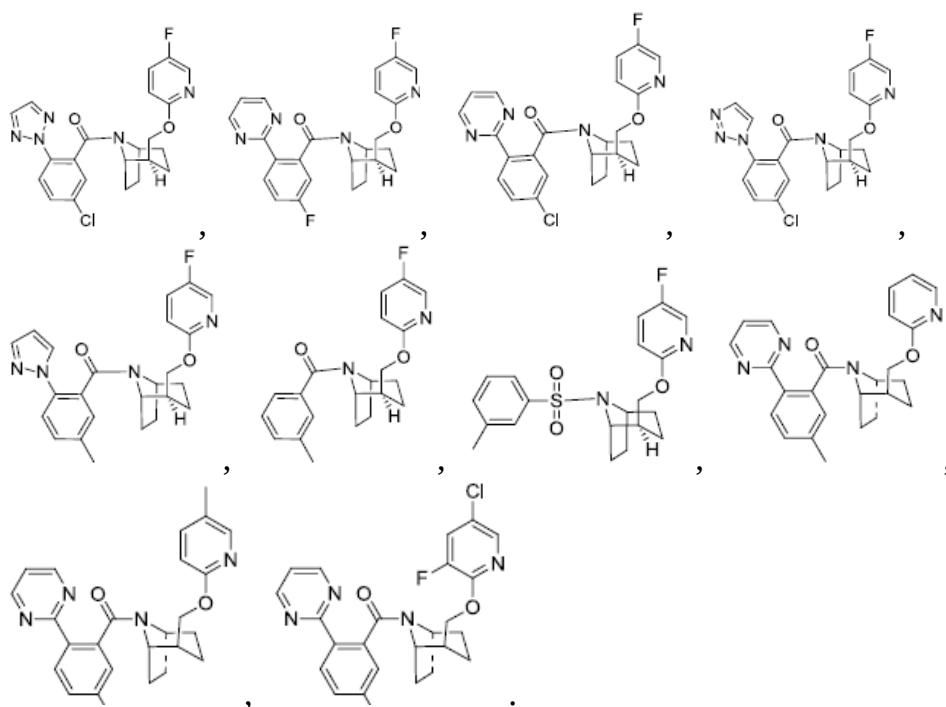


10

and R₃ are independently selected from H, methyl or fluoro.

15





- 5 12. A pharmaceutical composition comprising a therapeutically effective amount of the compound of any of claims 1-11, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
- 10 13. The use of a compound of any of claims 1-11 or a pharmaceutically acceptable salt thereof or a pharmaceutical composition of claim 12 in preparing a medicament for treatment of insomnia, chronic obstructive pulmonary disease, obstructive sleep apnea, hypersomnia, anxiety, obsessive-compulsive disorder, panic attack, nicotine addiction, or binge eating disorder.