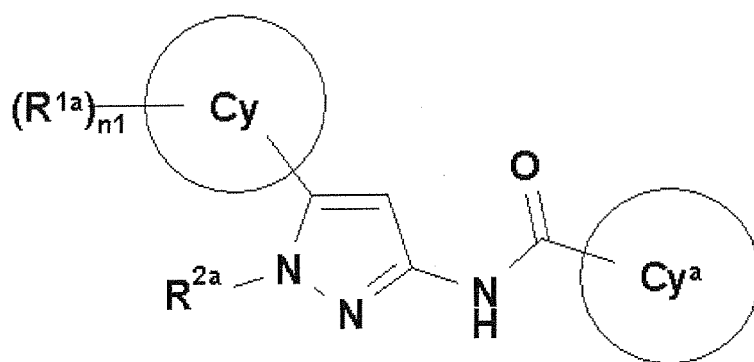


CLAIMS

1. A compound or a pharmaceutically acceptable salt thereof represented by the general formula [Ib]:



[Ib]

5

, wherein

Ring Cy is

(1) C₆₋₁₀ aryl,

(2) C₃₋₈ cycloalkyl or

10 (3) C₃₋₈ cycloalkenyl,

n₁ is 0, 1, 2, 3 or 4,

R^{1a} is

(1) a halogen atom,

(2) hydroxy,

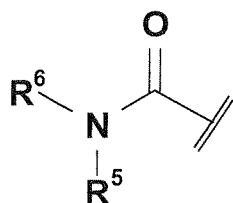
15 (3) carboxy,

(4) a C₁₋₆ alkyl group,

(5) a C₂₋₈ alkenyl group,

(6) a C₂₋₈ alkynyl group,

- (7) a C₁₋₆ alkoxy group,
- (8) a C₃₋₆ cycloalkyl group,
- (9) a halo C₁₋₆ alkyl group,
- (10) a hydroxy C₁₋₆ alkyl group,
- 5 (11) a C₁₋₆ alkoxy C₁₋₆ alkyl group,
- (12) a halo C₁₋₆ alkoxy C₁₋₆ alkyl group,
- (13) a C₁₋₆ alkylsulfonyl C₁₋₆ alkyl group,
- (14) a halo C₁₋₆ alkylsulfonyl C₁₋₆ alkyl group,
- (15) a halo C₁₋₆ alkylamino C₁₋₆ alkyl group,
- 10 (16) a C₃₋₆ cycloalkyl C₂₋₆ alkynyl group,
- (17) a halo C₁₋₆ alkoxy group,
- (18) a carboxy C₁₋₆ alkoxy group,
- (19) a C₁₋₆ alkylsulfanyl group,
- (20) a C₁₋₆ alkylsulfonyl group,
- 15 (21) a halo C₁₋₆ alkylsulfonyl group,
- (22) a C₁₋₈ alkylcarbonyl group,
- (23) a C₁₋₆ alkyloxycarbonyl group,
- (24) a group represented by the Formula:



20 , wherein

R₅ is

(a) a hydrogen atom or

(b) a C₁₋₆ alkyl group, and

R₆ is

(a) a C₁₋₆ alkyl group or

5 (b) a halo C₁₋₆ alkyl group,

(25) a saturated heterocyclo C₁₋₆ alkyl group (the saturated heterocycle is of 4-membered to 6-membered saturated heterocycle having 1 to 2 heteroatoms selected from nitrogen, oxygen, and sulfur) or

(26) a saturated heterocyclo oxy C₁₋₆ alkyl group (the saturated
10 heterocycle is of 4-membered to 6-membered saturated heterocycle having 1 to 2 heteroatoms selected from nitrogen, oxygen, and sulfur),
, provided when n₁ is 2, 3 or 4, R^{1a} each is the same or different,

R^{2a} is

(1) a C₁₋₈ alkyl group,

15 (2) a C₃₋₈ cycloalkyl C₁₋₆ alkyl group,

(3) a C₆₋₁₀ aryl C₁₋₆ alkyl group,

(4) a saturated heterocyclo C₁₋₆ alkyl group (the saturated heterocycle is of 4-membered to 6-membered saturated heterocycle having 1 to 2 heteroatoms selected from nitrogen, oxygen, and sulfur),

20 (5) a C₃₋₈ cycloalkyl group,

(6) a halo C₁₋₆ alkyl group,

(7) a C₁₋₆ alkoxy C₁₋₆ alkyl group,

(8) a halo C₃₋₈ cycloalkyl group,

- (9) a C₆₋₁₀ aryl group (the C₆₋₁₀ aryl group is optionally substituted by 1 to 4 substituents selected from
- (a) a halogen atom,
 - (b) hydroxy,
 - 5 (c) a C₁₋₆ alkyl group,
 - (d) a C₂₋₈ alkenyl group,
 - (e) a C₂₋₆ alkynyl group,
 - (f) a C₁₋₆ alkoxy group,
 - (g) a halo C₁₋₆ alkyl group,
 - 10 (h) a C₁₋₆ alkoxy C₁₋₆ alkyl group,
 - (i) a halo C₁₋₆ alkoxy group,
 - (j) a hydroxy C₁₋₆ alkoxy group,
 - (k) a C₁₋₆ alkoxy C₁₋₆ alkoxy group,
 - (l) a carboxy C₁₋₆ alkoxy group,
 - 15 (m) a C₆₋₁₀ aryl C₁₋₆ alkoxy group,
 - (n) a C₁₋₆ alkylsulfanyl C₁₋₆ alkoxy group,
 - (o) a C₁₋₆ alkylsulfonyl C₁₋₆ alkoxy group,
 - (p) a C₆₋₁₀ aryl C₁₋₆ alkoxy C₁₋₆ alkoxy group,
 - (q) a saturated heterocyclo C₁₋₆ alkoxy group (the saturated
 - 20 heterocycle is of 4-membered to 6-membered saturated heterocycle having 1 to 2 heteroatoms selected from nitrogen, oxygen, and sulfur, and is optionally substituted by 1 to 2 C₁₋₆ alkyl groups),

(r) a saturated heterocyclo oxy group (the saturated heterocycle is a 4-membered to 6-membered saturated heterocycle having 1 to 2 heteroatoms selected from nitrogen, oxygen, and sulfur),

(s) a C₃₋₈ cycloalkyloxy group,

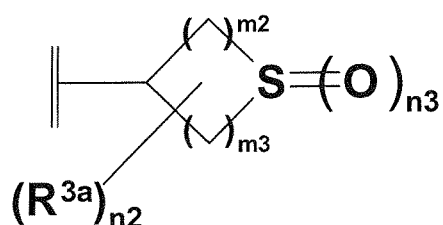
5 (t) a C₁₋₆ alkoxy carbonyloxy group and

(u) a C₁₋₆ alkylsulfonyl group), or

(10) a saturated heterocycle group (the saturated heterocycle is of 4-membered to 6-membered saturated heterocycle having 1 to 2 heteroatoms selected from nitrogen, oxygen, and sulfur, and is optionally substituted by 1 to 4 C₁₋₆ alkyl groups), and

Ring Cy^a is a group selected from

(1) a group represented by the Formula:



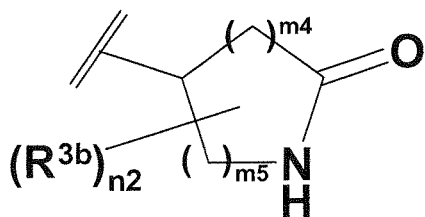
, wherein

15 m_2 is 1, 2 or 3,

m3 is 1, 2 or 3,

n_3 is 1 or 2,

(2) a group represented by the Formula:



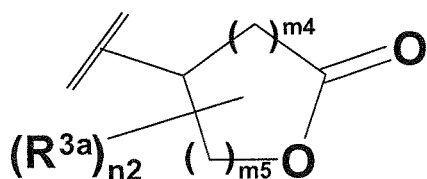
, wherein

m4 is 0, 1, 2 or 3,

m5 is 0, 1 or 2,

5 , provided sum of m4 and m5 is 1 or more,

(3) a group represented by the Formula:



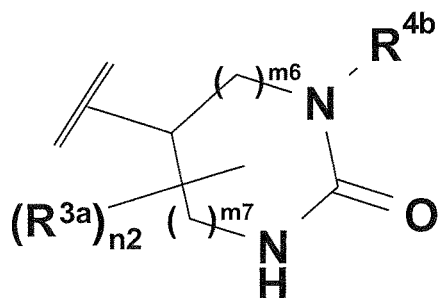
, wherein

10 m4 is 0, 1, 2 or 3,

m5 is 0, 1 or 2,

, provided sum of m4 and m5 is 1 or more,

(4) a group represented by the Formula:



, wherein

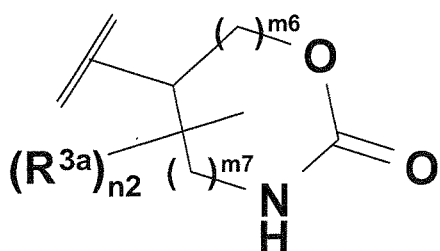
m6 is 0, 1 or 2,

m7 is 0, 1 or 2,

, provided sum of m6 and m7 is 1 or more,

5

(5) a group represented by the Formula:



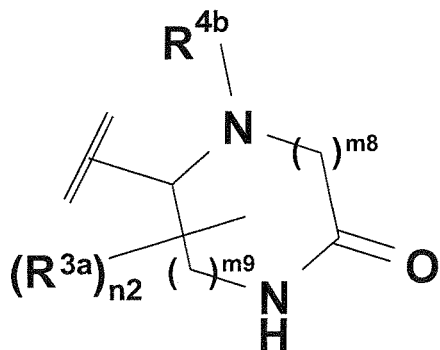
, wherein

m6 is 0, 1 or 2,

10 m7 is 0, 1 or 2,

, provided sum of m6 and m7 is 1 or more,

(6) a group represented by the Formula:

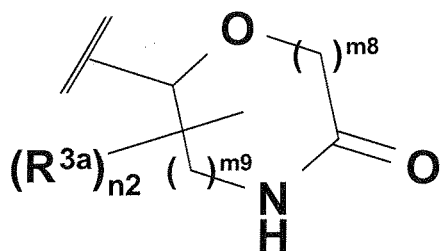


15 , wherein

m8 is 1 or 2,

m9 is 1 or 2, and

(7) a group represented by the Formula:



5 , wherein

m8 is 1 or 2,

m9 is 1 or 2,

n2 is 0, 1, 2, 3 or 4,

10 R^{3a} is

(1) hydroxy,

(2) a C₁₋₆ alkyl group or

(3) a hydroxy C₁₋₆ alkyl group,

, provided when n2 is 2, 3 or 4, R^{3a} each is the same or different,

15

R^{3b} is

(1) hydroxy,

(2) a C₁₋₆ alkyl group (which optionally form a C₃₋₆ cycloalkyl group

together with the carbon to which it is attached and the carbon adjacent

20 thereto) or

(3) a hydroxy C₁₋₆ alkyl group, or

(4) when two R^{3b} are attached to the same carbon, they optionally form a C₃₋₆ cycloalkyl group together with the carbon to which they are attached, provided, when n₂ is 2, 3 or 4, each R^{3b} is the same or different, and

5

R^{4b} is

(1) a hydrogen atom,

(2) a C₁₋₆ alkyl group,

(3) a carboxy C₁₋₆ alkyl group,

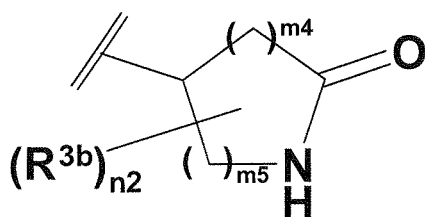
10 (4) a halo C₁₋₆ alkyl group or

(5) a C₁₋₆ alkoxy C₁₋₆ alkyl group.

2. The compound or a pharmaceutically acceptable salt thereof according to claim 1, wherein

15 Ring Cy^a is selected from

(1) a group represented by the Formula:



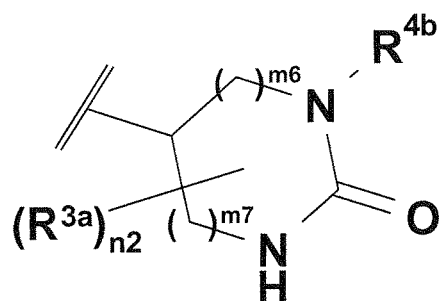
, wherein

m₄ is 0, 1, 2 or 3,

20 m₅ is 0, 1 or 2,

, provided sum of m₄ and m₅ is 1 or more,

(2) a group represented by the Formula:



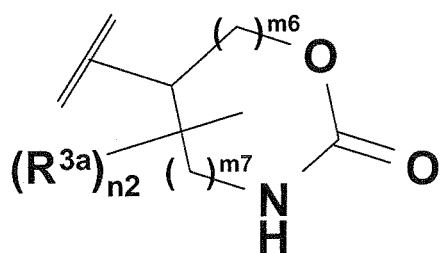
, wherein

5 $m6$ is 0, 1 or 2,

$m7$ is 0, 1 or 2,

, provided sum of $m6$ and $m7$ is 1 or more,

(3) a group represented by the Formula:



10

, wherein

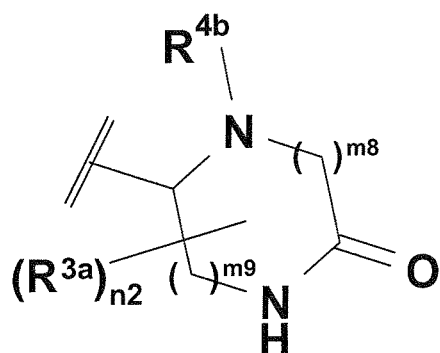
$m6$ is 0, 1 or 2,

$m7$ is 0, 1 or 2,

, provided sum of $m6$ and $m7$ is 1 or more,

15

(4) a group represented by the Formula:



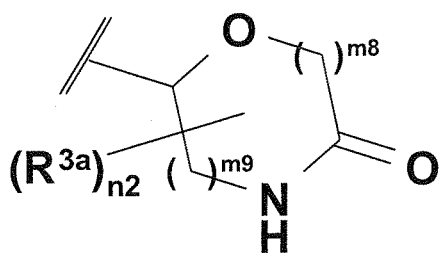
, wherein

m8 is 1 or 2,

m9 is 1 or 2, and

5

(5) a group represented by the Formula:



, wherein

m8 is 1 or 2,

10 m9 is 1 or 2,

n2 is 0, 1, 2, 3 or 4,

R^{3a} is

(1) hydroxy,

15 (2) a C₁₋₆ alkyl group or

(3) a hydroxy C₁₋₆ alkyl group,

, provided when n_2 is 2, 3 or 4, each R^{3a} is the same or different,

R^{3b} is

- (1) hydroxy,
- 5 (2) a C_{1-6} alkyl group (which optionally form a C_{3-6} cycloalkyl group together with the carbon to which it is attached and the carbon adjacent thereto) or
- (3) a hydroxy C_{1-6} alkyl group, or
- (4) when two R^{3b} are attached to the same carbon, they optionally form a
- 10 C_{3-6} cycloalkyl group together with the carbon to which they are attached, provided, when n_2 is 2, 3 or 4, each R^{3b} is the same or different, and

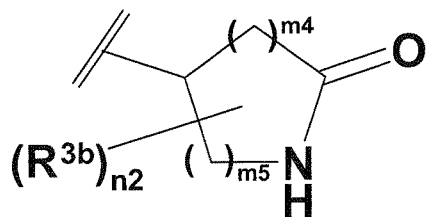
R^{4b} is

- (1) a hydrogen atom,
- 15 (2) a C_{1-6} alkyl group,
- (3) a carboxy C_{1-6} alkyl group,
- (4) a halo C_{1-6} alkyl group or
- (5) a C_{1-6} alkoxy C_{1-6} alkyl group.

- 20 3. The compound or a pharmaceutically acceptable salt thereof according to claim 1, wherein

Ring Cy^a is selected from

- (1) a group represented by the Formula:



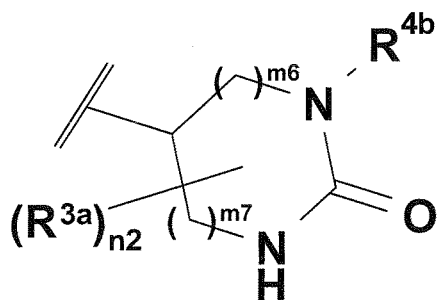
, wherein,

m4 is 0, 1, 2 or 3,

m5 is 0, 1 or 2,

5 , provided sum of m4 and m5 is 1 or more, and

(2) a group represented by the Formula:



, wherein

10 m6 is 0, 1 or 2,

m7 is 0, 1 or 2,

, provided sum of m6 and m7 is 1 or more,

n2 is 0, 1, 2, 3 or 4,

15 R^{3a} is

(1) hydroxy,

(2) a C₁₋₆ alkyl group or

(3) a hydroxy C₁₋₆ alkyl group,

, provided, when n₂ is 2, 3 or 4, each R^{3a} is the same or different,

R^{3b} is

5 (1) hydroxy,

(2) a C₁₋₆ alkyl group (which optionally form a C₃₋₆ cycloalkyl group together with the carbon to which it is attached and the carbon adjacent thereto) or

(3) a hydroxy C₁₋₆ alkyl group, or

10 (4) when two R^{3b} are attached to the same carbon, they optionally form a C₃₋₆ cycloalkyl group together with the carbon to which they are attached, provided, when n₂ is 2, 3 or 4, each R^{3b} is the same or different, and

R^{4b} is

15 (1) a hydrogen atom,

(2) a C₁₋₆ alkyl group,

(3) a carboxy C₁₋₆ alkyl group,

(4) a halo C₁₋₆ alkyl group or

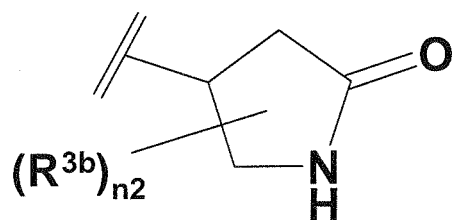
(5) a C₁₋₆ alkoxy C₁₋₆ alkyl group.

20

4. The compound or a pharmaceutically acceptable salt thereof according to claim 1, wherein

Ring Cy^a is selected from

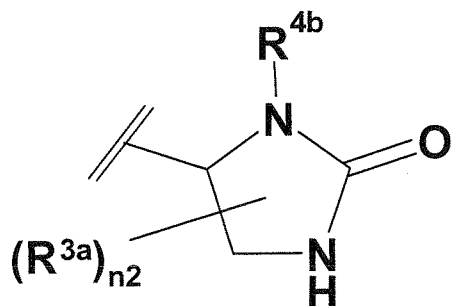
(1) a group represented by the Formula:



, wherein

n_2 is 0, 1, 2, 3 or 4, and

5 (2) a group represented by the Formula:



, wherein

n_2 is 0 or 1,

10 R^{3a} is

(1) hydroxy,

(2) a C_{1-6} alkyl group or

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

15 R^{3b} is

(1) hydroxy,

(2) a C₁₋₆ alkyl group (which optionally form a C₃₋₆ cycloalkyl group together with the carbon to which it is attached and the carbon adjacent thereto) or

(3) a hydroxy C₁₋₆ alkyl group, or

- 5 (4) when two R^{3b} are attached to the same carbon, they optionally form a C₃₋₆ cycloalkyl group together with the carbon to which they are attached, provided, when n₂ is 2, 3 or 4, each R^{3b} is the same or different, and

R^{4b} is

- 10 (1) a hydrogen atom,
(2) a C₁₋₆ alkyl group,
(3) a carboxy C₁₋₆ alkyl group,
(4) a halo C₁₋₆ alkyl group or
(5) a C₁₋₆ alkoxy C₁₋₆ alkyl group.

15

5. The compound or a pharmaceutically acceptable salt thereof according to any one of claims 1 to 4, wherein the ring Cy is C₆₋₁₀ aryl.

6. The compound or a pharmaceutically acceptable salt thereof according
20 to claim 5, wherein the ring Cy is phenyl.

7. The compound or a pharmaceutically acceptable salt thereof according to any one of claims 1 to 6 wherein R^{1a} is

(1) a halogen atom,

- (2) a C₁₋₆ alkyl group,
 - (3) a C₁₋₆ alkoxy group,
 - (4) a halo C₁₋₆ alkyl group,
 - (5) a C₁₋₆ alkoxy C₁₋₆ alkyl group,
 - 5 (6) a halo C₁₋₆ alkoxy C₁₋₆ alkyl group or
 - (7) a halo C₁₋₆ alkoxy group,
- , provided when n₁ is 2, 3, or 4, R^{1a} each is the same or different.

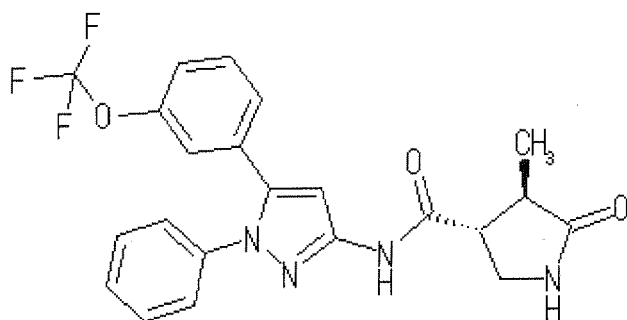
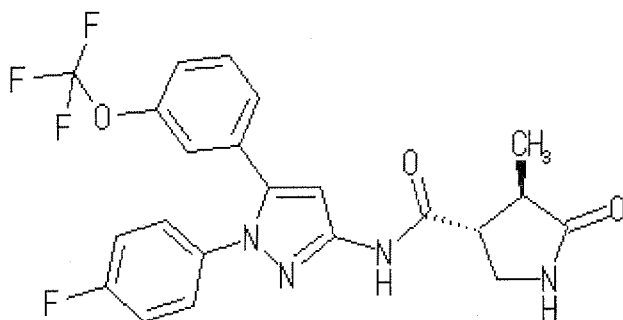
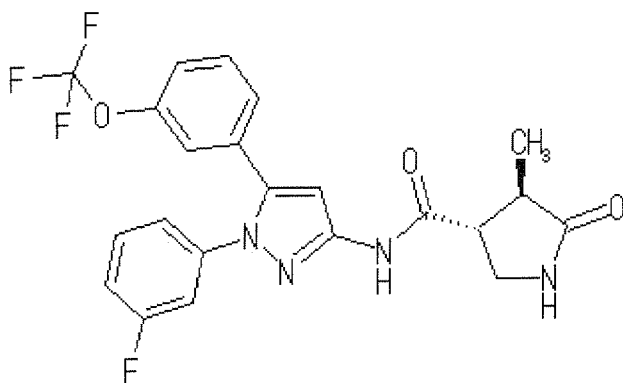
8. The compound or a pharmaceutically acceptable salt thereof according
- 10 to any one of claims 1 to 7
- , wherein R^{2a} is a C₆₋₁₀ aryl group (the C₆₋₁₀ aryl group is optionally substituted by 1 to 4 substituents selected from
- (a) a halogen atom,
 - (b) a C₁₋₆ alkyl group,
 - 15 (c) a C₁₋₆ alkoxy group and
 - (d) a carboxy C₁₋₆ alkoxy group).

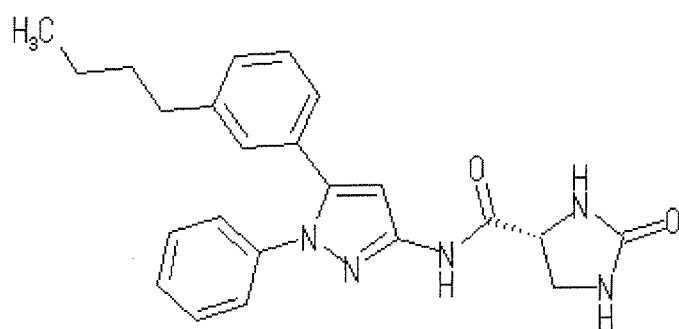
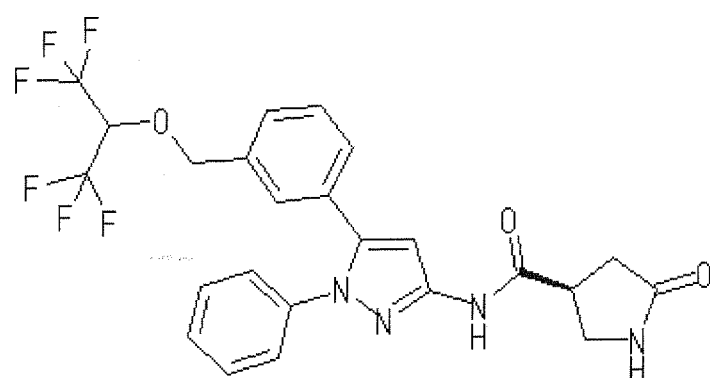
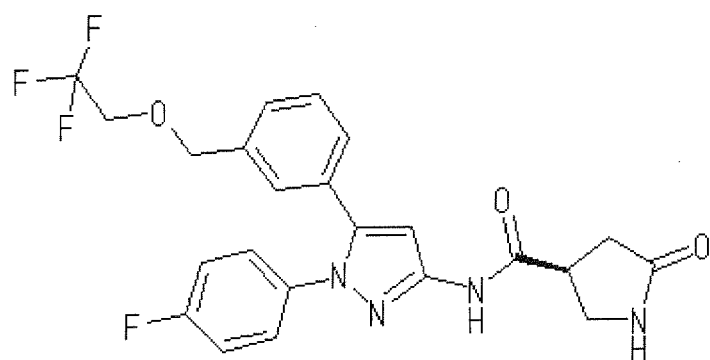
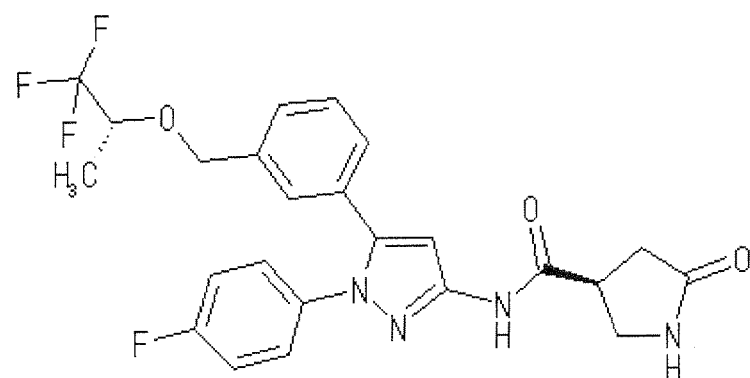
9. The compound or a pharmaceutically acceptable salt thereof according
- to claim 8
- 20 , wherein R^{2a} is a phenyl group (the phenyl group is optionally substituted by 1 to 4 substituents selected from
- (a) a halogen atom,
 - (b) a C₁₋₆ alkyl group,
 - (c) a C₁₋₆ alkoxy group and

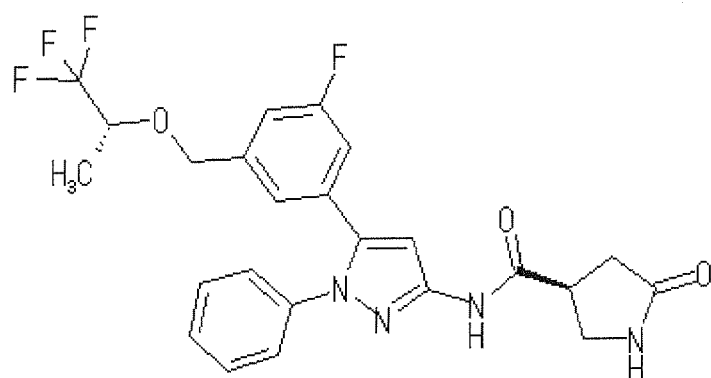
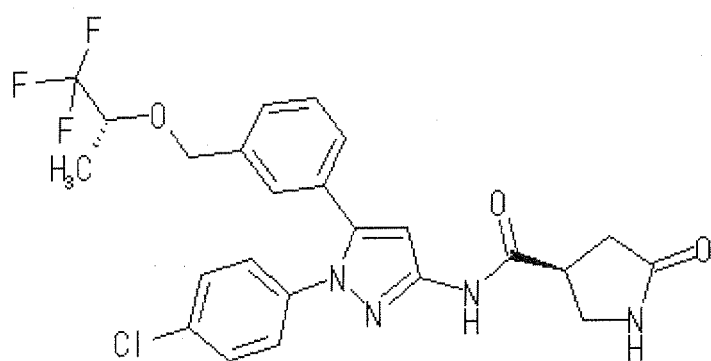
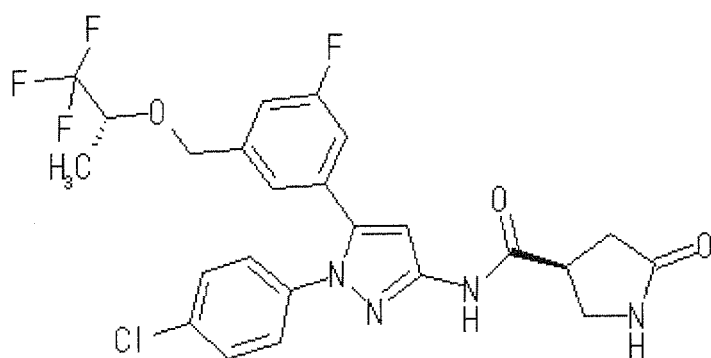
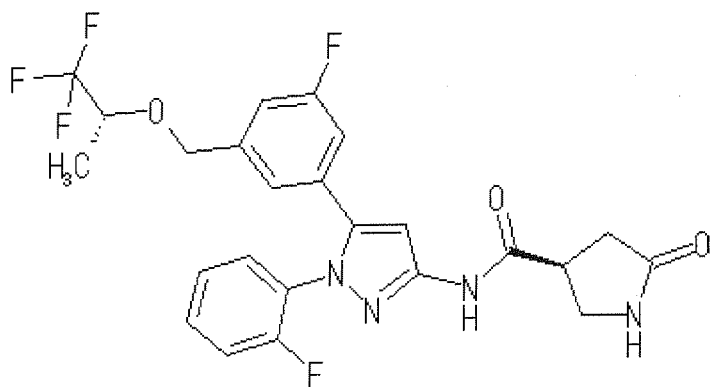
(d) a carboxy C₁₋₆ alkoxy group).

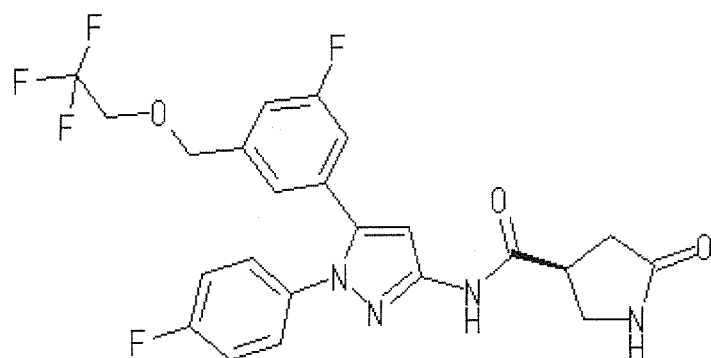
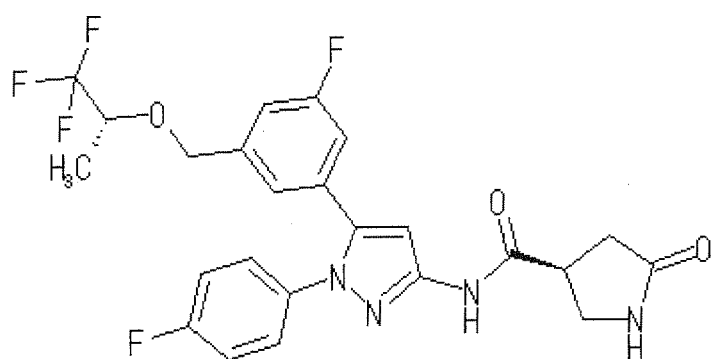
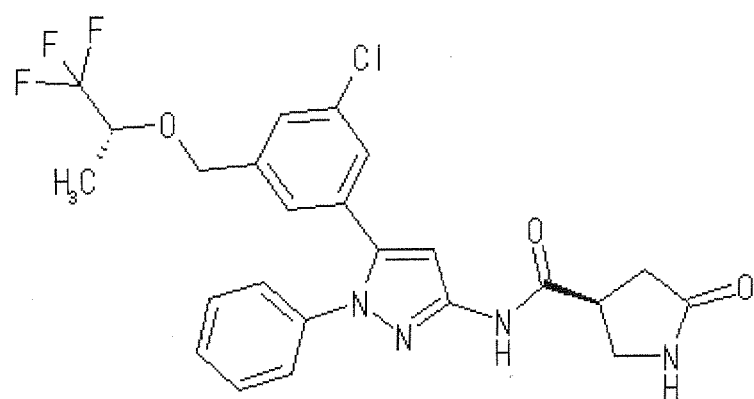
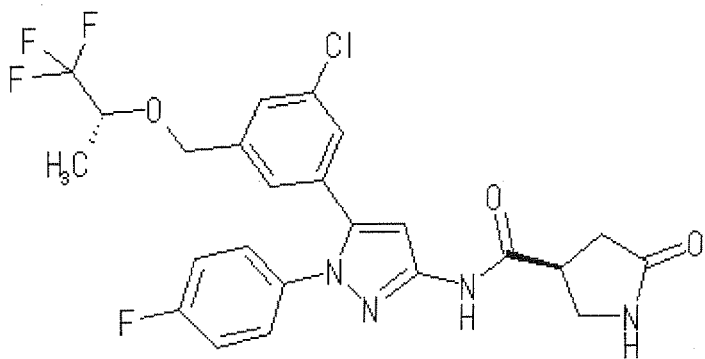
10. The compound or pharmaceutically acceptable salt thereof of claim 1, wherein the compound is selected from the following Formulae:

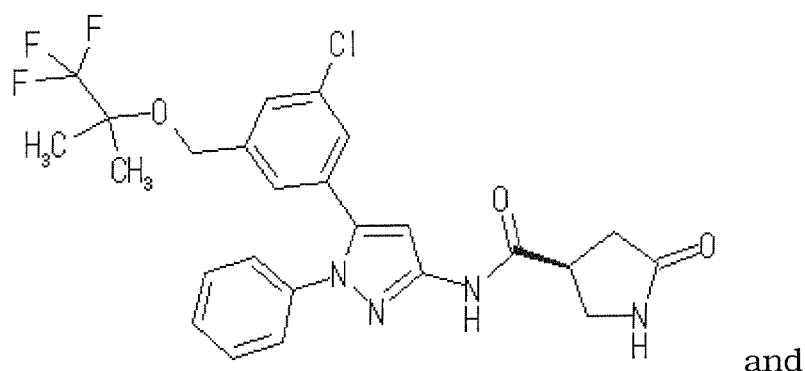
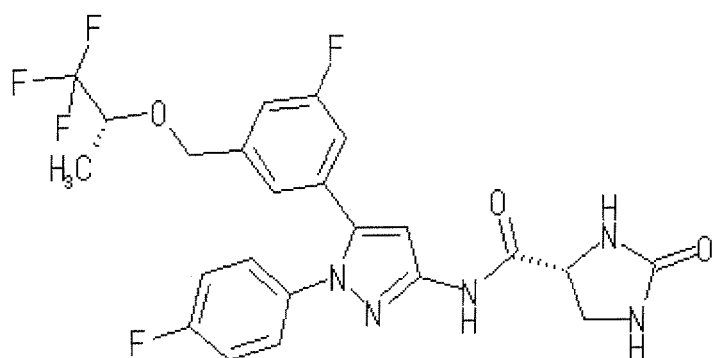
5





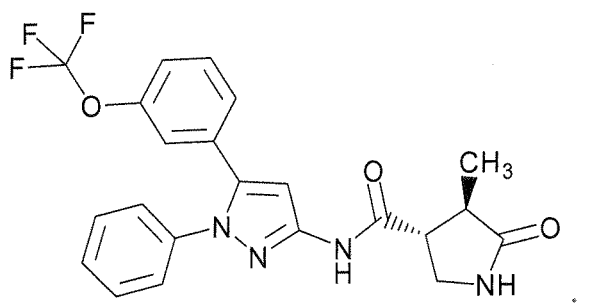




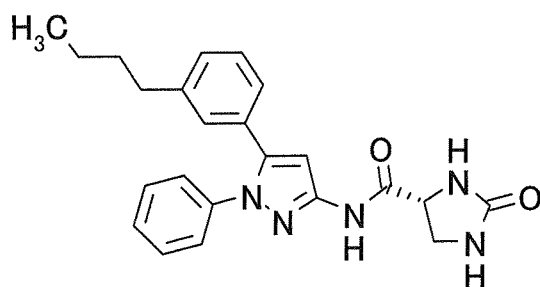


5

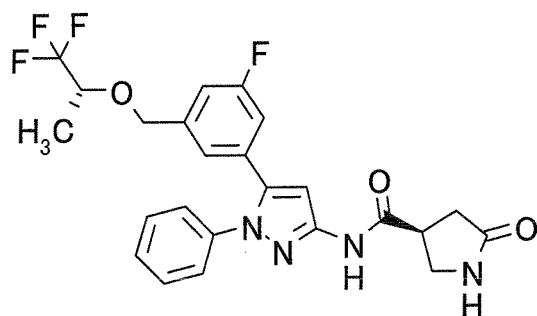
11. The compound or a pharmaceutically acceptable salt thereof of claim 1 represented by the following formula:



12. The compound or a pharmaceutically acceptable salt thereof of claim 1 represented by the following formula:

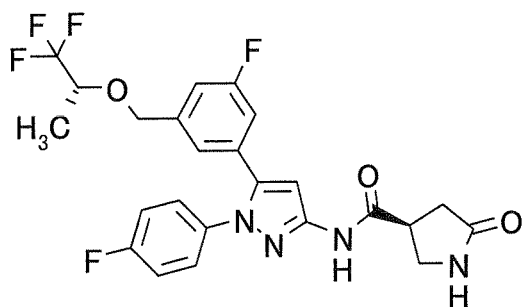


13. The compound or a pharmaceutically acceptable salt thereof of claim 1 represented by the following formula:



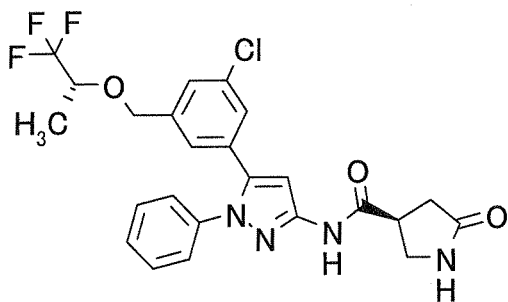
5

14. The compound or a pharmaceutically acceptable salt thereof of claim 1 represented by the following formula:

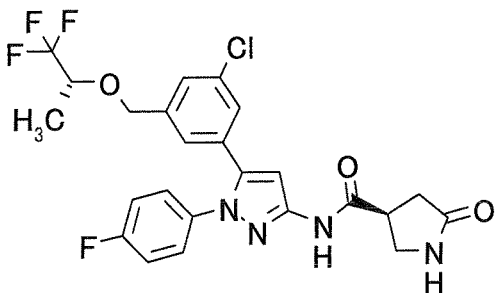


10

15. The compound or a pharmaceutically acceptable salt thereof of claim 1 represented by the following formula:

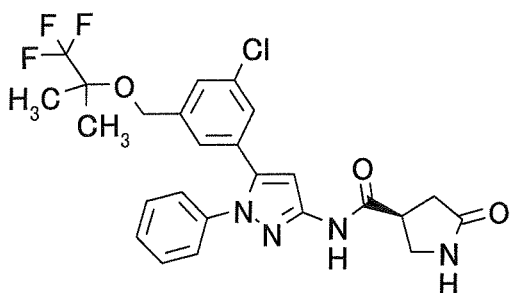


16. The compound or a pharmaceutically acceptable salt thereof of claim 1 represented by the following formula:



5

17. The compound or a pharmaceutically acceptable salt thereof of claim 1 represented by the following formula:



10

~~11~~18. A pharmaceutical composition which comprises a compound or a pharmaceutically acceptable salt thereof according to any one of claims 1 to ~~10~~17 and a pharmaceutically acceptable carrier.

5 ~~12~~19. A SGLT1 inhibitor which comprises a compound or a pharmaceutically acceptable salt thereof according to any one of claims 1 to ~~10~~17.

10 ~~13~~20. An agent for treating or preventing diabetes which comprises a compound or a pharmaceutically acceptable salt thereof according to any one of claims 1 to ~~10~~17.

~~14~~21. The agent for treating or preventing diabetes according to claim ~~13~~20, wherein diabetes is type II diabetes mellitus.

15 ~~15. A method for inhibiting SGLT1 which comprises administering to mammals a therapeutically effective amount of a compound or a pharmaceutically acceptable salt thereof according to any one of claims 1 to 10.~~

20 ~~16. A method for treating or preventing diabetes which comprises administering to mammals a therapeutically effective amount of a compound or a pharmaceutically acceptable salt thereof according to any one of claims 1 to 10.~~

~~17. The method according to claim 16, wherein the diabetes is type II diabetes mellitus.~~

5 ~~1822.~~ Use of a compound or a pharmaceutically acceptable salt thereof according to any one of claims 1 to ~~10-17~~ for manufacturing a SGLT1 inhibitor.

10 ~~1923.~~ Use of a compound or a pharmaceutically acceptable salt thereof according to any one of claims 1 to ~~10-17~~ for manufacturing an agent for treating or preventing diabetes.

~~2024.~~ The use according to claim ~~19-23~~ wherein the diabetes is type II diabetes mellitus.