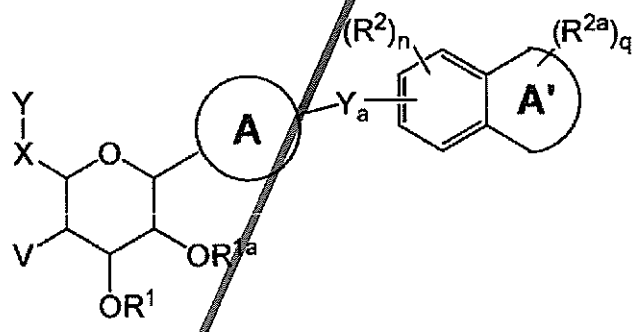
We Claim:

1. A compound represented by Formula (I):



(I)

wherein:

Ring A is an C_{6-10}aryl which is optionally substituted with one or more substituents independently selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{1-6}alkoxy, haloC_{1-6}alkoxy, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, haloC_{1-6}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, $-S(O)_pR^3$, $-S(O)_2NR^4R^5$, $-OS(O)_2R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein the alkyl, alkenyl, alkynyl, cycloalkyl, aryl, heterocyclyl and heteroaryl groups may be optionally substituted with one or more substituents selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, $-S(O)_pR^3$, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$ and C_{1-6}alkoxy;

Ring A' is a 5-, 6- or 7-membered heterocycle, provided that Ring A' is not 1,3-dioxole;

Y_a is a bond or a (C_1-C_6)alkylene which is optionally substituted with one or more substituents independently selected from halo, hydroxy, C_{1-4}alkyl, C_{1-4}alkoxy, haloC_{1-4}alkyl;

V is hydrogen, halo or $-OR^{1b}$;

n is 0, 1, 2, or 3;

q is 0, 1, 2, or 3;

R^1, R^{1a}, R^{1b} and R^{1c} are independently selected from hydrogen, C_{1-6}alkyl, C_{6-10}aryl-C_{1-4}alkyl, -C(O)C_{6-10}aryl and -C(O)C_{1-6}alkyl;

R^2, for each occurrence, is independently selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, -C(O)OR^3, -C(O)R^3, -C(O)NR^4R^5,-NR^4R^5, -$CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, -$S(O)_pR^3$, -$S(O)_2NR^4R^5$, -$OS(O)_2R^3$, -$CH_2C(O)OR^3$, -$CH_2C(O)NR^4R^5$, -$NR^3C(O)NR^4R^5$, -$NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein when any portion of R^2 is an alkyl, cycloalkyl, aryl, heterocyclyl or heteroaryl, for each occurrence, it may be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy;

R^{2a}, for each occurrence, is independently selected from the group consisting of oxo, halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, -C(O)OR^3, -C(O)R^3, -C(O)NR^4R^5,-NR^4R^5, -$CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, -$S(O)_pR^3$, -$S(O)_2NR^4R^5$, -$OS(O)_2R^3$, -$CH_2C(O)OR^3$, -$CH_2C(O)NR^4R^5$, -$NR^3C(O)NR^4R^5$, -$NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein when any portion of R^{2a} is an alkyl, cycloalkyl, aryl, heterocyclyl or heteroaryl, for each occurrence, it may be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, cyano, nitro, C_{1-6}alkyl, -$S(O)_pR^3$, -C(O)OR^3, -C(O)R^3, -C(O)NR^4R^5,-NR^4R^5, -$CH_2NR^4R^5$ and C_{1-6}alkoxy; or

two R^{2a} on adjacent atoms taken together with the atoms to which they are attached may form a fused C_{3-7}cycloalkyl, C_6aryl, 3- to 7-membered heterocyclyl, or 5- or 6-membered heteroaryl, wherein the fused cycloalkyl, aryl, heterocyclyl, and heteroaryl may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on the same carbon atom taken together may form a spiro 3- to 7-membered heterocyclyl or a spiro C_{3-7}cycloalkyl which may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; and

R^3, for each occurrence, is independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{1-10}heteroaryl, and C_{2-10}heterocyclyl;

X is $[C(R^6)(R^7)]_t$;

Y is H, halo, C_{1-4} alkyl, OR^{1c} or NR^4R^5;

t is 1, 2, or 3;

R^6 and R^7, for each occurrence, are independently selected from hydrogen, C_{1-6} alkyl, OR^{1e}, and NR^4R^5;

or when t is 1, R^6 and R^7 together may form an oxo group,

or when R^6 and R^7 are on the same carbon they can be taken together to form a C_{3-7}cycloalkyl or a 3- to 7-membered heterocycle;

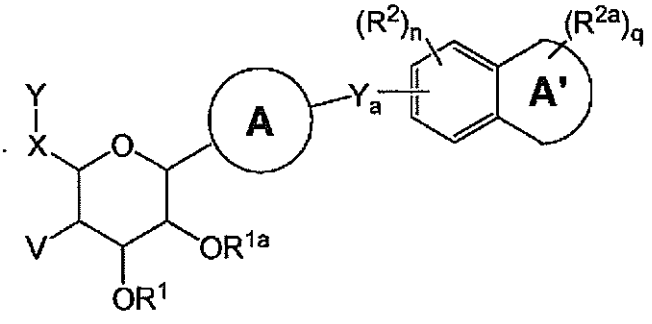
R^{1e}, for each occurrence, is independently selected from hydrogen, C_{1-6} alkyl, C_{6-10}aryl-C_{1-4}alkyl, -C(O)C_{6-10}aryl and -C(O)C_{1-6}alkyl;

R^4 and R^5, for each occurrence, are independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkylC_{1-4}alkyl, C_{6-10}arylC_{1-4}alkyl, C_{6-10}aryl, C_{1-10}heteroaryl, C_{1-10}heteroarylC_{1-4}alkyl, C_{2-10}heterocyclyl, and C_{2-10}heterocyclylC_{1-4}alkyl; or

R^4 and R^5 taken together along with the nitrogen to which they are bound may form a monocyclic or a bicyclic heteroaryl or heterocyclyl which may be optionally substituted with one or more halo or C_{1-4}alkyl; or

a pharmaceutically acceptable salt thereof.

2. The compound of Claim 1 represented by Formula (I):



(I)

Ring A is an C_{6-10}aryl which is optionally substituted with one or more substituents independently selected from the group consisting of halo, hydroxy, cyano, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{1-6}alkoxy, haloC_{1-6}alkoxy, a 5-membered heteroaryl and a 6-membered heteroaryl;

Ring A' is a 5- or 6-membered heterocycle, provided that Ring A' is not 1,3-dioxole;

Y_a is a bond or a (C_1-C_6)alkylene which is optionally substituted with one or more substituents independently selected from halo, C_{1-4}alkyl, haloC_{1-4}alkyl;

V is hydrogen, halo or $-OR^{1b}$;

n is 0, 1, 2, or 3;

q is 0, 1, 2, or 3;

R^1, R^{1a}, R^{1b} and R^{1c} are independently selected from hydrogen, C_{1-6}alkyl, C_{6-10}aryl-C_{1-4}alkyl, -C(O)C_{6-10}aryl and -C(O)C_{1-6}alkyl;

R^2, for each occurrence, is independently selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, $-S(O)_pR^3$, $-S(O)_2NR^4R^5$, $-OS(O)_2R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein R^2 may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy;

R^{2a}, for each occurrence, is independently selected from the group consisting of oxo, halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, $-S(O)_pR^3$, $-S(O)_2NR^4R^5$, $-OS(O)_2R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein R^{2a} may, for each occurrence, be optionally substituted with

one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on adjacent atoms taken together with the atoms to which they are attached may form a fused C_{3-7}cycloalkyl, C_6aryl, 3- to 7-membered heterocyclyl, or 5- or 6-membered heteroaryl, wherein the fused cycloalkyl, aryl, heterocyclyl, and heteroaryl may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on the same carbon atom taken together may form a spiro 3- to 7-membered heterocyclyl or a spiro C_{3-7}cycloalkyl which may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; and

R^3, for each occurrence, is independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{1-10}heteroaryl, and C_{2-10}heterocyclyl;

X is $[C(R^6)(R^7)]_t$;

Y is H, halo, C_{1-4} alkyl, OR^{1c} or NR^4R^5;

t is 1, 2, or 3;

R^6 and R^7, for each occurrence, are independently selected from hydrogen, C_{1-6} alkyl, OR^{1e}, and NR^4R^5;

or when t is 1, R^6 and R^7 together may form an oxo group,

or when R^6 and R^7 are on the same carbon they can be taken together to form a C_{3-7}cycloalkyl or a 3- to 7-membered heterocycle;

R^{1e}, for each occurrence, is independently selected from hydrogen, C_{1-6} alkyl, C_{6-10}arylC_{1-4}alkyl, -C(O)C_{6-10}aryl and -C(O)C_{1-6}alkyl;

R^4 and R^5, for each occurrence, are independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkylC_{1-4}alkyl, C_{6-10}arylC_{1-4}alkyl, C_{6-10}aryl, C_{1-10}heteroaryl, C_{1-10}heteroarylC_{1-4}alkyl, C_{2-10}heterocyclyl, and C_{2-10}heterocyclylC_{1-4}alkyl; or

R^4 and R^5 taken together along with the nitrogen to which they are bound may form a monocyclic or a bicyclic heteroaryl or heterocyclyl which may be optionally substituted with one or more halo or C_{1-4}alkyl; or

a pharmaceutically acceptable salt thereof.

3. The compound of claim 1 or Claim 2, or a pharmaceutically acceptable salt thereof, wherein V is OH.

4. The compound of any one of the preceding claims , or a pharmaceutically acceptable salt thereof, wherein R^1 is H.

5. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein R^{1a} is H.

6. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein t is 1.

7. The compound of claim 6, or a pharmaceutically acceptable salt thereof, wherein X is CH_2.

8. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein Y is H or OH.

9. The compound of claim 8, or a pharmaceutically acceptable salt thereof, wherein Y is OH.

10. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein Ring A is substituted with one or more substituents independently selected from the group consisting of halo, hydroxy, C_{1-3}alkyl, C_{3-7}cycloalkyl, C_{1-3}alkoxy, haloC_{1-3}alkoxy and 5-membered heteroaryl.

11. The compound of claim 10, or a pharmaceutically acceptable salt thereof, wherein Ring A is substituted with one or more substituents independently selected from the group consisting of chloro, fluoro, hydroxy, methyl, methoxy, ethoxy, trifluoromethoxy and N-pyrazolyl.

12. The compound of claim 10, or a pharmaceutically acceptable salt thereof, wherein Ring A is substituted with one or more substituents independently selected from the group consisting of chloro, ethyl, isopropyl, and cyclopropyl..

13. The compound of claim 12, or a pharmaceutically acceptable salt thereof, wherein Ring A is substituted with one or more chloro substituents.

14. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein Ring A is naphthyl which is optionally substituted as in anyone of the preceding claims.

15. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein Ring A is phenyl which is optionally substituted as in anyone of the preceding claims.

16. The compound of claim 15, or a pharmaceutically acceptable salt thereof, wherein Y_a is situated *meta* to the tetrahydropyran ring.

17. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein Ring A has one substituent.

18. The compound of claim 17, or a pharmaceutically acceptable salt thereof, wherein Ring A is phenyl, Y_a is situated *meta* to the tetrahydropyran ring and the one substituent is situated *para* to the tetrahydropyran ring.

19. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein Y_a is a bond or a C_{1-3}alkylene.

20. The compound of claim 19, or a pharmaceutically acceptable salt thereof, wherein Y_a is CH_2.

21. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein R^2, for each occurrence, is independently selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7}cycloalkoxy, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy.

22. The compound of claim 21, or a pharmaceutically acceptable salt thereof, wherein R^2 is halo and n is 1.

23. The compound of any one of claims 1 to 21, or a pharmaceutically acceptable salt thereof, wherein n is 0.

24. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein Ring A' contains at least one O or N heteroatom.

25. The compound of claim 24, or a pharmaceutically acceptable salt thereof, wherein Ring A' is selected from the group consisting of a morpholine ring, a piperidine

ring, a pyrrolidine ring, a tetrahydropyran ring, a tetrahydrofuran ring and a 1,4-dioxane ring.

26. The compound of claim 24, or a pharmaceutically acceptable salt thereof, wherein Ring A' is selected from the group consisting of a morpholine ring, a piperidine ring, and a 1,4-dioxane ring.

27. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein R^{2a}, for each occurrence, is independently selected from the group consisting of oxo, hydroxy, C_{1-6}alkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$ and $CH_2C(O)OR^3$; wherein R^{2a} may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on adjacent atoms taken together with the atoms to which they are attached may form a fused C_{3-7}cycloalkyl, C_6aryl, 3- to 7-membered heterocyclyl, or 5-membered heteroaryl, wherein the fused cycloalkyl, aryl, heterocyclyl, and heteroaryl may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on the same carbon atom taken together may form a spiro 3- to 7-membered heterocyclyl or a spiro C_{3-7}cycloalkyl which may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy.

28. The compound of claim 27, or a pharmaceutically acceptable salt thereof, wherein R^{2a}, for each occurrence, is independently selected from the group consisting of hydroxy, C_{1-6}alkyl, C_{3-7}cycloalkylC_{1-4}alkyl; wherein R^{2a} may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

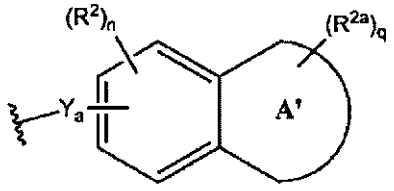
two R^{2a} on the same carbon atom taken together may form a spiro C_{3-7}cycloalkyl which may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy.

29. The compound of claim 28, or a pharmaceutically acceptable salt thereof, wherein R^{2a}, for each occurrence, is independently selected from the group consisting of unsubstituted hydroxy and unsubstituted C_{1-2}alkyl.

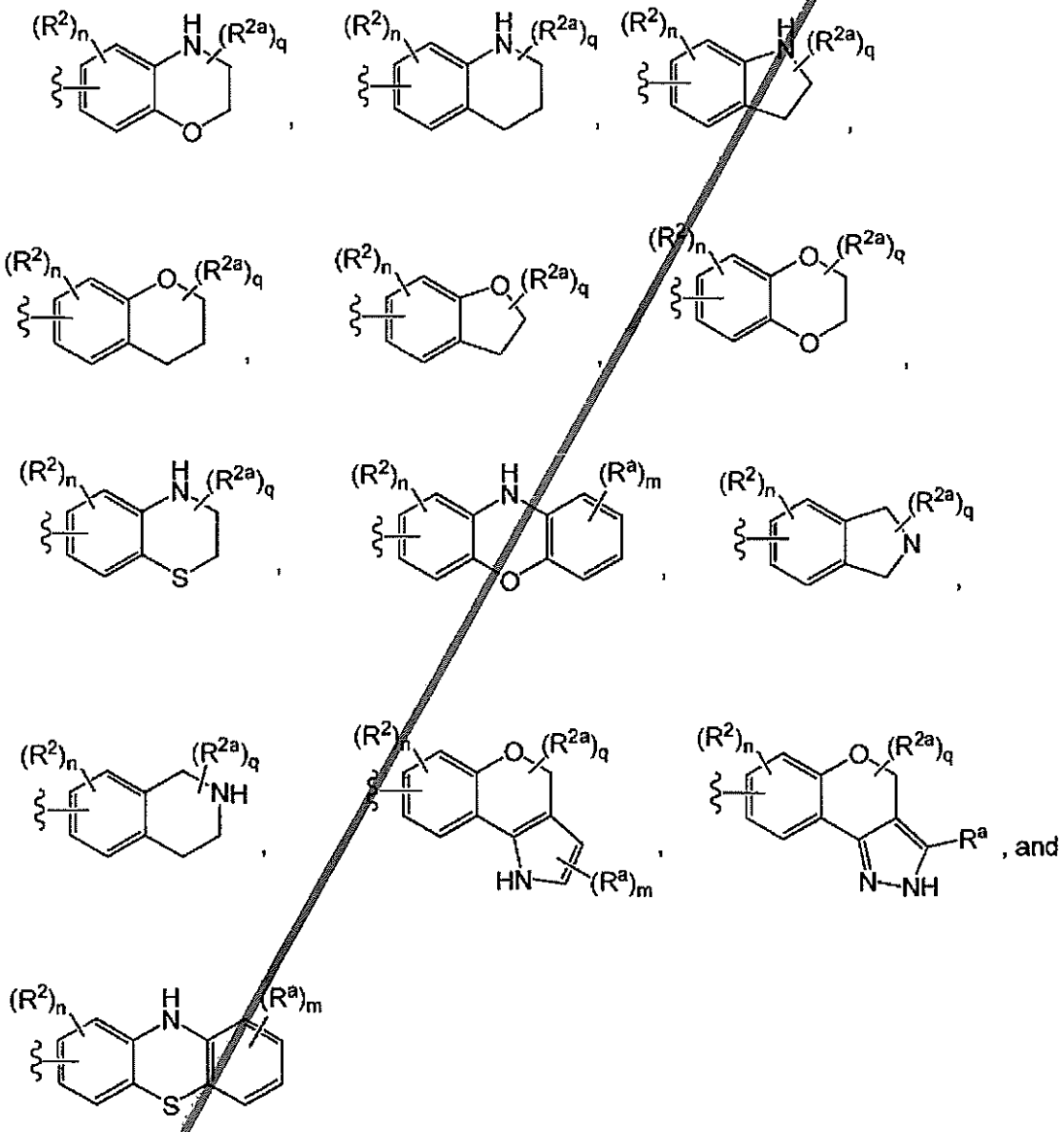
30. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, wherein q is 0 or 1.

31. The compound of claim 30, or a pharmaceutically acceptable salt thereof, wherein q is 0.

32. The compound of any one of the previous claims, or a pharmaceutically acceptable salt thereof, wherein the moiety

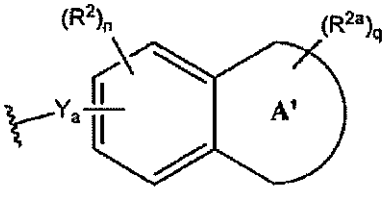


is selected from the group consisting of:

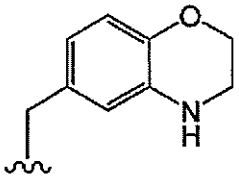


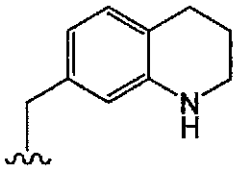
wherein the hydrogen on each nitrogen may be optionally replaced with R^{2a}.

33. The compound of claim 32, or a pharmaceutically acceptable salt thereof, wherein the moiety

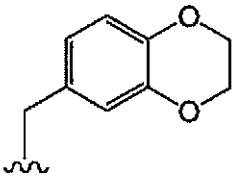


is selected from any one of structures (ii), (vii) and (xv) below:


(ii)


(vii)

and


(xv)

34. A compound of claim 1, selected from compounds 1 to 72 below, or a pharmaceutically acceptable salt thereof:

1. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-methyl-3,4-dihydro-2H benzo[1,4]oxazin-7-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
2. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-ethyl-3,4-dihydro-2H-benzo[1,4]oxazin-7-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
3. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-cyclopropyl-3,4-dihydro-2Hbenzo[1,4]oxazin-7ylmethyl)-phenyl]-6-hydroxymethyltetrahydropyran3,4,5-triol
4. (2S,3R,4R,5S,6R)-2-[3-(4-Benzyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-chloro-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
5. (2S,3R,4R,5S,6R)-2-{4-Chloro-3-[4-(4-methoxy-benzyl)-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl]-phenyl}-6-hydroxymethyltetrahydro-pyran-3,4,5-triol
6. (2S,3R,4R,5S,6R)-2-[3-(4-Benzyl-2,2-dimethyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-chloro-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
7. (2S,3R,4R,5S,6R)-2-[3-(4-benzyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-chloro-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
8. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
9. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-ethyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
10. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-cyclopropylmethyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
11. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-methyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
12. 6-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-2,3-dihydro-benzo[1,4]oxazine-4-carboxylic acid ethyl ester

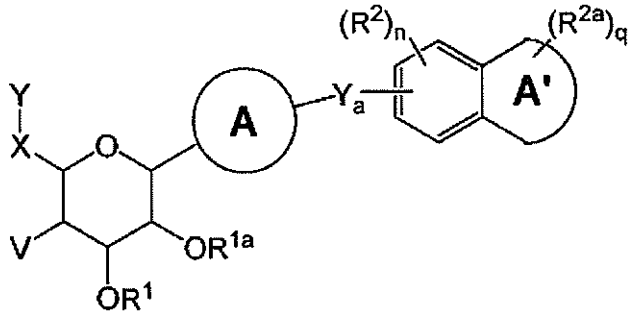
13. 1-{6-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-2,3-dihydro-benzo[1,4]oxazin-4-yl}-ethanone
14. (2S,3R,4R,5S,6R)-2-{4-Chloro-3-[1-(4-methoxy-benzyl)-1,2,3,4-tetrahydro-quinolin-6-ylmethyl]-phenyl}-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
15. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(1,2,3,4-tetrahydro-quinolin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
16. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(1,2,3,4-tetrahydro-quinolin-7-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
17. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(2,3-dihydro-1H-indol-5-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
18. (2S,3R,4R,5S,6R)-2-[3-(2-Benzyl-1,2,3,4-tetrahydro-isoquinolin-7-ylmethyl)-4-chloro-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
19. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(1,2,3,4-tetrahydro-isoquinolin-7-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
20. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(2,2-dimethyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
21. (2S,3R,4R,5S,6R)-2-(4-Chloro-3-chroman-6-ylmethyl-phenyl)-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
22. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(2,3-dihydro-benzofuran-5-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
23. (2R,3S,4R,5R,6S)-2-Hydroxymethyl-6-[4-methyl-3-(1,2,3,4-tetrahydro-quinolin-7-ylmethyl)-phenyl]-tetrahydro-pyran-3,4,5-triol
24. (2S,3R,4R,5S,6R)-2-[3-(3,4-Dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-fluoro-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
25. (2S,3R,4R,5S,6R)-2-[3-(2,3-Dihydro-benzo[1,4]dioxin-6-ylmethyl)-4-methoxy-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
26. (2R,3S,4R,5R,6S)-2-Hydroxymethyl-6-[4-methoxy-3-(1,2,3,4-tetrahydro-quinolin-6-ylmethyl)-phenyl]-tetrahydro-pyran-3,4,5-triol
27. (2R,3S,4R,5R,6S)-2-Hydroxymethyl-6-[4-methoxy-3-(1,2,3,4-tetrahydro-quinolin-7-ylmethyl)-phenyl]-tetrahydro-pyran-3,4,5-triol
28. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(3,4-dihydro-2H-benzo[1,4]oxazin-7-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
29. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4,4-spiro-cyclopropyl-chroman-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
30. 2S,3R,4R,5S,6R)-2-[5-(2,3-Dihydro-benzo[1,4]dioxin-6-ylmethyl)-2-ethoxy-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol

31. (2S,3R,4R,5S,6R)-2-[3-(3,4-Dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-methoxy-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
32. (2S,3R,4R,5S,6R)-2-(3-Chroman-6-ylmethyl-4-methoxy-phenyl)-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
33. (2S,3R,4R,5S,6R)-2-(3-Chroman-6-ylmethyl-4-trifluoromethoxy-phenyl)-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
34. 6-[2-chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-chromen-4-one
35. 6-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-chroman-4-one
36. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-hydroxy-chroman-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
37. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(spiro[chromane-2,1'-cyclopentane]-6-ylmethyl)phenyl]-6-(hydroxymethyl)tetrahydropyran-3,4,5-triol
38. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(spiro[chromane-2,1'-cyclopentane]-6-ylmethyl)phenyl]-6-(hydroxymethyl)tetrahydropyran-3,4,5-triol
39. 6-[[2-Chloro-5-[(2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)tetrahydropyran-2-yl] phenyl]methyl]spiro[chromane-2,4'-piperidine]-4-one
40. 6-(2-Methoxy-5-((2S,3S,4R,5R,6R)-3,4,5-tris(benzyloxy)-6(benzyloxymethyl)tetrahydro-2H-pyran-2-yl)benzyl)spiro[chroman-2,1'-cyclobutane
41. (2S,3R,4R,5S,6R)-2-[4-methoxy-3-(spiro[chromane-2,1'-cyclobutane]-6-ylmethyl)phenyl]-6-(hydroxymethyl)tetrahydropyran-3,4,5-triol
42. 7-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-4H-benzo[1,4]oxazin-3-one
43. 7-[2-Methoxy-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-4H-benzo[1,4]oxazin-3-one
44. (2S,3R,4R,5S,6R)-2-[4-chloro-3-(spiro[chromane-2,1'-cyclobutane]-6-ylmethyl)phenyl]-6-(hydroxymethyl)tetrahydropyran-3,4,5-triol
45. [(2R,3R,4R,5S,6S)-3,4,5-triacetoxy-6-[4-chloro-3-[(2,2-dimethyl-3-oxo-4H-1,4-benzoxazin-6-yl)methyl]phenyl]tetrahydropyran-2-yl]methyl acetate
46. 6-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-2,2-dimethyl-4H-benzo[1,4]oxazin-3-one
47. 6-(2-chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)tetrahydro-2H-pyran-2-yl)benzyl)-2H-benzo[b][1,4]oxazin-3(4H)-one

48. (2S,3R,4R,5S,6R)-2-[3-[(4-benzylspiro[3H-1,4-benzoxazine-2,1'-cyclopropane]-6-yl)methyl]-4-chloro-phenyl]-6-(hydroxymethyl)tetrahydropyran-3,4,5-triol
49. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(spiro[3,4-dihydro-1,4-benzoxazine-2,1'-cyclopropane]-6-ylmethyl)phenyl]-6-(hydroxymethyl)tetrahydropyran-3,4,5-triol
50. Acetic acid (2R,3R,4R,5S,6S)-3,4,5-triacetoxy-6-[4-chloro-3-(2-cyano-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-tetrahydro-pyran-2-ylmethyl ester
51. 6-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-3,4-dihydro-2H-benzo[1,4]oxazine-2-carbonitrile
52. 6-[2-chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-3,4-dihydro-2H-benzo[1,4]oxazine-2-carboxylic acid methyl ester
53. 6-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-3,4-dihydro-2H-benzo[1,4]oxazine-2-carboxylic acid
54. 6-[2-bromo-5-((3S,4R,5R,6R)-3,4,5-tris-benzyloxy-6-benzyloxymethyl-tetrahydro-pyran-2-yl)-benzyl]-chroman
55. 6-[2-cyclopropyl-5-((3S,4R,5R,6R)-3,4,5-tris-benzyloxy-6-benzyloxymethyl-tetrahydro-pyran-2-yl)-benzyl]-chroman
56. (2S,3R,4R,5S,6R)-2-(3-Chroman-6-ylmethyl-4-cyclopropyl-phenyl)-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
57. [(2R,3R,4R,5S,6S)-3,4,5-triacetoxy-6-[4-bromo-3-(2,3-dihydro-1,4-benzodioxin-6-ylmethyl)phenyl]tetrahydropyran-2-yl]methyl acetate
58. [(2R,3R,4R,5S,6S)-3,4,5-triacetoxy-6-[4-bromo-3-(2,3-dihydro-1,4-benzodioxin-6-ylmethyl)phenyl]tetrahydropyran-2-yl]methyl acetate
59. Acetic acid (2R,3R,4R,5S)-3,4,5-triacetoxy-6-[4-cyclopropyl-3-(2,3-dihydro-benzo[1,4]dioxin-6-ylmethyl)-phenyl]-tetrahydro-pyran-2-ylmethyl ester
60. (2S,3R,4R,5S,6R)-2-[4-Cyclopropyl-3-(2,3-dihydro-benzo[1,4]dioxin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
61. Acetic acid (2R,3R,4R,5S)-3,4,5-triacetoxy-6-[3-(2,3-dihydro-benzo[1,4]dioxin-6-ylmethyl)-4-ethyl-phenyl]-tetrahydro-pyran-2-ylmethyl ester
62. (2S,3R,4R,5S,6R)-2-[3-(2,3-Dihydro-benzo[1,4]dioxin-6-ylmethyl)-4-ethyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
63. 4-Benzyl-6-[2-bromo-5-((2S,3S,4R,5R,6R)-3,4,5-tris-benzyloxy-6-benzyloxymethyl-tetrahydro-pyran-2-yl)-benzyl]-3,4-dihydro-2H-benzo[1,4]oxazine

64. 4-Benzyl-6-[2-cyclopropyl-5-((2S,3S,4R,5R,6R)-3,4,5-tris-benzyloxy-6-benzyloxymethyl-tetrahydro-pyran-2-yl)-benzyl]-3,4-dihydro-2H-benzo[1,4]oxazine
65. (2S,3R,4R,5S,6R)-2-[4-Cyclopropyl-3-(3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
66. (2S,3R,4R,5S,6R)-2-[3-(3,4-Dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-ethyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
67. (2S,3R,4R,5S,6R)-2-[2-(3,4-Dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4'-methyl-biphenyl-4-yl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
68. (2S,3R,4R,5S,6R)-2-[3-(4-Benzyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-isopropyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
69. (2S,3R,4R,5S,6R)-2-[3-(3,4-Dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-isopropyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
70. (2S,3R,4R,5S,6R)-2-[3-(1-Benzyl-1,2,3,4-tetrahydro-quinolin-7-ylmethyl)-4-isopropyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
71. (2R,3S,4R,5R,6S)-2-Hydroxymethyl-6-[4-isopropyl-3-(1,2,3,4-tetrahydro-quinolin-7-ylmethyl)-phenyl]-tetrahydro-pyran-3,4,5-triol
72. (2R,3S,4R,5R,6S)-2-Hydroxymethyl-6-[4-isopropyl-3-(1,2,3,4-tetrahydro-quinolin-6-ylmethyl)-phenyl]-tetrahydro-pyran-3,4,5-triol.

35. The compound of claim 1, represented by Formula (I-ia):



(I-ia)

wherein:

Ring A is an C_{6-10}aryl which is optionally substituted with one or more substituents independently selected from the group consisting of halo, hydroxy, cyano,

nitro, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{1-6}alkoxy, haloC_{1-6}alkoxy, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, haloC_{1-6}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, $-S(O)_pR^3$, $-S(O)_2NR^4R^5$, $-OS(O)_2R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein the alkyl, alkenyl, alkynyl, cycloalkyl, aryl, heterocyclyl and heteroaryl groups may be optionally substituted with one or more substituents selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, $-S(O)_pR^3$, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$ and C_{1-6}alkoxy;

Ring A' is a 5- or 6-membered heterocycle containing at least one O or N heteroatom, provided that Ring A' is not 1,3-dioxole;

Y_a is a bond or a C_{1-3}alkylene which is optionally substituted with one or more substituents independently selected from halo, C_{1-4}alkyl, haloC_{1-4}alkyl;

V is hydrogen, halo or $-OR^{1c}$;

n is 0, 1 or 2;

q is 0, 1, 2, or 3;

p is 0, 1 or 2;

R^1, R^{1a}, R^{1b} and R^{1c} are independently selected from hydrogen, C_{1-6} alkyl, C_{6-10}aryl-C_{1-4}alkyl, $-C(O)C_{6-10}$aryl and $-C(O)C_{1-6}$alkyl;

R^2, for each occurrence, is independently selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein R^2 may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy;

R^{2a}, for each occurrence, is independently selected from the group consisting of oxo, halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, $-S(O)_pR^3$, $-S(O)_2NR^4R^5$, $-OS(O)_2R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, -

$NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein R^{2a} may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on adjacent atoms taken together with the atoms to which they are attached may form a fused C_{3-7}cycloalkyl, C_6aryl, 3- to 7-membered heterocyclyl, or 5-membered heteroaryl, wherein the fused cycloalkyl, aryl, heterocyclyl, and heteroaryl may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on the same carbon atom taken together may form a spiro 3- to 7-membered heterocyclyl or a spiro C_{3-7}cycloalkyl which may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; and

R^3, for each occurrence, is independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{1-10}heteroaryl, and C_{2-10}heterocyclyl;

X is $[C(R^6)(R^7)]_t$;

Y is H, halo, C_{1-4}alkyl, OR^{1c} or NR^4R^5;

t is 1, 2, or 3;

R^6 and R^7, for each occurrence, are independently selected from hydrogen, C_{1-6} alkyl, OR^{1e}, and NR^4R^5;

or when t is 1, R^6 and R^7 together may form an oxo group,

or when R^6 and R^7 are on the same carbon they can be taken together to form a C_{3-7}cycloalkyl or a 3- to 7-membered heterocycle;

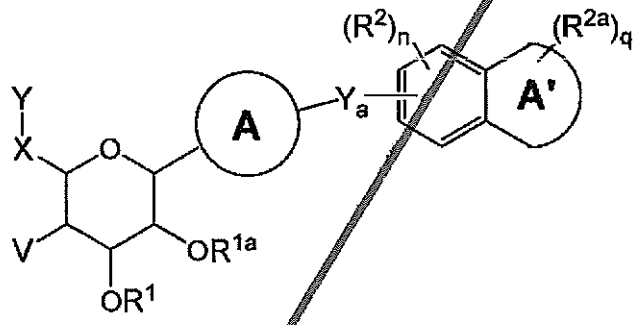
R^{1e}, for each occurrence, is independently selected from hydrogen, C_{1-6} alkyl, C_{6-10}aryl-C_{1-4}alkyl, $-C(O)C_{6-10}$aryl and $-C(O)C_{1-6}$alkyl;

R^4 and R^5, for each occurrence, are independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkylC_{1-4}alkyl, C_{6-10}arylC_{1-4}alkyl, C_{6-10}aryl, C_{1-10}heteroaryl, C_{1-10}heteroarylC_{1-4}alkyl, C_{2-10}heterocyclyl, and C_{2-10}heterocyclylC_{1-4}alkyl; or

R^4 and R^5 taken together along with the nitrogen to which they are bound may form a monocyclic or a bicyclic heteroaryl or heterocyclyl which may be optionally substituted with one or more halo or C_{1-4}alkyl; or

a pharmaceutically acceptable salt thereof.

36. The compound of claim 1 represented by Formula (I-iia):



(I-iia)

wherein:

Ring A is an C_{6-10}aryl which is optionally substituted with one or more substituents independently selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{1-6}alkoxy, haloC_{1-6}alkoxy, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, haloC_{1-6}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, $-S(O)_pR^3$, $-S(O)_2NR^4R^5$, $-OS(O)_2R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein the alkyl, alkenyl, alkynyl, cycloalkyl, aryl, heterocyclyl and heteroaryl groups may be optionally substituted with one or more substituents selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, $-S(O)_pR^3$, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$ and C_{1-6}alkoxy;

Ring A' is a 5- or 6-membered heterocycle containing at least one O or N heteroatom, provided that Ring A' is not 1,3-dioxole;

Y_a is a bond or a C_{1-3}alkylene which is optionally substituted with one or more substituents independently selected from halo, C_{1-4}alkyl, haloC_{1-4}alkyl;

V is OH;

n is 0, 1 or 2;

q is 0, 1, 2, or 3;

R^1 and R^{1a} are each hydrogen;

R^2, for each occurrence, is independently selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, -$C(O)OR^3$, -$C(O)R^3$, -$C(O)NR^4R^5$,-NR^4R^5, -$CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, -$CH_2C(O)OR^3$, -$CH_2C(O)NR^4R^5$, -$NR^3C(O)NR^4R^5$, -$NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein R^2 may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy;

R^{2a}, for each occurrence, is independently selected from the group consisting of oxo, halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, -$C(O)OR^3$, -$C(O)R^3$, -$C(O)NR^4R^5$,-NR^4R^5, -$CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, -$S(O)_pR^3$, -$S(O)_2NR^4R^5$, -$OS(O)_2R^3$, -$CH_2C(O)OR^3$, -$CH_2C(O)NR^4R^5$, -$NR^3C(O)NR^4R^5$, -$NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein R^{2a} may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on adjacent atoms taken together with the atoms to which they are attached may form a fused C_{3-7}cycloalkyl, C_6aryl, 3- to 7-membered heterocyclyl, or 5-membered heteroaryl, wherein the fused cycloalkyl, aryl, heterocyclyl, and heteroaryl may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on the same carbon atom taken together may form a spiro 3- to 7-membered heterocyclyl or a spiro C_{3-7}cycloalkyl which may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; and

R^3, for each occurrence, is independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{1-10}heteroaryl, and C_{2-10}heterocyclyl;

p is 0, 1 or 2;

X is $[C(R^6)(R^7)]_t$;

Y is H or OH;

t is 1;

R^6 and R^7, for each occurrence, are independently selected from hydrogen and C_{1-3} alkyl;

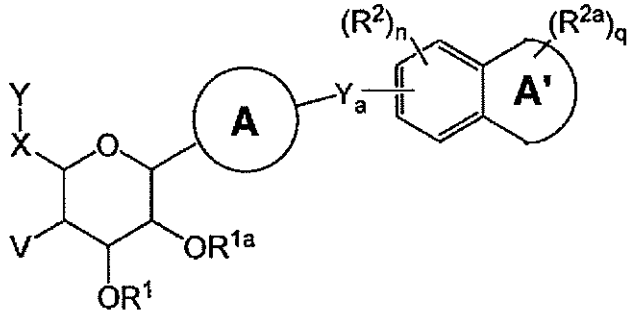
or when t is 1, R^6 and R^7 together may form an oxo group;

R^4 and R^5, for each occurrence, are independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkylC_{1-4}alkyl, C_{6-10}arylC_{1-4}alkyl, C_{6-10}aryl, C_{1-10}heteroaryl, C_{1-10}heteroarylC_{1-4}alkyl, C_{2-10}heterocyclyl, and C_{2-10}heterocyclylC_{1-4}alkyl; or

R^4 and R^5 taken together along with the nitrogen to which they are bound may form a monocyclic or a bicyclic heteroaryl or heterocyclyl which may be optionally substituted with one or more halo or C_{1-4}alkyl; or

a pharmaceutically acceptable salt thereof.

37. The compound of claim 1 represented by Formula (I-iiia):



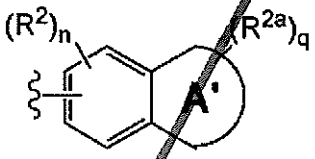
(I-iiia)

wherein:

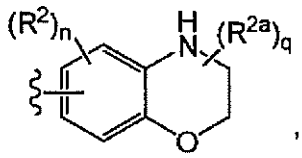
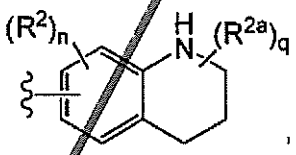
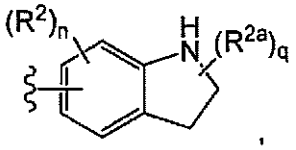
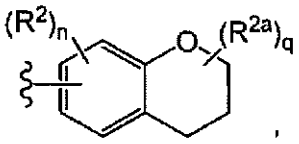
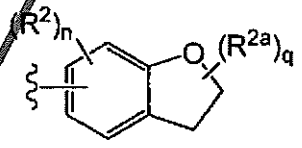
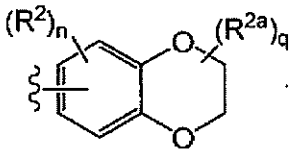
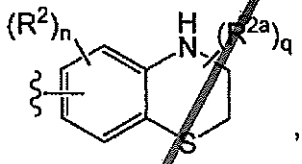
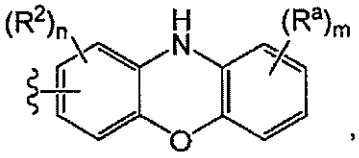
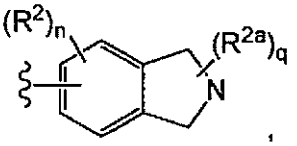
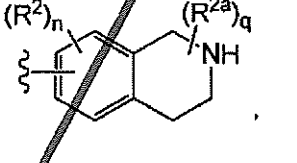
Ring A is a phenyl ring which is optionally substituted with one or more substituents independently selected from the group consisting of chloro, fluoro, hydroxy, cyano, methyl, ethyl, isopropyl, ethynyl, methoxy, ethoxy, trifluoromethoxy, amino,

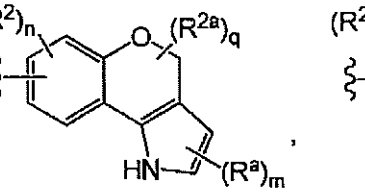
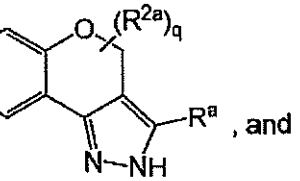
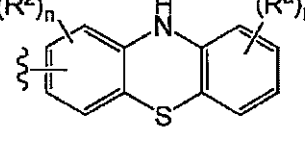
dimethylamino, methylsulfanyl, methylsulfonyl, carbamoyl, cyclopropyl, cyclobutyl, phenyl, toulyl, phenoxy, oxazolyloxy, and N-pyrazolyl;

the structure represented by the following formula:



is selected from the group consisting of:


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wherein the hydrogen on each nitrogen may be optionally replaced with R^{2a}; R^a, for each occurrance, is independently selected from halo, hydroxy, cyano, nitro, C_{1-6}alkyl, -

$S(O)_pR^3$, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$ and C_{1-6}alkoxy; and m is 0 or an integer from 1-4;

Y_a is CH_2;

V is OH;

n is 0 or 1;

q is 0 or 1;

R^1 and R^{1a} are each hydrogen;

R^2 is halo; wherein R^2 may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy;

R^{2a}, for each occurrence, is independently selected from the group consisting of oxo, halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, $-S(O)_pR^3$, $-S(O)_2NR^4R^5$, $-OS(O)_2R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein R^{2a} may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on the same carbon atom taken together may form a spiro C_{3-7}cycloalkyl which may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy;

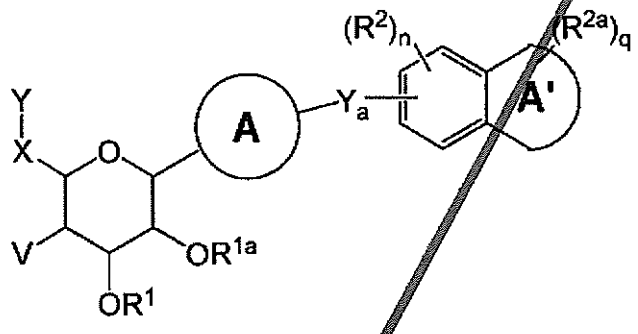
p is 0, 1 or 2;

X is CH_2;

Y is OH; or

a pharmaceutically acceptable salt thereof.

38. The compound of claim 1 or claim 2 represented by Formula (V):

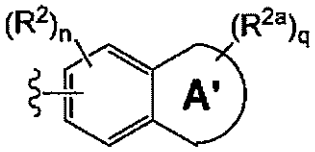


(V)

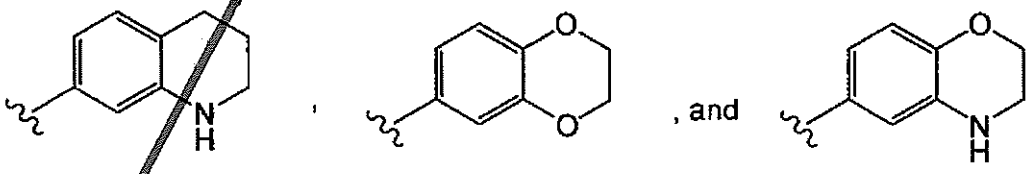
wherein:

ring A is phenyl which is substituted with one substituent selected from halo, C_{1-4}alkyl, and C_{3-7}cycloalkyl; wherein Y_a is situated *meta* to the tetrahydropyran ring and the one substituent is situated *para* to the tetrahydropyran ring;

the structure represented by the following formula:



is selected from the group consisting of:



Y_a is CH_2;

n is 0;

q is 0;

V is $-OR^{1b}$;

X is CH_2;

Y is OR^{1c};

R^1, R^{1a}, R^{1b} and R^{1c} are hydrogen;

or a pharmaceutically acceptable salt thereof.

39. The compound of any one of the preceding claims, or a pharmaceutically acceptable salt thereof, for use in therapy.

40. A pharmaceutical composition comprising a compound according to any one of claims 1 to 38, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient.

41. A method of treating diabetes comprising administering a compound according to any one of claims 1 to 38 or a pharmaceutically acceptable salt thereof, to a subject in need thereof.

42. A method of treating a disease or condition mediated by the sodium D-glucose co-transporter in a mammal, comprising administering to the mammal in need thereof a therapeutically effective amount of a compound according to any one of claims 1 to 38 or a pharmaceutically acceptable salt thereof.

43. The method according to claim 42, or a pharmaceutically acceptable salt thereof, wherein the disease or condition is metabolic syndrome, Syndrome X, diabetes, insulin resistance, decreased glucose tolerance, non-insulin-dependent diabetes mellitus, Type II diabetes, Type I diabetes, diabetic complications, body weight disorders, weight loss, body mass index or leptin related diseases.

44. The method according to claim 43, or a pharmaceutically acceptable salt thereof, wherein the metabolic syndrome is dyslipidemia, obesity, insulin resistance, hypertension, microalbuminemia, hyperuricaemia, and hypercoagulability.

45. A compound of any one of claims 1 to 38, or a pharmaceutically acceptable salt thereof, for use in treating a disease or condition in a subject mediated by the sodium D-glucose co-transporter.

46. Use of an agent selected from the group consisting of insulin, insulin derivative or mimetic; insulin secretagogue; insulinotropic sulfonylurea receptor ligand; PPAR ligand; insulin sensitizer; biguanide; alpha-glucosidase inhibitors; GLP-1, GLP-1 analog or mimetic; DPPIV inhibitor; HMG-CoA reductase inhibitor; squalene synthase inhibitor; FXR or LXR ligand; cholestyramine; fibrates; nicotinic acid, and aspirin in the manufacture of a medicament for the treatment of a disease or condition in a subject mediated by the sodium D-glucose co-transporter, wherein the agent is administered in combination with a compound according to any one of claims 1 to 38, or a pharmaceutically acceptable salt thereof.

47. Use of a compound according to any one of claims 1 to 38, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for the treatment of a disease or condition in a subject mediated by the sodium D-glucose co-transporter, wherein the compound is administered in combination with an agent selected from the group consisting of insulin, insulin derivative or mimetic; insulin secretagogue; insulinotropic sulfonylurea receptor ligand; PPAR ligand; insulin sensitizer; biguanide; alpha-glucosidase inhibitors; GLP-1, GLP-1 analog or mimetic; DPPIV inhibitor; HMG-CoA reductase inhibitor; squalene synthase inhibitor; FXR or LXR ligand; cholestyramine; fibrates; nicotinic acid, and aspirin.

48. The use of a compound according to any one of claims 1 to 38, or a pharmaceutically acceptable salt thereof, in combination with an agent selected from the group consisting of insulin, insulin derivative or mimetic; insulin secretagogue; insulinotropic sulfonylurea receptor ligand; PPAR ligand; insulin sensitizer; biguanide; alpha-glucosidase inhibitors; GLP-1, GLP-1 analog or mimetic; DPPIV inhibitor; HMG-CoA reductase inhibitor; squalene synthase inhibitor; FXR or LXR ligand; cholestyramine; fibrates; nicotinic acid, and aspirin in the manufacture of a medicament for treating a disease or condition in a subject mediated by the sodium D-glucose co-transporter.

49. The compound as claimed in any one of claims 45 to 48, or a pharmaceutically acceptable salt thereof, wherein the disease or condition is metabolic syndrome, Syndrome X, diabetes, insulin resistance, decreased glucose tolerance, non-insulin-dependent diabetes mellitus, Type II diabetes, Type I diabetes, diabetic complications, body weight disorders, weight loss, body mass index or leptin related diseases.

50. The compound as claimed in claim 49, or a pharmaceutically acceptable salt thereof, wherein the disease or condition is metabolic syndrome, Syndrome X, diabetes, insulin resistance, decreased glucose tolerance, non-insulin-dependent diabetes mellitus, Type II diabetes or Type I diabetes,.

51. The compound as claimed in claim 49 or 50, or a pharmaceutically acceptable salt thereof, wherein the metabolic syndrome is dyslipidemia, obesity, insulin resistance, hypertension, microalbuminemia, hyperuricaemia, and hypercoagulability.

52. A pharmaceutical composition comprising a therapeutically effective amount of a compound of any one of claims 1 to 38, or a pharmaceutically acceptable salt thereof, in combination with a therapeutically effective amount of insulin, insulin derivative or mimetic; insulin secretagogue; insulinotropic sulfonylurea receptor ligand; PPAR ligand; insulin sensitizer; biguanide; alpha-glucosidase inhibitors; GLP-1, GLP-1 analog or mimetic; DPPIV inhibitor; HMG-CoA reductase inhibitor; squalene synthase inhibitor; FXR or LXR ligand; cholestyramine; fibrates; nicotinic acid; or aspirin.

53. A product comprising a compound of any one of claims 1 to 38, or a pharmaceutically acceptable salt thereof, and an agent selected from the group consisting of insulin, insulin derivative or mimetic; insulin secretagogue; insulinotropic sulfonylurea receptor ligand; PPAR ligand; insulin sensitizer; biguanide; alpha-glucosidase inhibitors; GLP-1, GLP-1 analog or mimetic; DPPIV inhibitor; HMG-CoA reductase inhibitor; squalene synthase inhibitor; FXR or LXR ligand; cholestyramine;

fibrates; nicotinic acid, and aspirin for simultaneous, separate or sequential use in therapy.

54. A crystalline form of L-proline co-crystal of (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol.

55. The crystal according to Claim 54, wherein the molar ratio of L-proline to (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol is about 1:1.

56. The crystalline form according to Claim 55, wherein the crystalline form has a differential scanning calorimetry endotherm at about 64 °C, about 104 °C and/or about 157 °C.

57. The crystalline form according to anyone of Claims 54 to 56, which has a powder diffraction peak at about 19.3 degrees 2θ.

58. The crystalline form according to anyone of Claims 54 to 57, which has a powder diffraction peak at about 23.2 degrees 2θ.

59. The crystalline form according to anyone of Claims 54 to 58, which has a powder diffraction peak at about 17.0 degrees 2θ.

60. The crystalline form according to anyone of Claims 54 to 59, which has a powder diffraction peak at about 5.7 degrees 2θ.

61. A crystalline form of L-proline co-crystal of (2S,3R,4R,5S,6R)-2-[4-Cyclopropyl-3-(2,3-dihydro-benzo[1,4]dioxin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol.

62. The crystal according to Claim 61, wherein the molar ratio of L-proline to (2S,3R,4R,5S,6R)-2-[4-Cyclopropyl-3-(2,3-dihydro-benzo[1,4]dioxin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol is about 1:1.

63. The crystalline form according to Claim 61 or 62, wherein the crystalline form has a differential scanning calorimetry endotherm at about 151 °C.

64. The crystalline form according to anyone of Claims 61 or 63, which has a powder diffraction peak at about 16.7 degrees 2θ.

65. The crystalline form according to anyone of Claims 61 to 64, which has a powder diffraction peak at about 19.9 degrees 2θ.

66. The crystalline form according to anyone of Claims 61 to 65, which has a powder diffraction peak at about 17.6 degrees 2θ.

67. The crystalline form according to anyone of Claims 61 to 66, which has a powder diffraction peak at about 21.9 degrees 2θ.

68. A crystalline form of L-proline co-crystal of(2S,3R,4R,5S,6R)-2-[3-(2,3-Dihydro-benzo[1,4]dioxin-6-ylmethyl)-4-ethyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol.

69. The crystal according to Claim 68, wherein the molar ratio of L-proline to (2S,3R,4R,5S,6R)-2-[3-(2,3-Dihydro-benzo[1,4]dioxin-6-ylmethyl)-4-ethyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol is about 1:1.

70. The crystalline form according to Claim 68 or 69, wherein the crystalline form has a differential scanning calorimetry endotherm at about 136 °C.

71. The crystalline form according to anyone of Claims 68 to 70, which has a powder diffraction peak at about 17.3 degrees 2θ.

72. The crystalline form according to anyone of Claims 68 to 71, which has a powder diffraction peak at about 20.4 degrees 2θ.

73. The crystalline form according to anyone of Claims 68 to 72, which has a powder diffraction peak at about 18.0 degrees 2θ.

74. The crystalline form according to anyone of Claims 68 to 73, which has a powder diffraction peak at about 18.9 degrees 2θ.

75. The crystalline form according to anyone of Claims 68 to 74, which has a powder diffraction peak at about 23.8 degrees 2θ.

76. The crystal according to Claim 68, wherein the molar ratio of L-proline to (2S,3R,4R,5S,6R)-2-[3-(2,3-Dihydro-benzo[1,4]dioxin-6-ylmethyl)-4-ethyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol is about 2:1.

77. The crystal according to Claim 76, wherein the crystalline form has a differential scanning calorimetry endotherm at about 176 °C.

78. The crystalline form according to anyone of Claims 76 to 77, which has a powder diffraction peak at about 17.8 degrees 2θ.

79. The crystalline form according to anyone of Claims 76 to 78, which has a powder diffraction peak at about 9.1 degrees 2θ.

80. The crystalline form according to anyone of Claims 76 to 79, which has a powder diffraction peak at about 20.9 degrees 2θ.

81. The crystalline form according to anyone of Claims 76 to 80, which has a powder diffraction peak at about 18.9 degrees 2θ.

82. The crystalline form according to anyone of Claims 76 to 81, which has a powder diffraction peak at about 15.2 degrees 2θ.

83. The crystalline form according to anyone of Claims 76 to 82, which has a powder diffraction peak at about 16.5 degrees 2θ.

84. The crystalline form according to anyone of Claims 76 to 83, which has a powder diffraction peak at about 6.1 degrees 2θ.

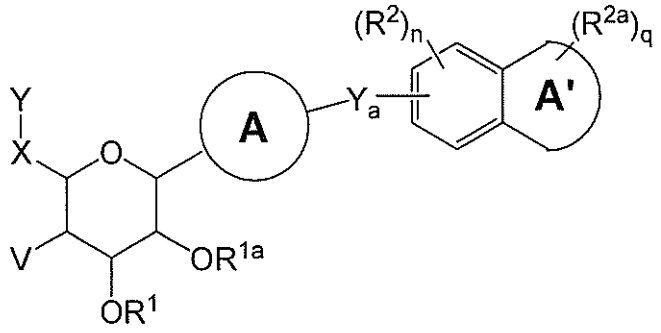
85. The crystalline form according to anyone of Claims 76 to 84, which has a powder diffraction peak at about 12.8 degrees 2θ.

86. The crystalline form according to anyone of Claims 76 to 85, which has a powder diffraction peak at about 28.4 degrees 2θ.

87. The crystalline form according to Claim 76 or 77 having a powder X-ray diffraction pattern which is substantially the same as the powder X-ray diffraction pattern shown in Fig. 4.

We claim:

1. A compound represented by Formula (I):



(I)

wherein:

Ring A is an C_{6-10}aryl which is optionally substituted with one or more substituents independently selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{1-6}alkoxy, haloC_{1-6}alkoxy, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, haloC_{1-6}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$,$-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, $-S(O)_pR^3$, $-S(O)_2NR^4R^5$, $-OS(O)_2R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein the alkyl, alkenyl, alkynyl, cycloalkyl, aryl, heterocyclyl and heteroaryl groups may be optionally substituted with one or more substituents selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, $-S(O)_pR^3$, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$,$-NR^4R^5$, $-CH_2NR^4R^5$ and C_{1-6}alkoxy;

Ring A' is a 5-, 6- or 7-membered heterocycle, provided that Ring A' is not 1,3-dioxole;

Y_a is a bond or a (C_1-C_6)alkylene which is optionally substituted with one or more substituents independently selected from halo, hydroxy, C_{1-4}alkyl, C_{1-4}alkoxy, haloC_{1-4}alkyl;

V is hydrogen, halo or $-OR^{1b}$;

n is 0, 1, 2, or 3;

q is 0, 1, 2, or 3;

R^1, R^{1a}, R^{1b} and R^{1c} are independently selected from hydrogen, C_{1-6} alkyl, C_{6-10}aryl-C_{1-4}alkyl, $-C(O)C_{6-10}$aryl and $-C(O)C_{1-6}$alkyl;

R^2, for each occurrence, is independently selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$,$-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, $-S(O)_pR^3$, $-S(O)_2NR^4R^5$, $-OS(O)_2R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein when any portion of R^2 is an alkyl, cycloalkyl,

aryl, heterocyclyl or heteroaryl, for each occurrence, it may be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy;

R^{2a}, for each occurrence, is independently selected from the group consisting of oxo, halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, -C(O)OR^3, -C(O)R^3, -C(O)NR^4R^5,-NR^4R^5, -$CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, -$S(O)_pR^3$, -$S(O)_2NR^4R^5$, -$OS(O)_2R^3$, -$CH_2C(O)OR^3$, -$CH_2C(O)NR^4R^5$, -$NR^3C(O)NR^4R^5$, -$NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein when any portion of R^{2a} is an alkyl, cycloalkyl, aryl, heterocyclyl or heteroaryl, for each occurrence, it may be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, cyano, nitro, C_{1-6}alkyl, -$S(O)_pR^3$, -C(O)OR^3, -C(O)R^3, -C(O)NR^4R^5,-NR^4R^5, -$CH_2NR^4R^5$ and C_{1-6}alkoxy; or

two R^{2a} on adjacent atoms taken together with the atoms to which they are attached may form a fused C_{3-7}cycloalkyl, C_6aryl, 3- to 7-membered heterocyclyl, or 5- or 6-membered heteroaryl, wherein the fused cycloalkyl, aryl, heterocyclyl, and heteroaryl may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on the same carbon atom taken together may form a spiro 3- to 7-membered heterocyclyl or a spiro C_{3-7}cycloalkyl which may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; and

R^3, for each occurrence, is independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{1-10}heteroaryl, and C_{2-10}heterocyclyl;

X is $[C(R^6)(R^7)]_t$;

Y is H, halo, C_{1-4} alkyl, OR^{1c} or NR^4R^5;

t is 1, 2, or 3;

R^6 and R^7, for each occurrence, are independently selected from hydrogen, C_{1-6} alkyl, OR^{1e}, and NR^4R^5;

or when t is 1, R^6 and R^7 together may form an oxo group,

or when R^6 and R^7 are on the same carbon they can be taken together to form a C_{3-7}cycloalkyl or a 3- to 7-membered heterocycle;

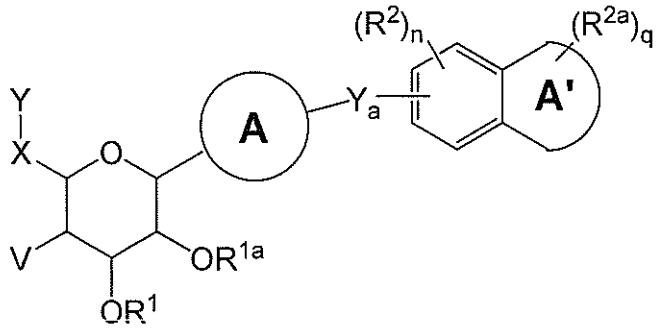
R^{1e}, for each occurrence, is independently selected from hydrogen, C_{1-6} alkyl, C_{6-10}aryl-C_{1-4}alkyl, -C(O)C_{6-10}aryl and -C(O)C_{1-6}alkyl;

R^4 and R^5, for each occurrence, are independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkylC_{1-4}alkyl, C_{6-10}arylC_{1-4}alkyl, C_{6-10}aryl, C_{1-10}heteroaryl, C_{1-10}heteroarylC_{1-4}alkyl, C_{2-10}heterocyclyl, and C_{2-10}heterocyclylC_{1-4}alkyl; or

R^4 and R^5 taken together along with the nitrogen to which they are bound may form a monocyclic or a bicyclic heteroaryl or heterocyclyl which may be optionally substituted with one or more halo or C_{1-4}alkyl; or

a pharmaceutically acceptable salt thereof.

2. The compound of Claim 1 represented by Formula (I):



(I)

wherein:

Ring A is an C_{6-10}aryl which is optionally substituted with one or more substituents independently selected from the group consisting of halo, hydroxy, cyano, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{1-6}alkoxy, haloC_{1-6}alkoxy, a 5-membered heteroaryl and a 6-membered heteroaryl;

Ring A' is a 5- or 6-membered heterocycle, provided that Ring A' is not 1,3-dioxole;

Y_a is a bond or a (C_1-C_6)alkylene which is optionally substituted with one or more substituents independently selected from halo, C_{1-4}alkyl, haloC_{1-4}alkyl;

V is hydrogen, halo or $-OR^{1b}$;

n is 0, 1, 2, or 3;

q is 0, 1, 2, or 3;

R^1, R^{1a}, R^{1b} and R^{1c} are independently selected from hydrogen, C_{1-6} alkyl, C_{6-10}aryl-C_{1-4}alkyl, -C(O)C_{6-10}aryl and -C(O)C_{1-6}alkyl;

R^2, for each occurrence, is independently selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, $-S(O)_pR^3$, $-S(O)_2NR^4R^5$, $-OS(O)_2R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein R^2 may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy;

R^{2a}, for each occurrence, is independently selected from the group consisting of oxo, halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$, $-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, $-S(O)_pR^3$, $-S(O)_2NR^4R^5$, $-OS(O)_2R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, -

$NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein R^{2a} may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on adjacent atoms taken together with the atoms to which they are attached may form a fused C_{3-7}cycloalkyl, C_6aryl, 3- to 7-membered heterocyclyl, or 5- or 6-membered heteroaryl, wherein the fused cycloalkyl, aryl, heterocyclyl, and heteroaryl may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on the same carbon atom taken together may form a spiro 3- to 7-membered heterocyclyl or a spiro C_{3-7}cycloalkyl which may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; and

R^3, for each occurrence, is independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{1-10}heteroaryl, and C_{2-10}heterocyclyl;

X is $[C(R^6)(R^7)]_t$;

Y is H, halo, C_{1-4} alkyl, OR^{1c} or NR^4R^5;

t is 1, 2, or 3;

R^6 and R^7, for each occurrence, are independently selected from hydrogen, C_{1-6} alkyl, OR^{1e}, and NR^4R^5;

or when t is 1, R^6 and R^7 together may form an oxo group,

or when R^6 and R^7 are on the same carbon they can be taken together to form a C_{3-7}cycloalkyl or a 3- to 7-membered heterocycle;

R^{1e}, for each occurrence, is independently selected from hydrogen, C_{1-6} alkyl, C_{6-10}aryl-C_{1-4}alkyl, -$C(O)C_{6-10}$aryl and -$C(O)C_{1-6}$alkyl;

R^4 and R^5, for each occurrence, are independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkylC_{1-4}alkyl, C_{6-10}arylC_{1-4}alkyl, C_{6-10}aryl, C_{1-10}heteroaryl, C_{1-10}heteroarylC_{1-4}alkyl, C_{2-10}heterocyclyl, and C_{2-10}heterocyclylC_{1-4}alkyl; or

R^4 and R^5 taken together along with the nitrogen to which they are bound may form a monocyclic or a bicyclic heteroaryl or heterocyclyl which may be optionally substituted with one or more halo or C_{1-4}alkyl; or

a pharmaceutically acceptable salt thereof.

3. The compound of Claim 2, or a pharmaceutically acceptable salt thereof, wherein:

V is OH;

R^1 and R^{1a} are H;

X is CH_2; and

Y is OH.

4. The compound of Claim 3, or a pharmaceutically acceptable salt thereof, wherein Ring A is a phenyl which is optionally substituted with one or more substituents independently selected from the group consisting of halo, hydroxy, C_{1-3}alkyl, C_{3-7}cycloalkyl, C_{1-3}alkoxy, haloC_{1-3}alkoxy and 5-membered heteroaryl.

5. The compound of claim 4, or a pharmaceutically acceptable salt thereof, wherein Ring A is substituted with one or more substituents independently selected from the group consisting of chloro, fluoro, hydroxy, methyl, methoxy, ethoxy, trifluoromethoxy and N-pyrazolyl.

6. The compound of claim 4, or a pharmaceutically acceptable salt thereof, wherein Ring A is substituted with one or more substituents independently selected from the group consisting of chloro, ethyl, isopropyl, and cyclopropyl.

7. The compound of claim 4, or a pharmaceutically acceptable salt thereof, wherein Ring A is substituted with one or more chloro substituents.

8. The compound of Claim 3, or a pharmaceutically acceptable salt thereof, wherein Ring A is naphthyl which is optionally substituted with one or more substituents independently selected from the group consisting of halo, hydroxy, C_{1-3}alkyl, C_{3-7}cycloalkyl, C_{1-3}alkoxy, haloC_{1-3}alkoxy and 5-membered heteroaryl.

9. The compound of claim 4, or a pharmaceutically acceptable salt thereof, wherein Y_a is situated *meta* to the tetrahydropyran ring.

10. The compound of Claim 9, or a pharmaceutically acceptable salt thereof, wherein Ring A has one substituent.

11. The compound of claim 10, or a pharmaceutically acceptable salt thereof, wherein the one substituent is situated *para* to the tetrahydropyran ring.

12. The compound of claim 11, or a pharmaceutically acceptable salt thereof, wherein Y_a is a bond or a C_{1-3}alkylene.

13. The compound of claim 12, or a pharmaceutically acceptable salt thereof, wherein Y_a is CH_2.

14. The compound of claim 13, or a pharmaceutically acceptable salt thereof, wherein R^2, for each occurrence, is independently selected from the group consisting of halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, -C(O)OR^3, -C(O)R^3, -C(O)NR^4R^5,-NR^4R^5, -$CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, -CH_2C(O)OR^3, -CH_2C(O)NR^4R^5, -NR^3C(O)NR^4R^5, -NR^3C(O)OR^3, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy.

15. The compound of claim 14, or a pharmaceutically acceptable salt thereof, wherein R^2 is halo and n is 1.

16. The compound of Claim 13, or a pharmaceutically acceptable salt thereof, wherein n is 0.

17. The compound of claim 16, or a pharmaceutically acceptable salt thereof, wherein Ring A' contains at least one O or N heteroatom.

18. The compound of claim 17, or a pharmaceutically acceptable salt thereof, wherein Ring A' is selected from the group consisting of a morpholine ring, a piperidine ring, a pyrrolidine ring, a tetrahydropyran ring, a tetrahydrofuran ring and a 1,4-dioxane ring.

19. The compound of claim 18, or a pharmaceutically acceptable salt thereof, wherein Ring A' is 1,4-dioxane ring.

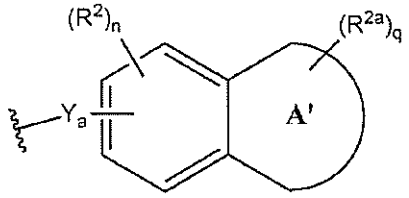
20. The compound of Claim 16, or a pharmaceutically acceptable salt thereof, wherein R^{2a}, for each occurrence, is independently selected from the group consisting of oxo, hydroxy, C_{1-6}alkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}arylC_{1-4}alkyl, -C(O)OR^3, -C(O)R^3, -C(O)NR^4R^5 and CH_2C(O)OR^3; wherein R^{2a} may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on adjacent atoms taken together with the atoms to which they are attached may form a fused C_{3-7}cycloalkyl, C_6aryl, 3- to 7-membered heterocyclyl, or 5-membered heteroaryl, wherein the fused cycloalkyl, aryl, heterocyclyl, and heteroaryl may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

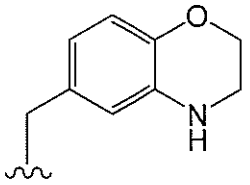
two R^{2a} on the same carbon atom taken together may form a spiro 3- to 7-membered heterocyclyl or a spiro C_{3-7}cycloalkyl which may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy.

21. The compound of claim 16, or a pharmaceutically acceptable salt thereof, wherein q is 0.

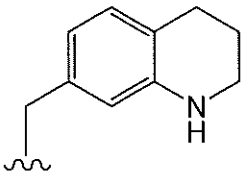
22. The compound of claim 13, or a pharmaceutically acceptable salt thereof, wherein the moiety



is selected from any one of structures (ii), (vii) and (xv) below:

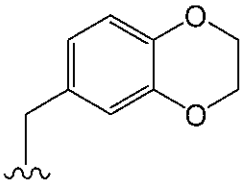


(ii)



(vii)

, and



(xv)

23. A compound of claim 1, selected from compounds 1 to 72 below, or a pharmaceutically acceptable salt thereof:

1. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-methyl-3,4-dihydro-2H benzo[1,4]oxazin-7-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
2. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-ethyl-3,4-dihydro-2H-benzo[1,4]oxazin-7-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
3. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-cyclopropyl-3,4-dihydro-2Hbenzo[1,4]oxazin-7ylmethyl)-phenyl]-6-hydroxymethyltetrahydropyran3,4,5-triol
4. (2S,3R,4R,5S,6R)-2-[3-(4-Benzyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-chloro-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
5. (2S,3R,4R,5S,6R)-2-{4-Chloro-3-[4-(4-methoxy-benzyl)-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl]-phenyl}-6-hydroxymethyltetrahydro-pyran-3,4,5-triol
6. (2S,3R,4R,5S,6R)-2-[3-(4-Benzyl-2,2-dimethyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-chloro-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
7. (2S,3R,4R,5S,6R)-2-[3-(4-benzyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-chloro-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
8. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
9. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-ethyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
10. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-cyclopropylmethyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
11. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-methyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol

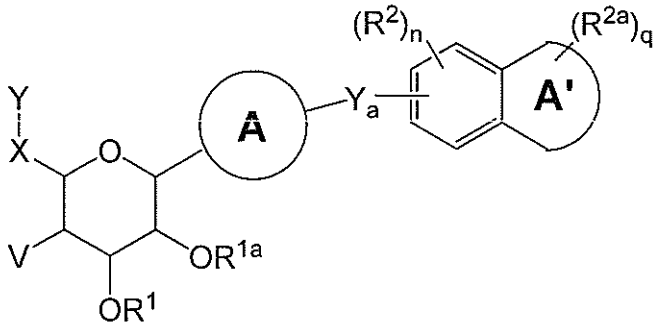
12. 6-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-2,3-dihydro-benzo[1,4]oxazine-4-carboxylic acid ethyl ester
13. 1-{6-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-2,3-dihydro-benzo[1,4]oxazin-4-yl}-ethanone
14. (2S,3R,4R,5S,6R)-2-{4-Chloro-3-[1-(4-methoxy-benzyl)-1,2,3,4-tetrahydro-quinolin-6-ylmethyl]-phenyl}-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
15. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(1,2,3,4-tetrahydro-quinolin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
16. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(1,2,3,4-tetrahydro-quinolin-7-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
17. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(2,3-dihydro-1H-indol-5-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
18. (2S,3R,4R,5S,6R)-2-[3-(2-Benzyl-1,2,3,4-tetrahydro-isoquinolin-7-ylmethyl)-4-chloro-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
19. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(1,2,3,4-tetrahydro-isoquinolin-7-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
20. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(2,2-dimethyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
21. (2S,3R,4R,5S,6R)-2-(4-Chloro-3-chroman-6-ylmethyl-phenyl)-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
22. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(2,3-dihydro-benzofuran-5-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
23. (2R,3S,4R,5R,6S)-2-Hydroxymethyl-6-[4-methyl-3-(1,2,3,4-tetrahydro-quinolin-7-ylmethyl)-phenyl]-tetrahydro-pyran-3,4,5-triol
24. (2S,3R,4R,5S,6R)-2-[3-(3,4-Dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-fluoro-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
25. (2S,3R,4R,5S,6R)-2-[3-(2,3-Dihydro-benzo[1,4]dioxin-6-ylmethyl)-4-methoxy-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
26. (2R,3S,4R,5R,6S)-2-Hydroxymethyl-6-[4-methoxy-3-(1,2,3,4-tetrahydro-quinolin-6-ylmethyl)-phenyl]-tetrahydro-pyran-3,4,5-triol
27. (2R,3S,4R,5R,6S)-2-Hydroxymethyl-6-[4-methoxy-3-(1,2,3,4-tetrahydro-quinolin-7-ylmethyl)-phenyl]-tetrahydro-pyran-3,4,5-triol
28. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(3,4-dihydro-2H-benzo[1,4]oxazin-7-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
29. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4,4-spiro-cyclopropyl-chroman-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
30. 2S,3R,4R,5S,6R)-2-[5-(2,3-Dihydro-benzo[1,4]dioxin-6-ylmethyl)-2-ethoxy-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol

31. (2S,3R,4R,5S,6R)-2-[3-(3,4-Dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-methoxy-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
32. (2S,3R,4R,5S,6R)-2-(3-Chroman-6-ylmethyl-4-methoxy-phenyl)-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
33. (2S,3R,4R,5S,6R)-2-(3-Chroman-6-ylmethyl-4-trifluoromethoxy-phenyl)-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
34. 6-[2-chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-chromen-4-one
35. 6-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-chroman-4-one
36. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(4-hydroxy-chroman-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
37. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(spiro[chromane-2,1'-cyclopentane]-6-ylmethyl)phenyl]-6-(hydroxymethyl)tetrahydropyran-3,4,5-triol
38. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(spiro[chromane-2,1'-cyclopentane]-6-ylmethyl)phenyl]-6-(hydroxymethyl)tetrahydropyran-3,4,5-triol
39. 6-[[2-Chloro-5-[(2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)tetrahydropyran-2-yl] phenyl]methyl]spiro[chromane-2,4'-piperidine]-4-one
40. 6-(2-Methoxy-5-((2S,3S,4R,5R,6R)-3,4,5-tris(benzyloxy)-6(benzyloxymethyl)tetrahydro-2H-pyran-2-yl)benzyl)spiro[chroman-2,1'-cyclobutane
41. (2S,3R,4R,5S,6R)-2-[4-methoxy-3-(spiro[chromane-2,1'-cyclobutane]-6-ylmethyl)phenyl]-6-(hydroxymethyl)tetrahydropyran-3,4,5-triol
42. 7-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-4H-benzo[1,4]oxazin-3-one
43. 7-[2-Methoxy-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-4H-benzo[1,4]oxazin-3-one
44. (2S,3R,4R,5S,6R)-2-[4-chloro-3-(spiro[chromane-2,1'-cyclobutane]-6-ylmethyl)phenyl]-6-(hydroxymethyl)tetrahydropyran-3,4,5-triol
45. [(2R,3R,4R,5S,6S)-3,4,5-triacetoxy-6-[4-chloro-3-[(2,2-dimethyl-3-oxo-4H-1,4-benzoxazin-6-yl)methyl]phenyl]tetrahydropyran-2-yl]methyl acetate
46. 6-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-2,2-dimethyl-4H-benzo[1,4]oxazin-3-one
47. 6-(2-chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)tetrahydro-2H-pyran-2-yl)benzyl)-2H-benzo[b][1,4]oxazin-3(4H)-one
48. (2S,3R,4R,5S,6R)-2-[3-[(4-benzylspiro[3H-1,4-benzoxazine-2,1'-cyclopropane]-6-yl)methyl]-4-chloro-phenyl]-6-(hydroxymethyl)tetrahydropyran-3,4,5-triol
49. (2S,3R,4R,5S,6R)-2-[4-Chloro-3-(spiro[3,4-dihydro-1,4-benzoxazine-2,1'-cyclopropane]-6-ylmethyl)phenyl]-6-(hydroxymethyl)tetrahydropyran-3,4,5-triol

50. Acetic acid (2R,3R,4R,5S,6S)-3,4,5-triacetoxy-6-[4-chloro-3-(2-cyano-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-tetrahydro-pyran-2-ylmethyl ester
51. 6-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-3,4-dihydro-2H-benzo[1,4]oxazine-2-carbonitrile
52. 6-[2-chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-3,4-dihydro-2H-benzo[1,4]oxazine-2-carboxylic acid methyl ester
53. 6-[2-Chloro-5-((2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-hydroxymethyl-tetrahydro-pyran-2-yl)-benzyl]-3,4-dihydro-2H-benzo[1,4]oxazine-2-carboxylic acid
54. 6-[2-bromo-5-((3S,4R,5R,6R)-3,4,5-tris-benzyloxy-6-benzyloxymethyl-tetrahydro-pyran-2-yl)-benzyl]-chroman
55. 6-[2-cyclopropyl-5-((3S,4R,5R,6R)-3,4,5-tris-benzyloxy-6-benzyloxymethyl-tetrahydro-pyran-2-yl)-benzyl]-chroman
56. (2S,3R,4R,5S,6R)-2-(3-Chroman-6-ylmethyl-4-cyclopropyl-phenyl)-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
57. [(2R,3R,4R,5S,6S)-3,4,5-triacetoxy-6-[4-bromo-3-(2,3-dihydro-1,4-benzodioxin-6-ylmethyl)phenyl]tetrahydropyran-2-yl]methyl acetate
58. [(2R,3R,4R,5S,6S)-3,4,5-triacetoxy-6-[4-bromo-3-(2,3-dihydro-1,4-benzodioxin-6-ylmethyl)phenyl]tetrahydropyran-2-yl]methyl acetate
59. Acetic acid (2R,3R,4R,5S)-3,4,5-triacetoxy-6-[4-cyclopropyl-3-(2,3-dihydro-benzo[1,4]dioxin-6-ylmethyl)-phenyl]-tetrahydro-pyran-2-ylmethyl ester
60. (2S,3R,4R,5S,6R)-2-[4-Cyclopropyl-3-(2,3-dihydro-benzo[1,4]dioxin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
61. Acetic acid (2R,3R,4R,5S)-3,4,5-triacetoxy-6-[3-(2,3-dihydro-benzo[1,4]dioxin-6-ylmethyl)-4-ethyl-phenyl]-tetrahydro-pyran-2-ylmethyl ester
62. (2S,3R,4R,5S,6R)-2-[3-(2,3-Dihydro-benzo[1,4]dioxin-6-ylmethyl)-4-ethyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
63. 4-Benzyl-6-[2-bromo-5-((2S,3S,4R,5R,6R)-3,4,5-tris-benzyloxy-6-benzyloxymethyl-tetrahydro-pyran-2-yl)-benzyl]-3,4-dihydro-2H-benzo[1,4]oxazine
64. 4-Benzyl-6-[2-cyclopropyl-5-((2S,3S,4R,5R,6R)-3,4,5-tris-benzyloxy-6-benzyloxymethyl-tetrahydro-pyran-2-yl)-benzyl]-3,4-dihydro-2H-benzo[1,4]oxazine
65. (2S,3R,4R,5S,6R)-2-[4-Cyclopropyl-3-(3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
66. (2S,3R,4R,5S,6R)-2-[3-(3,4-Dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-ethyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
67. (2S,3R,4R,5S,6R)-2-[2-(3,4-Dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4'-methyl-biphenyl-4-yl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
68. (2S,3R,4R,5S,6R)-2-[3-(4-Benzyl-3,4-dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-isopropyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol

69. (2S,3R,4R,5S,6R)-2-[3-(3,4-Dihydro-2H-benzo[1,4]oxazin-6-ylmethyl)-4-isopropyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
70. (2S,3R,4R,5S,6R)-2-[3-(1-Benzyl-1,2,3,4-tetrahydro-quinolin-7-ylmethyl)-4-isopropyl-phenyl]-6-hydroxymethyl-tetrahydro-pyran-3,4,5-triol
71. (2R,3S,4R,5R,6S)-2-Hydroxymethyl-6-[4-isopropyl-3-(1,2,3,4-tetrahydro-quinolin-7-ylmethyl)-phenyl]-tetrahydro-pyran-3,4,5-triol
72. (2R,3S,4R,5R,6S)-2-Hydroxymethyl-6-[4-isopropyl-3-(1,2,3,4-tetrahydro-quinolin-6-ylmethyl)-phenyl]-tetrahydro-pyran-3,4,5-triol.

24. The compound of claim 1 represented by Formula (I-iiia):

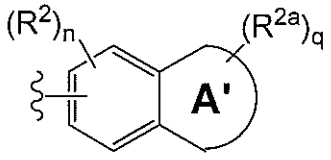


(I-iiia)

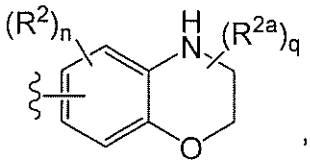
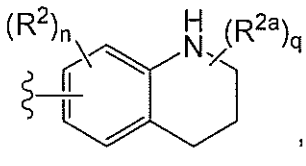
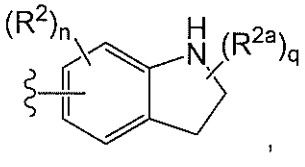
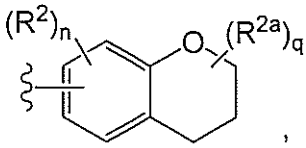
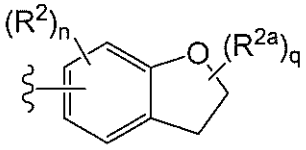
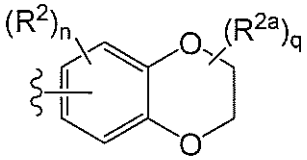
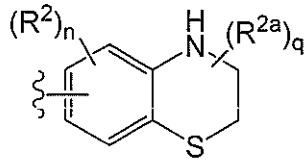
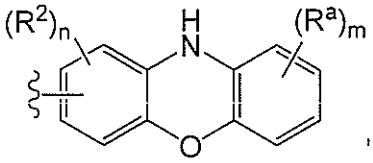
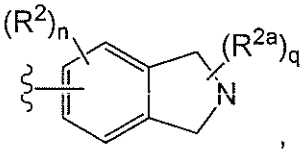
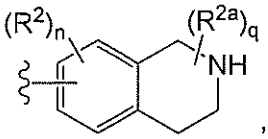
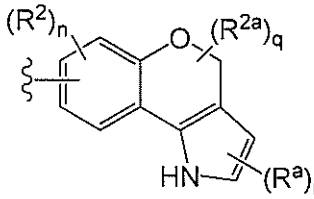
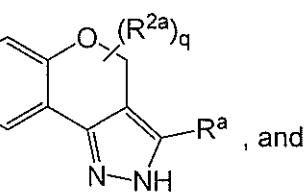
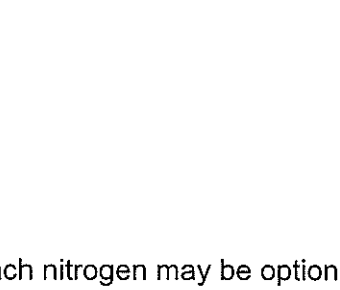
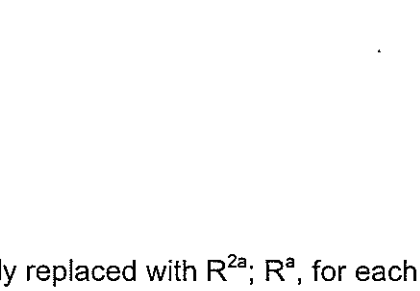
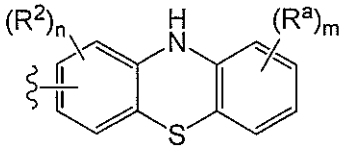
wherein:

Ring A is a phenyl ring which is optionally substituted with one or more substituents independently selected from the group consisting of chloro, fluoro, hydroxy, cyano, methyl, ethyl, isopropyl, ethynyl, methoxy, ethoxy, trifluoromethoxy, amino, dimethylamino, methylsulfanyl, methylsulfonyl, carbamoyl, cyclopropyl, cyclobutyl, phenyl, toulyl, phenoxy, oxazolyloxy, and N-pyrazolyl;

the structure represented by the following formula:



is selected from the group consisting of:


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wherein the hydrogen on each nitrogen may be optionally replaced with R^{2a}; R^a, for each occurrance, is independently selected from halo, hydroxy, cyano, nitro, C_{1-6}alkyl, $-S(O)_pR^3$, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$,$-NR^4R^5$, $-CH_2NR^4R^5$ and C_{1-6}alkoxy; and m is 0 or an integer from 1-4;

Y_a is CH_2;

V is OH;

n is 0 or 1;

q is 0 or 1;

R^1 and R^{1a} are each hydrogen;

R^2 is halo; wherein R^2 may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy;

R^{2a}, for each occurrence, is independently selected from the group consisting of oxo, halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, C_{6-10}aryl, C_{6-10}arylC_{1-4}alkyl, $-C(O)OR^3$, $-C(O)R^3$, $-C(O)NR^4R^5$,$-NR^4R^5$, $-CH_2NR^4R^5$, C_{1-6}alkoxy, C_{3-7} cycloalkoxy, -

$S(O)_pR^3$, $-S(O)_2NR^4R^5$, $-OS(O)_2R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NR^4R^5$, $-NR^3C(O)NR^4R^5$, $-NR^3C(O)OR^3$, C_{6-10}aryloxy, C_{2-10}heterocyclyl, C_{2-10}heterocyclylC_{1-4}alkyl, C_{1-10}heteroarylC_{1-4}alkyl, C_{1-10}heteroaryl, C_{1-10}heteroaryloxy and C_{1-10}heterocycloxy; wherein R^{2a} may, for each occurrence, be optionally substituted with one or more substituents which are independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy; or

two R^{2a} on the same carbon atom taken together may form a spiro C_{3-7}cycloalkyl which may be optionally substituted with one or more substituent independently selected from halo, hydroxy, C_{1-4}alkyl, and C_{1-4}alkoxy;

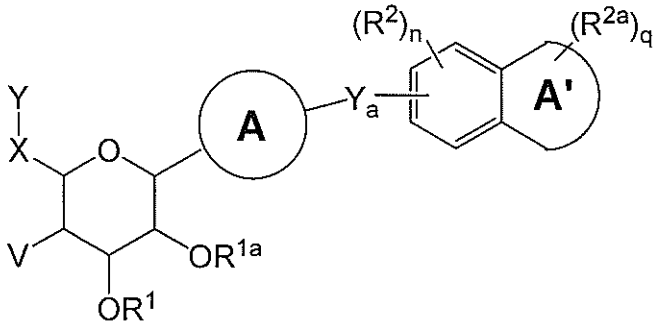
p is 0, 1 or 2;

X is CH_2;

Y is OH; or

a pharmaceutically acceptable salt thereof.

25. The compound of claim 1 represented by Formula (V):

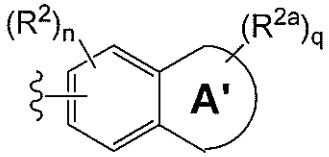


(V)

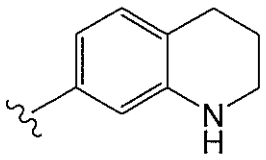
wherein:

ring A is phenyl which is substituted with one substituent selected from halo, C_{1-4}alkyl, and C_{3-7}cycloalkyl; wherein Y_a is situated *meta* to the tetrahydropyran ring and the one substituent is situated *para* to the tetrahydropyran ring;

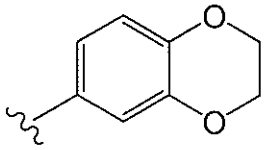
the structure represented by the following formula:



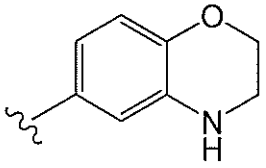
is selected from the group consisting of:



,



, and



Ya is CH_2;

n is 0;

q is 0;

V is $-OR^{1b}$;

X is CH_2;

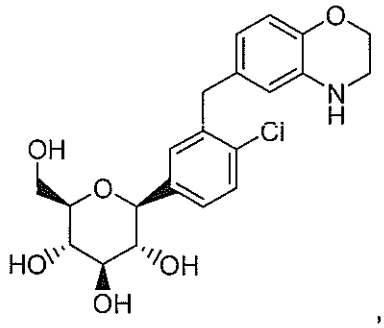
Y is OR^{1c};

R^1, R^{1a}, R^{1b} and R^{1c} are hydrogen;

or a pharmaceutically acceptable salt thereof.

26. A pharmaceutical composition comprising a compound according to any one of claim 1, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient.

27. A compound represented by the following formula:

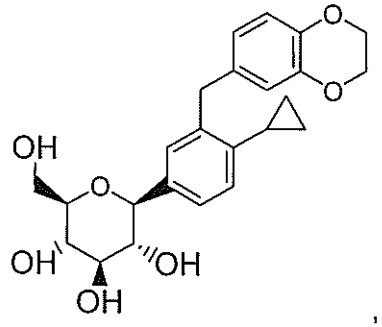


,

or a pharmaceutically acceptable salt thereof.

28. A pharmaceutical composition comprising a compound according to Claim 27, or a pharmaceutically acceptable salt thereof; and a pharmaceutically acceptable excipient.

29. A compound represented by the following formula:

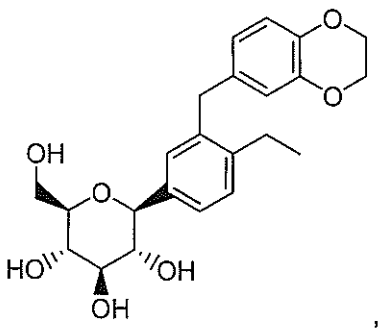


,

or a pharmaceutically acceptable salt thereof.

30. A pharmaceutical composition comprising a compound according to Claim 29, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient.

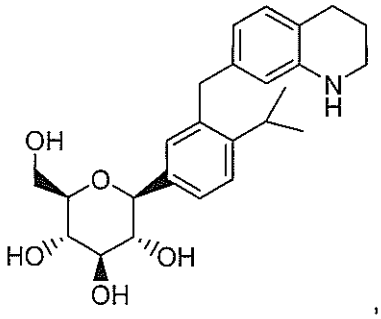
31. A compound represented by the following formula:



or a pharmaceutically acceptable salt thereof.

32. A pharmaceutical composition comprising a compound according to Claim 31, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient.

33. A compound represented by the following formula:



or a pharmaceutically acceptable salt thereof.

34. A pharmaceutical composition comprising a compound according to Claim 33, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient.