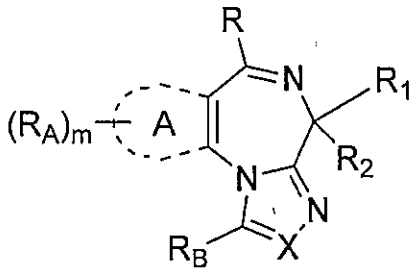
CLAIMS

What is claimed is:

1. A method for treating a condition associated with hyperinsulinaemia in a subject in need thereof, comprising administering to the subject an effective amount of a compound represented by Structural Formula I:



(I)

or a pharmaceutically acceptable salt thereof, wherein:

X is N or CR_3;

R_3 is selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_B is -(C_1-C_4)alkyl, H, -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, or –COO–R_4, wherein each -(C_1-C_4)alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, -OH, and -NR_5R_6;

ring A is -(C_5-C_{10})heteroaryl or -(C_6-C_{10})aryl;

each R_A is independently -(C_1-C_4)alkyl, H, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents; or any two R_A together with the atoms to which each is bound form a fused aryl or heteroaryl group;

R is -(C_6-C_{10})aryl, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, or -(C_5-C_{10})heteroaryl, wherein each is optionally and independently substituted with 1 to 4 substituents;

R_1 is -$(CH_2)_n$-L, in which n is 0-3 and L is -CO-N(R_9R_{10}), H, -C(O)O–R_9, -NR_9R_{10}, -N(R_{10})C(O)OR_9, or -N(R_{10})C(O)R_9;

R_2 is H, D, halogen, or -(C_1-C_4)alkyl;

R_4, R_5, and R_6 are each independently selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 is selected from the group consisting of: -(C_0-C_6)alkylene-heterocycloalkyl, H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-aryl, -(C_0-C_6)alkylene-heteroaryl, and -N=C$R_{11}R_{12}$, wherein each -(C_1-C_6)alkyl and -(C_0-C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_{10} is selected from the group consisting of: H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl; and -(C_0-C_6)alkylene-heteroaryl, wherein each -(C_1-C_6)alkyl and -(C_0-C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 and R_{10} are taken together with the nitrogen atom to which they are bound form a 4-10-membered ring;

R_{11} is H, -(C_1-C_4)alkyl, or -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, wherein each -(C_1-C_4)alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally and independently substituted with 1 to 3 substituents selected from the group consisting of -F, -Cl, -Br, and -OH;

R_{12} is H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents; and

m is 0, 1, 2, or 3.

2. The method of Claim 1, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

3. The method of Claim 1, wherein the condition associated with hyperinsulinaemia is an insulinoma.

4. The method of any one of Claims 1-3, wherein X is N.

5. The method of any one of Claims 1-4, wherein R_B is -(C_1-C_4)alkyl or H.

6. The method of any one of Claims 1-5, wherein ring A is 5- or 6-membered heteroaryl or aryl.

7. The method of any one of Claims 1-6, wherein ring A is thienyl or phenyl.

8. The method of any one of Claims 1-7, wherein R is -(C_6-C_{10})aryl or -(C_5-C_{10})heteroaryl optionally substituted with 1 to 4 substituents independently selected from the group consisting of: -F, -Cl, and -Br.

9. The method of any one of Claims 1-8, wherein L is –CO-N(R_9R_{10}), H, –COO–R_9.

10. The method of any one of Claims 1-9, wherein each R_9 is independently selected from the group consisting of -(C_0-C_6)alkylene-heterocycloalkyl, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-aryl, and -(C_0-C_6)alkylene-heteroaryl and each -(C_1-C_6)alkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally

substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -(C_1-C_6)alkyl.

11. The method of any one of Claims 1-10, wherein each R_{10} is independently selected from the group consisting of: H and -(C_1-C_6)alkyl.

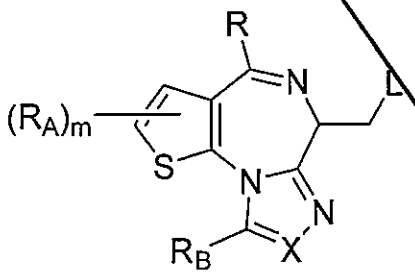
12. The method of any one of Claims 1-11, wherein R_2 is selected from the group consisting of: H and methyl.

13. The method of any one of Claims 1-12, wherein each R_A is independently H or -(C_1-C_4)alkyl, or any two R_A together with the atoms to which each is attached, can form a fused aryl.

14. The method of any one of Claims 1-13, wherein m is 2 and at least one R_A is methyl.

15. The method of any one of Claims 1-14, wherein m is 2 and each R_A is methyl.

16. A method for treating a condition associated with hyperinsulinaemia in a subject in need thereof, comprising administering to the subject an effective amount of a compound represented by Structural Formula II:



(II)

or a pharmaceutically acceptable salt thereof, wherein:

X is N or CR_3;

R_3 is selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_B is -(C_1-C_4)alkyl, H, -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, or –COO–R_4, wherein each -(C_1-C_4)alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, -OH, and -NR_5R_6;

each R_A is independently -(C_1-C_4)alkyl, H, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents; or any two R_A together with the atoms to which each is bound form a fused aryl or heteroaryl group;

R is -(C_6-C_{10})aryl, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, or -(C_5-C_{10})heteroaryl, wherein each is optionally and independently substituted with 1 to 4 substituents;

L is H, -C(O)O–R_9, -CO-N(R_9R_{10}), -NR_9R_{10}, -N(R_{10})C(O)OR_9, or -N(R_{10})C(O)R_9;

R_4, R_5, and R_6 are each independently selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 is selected from the group consisting of: -(C_0-C_6)alkylene-heterocycloalkyl, H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-aryl, -(C_0-C_6)alkylene-heteroaryl, and -N=C$R_{11}R_{12}$, wherein each -(C_1-C_6)alkyl and -(C_0-C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -

aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_{10} is selected from the group consisting of: H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl; and -(C_0-C_6)alkylene-heteroaryl, wherein each -(C_1-C_6)alkyl and -(C_0-C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 and R_{10} are taken together with the nitrogen atom to which they are bound form a 4-10-membered ring;

R_{11} is H, -(C_1-C_4)alkyl, or -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, wherein each -(C_1-C_4)alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 3 substituents selected from the group consisting of -F, -Cl, -Br, and -OH;

R_{12} is H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents; and

m is 0, 1, 2, or 3.

17. The method of Claim 16, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

18. The method of Claim 16, wherein the condition associated with hyperinsulinaemia is an insulinoma.

19. The method of any one of Claims 16-18, wherein X is N.

20. The method of of any one of Claims 16-19, wherein R_B is selected from the group consisting of: -(C_1-C_4) alkyl, H, and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, and each -(C_1-C_4) alkyl, and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally

substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -OH.

21. The method of any one of Claims 16-20, wherein R_B is methyl, ethyl, hydroxy methyl, methoxymethyl, or trifluoromethyl.

22. The method of any one of Claims 16-21, wherein R is -(C_6-C_{10})aryl, or -(C_5-C_{10})heteroaryl optionally substituted with 1 to 4 substituents independently selected from the group consisting of: -F, -Cl, and -Br.

23. The method of any one of Claims 16-22, wherein R is phenyl or pyridyl optionally substituted with a substituent independently selected from the group consisting of: -F, -Cl, and -Br.

24. The method of any one of Claims 16-23, wherein R is p-Cl-phenyl, o-Cl-phenyl, m-Cl-phenyl, p-F-phenyl, o-F-phenyl, m-F-phenyl or pyridinyl.

25. The method of any one of Claims 16-24, wherein L is –CO-N(R_9R_{10}), R_9 is -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6) alkylene-aryl, or -(C_0-C_6)alkylene- heteroaryl, wherein each -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 (C_1-C_4)alkyl, and R_{10} is H or -(C_1-C_6)alkyl.

26. The method of any one of Claims 16-25, wherein L is –COO–R_9 and R_9 is independently selected from the group consisting of -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl, and -(C_0-C_6)alkylene-heteroaryl, wherein each -(C_1-C_6)alkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -(C_1-C_6)alkyl.

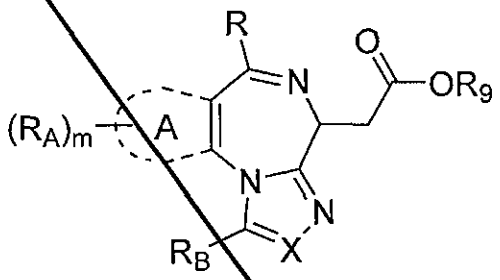
27. The method of any one of Claims 16-26, wherein L is –COO–R_9, and R_9 is selected from the group consisting of: methyl, ethyl, propyl, i-propyl, butyl, sec-butyl, t-butyl, and trifluoromethyl.

28. The method of any one of Claims 16-27, wherein each R_A is independently H or -(C_1-C_4)alkyl, or any two R_A together with the atoms to which each is attached, can form a fused aryl.

29. The method of any one of Claims 16-28, wherein m is 2, and at least one occurrence of R_A is methyl.

30. The method of any one of Claims 16-29, wherein m is 2 and each R_A is methyl.

31. A method for treating a condition associated with hyperinsulinaemia in a subject in need thereof, comprising administering to the subject an effective amount of a compound represented by Structural Formula III:



(III)

or a pharmaceutically acceptable salt thereof, wherein:

X is N or CR_3;

R_3 is selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_B is H, -(C_1-C_4)alkyl, -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, or –COO–R_4, wherein each -(C_1-C_4)alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, -OH, and -NR_5R_6;

ring A is -(C_6-C_{10})aryl or -(C_5-C_{10})heteroaryl;

each R_A is independently H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents; or any two R_A together with the atoms to which each is bound form a fused aryl or heteroaryl group;

R is -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_{10})heteroaryl, wherein each is optionally and independently substituted with 1 to 4 substituents;

R_4, R_5, and R_6 are each independently selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 is selected from the group consisting of: H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl, and -(C_0-C_6)alkylene-heteroaryl, wherein each -(C_1-C_6)alkyl and -(C_0-C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents; and

m is 0, 1, 2, or 3.

32. The method of Claim 31, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

33. The method of Claim 31, wherein the condition associated with hyperinsulinaemia is an insulinoma.

34. The method of any one of Claims 31-33, wherein X is N.

35. The method of any one of Claims 31-34, wherein R_B is selected from the group consisting of: H, -(C_1-C_4) alkyl, and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, and each -(C_1-C_4) alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -OH.

36. The method of any one of Claims 31-35, wherein R_B is methyl, ethyl, hydroxy methyl, methoxymethyl, or trifluoromethyl.

37. The method of any one of Claims 31-36, wherein ring A is 5- or 6-membered aryl or heteroaryl.

38. The method of any one of Claims 31-37, wherein ring A is thiofuranyl, phenyl, naphthyl, biphenyl, tetrahydronaphthyl, indanyl, pyridyl, furanyl, indolyl, pyrimidinyl, pyridizinyl, pyrazinyl, imidazolyl, oxazolyl, thienyl, thiazolyl, triazolyl, isoxazolyl, quinolinyl, pyrrolyl, pyrazolyl, or 5,6,7,8-tetrahydroisoquinolinyl.

39. The method of any one of Claims 31-38, wherein ring A is phenyl or thienyl.

40. The method of any one of Claims 31-39, wherein R is -(C_6-C_{10})aryl or -(C_5-C_{10})heteroaryl optionally substituted with 1 to 4 substituents independently selected from the group consisting of: -F, -Cl, and -Br.

41. The method of any one of Claims 31-40, wherein R is phenyl or pyridyl optionally substituted with 1 to 4 substituents independently selected from the group consisting of: -F, -Cl, and -Br.

42. The method of any one of Claims 31-41, wherein R is p-Cl-phenyl, o-Cl-phenyl, m-Cl-phenyl, p-F-phenyl, o-F-phenyl, m-F-phenyl or pyridinyl.

43. The method of any one of Claims 31-42, wherein each R_A is independently H or -(C_1-C_4)alkyl, or any two R_A together with the atoms to which each is attached, can form a fused aryl.

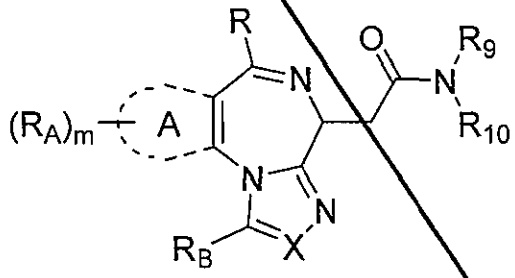
44. The method of any one of Claims 31-43, wherein m is 2 and at least one occurrence of R_A is methyl.

45. The method of any one of Claims 31-44, wherein m is 2 and each R_A is methyl.

46. The method of any one of Claims 31-45, R_9 is independently selected from the group consisting of -(C_1-C_6)alkyl, -(C_0-C_6)alkylene -heterocycloalkyl, -(C_0-C_6)alkylene-aryl, and -(C_0-C_6)alkylene-heteroaryl and each -(C_1-C_6)alkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -(C_1-C_6)alkyl.

47. The method of any one of Claims 31-46, wherein R_9 is selected from the group consisting of: methyl, ethyl, propyl, i-propyl, butyl, sec-butyl, t-butyl, and trifluoromethyl.

48. A method for treating a condition associated with hyperinsulinaemia in a subject in need thereof, comprising administering to the subject an effective amount of a compound represented by Structural Formula IV:



(IV)

or a pharmaceutically acceptable salt thereof, wherein:

X is N or CR_3;

R_3 is selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-

C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_B is H, -(C_1-C_4)alkyl, -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, or –COO–R_4, wherein each -(C_1-C_4)alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, -OH, and -NR_5R_6;

ring A is aryl or heteroaryl;

each R_A is independently H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents; or any two R_A together with the atoms to which each is bound form a fused aryl or heteroaryl group;

R is -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_{10})heteroaryl, wherein each is optionally and independently substituted with 1 to 4 substituents;

R_4, R_5, and R_6 are each independently selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 is selected from the group consisting of: H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl, -(C_0-C_6)alkylene-heteroaryl, and -$N=CR_{11}R_{12}$, wherein each -(C_1-C_6)alkyl and -(C_0-C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_{10} is selected from the group consisting of: H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl; and -(C_0-C_6)alkylene-heteroaryl, wherein each -(C_1-C_6)alkyl and -(C_0-

C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 and R_{10} are taken together with the nitrogen atom to which they are bound form a 4-10-membered ring;

R_{11} is H, -(C_1-C_4)alkyl, or -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, wherein each -(C_1-C_4)alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 3 substituents selected from the group consisting of: -F, -Cl, -Br, and -OH;

R_{12} is H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents; and

m is 0, 1, 2, or 3.

49. The method of Claim 48, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

50. The method of Claim 48, wherein the condition associated with hyperinsulinaemia is an insulinoma.

51. The method of any one of Claims 48-50, wherein X is N.

52. The method of any one of Claims 48-51, wherein R_B is selected from the group consisting of: H, -(C_1-C_4) alkyl, and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, and each -(C_1-C_4) alkyl, and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -OH.

53. The method of any one of Claims 48-52, wherein R_B is methyl, ethyl, hydroxy methyl, methoxymethyl, or trifluoromethyl.

54. The method of any one of Claims 48-53, wherein ring A is 5- or 6-membered aryl or heteroaryl.

55. The method of any one of Claims 48-54, wherein ring A is thiofuranyl, phenyl, naphthyl, biphenyl, tetrahydronaphthyl, indanyl, pyridyl, furanyl, indolyl, pyrimidinyl, pyridizinyl, pyrazinyl, imidazolyl, oxazolyl, thienyl, thiazolyl, triazolyl, isoxazolyl, quinolinyl, pyrrolyl, pyrazolyl, or 5,6,7,8-tetrahydroisoquinolinyl.

56. The method of any one of Claims 48-55, wherein ring A is phenyl or thienyl.

57. The method of any one of Claims 48-56, wherein R is -(C_6-C_{10})aryl, or -(C_5-C_{10})heteroaryl optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, and -Br.

58. The method of any one of Claims 48-57, wherein R is phenyl or pyridyl optionally substituted with 1 to 4 substituents independently selected from the group consisting of: -F, -Cl, and -Br.

59. The method of any one of Claims 48-58, wherein R is p-Cl-phenyl, o-Cl-phenyl, m-Cl-phenyl, p-F-phenyl, o-F-phenyl, m-F-phenyl or pyridinyl.

60. The method of any one of Claims 48-59, wherein each R_A is independently H or -(C_1-C_4)alkyl, or any two R_A together with the atoms to which each is attached, can form a fused aryl.

61. The method of any one of Claims 48-60, wherein m is 2, and at least one occurrence of R_A is methyl.

62. The method of any one of Claims 48-61, wherein m is 2 and each R_A is methyl.

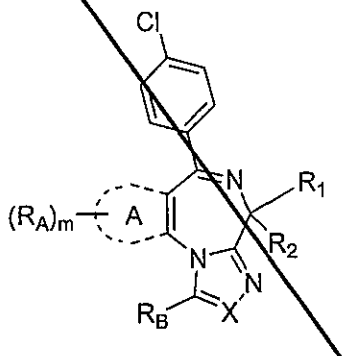
63. The method of any one of Claims 48-62, wherein R_9 is independently selected from the group consisting of -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl, and -(C_0-C_6)alkylene-heteroaryl and each -(C_1-C_6)alkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally

substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -(C_1-C_6)alkyl.

64. The method of any one of Claims 48-63, wherein R_{10} is selected from the group consisting of: H and -(C_1-C_6)alkyl optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F and -O-(C_1-C_6)alkyl.

65. The method of any one of Claims 48-64, wherein R_9 is N=$CR_{11}R_{12}$, R_{11} is H or -(C_1-C_4)alkyl and R_{12} is -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl or -(C_5-C_7)heteroaryl optionally substituted with 1 to 4 substituents independently selected from -(C_1-C_4)alkyl, -F, -Cl, -SO_2Na, and -$B(OH)_2$.

66. A method for treating a condition associated with hyperinsulinaemia in a subject in need thereof, comprising administering to the subject an effective amount of a compound represented by Structural Formula V:



(V)

or a pharmaceutically acceptable salt thereof, wherein:

X is N or CR_3;

R_3 is selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_B is H, -(C_1-C_4)alkyl, -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, or –COO–R_4, wherein each -(C_1-C_4)alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is

optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, -OH, and -NR_5R_6;

ring A is -(C_6-C_{10})aryl or -(C_5-C_{10})heteroaryl;

each R_A is independently H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents; or any two R_A together with the atoms to which each is bound form a fused aryl or heteroaryl group;

R_1 is -$(CH_2)_n$-L, in which n is 0-3 and L is H, -C(O)O–R_9, -CO-$N(R_9R_{10})$, -NR_9R_{10}, -$N(R_{10})C(O)OR_9$, or -$N(R_{10})C(O)R_9$;

R_2 is H, D, halogen, or -(C_1-C_4)alkyl;

R_4, R_5, and R_6 are each independently selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 is selected from the group consisting of: H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl, -(C_0-C_6)alkylene-heteroaryl, and -$N=CR_{11}R_{12}$, wherein each -(C_1-C_6)alkyl and -(C_0-C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_{10} is selected from the group consisting of: H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl; and -(C_0-C_6)alkylene-heteroaryl, wherein each -(C_1-C_6)alkyl and -(C_0-C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 and R_{10} are taken together with the nitrogen atom to which they are bound form a 4-10-membered ring;

R_{11} is H, -(C_1-C_4)alkyl, or -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, wherein each -(C_1-C_4)alkyl, and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally and independently substituted with 1 to 3 substituents selected from the group consisting of -F, -Cl, -Br, and -OH;

R_{12} is H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents, and

m is 0, 1, 2, or 3.

67. The method of Claim 66, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

68. The method of Claim 66, wherein the condition associated with hyperinsulinaemia is an insulinoma.

69. The method of any one of Claims 66-68, wherein X is N.

70. The method of any one of Claims 66-69, wherein R_B is selected from the group consisting of: H, -(C_1-C_4) alkyl, and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, and each -(C_1-C_4) alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -OH.

71. The method of any one of Claims 66-70, wherein R_B is methyl, ethyl, hydroxy methyl, methoxymethyl, or trifluoromethyl.

72. The method of any one of Claims 66-71, wherein ring A is 5- or 6-membered aryl or heteroaryl.

73. The method of any one of Claims 66-72, wherein ring A is thiofuranyl, phenyl, naphthyl, biphenyl, tetrahydronaphthyl, indanyl, pyridyl, furanyl, indolyl, pyrimidinyl, pyridizinyl, pyrazinyl, imidazolyl, oxazolyl, thienyl, thiazolyl, triazolyl, isoxazolyl, quinolinyl, pyrrolyl, pyrazolyl, or 5,6,7,8-tetrahydroisoquinolinyl.

74. The method of any one of Claims 66-73, wherein ring A is phenyl or thienyl.

75. The method any one of Claims 66-74, wherein each R_A is independently H or -(C_1-C_4)alkyl, or any two R_A together with the atoms to which each is attached, can form a fused aryl.

76. The method of any one of Claims 66-75, wherein m is 2, and at least one occurrence of R_A is methyl.

77. The method of any one of Claims 66-76, wherein m is 2 and each R_A is methyl.

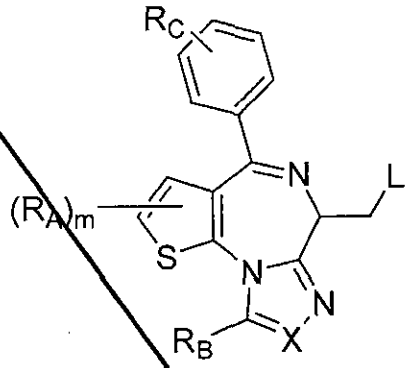
78. The method of any one of Claims 66-77, wherein L is –CO-N(R_9R_{10}), R_9 is -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6) alkylene-aryl, or -(C_0-C_6)alkylene-heteroaryl *optionally and independently substituted with 1 to 4* (C_1-C_4)alkyl, and R_{10} is H or -(C_1-C_6)alkyl.

79. The method of any one of Claims 66-78, wherein L is –COO–R_9, and R_9 is independently selected from the group consisting of -(C_1-C_6)alkyl, -(C_0-C_6)alkylene -heterocycloalkyl, -(C_0-C_6)alkylene-aryl, and -(C_0-C_6)alkylene-heteroaryl and each -(C_1-C_6)alkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -(C_1-C_6)alkyl.

80. The method of any one of Claims 66-79, wherein L is –COO–R_9, and R_9 is selected from the group consisting of: methyl, ethyl, propyl, i-propyl, butyl, sec-butyl, t-butyl, and trifluoromethyl.

81. The method of any one of Claim 66-80, wherein R_2 is H or -(C_1-C_4)alkyl.

82. A method for treating a condition associated with hyperinsulinaemia in a subject in need thereof, comprising administering to the subject an effective amount of a compound represented by Structural Formula VI:



(VI)

or a pharmaceutically acceptable salt thereof, wherein:

X is N or CR_3;

R_3 is selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_B is H, -(C_1-C_4)alkyl, -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, or –COO–R_4, wherein each -(C_1-C_4)alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, -OH, and -NR_5R_6;

each R_A is independently H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, and -

(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents; or any two R_A together with the atoms to which each is bound form a fused aryl or heteroaryl group;

L is H, -C(O)O–R_9, -CO-N(R_9R_{10}), -NR_9R_{10}, -N(R_{10})C(O)OR_9, or -N(R_{10})C(O)R_9;

R_C is selected from the group consisting of: -F, -Cl, -Br, -OH, -O-(C_1-C_4)alkyl, -(C_1-C_4)alkylene-O -(C_1-C_4)alkyl, halo-substituted-(C_1-C_4)alkyl, halo-substituted-O- (C_1-C_4)alkyl, -C(O)-(C_1-C_4)alkyl, -C(O)-(fluoro-substituted-(C_1-C_4)alkyl), -$S(O)_o$-(C_1-C_4)alkyl, -NR_7R_8 and CN;

R_4, R_5, R_6, R_7 and R_8 are each independently selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 is selected from the group consisting of: H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl, -(C_0-C_6)alkylene-heteroaryl, and -N=C$R_{11}R_{12}$, wherein each -(C_1-C_6)alkyl and -(C_0-C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_{10} is selected from the group consisting of: H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl; and -(C_0-C_6)alkylene-heteroaryl, wherein each -(C_1-C_6)alkyl and -(C_0-C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 and R_{10} are taken together with the nitrogen atom to which they are bound form a 4-10-membered ring;

R_{11} is H, -(C_1-C_4)alkyl, or -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, wherein each -(C_1-C_4)alkyl, and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally and

independently substituted with 1 to 3 substituents selected from the group consisting of -F, -Cl, -Br, and -OH;

R_{12} is H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents;

m is 0, 1, 2, or 3; and

o is 1 or 2.

83. The method of Claim 82, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

84. The method of Claim 82, wherein the condition associated with hyperinsulinaemia is an insulinoma.

85. The method of any one of Claims 82-84, wherein X is N.

86. The method of any one of Claims 82-85, wherein R_B is selected from the group consisting of: H, -(C_1-C_4) alkyl, and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, and each -(C_1-C_4) alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -OH.

87. The method of any one of Claims 82-86, wherein R_B is methyl, ethyl, hydroxy methyl, methoxymethyl, or trifluoromethyl.

88. The method any one of Claims 82-87, wherein each R_A is independently H or -(C_1-C_4)alkyl, or any two R_A together with the atoms to which each is attached, can form a fused aryl.

89. The method of any one of Claims 82-88, wherein m is 1 or 2, and at least one occurrence of R_A is methyl.

90. The method of any one of Claims 82-89, wherein m is 2 and each R_A is methyl

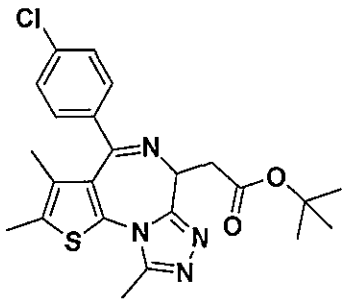
91. The method of any one of Claims 82-90, wherein L is –CO-N(R_9R_{10}), R_9 is -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6) alkylene-aryl, or -(C_0-C_6)alkylene-heteroaryl and each -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 (C_1-C_4)alkyl, and R_{10} is H or -(C_1-C_6)alkyl.

92. The method of any one of Claims 82-91, wherein L is –COO–R_9, and R_9 is independently selected from the group consisting of -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl, and -(C_0-C_6)alkylene-heteroaryl and each -(C_1-C_6)alkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -(C_1-C_6)alkyl.

93. The method of any one of Claims 82-92, wherein L is –COO–R_9, and R_9 is selected from the group consisting of: methyl, ethyl, propyl, *i*-propyl, butyl, sec-butyl, t-butyl, and trifluoromethyl.

94. The method of any one of Claims 82-93, wherein R_C is selected from the group consisting of -F, -Cl, -Br, -OH, and -O-(C_1-C_4)alkyl.

95. A method for treating a condition associated with hyperinsulinaemia in a subject in need thereof, comprising administering to the subject an effective amount of a compound represented by the following structural formula:

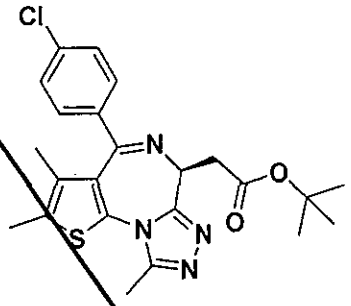


or a pharmaceutically acceptable salt thereof.

96. The method of Claim 95, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

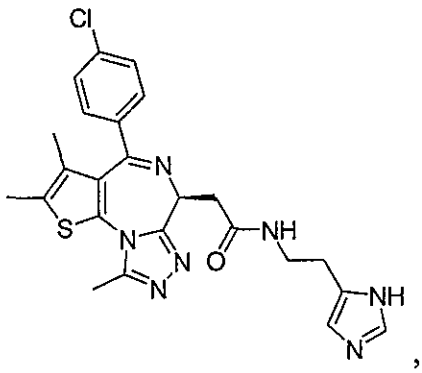
97. The method of Claim 95, wherein the condition associated with hyperinsulinaemia is an insulinoma.

98. The method of any one of Claims 95-97, wherein the compound is represented by the following structural formula:

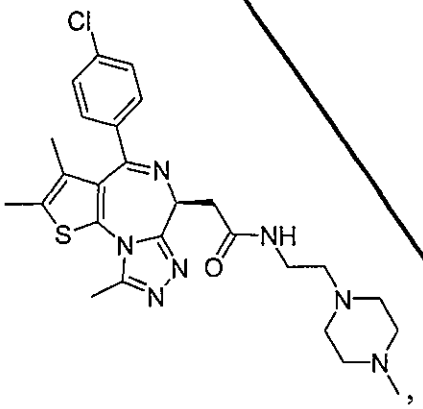


or a pharmaceutically acceptable salt thereof.

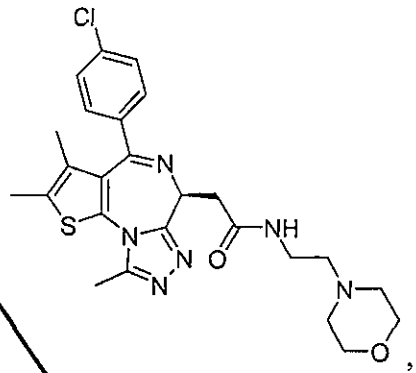
99. A method for treating a condition associated with hyperinsulinaemia in a subject in need thereof, comprising administering to the subject an effective amount of a compound represented by the following structural formulas:

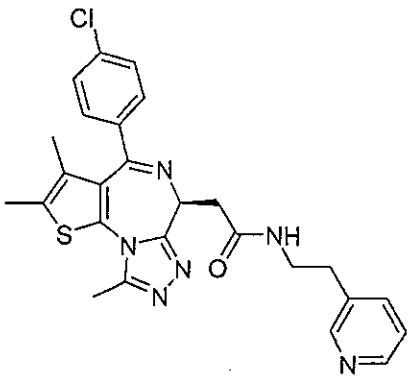


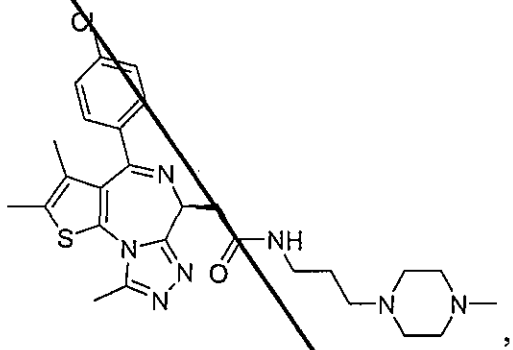
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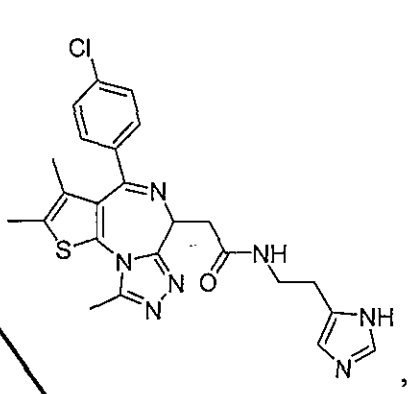

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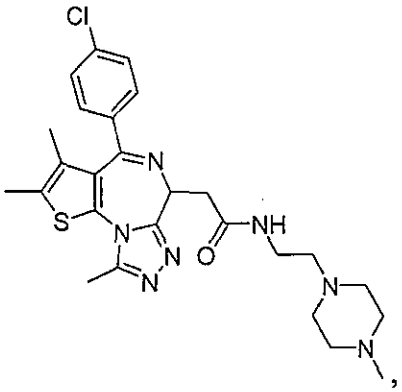
or a pharmaceutically acceptable salt thereof.

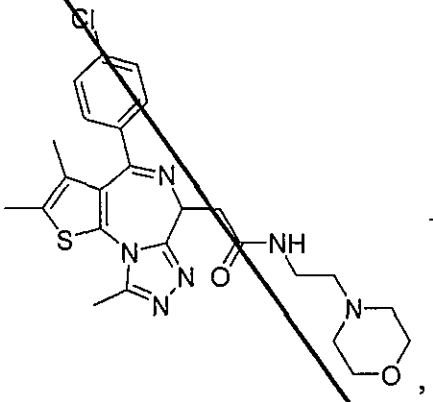
100. The method of Claim 99, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

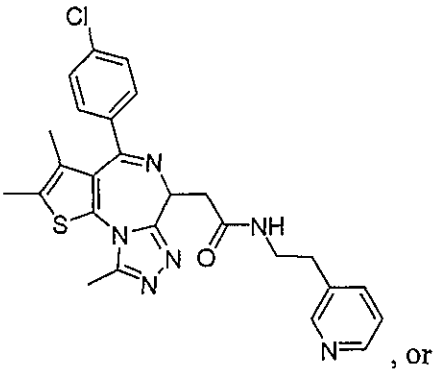
101. The method of Claim 99, wherein the condition associated with hyperinsulinaemia is an insulinoma.

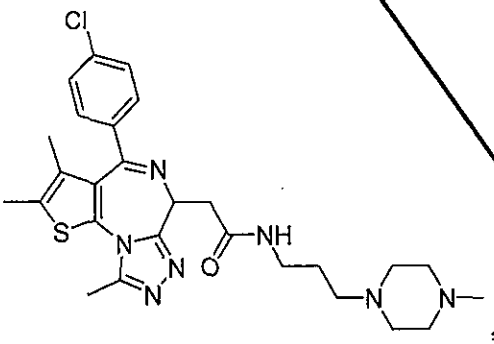
102. A method for treating a condition associated with hyperinsulinaemia in a subject in need thereof, comprising administering to the subject an effective amount of a compound represented by the following structural formulas:


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,


,


, or

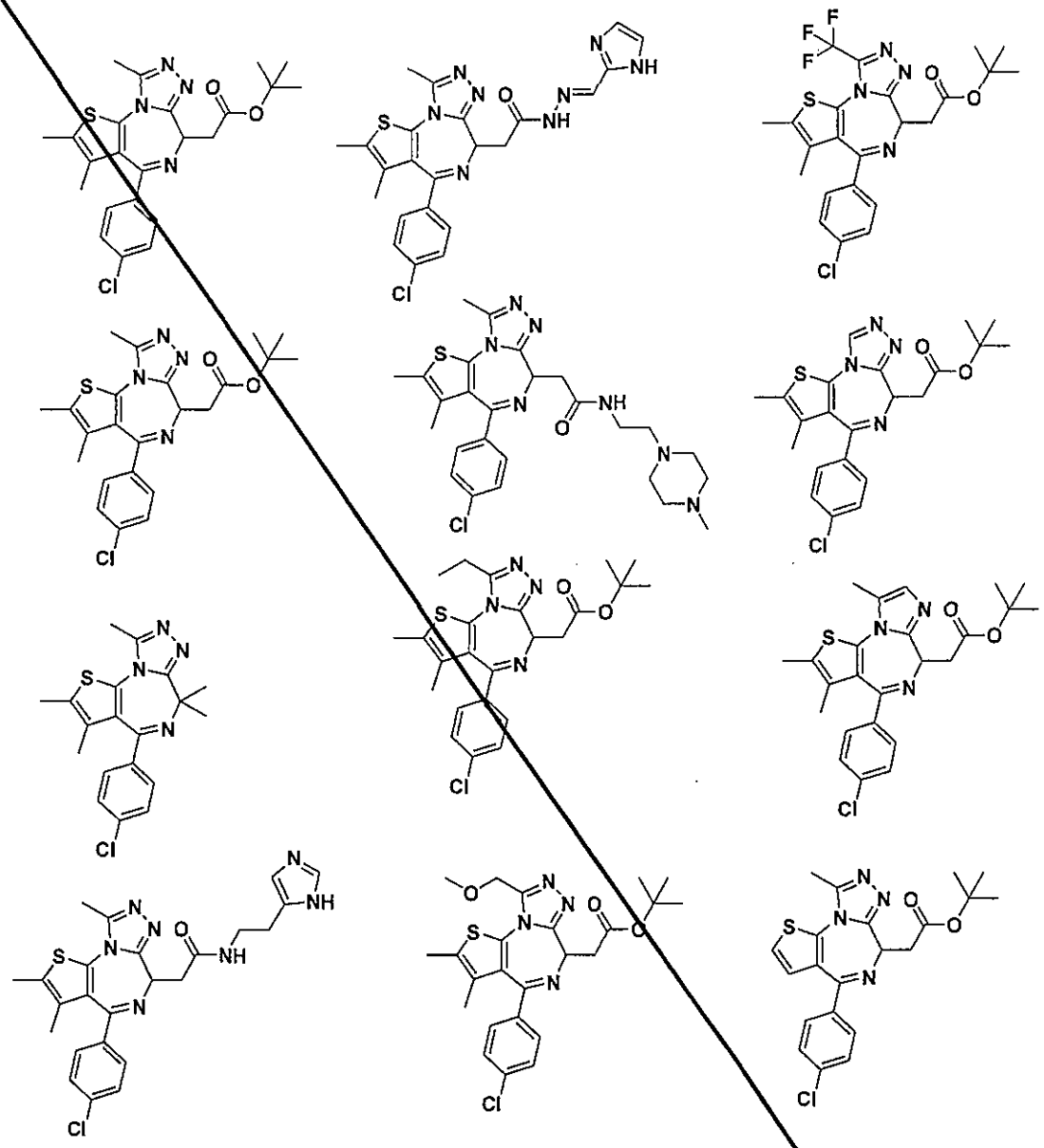

,

or a pharmaceutically acceptable salt thereof.

103. The method of Claim 102, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

104. The method of Claim 102, wherein the condition associated with hyperinsulinaemia is an insulinoma.

105. A method for treating a condition associated with hyperinsulinaemia in a subject in need thereof, comprising administering to the subject an effective amount of a compound represented by the following structural formulas:

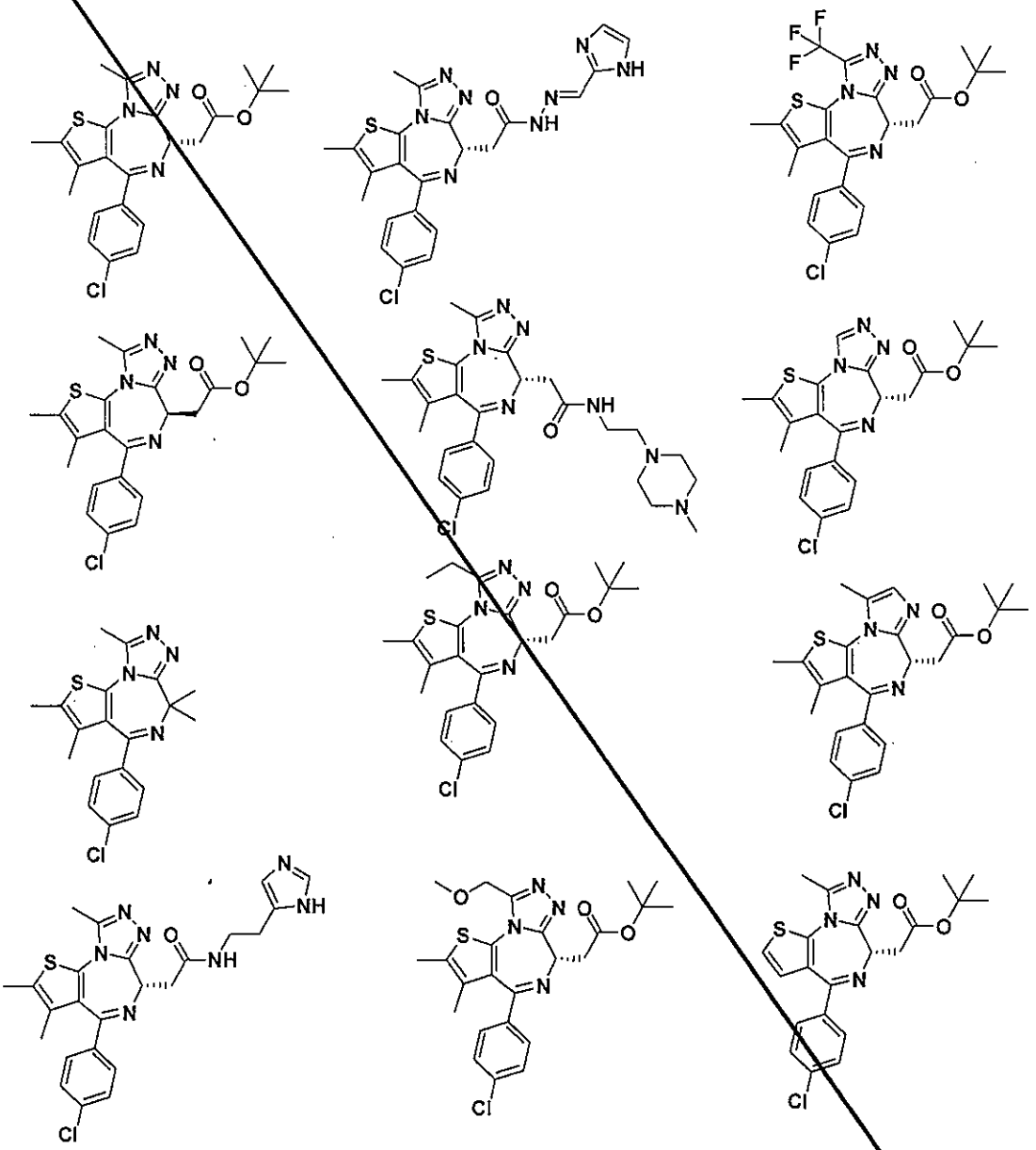


or a pharmaceutically acceptable salt thereof.

106. The method of Claim 105, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

107. The method of Claim 105, wherein the condition associated with hyperinsulinaemia is an insulinoma.

108. A method for treating a condition associated with hyperinsulinaemia in a subject in need thereof, comprising administering to the subject an effective amount of a compound represented by the following structural formulas:



or a pharmaceutically acceptable salt thereof.

109. The method of Claim 108, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

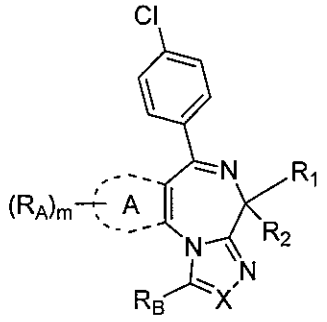
110. The method of Claim 108, wherein the condition associated with hyperinsulinaemia is an insulinoma.

111. The method of any one of claims 1-110, wherein the subject is a mammal.

112. The method of Claim 111, wherein the subject is a human.

CLAIMS

1. An effective amount of a compound represented by Structural Formula V:



(V)

or a pharmaceutically acceptable salt thereof, wherein:

X is N or CR_3;

R_3 is selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_B is H, -(C_1-C_4)alkyl, -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, or –COO–R_4, wherein each -(C_1-C_4)alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, -OH, and -NR_5R_6;

ring A is -(C_6-C_{10})aryl or -(C_5-C_{10})heteroaryl;

each R_A is independently H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_{10})heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7) heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_{10})heteroaryl is optionally and independently substituted with 1 to 4

substituents; or any two R_A together with the atoms to which each is bound form a fused aryl or heteroaryl group;

R_1 is -$(CH_2)_n$-L, in which n is 0-3 and L is H, -C(O)O–R_9, -CO-N(R_9R_{10}), -NR_9R_{10}, -N(R_{10})C(O)OR_9, or -N(R_{10})C(O)R_9;

R_2 is H, D, halogen, or -(C_1-C_4)alkyl;

R_4, R_5, and R_6 are each independently selected from the group consisting of: H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 is selected from the group consisting of: H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl, -(C_0-C_6)alkylene-heteroaryl, and -N=C$R_{11}R_{12}$, wherein each -(C_1-C_6)alkyl and -(C_0-C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_{10} is selected from the group consisting of: H, -(C_1-C_6)alkyl, -(C_0-C_6)alkylene-cycloalkyl, -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6)alkylene-aryl; and -(C_0-C_6)alkylene-heteroaryl, wherein each -(C_1-C_6)alkyl and -(C_0-C_6)alkylene- is optionally and independently substituted with 1 to 4 substituents and each -cycloalkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally and independently substituted with 1 to 4 substituents;

R_9 and R_{10} are taken together with the nitrogen atom to which they are bound form a 4-10-membered ring;

R_{11} is H, -(C_1-C_4)alkyl, or -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, wherein each -(C_1-C_4)alkyl, and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally and independently substituted with 1 to 3 substituents selected from the group consisting of -F, -Cl, -Br, and -OH;

R_{12} is H, -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl, -(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, or -(C_5-C_7)heteroaryl, wherein each -(C_1-C_4)alkyl, -(C_3-C_8)cycloalkyl,

-(C_5-C_7)heterocycloalkyl, -(C_6-C_{10})aryl, and -(C_5-C_7)heteroaryl is optionally and independently substituted with 1 to 4 substituents; and

m is 0, 1, 2, or 3, for use in the treatment of a condition associated with hyperinsulinaemia in a subject in need thereof.

2. The compound of Claim 1, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

3. The compound of Claim 1, wherein the condition associated with hyperinsulinaemia is an insulinoma.

4. The compound of any one of Claims 1-3, wherein X is N.

5. The compound of any one of Claims 1-4, wherein R_B is selected from the group consisting of: H, -(C_1-C_4) alkyl, and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl, and each -(C_1-C_4) alkyl and -(C_1-C_4)alkylene-O-(C_1-C_4)alkyl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -OH.

6. The compound of any one of Claims 1-5, wherein R_B is methyl, ethyl, hydroxy methyl, methoxymethyl, or trifluoromethyl.

7. The compound of any one of Claims 1-6, wherein ring A is 5- or 6-membered aryl or heteroaryl.

8. The compound of any one of Claims 1-7, wherein ring A is thiofuranyl, phenyl, naphthyl, biphenyl, tetrahydronaphthyl, indanyl, pyridyl, furanyl, indolyl, pyrimidinyl, pyridizinyl, pyrazinyl, imidazolyl, oxazolyl, thienyl, thiazolyl, triazolyl, isoxazolyl, quinolinyl, pyrrolyl, pyrazolyl, or 5,6,7,8-tetrahydroisoquinolinyl.

9. The compound of any one of Claims 1-8, wherein ring A is phenyl or thienyl.

10. The compound of any one of Claims 1-9, wherein each R_A is independently H or -(C_1-C_4)alkyl, or any two R_A together with the atoms to which each is attached, can form a fused aryl.

11. The compound of any one of Claims 1-10, wherein m is 2, and at least one occurrence of R_A is methyl.

12. The compound of any one of Claims 1-11, wherein m is 2 and each R_A is methyl.

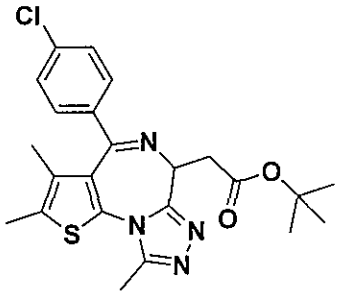
13. The compound of any one of Claims 1-12, wherein L is –CO-N(R_9R_{10}), R_9 is -(C_0-C_6)alkylene-heterocycloalkyl, -(C_0-C_6) alkylene-aryl, or -(C_0-C_6)alkylene-heteroaryl optionally and independently substituted with 1 to 4 (C_1-C_4)alkyl, and R_{10} is H or -(C_1-C_6)alkyl.

14. The compound of any one of Claims 1-13, wherein L is –COO–R_9, and R_9 is independently selected from the group consisting of -(C_1-C_6)alkyl, -(C_0-C_6)alkylene -heterocycloalkyl, -(C_0-C_6)alkylene-aryl, and -(C_0-C_6)alkylene-heteroaryl and each -(C_1-C_6)alkyl, -heterocycloalkyl, -aryl, and -heteroaryl is optionally substituted with 1 to 4 substituents independently selected from the group consisting of -F, -Cl, -Br, and -(C_1-C_6)alkyl.

15. The compound of any one of Claims 1-14, wherein L is –COO–R_9, and R_9 is selected from the group consisting of: methyl, ethyl, propyl, i-propyl, butyl, sec-butyl, t-butyl, and trifluoromethyl.

16. The compound of any one of Claim 1-15, wherein R_2 is H or -(C_1-C_4)alkyl.

17. An effective amount of a compound represented by the following structural formula:

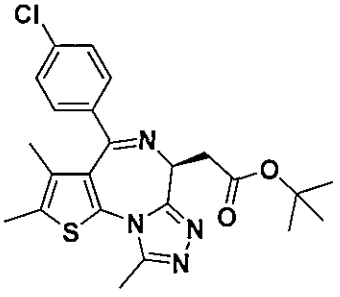


or a pharmaceutically acceptable salt thereof, for use in the treatment of a condition associated with hyperinsulinaemia in a subject in need thereof.

18. The compound of Claim 17, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

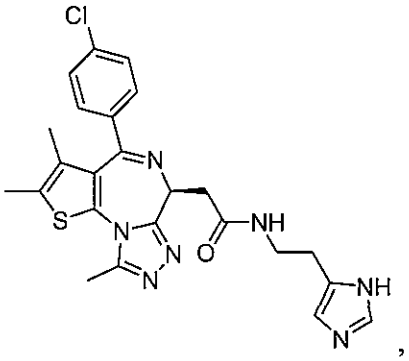
19. The compound of Claim 17, wherein the condition associated with hyperinsulinaemia is an insulinoma.

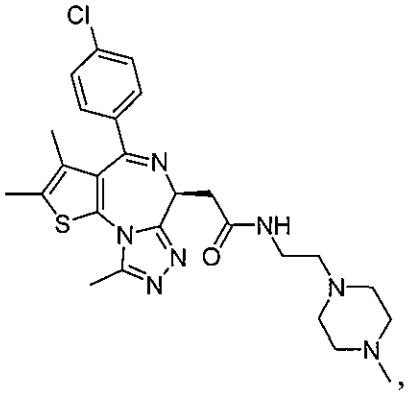
20. The compound of any one of Claims 17-19, wherein the compound is represented by the following structural formula:

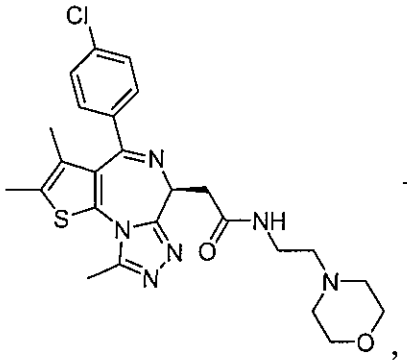


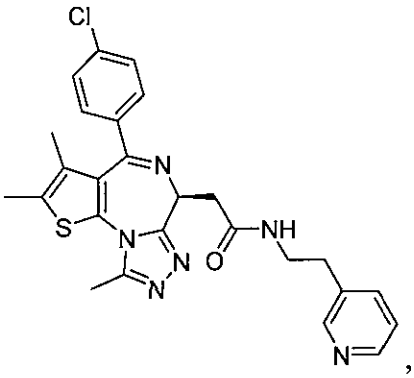
or a pharmaceutically acceptable salt thereof.

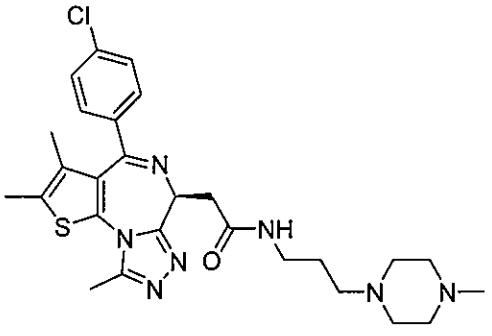
21. An effective amount of a compound represented by the following structural formulas:


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, or

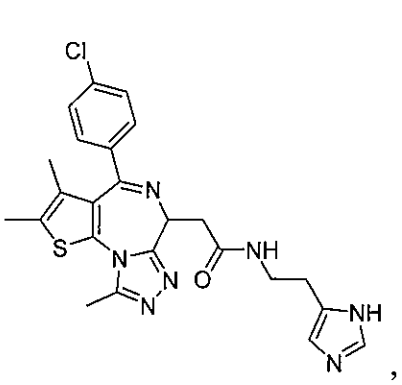

,

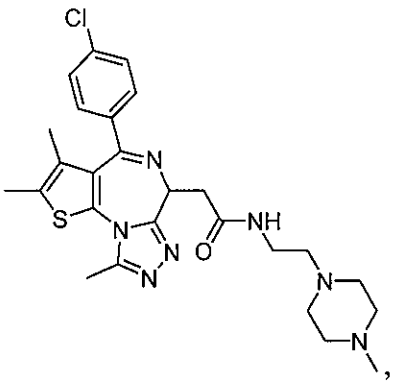
or a pharmaceutically acceptable salt thereof, for use in the treatment of a condition associated with hyperinsulinaemia in a subject in need thereof.

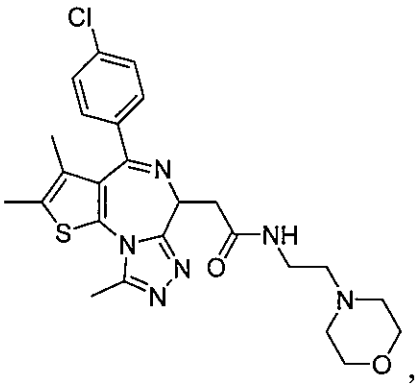
22. The compound of Claim 21, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

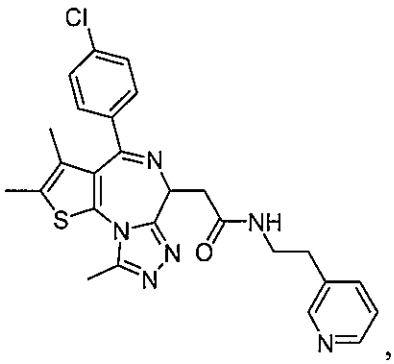
23. The compound of Claim 21, wherein the condition associated with hyperinsulinaemia is an insulinoma.

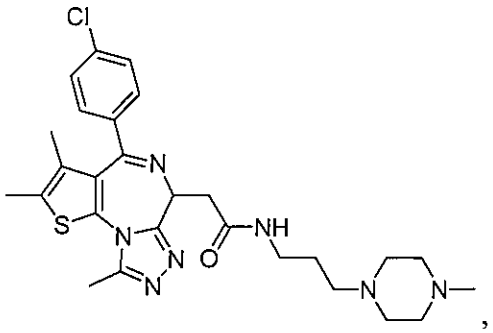
24. An effective amount of a compound represented by the following structural formulas:


,


,


,


, or

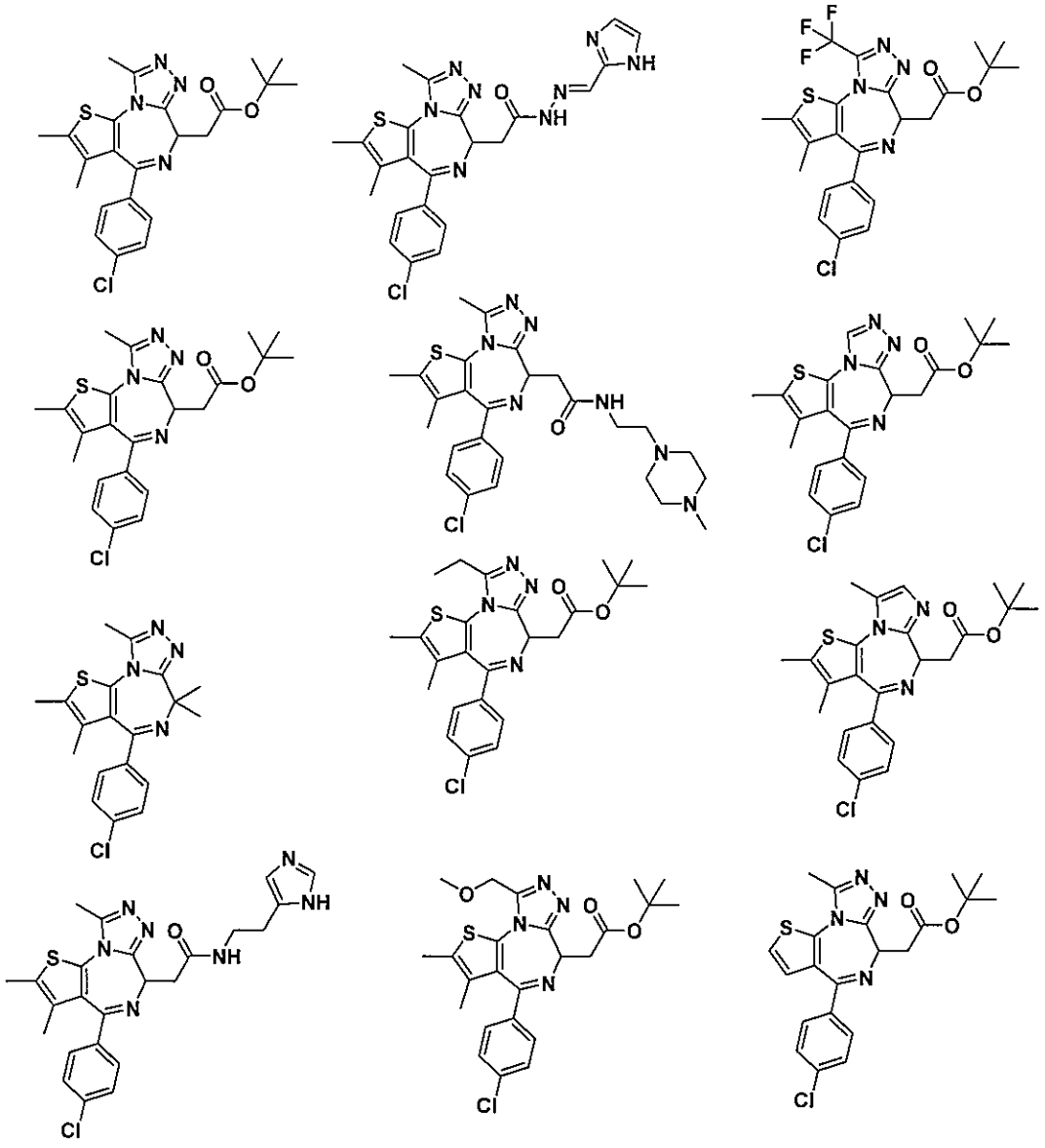


or a pharmaceutically acceptable salt thereof, for use in the treatment of a condition associated with hyperinsulinaemia in a subject in need thereof.

25. The compound of Claim 24, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

26. The compound of Claim 24, wherein the condition associated with hyperinsulinaemia is an insulinoma.

27. An effective amount of a compound represented by the following structural formulas:

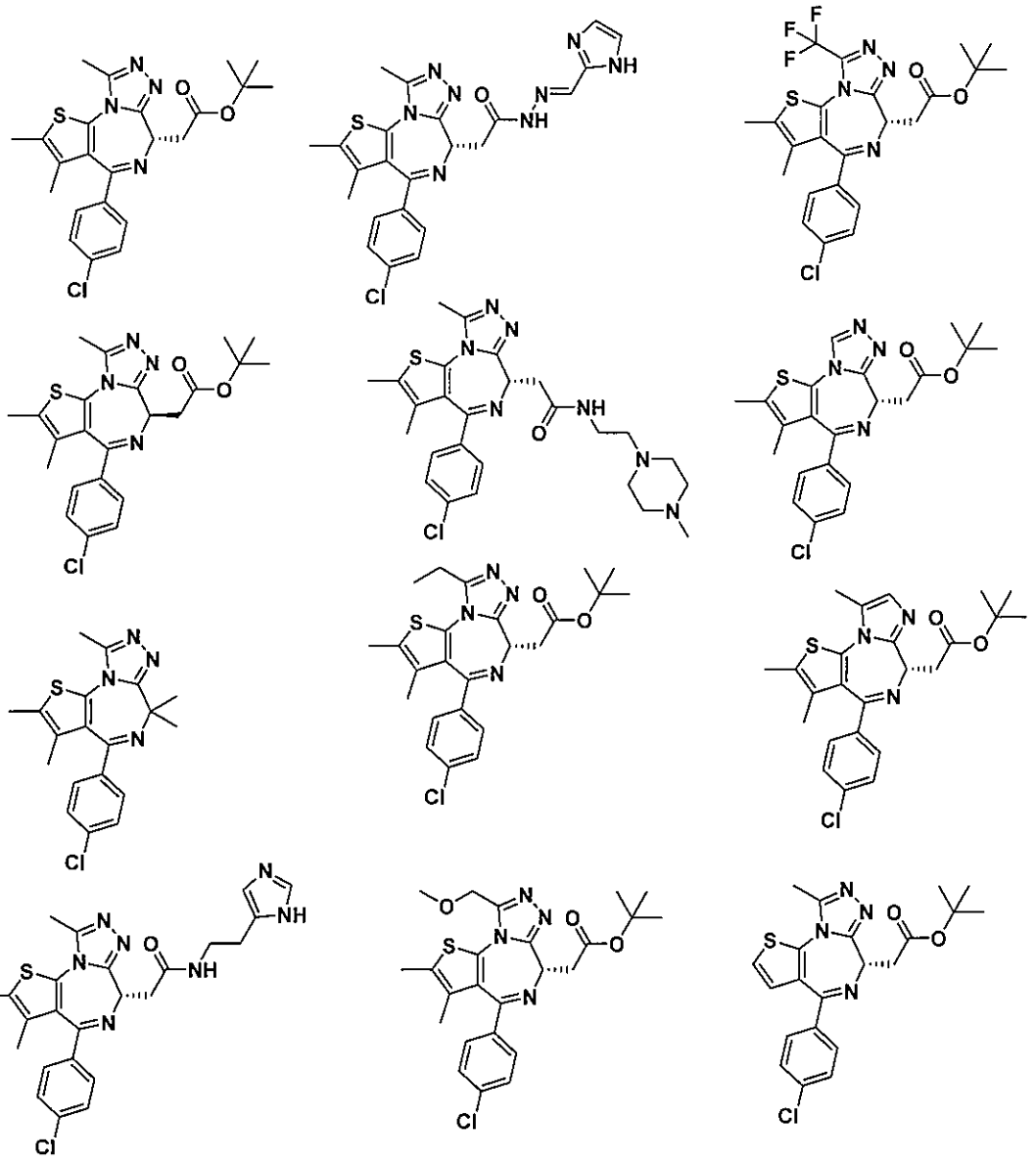


or a pharmaceutically acceptable salt thereof, for use in the treatment of a condition associated with hyperinsulinaemia in a subject in need thereof.

28. The compound of Claim 27, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

29. The compound of Claim 27, wherein the condition associated with hyperinsulinaemia is an insulinoma.

30. An effective amount of a compound represented by the following structural formulas:



or a pharmaceutically acceptable salt thereof, for use in the treatment of a condition associated with hyperinsulinaemia in a subject in need thereof.

31. The compound of Claim 30, wherein the condition associated with hyperinsulinaemia is selected from: insulinoma, congential hyperinsulism, polycystic ovary syndrome, Beckwith-Wiedemann syndrome and post-gastric bypass surgery.

32. The compound of Claim 30, wherein the condition associated with hyperinsulinaemia is an insulinoma.

33. The compound of any one of claims 1-32, wherein the subject is a mammal.

34. The compound of Claim 33, wherein the subject is a human.