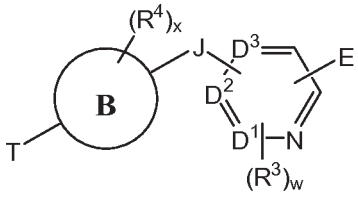
What is claimed is:

1. A compound having the structural formula



or a pharmaceutically acceptable salt, prodrug, or *N*-oxide thereof, or a solvate or hydrate thereof, wherein

0 or 1 of D^1, D^2 and D^3 is N, with the others independently being CH or C substituted by one of the w R^3;

E is $-R^2$, $-C(O)NR^1R^2$, $-NR^1R^2$ or $-NR^1C(O)R^2$, in which R^1 and R^2 together with the nitrogen to which they are bound form Hca, or R^1 is H, $-(C_1\text{-}C_4$ alkyl), $-C(O)-(C_1\text{-}C_4$ alkyl) or $-C(O)O-(C_1\text{-}C_4$ alkyl), and R^2 is $-C(O)$Hca, $-(C_0\text{-}C_3$ alkyl)-Ar, $-(C_0\text{-}C_3$ alkyl)-Het, $-(C_0\text{-}C_3$ alkyl)-Cak or $-(C_0\text{-}C_3$ alkyl)-Hca;

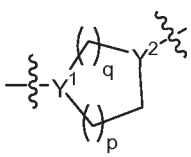
each R^3 is independently selected from $-(C_1\text{-}C_6$ alkyl), $-(C_1\text{-}C_6$ haloalkyl), $-(C_0\text{-}C_6$ alkyl)-Ar, $-(C_0\text{-}C_6$ alkyl)-Het, $-(C_0\text{-}C_6$ alkyl)-Cak, $-(C_0\text{-}C_6$ alkyl)-Hca, $-(C_0\text{-}C_6$ alkyl)-L-R^7, $-(C_0\text{-}C_6$ alkyl)-NR^8R^9, $-(C_0\text{-}C_6$ alkyl)-OR^{10}, $-(C_0\text{-}C_6$ alkyl)-$C(O)R^{10}$, $-(C_0\text{-}C_6$ alkyl)-$S(O)_{0\text{-}2}R^{10}$, -halogen, $-NO_2$ and -CN;

w is 0, 1, 2 or 3;

each R^4 is independently selected from $-(C_1\text{-}C_6$ alkyl), $-(C_1\text{-}C_6$ haloalkyl), $-(C_0\text{-}C_6$ alkyl)-Ar, $-(C_0\text{-}C_6$ alkyl)-Het, $-(C_0\text{-}C_6$ alkyl)-Cak, $-(C_0\text{-}C_6$ alkyl)-Hca, $-(C_0\text{-}C_6$ alkyl)-L-R^7, $-(C_0\text{-}C_6$ alkyl)-NR^8R^9, $-(C_0\text{-}C_6$ alkyl)-OR^{10}, $-(C_0\text{-}C_6$ alkyl)-$C(O)R^{10}$, $-(C_0\text{-}C_6$ alkyl)-$S(O)_{0\text{-}2}R^{10}$, -halogen, $-NO_2$ and -CN, and two R^4 on the same carbon optionally combine to form oxo, and two R^4 on different carbons optionally combine to form a $-(C_0\text{-}C_4$ alkylene)- bridge;

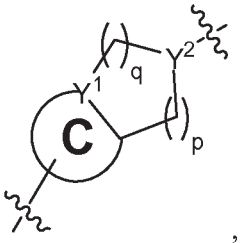
x is 0, 1, 2, 3 or 4;

J is absent, -C(O)-, $-NR^{13}$-, $-NR^{13}C(O)$- or $-C(O)NR^{13}$-, in which R^{13} is selected from -H, $-(C_1\text{-}C_4$ alkyl), $-C(O)-(C_1\text{-}C_4$ alkyl) and $-C(O)O-(C_1\text{-}C_4$ alkyl);

the ring system denoted by "B" is absnt, arylene, heteroarylene, 

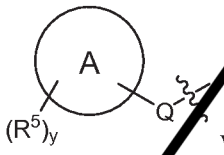
, wherein each of Y^1 and Y^2 is N, C or CH, provided that at least one of Y^1 and Y^2 is N; p is 0,

1, 2, 3 or 4, q is 1, 2, 3 or 4, and the sum of p and q is 1, 2, 3, 4, 5 or 6, or



, wherein Y^1 is N or C and Y^2 is N, C or CH, provided that at least one of Y^1 and Y^2 is N, the ring system denoted by "C" is an arylene or a heteroarylene, p is 0, 1, 2, 3 or 4, q is 1, 2, 3 or 4, and the sum of p and q is 1, 2, 3, 4, 5 or 6;

T is H, -(C_1-C_6 alkyl), -(C_1-C_6 alkyl)-R^{23} in which R^{23} is Het or Ar and in which one or more non-adjacent carbons of the alkyl is optionally replaced by -O- or -S-, -(C_0-C_6 alkyl)-L-R^7, -(C_0-C_6 alkyl)-NR^8R^9, -(C_0-C_6 alkyl)-OR^{10}, -(C_0-C_6 alkyl)-$C(O)R^{10}$, -(C_0-C_6 alkyl)-$S(O)_{0\text{-}2}R^{10}$ or



wherein

Q is -O-(C_0-C_3 alkyl)-, -$S(O)_2$-, -L- or (C_0-C_3 alkyl)-, in which each carbon of the -(C_0-C_3 alkyl)- is optionally and independently substituted with one or two R^{16};

the ring system denoted by "A" is heteroaryl, aryl, cycloalkyl or heterocycloalkyl;

each R^5 is independently selected from -(C_1-C_6 alkyl), -(C_1-C_6 haloalkyl), -(C_0-C_6 alkyl)-Ar, -(C_0-C_6 alkyl)-Het, -(C_0-C_6 alkyl)-Cak, -(C_0-C_6 alkyl)-Hca, -(C_0-C_6 alkyl)-L-R^7, -(C_0-C_6 alkyl)-NR^8R^9, -(C_0-C_6 alkyl)-OR^{10}, -(C_0-C_6 alkyl)-$C(O)R^{10}$, -(C_0-C_6 alkyl)-$S(O)_{0\text{-}2}R^{10}$, -halogen, N_3, -SF_5, -NO_2 and -CN; and

y is 0, 1, 2, 3 or 4;

in which

each L is independently selected

from -$NR^9C(O)O$-, -$OC(O)NR^9$-, -$NR^9C(O)$-NR^9-, -$NR^9C(O)S$-, -$SC(O)NR^9$-, -$NR^9C(O)$-, -$C(O)$-NR^9-, -$NR^9C(S)O$-, -$OC(S)NR^9$-, -$NR^9C(S)$-NR^9-, -$NR^9C(S)S$-, -$SC(S)NR^9$-, -$NR^9C(S)$-, -$C(S)NR^9$-, -$SC(O)NR^9$-, -$NR^9C(S)$-, -$S(O)_{0\text{-}2}$-, -C(O)O, -OC(O)-, -C(S)O-, -OC(S)-, -C(O)S-, -SC(O)-, -C(S)S-, -SC(S)-, -OC

(O)O-, -SC(O)O-, -OC(O)S-, -SC(S)O-, -OC(S)S-, -$NR^9C(NR^2)NR^9$-, -NR^9SO_2-, -SO_2NR^9- and -$NR^9SO_2NR^9$-,

each R^6, R^7, R^8 and R^{10} is independently selected from H, -(C_1-C_6 alkyl), -(C_1-C_6 haloalkyl), -(C_0-C_6 alkyl)-Ar, -(C_0-C_6 alkyl)-Het, -(C_0-C_6 alkyl)-Cak, -(C_0-C_6 alkyl)-Hca, -(C_0-C_6 alkyl)-L-(C_0-C_6 alkyl), -(C_0-C_6 alkyl)-NR^9-(C_0-C_6 alkyl), -(C_0-C_6 alkyl)-O-(C_0-C_6 alkyl), -(C_0-C_6 alkyl)-C(O)-(C_0-C_6 alkyl) and -(C_0-C_6 alkyl)-$S(O)_{0-2}$-(C_0-C_6 alkyl),

each R^9 is independently selected from -H, -(C_1-C_4 alkyl), -C(O)-(C_1-C_4 alkyl) and -C(O)O-(C_1-C_4 alkyl),

each Ar is an optionally substituted aryl,

each Het is an optionally substituted heteroaryl,

each Cak is an optionally substituted cycloalkyl,

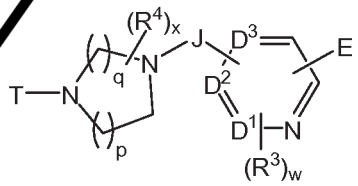
each Hca is an optionally substituted heterocycloalkyl, and

each alkyl is optionally substituted.

2. The compound according to claim 1, wherein D^1, D^2 and D^3 are independently CH or C substituted by one of the w R^3.

3. The compound according to claim 1, wherein D^1 is N and D^2 and D^3 are independently CH or C substituted by one of the w R^3; or D^3 is N and D^1 and D^2 are independently CH or C substituted by one of the w R^3

4. The compound according to any of claims 1-3, having the structural formula



,

wherein E is -R^2, -C(O)NR^1R^2, -NR^1R^2 or -$NR^1C(O)R^2$, in which R^1 and R^2 together with the nitrogen to which they are bound form Hca, or R^1 is H, -(C_1-C_4 alkyl), -C(O)-(C_1-C_4 alkyl) or -C(O)O-(C_1-C_4 alkyl); and R^2 is -(C_0-C_3 alkyl)-Ar, -(C_0-C_3 alkyl)-Het, -(C_0-C_3 alkyl)-Cak or -(C_0-C_3 alkyl)-Hca.

5. The compound according to any of claims 1-4, wherein two R^4 together to form oxo.

6. The compound according to any of claims 1-4, wherein two R^4 on different carbons form a -(C_0-C_4 alkylene)- bridge.

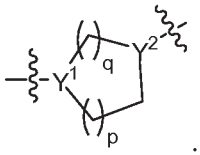
7. The compound according to any of claims 1-5, wherein two R^4 are (C^1-C^6 alkyl).

8. The compound according to any of claims 1-4, wherein x is 0.

9. The compound according to any of claims 1-3, wherein the ring system denoted by "B" is arylene or heteroarylene.

10. The compound according to any of claims 1-3, wherein the ring system denoted by "B" is absent.

11. The compound according to any of claims 1-3, wherein the ring system denoted by "B" is



.

12. The compound according to any of the preceding claims, wherein J is $-NR^{13}-$ or $-NR^{13}C(O)-$.

13. The compound according to any of the preceding claims, wherein J is $-C(O)NR^{13}-$ or $-C(O)-$.

14. The compound according to any of the preceding claims, wherein J is absent.

15. The compound according to any of the preceding claims, wherein R^2 is Hca substituted with at least one fluorine.

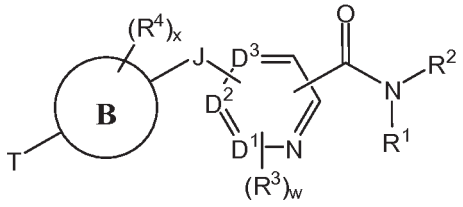
16. The compound according to any of the preceding claims, wherein R^2 is Hca substituted with $-C(O)-R^{22}$, $-S(O)_2-R^{22}$, $-C(O)$-Cak, $-CH_2$-Cak, $-CH(CH_3)-R^{22}$, $-C(CH_3)_2-R^{22}$, $-CH(C(O)-O(C_1-C_4$ alkyl))Het, in which R^{22} is Ar or Het.

17. The compound according to any of claims 1-14, wherein R^1 and R^2 together with the nitrogen to which they are bound form Hca.

18. The compound according to any of claims 1-14, wherein R^2 is $-(C_0-C_3$ alkyl)-Ar or $-(C_0-C_3$ alkyl)-Het.

19. The compound according to any of claims 1-14, wherein R^2 is -Cak.

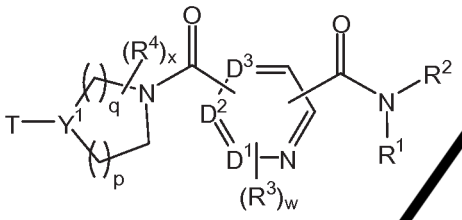
20. The compound according to any of the preceding claims, having the structural formula



,

in which J is absent, -NR[13]-, -NR[13]C(O)- or -C(O)NR[13]-; and the ring system denoted by "B" is arylene, heteroarylene, or absent.

21. The compound according to any of the preceding claims, having the structural formula



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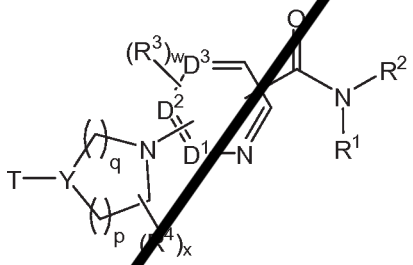
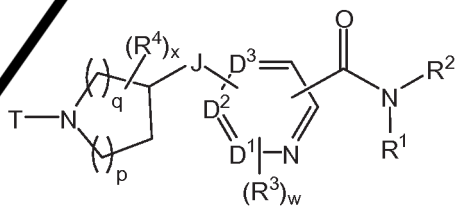
22. The compound according to any of the preceding claims, having the structural formula



,

in which Y is N, C, CF or CH.

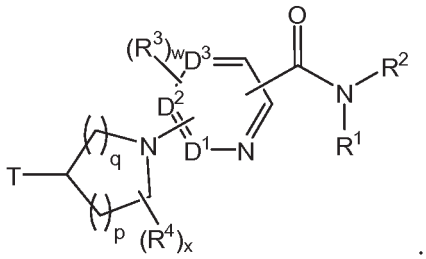
23. The compound according to any of the preceding claims, having the structural formula



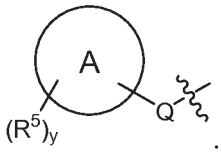
,

in which J is absent, -NR[13]-, -NR[13]C(O)- or -C(O)NR[13]-.

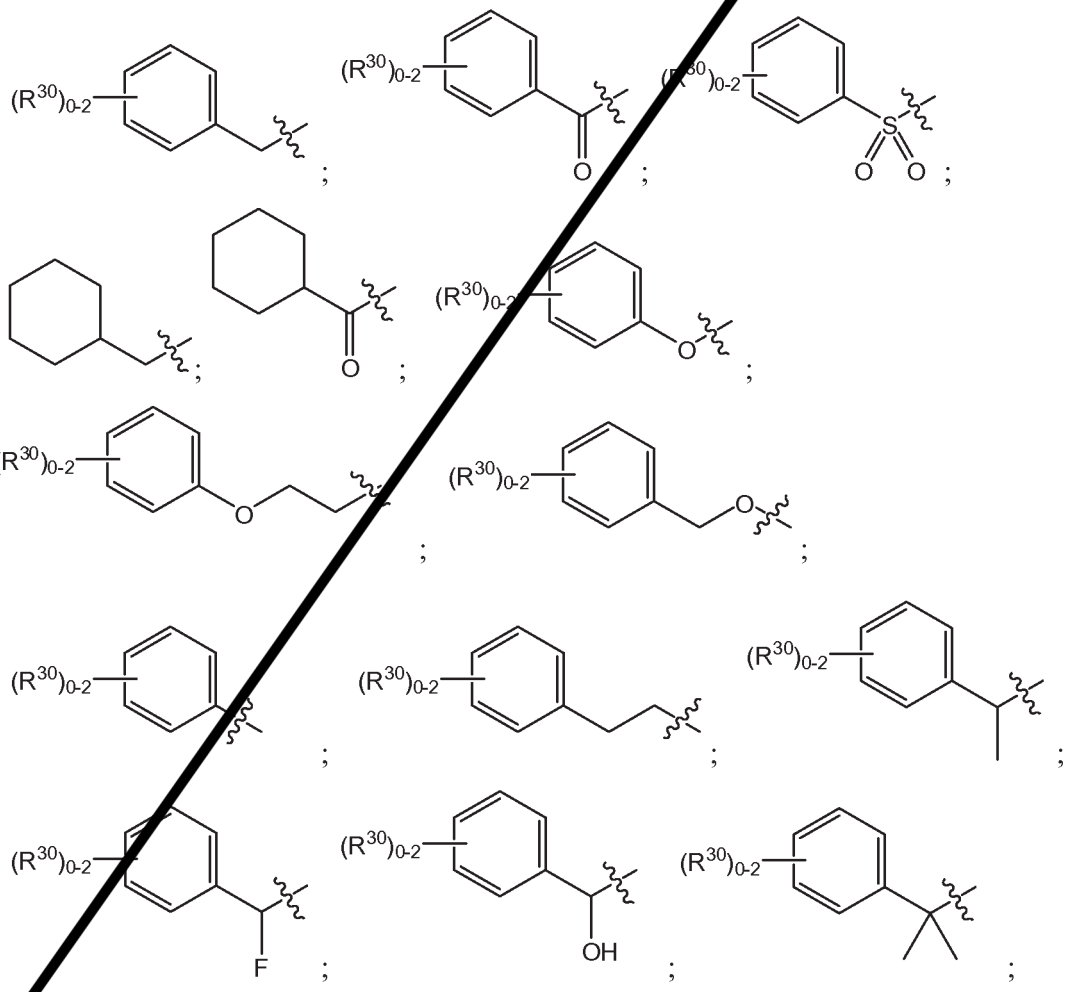
24. The compound according to any of the preceding claims, having the structural formula

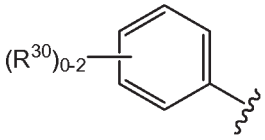


25. The compound according to any of the preceding claims, wherein T is



26. The compound according to any of the preceding claims, wherein T is





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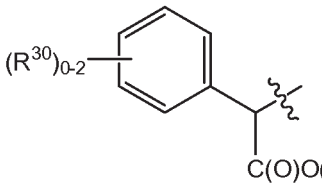
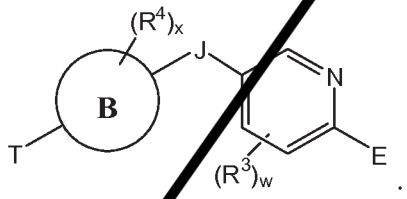


; monocyclic heterocycloalkyl with 0, 1 or 2 R^{30}, monocyclic heteroaryl substituted with 0, 1 or 2 R^{30}; or monocyclic heteroarylmethyl-, in which the heteroaryl is substituted with 0, 1 or 2 R^{30}; in which each R^{30} is independently selected from -F, -Cl, -Br, -C(O)-NH_2, C(O)N(alkyl)$_2$, NHCOalkyl, NHCOcycloalkyl, N(alkyl)$_2$, NH_2, -SH, methyl, ethyl, trifluoromethyl, methoxy, ethoxy, trifluoromethoxy, -NO_2, -SF_5, -N_3, -(NH)$_{0-1}SO_2R^{33}$, -(NH)$_{0-1}COR^{33}$, heterocycloalkyl, heteroaryl, and cyano, in which each R^{33} is alkyl, haloalkyl or cycloalkyl. .

27. The compound according to any of claims 1-24, wherein T is H, -C(O)-(C_1-C_6 alkyl) or (C_1-C_6 alkyl).

28. The compound according to any of the preceding claims, having the structural formula



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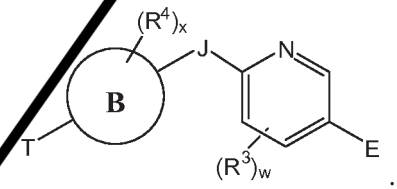
29. The compound according to any of claims 1-27 having the structural formula



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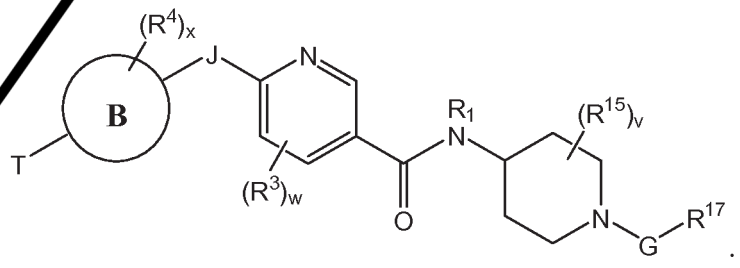
30. The compound according to claim 29, having the structural formula



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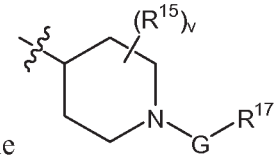
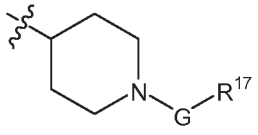
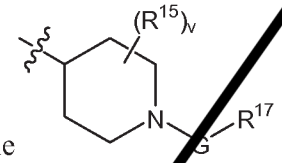
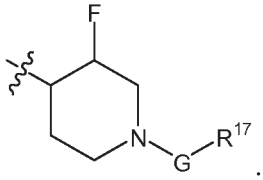
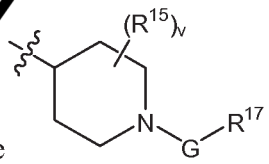
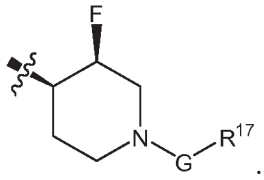
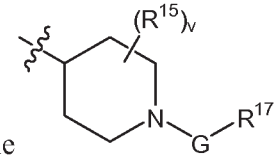
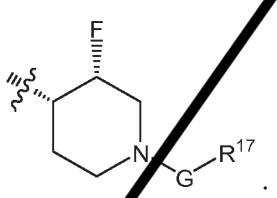
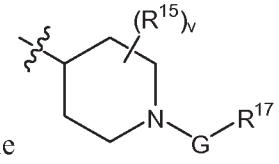
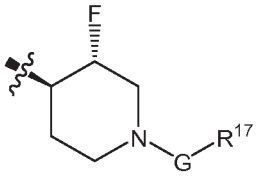
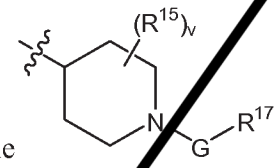
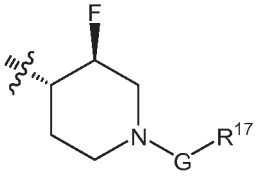
31. The compound according to claim 30, wherein the  moiety is .

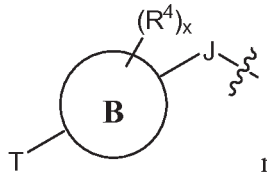
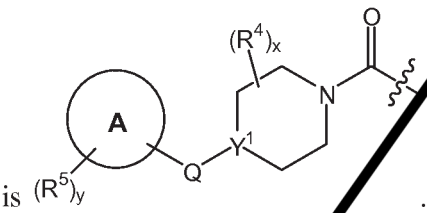
32. The compound according to claim 30, wherein the  moiety is .

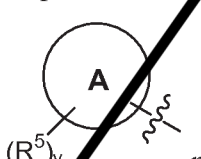
33. The compound according to claim 30, wherein the  moiety is .

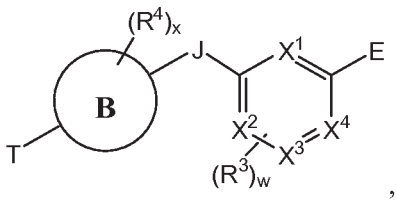
34. The compound according to claim 30, wherein the  moiety is .

35. The compound according to claim 30, wherein the  moiety is .

36. The compound according to claim 30, wherein the  moiety is .

37. A compound according to any of claims 31-36, wherein the  moiety is .

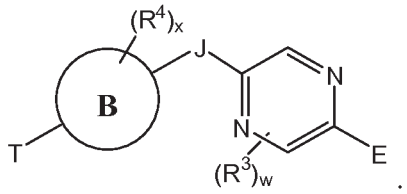
38. A compound according to claim 37, wherein R^{17} is phenyl substituted with 0, 1 or 2 R^{30}, and the  moiety is phenyl substituted with 0, 1 or 2 R^{30}.

39. The compound according to any of the preceding claims, having the structural formula ,

in which one of X^1, X^2, X^3 and X^4 is N, and the others are independently CH or C substituted with one of the w R^3 groups.

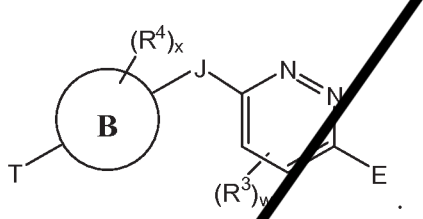
40. The compound according to claim 39, wherein X^1 is N and X^2, X^3 and X^4 are independently CH or C substituted with one of the w R^3 groups.

41. The compound according to any of claims 1-27, having the structural formula



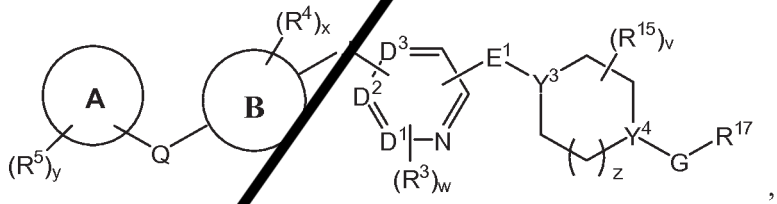
.

42. The compound according to any of claims 1-27, having the structural formula



.

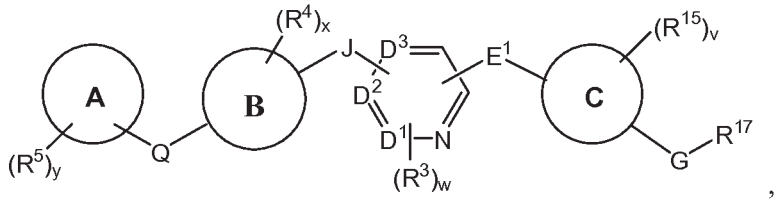
43. The compound according to any of the preceding claims, having the structural formula



,

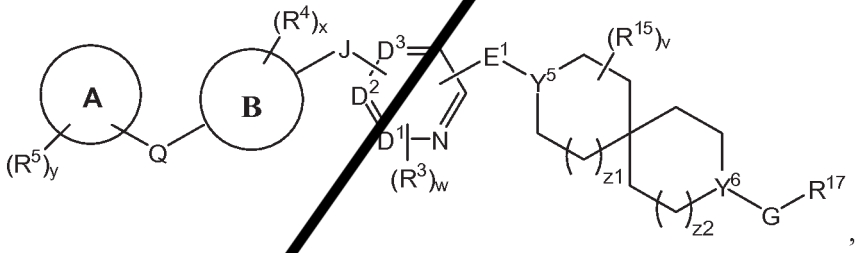
in which E^1 is absent, -C(O)-, -C(O)NR^1- or -NR^1C(O)-; z is 0 or 1; Y^3 is N, C or CH and Y^4 is N, C or CH; Q and G are each independently a single bond, -CH_2-, -C(H)(R^{16})-, -C(R^{16})$_2$-, -CH_2CH_2-, L, -L-C(R^{16})$_2$-, -O-(C_0-C_3 alkyl) in which the (C_0-C_3 alkyl is bound to the ring system denoted by "A" or the R^{17}, or -S(O)$_2$-; v is 0, 1, 2, 3 or 4; each R^{15} is independently selected from -(C_1-C_6 alkyl), -(C_1-C_6 haloalkyl), -(C_0-C_6 alkyl)-Ar, -(C_0-C_6 alkyl)-Het, -(C_0-C_6 alkyl)-Cak, -(C_0-C_6 alkyl)-Hca, -(C_0-C_6 alkyl)-L-R^7, -(C_0-C_6 alkyl)-NR^8R^9, -(C_0-C_6 alkyl)-OR^{10}, -(C_0-C_6 alkyl)-C(O)R^{10}, -(C_0-C_6 alkyl)-S(O)$_{0-2}R^{10}$, -halogen, -NO_2 and -CN, and two R^{15} on the same carbon optionally combine to form oxo; and R^{17} is Het or Ar.

44. The compound according to any of claims 1-42, having the structural formula



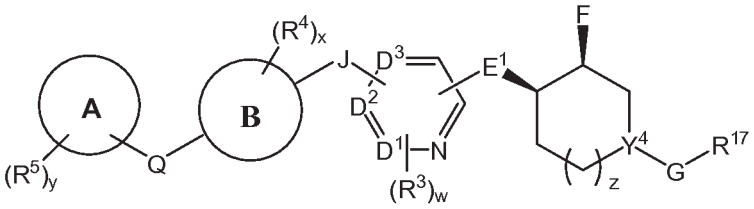
in which the ring system denoted by "C" is a monocyclic arylene or heteroarylene, or a monocyclic arylene fused to a heterocycloalkyl; E^1 is absent, -C(O)-, -C(O)NR^1- or -NR^1C(O)-; Q and G are each independently a single bond, -CH_2-, -C(H)(R^{16})-, -C(R^{16})$_2$-, -CH_2CH_2-, L, -L-C(R^{16})$_2$-, - O-(C_0-C_3 alkyl) in which the (C_0-C_3 alkyl is bound to the ring system denoted by "A" or the R^{17}, or -S(O)$_2$-; v is 0, 1, 2, 3 or 4; each R^{15} is independently selected from -(C_1-C_6 alkyl), -(C_1-C_6 haloalkyl), -(C_0-C_6 alkyl)-Ar, -(C_0-C_6 alkyl)-Het, -(C_0-C_6 alkyl)-Cak, -(C_0-C_6 alkyl)-Hca, -(C_0-C_6 alkyl)-L-R^7, -(C_0-C_6 alkyl)-NR^8R^9, -(C_0-C_6 alkyl)-OR^{10}, -(C_0-C_6 alkyl)-C(O)R^{10}, -(C_0-C_6 alkyl)-S(O)$_{0-2}R^{10}$, -halogen, -NO_2 and -CN, and two R^{15} on the same carbon optionally combine to form oxo; and R^{17} is Het or Ar.

45. The compound according to any of claims 1-42, having the structural formula

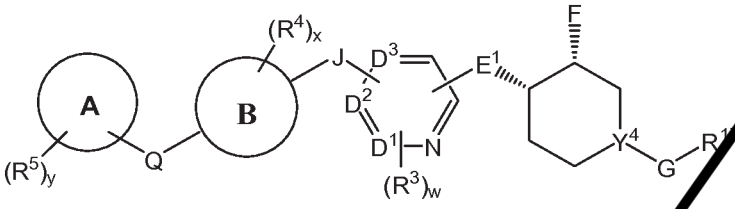


in which E^1 is absent, -C(O)-, -C(O)NR^1- or -NR^1C(O)-; z1 is 0 or 1; z2 is 0 or 1; Y^5 is N, C or CH; and Y^6 is N, C or CH; Q and G are each independently a single bond, -CH_2-, -C(H)(R^{16})-, -C(R^{16})$_2$-, -CH_2CH_2-, L, -L-C(R^{16})$_2$-, -O-(C_0-C_3 alkyl) in which the (C_0-C_3 alkyl is bound to the ring system denoted by "A" or the R^{17}, or -S(O)$_2$-; v is 0, 1, 2, 3 or 4; each R^{15} is independently selected from -(C_1-C_6 alkyl), -(C_1-C_6 haloalkyl), -(C_0-C_6 alkyl)-Ar, -(C_0-C_6 alkyl)-Het, -(C_0-C_6 alkyl)-Cak, -(C_0-C_6 alkyl)-Hca, -(C_0-C_6 alkyl)-L-R^7, -(C_0-C_6 alkyl)-NR^8R^9, -(C_0-C_6 alkyl)-OR^{10}, -(C_0-C_6 alkyl)-C(O)R^{10}, -(C_0-C_6 alkyl)-S(O)$_{0-2}R^{10}$, -halogen, -NO_2 and -CN, and two R^{15} on the same carbon optionally combine to form oxo; and R^{17} is Het or Ar.

46. The compound according to any of claims 1-42, having the structural formula

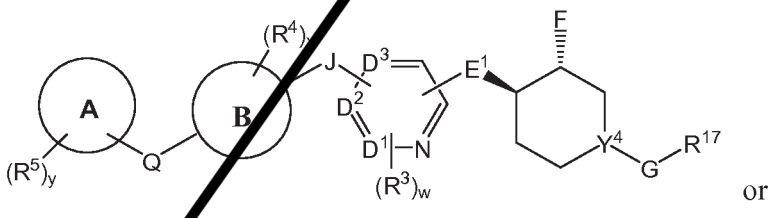


or

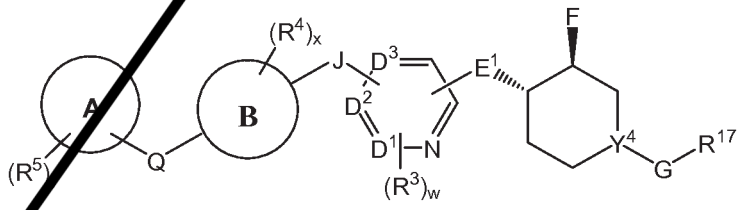


in which E^1 is absent, -C(O)-, -C(O)NR^1- or -NR^1C(O)-; z is 0 or 1; Y^4 is N or CH; Q and G are each independently a single bond, -CH_2-, -C(H)(R^{16})-, -C(R^{16})$_2$-, -CH_2CH_2-, L, -L-C(R^{16})$_2$-, -O-(C_0-C_3 alkyl) in which the (C_0-C_3 alkyl is bound to the ring system denoted by "A" or the R^{17}, or -S(O)$_2$-; v is 0, 1, 2, 3 or 4; each R^{15} is independently selected from -(C_1-C_6 alkyl), -(C_1-C_6 haloalkyl), -(C_0-C_6 alkyl)-Ar, -(C_0-C_6 alkyl)-Het, -(C_0-C_6 alkyl)-Cak, -(C_0-C_6 alkyl)-Hca, -(C_0-C_6 alkyl)-L-R^7, -(C_0-C_6 alkyl)-NR^8R^9, -(C_0-C_6 alkyl)-OR^{10}, -(C_0-C_6 alkyl)-C(O)R^{10}, -(C_0-C_6 alkyl)-S(O)$_{0-2}R^{10}$, -halogen, -NO_2 and -CN, and two R^{15} on the same carbon optionally combine to form oxo; and R^{17} is Het or Ar.

47. The compound according to any of claims 1-42, having the structural formula



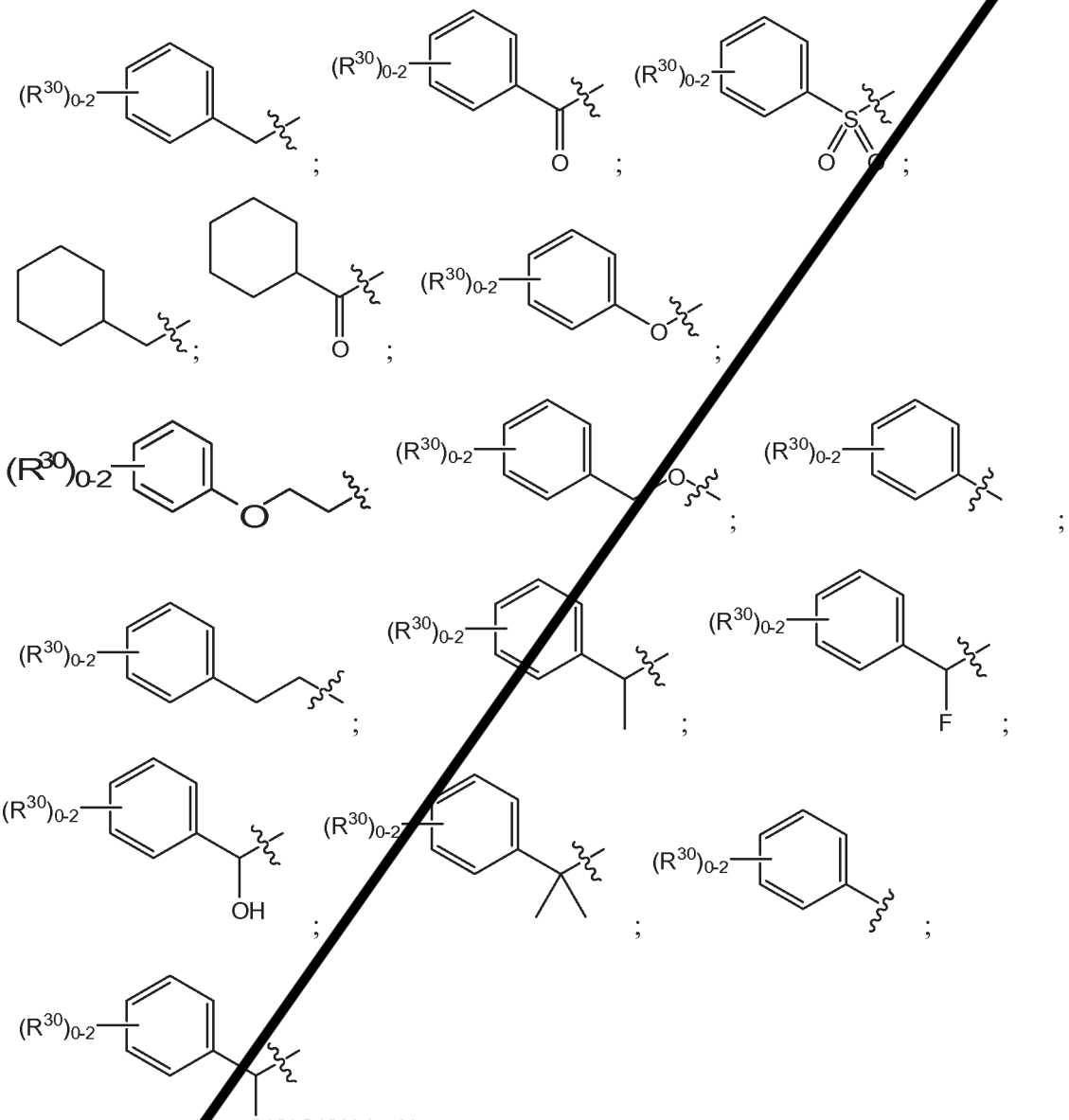
or



in which Y^4 is N or CH, E^1 is absent, -C(O)-, -C(O)NR^1- or -NR^1C(O)-; z is 0 or 1; Y^4 is N or CH; Q and G are each independently a single bond, -CH_2-, -C(H)(R^{16})-, -C(R^{16})$_2$-, -CH_2CH_2-, L, -L-C(R^{16})$_2$-, -O-(C_0-C_3 alkyl) in which the (C_0-C_3 alkyl is bound to the ring system denoted by "A" or the R^{17}, or -S(O)$_2$-; v is 0, 1, 2, 3 or 4; each R^{15} is independently selected from -(C_1-C_6 alkyl), -(C_1-C_6 haloalkyl), -(C_0-C_6 alkyl)-Ar, -(C_0-C_6 alkyl)-Het, -(C_0-C_6 alkyl)-Cak, -(C_0-C_6 alkyl)-Hca, -(C_0-C_6 alkyl)-L-R^7, -(C_0-C_6 alkyl)-NR^8R^9, -(C_0-C_6

alkyl)-OR^{10}, -(C_0-C_6 alkyl)-$C(O)R^{10}$, -(C_0-C_6 alkyl)-$S(O)_{0-2}R^{10}$, -halogen, -NO_2 and -CN, and two R^{15} on the same carbon optionally combine to form oxo; and R^{17} is Het or Ar.

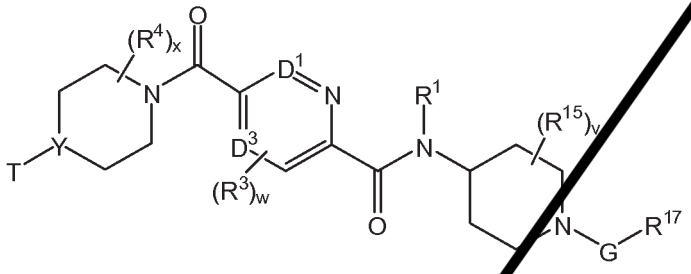
48. The compound according to any of claims 30-37 and 43-47, wherein the -G-R^{17} moiety is



$C(O)O(CH_2)_{1-3}H$; monocyclic heterocycloalkyl substituted with 0, 1 or 2 R^{30}, monocyclic heteroaryl substituted with 0, 1 or 2 R^{30}; monocyclic heteroarylmethyl- in which the heteroaryl is substituted with 0, 1 or 2 R^{30}; or monocyclic heteroaryloxy- in which the heteroaryl is substituted with 0, 1 or 2 R^{30}; in which each R^{30} is independently selected from halogen, unsubstituted (C_1-C_6 alkoxy), -(C_1-C_6 haloalkoxy), -SH, -S(unsubstituted C_1-C_4 alkyl), -S(C_1-C_6 haloalkyl), -OH, -CN, -NO_2, -NH_2, -NH(unsubstituted C_1-C_4 alkyl), -N(unsubstituted C_1-C_4 alkyl)$_2$, -N_3, -SF_5, -C(O)-NH_2, C(O)NH(unsubstituted C_1-C_4

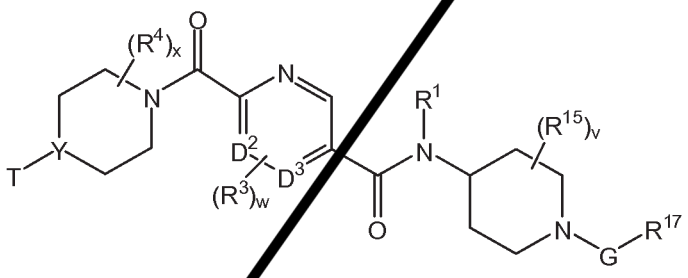
alkyl), C(O)N(unsubstituted C_1-C_4 alkyl)$_2$, -C(O)OH, C(O)O(unsubstituted C_1-C_6 alkyl), -$(NH)_{0-1}SO_2R^{33}$, -$(NH)_{0-1}COR^{33}$, heterocycloalkyl optionally substituted with an (unsubstituted C_1-C_6 alkyl) and heteroaryl optionally substituted with an (unsubstituted C_1-C_6 alkyl), in which each R^{33} is (unsubstituted C_1-C_6 alkyl), (C_1-C_6 haloalkyl(unsubstituted C_3-C_8 cycloalkyl) or (C_3-C_8 heterocycloalkyl) optionally substituted with an (unsubstituted C_1-C_6 alkyl).

49. A compound according to any of the preceding claims, having structural formula



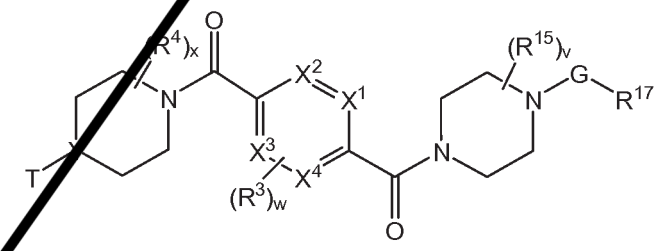
.

50. A compound according to any of the preceding claims, having structural formula



.

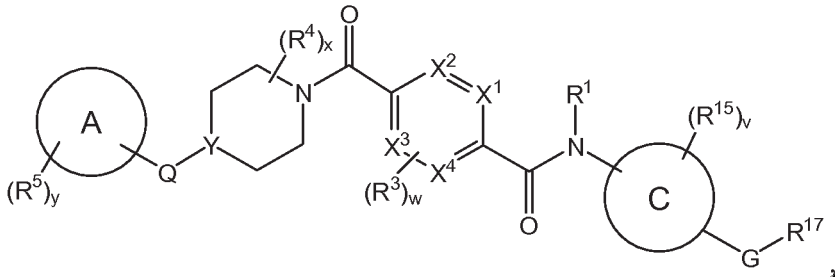
51. A compound according to any of the preceding claims, having structural formula



,

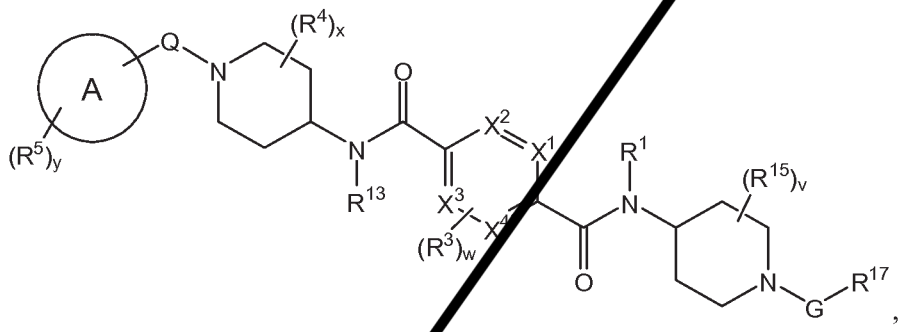
in which one or two of X^1, X^2, X^3 and X^4 are N, and the others are CH or C substituted by one of the w R^3.

52. A compound according to any of the preceding claims, having structural formula



in which the ring system denoted by "C" is heteroarylene (for example, monocyclic heteroarylene), and one or two of X^1, X^2, X^3 and X^4 are N, and the others are CH or C substituted by one of the w R^3.

53. A compound according to any of the preceding claims, having structural formula



in which one or two of X^1, X^2, X^3 and X^4 are N, and the others are CH or C substituted by one of the w R^3.

54. A compound according to any of the preceding claims wherein R^1 is H.

55. A compound according to any of the preceding claims wherein w is 0.

56. A compound according to any of the preceding claims, wherein the compound is not

5-(4-(4-cyanobenzyl)piperazine-1-carbonyl)-*N*-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(trifluoromethyl)benzyl)piperazine-1-carbonyl)picolinamide

(S)-5-(4-(4-chlorophenyl)piperazine-1-carbonyl)-*N*-(1-(4-fluorobenzyl)pyrrolidin-3-yl)picolinamide;

(S)-5-(4-(4-chlorophenyl)piperazine-1-carbonyl)-*N*-(1-(pyridin-4-ylmethyl)pyrrolidin-3-yl)picolinamide;

(S)-5-(4-(4-chlorophenyl)piperazine-1-carbonyl)-*N*-(1-(4-cyanobenzyl)pyrrolidin-3-yl)picolinamide;

N-(1-(4-chlorobenzyl)pyrrolidin-3-yl)-5-(4-(4-chlorophenyl)piperazine-1-carbonyl)picolinamide; or

5-(4-(4-chlorophenyl)piperazine-1-carbonyl)-*N*-(1-(4-(trifluoromethyl)benzyl)pyrrolidin-3-yl)picolinamide.

57. A compound according to claim 1, wherein the compound is

N-(4-(4-cyanobenzyl)piperadin-4-yl)-6-(4-(4-fluorobenzyl)piperizine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(piperazine-1-carbonyl)picolinamide;

pyridine-2,5-diylbis((4-(4-fluorobenzyl)piperazin-1-yl)methanone);

N-(1-(4-cyanobenzoyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N^2-(1-(4-cyanobenzyl)piperidin-4-yl)-N^5-(3-benzylphenyl)pyridine-2,5-dicarboxamide;

N-(4-((4-cyanophenyl)sulfonyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(1-(cyclohexanecarbonyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(1-(benzoyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)-1H-pyrazol-3-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(4-benzylphenyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl-*N*-(4-phenylphenyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl-*N*-(3-phenylphenyl)picolinamide;

N-(1-(cyclohexylmethyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(1-(phenyl)piperidin-4-yl)picolinamide;

4-((8-(5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinoyl)-2,8-diazaspiro[4.5]decan-2-yl)methyl)benzonitrile;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-phenoxyphenyl)picolinamide;

(4-(4-fluorobenzyl)piperazin-1-yl)(6-(4-(benzyloxy)phenyl)pyridin-3-yl)methanone;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(1-(1-phenylethyl)piperidin-4-yl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N* -(2-phenylphenyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-(4-nitrophenyl)phenyl) picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(3-phenoxyphenyl)picolinamide;

(6-(3-(benzyloxy)phenyl)pyridin-3-yl)(4-(4-fluorobenzyl)piperazin-1-yl)methanone;

N-(1-(4-cyanobenzyl)-1H-pyrazol-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(4-(4-cyanophenyl)phenyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-(4-trifluoromethylphenyl)phenyl)picolinamide;

N-(4-benzoylphenyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(4-benzyloxyphenyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(4-bromophenyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(4-(4-methoxyphenyl)phenyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

(6-(4-benzylphenylamino)pyridin-3-yl)(4-(4-fluorobenzyl)piperazin-1-yl)methanone;

4-((2-(5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)pyridin-2-yl)-2,8-diazaspiro[4.5]decan-8-yl)methyl)benzonitrile;

N-(4-(3-cyanophenyl)phenyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

(6-(3-phenylphenylamino)pyridin-3-yl)(4-(4-fluorobenzyl)piperazin-1-yl)methanone;

(4-(4-fluorobenzyl)piperazin-1-yl)(6-(4-phenoxyphenylamino)pyridin-3-yl)methanone;

(6-(4-(4-cyanobenzylcarbamoyl)phenyl)pyridin-3-yl)(4-(4-fluorobenzyl)piperazin-1-yl)methanone;

(6-(4-(cyanobenzyl)piperidin-4-ylamino)pyridin-3-yl)(4-(4-fluorobenzyl)piperazin-1-yl)methanone;

(6-(4-phenylphenylamino)pyridin-3-yl)(4-(4-fluorobenzyl)piperazin-1-yl)methanone;

N^5-(1-(4-cyanobenzyl)-1H-pyrazol-3-yl)-N^2-(1-(4-cyanobenzyl)piperidin-4-yl)pyridine-2,5-dicarboxamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-(1H-pyrrol-3-yl)phenyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-morpholinophenyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-(4-methylpiperazin-1-yl)phenyl)picolinamide;

(6-(3-(4-cyanobenzylcarbamoyl)phenyl)pyridin-3yl)(4-(4-fluorobenzyl)piperazin-1-yl)methanone;

N^5-(1-(4-cyanobenzyl)-1H-pyrazol-4-yl)-N^2-(1-(4-cyanobenzyl)piperidin-4-yl)pyridine-2,5-dicarboxamide;

(6-(1-(4-fluorobenzyl)-1H-pyrazol-4-ylamino)pyridin-3-yl)(4-(4-fluorobenzyl)piperazin-1-yl)methanone;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(1-(4-fluorobenzyl)-1H-pyrazol-4-ylamino)picolinamide;

(6-(1-(4-cyanobenzyl)piperidine-4-carboxamido)pyridin-3-yl)(4-(4-fluorobenzyl)piperazin-1-yl)methanone;

N-(4-(4-cyanobenzylcarbamoyl)phenyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

(6-(4-(4-cyanobenzylcarbamoyl)phenylamino)pyridin-3-yl)(4-(4-fluorobenzyl)piperazin-1-yl)methanone;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(1-(4-fluoro-3-methylbenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-chlorobenzyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-chlorobenzyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-(4-methylphenoxy)phenyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-(4-methoxyphenoxy)phenyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-(3-fluorophenoxy)phenyl)picolinamide;

N-(4-(3-cyanophenoxy)phenyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-(3-methoxyphenoxy)phenyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-(3-methylphenoxy)phenyl)picolinamide;

N-(4-(4-cyanophenoxy)phenyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-(4-fluorophenoxy)phenyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-(pyridine-3-yl)phenyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(4-(thiophen-3-yl)phenyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-(6-(4-cyanophenoxy)pyridin-3-yl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-(6-(3-cyanophenoxy)pyridin-3-yl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-*N*-(6-(4-fluorophenoxy)pyridin-3-yl)picolinamide;

5-(4-(4-cyano-2-methoxyphenoxy)piperidine-1-carbonyl)-*N*-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

5-(4-(4-fluoro-4-fluorobenzoyl)piperidine-1-carbonyl)-*N*-(6-(4-fluorophenoxy)pyridin-3-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-fluoro-4-fluorobenzoyl)piperidine-1-carbonyl)picolinamide;

5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-*N*-(6-(4-fluorophenoxy)pyridin-3-yl)picolinamide;

5-(4-(4-methoxyphenoxy)piperidine-1-carbonyl)-*N*-(6-(4-fluorophenoxy)pyridin-3-yl)picolinamide;

trans-*N*-(4-(4-cyanophenoxy)cyclohexyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-benzylpiperazine-1-carbonyl)-N-(1-benzylpiperidin-4-yl)picolinamide;

pyridine-2,5-diylbis((4-benzylpiperazin-1-yl)methanone);

6-(4-benzylpiperazine-1-carbonyl)-N-(1-benzylpiperidin-4-yl)nicotinamide;

5,5'-(piperazine-1,4-diylbis(oxomethylene))bis(N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide);

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-fluorobenzoyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-methoxybenzoyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-fluorophenylsulfonyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-methoxyphenylsulfonyl)piperazine-1-carbonyl)picolinamide;

5-(4-benzoylpiperazine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-pivaloylpiperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(phenylsulfonyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(tetrahydro-2H-pyran-4-yl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-isopropylpiperazine-1-carbonyl)picolinamide;

N-(1-benzylpiperidin-4-yl)-5-(4-((5-methylisoxazol-3-yl)methyl)piperazine-1-carbonyl)picolinamide;

N2,N6-bis(1-(4-cyanobenzyl)piperidin-4-yl)pyridine-2,6-dicarboxamide;

N2,N6-bis(1-(4-fluorobenzyl)piperidin-4-yl)pyridine-2,6-dicarboxamide;

(4-(4-fluorobenzyl)piperazin-1-yl)(6-(4-phenethylpiperazine-1-carbonyl)pyridin-3-yl)methanone;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(cyclohexanecarbonyl)piperazine-1-carbonyl)picolinamide;

(4-phenethylpiperazin-1-yl)(5-(4-phenylpiperazine-1-carbonyl)pyridin-2-yl)methanone;

(4-isopropylpiperazin-1-yl)(6-(4-phenethylpiperazine-1-carbonyl)pyridin-3-yl)methanone;

pyridine-2,5-diylbis((4-phenethylpiperazin-1-yl)methanone);

(4-(4-fluorobenzyl)piperazin-1-yl)(6-(4-phenethylpiperazine-1-carbonyl)pyridin-2-yl)methanone;

(4-(4-fluorobenzyl)piperazin-1-yl)(6-(4-phenylpiperazine-1-carbonyl)pyridin-2-yl)methanone;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(cyclohexylmethyl)piperazine-1-carbonyl)picolinamide;

N-(1-benzylpiperidin-4-yl)-5-(4-(pyridin-4-yl)piperazine-1-carbonyl)picolinamide;

N-(1-benzylpiperidin-4-yl)-5-(4-phenylpiperazine-1-carbonyl)picolinamide;

ethyl 2-(4-(5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamido)piperidin-1-yl)-2-phenylacetate;

N-(4-(4-cyanobenzyl)cyclohexyl)-6-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

cis-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-methoxybenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-N-(cis-3-fluoropiperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(pyridin-4-ylmethyl)piperazine-1-carbonyl)picolinamide;

N-(cis-3-fluoro-1-(pyridin-4-ylmethyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N2-(1-benzylpiperidin-4-yl)-N5-(biphenyl-4-yl)pyridine-2,5-dicarboxamide;

N2-(1-benzylpiperidin-4-yl)-N5-(biphenyl-3-yl)pyridine-2,5-dicarboxamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-N-phenylpicolinamide;

5-(4-benzylphenylamino)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

5-(biphenyl-4-ylamino)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

5-(4-benzylpiperazin-1-yl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(2-(4-cyanophenyl)propan-2-yl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(1-benzylpiperidin-4-yl)-5-(3-phenoxyphenylamino)picolinamide;

N-(1-benzylpiperidin-4-yl)-5-(4-phenoxyphenylamino)picolinamide;

N-(1-benzylpiperidin-4-yl)-5-(biphenyl-3-ylamino)picolinamide;

N-benzyl-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-benzyl-5-(4-benzylpiperazine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)picolinamide;

(R)-N-(1-(4-cyanobenzyl)pyrrolidin-3-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(1-benzylpiperidin-4-yl)-5-(4'-cyanobiphenyl-4-ylamino)picolinamide;

N-(1-benzylpiperidin-4-yl)-5-(4'-methoxybiphenyl-4-ylamino)picolinamide;

5-(1-benzyl-1H-1,2,3-triazol-4-yl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

5-(1-benzyl-1H-1,2,3-triazol-4-yl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

(S)-N-(1-(4-cyanobenzyl)pyrrolidin-3-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-benzylpiperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)-3,3-dimethylpiperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(1-phenylpiperidin-4-ylamino)picolinamide;

N-(*cis*-1-(4-chlorobenzyl)-3-fluoropiperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-cyanobenzyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-methoxybenzyl)piperidine-1-carbonyl)picolinamide;

N-(2-(4-cyanobenzyl)-1,2,3,4-tetrahydroisoquinolin-7-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(2-phenylpropan-2-yl)piperazine-1-carbonyl)picolinamide;

5-(4-(4-chlorophenyl)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-cyanophenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-fluorobenzoyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(3-(4-cyanophenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(fluoro(4-fluorophenyl)methyl)piperidine-1-carbonyl)picolinamide;

5-(1-(4-chlorophenyl)piperidin-4-ylamino)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(3,5-difluorobenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-(4-carbamoylbenzyl)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-((4-fluorophenyl)(hydroxy)methyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-methoxyphenoxy)piperidine-1-carbonyl)picolinamide;

N2-(2-(4-cyanobenzyl)-1,2,3,4-tetrahydroisoquinolin-7-yl)-N5-(4-fluorobenzyl)pyridine-2,5-dicarboxamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-methylbenzyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(3-fluoro-4-methoxybenzyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(3-methoxybenzyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-fluorophenoxy)piperidine-1-carbonyl)picolinamide;

N2-(1-(4-cyanobenzyl)piperidin-4-yl)-N5-(2-(4-fluorophenoxy)ethyl)pyridine-2,5-dicarboxamide;

N-(cis-4-(4-cyanophenoxy)cyclohexyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide

N-(trans-4-(4-cyanophenoxy)cyclohexyl)-5-(4-(4-fluorobenzoyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(3-(4-fluorobenzyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(2-(4-fluorobenzyl)piperidine-1-carbonyl)picolinamide;

5-(4-(4-chlorobenzoyl)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(3-cyanophenoxy)piperidine-1-carbonyl)picolinamide;

5-(4-(3-chloro-4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(trifluoromethyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(3,4-difluorophenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-3-(5,20-dioxo-24-((3aS,4S,6aR)-2-oxohexahydro-1H-thieno[3,4-d]imidazol-4-yl)-7,10,13,16-tetraoxa-4,19-diazatetracos-1-ynyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzoyl)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)picolinamide;

5-(4-(4-fluorophenoxy)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)picolinamide;

5-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)picolinamide;

5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)picolinamide;

tert-butyl 3-(2-(1-(4-cyanobenzyl)piperidin-4-ylcarbamoyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)pyridin-3-yl)prop-2-ynylcarbamate;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-cyanophenoxy)piperidin-1-yl)picolinamide;

N2-(1-(4-cyanobenzyl)piperidin-4-yl)-N5-(1-(4-cyanophenyl)piperidin-4-yl)pyridine-2,5-dicarboxamide;

N-((cis)-4-(4-cyanophenoxy)cyclohexyl)-5-(4-(4-fluorophenoxy)piperidine-1-carbonyl)picolinamide;

N-((trans)-4-(4-cyanophenoxy)cyclohexyl)-5-(4-(4-fluorobenzoyl)piperidine-1-carbonyl)picolinamide;

N-((trans)-4-(4-cyanophenoxy)cyclohexyl)-5-(4-(4-fluorophenoxy)piperidine-1-carbonyl)picolinamide;

N-(5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)pyridin-2-yl)biphenyl-4-carboxamide;

N-((cis)-4-(4-cyanophenoxy)cyclohexyl)-5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)picolinamide;

N-((trans)-4-(4-cyanophenoxy)cyclohexyl)-5-(4-(4-methoxyphenoxy)piperidine-1-carbonyl)picolinamide;

1-(4-cyanobenzyl)-N-(5-(4-(4-fluorophenoxy)piperidine-1-carbonyl)pyridin-2-yl)piperidine-4-carboxamide;

N-((cis)-4-(4-cyanophenoxy)cyclohexyl)-5-(4-(4-methoxyphenoxy)piperidine-1-carbonyl)picolinamide;

1-(4-cyanobenzyl)-N-(5-(4-(4-fluorobenzoyl)piperidine-1-carbonyl)pyridin-2-yl)piperidine-4-carboxamide;

N-((cis)-4-(4-cyanophenoxy)cyclohexyl)-5-((S)-3-(4-fluorophenoxy)pyrrolidine-1-carbonyl)picolinamide;

N-(5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)pyridin-2-yl)-6-(4-fluorophenoxy)nicotinamide;

N-(1-(4-fluorobenzyl)piperidin-4-yl)-5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-fluorobenzyl)piperidin-4-yl)-5-(4-(4-(trifluoromethyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-fluorobenzyl)piperidin-4-yl)-5-(4-(4-fluorophenoxy)piperidine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzoyl)piperidine-1-carbonyl)-N-(1-(4-fluorobenzyl)piperidin-4-yl)picolinamide;

(S)-N-(1-(4-fluorobenzyl)piperidin-4-yl)-5-(3-(4-fluorophenoxy)pyrrolidine-1-carbonyl)picolinamide;

N-(1-(4-fluorobenzyl)piperidin-4-yl)-5-(4-(4-methoxyphenoxy)piperidine-1-carbonyl)picolinamide;

5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-((cis)-4-(4-methoxyphenoxy)cyclohexyl)picolinamide;

N-((cis)-4-(4-methoxyphenoxy)cyclohexyl)-5-(4-(4-(trifluoromethyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-((cis)-4-(4-methoxyphenoxy)cyclohexyl)-5-(4-(4-methoxyphenoxy)piperidine-1-carbonyl)picolinamide;

(4-(4-fluorobenzyl)piperazin-1-yl)(6-(4-(4-(trifluoromethyl)phenoxy)piperidin-1-yl)pyridin-3-yl)methanone;

4-(1-(5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)pyridin-2-yl)piperidin-4-yloxy)benzonitrile;

(4-(4-fluorobenzyl)piperazin-1-yl)(6-(4-(4-methoxybenzoyl)piperidin-1-yl)pyridin-3-yl)methanone;

N-((cis)-4-(4-cyanophenoxy)cyclohexyl)-5-(4-(4-(trifluoromethyl)phenoxy)piperidine-1-carbonyl)picolinamide;

5-(4-(4-methoxyphenoxy)piperidine-1-carbonyl)-N-((cis)-4-(4-(trifluoromethyl)phenoxy)cyclohexyl)picolinamide;

5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-((cis)-4-(4-(trifluoromethyl)phenoxy)cyclohexyl)picolinamide;

5-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-((cis)-4-(4-(trifluoromethyl)phenoxy)cyclohexyl)picolinamide;

5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-(1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)picolinamide;

5-(4-(4-methoxyphenoxy)piperidine-1-carbonyl)-N-(1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)picolinamide;

5-(4-(4-fluorophenoxy)piperidine-1-carbonyl)-N-(1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)picolinamide;

5-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)picolinamide;

N-((cis)-4-(4-cyano-3-fluorophenoxy)cyclohexyl)-5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)picolinamide;

N-((cis)-4-(4-cyano-3-fluorophenoxy)cyclohexyl)-5-(4-(4-(trifluoromethyl)phenoxy)piperidine-1-carbonyl)picolinamide;

5-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-fluorobenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-carbamoylbenzyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-methoxybenzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)pyrazine-2-carboxamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-5-(4-(4-(trifluoromethyl)phenoxy)piperidine-1-carbonyl)pyrazine-2-carboxamide;

5-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)pyrazine-2-carboxamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)pyrazine-2-carboxamide;

5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)-N-(1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(3-(4-cyanophenoxy)azetidine-1-carbonyl)picolinamide;

5-(3-(4-cyanophenoxy)azetidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)pyrazine-2-carboxamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(trifluoromethyl)phenoxy)piperidine-1-carbonyl)pyrazine-2-carboxamide;

6-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)-N-(1-(4-(methylsulfonyl)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-(methylsulfonyl)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-(1-(4-(methylsulfonyl)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)-N-(1-(4-(methylsulfonamido)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-(methylsulfonamido)benzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)pyrazine-2-carboxamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)pyrazine-2-carboxamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(4-methylpiperazin-1-yl)benzoyl)piperidine-1-carbonyl)pyrazine-2-carboxamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-fluorobenzyl)piperidin-4-yl)-6-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-methoxybenzyl)piperidin-4-yl)-6-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-6-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-fluorobenzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-fluorobenzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)picolinamide;

6-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)-N-(1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)-N-(1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)nicotinamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-5-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)picolinamide;

5-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)-N-(1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)picolinamide;

N-(1-(4-methoxybenzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)picolinamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-6-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-6-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-methoxybenzyl)piperidin-4-yl)-6-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(1-(3-methoxybenzyl)piperidin-4-yl)-6-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)-N-(1-(3-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-azidobenzoyl)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)nicotinamide;

N-(1-(3-methoxybenzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)-N-(1-(3-(trifluoromethoxy)benzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(4-methylpiperazin-1-yl)benzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-(4-methylpiperazin-1-yl)benzoyl)piperidine-1-carbonyl)-N-(1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-6-(4-(4-(4-methylpiperazin-1-yl)benzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(cyclopropylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-(cyclopropylsulfonyl)phenoxy)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)nicotinamide;

6-(4-(4-(cyclopropylsulfonyl)phenoxy)piperidine-1-carbonyl)-N-(1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-(cyclopropylsulfonyl)phenoxy)piperidine-1-carbonyl)-N-(1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)phenyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(isopropylsulfonyl)phenyl)piperazine-1-carbonyl)picolinamide;

N-((trans)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-5-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)picolinamide;

N-((trans)-3-fluoro-1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)picolinamide;

N-((trans)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-((trans)-3-fluoro-1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(cyclopropylsulfonyl)phenyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(trifluoromethylsulfonyl)phenyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(cyclopropanecarbonyl)phenyl)piperazine-1-carbonyl)picolinamide;

N-(6-(4-acetylphenoxy)pyridin-3-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(ethylsulfonyl)benzoyl)piperidine-1-carbonyl)picolinamide;

N-(6-(4-fluorophenylsulfonyl)pyridin-3-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-fluorophenylsulfonyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(2,2,2-trifluoroacetyl)phenyl)piperazine-1-carbonyl)picolinamide;

N2,N5-bis(1-benzylpiperidin-4-yl)pyridine-2,5-dicarboxamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(3-(4-cyanophenoxy)piperidin-1-yl)picolinamide;

5-(4-(4-chlorobenzoyl)piperidin-1-yl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(1-(4-cyanophenyl)piperidin-4-ylamino)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(2-(4-fluorophenyl)propan-2-yl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(pyridin-4-yloxy)piperidine-1-carbonyl)picolinamide;

(S)-N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(3-(4-fluorophenoxy)pyrrolidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzoyl)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)picolinamide;

5-(4-(4-fluorophenoxy)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(3-(4-methoxyphenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(1-(4-methoxyphenyl)piperidin-4-ylamino)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(1-(4-fluorophenyl)piperidin-4-ylamino)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(3-(3-methoxyphenoxy)piperidine-1-carbonyl)picolinamide;

(R)-N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(3-(4-fluorophenoxy)pyrrolidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-((trans)-4-(4-cyanophenoxy)-3-fluoropiperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-((1R,3r,5S)-3-(4-cyanophenoxy)-8-azabicyclo[3.2.1]octane-8-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(3,4-difluorobenzoyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(2,4-difluorophenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(pyridin-3-yloxy)piperidine-1-carbonyl)picolinamide;

ethyl 4-(1-(6-(1-(4-cyanobenzyl)piperidin-4-ylcarbamoyl)nicotinoyl)piperidin-4-yloxy)benzoate;

5-(4-(4-cyanobenzyl)piperazine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)picolinamide;

5-(4-(4-cyano-2-methoxyphenoxy)piperidin-1-yl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)picolinamide;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-5-(4-(4-fluorobenzoyl)piperidine-1-carbonyl)picolinamide;

5-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(3,5-difluorobenzyl)piperidin-4-yl)picolinamide;

tert-butyl 3-(2-(1-(4-cyanobenzyl)piperidin-4-ylcarbamoyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)pyridin-3-yl)propylcarbamate;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-3-(5,21-dioxo-25-((3aS,4S,6aR)-2-oxohexahydro-1H-thieno[3,4-d]imidazol-4-yl)-8,11,14,17-tetraoxa-4,20-diazapentacosyl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-5-((S)-3-(4-fluorophenoxy)pyrrolidine-1-carbonyl)picolinamide;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-5-(4-(p-tolyloxy)piperidine-1-carbonyl)picolinamide;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-5-(4-(4-(trifluoromethyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-5-(4-(4-fluorophenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-5-(4-(4-methoxyphenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-5-(4-(3,4-difluorophenoxy)piperidine-1-carbonyl)picolinamide;

5-(4-(3,4-difluorobenzoyl)piperidine-1-carbonyl)-N-(1-(3,5-difluorobenzyl)piperidin-4-yl)picolinamide;

N-((cis)-4-(3,5-difluorophenoxy)cyclohexyl)-5-(4-(4-fluorophenoxy)piperidine-1-carbonyl)picolinamide;

N-((cis)-4-(3,5-difluorophenoxy)cyclohexyl)-5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(trifluoromethyl)phenoxy)piperidin-1-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-methoxybenzoyl)piperidin-1-yl)picolinamide;

5-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-((cis)-4-(4-fluorophenoxy)cyclohexyl)picolinamide;

5-(4-(4-fluorobenzoyl)piperidine-1-carbonyl)-N-((cis)-4-(4-fluorophenoxy)cyclohexyl)picolinamide;

N-(2-(4-fluorophenoxy)ethyl)-5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)picolinamide;

5-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(2-(4-fluorophenoxy)ethyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(3-(4-fluorobenzyloxy)azetidine-1-carbonyl)picolinamide;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-5-(3-(4-fluorobenzyloxy)azetidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(3,5-difluorobenzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((cis)-4-(4-fluorophenoxy)cyclohexyl)-5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)picolinamide;

N-((cis)-4-(4-fluorophenoxy)cyclohexyl)-5-(4-(4-fluorophenoxy)piperidine-1-carbonyl)picolinamide;

5-(3-(4-cyanophenoxy)azetidine-1-carbonyl)-N-(1-(3,5-difluorobenzyl)piperidin-4-yl)picolinamide;

5-(3-(4-cyanophenyl)-5,6,7,8-tetrahydro-[1,2,4]triazolo[4,3-a]pyrazine-7-carbonyl)-N-(1-(3,5-difluorobenzyl)piperidin-4-yl)picolinamide;

N-((1s,4s)-4-(4-cyanophenoxy)cyclohexyl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((cis)-4-(4-fluorophenoxy)cyclohexyl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-fluorobenzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-fluorobenzyl)piperidin-4-yl)nicotinamide;

N-((cis)-4-(4-cyanophenoxy)cyclohexyl)-6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(3,5-difluorobenzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-((cis)-4-(4-fluorophenoxy)cyclohexyl)nicotinamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)nicotinamide;

6-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-N-(1-(4-fluorobenzyl)piperidin-4-yl)nicotinamide;

5-(4-(3,4-difluorobenzoyl)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)picolinamide;

5-(4-(3,4-difluorobenzoyl)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)picolinamide;

5-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)picolinamide;

N-((cis)-4-(4-cyanophenoxy)cyclohexyl)-6-(4-(4-fluorobenzyl)piperazine-1-carbonyl)nicotinamide;

tert-butyl 4-(6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)nicotinamido)piperidine-1-carboxylate;

6-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(piperidin-4-yl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-morpholinobenzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(trifluoromethyl)phenyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-cyanophenyl)piperazine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-fluorophenyl)piperazine-1-carbonyl)picolinamide;

5-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)picolinamide;

6-(4-(2,4-difluorophenoxy)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)nicotinamide;

6-(4-(2,4-difluorophenoxy)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(2,4-difluorophenoxy)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)nicotinamide;

6-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)nicotinamide;

N-((trans)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((trans)-3-fluoro-1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-cyanophenoxy)piperidin-1-yl)pyridazine-3-carboxamide;

N-((trans)-3-fluoro-1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((trans)-3-fluoro-1-(4-isopropoxybenzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((trans)-1-(4-cyano-3-fluorobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(oxazol-4-ylmethyl)piperidin-4-yl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(thiazol-2-ylmethyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(dimethylcarbamoyl)phenoxy)piperidine-1-carbonyl)picolinamide;

5-(4-(4-acetylphenoxy)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

5-(4-(4-acetylphenoxy)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)picolinamide;

5-(4-(4-(dimethylcarbamoyl)phenoxy)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(trifluoromethyl)phenoxy)piperidin-1-yl)pyridazine-3-carboxamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidin-1-yl)pyridazine-3-carboxamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-nitrophenoxy)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-aminophenoxy)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)picolinamide;

6-(4-(4-acetamidophenoxy)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(methylsulfonamido)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-5-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)picolinamide;

5-(4-(4-cyanobenzoyl)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(dimethylamino)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(17-oxo-20-((3aS,4S,6aR)-2-oxohexahydro-1H-thieno[3,4-d]imidazol-4-yl)-4,7,10,13-tetraoxa-16-azaicosanamido)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(methylthio)benzoyl)piperidine-1-carbonyl)picolinamide;

6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-(1-(4-nitrobenzyl)piperidin-4-yl)nicotinamide;

1-(4-cyanobenzyl)-4-(5-(4-(4-(methylsulfinyl)benzoyl)piperidine-1-carbonyl)picolinamido)piperidine 1-oxide;

5-(4-(4-(1H-pyrazol-1-yl)benzoyl)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-morpholinobenzoyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-methoxy-2-nitrophenoxy)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-5-(4-(4-morpholinobenzoyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(4-methylpiperazin-1-yl)benzoyl)piperidine-1-carbonyl)picolinamide;

N-(1-(4-fluorobenzyl)piperidin-4-yl)-6-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-6-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(2-acetamido-4-methoxyphenoxy)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)nicotinamide;

6-(4-(2-amino-4-methoxyphenoxy)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(2-(dimethylamino)-4-methoxyphenoxy)piperidine-1-carbonyl)nicotinamide;

N3,N6-bis(1-(4-cyanobenzyl)piperidin-4-yl)pyridazine-3,6-dicarboxamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)pyridazine-3-carboxamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)pyridazine-3-carboxamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-methoxy-2-(methylsulfonamido)phenoxy)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-acetylphenoxy)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-acetylphenoxy)piperidine-1-carbonyl)-N-(1-(4-fluorobenzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-(1H-pyrazol-1-yl)benzoyl)piperidine-1-carbonyl)-N-(1-(4-fluorobenzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-(1H-pyrazol-1-yl)benzoyl)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-methoxy-2-(17-oxo-21-((3aS,4S,6aR)-2-oxohexahydro-1H-thieno[3,4-d]imidazol-4-yl)-4,7,10,13-tetraoxa-16-azahenicosanamido)phenoxy)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-acetylphenoxy)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)nicotinamide;

N-(1-(4-fluorobenzyl)piperidin-4-yl)-6-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(4-(4-cyanophenoxy)cyclohexyl)-6-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)pyridazine-3-carboxamide;

N-(1-(4-aminobenzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-acetamidobenzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-acetylphenoxy)piperidine-1-carbonyl)-N-(4-(4-cyanophenoxy)cyclohexyl)nicotinamide;

5-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-(1-(4-(14-oxo-18-((3aS,4S,6aR)-2-oxohexahydro-1H-thieno[3,4-d]imidazol-4-yl)-4,7,10-trioxa-13-azaoctadecanamido)benzyl)piperidin-4-yl)picolinamide;

6-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-N-(1-(4-fluorophenyl)piperidin-4-yl)nicotinamide;

6-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-N-(1-(4-methoxyphenyl)piperidin-4-yl)nicotinamide;

6-(4-(4-acetamidophenoxy)piperidine-1-carbonyl)-N-(1-(4-fluorobenzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-acetamidophenoxy)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)nicotinamide;

5-(4-(4-acetamidophenoxy)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(cyclopropanecarboxamido)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(trifluoromethylthio)phenoxy)piperidine-1-carbonyl)picolinamide;

6-(4-(3-acetamidophenoxy)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)nicotinamide;

6-(4-(3-acetamidophenoxy)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)nicotinamide;

6-(4-(3-acetamidophenoxy)piperidine-1-carbonyl)-N-(1-(4-fluorobenzyl)piperidin-4-yl)nicotinamide;

6-(4-(3-acetamidophenoxy)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(trifluoromethylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

tert-butyl 3-(5-(1-(4-cyanobenzyl)piperidin-4-ylcarbamoyl)-2-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)pyridin-3-yl)propylcarbamate;

N-(1-(4-cyanophenyl)piperidin-4-yl)-6-(4-(4-fluorobenzyl)piperazine-1-carbonyl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-cyanophenyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(thiophene-2-carbonyl)piperidine-1-carbonyl)picolinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-(methylsulfonyl)phenyl)piperidin-4-yl)nicotinamide;

6-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-N-(1-(4-(methylsulfonyl)phenyl)piperidin-4-yl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-fluorophenyl)piperidin-4-yl)nicotinamide;

6-(4-(4-cyanophenoxy)piperidine-1-carbonyl)-N-(1-(4-methoxyphenyl)piperidin-4-yl)nicotinamide;

6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-(1-(3-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-(1-(3-methoxybenzyl)piperidin-4-yl)nicotinamide;

N-((3S,4R)-3-fluoro-1-((5-methylisoxazol-3-yl)methyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((3S,4R)-3-fluoro-1-((2-methylthiazol-4-yl)methyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-acetamidophenoxy)piperidine-1-carbonyl)-N-(1-(3-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(3-acetamidophenoxy)piperidine-1-carbonyl)-N-(1-(3-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-(1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(3-(cyclopropanecarboxamido)phenoxy)piperidine-1-carbonyl)nicotinamide;

6-(4-(3-(cyclopropanecarboxamido)phenoxy)piperidine-1-carbonyl)-N-(1-(4-fluorobenzyl)piperidin-4-yl)nicotinamide;

6-(4-(3-(cyclopropanecarboxamido)phenoxy)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)nicotinamide;

N-((cis)-4-(4-cyanophenoxy)cyclohexyl)-6-(4-(3-(cyclopropanecarboxamido)phenoxy)piperidine-1-carbonyl)nicotinamide;

6-(4-(3-(cyclopropanecarboxamido)phenoxy)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(trifluoromethylthio)phenoxy)piperidine-1-carbonyl)pyridazine-3-carboxamide;

6-(4-(4-acetylphenoxy)piperidine-1-carbonyl)-N-(1-(4-cyanobenzyl)piperidin-4-yl)pyridazine-3-carboxamide;

6-(4-(3-(cyclopropanecarboxamido)phenoxy)piperidine-1-carbonyl)-N-(1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-methoxybenzyl)piperidin-4-yl)-6-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)-N-(1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)-N-(1-(3-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

N-((cis)-4-(4-cyanophenoxy)cyclohexyl)-6-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(3-fluoro-4-methoxybenzyl)piperidin-4-yl)-6-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)-N-(1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-(piperidin-4-yl)nicotinamide;

N-(1-(4-isopropoxybenzyl)piperidin-4-yl)-6-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-cyano-3-fluorobenzyl)piperidin-4-yl)-6-(4-(4-(pyrrolidin-1-yl)benzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(cyclopropanesulfonamido)phenoxy)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-(cyclopropanesulfonamido)phenoxy)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(trifluoromethylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-((trans)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-(trifluoromethylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-((3R,4R)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((3S,4S)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((cis)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-(cyclopropanecarbonyl)phenoxy)piperidine-1-carbonyl)-N-(1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(cyclopropanecarbonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-(cyclopropanecarbonyl)phenoxy)piperidine-1-carbonyl)-N-(6-(4-fluorophenoxy)pyridin-3-yl)nicotinamide;

6-(4-(4-(cyclopropanecarbonyl)phenoxy)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)nicotinamide;

N-(6-(4-cyanophenoxy)pyridin-3-yl)-6-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-cyanophenoxy)pyridin-3-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((cis)-3-fluoro-1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-acetylphenoxy)pyridin-3-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-cyanophenoxy)pyridin-3-yl)-6-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-acetylphenoxy)pyridin-3-yl)-6-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-(6-(4-(methylsulfonyl)phenoxy)pyridin-3-yl)nicotinamide;

6-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)-N-(6-(4-(methylsulfonyl)phenoxy)pyridin-3-yl)nicotinamide;

N-(6-(4-fluorophenylsulfonyl)pyridin-3-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-(5-(4-cyanophenoxy)pyridin-2-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-(5-(4-cyanophenoxy)pyridin-2-yl)-6-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-fluorophenylsulfonyl)piperidine-1-carbonyl)-N-(1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-fluorophenylsulfonyl)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-cyanophenoxy)pyridin-3-yl)-6-(4-(4-fluorophenylsulfonyl)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-acetylphenoxy)pyridin-3-yl)-6-(4-(4-fluorophenylsulfonyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-fluorophenylsulfonyl)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-fluorophenylsulfonyl)piperidine-1-carbonyl)-N-(1-(3-methoxybenzyl)piperidin-4-yl)nicotinamide;

N-(6-(4-cyanophenoxy)pyridin-3-yl)-6-(4-(4-fluorobenzyl)piperazine-1-carbonyl)nicotinamide;

N-(6-(4-acetylphenoxy)pyridin-3-yl)-6-(4-(4-fluorobenzyl)piperazine-1-carbonyl)nicotinamide;

N-(6-(4-cyanophenoxy)-2-methylpyridin-3-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-cyanophenoxy)-2-methylpyridin-3-yl)-6-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-(dimethylcarbamoyl)phenoxy)pyridin-3-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

6-(4-(2,4-difluorobenzoyl)piperidine-1-carbonyl)-N-(6-(4-(dimethylcarbamoyl)phenoxy)pyridin-3-yl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-methylnicotinamide;

6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-methyl-N-(1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)-N-(1-(4-methoxybenzyl)piperidin-4-yl)-N-methylnicotinamide;

N-(6-(4-acetylphenoxy)pyridin-3-yl)-6-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-acetylphenoxy)pyridin-3-yl)-6-(4-(4-(cyclopropylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-acetylphenoxy)pyridin-3-yl)-6-(4-(4-(methylsulfonyl)phenyl)piperazine-1-carbonyl)nicotinamide;

N-(6-(4-acetylphenoxy)pyridin-3-yl)-6-(4-(4-(dimethylcarbamoyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-acetylphenoxy)pyridin-3-yl)-6-(4-(4-(isopropylsulfonyl)phenyl)piperazine-1-carbonyl)nicotinamide;

N-(1-(4-(dimethylcarbamoyl)benzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-fluorobenzyl)piperazin-1-yl)pyridazine-3-carboxamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-5-(4-(4-(pentafluorosulfanyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-(1-(4-cyanobenzyl)piperidin-4-yl)-6-(4-(4-(pentafluorosulfanyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

6-(4-(4-(pentafluorosulfanyl)phenoxy)piperidine-1-carbonyl)-N-(1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)nicotinamide;

N-(1-(4-methoxybenzyl)piperidin-4-yl)-6-(4-(4-(pentafluorosulfanyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-fluorophenoxy)pyridin-3-yl)-6-(4-(4-(pentafluorosulfanyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-(6-(4-cyanophenoxy)pyridin-3-yl)-6-(4-(4-(pentafluorosulfanyl)phenoxy)piperidine-1-carbonyl)nicotinamide; or

N-(1-(4-cyanobenzyl)-3,3-difluoropiperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide,,

or a pharmaceutically acceptable salt or N-oxide thereof, or a solvate or hydrate thereof.

58. A pharmaceutical composition comprising:

at least one pharmaceutically acceptable carrier, diluent or excipient; and

a compound according to any of the preceding claims or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof.

59. A method for activating the AMPK pathway in a cell, the method comprising

contacting the cell with an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

60. A method for increasing fatty acid oxidation in a cell, the method comprising

contacting the cell with an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

61. A method for decreasing glycogen concentration in a cell, the method comprising

contacting the cell with an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

62. A method for increasing glucose uptake in a cell, the method comprising

contacting the cell with an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

63. A method for reducing triglyceride levels in a subject, the method comprising

administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

64. A method for treating type II diabetes in a subject, the method comprising

administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

65. A method for treating or preventing atherosclerosis or cardiovascular disease in a subject, the method comprising

administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

66. A method for up-regulating ceramidase function in a cell, the method comprising

contacting the cell with an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

67. A method for decreasing ceramide concentration in a cell, the method comprising

contacting the cell with an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

68. A method for treating or preventing a disorder in which cell proliferation is deficient or desired in a subject, the method comprising

administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

69. A method for treating or preventing a disease or to elevated ceramide levels in a subject, the method comprising

administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

70. A method for treating or ameliorating a disorder or condition related to oxidative stress, mitochondrial dysfunction, free radical damage and/or metabolic inefficiency in a subject, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

71. A method for the treatment or amelioration of a disorder of mitochondrial dysfunction in a subject, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

72. A method for the treatment or amelioration of a disorder in a subject, the disorder being selected from the group consisting of selected from the group consisting of exercise intolerance, chronic fatigue syndrome, muscle weakness, myoclonus, myoclonus epilepsy, Kearns-Sayre syndrome, Leigh's syndrome, mitochondrial myopathy encephalopathy lactacidosis stroke (MELAS) syndrome and stroke like episodes, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

73. A method for increasing metabolic efficiency in a subject, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

74. A method for increasing fiber oxidative capacity, endurance, aerobic workload, or any combination thereof in a subject in need thereof, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

75. A method for improving exercise efficiency, exercise endurance and/or athletic performance in a subject in need thereof, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

76. A method for mimicking the effects of exercise in a subject in need thereof, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

77. A method for treating or ameliorating a disorder in a subject in need thereof, the disorder being selected from the group consisting of hypoxic states, angina pectoris, coronary ischemia and organ damage secondary to coronary vessel occlusion, intermittent claudication, multi-infarct dementia, myocardial infarction, stroke, high altitude sickness and heart failure, including congestive heart failure, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

78. A method for the treatment of amelioration of a muscular dystrophic state in a subject in need thereof, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

79. A method for the treatment or amelioration of a disorder in a subject, the disorder being selected from the group consisting of selected from the group consisting of Duchenne's muscular dystrophy, Becker's muscular dystrophy, and Freidreich's ataxia, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

80. A method for increasing oxidative capacity of a muscle fiber, the method comprising contacting the muscle fiber with a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

81. A method for reducing oxidative stress in a subject in need thereof, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

82. A method for reducing free radical damage in a subject in need thereof, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

83. A method for treating or ameliorating a disorder or condition in a subject in need thereof, the disorder or condition selected from the group consisting of neurological disorders, hypoxic conditions, ischemia, ischemic reperfusion injury, myocardial ischemia or infarction, cerebrovascular accidents, operative ischemia, traumatic hemorrhage, resuscitation injury, spinal cord trauma, inflammatory diseases, autoimmune disorders, Down's syndrome, Hallervorden-Spatz disease, Huntingtons chorea, Wilson's disease, diabetic angiopathy, uveitis, chronic obstructive pulmonary disease (COPD), asthma, neoplasia, Crohn's disease, inflammatory bowel disease, pancreatitis and age-related disorders, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

84. A method for treating or ameliorating a neurological disorder in a subject in need thereof, the neurological disorder being associated with reduced mitochondrial function, oxidative stress, or both, the method comprising administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

85. A method for reducing oxidative stress in a cell, the method comprising contacting the cell with a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

86. A method for reducing free radical damage in a cell, the method comprising contacting the cell with a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

87. A method for treating an inflammatory disorder or effect in a subject in need thereof, the method including compound administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

88. A method for treating lung inflammation in a subject in need thereof, the method including compound administering to the subject an effective amount of a compound

according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

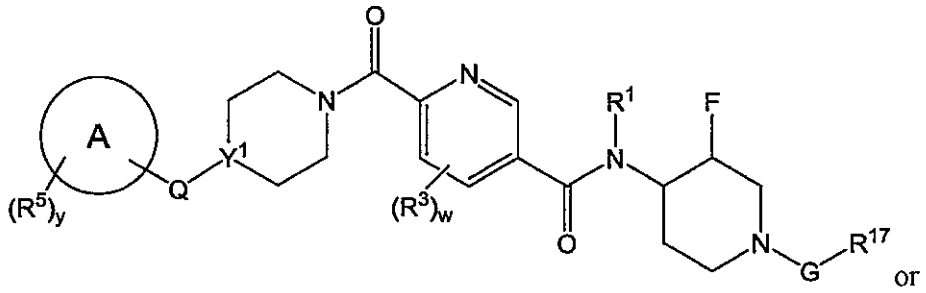
89. A method for treating organ inflammation in a subject in need thereof, the method including compound administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

90. A method for treating inflammation of the kidney or liver in a subject in need thereof, the method including compound administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

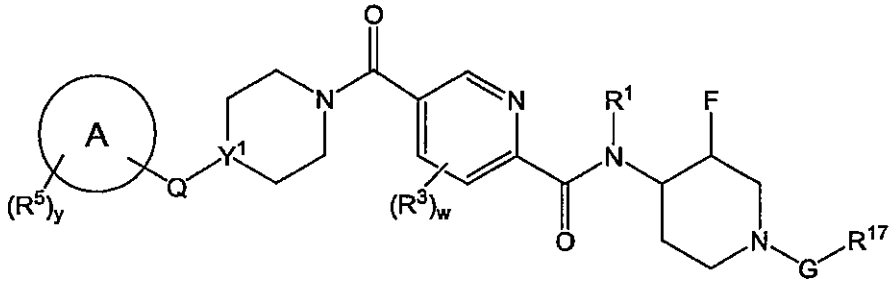
91. A method for treating macrophage-associated inflammation in a subject in need thereof, the method including compound administering to the subject an effective amount of a compound according to any of claims 1-57 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 58.

Claims:

1. A compound having the structural formula



or



or a pharmaceutically acceptable salt, or N-oxide thereof, or a solvate or hydrate thereof, wherein

R^1 is H, -(C_1-C_4 alkyl), -C(O)-(C_1-C_4 alkyl) or -C(O)O-(C_1-C_4 alkyl);

each R^3 is independently selected from -(C_1-C_3 alkyl), -(C_1-C_3 haloalkyl), -(C_0-C_3 alkyl)-L-R^7, -(C_0-C_3 alkyl)-NR^8R^9, -(C_0-C_3 alkyl)-OR^{10}, -(C_0-C_3 alkyl)-C(O)R^{10}, -(C_0-C_3 alkyl)-S(O)$_{0-2}R^{10}$, -halogen, -NO_2 and -CN;

w is 0, 1, 2 or 3;

G is -CH_2-, -C(O)-, -S(O)$_2$-, -$CH(CH_3)$-, -$C(CH_3)_2$-, -O-, -C(O)-NH-, -C(O)-NH-CH_2-, -CH_2CH_2-, a single bond, -OCH_2-, CH_2CH_2O-, -CH(COOMe)- or -CH(COOEt)-;

R^{17} is aryl or heteroaryl substituted with 1, 2 or 3 substituents independently selected from -(C_1-C_3 alkyl), -(C_1-C_3 haloalkyl), -(C_0-C_3 alkyl)-L-R^7, -(C_0-C_3 alkyl)-NR^8R^9, -(C_0-C_3 alkyl)-OR^{10}, -(C_0-C_3 alkyl)-C(O)R^{10}, -(C_0-C_3 alkyl)-S(O)$_{0-2}R^{10}$, -N_3, -SF_5, -halogen, -NO_2 and -CN;

Y^1 is N or CH;

Q is single bond, -CH_2-, -CH_2O-, -OCH_2CH_2-, -CH_2CH_2-, -O-, -CHF-, -$CH(CH_3)$-, -$C(CH_3)_2$-, -CH(OH)-, -CH(COOMe)-, -CH(COOEt)-, -C(O)- or -S(O)$_2$-;

the ring system denoted by "A" is monocyclic heteroaryl or phenyl;

each R^5 is independently selected from -(C_1-C_3 alkyl), -(C_1-C_3 haloalkyl), -(C_0-C_3 alkyl)-L-R^7, -(C_0-C_3 alkyl)-NR^8R^9, -(C_0-C_3 alkyl)-OR^{10}, -(C_0-C_3 alkyl)-$C(O)R^{10}$, -(C_0-C_3 alkyl)-$S(O)_{0-2}R^{10}$, -halogen, $-N_3$, $-SF_5$, $-NO_2$ and -CN; and

y is 0, 1, 2, 3 or 4;

in which

each L is independently selected from $-NR^9C(O)O-$, $-OC(O)NR^9-$, $-NR^9C(O)-NR^9-$, $-NR^9C(O)S-$, $-SC(O)NR^9-$, $-NR^9C(O)-$, $-C(O)-NR^9-$, $-NR^9C(S)O-$, $-OC(S)NR^9-$, $-NR^9C(S)-NR^9-$, $-NR^9C(S)S-$, $-SC(S)NR^9-$, $-NR^9C(S)-$, $-C(S)NR^9-$, $-SC(O)NR^9-$, $-NR^9C(S)-$, $-S(O)_{0-2}-$, -C(O)O, -OC(O)-, -C(S)O-, -OC(S)-, -C(O)S-, -SC(O)-, -C(S)S-, -SC(S)-, -OC(O)O-, -SC(O)O-, -OC(O)S-, -SC(S)O-, -OC(S)S-, $-NR^9SO_2-$, $-SO_2NR^9-$ and $-NR^9SO_2NR^9-$,

each R^7, R^8 and R^{10} is independently selected from H, -(C_1-C_2 alkyl), -(C_1-C_2 haloalkyl), -(C_0-C_2 alkyl)-L-(C_0-C_2 alkyl), -(C_0-C_2 alkyl)-NR^9(C_0-C_2 alkyl), -(C_0-C_2 alkyl)-O-(C_0-C_2 alkyl), -(C_0-C_2 alkyl)-C(O)-(C_0-C_2 alkyl) and -(C_0-C_2 alkyl)-$S(O)_{0-2}$-(C_0-C_2 alkyl), and

each R^9 is independently selected from -H, -(C_1-C_4 alkyl), -C(O)-(C_1-C_4 alkyl) and -C(O)O-(C_1-C_4 alkyl).

2. The compound according to claim 1, wherein Y^1 is CH.

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

4. The compound according to any one of claims 1-3, wherein Q is -O-.

5. The compound according to any one of claims 1-3, wherein Q is -C(O)- .

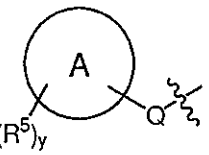
6. The compound according to any one of claims 1-3, wherein Q is $-S(O)_2-$.

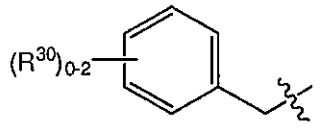
7. The compound according to any one of claims 1-3, wherein Q is $-CH_2-$.

8. The compound according to any one of claims 1-3, wherein Q is a single bond.

9. The compound according to any one of claims 1-8, wherein the ring system denoted by "A" is phenyl.

10. The compound according to any of claims 1-9, wherein y is not zero and at least one R^5 is halo, cyano, -(C_1-C_3 haloalkyl), -O-(C_1-C_2 haloalkyl), -(C_1-C_3 alkyl), -O-(C_1-C_2 alkyl), -C(O)-(C_0-C_2 alkyl), -C(O)O-(C_0-C_2 alkyl), -C(O)N(C_0-C_4 alkyl)(C_0-C_2 alkyl), $-N_3$, $-SF_5$ or NO_2.

11. The compound according to any one of claims 1-10, wherein the  group is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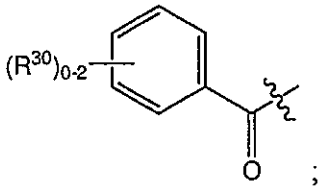
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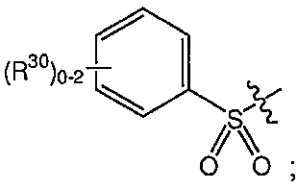
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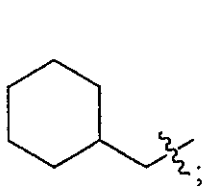
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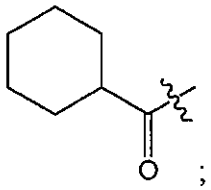
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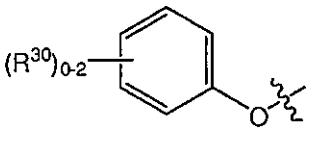
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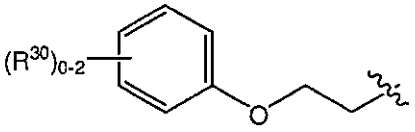
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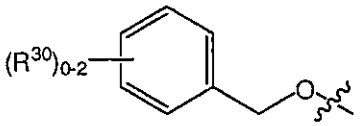
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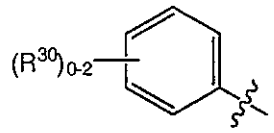
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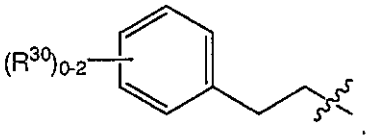
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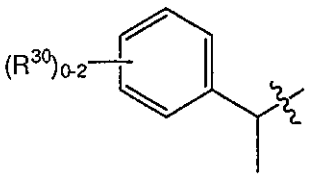
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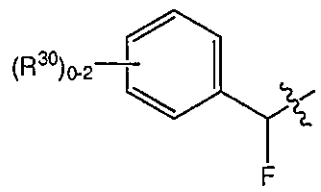
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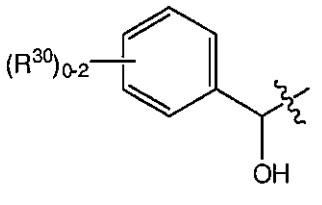
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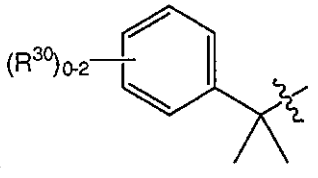
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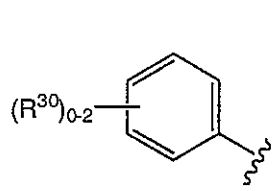
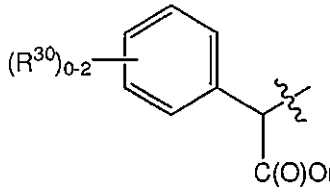
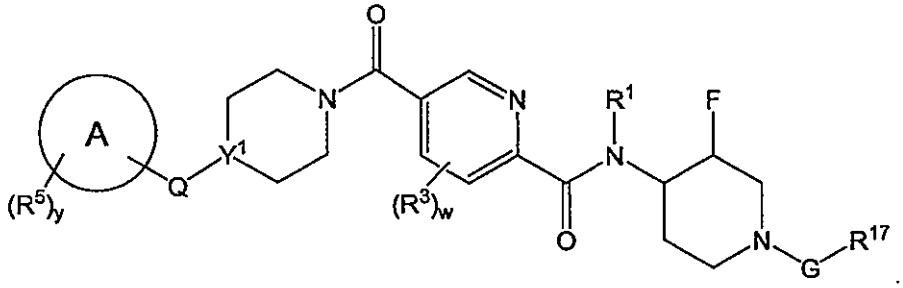



; monocyclic heteroaryl substituted with 0, 1 or 2 R^{30}; or monocyclic heteroarylmethyl-, in which the heteroaryl is substituted with 0, 1 or 2 R^{30}; in which each R^{30} is independently selected from -F, -Cl, -Br, -C(O)-NH_2, C(O)N(C_1-C_4 alkyl)(C_1-C_2 alkyl), NHCO(C_1-C_2 alkyl), N(C_1-C_4 alkyl)(C_1-C_2 alkyl), NH_2, -SH, methyl, ethyl, trifluoromethyl, methoxy, ethoxy, trifluoromethoxy, -NO_2, -SF_5, -N_3, -$(NH)_{0-1}SO_2R^{33}$, -$(NH)_{0-1}COR^{33}$, and cyano, in which each R^{33} is (C_1-C_2 alkyl) or (C_1-C_2 haloalkyl).

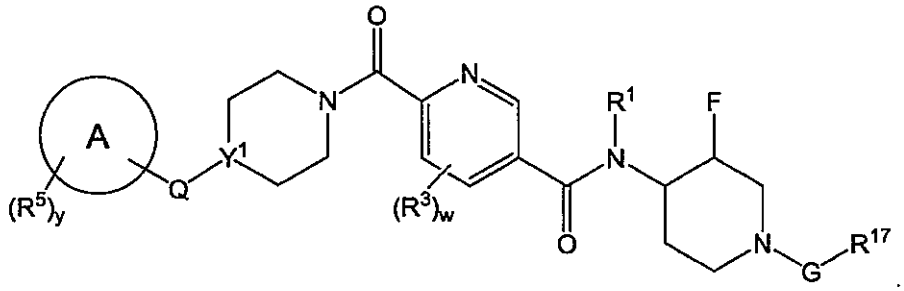
12. The compound according to any one of claims 1-11, wherein each R^3 is independently selected from methyl, ethyl, n-propyl, isopropyl, trifluoromethyl, pentafluoroethyl, acetyl, -NH_2, -OH, methoxy, ethoxy, trifluoromethoxy, -SO_2Me, -halogen, -NO_2 and -CN.

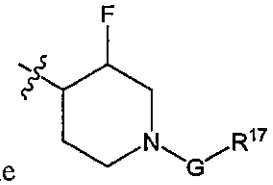
13. The compound according to any one of claims 1-12, wherein w is 0.

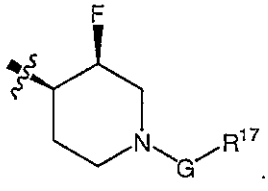
14. The compound according to any one of claims 1-13, having the structural formula



15. The compound according to any one of claims 1-13 having the structural formula



16. The compound according to any one of claims 1-15, wherein the 

moiety is 

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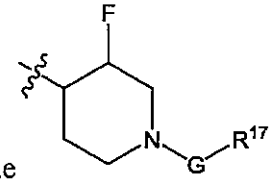
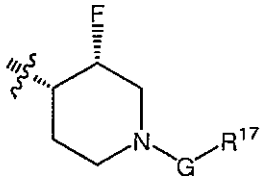
17. The compound according to any one of claims 1-15, wherein the 

moiety is 

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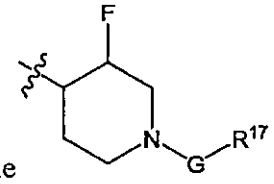
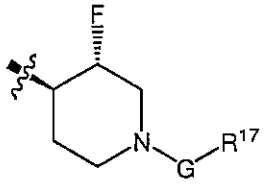
18. The compound according to any one of claims 1-15, wherein the 

moiety is 

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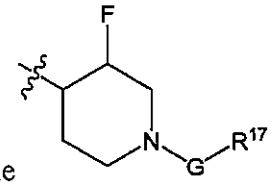
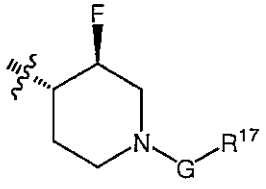
19. The compound according to any one of claims 1-15, wherein the 

moiety is 

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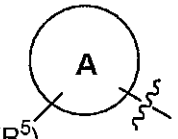
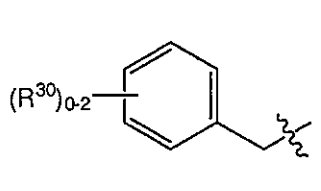
20. The compound according any one of claims 1-19, wherein R^{17} is phenyl substituted with 0, 1 or 2 R^{30}, and the  moiety is phenyl substituted with 0, 1 or 2 R^{30}, in which each R^{30} is independently selected from halogen, (C_1-C_2 alkoxy), -(C_1-C_2haloalkoxy), -SH, -S(C_1-C_2 alkyl), -S(C_1-C_2 haloalkyl), -OH, -CN, -NO_2, -NH_2, -NH(C_1-C_4 alkyl), -N(C_1-C_4 alkyl)(C_1-C_2 alkyl), -N_3, -SF_5, -C(O)-NH_2, C(O)NH(C_1-C_4 alkyl), C(O)N(C_1-C_4 alkyl)(C_1-C_2 alkyl), -C(O)OH, C(O)O(C_1-C_2 alkyl), -$(NH)_{0-1}SO_2R^{33}$, -$(NH)_{0-1}COR^{33}$, in which each R^{33} is (C_1-C_2 alkyl) or (C_1-C_2 haloalkyl).

21. The compound according to any one of claims 1-20, wherein G is -CH_2-.

22. The compound according to any one of claims 1-20, wherein G is -C(O)-.

23. The compound according to any one of claims 1-22, wherein the -G-R^{17} moiety is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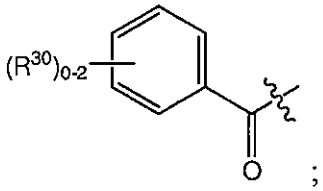
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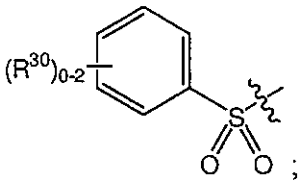
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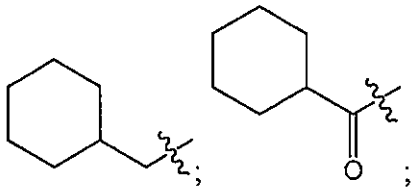
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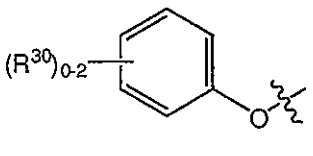
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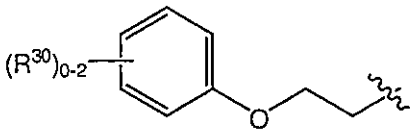
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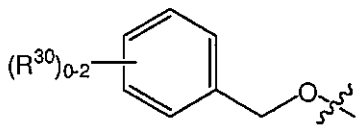
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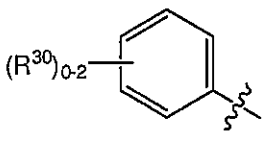
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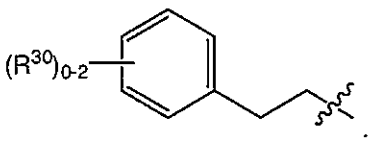
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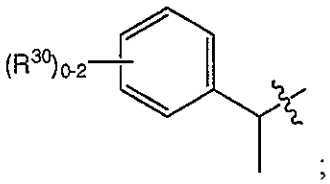
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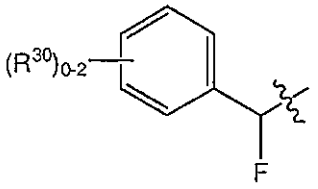
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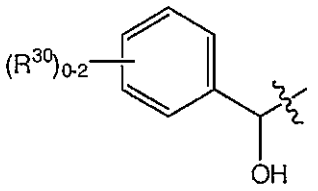
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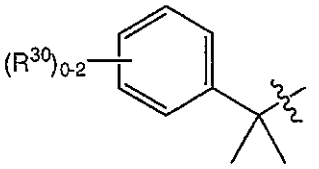
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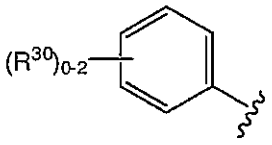
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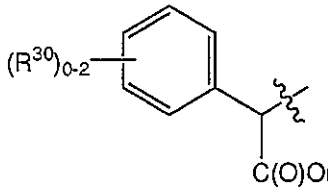

$C(O)O(CH_2)_{1-3}H$; monocyclic heteroaryl substituted with 0, 1 or 2 R^{30}; monocyclic heteroarylmethyl- in which the heteroaryl is substituted with 0, 1 or 2 R^{30}; or monocyclic heteroaryloxy- in which the heteroaryl is substituted with 0, 1 or 2 R^{30}; in which each R^{30} is independently selected from halogen, (C_1-C_2 alkoxy), -(C_1-C_2haloalkoxy), -SH, -S(C_1-C_2 alkyl), -S(C_1-C_2 haloalkyl), -OH, -CN, -NO_2, -NH_2, -NH(C_1-C_4 alkyl), -N(C_1-C_4 alkyl)(C_1-C_2 alkyl), -C(O)-NH_2, C(O)NH(C_1-C_4 alkyl), C(O)N(C_1-C_4 alkyl)(C_1-C_2 alkyl), -C(O)OH, C(O)O(C_1-C_2 alkyl), -$(NH)_{0-1}SO_2R^{33}$, -$(NH)_{0-1}COR^{33}$, in which each R^{33} is (C_1-C_2 alkyl) or (C_1-C_2 haloalkyl).

24. The compound according to any one of claims 1 or 14-19, wherein

G is -CH_2-, -C(O)-, or -$S(O)_2$-;

R^{17} is phenyl or monocyclic heteroaryl substituted with 0, 1 or 2 R^{30};

each R^3 is independently selected from methyl, ethyl, n-propyl, isopropyl, trfluoromethyl, pentafluoroethyl, acetyl, -NH_2, -OH, methoxy, ethoxy, trifluoromethoxy, -SO_2Me, -halogen, -NO_2 and -CN ;

w is 0 or 1;

Y^1 is N or CH;

Q is a single bond, -CH_2-, -O-, -C(O)- or -$S(O)_2$-;

the ring system denoted by "A" is phenyl or monocyclic heteroaryl; and

y is 0, 1, 2 or 3;

in which

each R^5 and R^{30} is independently selected from halogen, (C_1-C_2 alkoxy), -(C_1-C_2haloalkoxy), -SH, -S(C_1-C_2 alkyl), -S(C_1-C_2 haloalkyl), -OH, -CN, -NO_2, -NH_2, -NH(C_1-C_4 alkyl), -N(C_1-C_4 alkyl)(C_1-C_2 alkyl), -N_3, -SF_5, -C(O)-NH_2, C(O)NH(C_1-C_4 alkyl), C(O)N(C_1-C_4 alkyl)(C_1-C_2 alkyl) -C(O)OH, C(O)O(C_1-C_2 alkyl), -$(NH)_{0-1}SO_2R^{33}$, -$(NH)_{0-1}COR^{33}$, in which each R^{33} is (C_1-C_2 alkyl) or (C_1-C_2 haloalkyl).

25. The compound according to claim 24, wherein w is 0.

26. The compound according to claim 24 or claim 25, wherein G is $-CH_2-$.

27. The compound according to claim 24 or claim 25, wherein G is -C(O)-.

28. The compound according to any one of claims 24-27, wherein R^{17} is phenyl substituted with 0, 1 or 2 R^{30}.

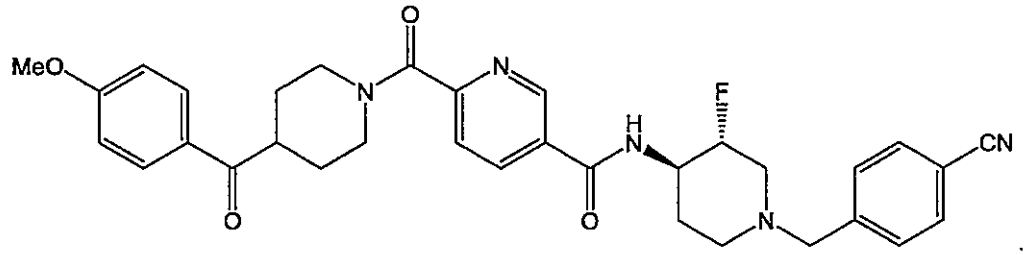
29. The compound according to any one of claims 24-28, wherein the ring system denoted by "A" is phenyl.

30. The compound according to any of claims 24-29, wherein Q is $-CH_2-$, -O- or -C(O)-.

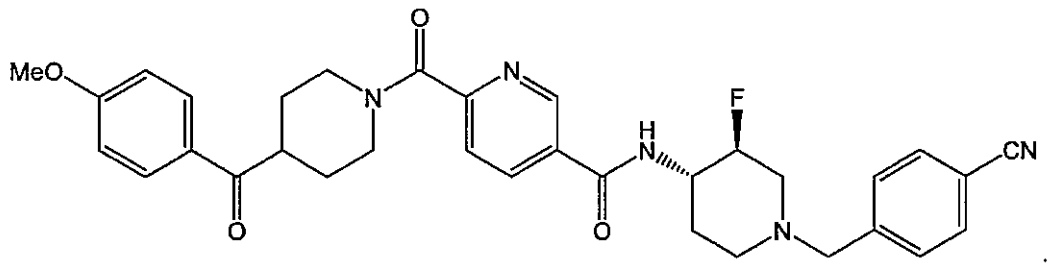
31. The compound according to claim 1, wherein the compound is N-((trans)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide or a pharmaceutically acceptable salt or N-oxide thereof, or a solvate or hydrate thereof.

32. The compound according to claim 31, wherein the compound is racemic.

33. The compound according to claim 31, wherein the compound has the structural formula



34. The compound according to claim 31, wherein the compound has the structural formula



35. The compound according to claim 1, wherein the compound is

cis-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)-N-(cis-3-fluoropiperidin-4-yl)picolinamide;

N-(cis-3-fluoro-1-(pyridin-4-ylmethyl)piperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-(cis-1-(4-chlorobenzyl)-3-fluoropiperidin-4-yl)-5-(4-(4-fluorobenzyl)piperazine-1-carbonyl)picolinamide;

N-((trans)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-5-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)picolinamide;

N-((trans)-3-fluoro-1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)benzoyl)piperidine-1-carbonyl)picolinamide;

N-((trans)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-((trans)-3-fluoro-1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)-5-(4-(4-(methylsulfonyl)phenoxy)piperidine-1-carbonyl)picolinamide;

N-((trans)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((trans)-3-fluoro-1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((trans)-3-fluoro-1-(4-(pyrrolidin-1-yl)benzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((trans)-3-fluoro-1-(4-isopropoxybenzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((trans)-1-(4-cyano-3-fluorobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((3S,4R)-3-fluoro-1-((5-methylisoxazol-3-yl)methyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((3S,4R)-3-fluoro-1-((2-methylthiazol-4-yl)methyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((trans)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-(trifluoromethylsulfonyl)phenoxy)piperidine-1-carbonyl)nicotinamide;

N-((3R,4R)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

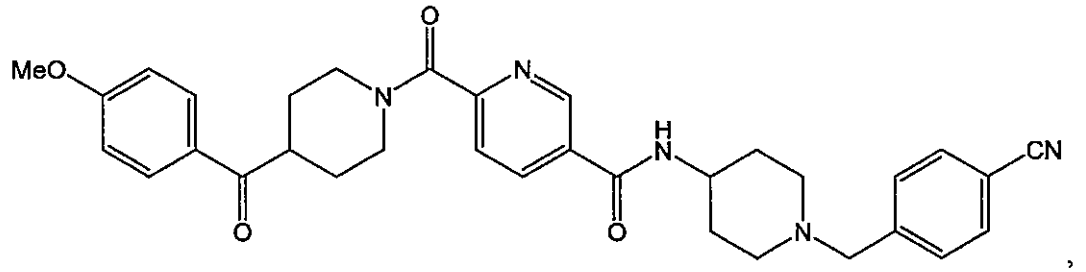
N-((3S,4S)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

N-((cis)-1-(4-cyanobenzyl)-3-fluoropiperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide; or

N-((cis)-3-fluoro-1-(4-(trifluoromethoxy)benzyl)piperidin-4-yl)-6-(4-(4-methoxybenzoyl)piperidine-1-carbonyl)nicotinamide;

or a pharmaceutically acceptable salt or N-oxide thereof, or a solvate or hydrate thereof.

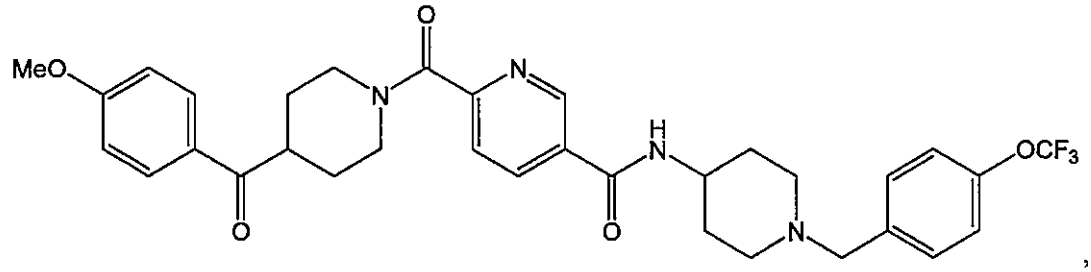
36. A compound having the structural formula



,

or a pharmaceutically acceptable salt or N-oxide thereof, or a solvate or hydrate thereof.

37. A compound having the structural formula



,

or a pharmaceutically acceptable salt or N-oxide thereof, or a solvate or hydrate thereof.

38. A pharmaceutical composition comprising:

at least one pharmaceutically acceptable carrier, diluent or excipient; and

a compound according to any of claims 1-37 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof.

39. A method for activating the AMPK pathway in a cell, the method comprising

contacting the cell with an effective amount of a compound according to any of claims 1-37 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 38.

40. A method for increasing fatty acid oxidation, decreasing glycogen concentration or increasing glucose uptake in a cell, the method comprising

contacting the cell with an effective amount of a compound according to any of claims 1-37 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 38.

41. A method for up-regulating ceramidase function or decreasing ceramide concentration in a cell, the method comprising

contacting the cell with an effective amount of a compound according to any of claims 1-37 or a pharmaceutically acceptable salt or *N*-oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 38.

42. A method for reducing oxidative stress or reducing free radical damage in a cell, the method comprising contacting the cell with a compound according to any of claims 1-37 or a pharmaceutically acceptable salt or N oxide thereof, or a solvate or hydrate thereof, or an effective amount of a composition according to claim 38.