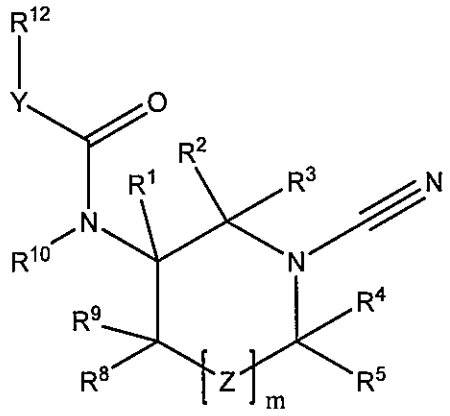
Claims

1. A compound of formula (II)



(II)

a tautomer thereof, or a pharmaceutically acceptable salt of said compound or tautomer, wherein:

m is 0 or 1;

when m is 1, Z is $-C(R^6)(R^7)-$;

R^2 represents a hydrogen atom, an optionally substituted C_1-C_6 alkyl, or C_1-C_6 alkoxy group;

R^3, R^4 and R^5 each independently represent a hydrogen atom, an optionally substituted C_1-C_3 alkyl, or C_1-C_3 alkoxy group;

R^1, R^6, R^7 and R^8 each independently represent a hydrogen atom, a fluorine atom, cyano, hydroxyl, an optionally substituted C_1-C_3 alkyl, or C_1-C_3 alkoxy group;

R^9 represents a hydrogen atom, a fluorine atom, cyano, hydroxyl, an optionally substituted C_1-C_6 alkyl, C_1-C_3 alkoxy group,or 3 to 8-membered cycloalkyl ring, or forms a heterocyclic ring with R^{10};

R^{10} represents a hydrogen atom, optionally substituted C_{1-6} alkyl, or forms a heterocyclic ring with R^9, or forms a monocyclic ring with R^{11};

Y represents a covalent bond, $-(C_0$-$C_3)$-alkylene-$N(R^{11})-(C_0$-$C_3)$-alkylene or C_1-C_3 alkylene;

R^{11} represents a hydrogen atom, C_1-C_6 alkyl, or forms a monocyclic ring with R^{10};

R^{12} represents a substituted monocyclic, optionally substituted bicyclic or optionally substituted tricyclic 3 to 14-membered heteroaryl, heterocyclyl, or cycloalkyl ring;

wherein R^{12}, when substituted, is substituted with one or more of $-Q^1-(R^{13})_p$, wherein:

p is 0 or 1;

Q^1 represents a halogen atom, cyano, oxo, hydroxyl, a covalent bond, $-C_0$-C_3 alkylene-NR^{14}-, $-C_0$-C_3 alkylene-$NR^{14}R^{15}$,$-C_0$-C_3 alkylene-$CONR^{14}$-, $-C_0$-C_3 alkylene-$NR^{14}CO$-, $-C_0$-C_3 alkylene-$NR^{14}SO_2$-, an oxygen atom, $-C_0$-C_3 alkylene-CO-, $-C_0$-C_3 alkylene-$S(O)_q$-, $-C_0$-C_3 alkylene-SO_2NR^{14}, $-C_0$-C_3 alkylene-$SO_2NR^{14}R^{15}$, $-C_1$-C_6 alkoxy, C_1-C_6 haloalkoxy, C_1-C_6 hydroxyalkyl, $-C_0$-C_3 alkylene-SO_2R^{14}, $-C_0$-C_3 alkylene-$NR^{14}COR^{15}$, $-C_0$-C_3 alkylene-$NR^{14}CONR^{15}R^{16}$, $-C_0$-C_3 alkylene-$NR^{14}SO_2NR^{15}R^{16}$, $-C_0$-C_3 alkylene-$CONR^{14}R^{15}$, $-C_0$-C_3 alkylene-CO_2R^{14}, $-C_0$-C_3 alkylene-$NR^{14}CO_2R^{15}$, $-C_0$-C_3 alkylene-$SO_2NR^{14}R^{15}$, $-C_0$-C_3 alkylene-$C(O)R^{14}$ and $-C_0$-C_3 alkylene-$NR^{14}SO_2R^{15}$, NO_2, C_1-C_6 alkylene, $-C_2$-C_6 alkenylene, or an optionally substituted $-C_1$-C_6 alkyl group;

q is 0, 1 or 2;

R^{14}, R^{15} and R^{16} each independently represent a hydrogen atom, C_1-C_6 alkyl, or C_1-C_6 alkylene group;

when p is 1, R^{13} represents a 4 to 10-membered heteroaryl, heterocyclyl, aryl, or 3 to 8-membered cycloalkyl ring; wherein R^{13} may be optionally substituted with one or more substituents selected from halogen, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_1-C_6 hydroxyalkyl, oxo, cyano, $-Q^2-R^{17}$, $-Q^2-NR^{17}CONR^{18}R^{19}$, $-Q^2-NR^{17}R^{18}$, $-Q^2-COR^{17}$, $-Q^2-NR^{17}COR^{18}$, $-Q^2-NR^{17}CO_2R^{18}$, $-Q^2-SO_2R^{17}$, $Q^2-CONR^{17}R^{18}$, $-Q^2-CO_2R^{17}$, $-Q^2-SO_2NR^{17}R^{18}$, $-Q^2-NR^{17}SO_2R^{18}$, heterocyclyl, cycloalkyl, heteroaryl, and aryl; wherein said heterocyclyl, cycloalkyl, heteroaryl and aryl rings may be optionally substituted with one or more substituents, which may be the same or different, selected from Cl, F, OMe, Me, $COCH_3$, $CONH_2$, $NHC(O)CH(CH_3)_2$, and $CO_2CH_2CH_3$;wherein

Q^2 represents a covalent bond, an oxygen atom, -CO-, or a C_1-C_6 alkylene or C_2-C_6 alkenylene group; and

R^{17} and R^{18} each independently represent hydrogen, C_1-C_6 alkyl, heterocyclyl, heteroaryl, aryl, or cycloalkyl; and

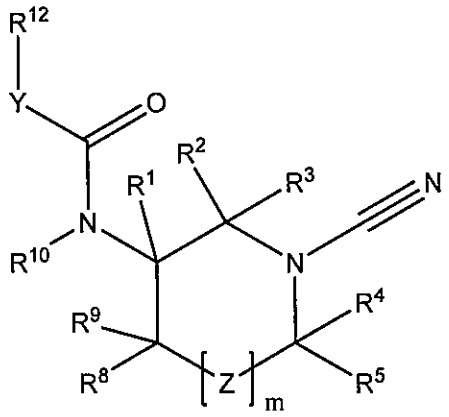
wherein the optional substituents of alkyl of R^1 to R^{10}, and Q^1, which may be the same or different, are selected from C_1-C_3 alkoxy, halogen, hydroxyl, thiol, cyano, amino, amido, nitro and SF_5.

2. A compound according to claim 1, wherein the heteroaryl, heterocyclyl, or cycloalkyl ring of R^{12} is selected from the group consisting of pyrrolidinyl, thiazolyl, pyridinyl, dihydropyridinyl, isoxazolyl, oxazolyl, imidazolyl, pyrazolyl, pyridazinyl, pyrimidinyl, indolyl, benzimidazolyl, quinolinyl, azetidinyl, indazolyl, pyrazolopyridinyl, imidazopyridinyl, indolinyl, piperazinyl, morpholinyl, diazepanyl, tetrahydro-2H-pyrido[3,4-b]indolyl, benzomorpholinyl and pyrrolopyridinyl.

3. A compound according to either claim 1 or claim 2, wherein the heterocyclyl ring of R^{12} is a nitrogen containing ring selected from azetidinyl and pyrrolidinyl, and Y is a covalent bond which is attached to the nitrogen of the azetidinyl or pyrrolidinyl ring.

4. A compound according to any one of claims 1 to 3, wherein the heteroaryl, heterocyclyl, aryl, or cycloalkyl ring of R^{13} is selected from phenyl, pyridinyl, pyrazolyl, imidazolyl, isoxazolyl, morpholinyl, piperdinyl, piperazinyl, quinolinyl, pyrrolidinyl, benzopyrazolyl, isoindolinyl, tetrahydroquinolinyl, homopiperazinyl, pyrimidinyl, imidazopyrimidinyl, imidazopyridinyl, indazolyl, pyrrolopyridinyl, isoxazolyl, benzoimidazolyl, pyridazinyl, cyclopropyl, pyrazolopyrimidinyl, pyrrolopyrimidinyl, dihydroisoquinolinyl, and imidazopyrazinyl.

5. A compound of formula (II)



(II)

a tautomer thereof, or a pharmaceutically acceptable salt of said compound or tautomer, wherein:

m is 0 or 1;

when m is 1, Z is $-C(R^6)(R^7)-$;

R^2 represents a hydrogen atom, an optionally substituted C_1-C_6 alkyl, or C_1-C_6 alkoxy group,;

R^3, R^4 and R^5 each independently represent a hydrogen atom, an optionally substituted C_1-C_3 alkyl, or C_1-C_3 alkoxy group;

R^1, R^6, R^7 and R^8 each independently represent a hydrogen atom, a fluorine atom, cyano, hydroxyl, an optionally substituted C_1-C_3 alkyl, or C_1-C_3 alkoxy group;

R^9 represents a hydrogen atom, a fluorine atom, cyano, hydroxyl, an optionally substituted C_1-C_6 alkyl, C_1-C_3 alkoxy group,or 3 to 8-membered cycloalkyl ring, or forms a heterocyclic ring with R^{10};

R^{10} represents a hydrogen atom, optionally substituted $C_{1\text{-}6}$ alkyl, or forms a heterocyclic ring with R^9, or forms a monocyclic ring with R^{11};

Y represents a covalent bond, $-(C_0\text{-}C_3)$-alkylene-$N(R^{11})$-$(C_0\text{-}C_3)$-alkylene or C_1-C_3 alkylene;

R^{11} represents a hydrogen atom, C_1-C_6 alkyl, or forms a monocyclic ring with R^{10};

R^{12} represents a substituted monocyclic, optionally substituted bicyclic or optionally substituted tricyclic 3 to 14-membered aryl ring;
wherein R^{12}, when substituted, is substituted with one or more of $-Q^1-(R^{13})_p$, wherein:

p is 0 or 1;

Q^1 represents a halogen atom, cyano, oxo, hydroxyl, a covalent bond, $-C_0$-C_3 alkylene-$NR^{14}-$, $-C_0$-C_3 alkylene-$NR^{14}R^{15}$,$-C_0$-C_3 alkylene-$CONR^{14}-$, $-C_0$-C_3 alkylene-$NR^{14}CO-$, $-C_0$-C_3 alkylene-$NR^{14}SO_2-$, an oxygen atom, $-C_0$-C_3 alkylene-CO-, $-C_0$-C_3 alkylene-$S(O)_q-$, $-C_0$-C_3 alkylene-$SO_2NR^{14}R^{15}$, $-C_1$-C_6 alkoxy, C_1-C_6 haloalkoxy, C_1-C_6 hydroxyalkyl, $-C_0$-C_3 alkylene-SO_2R^{14}, $-C_0$-C_3 alkylene-$NR^{14}COR^{15}$, $-C_0$-C_3 alkylene-$NR^{14}CONR^{15}R^{16}$, $-C_0$-C_3 alkylene-$NR^{14}SO_2NR^{15}R^{16}$, $-C_0$-C_3 alkylene-$CONR^{14}R^{15}$, $-C_0$-C_3 alkylene-CO_2R^{14}, $-C_0$-C_3 alkylene-$NR^{14}CO_2R^{15}$, $-C_0$-C_3 alkylene-$SO_2NR^{14}R^{15}$, $-C_0$-C_3 alkylene-

$C(O)R^{14}$ and $-C_0$-C_3 alkylene-$NR^{14}SO_2R^{15}$, NO_2, C_1-C_6 alkylene, -C_2-C_6 alkenylene, or an optionally substituted -C_1-C_6 alkyl group;

q is 0, 1 or 2;

R^{14}, R^{15} and R^{16} each independently represent a hydrogen atom, C_1-C_6 alkyl, or C_1-C_6 alkylene group;

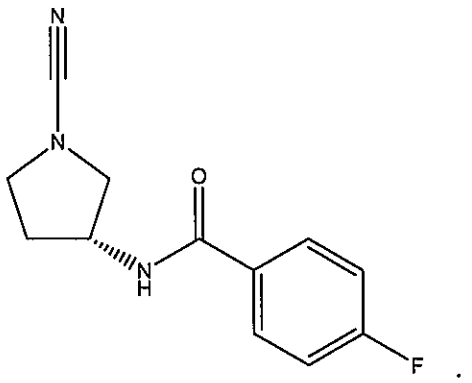
when p is 1, R^{13} represents a 4 to 10-membered heteroaryl, heterocyclyl, or 3 to 8-membered cycloalkyl ring; wherein R^{13} may be optionally substituted with one or more substituents selected from halogen, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_1-C_6 hydroxyalkyl, oxo, cyano, -Q^2-R^{17}, -Q^2-$NR^{17}CONR^{18}R^{19}$, -Q^2-$NR^{17}R^{18}$, -Q^2-COR^{17}, -Q^2-$NR^{17}COR^{18}$, -Q^2-$NR^{17}CO_2R^{18}$, -Q^2-SO_2R^{17}, Q^2-$CONR^{17}R^{18}$, -Q^2-CO_2R^{17}, -Q^2-$SO_2NR^{17}R^{18}$, -Q^2-$NR^{17}SO_2R^{18}$, heterocyclyl, cycloalkyl, heteroaryl, and aryl; wherein said heterocyclyl, cycloalkyl, heteroaryl and aryl rings may be optionally substituted with one or more substituents, which may be the same or different, selected from Cl, F, OMe, Me, $COCH_3$, $CONH_2$, $NHC(O)CH(CH_3)_2$, and $CO_2CH_2CH_3$;wherein

Q^2 represents a covalent bond, an oxygen atom, -CO-, or a C_1-C_6 alkylene or C_2-C_6 alkenylene group; and

R^{17} and R^{18} each independently represent hydrogen, C_1-C_6 alkyl, heterocyclyl, heteroaryl, aryl, or cycloalkyl;

wherein the optional substituents of alkyl of R^1 to R^{10}, and Q^1, which may be the same or different, are selected from C_1-C_3 alkoxy, halogen, hydroxyl, thiol, cyano, amino, amido, nitro and SF_5; and

where the compound is not of the formula:

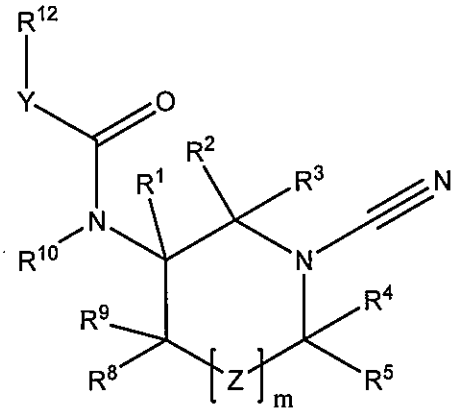


6. A compound according to claim 5, wherein the aryl ring of R^{12} is phenyl.

7. A compound according to either claim 5 or claim 6, wherein the heteroaryl, heterocyclyl, or cycloalkyl ring of R^{13} is selected from pyridinyl, pyrazolyl, imidazolyl, isoxazolyl, morpholinyl, piperdinyl, piperazinyl, quinolinyl, pyrrolidinyl, benzopyrazolyl, isoindolinyl, tetrahydroquinolinyl, homopiperazinyl, pyrimidinyl, imidazopyrimidinyl, imidazopyridinyl, indazolyl, pyrrolopyridinyl, isoxazolyl, benzoimidazolyl, pyridazinyl, cyclopropyl, pyrazolopyrimidinyl, pyrrolopyrimidinyl, dihydroisoquinolinyl, and imidazopyrazinyl.

8. A compound according to any one of claims 1 to 7, wherein Q^1 is selected from halogen, cyano, oxo, a covalent bond, $-NR^{14}R^{15}-$, $-NR^{14}CO-$, an oxygen atom, C_1-C_6 alkoxy, $-NR^{14}-$, $-NR^{14}COR^{15}$, C_1-C_6 alkyl, C_1-C_3 alkylene, wherein the alkyl and alkoxy are optionally substituted with fluorine; and R^{14} and R^{15} each independently represent a hydrogen atom or C_1-C_3 alkyl.

9. A compound of formula (II)



(II)

a tautomer thereof, or a pharmaceutically acceptable salt of said compound or tautomer, wherein:

m is 0 or 1;

when m is 1, Z is $-C(R^6)(R^7)-$;

R^2 represents a hydrogen atom, an optionally substituted C_1-C_6 alkyl, or C_1-C_6 alkoxy group;

R^3, R^4 and R^5 each independently represent a hydrogen atom, an optionally substituted C_1-C_3 alkyl, or C_1-C_3 alkoxy group;

R^1, R^6, R^7 and R^8 each independently represent a hydrogen atom, a fluorine atom, cyano, hydroxyl, an optionally substituted C_1-C_3 alkyl, or C_1-C_3 alkoxy group;

R^9 represents a hydrogen atom, a fluorine atom, cyano, hydroxyl, an optionally substituted C_1-C_6 alkyl, C_1-C_3 alkoxy group,or 3 to 8-membered cycloalkyl ring, or forms a heterocyclic ring with R^{10};

R^{10} represents a hydrogen atom, optionally substituted C_{1-6} alkyl, or forms a heterocyclic ring with R^9, or forms a monocyclic ring with R^{11};

Y represents a covalent bond, -(C_0-C_3)-alkylene-N(R^{11})-(C_0-C_3)-alkylene or C_1-C_3 alkylene;

R^{11} represents a hydrogen atom, C_1-C_6 alkyl, or forms a monocyclic ring with R^{10};

R^{12} represents a substituted monocyclic, optionally substituted bicyclic or optionally substituted tricyclic 3 to 14-membered aryl ring;

wherein R^{12}, when substituted, is substituted with one or more of -Q^1-(R^{13})$_p$, wherein:

p is 0 or 1;

Q^1 represents cyano, oxo, hydroxyl, a covalent bond, -C_0-C_3 alkylene-NR^{14}-, -C_0-C_3 alkylene-$NR^{14}R^{15}$,-C_0-C_3 alkylene-$CONR^{14}$-, -C_0-C_3 alkylene-$NR^{14}CO$-, -C_0-C_3 alkylene-$NR^{14}SO_2$-, an oxygen atom, -C_0-C_3 alkylene-CO-, -C_0-C_3 alkylene-$S(O)_q$-, -C_0-C_3 alkylene-SO_2NR^{14}, -C_0-C_3 alkylene-$SO_2NR^{14}R^{15}$, -C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, C_1-C_6 hydroxyalkyl, -C_0-C_3 alkylene-SO_2R^{14}, -C_0-C_3 alkylene-$NR^{14}COR^{15}$, -C_0-C_3 alkylene-$NR^{14}CONR^{15}R^{16}$, -C_0-C_3 alkylene-$NR^{14}SO_2NR^{15}R^{16}$, -C_0-C_3 alkylene-$CONR^{14}R^{15}$, -C_0-C_3 alkylene-CO_2R^{14}, -C_0-C_3 alkylene-$NR^{14}CO_2R^{15}$, -C_0-C_3 alkylene-$SO_2NR^{14}R^{15}$, -C_0-C_3 alkylene-C(O)R^{14} and –C_0-C_3 alkylene-$NR^{14}SO_2R^{15}$, NO_2, C_1-C_6 alkylene, -C_2-C_6 alkenylene, or an optionally substituted -C_1-C_6 alkyl group;

q is 0, 1 or 2;

R^{14}, R^{15} and R^{16} each independently represent a hydrogen atom, C_1-C_6 alkyl, or C_1-C_6 alkylene group;

when p is 1, R^{13} represents a 4 to 10-membered aryl ring; wherein R^{13} is substituted with one or more substituents selected from C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_1-C_6 hydroxyalkyl, oxo, cyano, $-Q^2-R^{17}$, $-Q^2-NR^{17}CONR^{18}R^{19}$, $-Q^2-NR^{17}R^{18}$, $-Q^2-COR^{17}$, $-Q^2-NR^{17}COR^{18}$, $-Q^2-NR^{17}CO_2R^{18}$, $-Q^2-SO_2R^{17}$, $Q^2-CONR^{17}R^{18}$, $-Q^2-CO_2R^{17}$, $-Q^2-SO_2NR^{17}R^{18}$, $-Q^2-NR^{17}SO_2R^{18}$, heterocyclyl, cycloalkyl, heteroaryl, and aryl; wherein said heterocyclyl, cycloalkyl, heteroaryl and aryl rings may be optionally substituted with one or more substituents, which may be the same or different, selected from Cl, F, OMe, Me, $COCH_3$, $CONH_2$, $NHC(O)CH(CH_3)_2$, and $CO_2CH_2CH_3$;wherein

Q^2 represents a covalent bond, an oxygen atom, -CO-, or a C_1-C_6 alkylene or C_2-C_6 alkenylene group; and

R^{17} and R^{18} each independently represent hydrogen, C_1-C_6 alkyl, heterocyclyl, heteroaryl, aryl, or cycloalkyl; and

wherein the optional substituents of alkyl of R^1 to R^{10}, and Q^1, which may be the same or different, are selected from C_1-C_3 alkoxy, halogen, hydroxyl, thiol, cyano, amino, amido, nitro and SF_5.

10. A compound according to claim 9, wherein Q^1 is selected from cyano, oxo, a covalent bond, $-NR^{14}R^{15}-$, $-NR^{14}CO-$, an oxygen atom, C_1-C_6 alkoxy, $-NR^{14}-$, $-NR^{14}COR^{15}$, C_1-C_6 alkyl, C_1-C_3 alkylene, wherein the alkyl and alkoxy are optionally substituted with fluorine; and R^{14} and R^{15} each independently represent a hydrogen atom or C_1-C_3 alkyl.

11. A compound according to any one of claims 1 to 10, wherein m is 0.

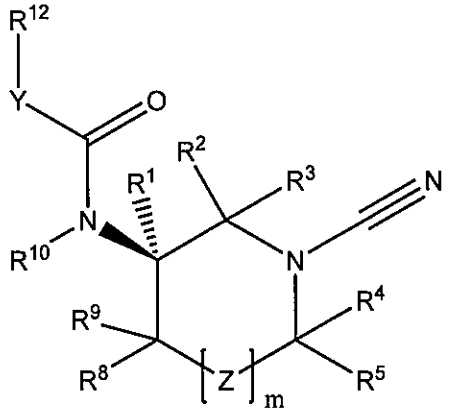
12. A compound according to any one of claims 1 to 11, wherein R^{10} represents a hydrogen atom, optionally substituted C_1-C_6 alkyl, or forms a heterocyclic ring with R^9, or forms a 5 or 6-membered monocyclic ring with R^{11}.

13. A compound according to any one of claims 1 to 12, wherein R^1, R^3, R^4, R^5, and R^6, R^7 and R^8 if present, each independently represent a hydrogen atom, and wherein R^2 represents hydrogen or methyl.

14. A compound according to any one of claims 1 to 13, wherein R^9 represents hydrogen, fluorine atom, hydroxyl, methyl, methoxy, cyclopropyl, or forms a 5-membered heterocyclic ring with R^{10}.

15. A compound according to any one of claims 1 to 14, wherein R^{10} forms a 5-membered heterocyclic ring with R^9.

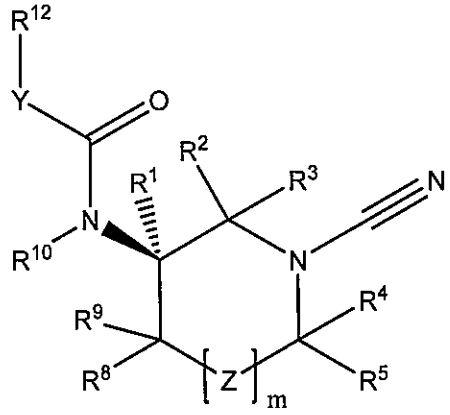
16. A compound according to any one of claims 1 to 15, having the structure of formula (III)



(III)

a tautomer thereof, or a pharmaceutically acceptable salt of said compound or tautomer, wherein m, Z, R^1, R^2, R^3, R^4, R^5, R^8, R^9, R^{10}, R^{12} and Y are defined in any one of claims 1 to 15 for compounds of formula (II).

17. A compound of formula (III)



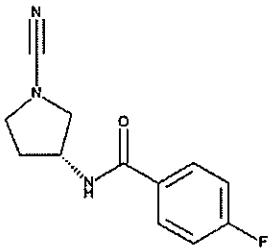
(III)

a tautomer thereof, or a pharmaceutically acceptable salt of said compound or tautomer, wherein R^{12} represents a substituted monocyclic, optionally substituted bicyclic or optionally substituted tricyclic 3 to 14 membered heteroaryl, heterocyclyl, cycloalkyl or aryl ring;

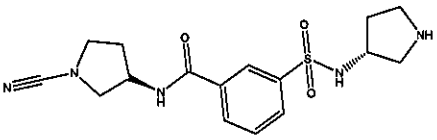
wherein R^{12}, when substituted, is substituted with one or more of $-Q^1-(R^{13})_p$; and

m, Z, R^1, R^2, R^3, R^4, R^5, R^8, R^9, R^{10}, Y, and $-Q^1-(R^{13})_p$ are defined in any one of claims 1 to 15 for compounds of formula (II); and

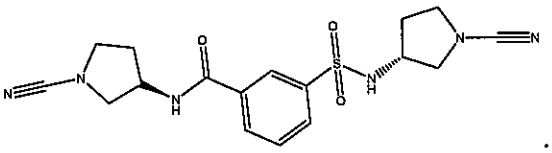
where the compound is not of the formula:



;



; or



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18. A compound of formula (II), which is selected from the group consisting of:

(R)-N-(1-cyanopyrrolidin-3-yl)-5-phenylpicolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-methoxy-4-(1-methyl-1H-pyrazol-4-yl)benzamide

2'-chloro-N-(1-cyanopyrrolidin-3-yl)-[1,1'-biphenyl]-4-carboxamide

6-(benzyl(methyl)amino)-N-(1-cyanopyrrolidin-3-yl)nicotinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-phenylazetidine-1-carboxamide

N-((R)-1-cyanopyrrolidin-3-yl)-4-((2S,6R)-2,6-dimethylmorpholino)-3-fluorobenzamide

N-(1-cyanopyrrolidin-3-yl)-4-phenylthiazole-2-carboxamide

3-(3-chlorophenyl)-N-(1-cyanopyrrolidin-3-yl)isoxazole-5-carboxamide

N-(1-cyanopyrrolidin-3-yl)-1-phenyl-1H-imidazole-4-carboxamide

N-(1-cyanopyrrolidin-3-yl)-1-(2,4-difluorobenzyl)-5-oxopyrrolidine-3-carboxamide

N-(1-cyanopyrrolidin-3-yl)-5-oxo-1-phenylpyrrolidine-3-carboxamide

N-(1-cyanopyrrolidin-3-yl)-4-(3,5-dimethylisoxazol-4-yl)benzamide

3'-chloro-N-(1-cyanopyrrolidin-3-yl)-[1,1'-biphenyl]-4-carboxamide

N-(1-cyanopyrrolidin-3-yl)-2'-methoxy-[1,1'-biphenyl]-4-carboxamide

N-(1-cyanopyrrolidin-3-yl)-4-phenoxybenzamide

2-([1,1'-biphenyl]-4-yl)-N-(1-cyanopyrrolidin-3-yl)acetamide

N-(1-cyanopyrrolidin-3-yl)-2-phenylquinoline-4-carboxamide

6-(4-carbamoylpiperidin-1-yl)-N-(1-cyanopyrrolidin-3-yl)nicotinamide

N-(1-cyanopyrrolidin-3-yl)-6-(4-(2,4-difluorophenyl)piperazin-1-yl)nicotinamide

ethyl 4-(5-((1-cyanopyrrolidin-3-yl)carbamoyl)pyridin-2-yl)piperazine-1-carboxylate

N-(1-cyanopyrrolidin-3-yl)-6-(2-(pyridin-3-yl)pyrrolidin-1-yl)nicotinamide

N-(1-cyanopyrrolidin-3-yl)-6-(4-phenoxypiperidin-1-yl)nicotinamide

N-(1-cyanopyrrolidin-3-yl)-6-(4-(pyridin-4-yl)piperidin-1-yl)nicotinamide

6-(benzyl(methyl)amino)-N-(1-cyanopyrrolidin-3-yl)picolinamide

N-(1-cyanopyrrolidin-3-yl)-6-(3,4-dihydroisoquinolin-2(1H)-yl)picolinamide

N-(1-cyanopyrrolidin-3-yl)-6-(4-phenoxypiperidin-1-yl)picolinamide

N-(1-cyanopyrrolidin-3-yl)-2-(3,4-dihydroisoquinolin-2(1H)-yl)isonicotinamide

2-(4-acetyl-1,4-diazepan-1-yl)-N-(1-cyanopyrrolidin-3-yl)isonicotinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-phenylpicolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-phenylpicolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-morpholinobenzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-fluoro-4-morpholinobenzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-phenylisoxazole-5-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(pyridin-4-yl)isoxazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-[1,1'-biphenyl]-4-carboxamide

(R)-6-(4-chlorophenyl)-N-(1-cyanopyrrolidin-3-yl)nicotinamide

(R)-2-(2-chlorophenyl)-N-(1-cyanopyrrolidin-3-yl)thiazole-5-carboxamide

(R)-4-(3-chloropyridin-4-yl)-N-(1-cyanopyrrolidin-3-yl)benzamide

(R)-4-(3-chloropyridin-4-yl)-N-(1-cyanopyrrolidin-3-yl)-3-methoxybenzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-methoxy-4-(2-methylpyridin-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-methoxy-4-(2-morpholinopyridin-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-fluoro-3-(pyridin-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-fluoro-3-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)pyrimidine-2-carboxamide

N-((R)-1-cyanopyrrolidin-3-yl)-3-phenylpyrrolidine-1-carboxamide

(S)-N-(1-cyanopyrrolidin-3-yl)-4-(pyridin-4-yl)benzamide

(S)-N-(1-cyanopyrrolidin-3-yl)-6-phenylpicolinamide

(R)-4-(3-chloropyridin-4-yl)-N-(1-cyanopyrrolidin-3-yl)-N-methylbenzamide

(R)-1-(1-cyanopyrrolidin-3-yl)-3-(imidazo[1,2-a]pyridin-2-yl)-1-methylurea

(3aR,6aR)-1-([1,1'-biphenyl]-3-carbonyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(3aR,6aR)-1-(3-phenyl-1H-pyrazole-5-carbonyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(3aR,6aR)-1-(3-phenylisoxazole-5-carbonyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(3aR,6aR)-1-(1-phenyl-1H-imidazole-4-carbonyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(3aR,6aR)-1-(3-(4-methoxyphenyl)-1H-pyrazole-5-carbonyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(3aR,6aR)-1-(3-(4-methoxyphenyl)isoxazole-5-carbonyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(3aR,6aR)-1-(4-fluoro-3-(pyridin-4-yl)benzoyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(3aR,6aR)-1-(4-fluoro-3-(1-methyl-1H-pyrazol-4-yl)benzoyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(3aR,6aR)-1-(4-(3-chloropyridin-4-yl)-3-methoxybenzoyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(3aR,6aR)-1-(3-methoxy-4-(1-methyl-1H-pyrazol-4-yl)benzoyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(3aR,6aR)-1-(2-oxo-6-phenyl-1,2-dihydropyridine-3-carbonyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(N-methylisobutyramido)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-phenylpyrimidine-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(pyridin-4-yl)isoxazole-5-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(pyridin-3-yl)isoxazole-5-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(pyridin-2-yl)isoxazole-5-carboxamide

N-(1-cyanopyrrolidin-3-yl)-5-phenylpyridazine-3-carboxamide

N-(1-cyanopyrrolidin-3-yl)-N-methyl-[1,1'-biphenyl]-4-carboxamide

N-((3S,4R)-1-cyano-4-methylpyrrolidin-3-yl)-2-phenylthiazole-5-carboxamide

N-((3R,4S)-1-cyano-4-methylpyrrolidin-3-yl)-2-phenylthiazole-5-carboxamide

N-((3S,4R)-1-cyano-4-methylpyrrolidin-3-yl)-5-phenylthiazole-2-carboxamide

N-((3R,4S)-1-cyano-4-methylpyrrolidin-3-yl)-5-phenylthiazole-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-(isoindolin-2-yl)isonicotinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-(3,4-dihydroisoquinolin-2(1H)-yl)isonicotinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(4-methyl-1H-imidazol-1-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-fluoro-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2,5-difluoro-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-(1,3-dimethyl-1H-pyrazol-4-yl)-3-fluorobenzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-(1,3-dimethyl-1H-pyrazol-4-yl)-2-fluorobenzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-(1-ethyl-1H-pyrazol-4-yl)-2-fluorobenzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(1-(2-methoxyethyl)-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(1-methyl-1H-pyrazol-4-yl)-1H-benzo[d]imidazole-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(1-methyl-1H-pyrazol-4-yl)-1H-indole-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(5-(trifluoromethyl)-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(1-methyl-1H-indazol-5-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-fluoro-N-methyl-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-N-methyl-6-(1-methyl-1H-pyrazol-4-yl)-1H-benzo[d]imidazole-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-N-methyl-3-phenoxyazetidine-1-carboxamide

(3aR,6aR)-5-cyano-N-(2-fluoro-4-(trifluoromethyl)phenyl)hexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(pyrimidin-2-ylamino)benzamide

N-((3R,4S)-1-cyano-4-methylpyrrolidin-3-yl)-2-fluoro-4-((R)-3-methoxypyrrolidin-1-yl)benzamide

2-(2-chlorophenyl)-N-((3R,4R)-1-cyano-4-hydroxypyrrolidin-3-yl)thiazole-5-carboxamide

N-(1-cyano-3-methylpyrrolidin-3-yl)-2-fluoro-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(4-methoxyphenyl)-1H-pyrazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(pyridin-2-yl)-1H-pyrazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(2-methoxyphenyl)-1H-pyrazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(2-fluorophenyl)-1H-pyrazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-morpholinonicotinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(4-methoxyphenyl)isoxazole-5-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-1H-indazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-phenyl-1H-pyrazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(pyridin-3-yl)-1H-pyrazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-3-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(2-methylpyrimidin-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)picolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-5-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(pyrimidin-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(imidazo[1,2-a]pyrimidin-6-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-methoxy-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(1-methyl-1H-pyrazol-4-yl)nicotinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3,5-difluoro-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2,6-difluoro-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazolo[1,5-a]pyridine-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-3-methoxy-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-6-(3-cyanophenyl)-N-(1-cyanopyrrolidin-3-yl)imidazo[1,2-a]pyridine-2-carboxamide

(R)-6-(4-cyanophenyl)-N-(1-cyanopyrrolidin-3-yl)imidazo[1,2-a]pyridine-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(imidazo[1,2-a]pyridin-6-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(2-morpholinopyridin-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-fluoro-5-(1-methyl-1H-indazol-5-yl)picolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-fluoro-5-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)picolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(1,3-dimethyl-1H-pyrazol-4-yl)-3-fluoropicolinamide

(R)-3-chloro-N-(1-cyanopyrrolidin-3-yl)-5-(4-fluorophenyl)picolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(1-methyl-1H-pyrazol-4-yl)imidazo[1,2-a]pyridine-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(1,3-dimethyl-1H-pyrazol-4-yl)imidazo[1,2-a]pyridine-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)-1H-indazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(1-methyl-1H-pyrazol-4-yl)-1H-indazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(3,5-dimethylisoxazol-4-yl)-1H-indole-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(1,3-dimethyl-1H-pyrazol-4-yl)-1H-indole-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)-1H-indole-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2,3-difluoro-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(1-ethyl-1H-pyrazol-4-yl)-4-methylpicolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-phenoxyazetidine-1-carboxamide

(R)-3-(1H-benzo[d]imidazol-2-yl)-N-(1-cyanopyrrolidin-3-yl)azetidine-1-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-phenylpiperazine-1-carboxamide

N-((R)-1-cyanopyrrolidin-3-yl)-2-phenylmorpholine-4-carboxamide

(R)-4-(2-chloro-6-fluorobenzyl)-N-(1-cyanopyrrolidin-3-yl)-1,4-diazepane-1-carboxamide

(R)-4-benzyl-N-(1-cyanopyrrolidin-3-yl)-1,4-diazepane-1-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-1,3,4,9-tetrahydro-2H-pyrido[3,4-b]indole-2-carboxamide

N-((R)-1-cyanopyrrolidin-3-yl)-2-((2S,6R)-2,6-dimethylmorpholino)-5-fluoroisonicotinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-fluoro-2-(isoindolin-2-yl)isonicotinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-fluoro-4-(pyrimidin-2-ylamino)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(pyrrolidin-1-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2,5-difluoro-4-morpholinobenzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2,5-difluoro-4-(pyrrolidin-1-yl)benzamide

N-((R)-1-cyanopyrrolidin-3-yl)-2-fluoro-4-((R)-3-methoxypyrrolidin-1-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-methoxy-4-(pyrimidin-2-ylamino)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-methoxy-4-((4-methylpyrimidin-2-yl)amino)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-((4-methoxypyrimidin-2-yl)amino)benzamide

N-((R)-1-cyanopyrrolidin-3-yl)-5-methyl-1-(1-phenylethyl)-1H-pyrazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-methyl-1-(pyridin-2-ylmethyl)-1H-pyrazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(pyridazin-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-1-isobutyl-6-(1-methyl-1H-pyrazol-4-yl)-1H-indazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(3,5-dimethylisoxazol-4-yl)-1-isobutyl-1H-indazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-1-(cyclopropylmethyl)-6-(3,5-dimethylisoxazol-4-yl)-1H-indazole-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-N-methyl-6-(1-methyl-1H-pyrazol-4-yl)imidazo[1,2-a]pyridine-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-N-methyl-5-(1-methyl-1H-pyrazol-4-yl)-1H-indole-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(3,5-dimethylisoxazol-4-yl)-N-methyl-1H-benzo[d]imidazole-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-7-(1-methyl-1H-pyrazol-4-yl)imidazo[1,2-a]pyridine-3-carboxamide

(R)-7-(3-cyanophenyl)-N-(1-cyanopyrrolidin-3-yl)imidazo[1,2-a]pyridine-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-N-methyl-7-(2-methylpyridin-4-yl)imidazo[1,2-a]pyridine-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-N-methyl-7-(6-methylpyridin-3-yl)imidazo[1,2-a]pyridine-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-7-(1,3-dimethyl-1H-pyrazol-4-yl)-N-methylimidazo[1,2-a]pyridine-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-7-(2,6-dimethylpyridin-4-yl)-N-methylimidazo[1,2-a]pyridine-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-N-ethyl-7-(2-methylpyridin-4-yl)imidazo[1,2-a]pyridine-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-7-morpholinoimidazo[1,2-a]pyridine-3-carboxamide

(R)-6-(3-cyanophenyl)-N-(1-cyanopyrrolidin-3-yl)-3-fluoroimidazo[1,2-a]pyridine-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-fluoro-6-(1-methyl-1H-pyrazol-4-yl)imidazo[1,2-a]pyridine-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(1-ethyl-1H-pyrazol-4-yl)-3-fluoroimidazo[1,2-a]pyridine-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(1,3-dimethyl-1H-pyrazol-4-yl)-3-fluoroimidazo[1,2-a]pyridine-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(3,5-dimethylisoxazol-4-yl)-3-fluoroimidazo[1,2-a]pyridine-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(pyrazolo[1,5-a]pyrimidin-5-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(4-fluorophenyl)picolinamide

N-((2R,3R)-1-cyano-2-methylpyrrolidin-3-yl)-5-(4-fluorophenyl)picolinamide

3-chloro-N-((3R,4S)-1-cyano-4-methylpyrrolidin-3-yl)-4-morpholinobenzamide

N-((3R,4R)-1-cyano-4-fluoropyrrolidin-3-yl)-[1,1'-biphenyl]-4-carboxamide

N-((3R,4R)-1-cyano-4-cyclopropylpyrrolidin-3-yl)-3-fluoro-4-(1-methyl-1H-pyrazol-4-yl)benzamide

N-((3S,4S)-1-cyano-4-methoxypyrrolidin-3-yl)-N-methyl-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(1,3-dimethyl-1H-pyrazol-4-yl)picolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-5-(2-methyl-6-(trifluoromethyl)pyrimidin-4-yl)picolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-(2,6-dimethylpyrimidin-4-yl)-2-fluorobenzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(5-fluoro-2-methylpyrimidin-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(2-(trifluoromethyl)pyrimidin-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(2-methyl-3H-pyrrolo[2,3-d]pyrimidin-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(imidazo[1,2-a]pyrazin-3-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-fluoro-5-(pyrazolo[1,5-a]pyrimidin-5-yl)picolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-fluoro-5-(imidazo[1,2-a]pyridin-6-yl)picolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-methoxy-3-phenylazetidine-1-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-N-methyl-3-phenylazetidine-1-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(4-methoxyphenyl)azetidine-1-carboxamide

(R)-3-(4-chlorophenyl)-N-(1-cyanopyrrolidin-3-yl)azetidine-1-carboxamide

(R)-3-(3-chlorophenyl)-N-(1-cyanopyrrolidin-3-yl)azetidine-1-carboxamide

(3aR,6aR)-1-(3-phenylazetidine-1-carbonyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(R)-1-(1-cyanopyrrolidin-3-yl)-1-methyl-3-(4-(1-methyl-1H-pyrazol-4-yl)phenyl)urea

(R)-1-(1-cyanopyrrolidin-3-yl)-1-methyl-3-(4-(trifluoromethyl)phenyl)urea

(3aR,6aR)-N-(4-chloro-2-fluorophenyl)-5-cyanohexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(3aR,6aR)-5-cyano-N-(2-fluoro-4-(trifluoromethoxy)phenyl)hexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(3aR,6aR)-5-cyano-N-(4-cyano-2-fluorophenyl)hexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(3aR,6aR)-5-cyano-N-(4-cyano-2,5-difluorophenyl)hexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(3aR,6aR)-N-(5-chloro-2-fluorophenyl)-5-cyanohexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(3aR,6aR)-5-cyano-N-(2-fluoro-5-(trifluoromethyl)phenyl)hexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(3aR,6aR)-5-cyano-N-(5-phenylpyridin-2-yl)hexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(3aR,6aR)-5-cyano-N-(4-(trifluoromethyl)phenyl)hexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(R)-1-(1-cyanopyrrolidin-3-yl)-1-ethyl-3-(4-(trifluoromethyl)phenyl)urea

1-(1-cyanopyrrolidin-3-yl)-1-(2-methoxyethyl)-3-(4-(trifluoromethyl)phenyl)urea

(R)-N-(1-cyanopyrrolidin-3-yl)-N-ethyl-3-fluoro-4-(1-methyl-1H-pyrazol-4-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-N-ethyl-3-phenylazetidine-1-carboxamide

(R)-3-(2-oxo-3-(4-phenylthiazol-2-yl)imidazolidin-1-yl)pyrrolidine-1-carbonitrile

(R)-3-(2-oxo-3-(4-phenylthiazol-2-yl)tetrahydropyrimidin-1(2H)-yl)pyrrolidine-1-carbonitrile

(R)-3-(3-(3-morpholinophenyl)-2-oxoimidazolidin-1-yl)pyrrolidine-1-carbonitrile

(R)-N-(1-cyanopyrrolidin-3-yl)-4-(pyrimidin-2-yl)-3,4-dihydro-2H-benzo[b][1,4]oxazine-7-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-(4-cyclopropylpyrimidin-2-yl)-3,4-dihydro-2H-benzo[b][1,4]oxazine-7-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-((4-cyclopropylpyrimidin-2-yl)amino)-3-fluorobenzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-((4-cyclopropylpyrimidin-2-yl)amino)-2,3-difluorobenzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-4-(N-methylisobutyramido)picolinamide

(R)-N-(1-cyanopyrrolidin-3-yl)-[2,3'-bipyridine]-6'-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-[2,4'-bipyridine]-2'-carboxamide

(R)-3-(4-chlorophenyl)-N-(1-cyanopyrrolidin-3-yl)isoxazole-5-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(4-(trifluoromethyl)phenyl)isoxazole-5-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(3,4-dimethoxyphenyl)isoxazole-5-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(3-methoxyphenyl)isoxazole-5-carboxamide

N-((R)-1-cyanopyrrolidin-3-yl)-1-phenylpyrrolidine-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-fluoro-4-(4-methyl-1H-imidazol-1-yl)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-fluoro-N-methyl-4-(4-methyl-1H-imidazol-1-yl)benzamide

N-((R)-1-cyanopyrrolidin-3-yl)-3-(pyridin-2-yl)pyrrolidine-1-carboxamide

N-((R)-1-cyanopyrrolidin-3-yl)-3-(1-methyl-1H-pyrazol-4-yl)pyrrolidine-1-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(2-methoxypyridin-4-yl)-N-methylisoxazole-5-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-2-fluoro-4-(N-methylphenylsulfonamido)benzamide

(R)-N-(1-cyanopyrrolidin-3-yl)-1-methyl-6-(1-methyl-1H-pyrazol-4-yl)-1H-indole-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-1-methyl-5-(1-methyl-1H-pyrazol-4-yl)-1H-indole-2-carboxamide

(R)-1-(1-cyanopyrrolidin-3-yl)-3-(2-(isoindolin-2-yl)pyridin-4-yl)-1-methylurea

(R)-N-(1-cyanopyrrolidin-3-yl)-3-fluoro-1-methyl-5-(1-methyl-1H-pyrazol-4-yl)-1H-indole-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-7-(1-methyl-1H-pyrazol-4-yl)imidazo[1,5-a]pyridine-3-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(1-phenyl-1H-pyrazol-3-yl)azetidine-1-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(1-(pyrazin-2-yl)-1H-pyrazol-3-yl)azetidine-1-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(2-phenylpyrimidin-4-yl)azetidine-1-carboxamide

(R)-3-(2-(4-chlorophenyl)pyrimidin-4-yl)-N-(1-cyanopyrrolidin-3-yl)azetidine-1-carboxamide

(R)-3-(benzyloxy)-N-(1-cyanopyrrolidin-3-yl)-3-phenylazetidine-1-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-1-(4-cyclopropylpyrimidin-2-yl)indoline-5-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-1-(4-cyclopropylpyrimidin-2-yl)-N-methylindoline-5-carboxamide

(3aR,6aR)-5-cyano-N-(3-(2-methylpyridin-4-yl)phenyl)hexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(3aR,6aR)-5-cyano-N-(4-(2-methylpyridin-4-yl)phenyl)hexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(3aR,6aR)-5-cyano-N-(2-fluoro-4-(2-methylpyridin-4-yl)phenyl)hexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(3aR,6aR)-5-cyano-N-(2'-methyl-[3,4'-bipyridin]-6-yl)hexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

(3aR,6aR)-5-cyano-N-(2-fluoro-4-(1-methyl-1H-pyrazol-4-yl)phenyl)hexahydropyrrolo[3,4-b]pyrrole-1(2H)-carboxamide

1-(3-phenyl-1H-pyrazole-5-carbonyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(3aR,6aR)-1-(3-phenoxyazetidine-1-carbonyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

N-(1-cyanopiperidin-3-yl)-[1,1'-biphenyl]-3-carboxamide

1-(3-benzylphenyl)-3-(1-cyanopiperidin-3-yl)urea

1-(1-cyanopiperidin-3-yl)-3-(3-phenoxyphenyl)urea

1-(1-cyanopyrrolidin-3-yl)-3-(2,4-dichlorophenyl)urea

1-(1-cyanopyrrolidin-3-yl)-3-(4-(trifluoromethyl)phenyl)urea

1-(3-benzylphenyl)-3-(1-cyanopyrrolidin-3-yl)urea

1-([1,1'-biphenyl]-4-yl)-3-(1-cyanopyrrolidin-3-yl)urea

1-(1-cyanopyrrolidin-3-yl)-3-(3-phenoxyphenyl)urea

3-(3-benzylphenyl)-1-(1-cyanopyrrolidin-3-yl)-1-methylurea

3-(3-chlorophenyl)-1-(1-cyanopyrrolidin-3-yl)-1-methylurea

1-(1-cyanopyrrolidin-3-yl)-1-methyl-3-(3-phenoxyphenyl)urea

3-([1,1'-biphenyl]-4-yl)-1-(1-cyanopyrrolidin-3-yl)-1-methylurea

1-(1-cyanopyrrolidin-3-yl)-3-(2,4-dichlorophenyl)-1-methylurea

1-(1-cyanopyrrolidin-3-yl)-1-methyl-3-(4-(trifluoromethyl)phenyl)urea

(R)-N-(1-cyanopyrrolidin-3-yl)-6-(3,5-dimethylisoxazol-4-yl)-N-methyl-1H-indole-2-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-N-methyl-5-(1-methyl-1H-pyrazol-4-yl)-1H-pyrrolo[2,3-c]pyridine-2-carboxamide

N-((R)-1-cyanopyrrolidin-3-yl)-N-methyl-2-phenylmorpholine-4-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-N-methylindoline-1-carboxamide

(R)-1-(1-cyanopyrrolidin-3-yl)-1-methyl-3-(6-(trifluoromethyl)pyridin-3-yl)urea

(R)-3-(5-chloropyridin-2-yl)-1-(1-cyanopyrrolidin-3-yl)-1-methylurea

(3aR,6aR)-1-(3-chloro-4-morpholinobenzoyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(3aR,6aR)-1-(indoline-1-carbonyl)hexahydropyrrolo[3,4-b]pyrrole-5(1H)-carbonitrile

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(2-methylpyridin-4-yl)isoxazole-5-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(3,4-dimethylphenyl)isoxazole-5-carboxamide

(R)-N-(1-cyanopyrrolidin-3-yl)-3-(2,4-difluorophenyl)isoxazole-5-carboxamide

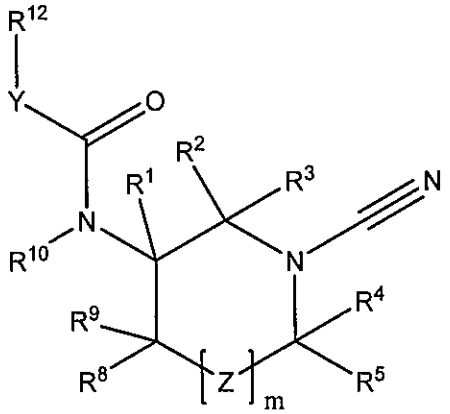
(R)-N-(1-cyanopyrrolidin-3-yl)-N-methyl-3-(2-methylpyridin-4-yl)isoxazole-5-carboxamide;

or a pharmaceutically acceptable salt thereof.

19. Use of a compound according to any one of claims 1 to 18, a tautomer thereof, or a pharmaceutically acceptable salt of said compound or tautomer, in the manufacture of a medicament.

20. Use of a compound according to any one of claims 1 to 18, a tautomer thereof, or a pharmaceutically acceptable salt of said compound or tautomer, in the manufacture of a medicament for the treatment of a condition involving mitochondrial dysfunction, or a cancer, wherein the condition involving mitochondrial dysfunction is selected from a neurodegenerative disease; mitochondrial encephalopathy, lactic acidosis, and stroke-like episodes syndrome; Leber's hereditary optic neuropathy; cancer; neuropathy, ataxia, retinitis pigmentosa-maternally inherited Leigh syndrome; Danon disease; diabetes; metabolic disorders; ischemic heart disease leading to myocardial infarction; psychiatric diseases, for example schizophrenia; multiple sulfatase deficiency; mucolipidosis II; mucolipidosis III; mucolipidosis IV; GMl-gangliosidosis; neuronal ceroid-lipofuscinoses; Alpers disease; Barth syndrome; Beta-oxidation defects; carnitine-acyl-carnitine deficiency; carnitine deficiency; creatine deficiency syndromes; co-enzyme Q10 deficiency; complex I deficiency; complex II deficiency; complex III deficiency; complex IV deficiency; complex V deficiency; COX deficiency; chronic progressive external ophthalmoplegia syndrome; CPT I deficiency; CPT II deficiency; glutaric aciduria type II; Kearns-Sayre syndrome; lactic acidosis; long-chain acyl-CoA dehydrogenase deficiency; Leigh disease or syndrome; lethal infantile cardiomyopathy; Luft disease; glutaric aciduria type II; medium-chain acyl-CoA dehydrogenase deficiency; myoclonic epilepsy and ragged-red fiber syndrome; mitochondrial cytopathy; mitochondrial recessive ataxia syndrome; mitochondrial DNA depletion syndrome; myoneurogastrointestinal disorder and encephalopathy; Pearson syndrome; pyruvate dehydrogenase deficiency; pyruvate carboxylase deficiency; POLG mutations; medium/short-chain 3-hydroxyacyl-CoA dehydrogenase deficiency; and very long-chain acyl-CoA dehydrogenase deficiency.

21. Use of a compound of formula (II)



(II)

a tautomer thereof, or a pharmaceutically acceptable salt of said compound or tautomer, wherein:

m is 0 or 1;

when m is 1, Z is $-C(R^6)(R^7)-$;

R^2 represents a hydrogen atom, an optionally substituted C_1-C_6 alkyl, or C_1-C_6 alkoxy group;

R^3, R^4 and R^5 each independently represent a hydrogen atom, an optionally substituted C_1-C_3 alkyl, or C_1-C_3 alkoxy group;

R^1, R^6, R^7 and R^8 each independently represent a hydrogen atom, a fluorine atom, cyano, hydroxyl, an optionally substituted C_1-C_3 alkyl, or C_1-C_3 alkoxy group;

R^9 represents a hydrogen atom, a fluorine atom, cyano, hydroxyl, an optionally substituted C_1-C_6 alkyl, C_1-C_3 alkoxy group,or 3 to 8-membered cycloalkyl ring, or forms a heterocyclic ring with R^{10};

R^{10} represents a hydrogen atom, optionally substituted $C_{1\text{-}6}$ alkyl, or forms a heterocyclic ring with R^9, or forms a monocyclic ring with R^{11};

Y represents a covalent bond, -(C_0-C_3)-alkylene-$N(R^{11})$-(C_0-C_3)-alkylene or C_1-C_3 alkylene;

R^{11} represents a hydrogen atom, C_1-C_6 alkyl, or forms a monocyclic ring with R^{10};

R^{12} represents a substituted monocyclic, optionally substituted bicyclic or optionally substituted tricyclic 3 to 14-membered aryl ring;

wherein R^{12}, when substituted, is substituted with one or more of $-Q^1-(R^{13})_p$, wherein:

p is 0 or 1;

Q^1 represents a halogen atom, cyano, oxo, hydroxyl, a covalent bond, -C_0-C_3 alkylene-NR^{14}-, -C_0-C_3 alkylene-$NR^{14}R^{15}$,-C_0-C_3 alkylene-$CONR^{14}$-, -C_0-C_3 alkylene-$NR^{14}CO$-, -C_0-C_3 alkylene-$NR^{14}SO_2$-, an oxygen atom, -C_0-C_3 alkylene-CO-, -C_0-C_3 alkylene-$S(O)_q$-, -C_0-C_3 alkylene-SO_2NR^{14}, -C_0-C_3 alkylene-$SO_2NR^{14}R^{15}$, -C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, C_1-C_6 hydroxyalkyl, -C_0-C_3 alkylene-SO_2R^{14},

-C_0-C_3 alkylene-$NR^{14}COR^{15}$, -C_0-C_3 alkylene-$NR^{14}CONR^{15}R^{16}$, -C_0-C_3 alkylene-$NR^{14}SO_2NR^{15}R^{16}$, -C_0-C_3 alkylene-$CONR^{14}R^{15}$, -C_0-C_3 alkylene-CO_2R^{14}, -C_0-C_3 alkylene-$NR^{14}CO_2R^{15}$, -C_0-C_3 alkylene-$SO_2NR^{14}R^{15}$, -C_0-C_3 alkylene-$C(O)R^{14}$ and –C_0-C_3 alkylene-$NR^{14}SO_2R^{15}$, NO_2, C_1-C_6 alkylene, -C_2-C_6 alkenylene, or an optionally substituted -C_1-C_6 alkyl group;

q is 0, 1 or 2;

R^{14}, R^{15} and R^{16} each independently represent a hydrogen atom, C_1-C_6 alkyl, or C_1-C_6 alkylene group;

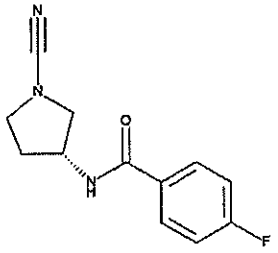
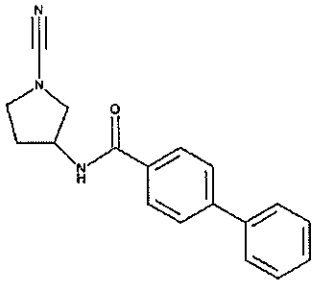
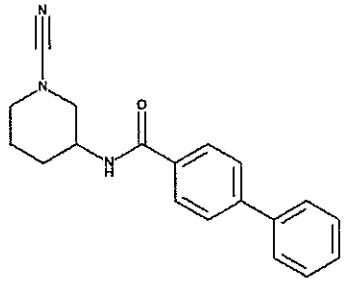
when p is 1, R^{13} represents a 4 to 10-membered aryl ring; wherein R^{13} may be optionally substituted with one or more substituents selected from halogen, C_1-C_6 haloalkyl, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_1-C_6 hydroxyalkyl, oxo, cyano, -Q^2-R^{17}, -Q^2-$NR^{17}CONR^{18}R^{19}$, -Q^2-$NR^{17}R^{18}$, -Q^2-COR^{17}, -Q^2-$NR^{17}COR^{18}$, -Q^2-$NR^{17}CO_2R^{18}$, -Q^2-SO_2R^{17}, Q^2-$CONR^{17}R^{18}$, -Q^2-CO_2R^{17}, -Q^2-$SO_2NR^{17}R^{18}$, -Q^2-$NR^{17}SO_2R^{18}$, heterocyclyl, cycloalkyl, heteroaryl, and aryl; wherein said heterocyclyl, cycloalkyl, heteroaryl and aryl rings may be optionally substituted with one or more substituents, which may be the same or different, selected from Cl, F, OMe, Me, $COCH_3$, $CONH_2$, $NHC(O)CH(CH_3)_2$, and $CO_2CH_2CH_3$;wherein

Q^2 represents a covalent bond, an oxygen atom, -CO-, or a C_1-C_6 alkylene or C_2-C_6 alkenylene group; and

R^{17} and R^{18} each independently represent hydrogen, C_1-C_6 alkyl, heterocyclyl, heteroaryl, aryl, or cycloalkyl; and

wherein the optional substituents of alkyl of R^1 to R^{10}, and Q^1, which may be the same or different, are selected from C_1-C_3 alkoxy, halogen, hydroxyl, thiol, cyano, amino, amido, nitro and SF_5; and

where the compound is not of the formula:


;

; or

;

in the manufacture of a medicament for the treatment of a condition involving mitochondrial dysfunction, or a cancer;

wherein the condition involving mitochondrial dysfunction is selected from a neurodegenerative disease; mitochondrial encephalopathy, lactic acidosis, and stroke-like episodes syndrome; Leber's hereditary optic neuropathy; cancer; neuropathy, ataxia, retinitis pigmentosa-maternally inherited Leigh syndrome; Danon disease; diabetes; metabolic disorders; ischemic heart disease leading to myocardial infarction; psychiatric diseases, for example schizophrenia; multiple sulfatase deficiency; mucolipidosis II; mucolipidosis III; mucolipidosis IV; GMl-gangliosidosis; neuronal ceroid-lipofuscinoses; Alpers disease; Barth syndrome; Beta-oxidation defects; carnitine-acyl-carnitine deficiency; carnitine deficiency; creatine deficiency syndromes; co-enzyme Q10 deficiency; complex I deficiency; complex II deficiency; complex III deficiency; complex IV deficiency; complex V deficiency; COX deficiency; chronic progressive external ophthalmoplegia syndrome; CPT I deficiency; CPT II deficiency; glutaric aciduria type II; Kearns-Sayre syndrome; lactic acidosis; long-chain acyl-CoA dehydrogenase deficiency; Leigh disease or syndrome; lethal infantile cardiomyopathy; Luft disease; glutaric aciduria type II; medium-chain acyl-CoA dehydrogenase deficiency; myoclonic epilepsy and ragged-red fiber syndrome; mitochondrial cytopathy; mitochondrial recessive ataxia syndrome; mitochondrial DNA depletion syndrome; myoneurogastrointestinal disorder and encephalopathy; Pearson syndrome; pyruvate dehydrogenase deficiency; pyruvate carboxylase deficiency; POLG mutations; medium/short-chain 3-hydroxyacyl-CoA dehydrogenase deficiency; and very long-chain acyl-CoA dehydrogenase deficiency.

22. Use of a compound according to either claim 20 or claim 21, wherein the neurodegenerative disease is selected from Parkinson's disease, Alzheimer's disease, amyotrophic lateral sclerosis, Huntington's disease, ischemia, stroke, dementia with Lewy bodies, and frontotemporal dementia; and Parkinson's disease related to mutations in α-synuclein, parkin and PINK1, autosomal recessive juvenile Parkinson's disease, where parkin is mutated.

23. Use of a compound according to either claim 20 or claim 21, wherein the cancer is selected from breast, ovarian, prostate, lung, kidney, gastric, colon, testicular, head and neck, pancreas, brain, melanoma, bone or other cancers of tissue organs and cancers of the blood cells such as lymphomas and leukaemias, lymphoma, multiple myeloma, colorectal cancer, and non-small cell lung carcinoma; cancer where apoptotic pathways are dysregulated; and cancer where proteins of the BCL-2 family are mutated, or over or under expressed.

24. A pharmaceutical composition comprising a compound of formula (II) as defined in any one of claims 1 to 18, a tautomer thereof, or a pharmaceutically acceptable salt of said compound or tautomer, together with one or more pharmaceutically acceptable excipients.