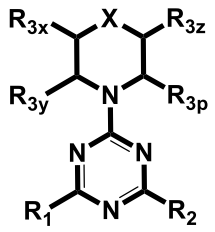
CLAIMS

1. A compound of formula (Ia),



(Ia)

and stereoisomers, geometric isomers, tautomers, solvates, N-oxide derivatives and pharmaceutically acceptable salts thereof, wherein:

X is CR_x or O, S, NR_y, wherein R_x and R_y are independently selected from the group consisting of:

(1) hydrogen, (2) cyano, (3) halogen, (4) methyl, (5) trifluoromethyl, (6) sulfonamido, (7) sulfon, (8) linker moiety, (9) linker moiety with covalently bonded tag-molecules;

the linker moiety being selected from the group consisting of:

optionally substituted C_1-C_{20} alkyl, optionally substituted halo-substituted C_1-C_{20} alkyl, optionally substituted C_1-C_{20} alkoxy, optionally substituted halo-substituted C_1-C_{20} alkoxy, optionally substituted C_1-C_{20} pegylated alkyl;

the tag molecules being selected from the group consisting of:

dye molecules, fluorophore dyes, biotine, a polymer resin or a reactive group selected from acrylamide, iodoacetamide, fluoroacetamide, chloroacetamide, bromoacetamide, photo-reactive chemical groups, oxirane carboxamide, and redox-reaction reactive chemical groups;

R_{3x}, R_{3y}, R_{3z} and R_{3p} are independently selected from the group consisting of:

hydrogen, F, Cl, Br, I, $-C(C_1\text{-}C_6\ \text{alkyl})_2NR_{10}R_{11}$, $-(CR_{14}R_{15})_tNR_{10}R_{11}$, $-C(R_{14}R_{15})_nNR_{12}C(=Y)R_{10}$, $-(CR_{14}R_{15})_nNR_{12}S(O)_2R_{10}$, $-CH(OR_{10})R_{10}$, $-(CR_{14}R_{15})_nOR_{10}$, $-(CR_{14}R_{15})_nS(O)_2R_{10}$, $-(CR_{14}R_{15})_nS(O)_2NR_{10}R_{11}$, $-C(=Y)R_{10}$, $-C(=Y)OR_{10}$, $-C(=Y)NR_{10}R_{11}$, $-C(=Y)NR_{12}OR_{10}$, $-C(=O)NR_{12}S(O)_2R_{10}$, $-C(=O)NR_{12}(CR_{14}R_{15})_mNR_{10}R_{11}$, $-NO_2$, $-NHR_{12}$, $-NR_{12}C(=Y)R_{11}$, $-NR_{12}C(=Y)OR_{11}$, $-NR_{12}C(=Y)NR_{10}R_{11}$, $-NR_{12}S(O)_2R_{10}$, $-NR_{12}SO_2NR_{10}R_{11}$, $-S(O)_2R_{10}$, $-S(O)_2NR_{10}R_{11}$,

-SC(=Y)R_{10}, -SC(=Y)OR_{10}, C_1-C_{12} alkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl, C_3-C_{12} carbocyclyl, C_2-C_{20} heterocyclyl, C_6-C_{20} aryl, and C_1-C_{20} heteroaryl; or where the C_3-C_{12} carbocyclyl, C_2-C_{20} heterocyclyl, C_6-C_{20} aryl, or C_1-C_{20} heteroaryl is substituted at vicinal carbon atoms of the morpholine and forms a fused bicyclic morpholinyl;

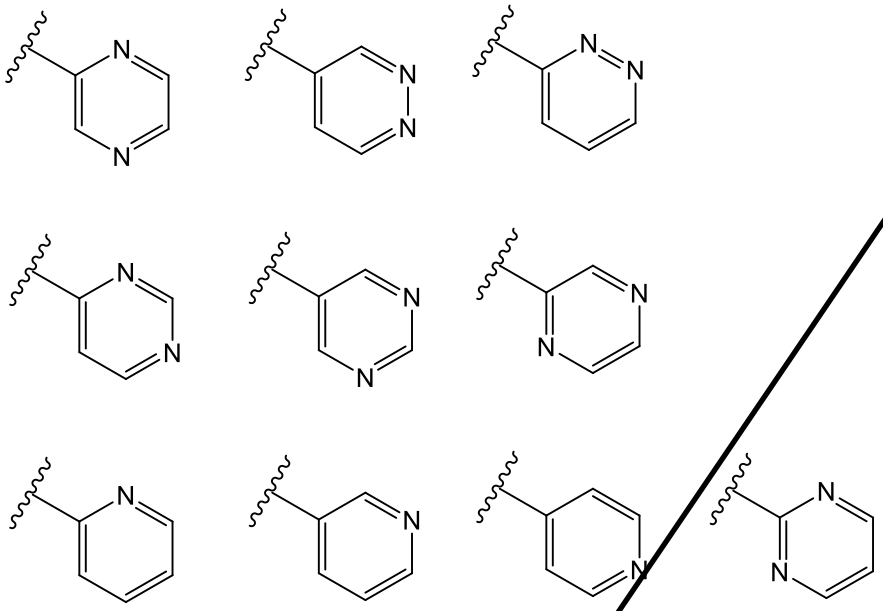
where said alkyl, alkenyl, alkynyl, carbocyclyl, heterocyclyl, aryl and heteroaryl are optionally substituted with one or more groups independently selected from F, Cl, Br, I, -CN, CF_3, -NO_2, oxo, -C(=Y)R_{10}, -C(=Y)OR_{10}, -C(=Y)$NR_{10}R_{11}$, -$(CR_{14}R_{15})_nNR_{10}R_{11}$, -$(CR_{14}R_{15})_nC(=Y)NR_{10}R_{11}$, -$(CR_{14}R_{15})_nC(=Y)OR_{10}$, $(CR_{14}R_{15})_nNR_{12}SO_2R_{10}$, -$(CR_{14}R_{15})_nOR_{10}$, -$(CR_{14}R_{15})_nR_{10}$, -$(CR_{14}R_{15})_nSO_2R_{10}$, -$NR_{10}R_{11}$, -$NR_{12}C(=Y)R_{10}$, -$NR_{12}C(=Y)OR_{11}$, -$NR_{12}C(=Y)NR_{10}R_{11}$, -$NR_{12}SO_2R_{10}$, =$NR_{12}$, OR_{10}, -OC(=Y)R_{10}, -OC(=Y)OR_{10}, -OC(=Y)$NR_{10}R_{11}$, -$OS(O)_2(OR_{10})$, -OP(=Y)$(OR_{10})(OR_{11})$, -OP$(OR_{10})(OR_{11})$, SR_{10}, -S(O)R_{10}, -$S(O)_2R_{10}$, -$S(O)_2NR_{10}R_{11}$, -S(O)(OR_{10}), -$S(O)_2(OR_{10})$, -SC(=Y)R_{10}, -SC(=Y)OR_{10}, -SC(=Y)$NR_{10}R_{11}$, optionally substituted C_1-C_{12} alkyl, optionally substituted C_2-C_8 alkenyl, optionally substituted C_2-C_8 alkynyl, optionally substituted C_3-C_{12} carbocyclyl, optionally substituted C_2-C_{20} heterocyclyl, optionally substituted C_6-C_{20} aryl, and optionally substituted C_1-C_{20} heteroaryl;

R_1 is selected from the group consisting of:

(1) H, F, Cl, Br, I, (2) cyano, (3) nitro, (4) halogen, (5) substituted and unsubstituted alkyl, (6) substituted and unsubstituted alkenyl, (7) substituted and unsubstituted alkynyl, (8) substituted and unsubstituted aryl, (9) substituted and unsubstituted heteroaryl, (10) substituted and unsubstituted heterocyclyl, (11) substituted and unsubstituted cycloalkyl, (12) -C(C_1-C_6 alkyl)$_2NR_{10}R_{11}$, -$(CR_{14}R_{15})_tNR_{10}R_{11}$, -$C(R_{14}R_{15})_nNR_{12}C(=Y)R_{10}$, -$(CR_{14}R_{15})_nNR_{12}S(O)_2R_{10}$, -CH$(OR_{10})R_{10}$, -$(CR_{14}R_{15})_nOR_{10}$, -$(CR_{14}R_{15})_nS(O)_2R_{10}$, -$(CR_{14}R_{15})_nS(O)_2NR_{10}R_{11}$, -C(=Y)$R_{10}$, -C(=Y)$OR_{10}$, -C(=Y)$NR_{10}R_{11}$, -C(=Y)$NR_{12}OR_{10}$, -C(=O)$NR_{12}S(O)_2R_{10}$, -C(=O)$NR_{12}(CR_{14}R_{15})_mNR_{10}R_{11}$, -$NO_2$, -$NHR_{12}$, -$NR_{12}C(=Y)R_{11}$, -$NR_{12}C(=Y)OR_{11}$, -$NR_{12}C(=Y)NR_{10}R_{11}$, -$NR_{12}S(O)_2R_{10}$, -$NR_{12}SO_2NR_{10}R_{11}$, -$S(O)_2R_{10}$, -$S(O)_2NR_{10}R_{11}$, -SC(=Y)$R_{10}$, -SC(=Y)$OR_{10}$, C_1-C_{12} alkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl, C_3-C_{12} carbocyclyl, C_2-C_{20} heterocyclyl, C_6-C_{20} aryl or C_1-C_{20} heteroaryl;

R_2 is selected from

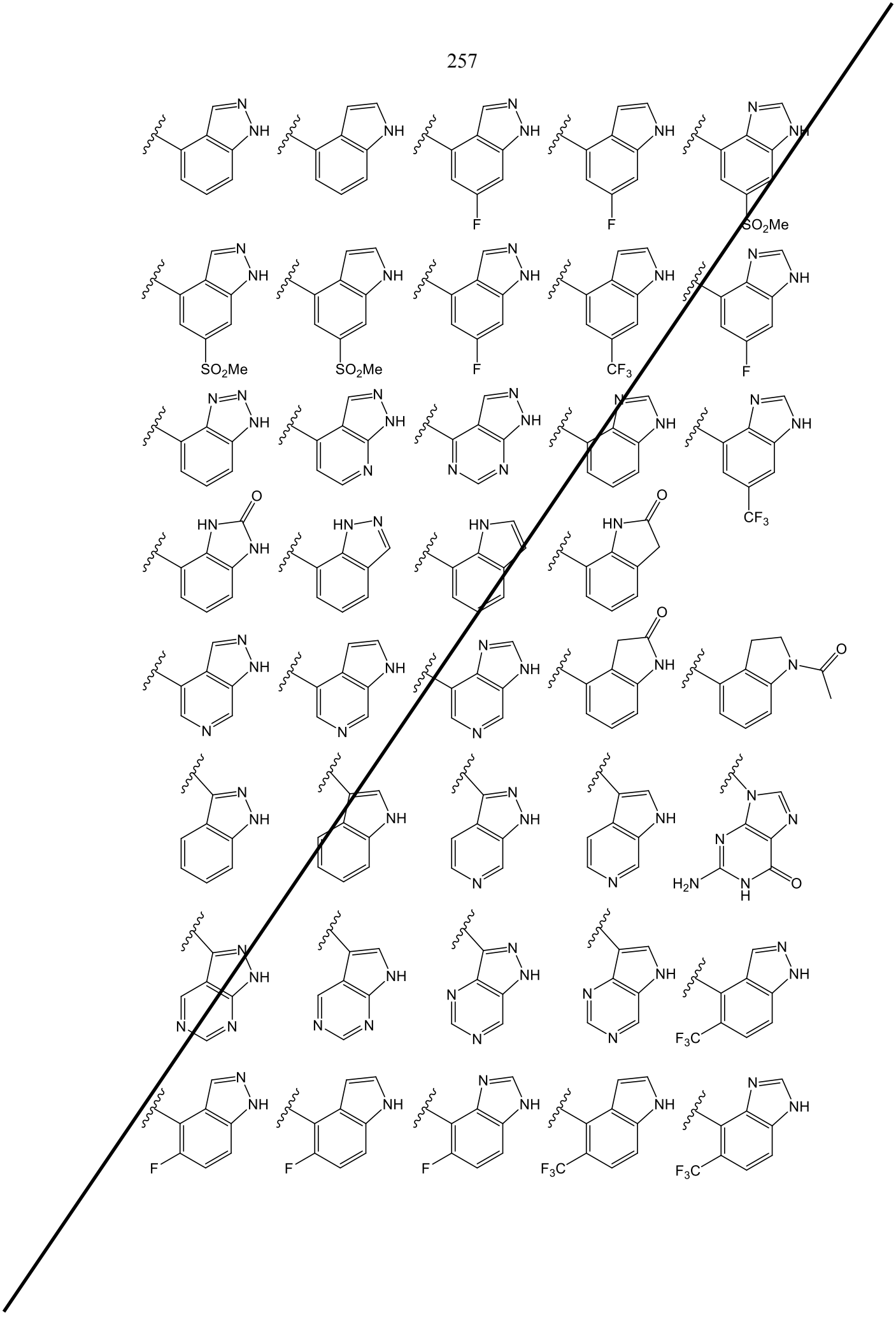
a monocyclic heteroaryl group of the structure

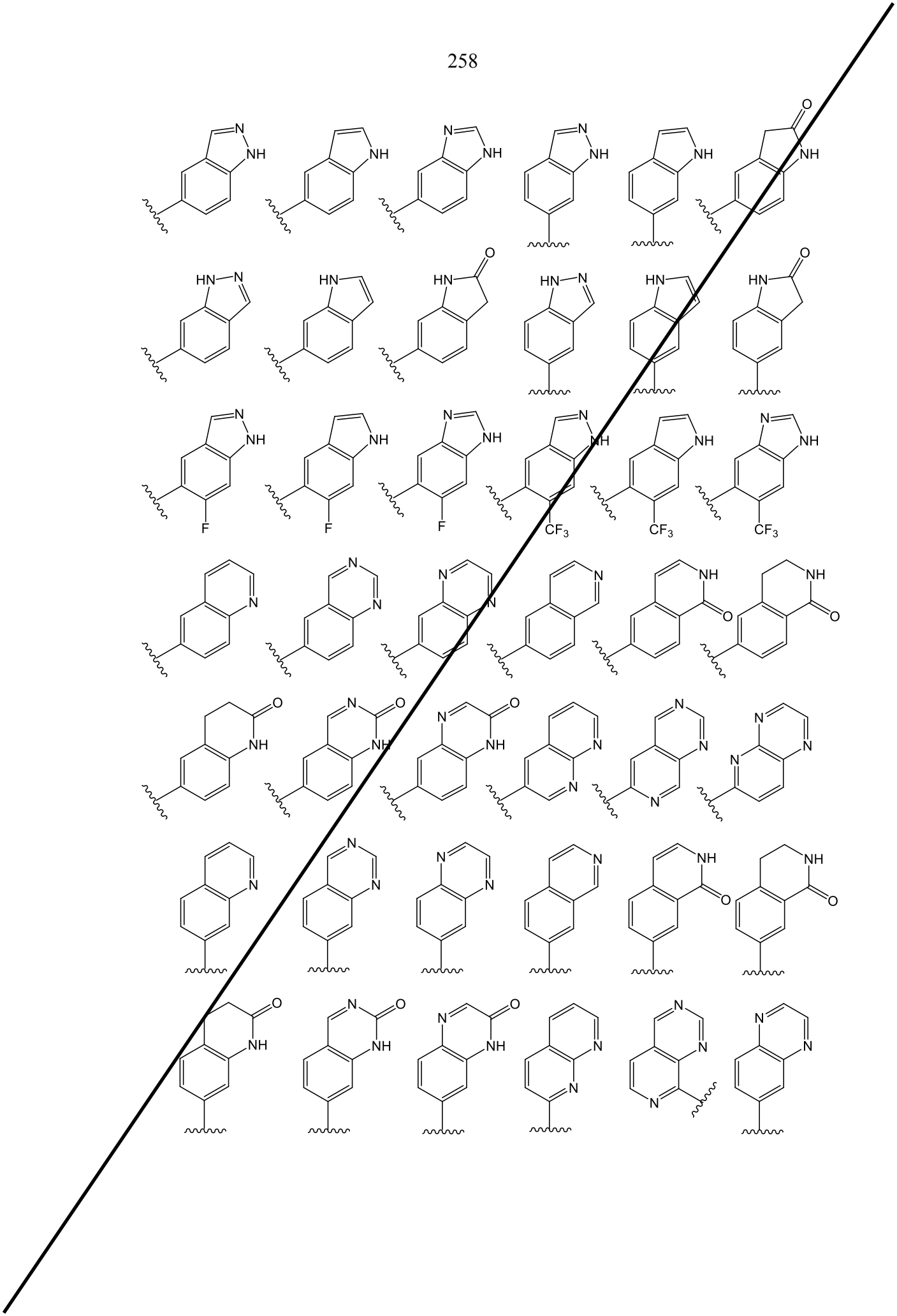


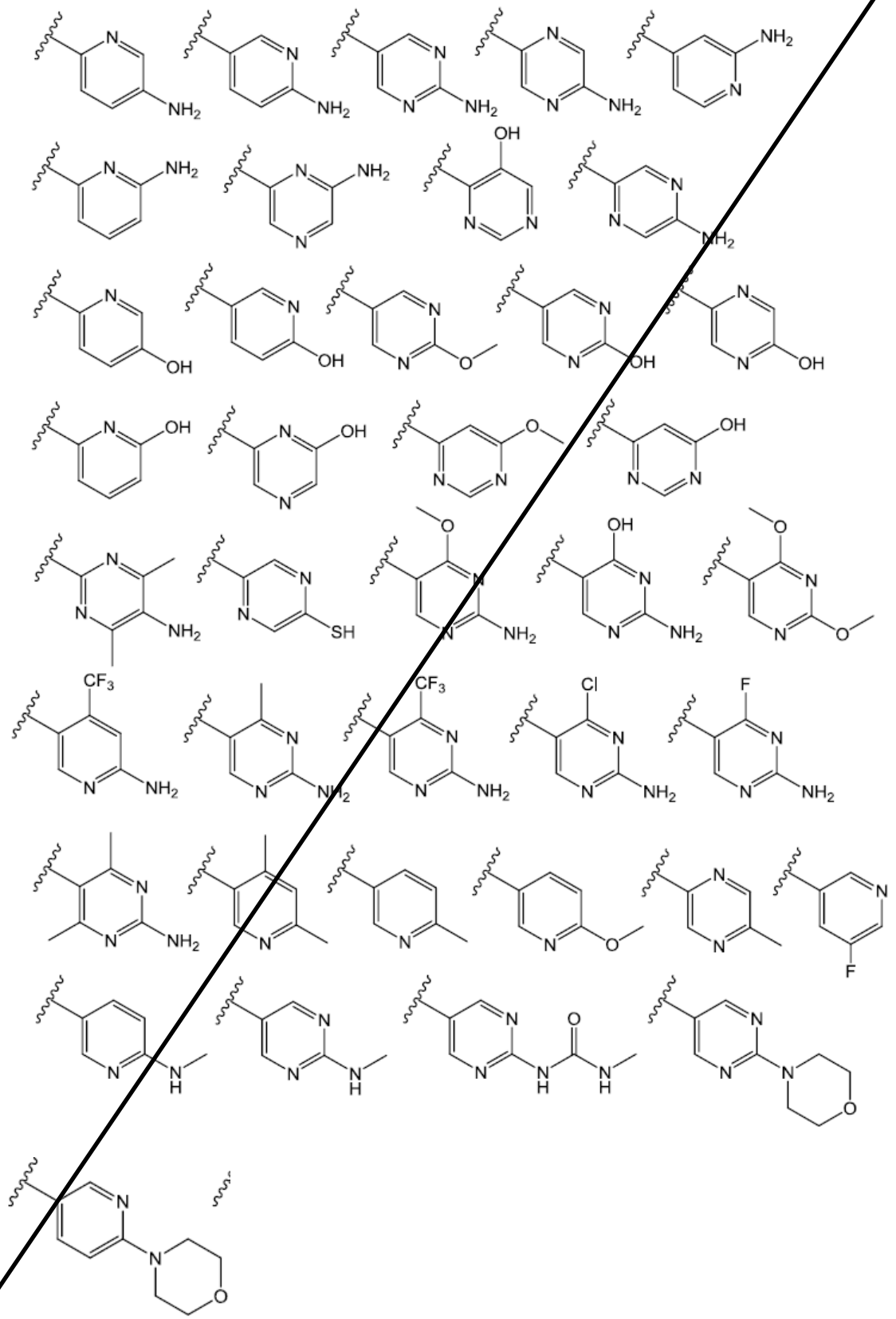
wherein the wavy line indicates the attachment to the 4-position of the triazine ring, and

wherein the monocyclic heteroaryl group is optionally substituted with one or more groups selected from F, Cl, Br, I, $-NR_{10}R_{11}$, $-OR_{10}$, $-C(O)R_{10}$, $-NR_{10}C(O)R_{11}$, $-N(C(O)R_{11})_2$, $-C(=O)OR_{10}$, $-C(=O)NR_{10}R_{11}$, and C_1-C_{12} alkyl,

and from a monocyclic or bicyclic heteroaryl group of the structure







wherein the wavy line indicates the attachment to the 4-position of the triazine ring, and

wherein R_{10}, R_{11} and R_{12} are independently H, C_1-C_{12} alkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl, C_3-C_{12} carbocyclyl, C_2-C_{20} heterocyclyl, C_6-C_{20} aryl, or C_1-C_{20} heteroaryl,

or R_{10}, R_{11} together with the nitrogen to which they are attached optionally form a C_3-C_{20} heterocyclic ring optionally containing one or more additional ring atoms selected from N, O or S, wherein said heterocyclic ring is optionally substituted with one or more groups independently selected from oxo, CF_3, F, Cl, Br, I, C_1-C_{12} alkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl, C_3-C_{12} carbocyclyl, C_2-C_{20} heterocyclyl, C_6-C_{20} aryl and C_1-C_{20} heteroaryl;

wherein R_{14} and R_{15} are independently selected from H, C_1-C_{12} alkyl, or -$(CH_2)_n$-aryl,

or R_{14} and R_{15} together with the atoms to which they are attached form a saturated or partially unsaturated C_3-C_{12} carbocyclic ring; and

wherein

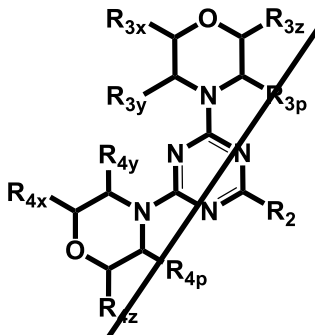
Y is O, S, or NR_{12};

m is 0, 1, 2, 3, 4, 5 or 6;

n is 1, 2, 3, 4, 5, or 6; and

t is 2, 3, 4, 5 or 6.

2. A compound according to Claim 1 having formula (Ib):



(Ib)

and stereoisomers, geometric isomers, tautomers, solvates, N-oxid derivatives and pharmaceutically acceptable salts thereof, wherein

R_{3x}, R_{3y}, R_{3z}, R_{3p} and R_2 are as defined in claim 1,

R_{4x}, R_{4y}, R_{4z} and R_{4p} are independently from each other selected from the group consisting of:

hydrogen, F, Cl, Br, I, -C(C_1-C_6 alkyl)$_2$$NR_{10}R_{11}$, -$(CR_{14}R_{15})_tNR_{10}R_{11}$, -$C(R_{14}R_{15})_nNR_{12}C(=Y)R_{10}$, -$(CR_{14}R_{15})_nNR_{12}S(O)_2R_{10}$, -$CH(OR_{10})R_{10}$, -$(CR_{14}R_{15})_nOR_{10}$, -$(CR_{14}R_{15})_nS(O)_2R_{10}$, -$(CR_{14}R_{15})_nS(O)_2NR_{10}R_{11}$, -$C(=Y)R_{10}$, -$C(=Y)OR_{10}$, -$C(=Y)NR_{10}R_{11}$, -$C(=Y)NR_{12}OR_{10}$, -$C(=O)NR_{12}S(O)_2R_{10}$, -$C(=O)NR_{12}(CR_{14}R_{15})_mNR_{10}R_{11}$, -$NO_2$, -$NHR_{12}$, -$NR_{12}C(=Y)R_{11}$, -$NR_{12}C(=Y)OR_{11}$, -$NR_{12}C(=Y)NR_{10}R_{11}$, -$NR_{12}S(O)_2R_{10}$, -$NR_{12}SO_2NR_{10}R_{11}$, -$S(O)_2R_{10}$, -$S(O)_2NR_{10}R_{11}$, -$SC(=Y)R_{10}$, -$SC(=Y)OR_{10}$, C_1-C_{12} alkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl, C_3-C_{12} carbocyclyl, C_2-C_{20} heterocyclyl, C_6-C_{20} aryl, and C_1-C_{20} heteroaryl; or where the C_3-C_{12} carbocyclyl, C_2-C_{20} heterocyclyl, C_6-C_{20} aryl, or C_1-C_{20} heteroaryl is substituted at vicinal carbon atoms of the morpholine and forms a fused bicyclic morpholinyl;

where said alkyl, alkenyl, alkynyl, carbocyclyl, heterocyclyl, aryl and heteroaryl are optionally substituted with one or more groups independently selected from F, Cl, Br, I, -CN, CF_3, -NO_2, oxo, -$C(=Y)R_{10}$, -$C(=Y)OR_{10}$, -$C(=Y)NR_{10}R_{11}$, -$CR_{14}R_{15})_nNR_{10}R_{11}$, -$(CR_{14}R_{15})_nC(=Y)NR_{10}R_{11}$, -$(CR_{14}R_{15})_nC(=Y)OR_{10}$, $(CR_{14}R_{15})_nNR_{12}SO_2R_{10}$, $-CR_{14}R_{15})_nOR_{10}$, -$(CR_{14}R_{15})_nR_{10}$, -$(CR_{14}R_{15})_nSO_2R_{10}$, -$NR_{10}R_{11}$, -$NR_{12}C(=Y)R_{10}$, -$R_{12}C(=Y)OR_{11}$, -$NR_{12}C(=Y)NR_{10}R_{11}$, -$NR_{12}SO_2R_{10}$, $=NR_{12}$, OR_{10}, -$OC(=Y)R_{10}$, -$C(=Y)OR_{10}$, -$OC(=Y)NR_{10}R_{11}$, -$OS(O)_2(OR_{10})$, -$OP(=Y)(OR_{10})(OR_{11})$, -$OP(OR_{10})(OR_{11})$, SR_{10}, -$S(O)R_{10}$, -$S(O)_2R_{10}$, -$S(O)_2NR_{10}R_{11}$, -$S(O)(OR_{10})$, -$S(O)_2(OR_{10})$, -$SC(=Y)R_{10}$, -$C(=Y)OR_{10}$, -$SC(=Y)NR_{10}R_{11}$, optionally substituted C_1-C_{12} alkyl, optionally substituted C_2-C_8 alkenyl, optionally substituted C_2-C_8 alkynyl, optionally substituted C_3-C_{12} carbocyclyl, optionally substituted C_2-C_{20} heterocyclyl, optionally substituted C_6-C_{20} aryl, and optionally substituted C_1-C_{20} heteroaryl;

wherein R_{10}, R_{11} and R_{12} are independently H, C_1-C_{12} alkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl, C_3-C_{12} carbocyclyl, C_2-C_{20} heterocyclyl, C_6-C_{20} aryl, or C_1-C_{20} heteroaryl, or R_{10}, R_{11} together with the nitrogen to which they are attached optionally form a C_3-C_{20} heterocyclic ring optionally containing one or more additional ring atoms selected from N, O or S, wherein said heterocyclic ring is optionally substituted with one or more groups independently selected from oxo, CF_3, F, Cl, Br, I, C_1-C_{12} alkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl, C_3-C_{12} carbocyclyl, C_2-C_{20} heterocyclyl, C_6-C_{20} aryl and C_1-C_{20} heteroaryl;

wherein R_{14} and R_{15} are independently selected from H, C_1-C_{12} alkyl, or -$(CH_2)_n$-aryl, or R_{14} and R_{15} together with the atoms to which they are attached form a saturated or partially unsaturated C_3-C_{12} carbocyclic ring; and

wherein

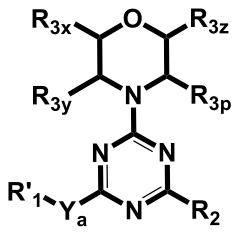
Y is O, S, or NR_{12};

m is 0, 1, 2, 3, 4, 5 or 6;

n is 1, 2, 3, 4, 5, or 6; and

t is 2, 3, 4, 5 or 6.

3. A compound according to Claim 1 having formula (Ic):



(Ic)

and stereoisomers, geometric isomers, tautomers, solvates, metabolites, N-oxide derivatives and pharmaceutically acceptable salts thereof, wherein

R_{3x}, R_{3y}, R_{3z}, R_{3p} and R_2 are as defined in claim 1,

Y_a is O, S, NH, or a direct bond,

R'$_1$ is selected from the group consisting of:

(1) H, F, Cl, Br, I, (2) cyano, (3) nitro, (4) halogen, (5) substituted and unsubstituted alkyl, (6) substituted and unsubstituted alkenyl, (7) substituted and unsubstituted alkynyl, (8) substituted and unsubstituted aryl, (9) substituted and unsubstituted heteroaryl, (10) substituted and unsubstituted heterocyclyl, (11) substituted and unsubstituted cycloalkyl, (12) -$C(C_1$-C_6 alkyl$)_2NR_{10}R_{11}$, -$(CR_{14}R_{15})_tNR_{10}R_{11}$, -$C(R_{14}R_{15})_nNR_{12}C(=Y)R_{10}$, -$(CR_{14}R_{15})_nNR_{12}S(O)_2R_{10}$, -$CH(OR_{10})R_{10}$, -$(CR_{14}R_{15})_nOR_{10}$, -$(CR_{14}R_{15})_nS(O)_2R_{10}$, -$(CR_{14}R_{15})_nS(O)_2NR_{10}R_{11}$, -$C(=Y)R_{10}$, -$C(=Y)OR_{10}$, -$C(=Y)NR_{10}R_{11}$, -$C(=Y)NR_{12}OR_{10}$, -$C(=O)NR_{12}S(O)_2R_{10}$, -$C(=O)NR_{12}(CR_{14}R_{15})_mNR_{10}R_{11}$, -$NO_2$, -$NHR_{12}$, -

$NR_{12}C(=Y)R_{11}$, $-NR_{12}C(=Y)OR_{11}$, $-NR_{12}C(=Y)NR_{10}R_{11}$, $-NR_{12}S(O)_2R_{10}$, $-NR_{12}SO_2NR_{10}R_{11}$, $-S(O)_2R_{10}$, $-S(O)_2NR_{10}R_{11}$, $-SC(=Y)R_{10}$, $-SC(=Y)OR_{10}$, C_1-C_{12} alkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl, C_3-C_{12} carbocyclyl, C_2-C_{20} heterocyclyl, C_6-C_{20} aryl or C_1-C_{20} heteroaryl, (13) linker moiety, (14) linker moiety with covalently bonded tag-molecules,

wherein R_{10}, R_{11} and R_{12} are independently H, C_1-C_{12} alkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl, C_3-C_{12} carbocyclyl, C_2-C_{20} heterocyclyl, C_6-C_{20} aryl, or C_1-C_{20} heteroaryl,

or R_{10}, R_{11} together with the nitrogen to which they are attached optionally form a C_3-C_{20} heterocyclic ring optionally containing one or more additional ring atoms selected from N, O or S, wherein said heterocyclic ring is optionally substituted with one or more groups independently selected from oxo, CF_3, F, Cl, Br, I, C_1-C_{12} alkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl, C_3-C_{12} carbocyclyl, C_2-C_{20} heterocyclyl, C_6-C_{20} aryl and C_1-C_{20} heteroaryl;

wherein R_{14} and R_{15} are independently selected from H, C_1-C_{12} alkyl, or $-(CH_2)_n$-aryl,

or R_{14} and R_{15} together with the atoms to which they are attached form a saturated or partially unsaturated C_3-C_{12} carbocyclic ring; and

wherein

Y is O, S, or NR_{12};

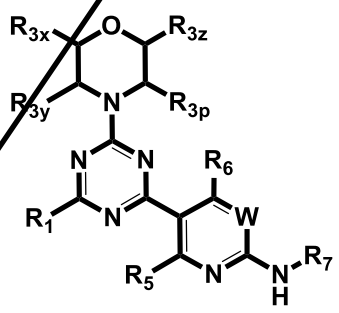
m is 0, 1, 2, 3, 4, 5 or 6;

n is 1, 2, 3, 4, 5, or 6; and

t is 2, 3, 4, 5 or 6;

with the proviso that $\mathbf{Y_a–R'_1}$ does not extend over the meaning of $\mathbf{R_1}$ in claim 1.

4. A compound according to Claim 1 having formula (Id):



(Id)

and stereoisomers, geometric isomers, tautomers, solvates, N-oxide derivatives and pharmaceutically acceptable salts thereof, wherein

R_{3x}, R_{3y}, R_{3z}, R_{3p} and R_1 are as defined in claim 1,

W is CR_w or N, wherein Rw is selected from the group consisting of:

(1) hydrogen, (2) cyano, (3) halogen, (4) methyl, (5) trifluoromethyl, (6) sulfonamido;

R_5 is selected from the group consisting of:

(1) hydrogen, and (2) halogen,

R_6 is selected from the group consisting of:

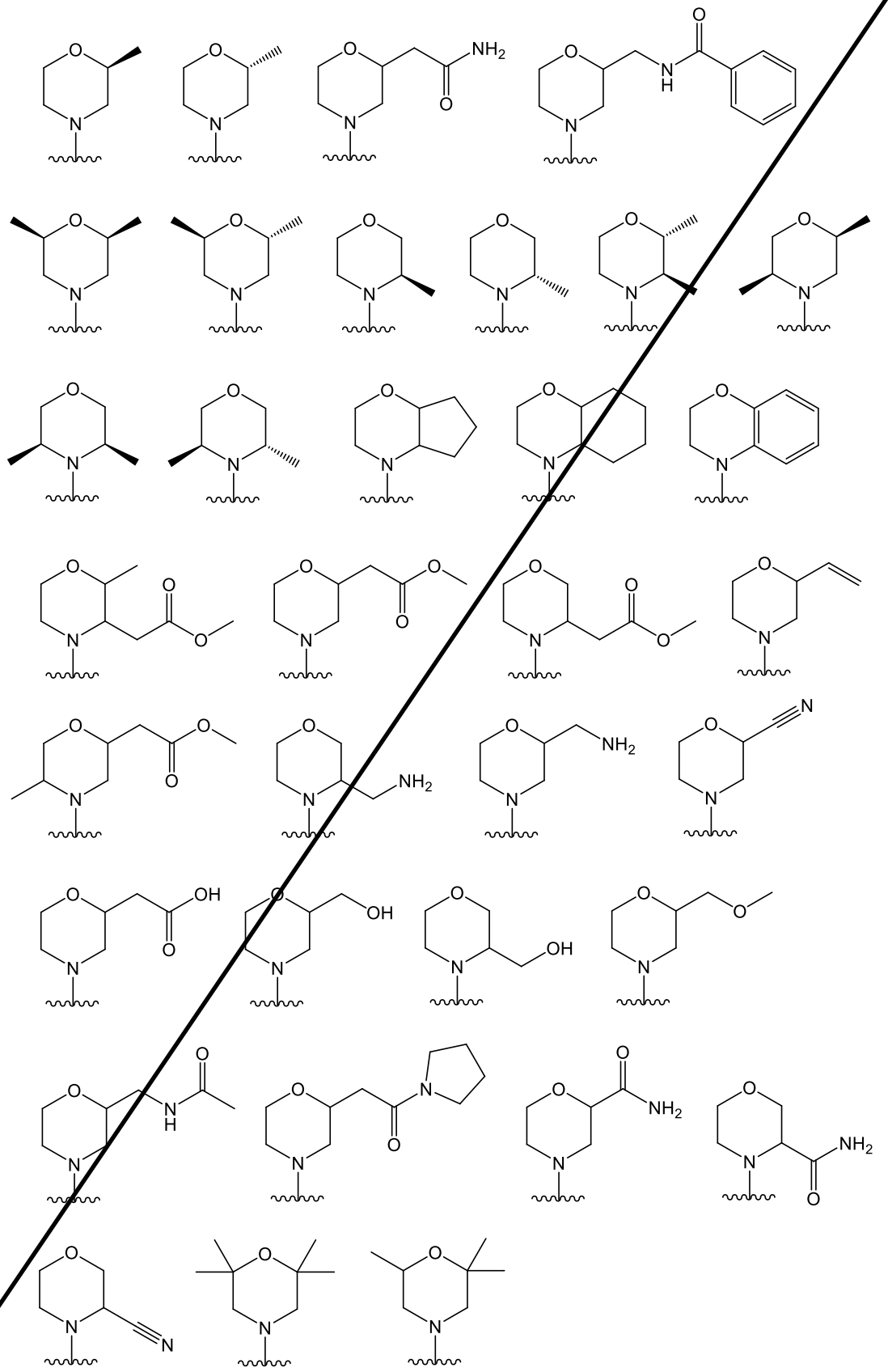
H, F, Cl, Br, I, $-NR_{10}R_{11}$, $-OR_{10}$, $-C(O)R_{10}$, $-NR_{10}C(O)R_{11}$, $-N(C(O)R_{11})_2$, $-NR_{10}C(O)NR_{10}R_{11}$, $-C(=O)OR_{10}$, $-C(=O)NR_{10}R_{11}$, and C_1-C_{12} alkyl;and

R_7 is selected from the group consisting of:

R_{11}, $-C(O)R_{11}$, and $-C(O)NR_{10}R_{11}$;

and wherein R_{10} and R_{11} are as defined in claim 1.

5. A compound according to any of Claims 1 to 4, in which **R_{3x}, R_{3y}, R_{3z}, R_{3p}** are independently selected from the structures:



where the wavy line indicates the attachment to the 4-position of the core triazine ring.

6. A compound according to Claim 1 selected from

4,4'-(6-(pyridin-3-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

3-(4,6-dimorpholino-1,3,5-triazin-2-yl)phenol,

5-(4,6-dimorpholino-1,3,5-triazin-2-yl)pyridin-3-ol,

5-(4,6-dimorpholino-1,3,5-triazin-2-yl)pyridin-2-amine,

5-(4,6-dimorpholino-1,3,5-triazin-2-yl)pyrimidin-2-amine,

5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyridin-2-amine,

5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyrimidin-2-amine,

N-(5-(4,6-dimorpholino-1,3,5-triazin-2-yl)pyridin-2-yl)acetamide,

N-(5-(4,6-dimorpholino-1,3,5-triazin-2-yl)pyrimidin-2-yl)acetamide,

N-(5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyrimidin-2-yl)acetamide,

N-(5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyridin-2-yl)acetamide,

5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-6-(trifluoromethyl)pyridin-2-amine,

4,4'-(6-(1H-indazol-5-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

4,4'-(6-(1H-indol-5-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

4,4'-(6-(1H-benzo[d]imidazol-5-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

4,4'-(6-(1H-benzo[d]imidazol-4-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

4,4'-(6-(1H-indol-4-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

4,4'-(6-(1H-indazol-4-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

4,4'-(6-(1H-indazol-6-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

5-(4-morpholino-6-(pyridin-2-ylmethoxy)-1,3,5-triazin-2-yl)pyridin-2-amine,

5-(4-morpholino-6-(pyridin-2-ylmethoxy)-1,3,5-triazin-2-yl)pyrimidin-2-amine,

4-(4-(1H-indol-4-yl)-6-(pyridin-2-ylmethoxy)-1,3,5-triazin-2-yl)morpholine,

4-(4-(1H-indazol-4-yl)-6-(pyridin-2-ylmethoxy)-1,3,5-triazin-2-yl)morpholine,

4-(4-(1H-benzo[d]imidazol-4-yl)-6-(pyridin-2-ylmethoxy)-1,3,5-triazin-2-yl)morpholine,

4-(4-(1H-benzo[d]imidazol-5-yl)-6-(pyridin-2-ylmethoxy)-1,3,5-triazin-2-yl)morpholine,

4-(4-(1H-indazol-5-yl)-6-(pyridin-2-ylmethoxy)-1,3,5-triazin-2-yl)morpholine,

4-(4-(1H-indol-5-yl)-6-(pyridin-2-ylmethoxy)-1,3,5-triazin-2-yl)morpholine,

3-(4-morpholino-6-(pyridin-2-ylmethylamino)-1,3,5-triazin-2-yl)phenol,

4-(6-aminopyridin-3-yl)-6-morpholino-N-(pyridin-2-ylmethyl)-1,3,5-triazin-2-amine,

4-(2-aminopyrimidin-5-yl)-6-morpholino-N-(pyridin-2-ylmethyl)-1,3,5-triazin-2-amine,

4-(1H-indol-5-yl)-6-morpholino-N-(pyridin-2-ylmethyl)-1,3,5-triazin-2-amine,

4-(1H-indazol-5-yl)-6-morpholino-N-(pyridin-2-ylmethyl)-1,3,5-triazin-2-amine,

4-(1H-benzo[d]imidazol-5-yl)-6-morpholino-N-(pyridin-2-ylmethyl)-1,3,5-triazin-2-amine,

4-(1H-benzo[d]imidazol-4-yl)-6-morpholino-N-(pyridin-2-ylmethyl)-1,3,5-triazin-2-amine,

4-(1H-indol-4-yl)-6-morpholino-N-(pyridin-2-ylmethyl)-1,3,5-triazin-2-amine,

4-(1H-indazol-4-yl)-6-morpholino-N-(pyridin-2-ylmethyl)-1,3,5-triazin-2-amine,

7. A compound according to Claim 1 selected from 5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyridin-2-amine and 5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyrimidin-2-amine.

8. A compound according to any of Claims 1 to 7 for use as a therapeutic agent.

9. A pharmaceutical composition comprising a compound according to any of Claims 1 to 7 and a pharmaceutically acceptable carrier.

10. A compound according to any of Claims 1 to 7 for use in the treatment of cancer.

11. Use of a compound according to any of Claims 1 to 7 in the manufacture of a medicament for the treatment of hyperproliferative disorders, neurodegeneration, cardiac

hypertrophy, pain, migraine, neurotraumatic diseases, stroke, diabetes, hepatomegaly, cardiovascular disease, Alzheimer's disease, cystic fibrosis, autoimmune diseases, atherosclerosis, restenosis, psoriasis, allergis disorders, inflammation, neurological disorders, hormone-related diseases, conditions associated with organ transplantation, immunodeficiency disorders, destructive bone disorders, hyperproliferative disorders, infectious diseases, conditions associated with cell death, thrombin-induced platelet aggregation, chronic myelogenous leukaemia (CML), liver disease, pathologic immune conditions involving T cell activation, and CNS disorders.

12. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and an amount of a compound according to any of Claims 1 to 7 effective to inhibit PI3K activity in a human or animal subject when administered thereto.

13. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and an amount of a compound according to any of Claims 1 to 7 effective to inhibit mTOR activity in a human or animal subject when administered thereto.

14. A composition according to Claim 12, effective to inhibit PI3K alpha activity in a human or animal subject when administered thereto.

15. A composition according to Claim 13, effective to inhibit TORC1 and/or TORC2 activity in a human or animal subject when administered thereto.

16. A composition according to Claim 12 further comprising at least one additional agent for the treatment of hyperproliferative disorders, neurodegeneration, cardiac hypertrophy, pain, migraine, neurotraumatic diseases, stroke, diabetes, hepatomegaly, cardiovascular disease, Alzheimer's disease, cystic fibrosis, autoimmune diseases, atherosclerosis, restenosis, psoriasis, allergis disorders, inflammation, neurological disorders, hormone-related diseases, conditions associated with organ transplantation, immunodeficiency disorders, destructive bone disorders, hyperproliferative disorders, infectious diseases, conditions associated with cell death, thrombin-induced platelet aggregation, chronic myelogenous leukaemia (CML), liver disease, pathologic immune conditions involving T cell activation, and CNS disorders.

17. A composition according to Claim 16, wherein the at least one additional agent for the treatment of cancer is vatalanib, imatinib or gefitinib.

18. A *in vitro* or *ex-vivo* method of modulating activity of PDK, PKB and other PH-domain containing effector proteins comprising contacting a compound according to any of Claims 1 to 7 with a cell.

19. A method according to Claim 18, in which the compound has an EC_{50} value of less than about 1 μM with respect to inhibition of pAKT.

20. A kit, comprising a compound according to any of Claims 1 to 7 and a package insert or other labelling including directions for treating a cellular proliferative disease by administering a PI3K inhibitory amount of the compound.

21. A *in vitro* or *ex-vivo* method for inhibiting the activity of KSP kinesin which method comprises contacting said kinesin with an effective inhibitory amount of a compound according to any of Claims 1 to 7.

22. A *in vitro* or *ex-vivo* method for inhibiting the activity of KSP kinesin in a cell which method comprises contacting said cell with an effective inhibitory amount of a compound according to any of Claims 1 to 7.

CLAIMS

1. A compound selected from

4,4'-(6-(pyridin-3-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

3-(4,6-dimorpholino-1,3,5-triazin-2-yl)phenol,

5-(4,6-dimorpholino-1,3,5-triazin-2-yl)pyridin-3-ol,

5-(4,6-dimorpholino-1,3,5-triazin-2-yl)pyridin-2-amine,

5-(4,6-dimorpholino-1,3,5-triazin-2-yl)pyrimidin-2-amine,

5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyridin-2-amine,

5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyrimidin-2-amine,

N-(5-(4,6-dimorpholino-1,3,5-triazin-2-yl)pyridin-2-yl)acetamide,

N-(5-(4,6-dimorpholino-1,3,5-triazin-2-yl)pyrimidin-2-yl)acetamide,

N-(5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyrimidin-2-yl)acetamide,

N-(5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyridin-2-yl)acetamide,

5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-6-(trifluoromethyl)pyridin-2-amine,

4,4'-(6-(1H-indazol-5-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

4,4'-(6-(1H-indol-5-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

4,4'-(6-(1H-benzo[d]imidazol-5-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

4,4'-(6-(1H-benzo[d]imidazol-4-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

4,4'-(6-(1H-indol-4-yl)-1,3,5-triazine-2,4-diyl)dimorpholine,

4,4'-(6-(1H-indazol-4-yl)-1,3,5-triazine-2,4-diyl)dimorpholine, and

4,4'-(6-(1H-indazol-6-yl)-1,3,5-triazine-2,4-diyl)dimorpholine.

2. A compound according to Claim 1 selected from 5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyridin-2-amine and 5-(4,6-dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyrimidin-2-amine.

3. A compound according to Claim 1 or 2 for use as a therapeutic agent.

4. A pharmaceutical composition comprising a compound according to Claim 1 or 2 and a pharmaceutically acceptable carrier.

5. A compound according to Claim 1 or 2 for use in the treatment of cancer.

6. Use of a compound according to Claim 1 or 2 in the manufacture of a medicament for the treatment of hyperproliferative disorders, neurodegeneration, cardiac hypertrophy, pain, migraine, neurotraumatic diseases, stroke, diabetes, hepatomegaly, cardiovascular disease, Alzheimer's disease, cystic fibrosis, autoimmune diseases, atherosclerosis, restenosis, psoriasis, allergic disorders, inflammation, neurological disorders, hormone-related diseases, conditions associated with organ transplantation, immunodeficiency disorders, destructive bone disorders, hyperproliferative disorders, infectious diseases, conditions associated with cell death, thrombin-induced platelet aggregation, chronic myelogenous leukaemia (CML), liver disease, pathologic immune conditions involving T cell activation, and CNS disorders.

7. A composition according to Claim 4, further comprising at least one additional agent for the treatment of hyperproliferative disorders, neurodegeneration, cardiac hypertrophy, pain, migraine, neurotraumatic diseases, stroke, diabetes, hepatomegaly, cardiovascular disease, Alzheimer's disease, cystic fibrosis, autoimmune diseases, atherosclerosis, restenosis, psoriasis, allergic disorders, inflammation, neurological disorders, hormone-related diseases, conditions associated with organ transplantation, immunodeficiency disorders, destructive bone disorders, hyperproliferative disorders, infectious diseases, conditions associated with cell death, thrombin-induced platelet aggregation, chronic myelogenous leukaemia (CML), liver disease, pathologic immune conditions involving T cell activation, and CNS disorders.

8. A composition according to Claim 7, wherein the at least one additional agent for the treatment of hyperproliferative disorders is vatalanib, imatinib or gefitinib.

9. A kit, comprising a compound according to Claim 1 or 2 and a package insert or other labelling including directions for treating a cellular proliferative disease by administering a PI3K inhibitory amount of the compound.

10. Use of a compound according to Claim 1 or 2 in the manufacture of a medicament for the treatment of cancer.