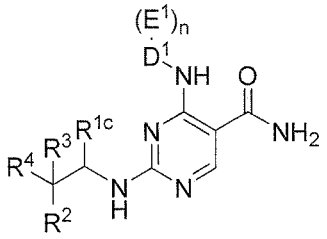
CLAIMS

1. A compound having formula (I):



(I)

or a tautomer thereof or a pharmaceutically acceptable salt thereof,

wherein:

D^1 is phenyl substituted with heteroaryl;

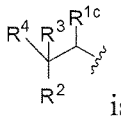
each E^1 is independently selected from the group consisting of C_{1-8} alkyl, C_{2-8} alkenyl, C_{2-8}alkynyl, C_{1-8}alkoxy, C_{1-8}alkylthio, aminocarbonyl, C_{1-8}alkoxycarbonylC_{1-8}alkylene, C_{1-8}alkoxycarbonyl$C_{1-8}C_{1-8}$alkoxy, C_{1-8}alkoxycarbonylamino, oxo, halo, cyano, haloC_{1-8}alkyl, haloC_{1-8}alkoxy, aminosulfonyl, heteroarylsulfinyl; amino, hydroxyl, C_{1-8}arylalkylene, phenyl, aminoC_{1-8}alkyl, aminoC_{3-8}cycloalkyl, heterocyclyl, heteroaryl, C_{1-8}acyl, C_{1-8}alkylsulfonyl, acylamino and heterocyclylC_{1-8}alkylene;

~~R^{1c} is selected from the group consisting of: H, C_{1-8}alkyl, hydroxyC_{1-8}alkyl, C_{1-8}haloalkyl, amino, C_{1-8}alkylamino, C_{1-8} alkoxycarbonylaminoC_{1-8} alkylene, C_{3-8}cycloalkyl, heteroaryl, C_{1-8} alkylC_{3-8}cycloalkyl, C_{1-8}alkylthioC_{1-8} alkyl, C_{1-8}alkylsulfonylC_{1-8} alkylene, aminocarbonyl, C_{1-8}alkoxyC_{1-8}alkyl, haloC_{1-8}alkyl, aryl and heterocyclyl; wherein the aryl is optionally substituted by hydroxyl, C_{1-8}alkoxy, halo and haloC_{1-8}alkyl;~~

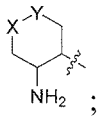
~~R^2 is selected from the group consisting of H, amino, C_{1-8}alkylamino, hydroxycarbonylamino C_{1-8}alkoxycarbonylamino ,arylC_{1-8}alkoxycarbonylamino and hydroxyl;~~

~~R^3 is selected from the group consisting of H, C_{1-8}alkyl, C_{1-8}alkylamino, amino aminoC_{1-8}alkyl, carboxy, C_{1-8}alkylaminoC_{1-8}alkyl, C_{1-8}alkoxyC_{1-8}alkyl, hydroxyC_{1-8}alkyl; carboxyC_{1-8}alkyl, C_{3-8}cycloalkylC_{1-8}alkyl, aryloxyC_{1-8}alkyl, arylC_{1-8}alkyl, heteroarylC_{1-8}alkyl, and hydroxyC_{1-8}alkoxy and hydroxyC_{1-8}alkoxy;~~

~~R^4 is H or alkyl~~the subscript n is 0, 1, 2, 3 or 4; ~~or~~ the moiety:

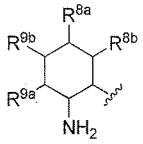
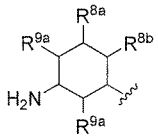
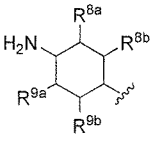
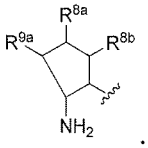
 is either:

(a)

 ; and

wherein X and Y is each independently selected from the group consisting of: CH_2, NH, $NCOCH_3$ and S;

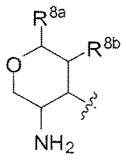
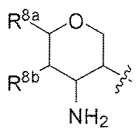
(b) selected from the group consisting of:

 ,  ,  and  ; and

wherein each R^{8a} and R^{8b} is independently H, hydroxyl, halo or if on adjacent carbon atoms, may be combined with the atoms to which they are attached to form a fused benzene ring; and

each R^{9a} and R^{9b} is independently H, hydroxyl, halo or, if on adjacent carbon atoms, may be combined with the atoms to which they are attached to form a fused benzene ring; and the wavy line indicates the point of attachment to the rest of the molecule; or

(c)

  or ;

wherein each R^{8a} and R^{8b} is independently H or may be combined with the atoms to which they are attached to form a fused benzene ring; and the wavy line indicates the point of attachment to the rest of the molecule; and "cycloalkyl" refers to a mono- or polycyclic aliphatic hydrocarbon group, which may form a bridged ring or a spiro ring, and which may have one or more double or triple bond(s)

~~the subscript n is 0, 1, 2, 3 or 4~~.

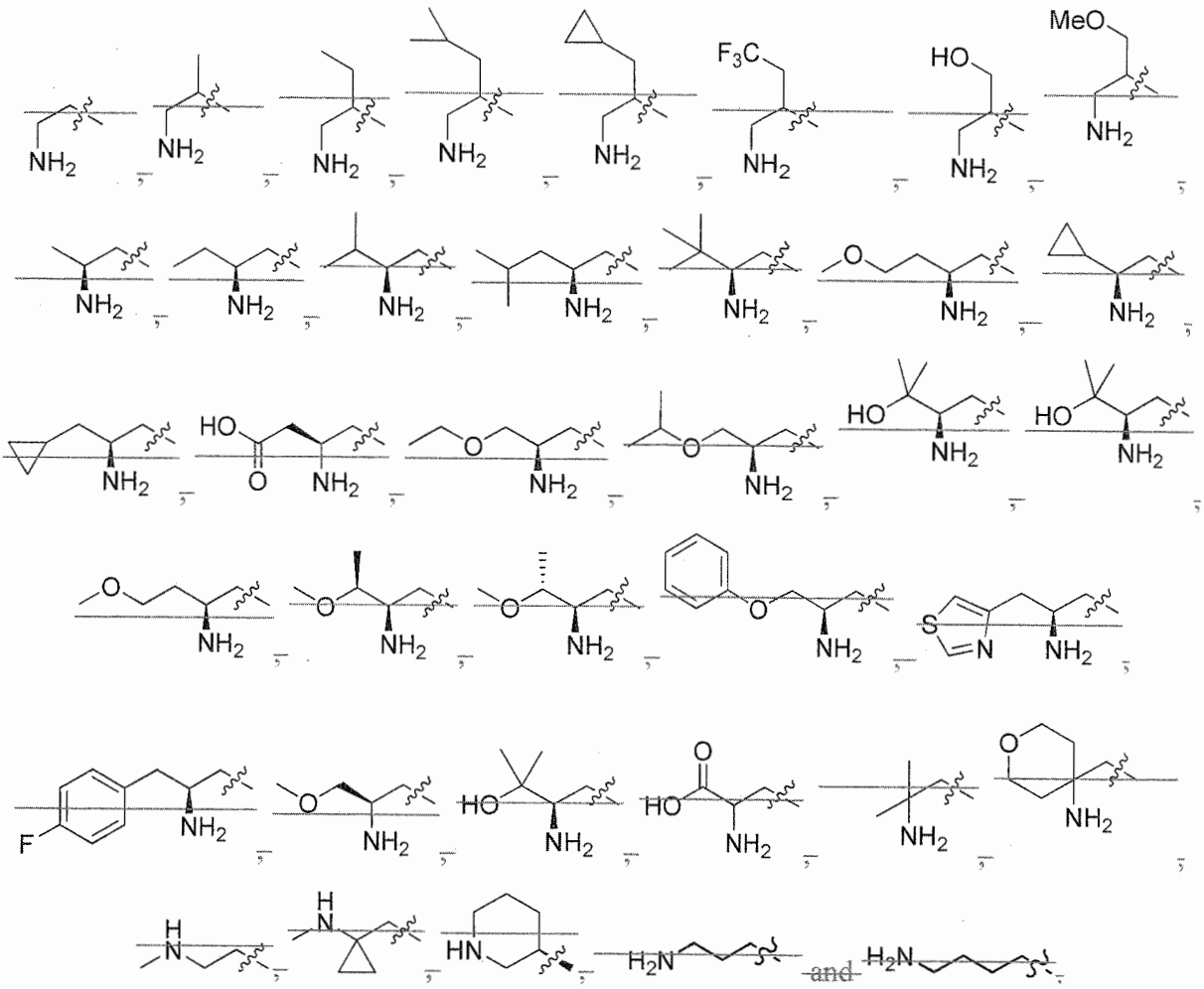
~~2. The compound of claim 1, or a tautomer thereof or a pharmaceutically acceptable salt thereof,~~

~~wherein the moiety:~~



~~is:~~

~~is selected from the group consisting of:~~

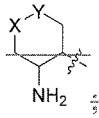


~~3. The compound of claim 1, or a tautomer thereof or a pharmaceutically acceptable salt thereof;~~

~~wherein the moiety:~~



~~is:~~



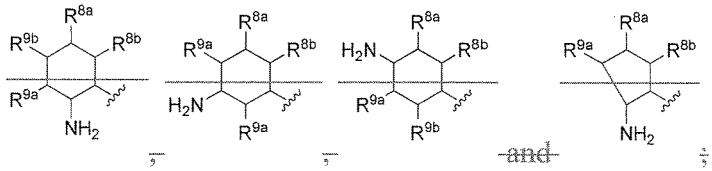
; and

wherein X and Y is each independently selected from the group consisting of: CH_2, NH, $NCOCH_3$ and S.

4. The compound of claim 1 or a tautomer thereof or a pharmaceutically acceptable salt thereof, wherein the moiety:



is selected from the group consisting of:

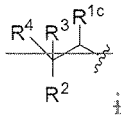


; and

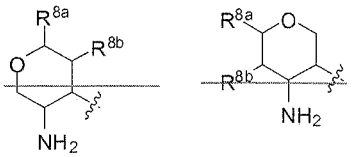
each R^{8a} and R^{8b} is independently H, hydroxyl, halo or if on adjacent carbon atoms, may be combined with the atoms to which they are attached to form a fused benzene ring; and

each R^{9a} and R^{9b} is independently H, hydroxyl, halo or, if on adjacent carbon atoms, may be combined with the atoms to which they are attached to form a fused benzene ring; and the wavy line indicates the point of attachment to the rest of the molecule.

5. The compound of claim 1 or a tautomer thereof or a pharmaceutically acceptable salt thereof, wherein the moiety:



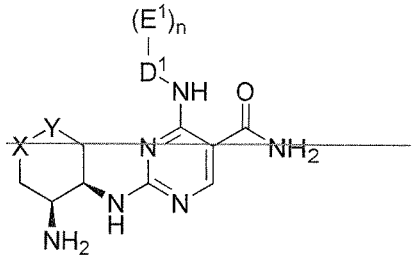
is:



or ;

wherein each R^{8a} and R^{8b} is independently H or may be combined with the atoms to which they are attached to form a fused benzene ring; and the wavy line indicates the point of attachment to the rest of the molecule.

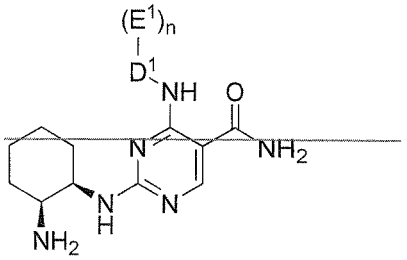
6. The compound of claim 1 wherein the compound has the formula:



;

or a tautomer thereof or a pharmaceutically acceptable salt thereof, wherein each X and Y is independently selected from the group consisting of: CH_2, NH, $NCOCH_3$ and S.

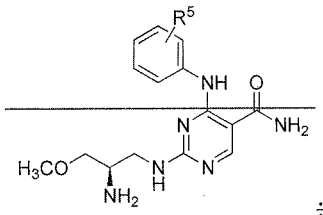
7. The compound of claim 1 wherein the compound has the formula:



;

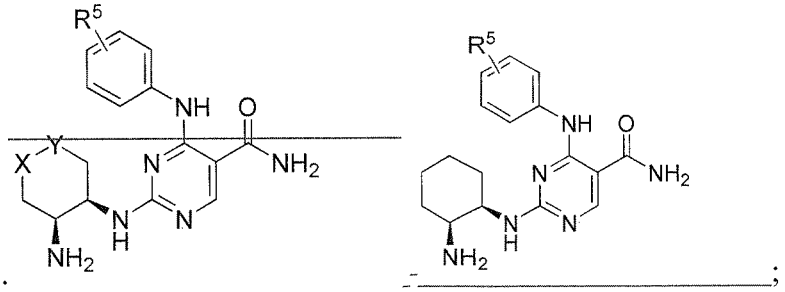
or a tautomer thereof or a pharmaceutically acceptable salt thereof.

8. The compound of claim 1 wherein the compound has the formula:



~~;or a tautomer thereof or a pharmaceutically acceptable salt thereof, wherein R^5 is H or C_{1-8}alkyl.~~

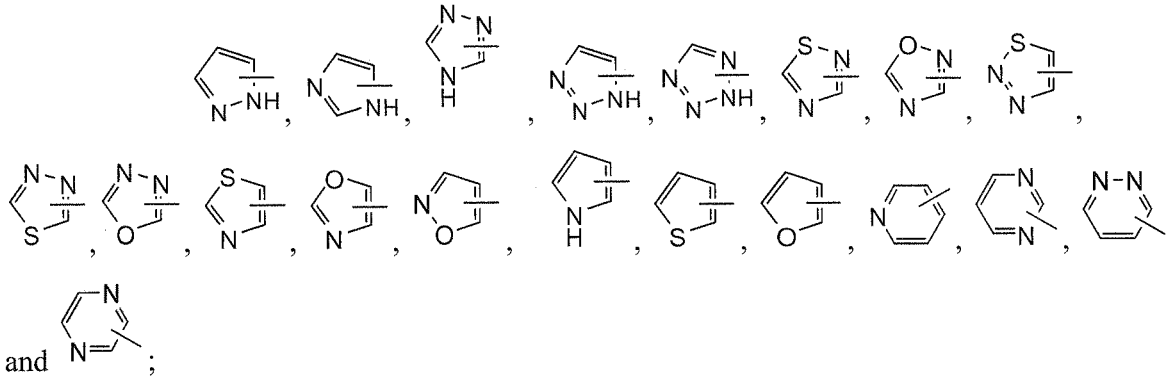
92. The compound ~~of~~ according to claim 1 ~~wherein the compound has~~having the formula:



~~or a tautomer thereof or a pharmaceutically acceptable salt thereof, wherein each X and Y is independently selected from the group consisting of: CH_2, NH, $NCOCH_3$ and S; and~~

wherein R^5 is selected from the group consisting of:

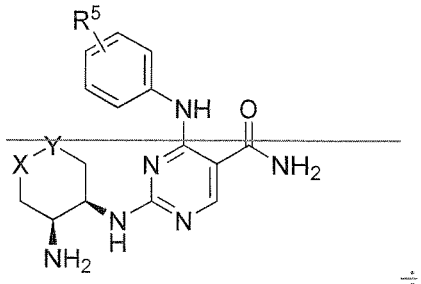
(a)



each of which is optionally substituted with from 1 to 2 substituents independently selected from the group consisting of:

C_{1-8} alkyl, amino, hydroxyl, oxo, halo, C_{1-8} alkoxy, hydroxyC_{1-8}alkyl-, aminoC_{1-8}alkyl, C_{1-8}alkylcarbonyl, haloC_{1-8}alkyl, C_{3-8}cycloalkyl, C_{1-8}aminocycloalkyl, aminoC_{1-8}alkylenecarbonyl, aminocarbonyl, C_{1-8}alkyleneaminoC_{1-8}alkylenecarbonyl, C_{1-8}alkoxyC_{1-8}alkylenecarbonyl, hydroxyC_{1-8}alkylenecarbonyl, hydroxyC_{1-8}alkoxycarbonyl, C_{1-8} alkoxycarbonylamino, aryl, arylC_{1-8} alkoxycarbonylamino, C_{1-8}alkylsulfonyl, aminoC_{1-8}alkylenesulfonyl, aminosulfonyl, C_{1-8}alkyleneaminoC_{1-8}alkylenesulfonyl, C_{1-8}alkoxyC_{1-8}alkylenesulfonyl, hydroxyC_{1-8}alkylenesulfonyl, hydroxyC_{1-8}alkoxysulfonyl, aminosulfonyl, and C_{1-8}alkylheterocyclyl; ~~and the wavy line indicates the point of attachment to the rest of the molecule.~~

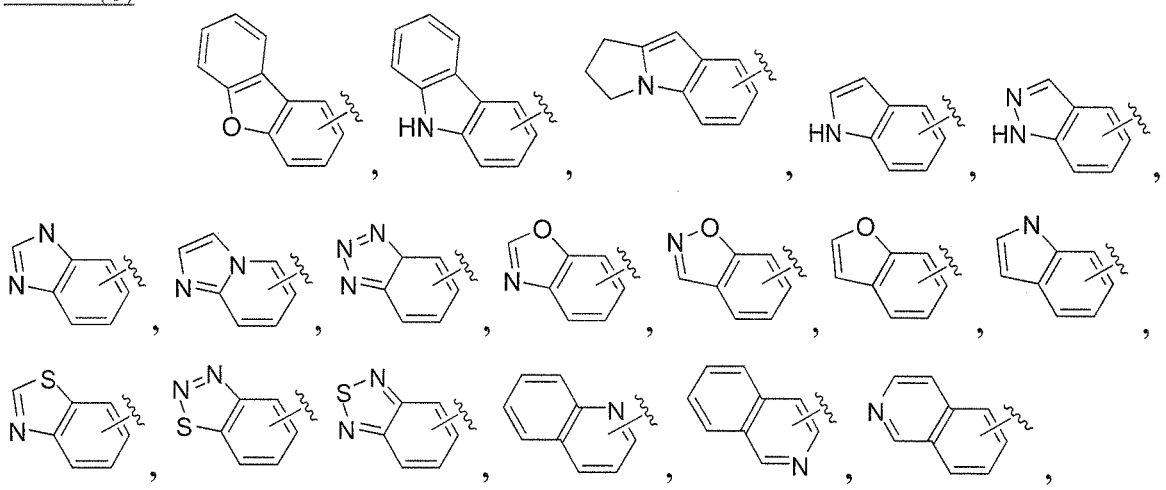
~~10. The compound of claim 1 wherein the compound has the formula:~~

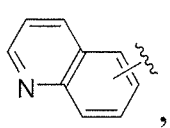
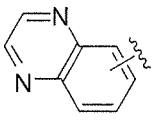
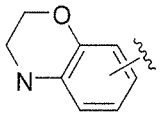
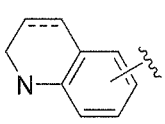
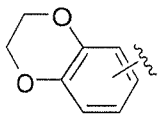
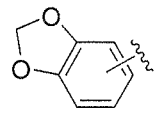


~~or a tautomer thereof or a pharmaceutically acceptable salt thereof, wherein each X and Y is independently selected from the group consisting of: CH_2, NH, $NCOCH_3$ and S;~~

~~R^5 is selected from the group consisting of:~~or

~~(b)~~

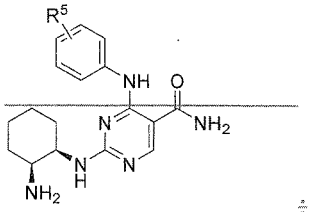


 ,  ,  ,  ,  and  ,

optionally substituted with from 1 to 3 R^{7d} substituents independently selected from the group consisting of:

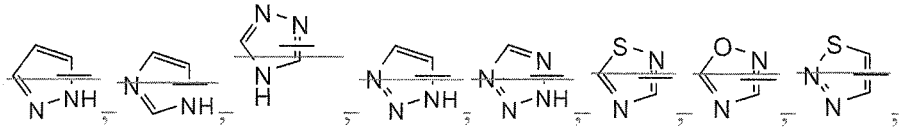
C_{1-8} alkyl, C_{1-8}alkylcarbonyl, C_{1-8}aminocycloalkyl, aminoC_{1-8}alkylenecarbonyl, aminocarbonyl, C_{1-8}alkyleneaminoC_{1-8}alkylenecarbonyl, C_{1-8}alkoxyC_{1-8}alkylenecarbonyl, hydroxyC_{1-8}alkylenecarbonyl, hydroxyC_{1-8}alkoxycarbonyl, aminocarbonyl, amino, C_{1-8} alkoxycarbonylamino, aryl, arylC_{1-8} alkoxycarbonylamino, hydroxyl, C_{1-8} alkoxy, C_{1-8}alkylsulfonyl, aminoC_{1-8}alkylenesulfonyl, aminosulfonyl, C_{1-8}alkyleneaminoC_{1-8}alkylenesulfonyl, C_{1-8}alkoxyC_{1-8}alkylenesulfonyl, hydroxyC_{1-8}alkylenesulfonyl, hydroxyC_{1-8}alkoxysulfonyl, aminosulfonyl, oxo, halo, phenyl and C_{1-8}alkylheterocyclyl; and the wavy line indicates the point of attachment to the rest of the molecule.

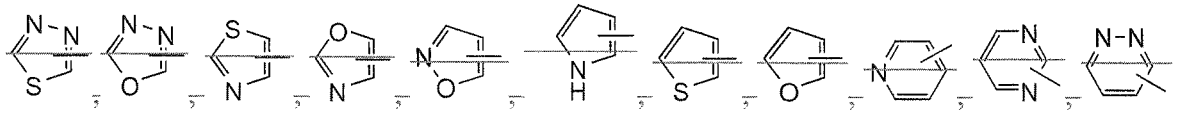
~~11. The compound of claim 1, wherein the compound has the formula:~~

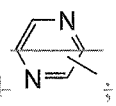


~~or a tautomer thereof or a pharmaceutically acceptable salt thereof,~~

~~wherein R^5 is selected from the group consisting of:~~



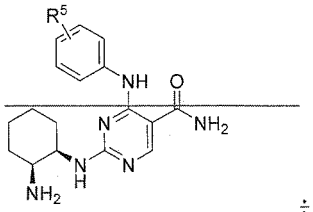


~~and~~ 

each of which is optionally substituted with from 1 to 2 substituents independently selected from the group consisting of:

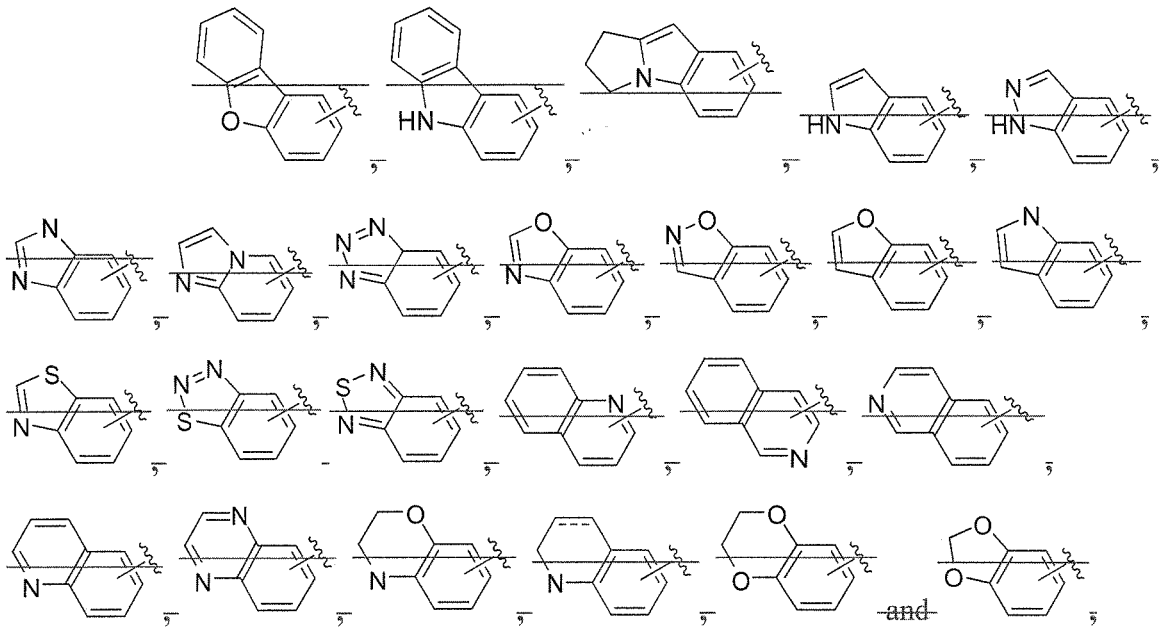
C_{1-8} alkyl, amino, hydroxyl, oxo, halo, C_{1-8} alkoxy, hydroxyC_{1-8}alkyl-, aminoC_{1-8}alkyl, C_{1-8}alkylcarbonyl, haloC_{1-8}alkyl, C_{3-8}cycloalkyl, C_{1-8}aminocycloalkyl, aminoC_{1-8}alkylenecarbonyl, aminocarbonyl, C_{1-8}alkyleneaminoC_{1-8}alkylenecarbonyl, C_{1-8}alkoxyC_{1-8}alkylenecarbonyl, hydroxyC_{1-8}alkylenecarbonyl, hydroxyC_{1-8}alkoxycarbonyl, C_{1-8} alkoxycarbonylamino, aryl, arylC_{1-8} alkoxycarbonylamino, C_{1-8}alkylsulfonyl, aminoC_{1-8}alkylenesulfonyl, aminosulfonyl, C_{1-8}alkyleneaminoC_{1-8}alkylenesulfonyl, C_{1-8}alkoxyC_{1-8}alkylenesulfonyl, hydroxyC_{1-8}alkylenesulfonyl, hydroxyC_{1-8}alkoxysulfonyl, aminosulfonyl, and C_{1-8}alkylheterocyclyl; and the wavy line indicates the point of attachment to the rest of the molecule.

12. The compound of claim 1, wherein the compound has the formula:



or a tautomer thereof or a pharmaceutically acceptable salt thereof,

R^5 is selected from the group consisting of:

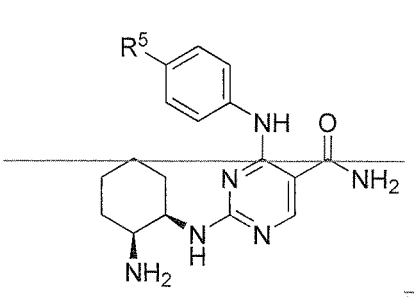
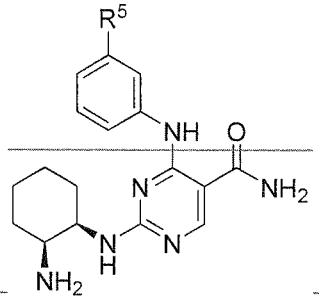
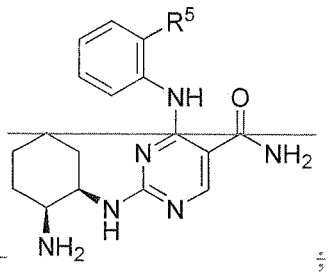


and

optionally substituted with from 1 to 3 R^{7d} substituents independently selected from the group consisting of:

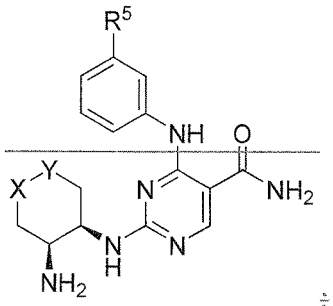
C_{1-8}alkyl, C_{1-8}alkylcarbonyl, C_{1-8}aminocycloalkyl, aminoC_{1-8}alkylenecarbonyl, aminocarbonyl, C_{1-8}alkyleneaminoC_{1-8}alkylenecarbonyl, C_{1-8}alkoxyC_{1-8}alkylenecarbonyl, hydroxyC_{1-8}alkylenecarbonyl, hydroxyC_{1-8}alkoxycarbonyl, aminocarbonyl, amino, C_{1-8} alkoxycarbonylamino, aryl, arylC_{1-8} alkoxycarbonylamino, hydroxyl, C_{1-8} alkoxy, C_{1-8}alkylsulfonyl, aminoC_{1-8}alkylenesulfonyl, aminosulfonyl, C_{1-8}alkyleneaminoC_{1-8}alkylenesulfonyl, C_{1-8}alkoxyC_{1-8}alkylenesulfonyl, hydroxyC_{1-8}alkylenesulfonyl, hydroxyC_{1-8}alkoxysulfonyl, aminosulfonyl, oxo, halo, phenyl and C_{1-8}alkylheterocyclyl; and the wavy line indicates the point of attachment to the rest of the molecule.

~~13. The compound of claim 11 or 12 wherein the compound has the formula:~~



~~and~~


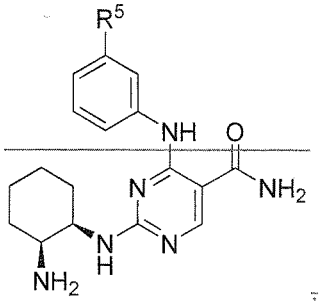
~~or a tautomer thereof or a pharmaceutically acceptable salt thereof.~~

~~14. The compound of claim 9 or 10 wherein the compound has the formula:~~



~~or a tautomer thereof or a pharmaceutically acceptable salt thereof.~~

~~15. The compound of claim 13 wherein the compound has the formula selected from the group consisting of:~~



~~16~~3. The compound ~~of~~ according to claim 1, selected from the group consisting of: 4-(4-(1H-pyrazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-

carboxamide; 4-(4-(1,2,3-thiadiazol-4-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(pyridin-4-yl)phenylamino)pyrimidine-5-carboxamide 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(pyridin-3-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(pyridin-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(pyrimidin-5-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(thiazol-4-yl)phenylamino)pyrimidine-5-carboxamide; 4-(4-(1,2,3-thiadiazol-4-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(pyridin-3-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(pyrimidin-5-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(pyridin-4-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(thiazol-5-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(thiazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 4-(4-(1H-pyrazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(pyridin-3-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(pyrimidin-5-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(pyridazin-4-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(pyrazin-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(pyridin-4-yl)phenylamino)pyrimidine-5-carboxamide; 4-(4-(1H-1,2,3-triazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(1-methyl-1H-imidazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(2-oxopyridin-1(2H)-yl)phenylamino)pyrimidine-5-carboxamide; 4-(4-(1H-imidazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(3-(trifluoromethyl)-1H-pyrazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 4-(3-(1H-pyrazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-fluoro-4-(1H-pyrazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-fluoro-4-(thiazol-4-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-fluoro-

4-(1H-imidazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-fluoro-4-(4-methyl-1H-pyrazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(2-fluoro-4-(1H-pyrazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(thiazol-4-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(2-fluoro-4-(thiazol-4-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(thiazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(thiazol-5-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(pyridin-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(pyrazin-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(pyridazin-4-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(1-methyl-1H-imidazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(6-methoxypyridin-3-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(6-methoxypyridin-3-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(2-aminopyridin-4-yl)phenylamino)pyrimidine-5-carboxamide; 4-(4-(1H-1,2,4-triazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexyl-amino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(isoxazol-5-yl)phenylamino)pyrimidine-5-carboxamide; 4-(4-(1H-tetrazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(oxazol-5-yl)phenylamino) pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(oxazol-4-yl)phenylamino) pyrimidine-5-carboxamide; 4-(3-(1H-1,2,4-triazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino) pyrimidine 5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(5-methyl-1,2,4-oxadiazol-3-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(2-methylthiazol-4-yl)phenylamino) pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(5-methyl-1,2,4-oxadiazol-3-yl)phenylamino) pyrimidine-5-carboxamide; 4-(3-(1H-pyrazol-5-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexyl amino) pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(thiophen-2-yl)phenylamino) pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-methoxy-4-(oxazol-5-yl)phenylamino) pyrimidine-5-carboxamide; 2-((1R,2S)-2-

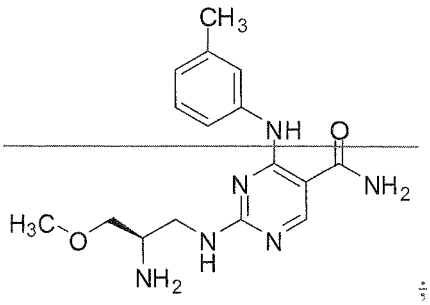
aminocyclohexylamino)-4-(4-(3-methyl-1H-pyrazol-1-yl)phenylamino) pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(3,5-dimethyl-1H-pyrazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-methoxy-5-(1H-tetrazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 4-(3-(1H-tetrazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexyl amino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(5-methyl-1H-tetrazol-1-yl)phenylamino) pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(1-methyl-1H-tetrazol-5-yl) phenylamino) pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(5-methyl-1,2,4-oxadiazol-3-yl)phenylamino) pyrimidine-5-carboxamide; 4-(3-(1H-pyrrol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino) pyrimidine-5-carboxamide; 4-(4-(1H-pyrrol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino) pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(5-methylfuran-2-yl)phenylamino) pyrimidine-5-carboxamide; 4-(4-(1,3,4-oxadiazol-2-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexyl amino)pyrimidine-5-carboxamide; 4-(3-(2H-tetrazol-5-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexyl amino) pyrimidine-5-carboxamide; 4-(4-(2H-tetrazol-5-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexyl amino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-fluoro-4-(3-(trifluoromethyl)-1H-pyrazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3,4-bis(3-(trifluoromethyl)-1H-pyrazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-morpholino-4-(1H-pyrazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 4-(3-(1H-imidazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(5-methyl-1,3,4-thiadiazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(2-methyl-1H-imidazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(2-methyl-1H-imidazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 4-(3-(1H-1,2,3-triazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 4-(3-(2H-1,2,3-triazol-2-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(4-(hydroxymethyl)-1H-1,2,3-triazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(4-(aminomethyl)-1H-1,2,3-triazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-

aminocyclohexylamino)-4-(4-(4-carbamoyl-1H-1,2,3-triazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-fluoro-3-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-cyano-3-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-cyano-5-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-cyano-5-(1H-1,2,3-triazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(6-methoxypyridin-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(4-methoxypyrimidin-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(5-fluoropyrimidin-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(4-methyl-1H-1,2,3-triazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(4-methyl-2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 4-(3-(2H-tetrazol-2-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-methyl-5-(2H-tetrazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(4-methyl-4H-1,2,4-triazol-3-yl)phenylamino)pyrimidine-5-carboxamide; 4-(3-(1H-benzo[d]imidazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 4-(3-(1H-indazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide (242.A) and 4-(3-(2H-indazol-2-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide (242.B); 4-(3-(1H-benzo[d][1,2,3]triazol-1-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide (243.A) and 4-(3-(2H-benzo[d][1,2,3]triazol-2-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide (243.B); 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(imidazo[1,2-a]pyridin-2-yl)phenylamino)pyrimidine-5-carboxamide; 4-(3-(2H-benzo[b][1,4]oxazin-4(3H)-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(quinolin-6-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(quinolin-3-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(1-methyl-1H-pyrazol-3-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(1-methyl-1H-pyrazol-4-

yl)phenylamino)pyrimidine-5-carboxamide; 4-(4-(2H-1,2,3-triazol-2-yl)phenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-fluoro-5-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-methoxy-3-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-methoxy-5-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-methyl-3-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-methyl-5-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(pyrimidin-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(pyrimidin-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(1-methyl-1H-pyrazol-3-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(1-methyl-1H-pyrazol-4-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(imidazo[1,2-a]pyridin-6-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(imidazo[1,2-a]pyridin-6-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(6-(dimethylamino)pyridine-3-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(isoxazol-3-yl)phenylamino)pyrimidine-5-carboxamide; 4-(4-(4H-1,2,4-triazol-4-ylphenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 4-(3-(4H-1,2,4-triazol-4-ylphenylamino)-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(isoxazol-3-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(5-methylisoxazol-3-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(2,3-dihydrobenzofuran-5-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(benzo[d][1,3]dioxol-4-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(2,3-dihydrobenzo[b][1,4]dioxin-6-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-(2,3-dihydrobenzo[b][1,4]dioxin-6-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(4-methyl-3,4-dihydro-2H-benzo[b][1,4]oxazin-7-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-

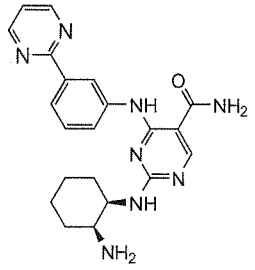
(benzo[d][1,3]dioxol-5-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(quinolin-4-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(quinolin-8-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(quinolin-5-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(2H-1,2,3-triazol-2-yl)-5-(trifluoromethyl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-methyl-4-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-methyl-4-(1H-pyrazol-1-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(2H-1,2,3-triazol-2-yl)-4-(trifluoromethyl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-(1H-1,2,3-triazol-1-yl)-4-trifluoromethyl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-fluoro-4-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 4-(3-(2H-1,2,3-triazol-2-yl)phenylamino)-2-((3R,4R)-3-aminotetrahydro-2H-pyran-4-ylamino)pyrimidine-5-carboxamide; 4-(3-(2H-1,2,3-triazol-2-yl)phenylamino)-2-((3S,4S)-4-aminotetrahydro-2H-pyran-3-ylamino)pyrimidine-5-carboxamide; 4-(3-(1H-pyrazol-1-yl)phenylamino)-2-((3R,4R)-3-aminotetrahydro-2H-pyran-4-ylamino)pyrimidine-5-carboxamide; 2-((3R,4R)-3-aminotetrahydro-2H-pyran-4-ylamino)-4-(3-(pyrimidin-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-bromo-3-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-bromo-5-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide; 2-((1R,2S)-2-aminocyclohexylamino)-4-(4-chloro-3-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide and 2-((1R,2S)-2-aminocyclohexylamino)-4-(3-chloro-5-(2H-1,2,3-triazol-2-yl)phenylamino)pyrimidine-5-carboxamide~~, and a pharmaceutically acceptable salt thereof~~.

~~17. A compound according to claim 1 having the formula:~~



~~or a pharmaceutically acceptable salt thereof.~~

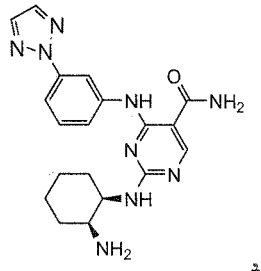
~~18~~4. A compound according to claim 1 having the formula:



2-((1R, 2S)-2-aminocyclohexylamino)-4-(3-(pyrimidin-2-yl)phenylamino)pyrimidine-5-carboxamide;

or a pharmaceutically acceptable salt thereof.

~~19~~5. A compound according to claim 1 having the formula:



4-(3-(2H-1,2,3-triazol-2-yl)phenylamino-2-((1R,2S)-2-aminocyclohexylamino)pyrimidine-5-carboxamide;

or a pharmaceutically acceptable salt thereof.

~~20~~6. A composition comprising a compound of any one of claims 1 to ~~19~~ 5 ~~or a pharmaceutically acceptable salt thereof~~ in combination with a pharmaceutically acceptable carrier or diluent.

~~21~~7. ~~An *in vitro*~~A compound according to any one of claims 1 to 5 or a composition according to claim 6 for use in a method for inhibiting syk or JAK kinase or a signal transduction pathway mediated at least in part by syk kinase activity.

~~22~~8. A compound according to any one of claims 1 to 5 or a composition according to claim ~~20~~ 6 for use in a method for treating a condition or disorder mediated at least in part by syk kinase activity in a subject.

~~23~~9. A compound or a composition for use according to claim ~~22~~8, wherein the condition or disorder is selected from the group consisting of cardiovascular disease, inflammatory disease and autoimmune disease and cell proliferative disorder.

~~24~~10. A compound or a composition for use according to claim ~~23~~9, wherein said cardiovascular disease is selected from the group consisting of restenosis, thrombosis, immune thrombocytopenic purpura, heparin induced thrombocytopenia, dilated cardiomyopathy, sickle cell disease, atherosclerosis, myocardial infarction, vascular inflammation, unstable angina and acute coronary syndromes; said inflammatory disease is selected from the group consisting of allergy, asthma, rheumatoid arthritis, B Cell mediated diseases such as Non Hodgkin's Lymphoma, anti phospholipid syndrome, lupus, psoriasis, multiple sclerosis and end stage renal disease; said cardiovascular disease is selected from the group consisting of thrombosis, immune thrombocytopenic purpura, and heparin induced thrombocytopenia; said inflammatory disease is rheumatoid arthritis or Non Hodgkin's Lymphoma; said sickle cell disease is selected from the group consisting of sickle cell anemia, sickle-hemoglobin C disease, sickle beta-plus thalassemia, and sickle beta-zero thalassemia; said immune-related disease is selected from the group consisting of a T-cell mediated disease, an autoimmune disease, host versus graft rejection, graft versus host rejection, a Type IV hypersensitivity reaction and allograft rejection; said autoimmune disease is selected from the group consisting of hemolytic anemia, immune thrombocytopenic purpura, multiple sclerosis, Sjogren's syndrome, diabetes, rheumatoid arthritis, lupus and psoriasis; said wherein said cell proliferative disorder is leukemia, a lymphoma, myeloproliferative disorders, hematological malignancies, and chronic idiopathic myelofibrosis; and said disorder is acute myeloid leukemia, chronic lymphocytic leukemia, or non-Hodgkin's lymphoma.

~~25. A composition according to claim 23, wherein said inflammatory disease is selected from the group consisting of allergy, asthma, rheumatoid arthritis, B Cell mediated diseases such as Non Hodgkin's Lymphoma, anti phospholipid syndrome, lupus, psoriasis, multiple sclerosis and end stage renal disease.~~

~~26. A composition according to claim 23, wherein said cardiovascular disease is selected from the group consisting of thrombosis, immune thrombocytopenic purpura, and heparin induced thrombocytopenia.~~

~~27. A composition according to claim 23, wherein said inflammatory disease is rheumatoid arthritis or Non Hodgkin's Lymphoma.~~

~~28. A composition according to claim 23, wherein said sickle cell disease is selected from the group consisting of sickle cell anemia, sickle hemoglobin C disease, sickle beta plus thalassemia, and sickle beta zero thalassemia.~~

~~29. A composition according to claim 23, wherein said immune related disease is selected from the group consisting of a T cell mediated disease, an autoimmune disease, host versus graft rejection, graft versus host rejection, a Type IV hypersensitivity reaction and allograft rejection.~~

~~30. A composition according to claim 23, wherein said autoimmune disease is selected from the group consisting of hemolytic anemia, immune thrombocytopenic purpura, multiple sclerosis, Sjogren's syndrome, diabetes, rheumatoid arthritis, lupus and psoriasis.~~

~~31. A composition according to claim 23, wherein said wherein said cell proliferative disorder is leukemia, a lymphoma, myeloproliferative disorders, hematological malignancies, and chronic idiopathic myelofibrosis.~~

~~32. A composition according to claim 23, wherein said disorder is acute myeloid leukemia, chronic lymphocytic leukemia, or non Hodgkin's lymphoma.~~

~~33~~11. A compound or a composition for use according to claim ~~23~~10, wherein said condition or disorder is asthma.

~~34~~12. A compound or a composition for use according to claim ~~23~~10, wherein said condition or disorder is non-Hodgkin's Lymphoma.

~~35~~13. A compound or a composition for use according to claim ~~23~~10, wherein said condition or disorder is rheumatoid arthritis.

~~36. A composition according to claim 23, wherein said condition or disorder is lupus.~~

~~37~~14. A compound or a composition for use according to claim ~~23~~ 10 for use in combination with another agent useful for treating said condition or disorder.

~~38~~15. A kit comprising a composition of claim ~~20~~6 for use in a method for inhibiting syk or JAK kinase or a signal transduction pathway mediated at least in part by syk kinase activity, packaging and instructions for use.