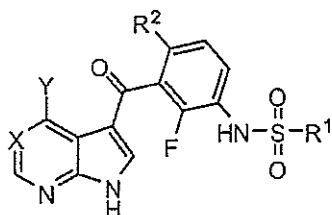


CLAIMS

1. A compound having the chemical structure of Formula I,



Formula I

or a pharmaceutically acceptable salt, hydrate or solvate thereof,

wherein:

X is -N=

Y is -N(R³)(R⁴); wherein:

R³ is hydrogen and R⁴ is selected from the group consisting of (i) hydrogen, -OR⁸ and lower alkyl optionally substituted with one or more R¹¹; (ii) cycloalkyl optionally substituted with one or more R¹²; (iii) heterocycloalkyl optionally substituted with one or more R¹³; (iv) aryl optionally substituted with one or more R¹⁴; and (v) heteroaryl optionally substituted with one or more R¹⁵; or

R³ and R⁴ are both lower alkyl; or

R³ and R⁴ combine with the nitrogen atom to which they are attached to form cycloalkylamino;

R¹ is selected from the group consisting of lower alkyl, haloalkyl, haloalkoxy, fluoro substituted lower alkyl, cycloalkyl optionally substituted with one or more R⁷, heterocycloalkyl, mono-alkylamino, di-alkylamino, cycloalkylamino, heterocycloalkylamino, aryl optionally substituted with one or more R⁶ and heteroaryl optionally substituted with one or more R⁷;

R² is hydrogen, fluoro, chloro, or lower alkyl optionally substituted with one or more fluorine;

each R⁶, when present, is independently selected from the group consisting of fluoro, chloro, -CN, -NO₂, lower alkyl, fluoro substituted lower alkyl, lower alkoxy, fluoro substituted

lower alkoxy, $-\text{C}(\text{O})-\text{O}-\text{R}^{18}$, $-\text{N}(\text{H})-\text{C}(\text{O})-\text{R}^{19}$, and heteroaryl optionally substituted with one or more lower alkyl;

each R^7 , when present, is independently selected from the group consisting of lower alkyl, fluoro substituted lower alkyl, lower alkoxy, $-\text{C}(\text{O})-\text{O}-\text{R}^{20}$, and heteroaryl optionally substituted with one or more lower alkyl;

R^8 is hydrogen, lower alkyl optionally substituted with one or more fluorine, or, when R^8 is a C_{2-6} alkyl, said alkyl may optionally be substituted with one or more R^{21} ; cycloalkyl optionally substituted with one or more R^{21} , or heterocycloalkyl optionally substituted with one or more R^{21} ;

each R^{11} , when present, is independently selected from the group consisting of fluoro, $-\text{OH}$, lower alkoxy, fluoro substituted lower alkoxy, $-\text{NH}_2$, mono-alkylamino, di-alkylamino, cycloalkylamino, heterocycloalkylamino, cycloalkyl optionally substituted with one or more R^{12} , heterocycloalkyl optionally substituted with one or more R^{13} , aryl optionally substituted with one or more R^{14} , and heteroaryl optionally substituted with one or more R^{15} ;

each R^{12} , when present, is independently selected from the group consisting of fluoro, lower alkyl, fluoro substituted lower alkyl, $-\text{OH}$, lower alkoxy, fluoro substituted lower alkoxy, $-\text{NH}_2$, mono-alkylamino, di-alkylamino, cycloalkylamino, heterocycloalkylamino, $-\text{N}(\text{H})-\text{C}(\text{O})-\text{R}^{22}$, $-\text{N}(\text{H})-\text{S}(\text{O})_2-\text{R}^{23}$, $\text{C}(\text{O})-\text{R}^{24}$, and $\text{S}(\text{O})_2-\text{R}^{25}$;

each R^{13} , when present, is independently selected from the group consisting of fluoro, $-\text{OH}$, lower alkoxy, fluoro substituted lower alkoxy, $-\text{NH}_2$, mono-alkylamino, di-alkylamino, cycloalkylamino, heterocycloalkylamino, $-\text{N}(\text{H})-\text{C}(\text{O})-\text{R}^{26}$, $-\text{N}(\text{H})-\text{S}(\text{O})_2-\text{R}^{27}$, $\text{C}(\text{O})-\text{R}^{28}$, $\text{S}(\text{O})_2-\text{R}^{29}$, and lower alkyl optionally substituted with one or more R^{30} ;

each R^{14} and R^{15} , when present, are independently selected from the group consisting of fluoro, chloro, $-\text{OH}$, $-\text{NH}_2$, $-\text{CN}$, $-\text{NO}_2$, $-\text{N}(\text{H})-\text{C}(\text{O})-\text{R}^{31}$, $-\text{N}(\text{H})-\text{S}(\text{O})_2-\text{R}^{32}$, $\text{C}(\text{O})-\text{R}^{33}$, $\text{S}(\text{O})_2-\text{R}^{34}$, lower alkyl, fluoro substituted lower alkyl, lower alkoxy, fluoro substituted lower alkoxy, mono-alkylamino, di-alkylamino, cycloalkylamino, heterocycloalkylamino, aryl optionally substituted with one or more R^{35} , and heteroaryl optionally substituted with one or more R^{36} ;

each R^{18} and R^{20} , when present, are independently hydrogen, lower alkyl or fluoro substituted lower alkyl;

each R^{19} , R^{22} , R^{23} , R^{26} , R^{27} , R^{31} and R^{32} , when present, are independently lower alkyl or fluoro substituted lower alkyl;

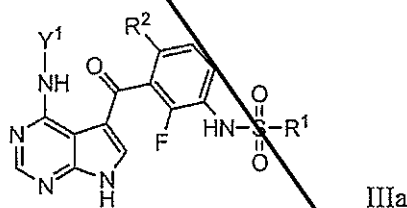
each R^{21} , when present, is fluoro, -OH, lower alkoxy, -NH₂, mono-alkylamino, di-alkylamino, cycloalkylamino, or heterocycloalkylamino;

each R^{24} , R^{25} , R^{28} , R^{29} , R^{33} , and R^{34} , when present, are independently lower alkyl, fluoro substituted lower alkyl, -OH, lower alkoxy, fluoro substituted lower alkoxy, -NH₂, mono-alkylamino, di-alkylamino, cycloalkylamino, or heterocycloalkylamino;

each R^{30} , when present, is independently fluoro, aryl optionally substituted with one or more R^{35} or heteroaryl optionally substituted with one or more R^{36} ; and

each R^{35} and R^{36} , when present, are independently selected from the group consisting of fluoro, chloro, -OH, -NH₂, -CN, -NO₂, lower alkyl, fluoro substituted lower alkyl, lower alkoxy, fluoro substituted lower alkoxy, mono-alkylamino, di-alkylamino, cycloalkylamino, and heterocycloalkylamino.

2. The compound of claim 1, wherein Y is -NH(R^4).
3. The compound of claim 1, wherein Y is alkoxyamino or HO-NH-.
4. The compound of claims 1, having Formula IIIa:



wherein Y^1 is lower alkyl optionally substituted with from one to three R^{11} , cycloalkyl, aryl, heterocycloalkyl or heteroaryl, wherein:

- (i) the cycloalkyl is optionally substituted with from one to three R^{12} ;
- (ii) the heterocycloalkyl is optionally substituted with from one to three R^{13} ;
- (iii) the aryl is optionally substituted with from one to three R^{14} ; and
- (iv) the heteroaryl is optionally substituted with from one to three R^{15} .

5. (Currently amended) The compound of claim 4, wherein Y^1 is selected from lower alkyl, fluoro substituted lower alkyl, 2-hydroxyethyl, cyclobutyl, cyclopropylmethyl,

cyclobutylmethyl, cyclopentyl, cyclopentylmethyl, cyclohexylmethyl, cyclohexyl, 2-oxetanyl, 2-oxetanylmethyl, 3-oxetanyl, 3-oxetanylmethyl, 2-tetrahydrofuranyl, 3-tetrahydrofuranyl, 2-tetrahydropyranyl, 3-tetrahydropyranyl, 4-tetrahydropyranyl, 2-tetrahydrofuranylmethyl, 3-tetrahydrofuranylmethyl, 2-tetrahydropyranylmethyl, 3-tetrahydropyranylmethyl, 4-tetrahydropyranylmethyl, 1-methyl-2-aziridinyl, 1-methyl-2-aziridinylmethyl, 1-methyl-2-azetidiny, 1-methyl-2-azetidinylmethyl, 1-methyl-3-azetidiny, 1-methyl-3-azetidinylmethyl, 1-methyl-2-pyrrolidinyl, 1-methyl-2-pyrrolidinylmethyl, 1-methyl-3-pyrrolidinyl, 1-methyl-3-pyrrolidinylmethyl, 1-methyl-2-piperidinyl, 1-methyl-2-piperidinylmethyl, 1-methyl-3-piperidinyl, 1-methyl-3-piperidinylmethyl, 1-methyl-4-piperidinyl, 1-methyl-4-piperidinylmethyl, 1-methylsulfonyl-2-piperidinyl, 1-methylsulfonyl-2-piperidinylmethyl, 1-methylsulfonyl-3-piperidinyl, 1-methylsulfonyl-3-piperidinylmethyl, 1-methylsulfonyl-4-piperidinyl, 1-methylsulfonyl-4-piperidinylmethyl, 1,1-dioxo-4-thianyl, 1,1-dioxo-4-thianylmethyl, phenyl, 2-fluorophenyl, 3-fluorophenyl, 4-fluorophenyl, 2-benzyl, 2-fluorobenzyl, 3-fluorobenzyl, 4-fluorobenzyl, 2-pyridyl, 2-pyridylmethyl, 3-pyridyl, 3-pyridylmethyl, 4-pyridyl, 4-pyridylmethyl, 2-chlorophenyl, 3-chlorophenyl, 4-chlorophenyl, 2-dimethylaminophenyl, 3-dimethylaminophenyl, 4-dimethylaminophenyl, 2-dimethylaminobenzyl, 2-dimethylaminobenzyl, 3-dimethylaminobenzyl, 4-dimethylaminobenzyl, 2-hydroxyphenyl, 3-hydroxyphenyl, 4-hydroxyphenyl, 2-hydroxybenzyl, 3-hydroxybenzyl, 4-hydroxybenzyl, 2-carboxyphenyl, 3-carboxyphenyl, 4-carboxyphenyl, 2-carboxybenzyl, 3-carboxybenzyl, 4-carboxybenzyl, 2-methoxycarbonylphenyl, 3-methoxycarbonylphenyl, 4-methoxycarbonylphenyl, 2-methoxycarbonylbenzyl, 3-methoxycarbonylbenzyl, 4-methoxycarbonylbenzyl, 1-alkyl-4-pyrazolyl, 1-alkyl-4-pyrazolylmethyl, 3-pyridazinyl, pyridazinylmethyl, 4-pyridazinyl, 4-pyridazinylmethyl, triazolyl, triazolylmethyl, tetrazolyl, tetrazolylmethyl, 2,1,3,-benzoxadiazolyl, 2,1,3-benzoxadiazol-5-yl, 2,1,3,-benzoxadiazolyl-methyl, 2,1,3-benzoxadiazol-5ylmethyl, 2,1,3,-benzothiadiazolyl, 2,1,3-benzothiadiazol-5-yl, 2,1,3,-benzothiadiazolyl-methyl, 2,1,3-benzothiadiazol-5ylmethyl, 1H-1,2,4-triazol-5-yl, 1H-1,2,4-triazol-5-methyl, 2-oxobenzimidazol-4-yl, 2-oxobenzimidazol-4-methyl, 2-oxobenzimidazol-5-yl, 2-oxobenzimidazol-5-methyl, 1,1,-dioxo-thiolan-3-yl, 1,1-dioxothiolan-3-methyl, 3-(2-methyl-1,2,3,4-tetrazol-5-yl)phenyl, 3-(2-methyl-1,2,3,4-tetrazol-5-yl)benzyl, 3-(5-methyl-1,2,3,4-tetrazol-1-yl)phenyl, 3-(1,2,4-triazol-5-yl)phenyl, 3-(1,2,4-triazol-5-yl)benzyl, 3-3-methyl-4H-1,2,4-triazol-5-methyl or 2-(3-methyl-4H-1,2,4-triazol-5-yl)ethyl.

6. The compound of claim 1, wherein R^2 is H or F.
7. The compound of claim 1, wherein R^1 is lower alkyl, cycloalkyl optionally substituted with 1-2 lower alkyl groups, heterocycloalkyl, heteroaryl optionally substituted with lower alkyl or lower alkoxy, phenyl optionally substituted with 1-2 substituents selected from lower alkyl, fluoro, chloro, lower alkoxy, fluoro substituted lower alkyl, fluoro substituted lower alkoxy or CN.
8. The compound of claim 7, wherein R^1 is methyl, propyl, isobutyl, 2-methylpropyl, CF_3 , CF_3CH_2- , CHF_2CH_2- , 4-trifluorophenyl, 2-trifluorophenyl, 3-trifluorophenyl, 3,5-dimethylphenyl, 4-propylphenyl, 3-fluoro-4-methoxyphenyl, 2-cyanophenyl, 3-cyanophenyl, 4-cyanophenyl, 4-fluoro-3-methoxyphenyl, 2,5-difluorophenyl, 2,6-difluorophenyl, 2,4-difluorophenyl, 2-pyridyl, 3-pyridyl, 5-methoxy-2-pyridyl, 3-methoxy-2-pyridyl, 4-methoxy-2-pyridyl, 6-methyl-2-pyridyl, 5-methyl-2-pyridyl, 4-methyl-2-pyridyl, 3-methyl-2-pyridyl, 1-pyrrolidinyl, 1-piperidinyl, 4-morpholinyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, 4,4-difluorocyclohexyl, 1-methyl-4-pyrazolyl, 1-ethyl-4-pyrazolyl, 1-methyl-3-pyrazolyl, 1-ethyl-3-pyrazolyl, 6-methyl-3-pyridyl, 5-methyl-3-pyridyl, 4-methyl-3-pyridyl or 2-methyl-3-pyridyl.
9. The compound of claim 8, wherein R^1 is 2-fluorophenyl, 3-fluorophenyl, 2,5-difluorophenyl or 4-lower alkyl-substituted phenyl, wherein lower alkyl is optionally substituted with one or more fluoro.
10. The compound of claim 4, wherein Y is 1-aziridinyl, 1-azetidiny, 1-pyrrolidinyl, 1-piperidinyl, 1-morpholinyl or 1-azepanyl.
11. A compound selected from the group consisting of:
N-[2,4-Difluoro-3-(4-methyl-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-4-trifluoromethyl-benzenesulfonamide (P-1001),
Propane-1-sulfonic acid [3-(4-ethoxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-2,4-difluorophenyl]-amide (P-1002),
2-Methyl-propane-1-sulfonic acid [2,4-difluoro-3-(4-methyl-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-amide (P-1003),
2-Methyl-propane-1-sulfonic acid [2,4-difluoro-3-(4-methoxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-amide (P-1004),

N-[2,4-Difluoro-3-(4-methoxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-4-propyl-benzenesulfonamide (P-1005),
N-[3-(4-Ethoxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-2,4-difluoro-phenyl]-4-trifluoromethyl-benzenesulfonamide (P-1006),
N-[2,4-Difluoro-3-(4-methyl-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-4-propyl-benzenesulfonamide (P-1007),
N-[2,4-Difluoro-3-(4-methoxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-4-ethyl-benzenesulfonamide (P-1008),
N-[2,4-Difluoro-3-(4-methyl-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-4-isopropyl-benzenesulfonamide (P-1009),
N-[2,4-Difluoro-3-(4-methoxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-4-isopropyl-benzenesulfonamide (P-1010),
N-[2,4-Difluoro-3-(4-hydroxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-4-trifluoromethyl-benzenesulfonamide (P-1012),
Propane-1-sulfonic acid [2,4-difluoro-3-(4-isobutyl-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-amide (P-1014),
N-[2,4-Difluoro-3-(4-isobutyl-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-4-trifluoromethyl-benzenesulfonamide (P-1015),
N-[3-(4-Chloro-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-2,4-difluoro-phenyl]-4-trifluoromethyl-benzenesulfonamide (P-1016),
6-Methoxy-pyridine-3-sulfonic acid [2,4-difluoro-3-(4-methoxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-amide (P-1018),
N-[2,4-Difluoro-3-(4-methyl-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-4-ethyl-benzenesulfonamide (P-1019),
N-{2,4-Difluoro-3-[4-(tetrahydro-pyran-4-yloxy)-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl]-phenyl}-4-trifluoromethyl-benzenesulfonamide (P-1021),
Propane-1-sulfonic acid [2,4-difluoro-3-(4-hydroxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-amide (P-1022),
N-[3-(4-Cyano-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-2,4-difluoro-phenyl]-4-trifluoromethyl-benzenesulfonamide (P-1023),
N-[2,4-Difluoro-3-(4-methoxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-3,5-dimethyl-benzenesulfonamide (P-1025),

N-[2,4-Difluoro-3-(4-methyl-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-3,5-dimethyl-benzenesulfonamide (P-1027),
N-[2,4-Difluoro-3-(4-isobutoxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-4-trifluoromethyl-benzenesulfonamide (P-1028),
N-[2,4-Difluoro-3-(4-isopropyl-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-4-trifluoromethyl-benzenesulfonamide (P-1029),
N-[2,4-Difluoro-3-(4-hydroxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-4-propyl-benzenesulfonamide (P-1030),
Propane-1-sulfonic acid [3-(4-chloro-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-2,4-difluoro-phenyl]-amide (P-1033),
N-[3-(4-Chloro-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-2,4-difluoro-phenyl]-4-propyl-benzenesulfonamide (P-1034),
N-[2,4-Difluoro-3-(4-methyl-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-3-fluoro-4-methoxy-benzenesulfonamide (P-1036),
N-[3-(4-Ethoxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-2,4-difluoro-phenyl]-4-propyl-benzenesulfonamide (P-1038),
N-[3-(4-Cyclopropylmethoxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-2,4-difluoro-phenyl]-4-trifluoromethyl-benzenesulfonamide (P-1053),
N-[2,4-Difluoro-3-(4-hydroxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-2-fluoro-benzenesulfonamide (P-1070),
N-[3-(4-Chloro-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-2,4-difluoro-phenyl]-2-fluoro-benzenesulfonamide (P-1071),
N-[3-(4-Cyclopropyl-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-2,4-difluoro-phenyl]-2,5-difluoro-benzenesulfonamide (P-1107),
N-[3-(4-Cyclopropylmethoxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-2,4-difluoro-phenyl]-2,5-difluoro-benzenesulfonamide (P-1181),
N-[2,4-Difluoro-3-(4-isopropyl-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-2,5-difluoro-benzenesulfonamide (P-1182),
N-[2,4-Difluoro-3-(4-hydroxy-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-phenyl]-2,5-difluoro-benzenesulfonamide (P-1183),
N-[3-(4-Chloro-7H-pyrrolo[2,3-d]pyrimidine-5-carbonyl)-2,4-difluoro-phenyl]-2,5-difluoro-benzenesulfonamide (P-1184),

Propane-1-sulfonic acid [2,4-difluoro-3-(4-trifluoromethyl-1H-pyrrolo[2,3-b]pyridine-3-carbonyl)-phenyl]-amide (P-2015),

N-[2,4-Difluoro-3-(4-trifluoromethyl-1H-pyrrolo[2,3-b]pyridine-3-carbonyl)-phenyl]-4-trifluoromethyl-benzenesulfonamide (P-2016),

N-[2,4-Difluoro-3-(4-trifluoromethyl-1H-pyrrolo[2,3-b]pyridine-3-carbonyl)-phenyl]-benzenesulfonamide (P-2017),

or a pharmaceutically acceptable salt thereof.

12. A composition comprising a compound of claim 1 and a pharmaceutically acceptable excipient or carrier.

13. A pharmaceutical composition comprising a compound of claim 1 and another drug.

14. A kit comprising a compound according to Claim 1.

15. A pharmaceutical composition comprising a compound of claim 11 and a pharmaceutically acceptable excipient or carrier.

CLAIMS

1. An invention not claimed in any divisional application.