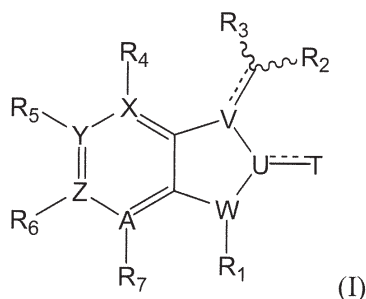


What is claimed is:

1. A compound of Formula I,



or an enantiomer, diastereomer, tautomer, or pharmaceutically acceptable salt or solvate thereof, wherein:

R_1 is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

R_2 is monocyclic or bicyclic heterocycle or substituted heterocycle, aryl or substituted aryl;

R_3 is hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, halogen, $-OR_a$, $-C(O)R_a$, $-C(O)OR_a$, $-NR_aR_b$, $S(O)_2NR_aR_b$;

R_4 , R_5 , R_6 , and R_7 are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)R_e$, $S(=O)_2R_e$, $P(=O)_2R_e$, $S(=O)_2OR_e$, $P(=O)_2OR_e$, NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$;

T is O, S or R_a ;

U, V, and W are each independently a carbon, N, O, or S;

X, Y, Z, and A are each independently a carbon or N, with the proviso that the ring in which X, Y, Z, and A exist is aromatic;

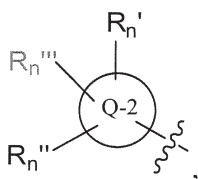
with the provision that

one of R₄, R₅, R₆, and R₇ is substituted heterocycle or substituted aryl, and

R₄, R₅, R₆, or R₇ is absent if X, Y, Z, or A, respectively, is a heteroatom;

wherein

substituted heterocycle and substituted aryl in R₄, R₅, R₆, and R₇ is the following group:



wherein:

Q-2 is heterocycle or aryl;

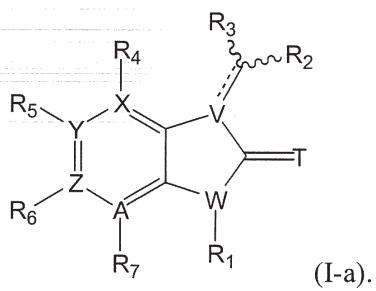
R_n', R_n'' and R_n''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, OR_a, SR_a, C(=O)R_a, C(=O)OR_a, NH₂, S(O)₂NH₂, heterocycle or substituted heterocycle, or aryl or substituted aryl;

R_a is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl;

R_b, R_c and R_d are each independently hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, or aryl or substituted aryl, or said R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle; and

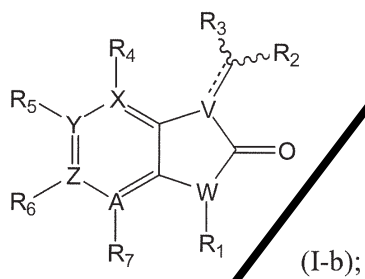
R_e is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl.

2. The compound of Claim 1, wherein T is O or S,

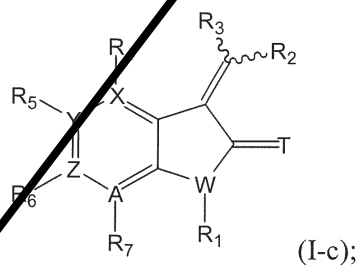


3. The compound of Claim 2,

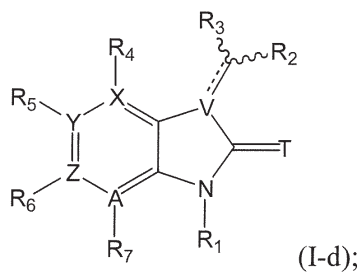
(i) wherein T is O,



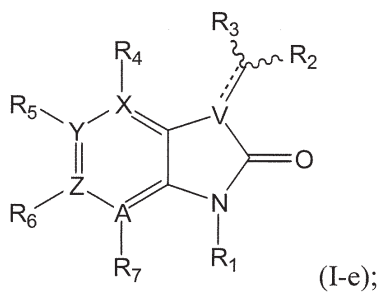
(ii) wherein V is carbon,



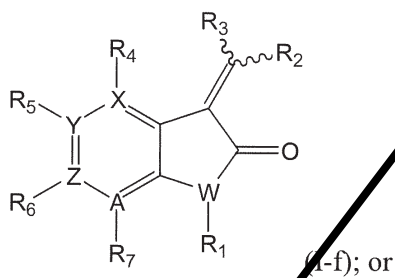
(iii) wherein W is N,



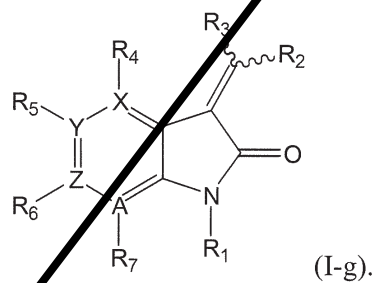
(iv) wherein T is O and W is N,



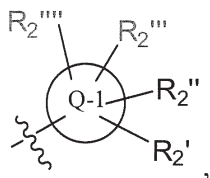
(v) wherein T is O and V is carbon,



(vi) wherein U is carbon, V is carbon, W is N, and T is O,



4. The compound of any one of Claims 1 to 3, wherein R₂ is



wherein

Q-1 is heterocycle or aryl selected from the group consisting of pyrrole, furan, thiophene, pyridine, pyrimidine, pyrazine, pyridazine, imidazole, indole, pyrrolopyridinone, pyridone, pyrrolidine, pyridinone, piperidine, and pyrroloazepinone;

R_2' , R_2'' , R_2''' , and R_2'''' are each independently absent, hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$.

5. The compound of Claim 4, wherein R_2' , R_2'' , R_2''' , and R_2'''' are independently absent, hydrogen, alkyl, substituted alkyl, substituted heterocycle, substituted aryl, $C(=O)OR_e$, or $C(=O)NR_bR_c$,

wherein

R_b and R_c are independently hydrogen, alkyl, substituted alkyl, substituted heterocycle, or said R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle, and R_e is hydrogen.

6. The compound of Claim 5, wherein one of R_2' , R_2'' , R_2''' , and R_2'''' is $C(=O)NR_bR_c$,

wherein

R_b is hydrogen, and

R_c is alkyl substituted with $NR_{bn}R_{cn}$ (wherein R_{bn} and R_{cn} are alkyl, or said R_{bn} and R_{cn} together with the N to which they are bonded optionally form a substituted heterocycle (wherein said heterocycle is piperidine, or morpholine)), or R_b and R_c together with the N to which they are bonded optionally form a substituted heterocycle (wherein said heterocycle is piperidine, or morpholine), and

two of R_2' , R_2'' , R_2''' , and R_2'''' are independently alkyl, and the other is hydrogen.

7. The compound of Claim 6, wherein one of R_2' , R_2'' , R_2''' , and R_2'''' is $C(=O)NR_bR_c$,

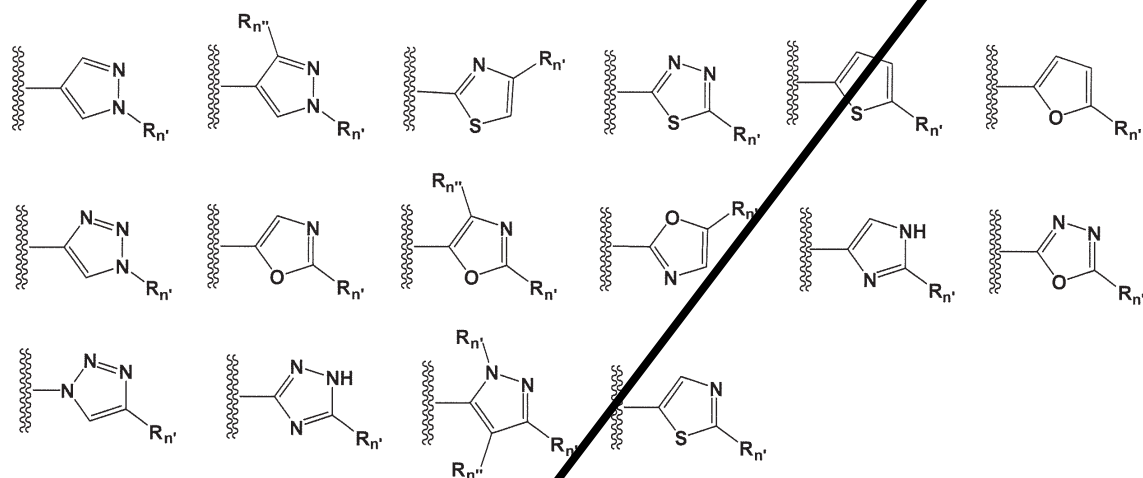
wherein

NR_bR_c is 2-(di-ethyl amino) ethyl, amino, 2-pyrrolidino ethyl amino, 4-methyl piperazinyl, or morpholino.

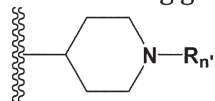
8. The compound of Claim 4, wherein Q-1 is pyrrole, one of R_2' , R_2'' , R_2''' , and R_2'''' is absent, two of R_2' , R_2'' , R_2''' , and R_2'''' are alkyl (e.g., methyl), and one of R_2' , R_2'' , R_2''' , and R_2'''' is $C(=O)NR_bR_c$.
9. The compound of Claim 8, wherein
- R_b is hydrogen, and
- R_c is alkyl substituted with $NR_{bn}R_{cn}$, wherein R_{bn} and R_{cn} are alkyl, or said R_{bn} and R_{cn} together with the N to which they are bonded optionally form a substituted heterocycle, and wherein said heterocycle is piperidine, or morpholine.
10. The compound of Claim 9, wherein NR_bR_c is 2-(di-ethyl amino) ethyl, amino, or 2-pyrrolidino ethyl amino.
11. The compound of Claim 8, wherein R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle.
12. The compound of Claim 11, wherein NR_bR_c is 4-methyl piperazinyl, or morpholino.
13. The compound of any one of Claims 1 to 12, wherein Q-2 is selected from the group consisting of pyrrole, furan, thiophene, imidazole, pyrazole, oxazole, isoxazole, thiazole, isothiazole, triazole, thiadiazole, oxadiazole, pyrrolidine, piperidine, azepane, tetrahydro furan, oxane, oxepane, indole, indolinone, indazole, benzothiazole, quinoline, quinazoline, quinoxaline, imidazopyridine, imidazopyridazine, pyrazolopyridine, pyrazolopyrimidine, phthalazinone, and phenyl.
14. The compound of Claim 13, wherein R_n is pyrrolidinyl, piperidinyl, azepanyl, tetrahydrofuranyl, oxanyl, oxepanyl, pyranyl, phenyl, thiophenyl, pyrazinyl, pyrimidinyl, pyridazinyl, or pyridyl (said piperidinyl, pyranyl, phenyl, thiophenyl, pyrazinyl, pyrimidinyl, pyridazinyl, and pyridyl are optionally substituted with halogen, cyano, nitro, alkyl or substituted alkyl, OR_a , NR_bR_c , $C(=O)OR_e$, $C(=O)R_a$, or $C(=O)NR_bR_c$ (wherein R_a is hydrogen, or alkyl or substituted alkyl, R_b and R_c are independently hydrogen, or alkyl or substituted alkyl, and R_e is alkyl or substituted alkyl (substituted alkyl is optionally substituted with one or more substituent(s) selected from the group consisting of hydroxy, amino, nitro, cyano, halogen, alkoxy, alkylcarbonyl, alkoxy carbonyl, aminocarbonyl, aryl, cycloalkyl, and heterocycle), and

$R_{n''}$ and $R_{n'''}$ are independently hydrogen, or alkyl or substituted alkyl (substituted alkyl is optionally substituted with one or more substituent(s) selected from the group consisting of hydroxy, amino, nitro, cyano, halogen, alkoxy, alkylcarbonyl, alkoxycarbonyl, aminocarbonyl, aryl, cycloalkyl, and heterocycle).

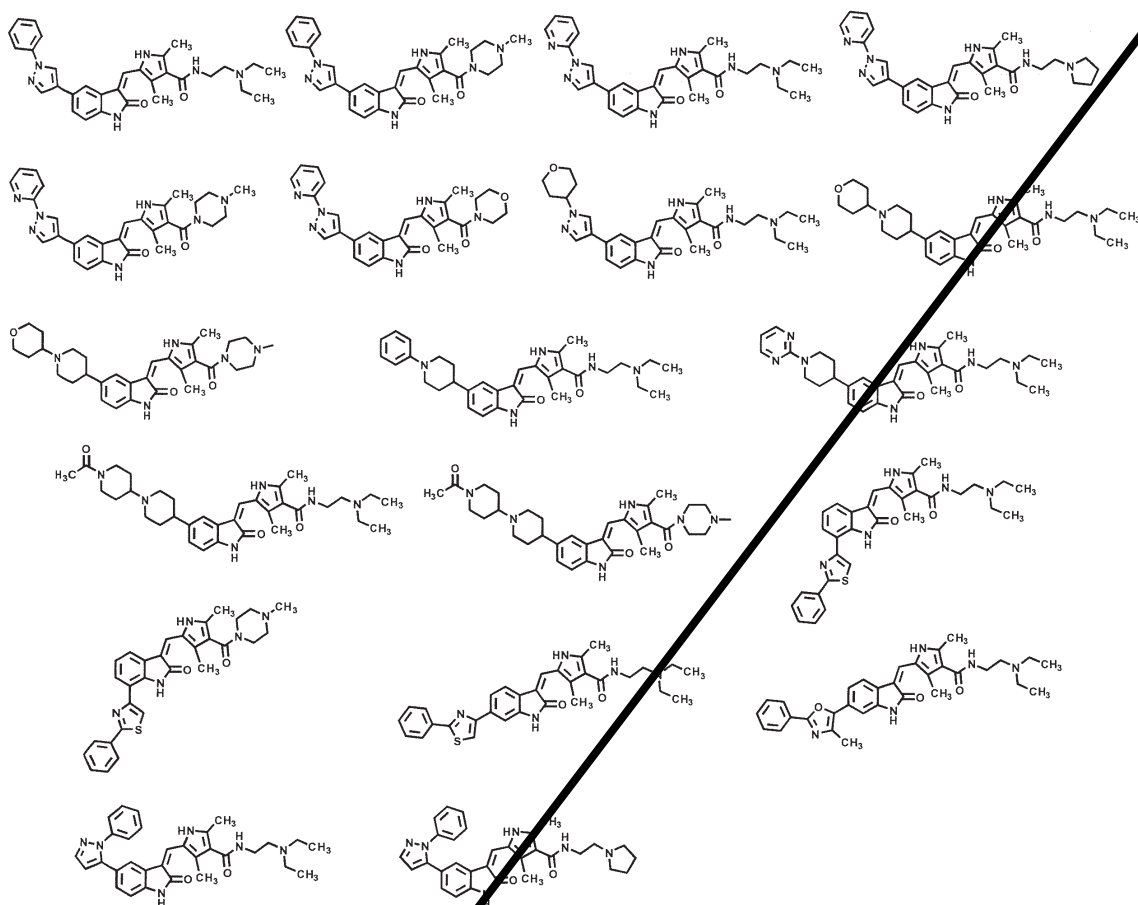
15. The compound of Claim 13, wherein Q-2 is selected from the group consisting of the following group:



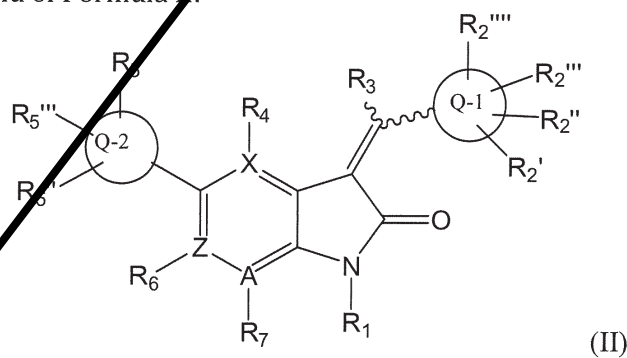
16. The compound of Claim 15, wherein Q-2 is selected from the group consisting of the following group:



17. A compound selected from the group consisting of:



18. A compound of Formula II.



or an enantiomer, diastereomer, tautomer, or pharmaceutically acceptable salt or solvate thereof
 wherein

R₁ is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a, SR_a, S(=O)₂R_a, S(=O)₂OR_e, C(=O)OR_d, C(=O)R_a, or C(=O)NR_bR_c;

R₃ is hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, halogen, -OR_a, -C(O)R_a, C(O)OR_a, -NR_aR_b, S(O)₂NR_aR_b;

R₄, R₆, and R₇ are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a, SR_a, S(=O)R_e, S(=O)₂R_e, P(=O)₂R_e, S(=O)₂OR_e, P(=O)₂OR_e, NR_bR_c, NR_bS(=O)₂R_e, NR_bP(=O)₂R_e, S(=O)₂NR_bR_c, P(=O)₂NR_bR_c, C(=O)OR_e, C(=O)R_a, C(=O)NR_bR_c, OC(=O)R_a, OC(=O)NR_bR_c, NR_bC(=O)OR_e, NR_dC(=O)NR_bR_c, NR_dS(=O)₂NR_bR_c, NR_dP(=O)₂NR_bR_c, NR_bC(=O)R_a, or NR_bP(=O)₂R_e;

X, Z, and A are each independently carbon or N, with the proviso that the ring in which X, Z, and A exist is aromatic;

Q-1 and Q-2 is independently is heterocycle, or aryl;

R₂', R₂'', R₂'', and R₂''' are each independently absent, hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a, NR_bR_c, NR_bS(=O)₂R_e, NR_bP(=O)₂R_e, S(=O)₂NR_bR_c, P(=O)₂NR_bR_c, C(=O)OR_e, C(=O)R_a, C(=O)NR_bR_c, OC(=O)R_a, OC(=O)NR_bR_c, NR_bC(=O)OR_e, NR_dC(=O)NR_bR_c, NR_dS(=O)₂NR_bR_c, NR_dP(=O)₂NR_bR_c, NR_bC(=O)R_a, or NR_bP(=O)₂R_e,

R₅', R₅'', and R₅''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, OR_a, SR_a, C(=O)R_a, C(=O)OR_a, NH₂, S(O)₂NH₂, heterocycle or substituted heterocycle, or aryl or substituted aryl;

wherein

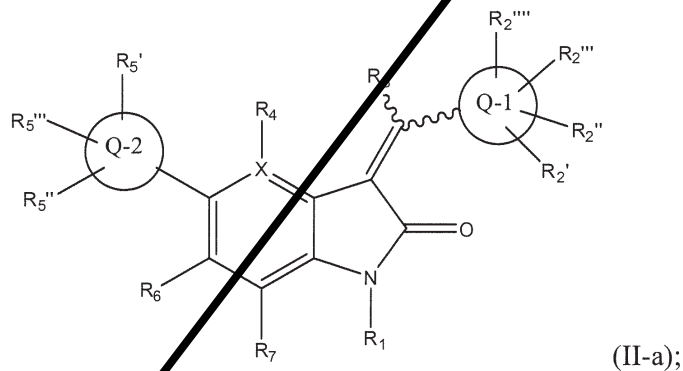
R_a is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl;

R_b, R_c and R_d are independently hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, or aryl or substituted aryl or said R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle; and

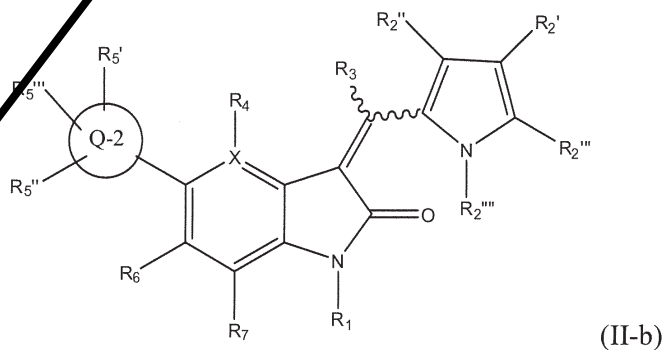
R_e is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl.

19. The compound of Claim 18, wherein the compound has

(i) the formula,



(ii) the formula,

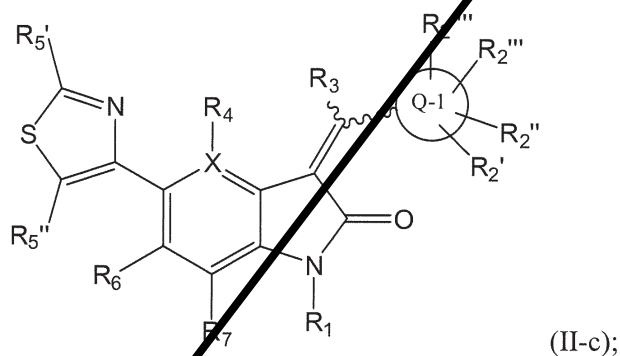


wherein

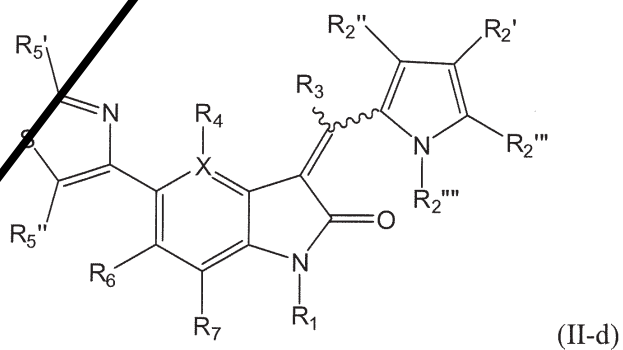
R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(iii) the formula,



(iv) the formula,



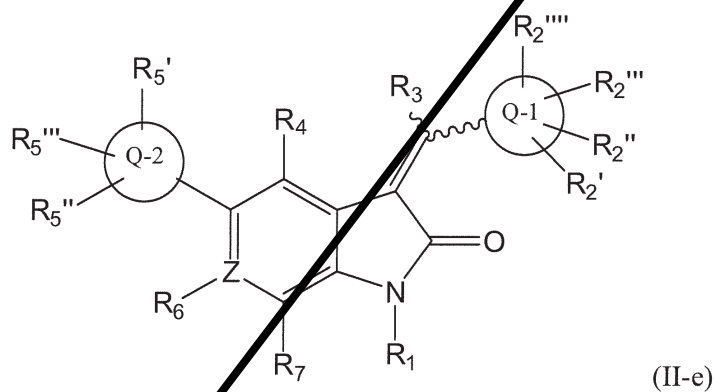
wherein

X is C or N,

R_2 , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

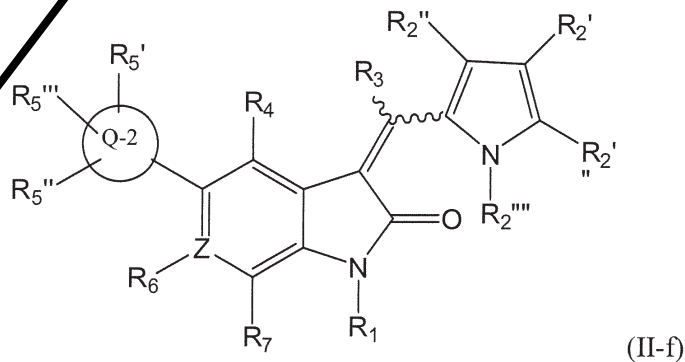
R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(v) the formula,



wherein Z is C or N;

(vi) the formula,



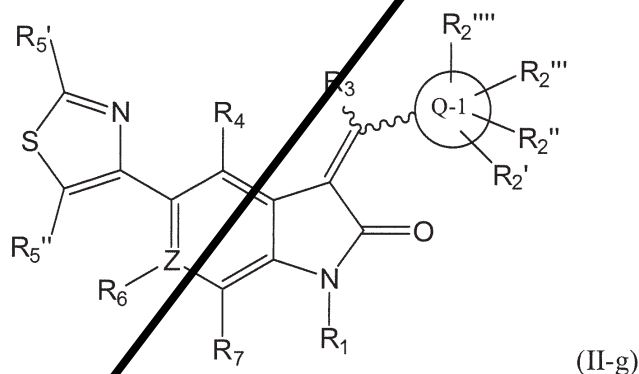
wherein

Z is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

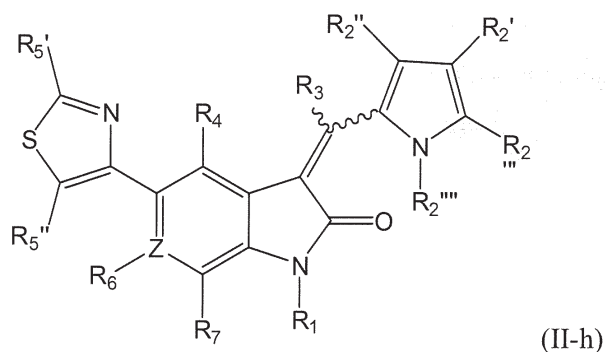
R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$,

(vii) the formula,



wherein Z is C or N;

(viii) the formula,



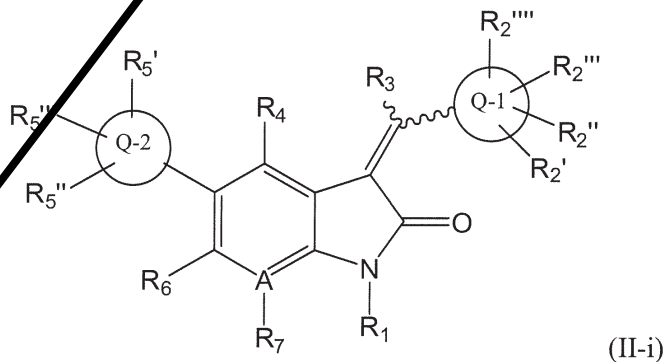
wherein

Z is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

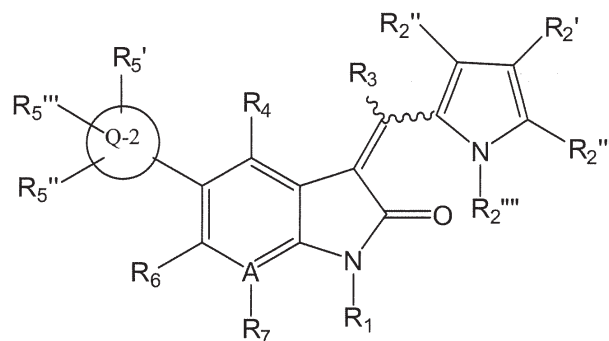
R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(ix) the formula,



wherein A is C or N;

(x) the formula,



(II-j)

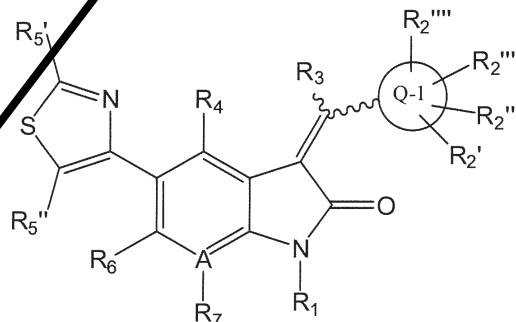
wherein

A is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

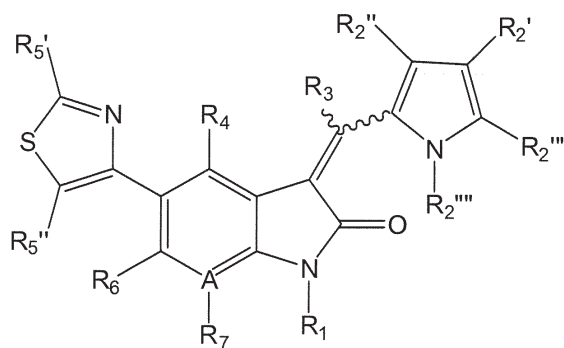
(xi) the formula,



(II-k)

wherein A is C or N;

(xii) the formula,



(II-l)

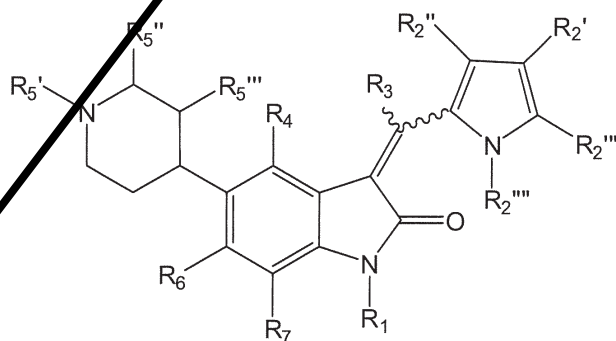
wherein

A is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

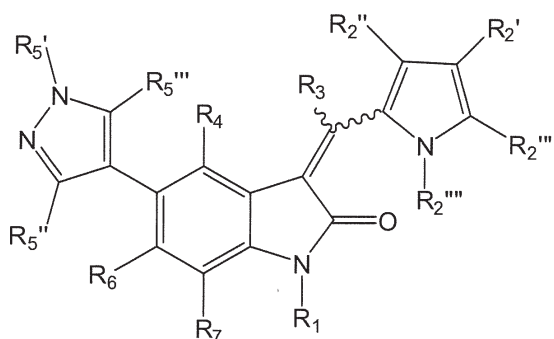
R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(xiii) the formula,



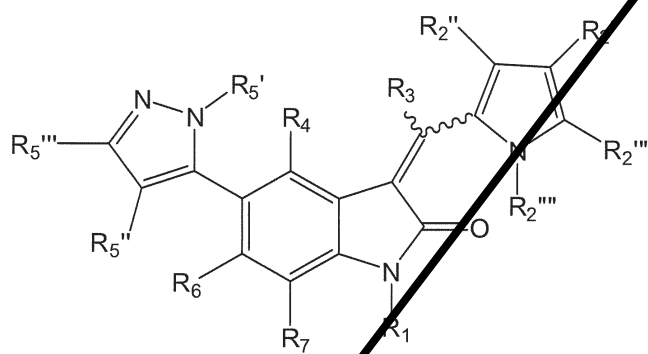
(II-m);

(xiii) the formula,



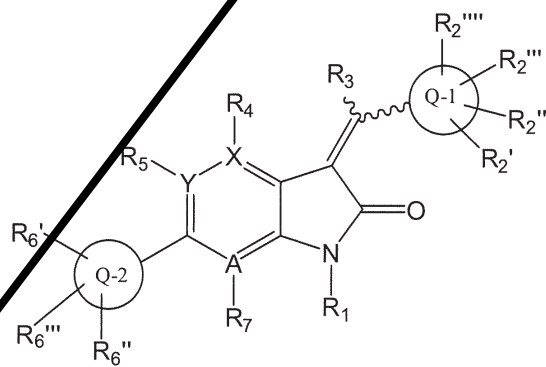
(II-n); or

(xiv) the formula,



(II-o)

20. A compound of Formula III,



(III)

or an enantiomer, diastereomer, tautomer, or pharmaceutically acceptable salt or solvate thereof, wherein:

R₁ is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl,

heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $\text{S(=O)}_2\text{R}_e$, $\text{S(=O)}_2\text{OR}_e$, C(=O)OR_d , C(=O)R_a , or $\text{C(=O)NR}_b\text{R}_c$;

R_3 is hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, halogen, $-\text{OR}_a$, $-\text{C(=O)R}_a$, $-\text{C(=O)OR}_a$, $-\text{NR}_a\text{R}_b$, or $\text{S(O)}_2\text{NR}_a\text{R}_b$;

R_4 , R_5 , and R_7 are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , S(=O)R_e , $\text{S(=O)}_2\text{R}_e$, $\text{P(=O)}_2\text{R}_e$, $\text{S(=O)}_2\text{OR}_e$, $\text{P(=O)}_2\text{OR}_e$, NR_bR_c , $\text{NR}_b\text{S(=O)}_2\text{R}_e$, $\text{NR}_b\text{P(=O)}_2\text{R}_e$, $\text{S(=O)}_2\text{NR}_b\text{R}_c$, $\text{P(=O)}_2\text{NR}_b\text{R}_c$, C(=O)OR_e , C(=O)R_a , $\text{C(=O)NR}_b\text{R}_c$, OC(=O)R_a , $\text{OC(=O)NR}_b\text{R}_c$, $\text{NR}_b\text{C(=O)OR}_e$, $\text{NR}_d\text{C(=O)NR}_b\text{R}_c$, $\text{NR}_d\text{S(=O)}_2\text{NR}_b\text{R}_c$, $\text{NR}_d\text{P(=O)}_2\text{NR}_b\text{R}_c$, $\text{NR}_b\text{C(=O)R}_a$, or $\text{NR}_b\text{P(=O)}_2\text{R}_e$;

X , Y , and A are each independently carbon or N, with the proviso that the ring in which X , Y , and A exist is aromatic;

Q-1 and Q-2 are each independently is heterocycle or aryl;

R_2' , R_2'' , R_2''' and R_2'''' are each independently absent, hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $\text{NR}_b\text{S(=O)}_2\text{R}_e$, $\text{NR}_b\text{P(=O)}_2\text{R}_e$, $\text{S(=O)}_2\text{NR}_b\text{R}_c$, $\text{P(=O)}_2\text{NR}_b\text{R}_c$, C(=O)OR_e , C(=O)R_a , $\text{C(=O)NR}_b\text{R}_c$, OC(=O)R_a , $\text{OC(=O)NR}_b\text{R}_c$, $\text{NR}_b\text{C(=O)OR}_e$, $\text{NR}_d\text{C(=O)NR}_b\text{R}_c$, $\text{NR}_d\text{S(=O)}_2\text{NR}_b\text{R}_c$, $\text{NR}_d\text{P(=O)}_2\text{NR}_b\text{R}_c$, $\text{NR}_b\text{C(=O)R}_a$, or $\text{NR}_b\text{P(=O)}_2\text{R}_e$;

R_6' , R_6'' and R_6''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, OR_a , SR_a , C(=O)R_a , C(=O)OR_a , NH_2 , $\text{S(O)}_2\text{NH}_2$, heterocycle or substituted heterocycle, or aryl or substituted aryl;

R_a is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl;

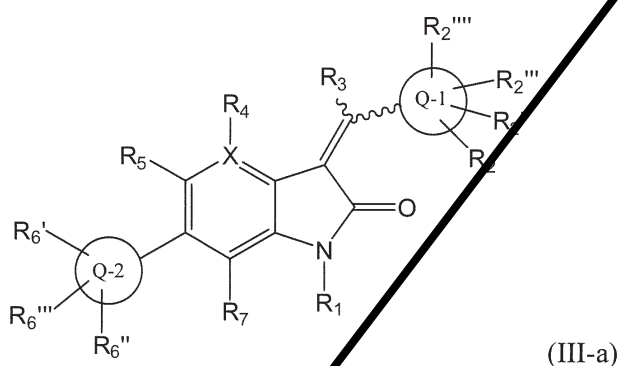
R_b , R_c and R_d are each independently hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, or aryl or substituted aryl,

or said R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle; and

R_e is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl.

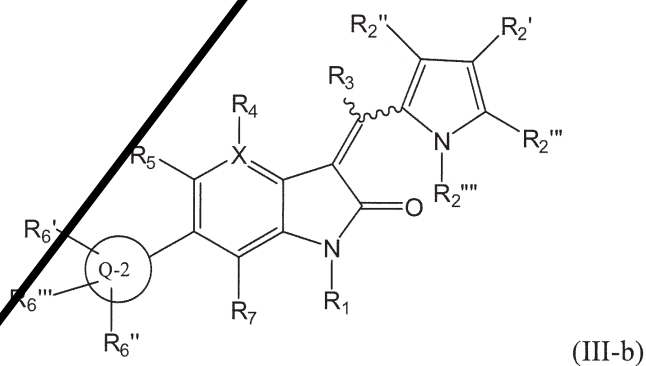
21. The compound of Claim 20, wherein the compound

(i) has the formula of



wherein X is C or N;

(ii) has the formula of



wherein

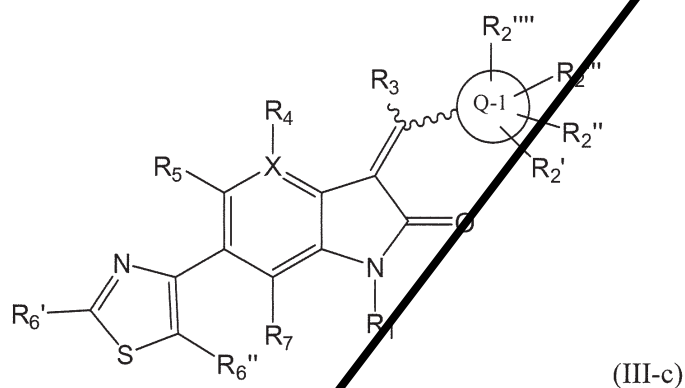
X is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCE_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$,

$S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

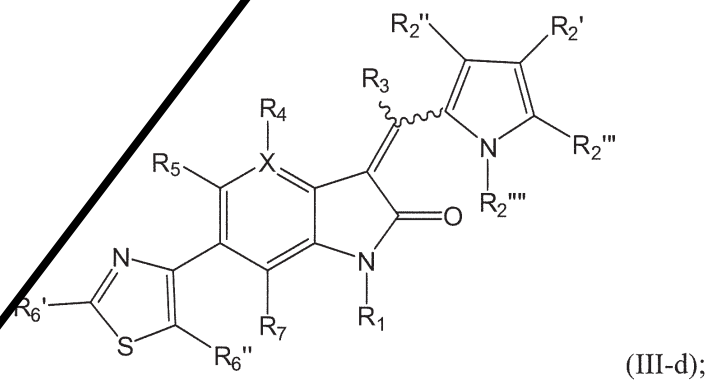
$R_{2''''}$ is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(iii) has the formula of



wherein X is C or N;

(iv) has the formula of



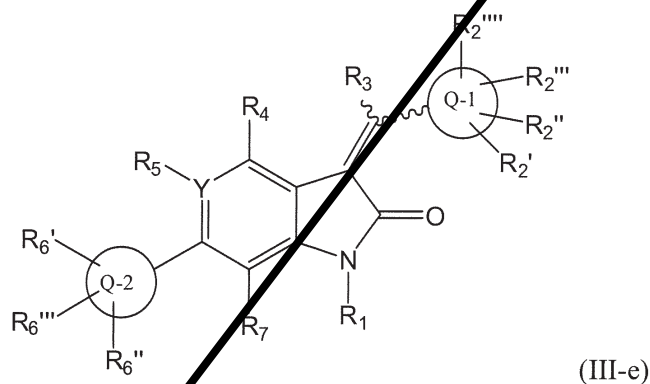
wherein

X is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

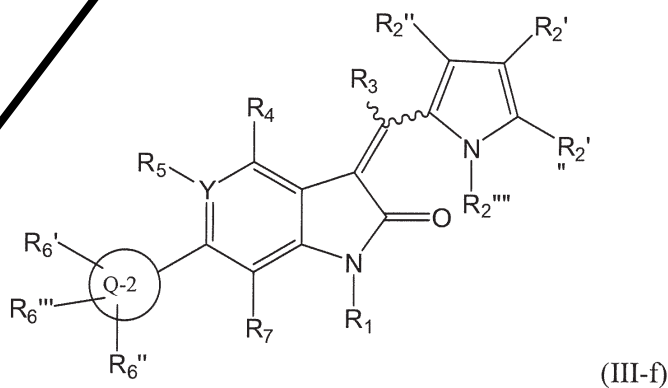
R_2'''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(v) has the formula of



wherein Y is C or N;

(vi) has the formula of



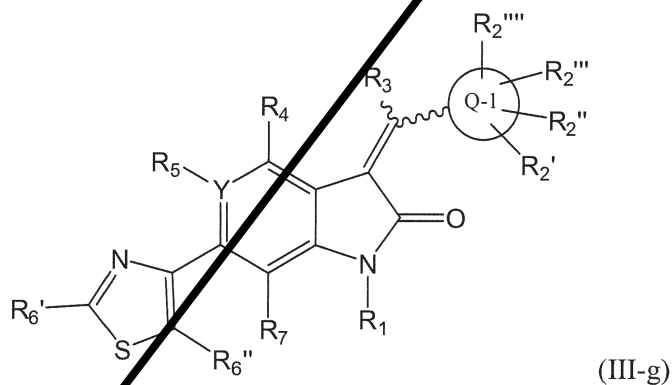
wherein

Y is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

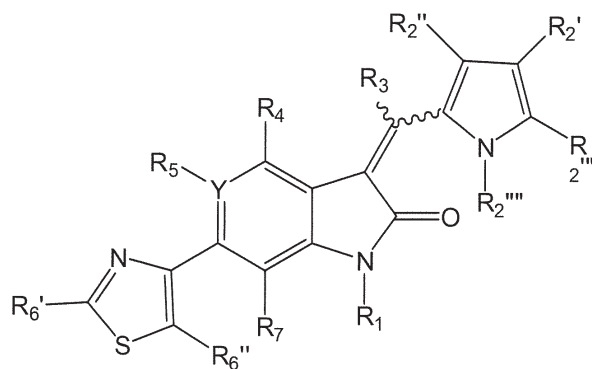
R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$,

(vii) has the formula of



wherein Y is C or N;

(viii) has the formula of



(III-1)

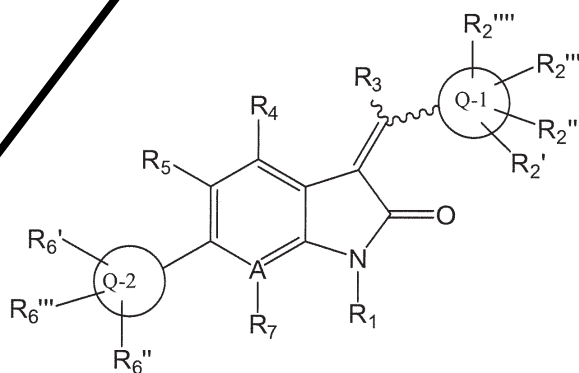
wherein

Y is C or N,

R₂', R₂'', and R₂''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a, NR_bR_c, NR_bS(=O)₂R_e, NR_bP(=O)₂R_e, S(=O)₂NR_bR_c, P(=O)₂NR_bR_c, C(=O)OR_e, C(=O)R_a, C(=O)NR_bR_c, OC(=O)R_a, OC(=O)NR_bR_c, NR_bC(=O)OR_e, NR_dC(=O)NR_bR_c, NR_dS(=O)₂NR_bR_c, NR_dP(=O)₂NR_bR_c, NR_bC(=O)R_a, or NR_bP(=O)₂R_e, and

R₂''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a, SR_a, S(=O)₂R_e, S(=O)₂OR_e, C(=O)OR_d, C(=O)R_a, or C(=O)NR_bR_c;

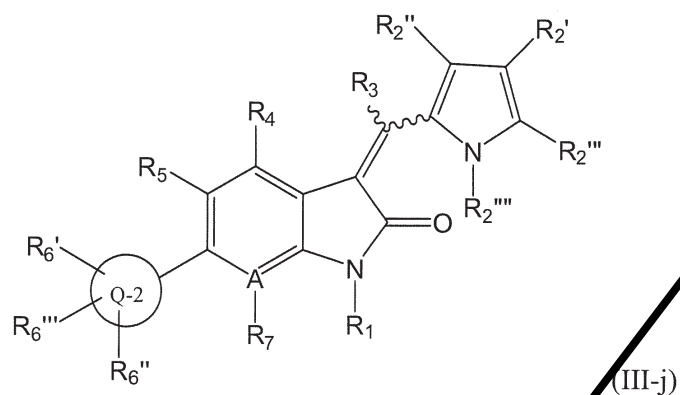
(ix) has the formula of



(III-i)

wherein A is C or N;

(x) has the formula of



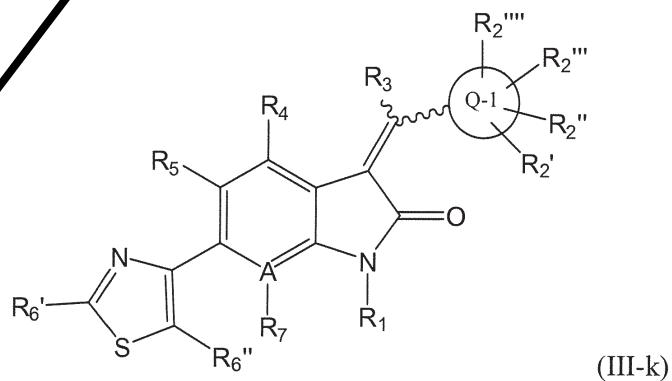
wherein

A is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_d$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

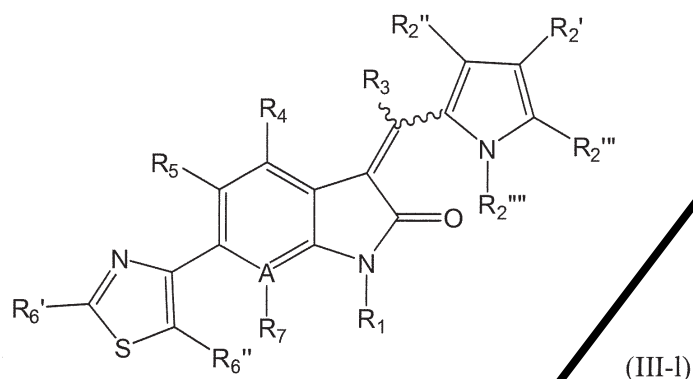
R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(xi) has the formula of



wherein A is C or N; or

(xii) has the formula of



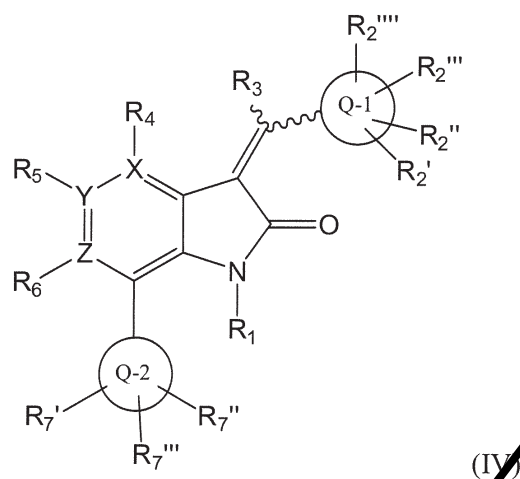
wherein

A is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$.

22. A compound of Formula IV,



or an enantiomer, diastereomer, tautomer, or pharmaceutically acceptable salt or solvate thereof, wherein:

R₁ is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a, SR_a, S(=O)₂R_e, S(=O)₂OR_e, C(=O)OR_d, C(=O)R_a, or C(=O)NR_bR_c;

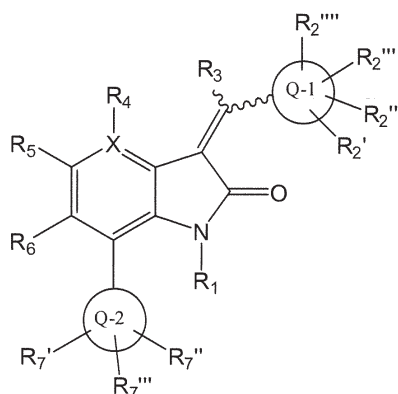
R₃ is hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, halogen, -OR_a, -C(O)R_a, -C(O)OR_a, -NR_aR_b, or S(O)₂NR_aR_b;

R₄, R₅, and R₆ are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a, SR_a, S(=O)R_e, S(=O)₂R_e, P(=O)₂R_e, S(=O)₂OR_e, P(=O)₂OR_e, NR_bR_c, NR_bS(=O)₂R_e, NR_bP(=O)₂R_e, S(=O)₂NR_bR_c, P(=O)₂NR_bR_c, C(=O)OR_e, C(=O)R_a, C(=O)NR_bR_c, OC(=O)R_a, OC(=O)NR_bR_c, NR_bC(=O)OR_e, NR_dC(=O)NR_bR_c, NR_dS(=O)₂NR_bR_c, NR_dP(=O)₂NR_bR_c, NR_bC(=O)R_a, or NR_bP(=O)₂R_e;

X, Y, and Z are each independently carbon or N, with the proviso that the ring in which X, Y, and Z exist is aromatic;

Q-1 and Q-2 are each independently is heterocycle or aryl;

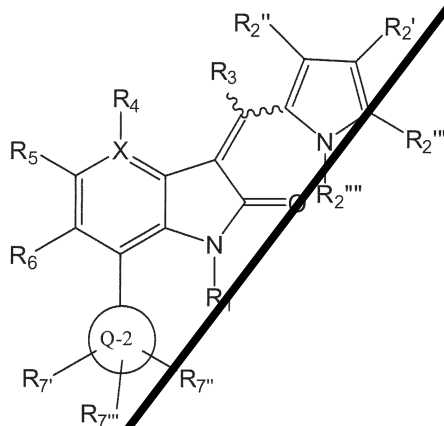
- R_2' , R_2'' , R_2''' and R_2'''' are each independently absent, hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$,
- R_7 , R_7'' and R_7''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, OR_a , SR_a , $C(=O)R_a$, $C(=O)OR_a$, NH_2 , $S(=O)_2NH_2$, heterocycle or substituted heterocycle, or aryl or substituted aryl;
- R_a is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl;
- R_b , R_c and R_d are each independently hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, or aryl or substituted aryl, or said R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle; and
- R_e is alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl.
23. The compound of Claim 22, wherein the compound
- (i) has the formula:



(IV-a)

wherein X is C or N;

(ii) has the formula:



(IV-b)

wherein

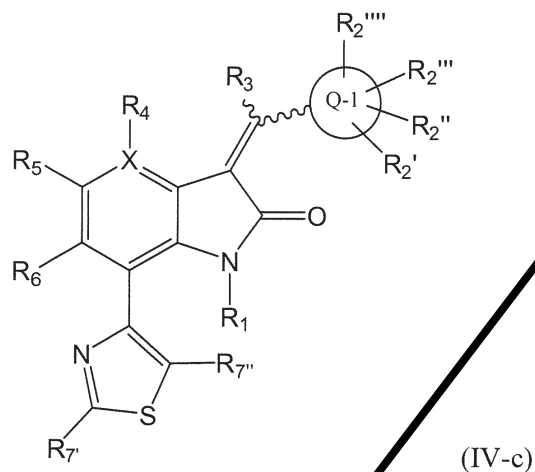
X is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $\text{NR}_b\text{S}(=\text{O})_2\text{R}_e$, $\text{NR}_b\text{P}(=\text{O})_2\text{R}_e$, $\text{S}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{P}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{C}(=\text{O})\text{OR}_e$, $\text{C}(=\text{O})\text{R}_a$, $\text{C}(=\text{O})\text{NR}_b\text{R}_c$, $\text{OC}(=\text{O})\text{R}_a$, $\text{OC}(=\text{O})\text{NR}_b\text{R}_c$, $\text{NR}_b\text{C}(=\text{O})\text{OR}_e$, $\text{NR}_d\text{C}(=\text{O})\text{NR}_b\text{R}_c$, $\text{NR}_d\text{S}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{NR}_d\text{P}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{NR}_b\text{C}(=\text{O})\text{R}_a$, or $\text{NR}_b\text{P}(=\text{O})_2\text{R}_e$, and

R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted

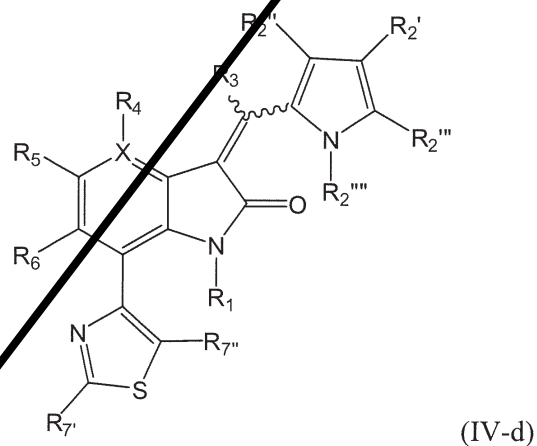
cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(iii) has the formula:



wherein X is C or N;

(iv) has the formula:



wherein

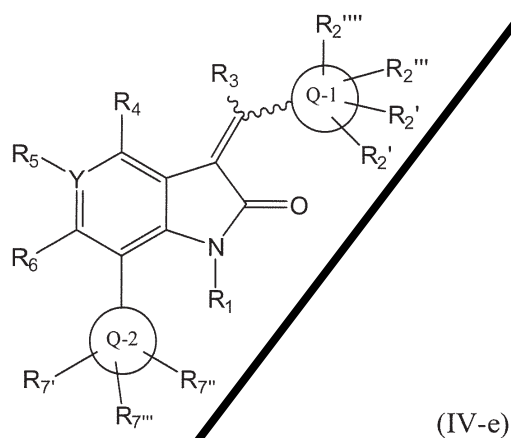
X is C or N,

R_2 , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$,

$S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

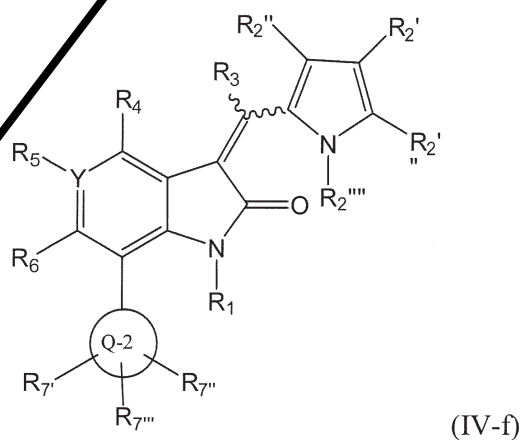
$R_{2''''}$ is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(v) has the formula:



wherein Y is C or N;

(vi) has the formula:



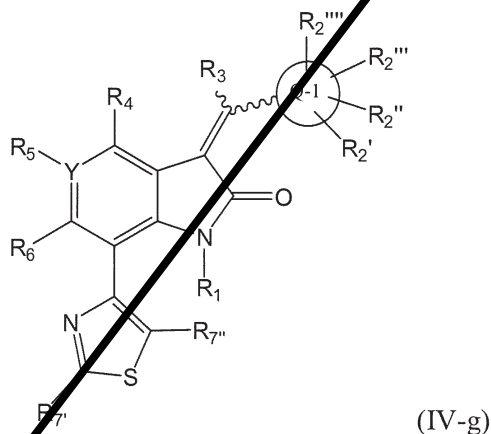
wherein

Y is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

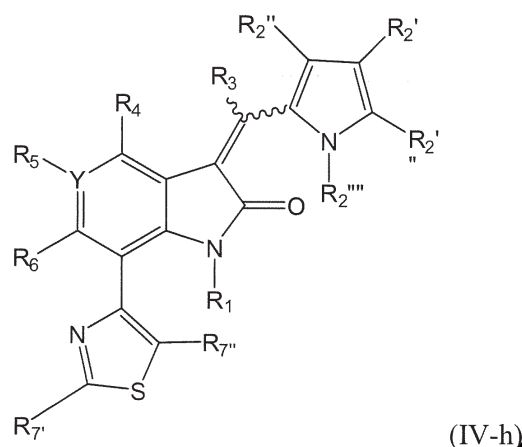
R_2'''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(vii) has the formula:



wherein Y is C or N;

(viii) has the formula:



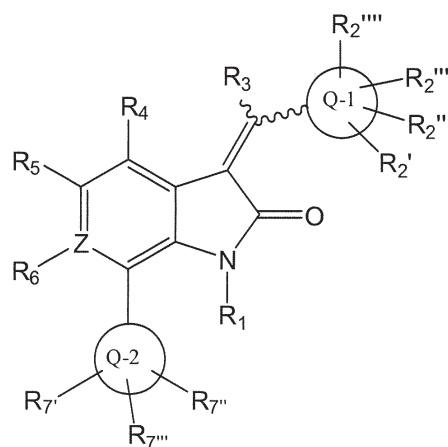
wherein

Y is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_d$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

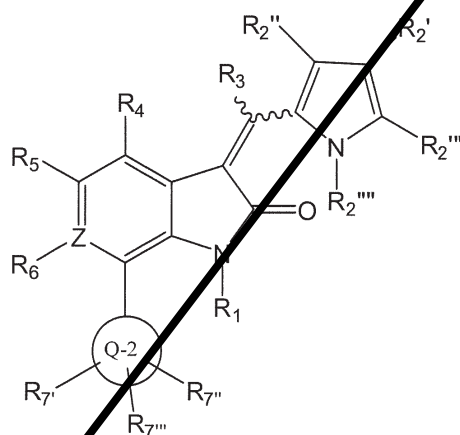
(ix) has the formula:



(IV-i)

wherein Z is C or N;

(x) has the formula:



(IV-j)

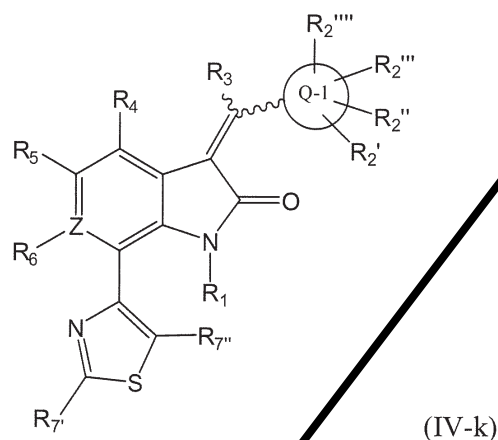
wherein

Z is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_bC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

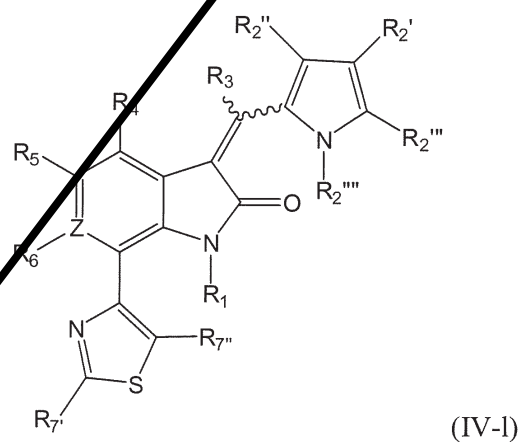
$R_{2''''}$ is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(xi) has the formula:



wherein Z is C or N; or

(xii) has the formula:



wherein

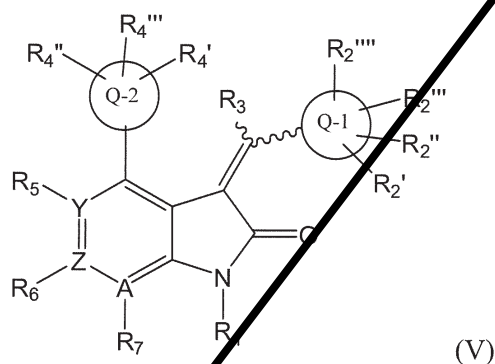
Z is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted

heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $\text{NR}_b\text{S}(=\text{O})_2\text{R}_e$, $\text{NR}_b\text{P}(=\text{O})_2\text{R}_e$, $\text{S}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{P}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{C}(=\text{O})\text{OR}_e$, $\text{C}(=\text{O})\text{R}_a$, $\text{C}(=\text{O})\text{NR}_b\text{R}_c$, $\text{OC}(=\text{O})\text{R}_a$, $\text{OC}(=\text{O})\text{NR}_b\text{R}_c$, $\text{NR}_b\text{C}(=\text{O})\text{OR}_e$, $\text{NR}_d\text{C}(=\text{O})\text{NR}_b\text{R}_c$, $\text{NR}_d\text{S}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{NR}_d\text{P}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{NR}_b\text{C}(=\text{O})\text{R}_a$, or $\text{NR}_b\text{P}(=\text{O})_2\text{R}_e$, and

R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $\text{S}(=\text{O})_2\text{R}_e$, $\text{S}(=\text{O})_2\text{OR}_e$, $\text{C}(=\text{O})\text{OR}_d$, $\text{C}(=\text{O})\text{R}_a$, or $\text{C}(=\text{O})\text{NR}_b\text{R}_c$.

24. A compound of Formula V,



or an enantiomer, diastereomer, tautomer, or pharmaceutically acceptable salt or solvate thereof, wherein:

R_1 is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $\text{S}(=\text{O})_2\text{R}_e$, $\text{S}(=\text{O})_2\text{OR}_e$, $\text{C}(=\text{O})\text{OR}_d$, $\text{C}(=\text{O})\text{R}_a$, or $\text{C}(=\text{O})\text{NR}_b\text{R}_c$;

R_3 is hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, halogen, $-\text{OR}_a$, $-\text{C}(\text{O})\text{R}_a$, $-\text{C}(\text{O})\text{OR}_a$, $-\text{NR}_a\text{R}_b$, or $\text{S}(\text{O})_2\text{NR}_a\text{R}_b$;

R_5 , R_6 , and R_7 are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $\text{S}(=\text{O})\text{R}_e$,

$S(=O)_2R_e$, $P(=O)_2R_e$, $S(=O)_2OR_e$, $P(=O)_2OR_e$, NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$,
 $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$,
 $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$,
 $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$;

Y, Z and A are each independently carbon or N, with the proviso that the ring in which Y, Z and A exist is aromatic;

Q-1 and Q-2 are each independently is heterocycle or aryl;

R_2' , R_2'' , R_2''' and R_2'''' are each independently absent, hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$;

R_4' , R_4'' and R_4''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, OR_a , SR_a , $C(=O)R_a$, $C(=O)OR_a$, NH_2 , $S(O)_2NH_2$, heterocycle or substituted heterocycle, or aryl or substituted aryl;

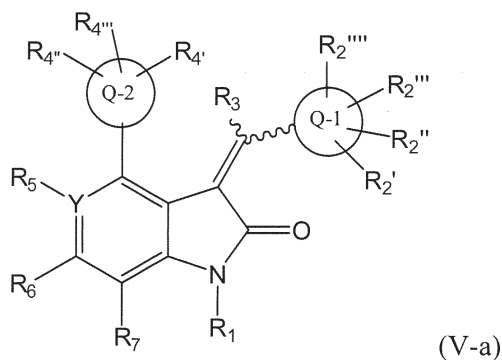
R_a is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl;

R_b , R_c and R_d are each independently hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, or aryl or substituted aryl, or said R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle; and

R_e is alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl.

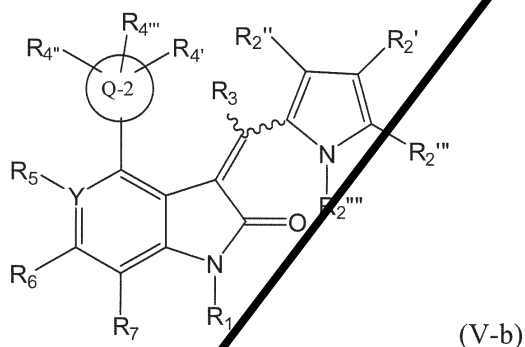
25. The compound of Claim 24, wherein the compound

(i) has the formula of



wherein Y is C or N;

(ii) has the formula of



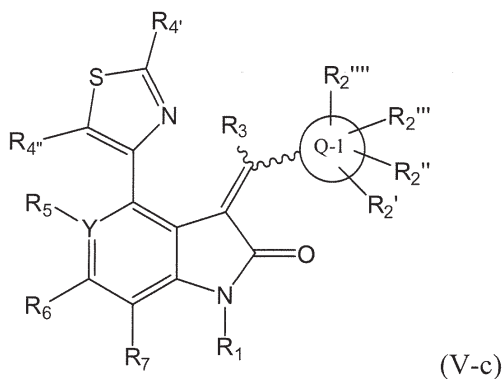
wherein

Y is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $\text{NR}_b\text{S}(=\text{O})_2\text{R}_e$, $\text{NR}_b\text{P}(=\text{O})_2\text{R}_e$, $\text{S}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{P}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{C}(=\text{O})\text{OR}_e$, $\text{C}(=\text{O})\text{R}_a$, $\text{C}(=\text{O})\text{NR}_b\text{R}_c$, $\text{OC}(=\text{O})\text{R}_a$, $\text{OC}(=\text{O})\text{NR}_b\text{R}_c$, $\text{NR}_b\text{C}(=\text{O})\text{OR}_e$, $\text{NR}_d\text{C}(=\text{O})\text{NR}_b\text{R}_c$, $\text{NR}_d\text{S}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{NR}_d\text{P}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{NR}_b\text{C}(=\text{O})\text{R}_a$, or $\text{NR}_b\text{P}(=\text{O})_2\text{R}_e$, and

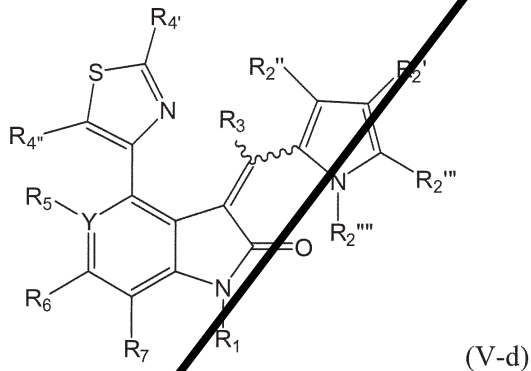
R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $\text{S}(=\text{O})_2\text{R}_e$, $\text{S}(=\text{O})_2\text{OR}_e$, $\text{C}(=\text{O})\text{OR}_d$, $\text{C}(=\text{O})\text{R}_a$, or $\text{C}(=\text{O})\text{NR}_b\text{R}_c$;

(iii) has the formula of



wherein Y is C or N;

(iv) has the formula of



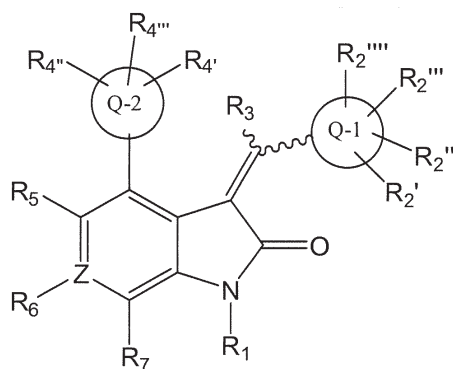
wherein

Y is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

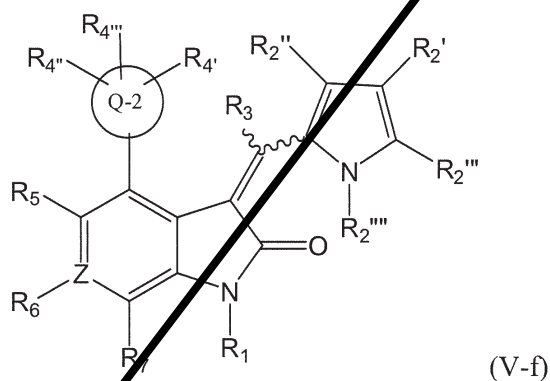
R_2'''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(v) has the formula of



wherein Z is C or N;

(vi) has the formula of



wherein

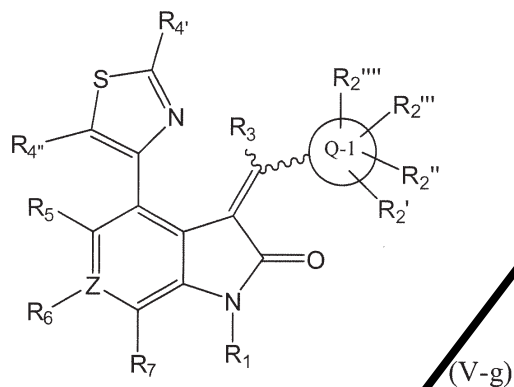
Z is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted

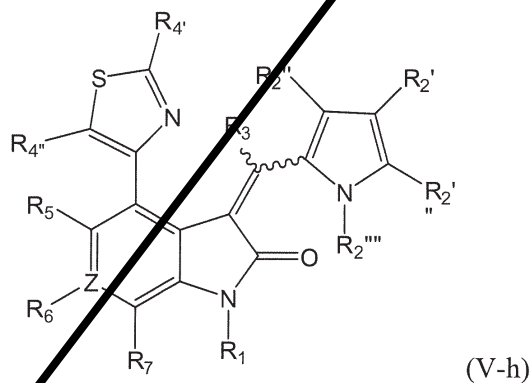
cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(vii) has the formula of



wherein Z is C or N;

(viii) has the formula of



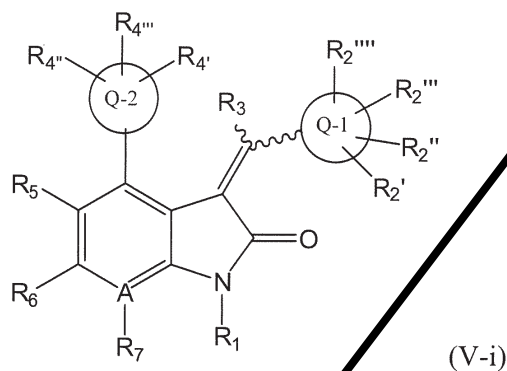
wherein

Z is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

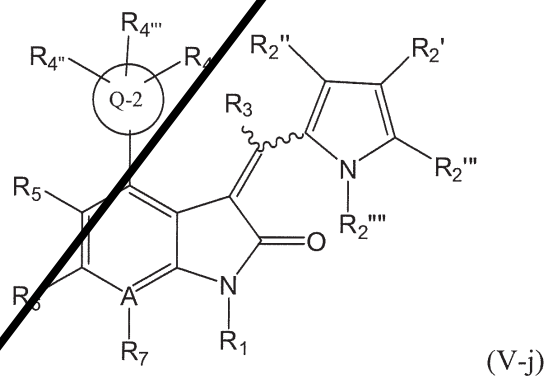
$R_{2''''}$ is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(ix) has the formula of



wherein Z is C or N;

(x) has the formula of



wherein

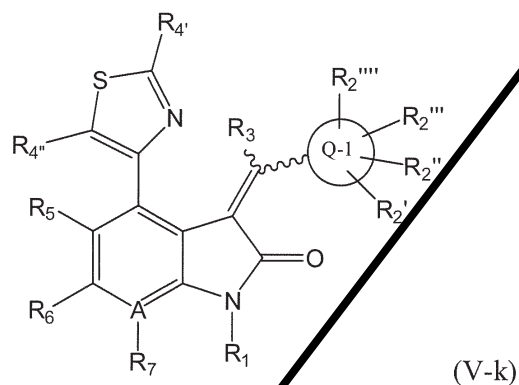
Z is C or N,

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$,

$\text{NR}_b\text{C}(=\text{O})\text{OR}_e$, $\text{NR}_d\text{C}(=\text{O})\text{NR}_b\text{R}_c$, $\text{NR}_d\text{S}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{NR}_d\text{P}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{NR}_b\text{C}(=\text{O})\text{R}_a$, or $\text{NR}_b\text{P}(=\text{O})_2\text{R}_e$, and

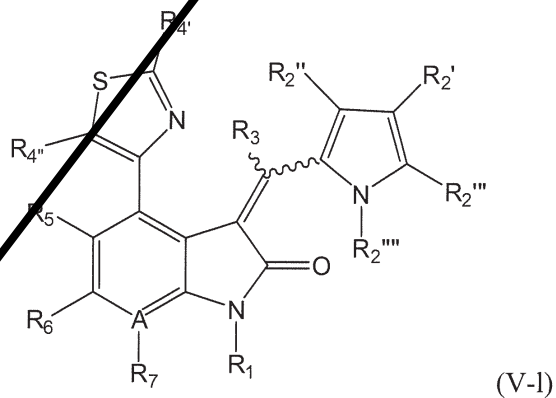
$\text{R}_{2''''}$ is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $\text{S}(=\text{O})_2\text{R}_e$, $\text{S}(=\text{O})_2\text{OR}_e$, $\text{C}(=\text{O})\text{OR}_d$, $\text{C}(=\text{O})\text{R}_a$, or $\text{C}(=\text{O})\text{NR}_b\text{R}_c$;

(xi) has the formula of



wherein A is C or N; or

(xii) has the formula of



wherein

A is C or N,

$\text{R}_{2'}$, $\text{R}_{2''}$, and $\text{R}_{2''''}$ are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted

heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

R_2 is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$.

26. A pharmaceutical composition comprising a compound of any one of Claims 1-25, or a pharmaceutically acceptable salt, ester or pro-drug thereof, and a pharmaceutically acceptable excipient, carrier, or diluent.

27. The compound of any one of Claims 1-25 for use in the treatment or prevention of cancer, or a related disorder or condition thereof in a mammal.

28. The compound of any one of Claims 1-25 for use in the treatment, prevention, amelioration of a protein kinase related disorder in a mammal.

29. The compound of Claim 28, wherein the protein kinase related disorder is a cancer such as lung cancer, bladder cancer, head and neck cancer, melanoma, ovarian cancer, prostate cancer, breast cancer, small-cell lung cancer, glioma, colorectal cancer, non-small cell lung cancer, genitourinary cancer, pancreatic cancer, thyroid cancer, Hodgkin's lymphoma, non-Hodgkin's lymphoma, gastrointestinal cancer, gastric cancer, hepatoma, gastrointestinal stromal tumor, squamous cell carcinoma, renal cell carcinoma, astrocytoma, Kaposi's sarcoma, chronic myelogenous leukemia, acute myelogenous leukemia, myeloproliferative disorders, and glioblastoma.

30. The compound of any one of Claims 1-25 for use in inhibiting, reducing, and/or diminishing cancer stem cell survival and/or proliferation, self-renewal in a mammal by inhibiting or decreasing unwanted activity of CSCPKs.

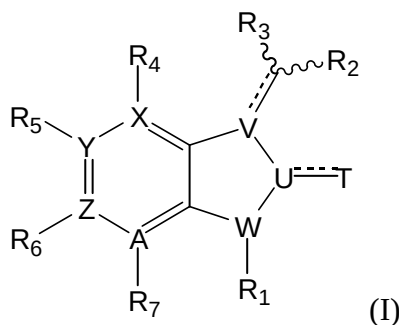
31. A method of inhibiting cancer stem cell, or stromal cell signaling by targeting CSCPKs, comprising contacting said CSCPKs with the compound of any one of Claims 1-25, or a pharmaceutically- acceptable salt, ester or pro-drug thereof.

32. The compound of any one of Claims 1-25, or a pharmaceutically- acceptable salt, ester or pro-drug thereof, for use in the treatment of cancer.

33. A method of modulating the catalytic activity of a protein kinase, comprising contacting said protein kinase with the compound of any one of Claims 1-25, or a pharmaceutically- acceptable salt, ester or pro-drug thereof.

What is claimed is:

1. A compound of Formula I,



or an enantiomer, diastereomer, tautomer, or pharmaceutically acceptable salt or solvate thereof, wherein:

R₁ is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a, SR_a, S(=O)₂R_e, S(=O)₂OR_e, C(=O)OR_d, C(=O)R_a, or C(=O)NR_bR_c;

R₂ is monocyclic or bicyclic heterocycle or substituted heterocycle, aryl or substituted aryl;

R₃ is hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, halogen, -OR_a, -C(O)R_a, -C(O)OR_a, -NR_aR_b, S(O)₂NR_aR_b;

R₄, R₅, R₆, and R₇ are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a, SR_a, S(=O)R_e, S(=O)₂R_e, P(=O)₂R_e, S(=O)₂OR_e, P(=O)₂OR_e, NR_bR_c, NR_bS(=O)₂R_e, NR_bP(=O)₂R_e, S(=O)₂NR_bR_c, P(=O)₂NR_bR_c, C(=O)OR_e, C(=O)R_a, C(=O)NR_bR_c, OC(=O)R_a, OC(=O)NR_bR_c, NR_bC(=O)OR_e, NR_dC(=O)NR_bR_c, NR_dS(=O)₂NR_bR_c, NR_dP(=O)₂NR_bR_c, NR_bC(=O)R_a, or NR_bP(=O)₂R_e;

T is O, S or R_a;

U, V, and W are each independently a carbon or N; and

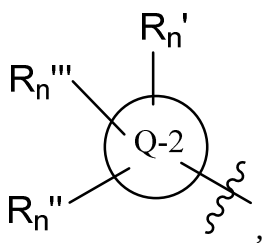
X, Y, Z, and A are each independently a carbon or N,

wherein the ring in which X, Y, Z, and A exist is aromatic and one of X, Y, Z, and A is N;

with the provision that one of R₄, R₅, R₆, and R₇ is substituted heterocycle or substituted aryl, and R₄, R₅, R₆, or R₇ is absent if X, Y, Z, or A, respectively, is a heteroatom;

wherein

substituted heterocycle and substituted aryl in R₄, R₅, R₆, and R₇ is the following group:



wherein:

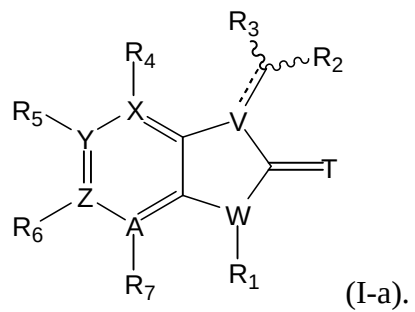
Q-2 is heterocycle or aryl;

R_n', R_n'' and R_n''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, OR_a, SR_a, C(=O)R_a, C(=O)OR_a, NH₂, S(O)₂NH₂, heterocycle or substituted heterocycle, or aryl or substituted aryl; R_a is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl;

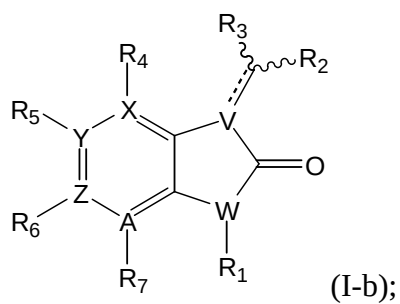
R_b, R_c and R_d are each independently hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, or aryl or substituted aryl, or said R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle; and

R_e is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl.

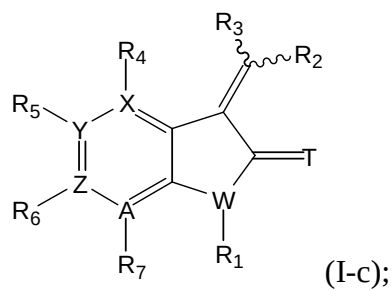
2. The compound of Claim 1, wherein T is O or S,



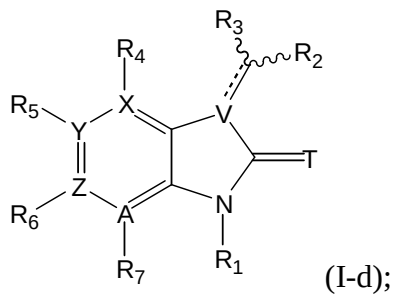
3. The compound of Claim 2,
(i) wherein T is O,



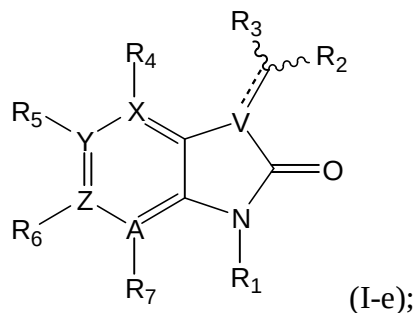
- (ii) wherein V is carbon,



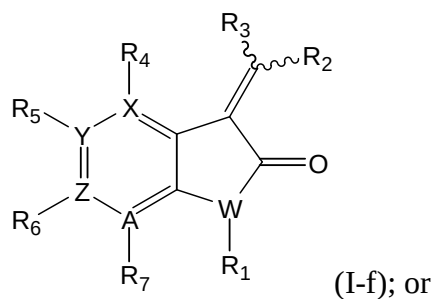
- (iii) wherein W is N,



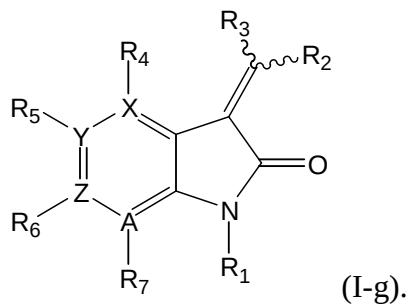
- (iv) wherein T is O and W is N,



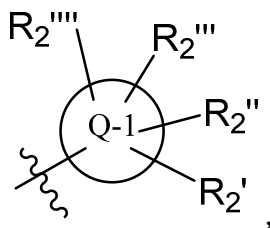
(v) wherein T is O and V is carbon,



(vi) wherein U is carbon, V is carbon, W is N, and T is O,



4. The compound of any one of Claims 1 to 3, wherein R₂ is



wherein

Q-1 is heterocycle or aryl selected from the group consisting of pyrrole, furan, thiophene, pyridine, pyrimidine, pyrazine, pyridazine, imidazole, indole, pyrrolopyridinone, pyridone, pyrrolidine, pyridinone, piperidine, and pyrroloazepinone; and

R_2' , R_2'' , R_2''' , and R_2'''' are each independently absent, hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$.

5. The compound of Claim 4, wherein R_2' , R_2'' , R_2''' , and R_2'''' are independently absent, hydrogen, alkyl, substituted alkyl, substituted heterocycle, substituted aryl, $C(=O)OR_e$, or $C(=O)NR_bR_c$,

wherein

R_b and R_c are independently hydrogen, alkyl, substituted alkyl, substituted heterocycle, or said R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle, and
 R_e is hydrogen.

6. The compound of Claim 5, wherein one of R_2' , R_2'' , R_2''' , and R_2'''' is $C(=O)NR_bR_c$,
wherein

R_b is hydrogen, and

R_c is alkyl substituted with $NR_{bn}R_{cn}$, or

wherein R_{bn} and R_{cn} are alkyl, or said R_{bn} and R_{cn} together with the N to which they are bonded optionally form a substituted heterocycle,

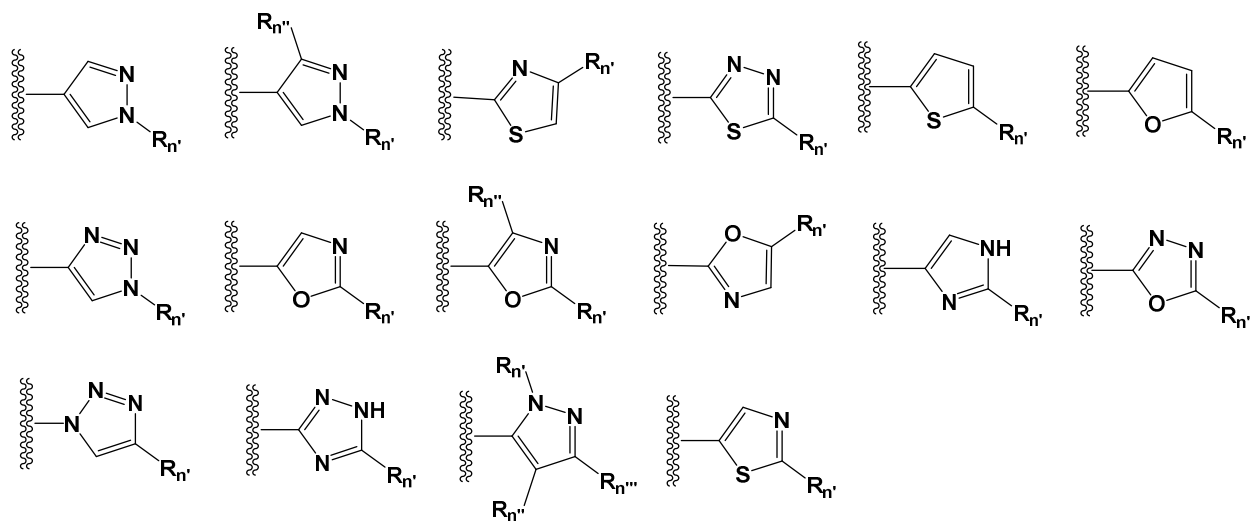
R_b and R_c together with the N to which they are bonded optionally form a substituted heterocycle,

two of R_2' , R_2'' , R_2''' , and R_2'''' are independently alkyl, and
the other is hydrogen.

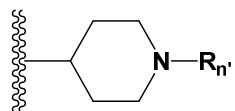
7. The compound of Claim 5, wherein one of R_2' , R_2'' , R_2''' , and R_2'''' is $C(=O)NR_bR_c$,
wherein NR_bR_c is 2-(di-ethyl amino) ethyl, amino, 2-pyrrolidino ethyl amino, 4-methyl piperazinyl, or morpholino.

8. The compound of Claim 4, wherein Q-1 is pyrrole, one of R_2' , R_2'' , R_2''' , and R_2'''' is absent, two of R_2' , R_2'' , R_2''' , and R_2'''' are alkyl (e.g., methyl), and one of R_2' , R_2'' , R_2''' , and R_2'''' is $C(=O)NR_bR_c$.

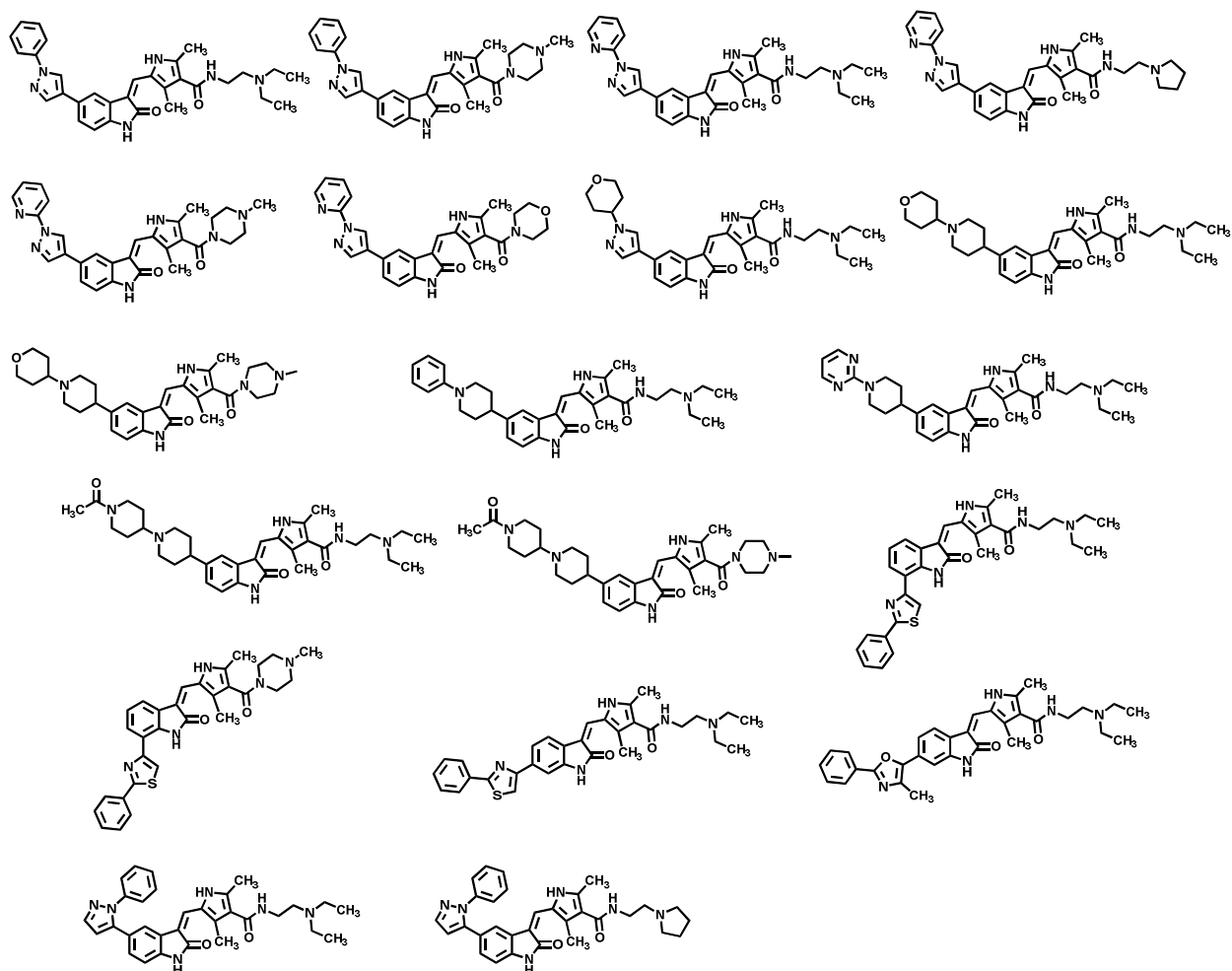
9. The compound of Claim 8, wherein
 R_b is hydrogen, and
 R_c is alkyl substituted with $NR_{bn}R_{cn}$,
wherein R_{bn} and R_{cn} are alkyl, or said R_{bn} and R_{cn} together with the N to which they are bonded optionally form a substituted heterocycle, and wherein said heterocycle is piperidine, or morpholine.
10. The compound of Claim 8, wherein NR_bR_c is 2-(di-ethyl amino) ethyl, amino, or 2-pyrrolidino ethyl amino.
11. The compound of Claim 8, wherein R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle.
12. The compound of Claim 11, wherein NR_bR_c is 4-methyl piperazinyl, or morpholino.
13. The compound of any one of Claims 1 to 12, wherein Q-2 is selected from the group consisting of pyrrole, furan, thiophene, imidazole, pyrazole, oxazole, isoxazole, thiazole, isothiazole, triazole, thiadiazole, oxadiazole, pyrrolidine, piperidine, azepane, tetrahydro furan, oxane, oxepane, indole, indolinone, indazole, benzothiazole, quinoline, quinazoline, quinoxaline, imidazopyridine, imidazopyridazine, pyrazolopyridine, pyrazolopyrimidine, phthalazinone, and phenyl.
14. The compound of Claim 13, wherein
 R_n is pyrrolidinyl, piperidinyl, azepanyl, tetrahydrofuranyl, oxanyl, oxepanyl, pyranyl, phenyl, thiophenyl, pyrazinyl, pyrimidinyl, pyridazinyl, or pyridyl; and
wherein said piperidinyl, pyranyl, phenyl, thiophenyl, pyrazinyl, pyrimidinyl, pyridazinyl, and pyridyl are optionally substituted with halogen, cyano, nitro, alkyl or substituted alkyl, OR_a , NR_bR_c , $C(=O)OR_e$, $C(=O)R_a$, or $C(=O)NR_bR_c$,
wherein R_a is hydrogen, or alkyl or substituted alkyl, R_b and R_c are independently hydrogen, or alkyl or substituted alkyl, and R_e is alkyl or substituted alkyl,
 R_n and R_n are independently hydrogen, or alkyl or substituted alkyl.
15. The compound of Claim 13, wherein Q-2 is selected from the group consisting of the following group:



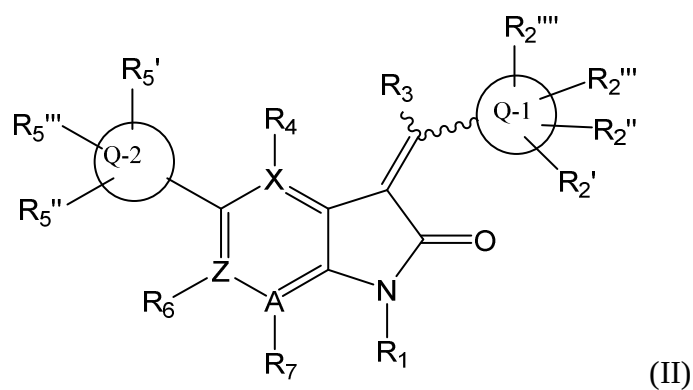
16. The compound of Claim 14, wherein Q-2 is selected from the group consisting of the following group:



17. A compound selected from the group consisting of:



18. A compound of Formula II:



or an enantiomer, diastereomer, tautomer, or pharmaceutically acceptable salt or solvate thereof, wherein

R_1 is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted

cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

R_3 is hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, halogen, $-OR_a$, $-C(=O)R_a$, $-C(=O)OR_a$, $-NR_aR_b$, $S(O)_2NR_aR_b$;

R_4 , R_6 , and R_7 are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)R_e$, $S(=O)_2R_e$, $P(=O)_2R_e$, $S(=O)_2OR_e$, $P(=O)_2OR_e$, NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$;

X , Z , and A are each independently carbon, with the proviso that the ring in which X , Z , and A exist is aromatic;

$Q-1$ is heterocycle or aryl;

$Q-2$ is selected from the group consisting of pyrrole, furan, thiophene, imidazole, pyrazole, oxazole, isoxazole, isothiazole, triazole, thiadiazole, oxadiazole, pyrrolidine, piperidine, azepane, tetrahydrofuran, oxane, oxepane, indole, indolinone, indazole, benzothiazole, quinoline, quinazoline, quinoxaline, imidazopyridine, imidazopyridazine, pyrazolopyridine, pyrazolopyrimidine, and phthalazinone;

R_2' , R_2'' , R_2''' , and R_2'''' are each independently absent, hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

R_5' , R_5'' and R_5''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, OR_a , SR_a , $C(=O)R_a$, $C(=O)OR_a$, NH_2 , $S(O)_2NH_2$, heterocycle or substituted heterocycle, or aryl or substituted aryl;

wherein

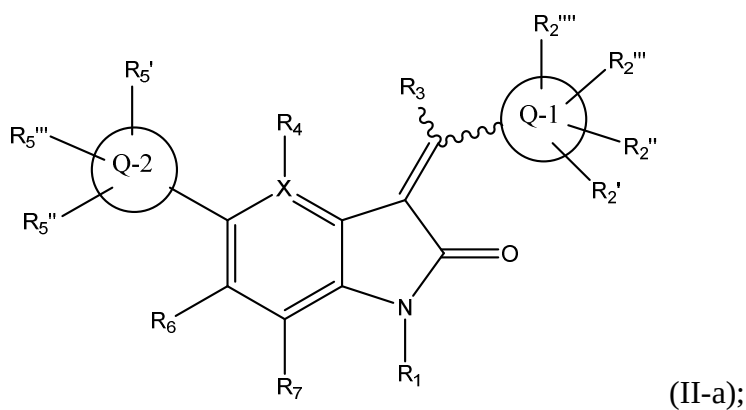
R_a is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl;

R_b, R_c and R_d are independently hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, or aryl or substituted aryl, or said R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle; and

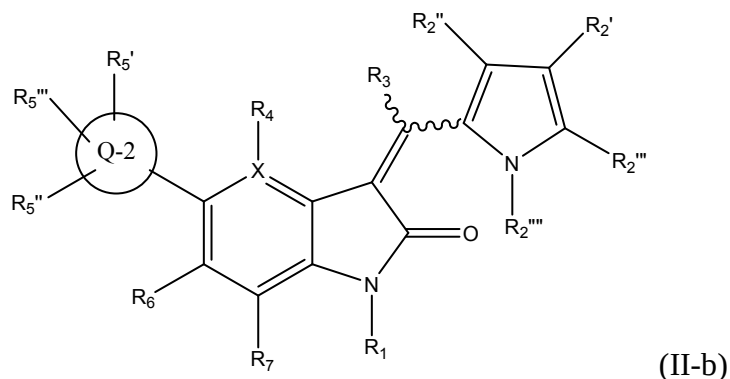
R_e is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl.

19. The compound of Claim 18, wherein the compound has:

(i) the formula,



(ii) the formula,

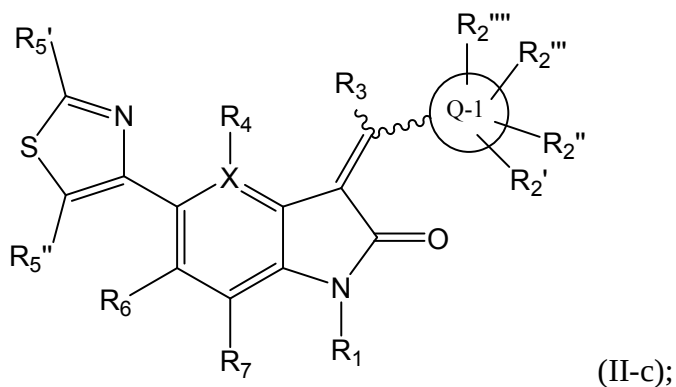


wherein

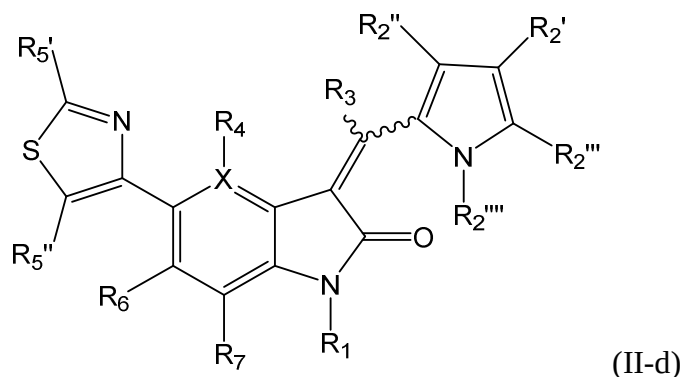
R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

R_2'''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(iii) the formula,



(iv) the formula,

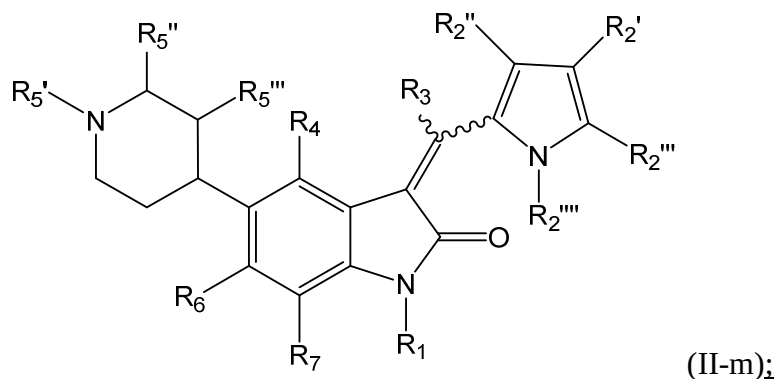


wherein

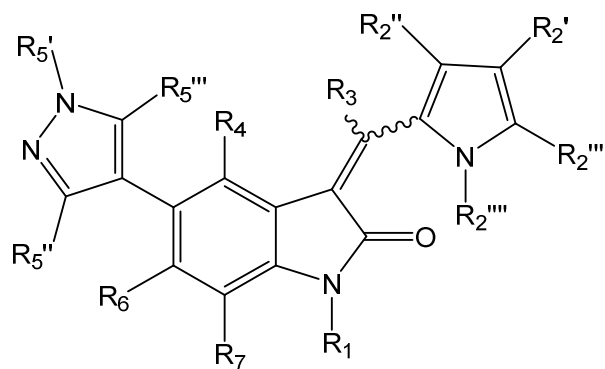
R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

R_2'''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(v) the formula,

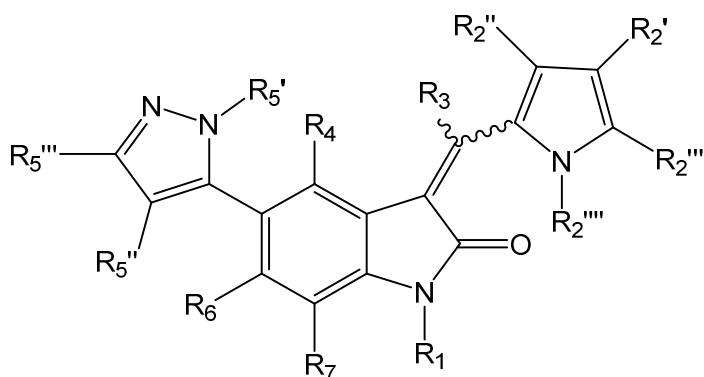


(vi) the formula,



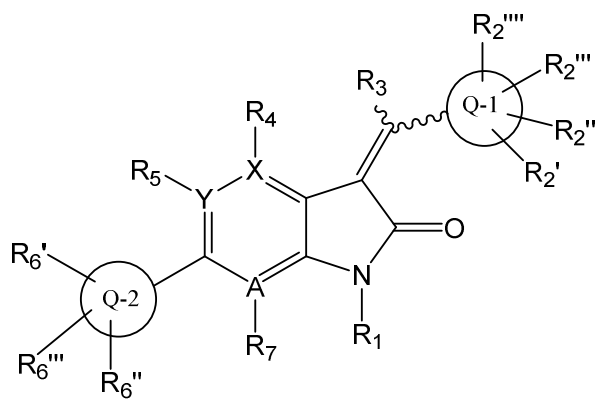
(II-n); or

(vii) the formula,



(II-o).

20. A compound of Formula III,



(III)

or an enantiomer, diastereomer, tautomer, or pharmaceutically acceptable salt or solvate thereof, wherein:

R_1 is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

R₃ is hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, halogen, -OR_a, -C(O)R_a, -C(O)OR_a, -NR_aR_b, or S(O)₂NR_aR_b;

R₄, R₅, and R₇ are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a, SR_a, S(=O)R_e, S(=O)₂R_e, P(=O)₂R_e, S(=O)₂OR_e, P(=O)₂OR_e, NR_bR_c, NR_bS(=O)₂R_e, NR_bP(=O)₂R_e, S(=O)₂NR_bR_c, P(=O)₂NR_bR_c, C(=O)OR_e, C(=O)R_a, C(=O)NR_bR_c, OC(=O)R_a, OC(=O)NR_bR_c, NR_bC(=O)OR_e, NR_dC(=O)NR_bR_c, NR_dS(=O)₂NR_bR_c, NR_dP(=O)₂NR_bR_c, NR_bC(=O)R_a, or NR_bP(=O)₂R_e;

X, Y, and A are each independently carbon, with the proviso that the ring in which X, Y, and A exist is aromatic;

Q-1 is heterocycle or aryl;

Q-2 is selected from the group consisting of pyrrole, furan, thiophene, imidazole, pyrazole, oxazole, isoxazole, thiazole, isothiazole, triazole, thiadiazole, oxadiazole, pyrrolidine, piperidine, azepane, tetrahydrofuran, oxane, oxepane, indole, indolinone, indazole, benzothiazole, quinoline, quinazoline, quinoxaline, imidazopyridine, imidazopyridazine, pyrazolopyridine, pyrazolopyrimidine, and phthalazinone;

R₂', R₂", R₂''' and R₂'''' are each independently absent, hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a, NR_bR_c, NR_bS(=O)₂R_e, NR_bP(=O)₂R_e, S(=O)₂NR_bR_c, P(=O)₂NR_bR_c, C(=O)OR_e, C(=O)R_a, C(=O)NR_bR_c, OC(=O)R_a, OC(=O)NR_bR_c, NR_bC(=O)OR_e, NR_dC(=O)NR_bR_c, NR_dS(=O)₂NR_bR_c, NR_dP(=O)₂NR_bR_c, NR_bC(=O)R_a, or NR_bP(=O)₂R_e; and

R₆', R₆" and R₆''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, OR_a, SR_a, C(=O)R_a, C(=O)OR_a, NH₂, S(O)₂NH₂, heterocycle or substituted heterocycle, or aryl or substituted aryl;

wherein R_a is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl

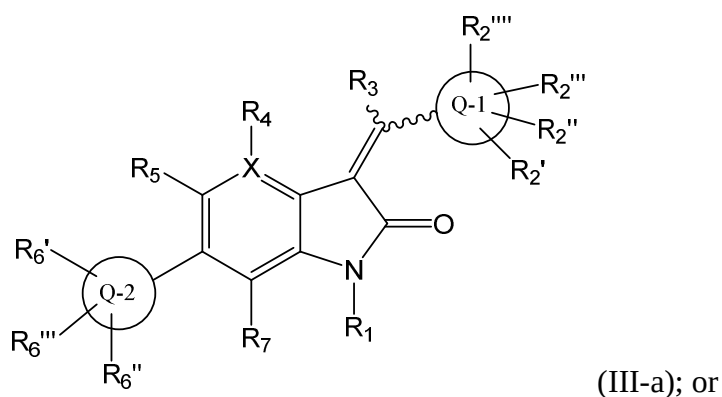
or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl;

R_b, R_c and R_d are each independently hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, or aryl or substituted aryl, or said R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle; and

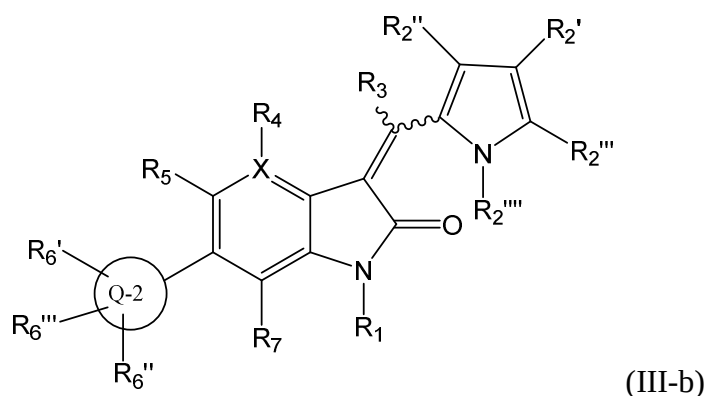
R_e is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl.

21. The compound of Claim 20, wherein the compound

(i) has the formula of

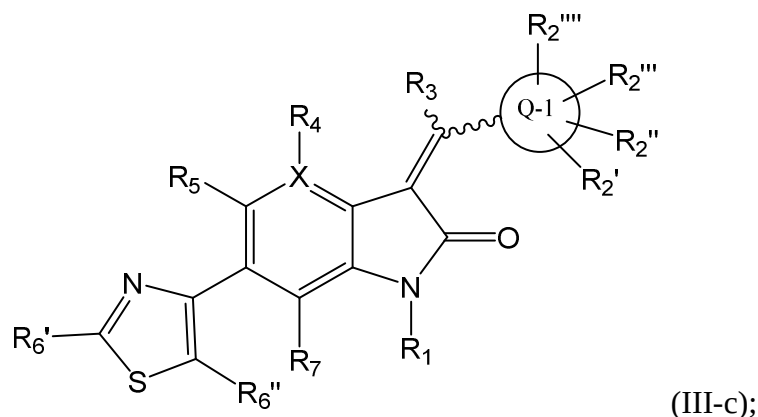


(ii) has the formula of

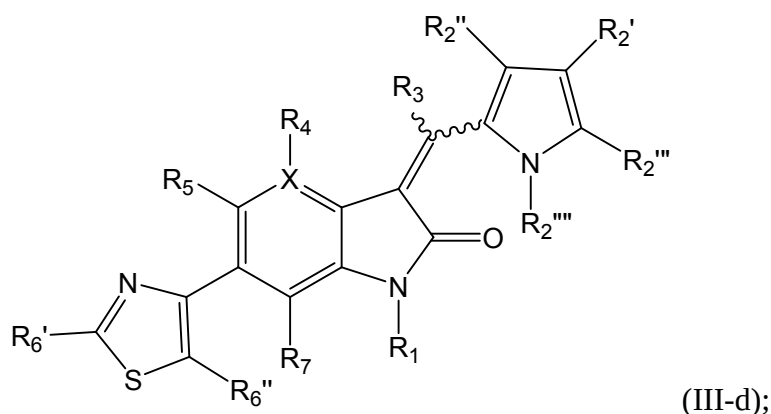


wherein

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)R_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and R_2'''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c[[,]]_i$; (iii) has the formula of



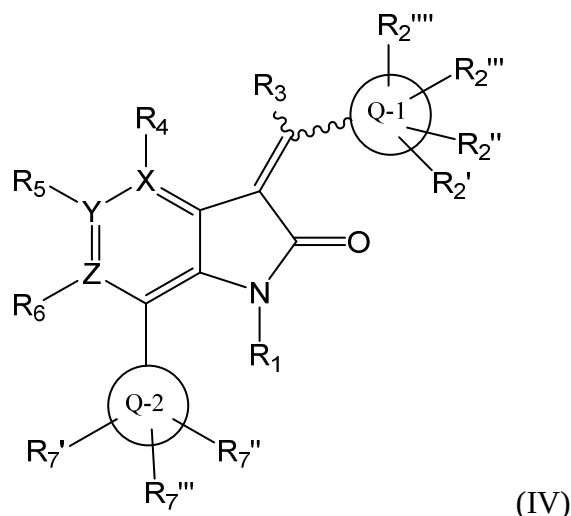
(iv) has the formula of



wherein

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and R_2'''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$.

22. A compound of Formula IV,



or an enantiomer, diastereomer, tautomer, or pharmaceutically acceptable salt or solvate thereof, wherein:

R_1 is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

R_3 is hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, halogen, $-OR_a$, $-C(O)R_a$, $-C(O)OR_a$, $-NR_aR_b$, or $S(O)_2NR_aR_b$;

R₄, R₅, and R₆ are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a, SR_a, S(=O)R_e, S(=O)₂R_e, P(=O)₂R_e, S(=O)₂OR_e, P(=O)₂OR_e, NR_bR_c, NR_bS(=O)₂R_e, NR_bP(=O)₂R_e, S(=O)₂NR_bR_c, P(=O)₂NR_bR_c, C(=O)OR_e, C(=O)R_a, C(=O)NR_bR_c, OC(=O)R_a, OC(=O)NR_bR_c, NR_bC(=O)OR_e, NR_dC(=O)NR_bR_c, NR_dS(=O)₂NR_bR_c, NR_dP(=O)₂NR_bR_c, NR_bC(=O)R_a, or NR_bP(=O)₂R_e;

X, Y, and Z each independently is carbon, with the proviso that the ring in which X, Y, and Z exist is aromatic;

Q-1 and Q-2 are each independently is heterocycle or aryl;

R₂', R₂", R₂''' and R₂'''' are each independently absent, hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a, NR_bR_c, NR_bS(=O)₂R_e, NR_bP(=O)₂R_e, S(=O)₂NR_bR_c, P(=O)₂NR_bR_c, C(=O)OR_e, C(=O)R_a, C(=O)NR_bR_c, OC(=O)R_a, OC(=O)NR_bR_c, NR_bC(=O)OR_e, NR_dC(=O)NR_bR_c, NR_dS(=O)₂NR_bR_c, NR_dP(=O)₂NR_bR_c, NR_bC(=O)R_a, or NR_bP(=O)₂R_e, and

R₇', R₇" and R₇''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF₃, alkyl or substituted alkyl, OR_a, SR_a, C(=O)R_a, C(=O)OR_a, NH₂, S(O)₂NH₂, heterocycle or substituted heterocycle, or aryl or substituted aryl;

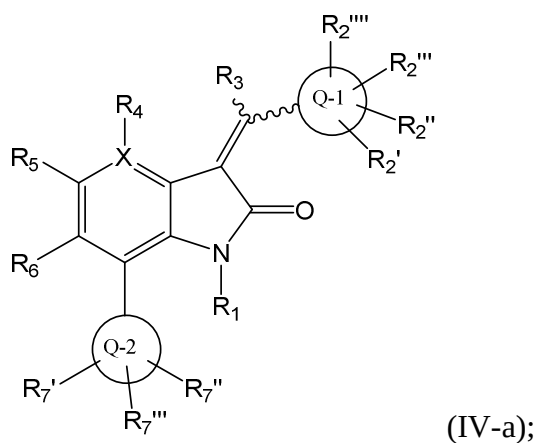
wherein R_a is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl;

R_b, R_c and R_d are each independently hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, or aryl or substituted aryl, or said R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle; and

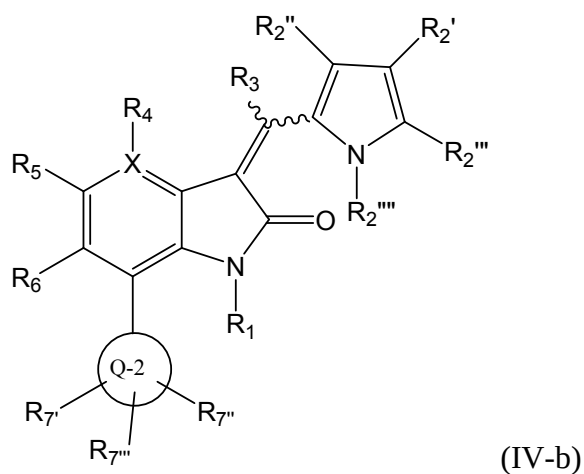
R_e is alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or

substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl.

23. The compound of Claim 22, wherein the compound
(i) has the formula:



- (ii) has the formula:



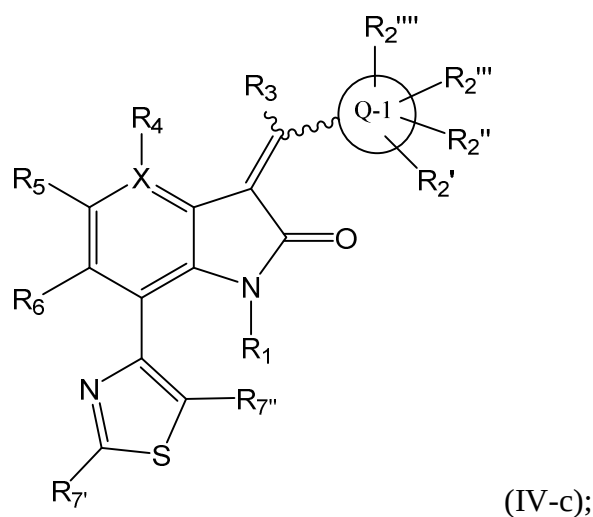
wherein

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $\text{NR}_b\text{S}(=\text{O})_2\text{R}_e$, $\text{NR}_b\text{P}(=\text{O})_2\text{R}_e$, $\text{S}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{P}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{C}(=\text{O})\text{OR}_e$, $\text{C}(=\text{O})\text{R}_a$, $\text{C}(=\text{O})\text{NR}_b\text{R}_c$,

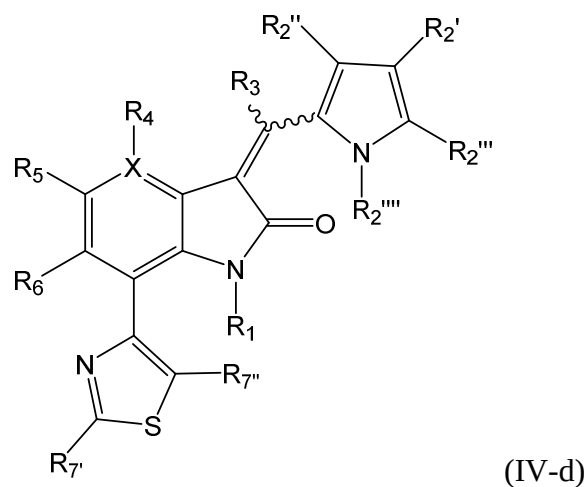
$\text{OC}(=\text{O})\text{R}_a$, $\text{OC}(=\text{O})\text{NR}_b\text{R}_c$, $\text{NR}_b\text{C}(=\text{O})\text{OR}_e$, $\text{NR}_d\text{C}(=\text{O})\text{NR}_b\text{R}_c$, $\text{NR}_d\text{S}(=\text{O})_2\text{NR}_b\text{R}_c$,
 $\text{NR}_d\text{P}(=\text{O})_2\text{NR}_b\text{R}_c$, $\text{NR}_b\text{C}(=\text{O})\text{R}_a$, or $\text{NR}_b\text{P}(=\text{O})_2\text{R}_e$, and

R_2'''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $\text{S}(=\text{O})_2\text{R}_e$, $\text{S}(=\text{O})_2\text{OR}_e$, $\text{C}(=\text{O})\text{OR}_d$, $\text{C}(=\text{O})\text{R}_a$, or $\text{C}(=\text{O})\text{NR}_b\text{R}_c$;

(iii) has the formula:



(iv) has the formula:



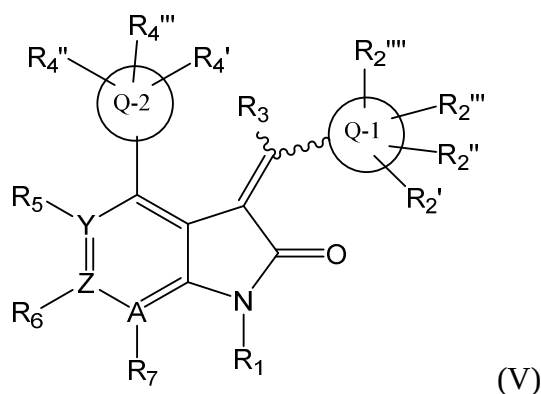
wherein

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or

substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$.

24. A compound of Formula V,



or an enantiomer, diastereomer, tautomer, or pharmaceutically acceptable salt or solvate thereof, wherein:

R_1 is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

R_3 is hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, halogen, $-OR_a$, $-C(O)R_a$, $-C(O)OR_a$, $-NR_aR_b$, or $S(O)_2NR_aR_b$;

R_5 , R_6 , and R_7 are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)R_e$,

$S(=O)_2R_e$, $P(=O)_2R_e$, $S(=O)_2OR_e$, $P(=O)_2OR_e$, NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$,
 $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$,
 $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$,
 $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$;

Y, Z and A each independently is carbon, with the proviso that the ring in which Y, Z and A exist is aromatic;

Q-1 is heterocycle or aryl;

Q-2 is selected from the group consisting of pyrrole, furan, thiophene, imidazole, pyrazole, oxazole, isoxazole, thiazole, isothiazole, triazole, thiadiazole, oxadiazole, pyrrolidine, piperidine, azepane, tetrahydrofuran, oxane, oxepane, indolinone, indazole, benzothiazole, quinoline, quinazoline, quinoxaline, imidazopyridine, imidazopyridazine, pyrazolopyridine, pyrazolopyrimidine, and phthalazinone;

R_2' , R_2'' , R_2''' and R_2'''' are each independently absent, hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$; and

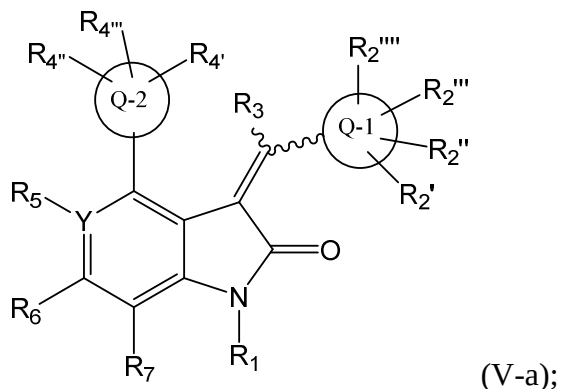
R_4' , R_4'' and R_4''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, OR_a , SR_a , $C(=O)R_a$, $C(=O)OR_a$, NH_2 , $S(O)_2NH_2$, heterocycle or substituted heterocycle, or aryl or substituted aryl;

wherein R_a is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl;

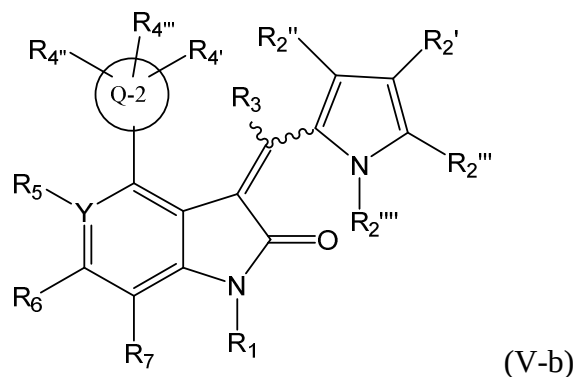
R_b , R_c and R_d are each independently hydrogen, alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, or aryl or substituted aryl, or said R_b and R_c together with the N to which they are bonded optionally form a heterocycle or substituted heterocycle; and

R_e is alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, or aryl or substituted aryl.

25. The compound of Claim 24, wherein the compound
(i) has the formula of



- (ii) has the formula of

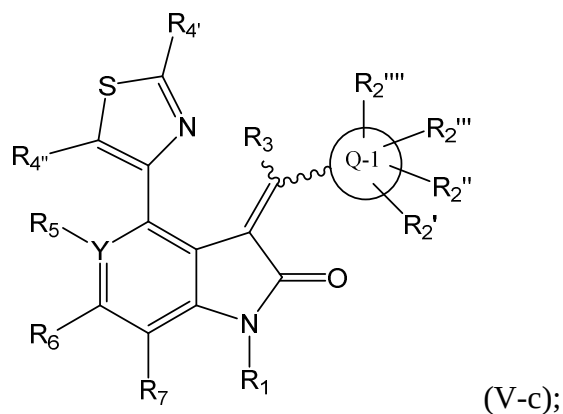


wherein

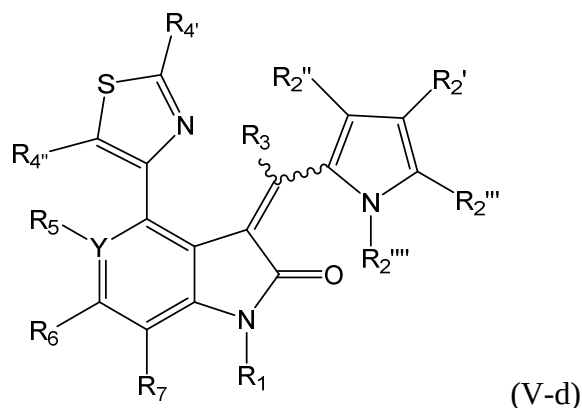
R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

R_2'''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$;

(iii) has the formula of



(iv) has the formula of



wherein

R_2' , R_2'' , and R_2''' are each independently hydrogen, halogen, cyano, nitro, trihalomethyl, OCF_3 , alkyl or substituted alkyl, cycloalkyl or substituted cycloalkyl, heterocycle or substituted heterocycle, aryl or substituted aryl, or OR_a , NR_bR_c , $NR_bS(=O)_2R_e$, $NR_bP(=O)_2R_e$, $S(=O)_2NR_bR_c$, $P(=O)_2NR_bR_c$, $C(=O)OR_e$, $C(=O)R_a$, $C(=O)NR_bR_c$, $OC(=O)R_a$, $OC(=O)NR_bR_c$, $NR_bC(=O)OR_e$, $NR_dC(=O)NR_bR_c$, $NR_dS(=O)_2NR_bR_c$, $NR_dP(=O)_2NR_bR_c$, $NR_bC(=O)R_a$, or $NR_bP(=O)_2R_e$, and

R_2''' is hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, cycloalkenyl or substituted cycloalkenyl, heterocycle or substituted heterocycle, aryl or substituted aryl, OR_a , SR_a , $S(=O)_2R_e$, $S(=O)_2OR_e$, $C(=O)OR_d$, $C(=O)R_a$, or $C(=O)NR_bR_c$.

26. A pharmaceutical composition comprising a compound of any one of Claims 1-25, or a pharmaceutically acceptable salt or ester thereof, and a pharmaceutically acceptable excipient, carrier, or diluent.
27. The compound of any one of Claims 1-25 for use in the treatment or prevention of cancer, or a related disorder or condition thereof in a mammal.
28. The use of the compound of any one of Claims 1-25 in the manufacture of a medicament for the treatment, prevention, amelioration of a protein kinase related disorder in a mammal.
29. The use of Claim 28, wherein the protein kinase related disorder is a cancer such as lung cancer, bladder cancer, head and neck cancer, melanoma, ovarian cancer, prostate cancer, breast cancer, small-cell lung cancer, glioma, colorectal cancer, non-small cell lung cancer, genitourinary cancer, pancreatic cancer, thyroid cancer, Hodgkin's lymphoma, non-Hodgkin's lymphoma, gastrointestinal cancer, gastric cancer, hepatoma, gastrointestinal stromal tumor, squamous cell carcinoma, renal cell carcinoma, astrocytoma, Kaposi's sarcoma, chronic myelogenous leukemia, acute myelogenous leukemia, myeloproliferative disorders, and glioblastoma.
30. The use of the compound of any one of Claims 1-25 in the manufacture of a medicament for inhibiting, reducing, and/or diminishing cancer stem cell survival and/or proliferation, self-renewal in a mammal by inhibiting or decreasing unwanted activity of CSCPKs.
31. The use of the compound of any one of Claims 1-25 in the manufacture of a medicament for inhibiting cancer stem cell, or stromal cell signaling by targeting CSCPKs.
32. The use of the compound of any one of Claims 1-25 in the manufacture of a medicament for the treatment of cancer.
33. The use of the compound of any one of Claims 1-25 in the manufacture of a medicament for modulating the catalytic activity of a protein kinase.

34. The compound of any one of claims 18, 20, 22, and 24, wherein Q2 is selected from

