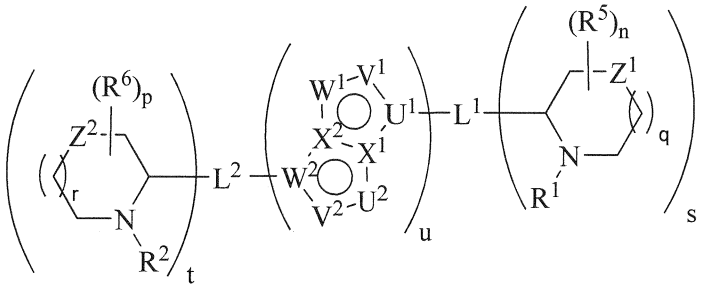
What is claimed is:

1. A compound of Formula IIIB:



(IIIB)

or a single enantiomer, a racemic mixture, a mixture of diastereomers, or an isotopic variant thereof; or a pharmaceutically acceptable salt or solvate thereof;

wherein:

U^1, W^2, X^1, and X^2 are each C;

U^2 and W^1 are each S;

V^1 and V^2 are each independently CR^{3a};

R^1 and R^2 are each independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) $-C(O)R^{1a}$, $-C(O)CH(NR^{1b}R^{1c})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)R^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)OR^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)NR^{1b}R^{1d})R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-P(O)(OR^{1a})R^{1d}$, $-CH_2P(O)(OR^{1a})R^{1d}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$;

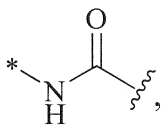
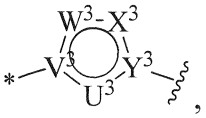
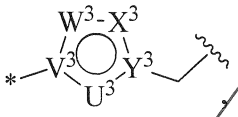
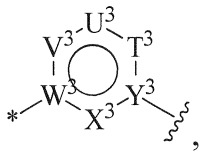
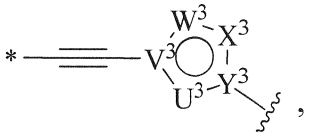
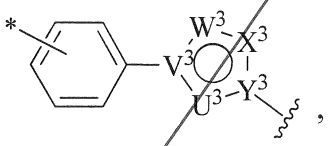
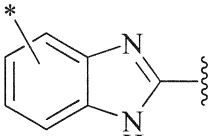
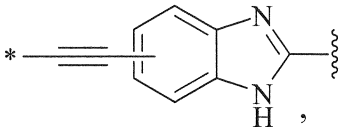
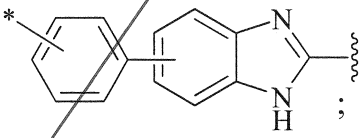
each R^{3a} is independently hydrogen or R^3;

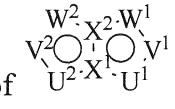
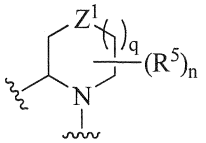
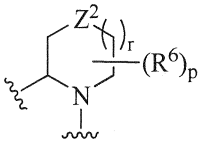
each R^3, R^5, and R^6 is independently (a) cyano, halo, or nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) $-C(O)R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-OR^{1a}$, $-OC(O)R^{1a}$, $-OC(O)OR^{1a}$, $-OC(O)NR^{1b}R^{1c}$, $-OC(=NR^{1a})NR^{1b}R^{1c}$, $-OS(O)R^{1a}$, $-OS(O)_2R^{1a}$, $-OS(O)NR^{1b}R^{1c}$, $-OS(O)_2NR^{1b}R^{1c}$, $-NR^{1b}R^{1c}$, $-NR^{1a}C(O)R^{1d}$, $-NR^{1a}C(O)OR^{1d}$, $-NR^{1a}C(O)NR^{1b}R^{1c}$, $-NR^{1a}C(=NR^{1d})NR^{1b}R^{1c}$, $-NR^{1a}S(O)R^{1d}$, $-NR^{1a}S(O)_2R^{1d}$, $-NR^{1a}S(O)NR^{1b}R^{1c}$, $-NR^{1a}S(O)_2NR^{1b}R^{1c}$, $-SR^{1a}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$; or

two R^5 or two R^6 that are attached to the same ring are linked together to form a bond, $-O-$, $-NR^7-$, $-S-$, C_{1-6} alkylene, C_{1-6} heteroalkylene, C_{2-6} alkenylene, or C_{2-6}

~~heteroalkenylene;~~

L^1 and L^2 are each independently selected from:

a bond, , , , , , , , , and ;

wherein each moiety is optionally substituted with one, two, three, or four R^3; the star (*) on each moiety represents the point of attachment thought which the moiety is connected to U^1 or W^2 of ; and the zigzag line () on each moiety represents the point of attachment through which the moiety is connected to  or ; and wherein T^3 is a bond, C, N, O, S, CR^{3a}, or NR^{3a}; U^3, V^3, W^3, and X^3 are each independently C, N, O, S, CR^{3a}, or NR^{3a}; and Y^3 is C or N;

Z^1 and Z^2 are each a bond;

each R^{1a}, R^{1b}, R^{1c}, and R^{1d} is independently hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or R^{1a} and R^{1c} together with the C and N atoms to which they are attached form heterocyclyl; or R^{1b} and R^{1c} together with the N atom to which they are attached form heterocyclyl;

n is an integer of 2, 3, 4, 5, 6, or 7;

p is an integer of 0, 1, 2, 3, 4, 5, 6, or 7;

q and r are each independently an integer of 1, 2, 3, or 4;

and

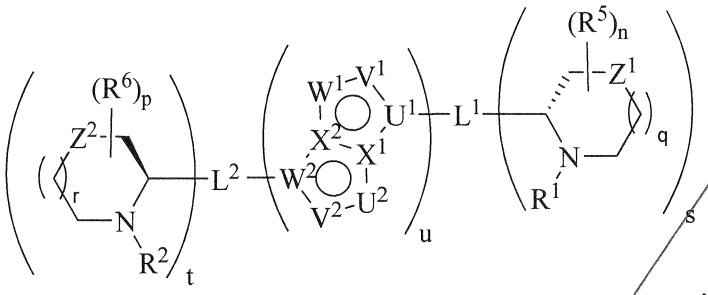
s, t, and u is an integer of 1;

wherein each alkyl, alkylene, heteroalkylene, alkenyl, alkenylene, heteroalkenylene, alkynyl, cycloalkyl, aryl, aralkyl, heteroaryl, and heterocyclyl is optionally substituted with one or more substituents Q, where each Q is independently selected from (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl, each of which is further optionally substituted with one or more substituents Q^a; and (c) $-C(O)R^a$, $-C(O)OR^a$, $-C(O)NR^bR^c$, $-C(NR^a)NR^bR^c$, $-OR^a$, $-OC(O)R^a$, $-OC(O)OR^a$, $-OC(O)NR^bR^c$, $-OC(=NR^a)NR^bR^c$, $-OS(O)R^a$, $-OS(O)_2R^a$, $-OS(O)NR^bR^c$, $-OS(O)_2NR^bR^c$, $-NR^bR^c$, $-NR^aC(O)R^d$, $-NR^aC(O)OR^d$, $-NR^aC(O)NR^bR^c$, $-NR^aC(=NR^d)NR^bR^c$, $-NR^aS(O)R^d$, $-NR^aS(O)_2R^d$, $-NR^aS(O)NR^bR^c$, $-NR^aS(O)_2NR^bR^c$, $-SR^a$, $-S(O)R^a$, $-S(O)_2R^a$, $-S(O)NR^bR^c$, and $-S(O)_2NR^bR^c$, wherein each R^a, R^b, R^c, and R^d is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q^a; or (iii) R^b and R^c together with the N atom to which they are attached form heterocyclyl, optionally substituted with one or more substituents Q^a;

wherein each Q^a is independently selected from the group consisting of (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl; and (c) $-C(O)R^e$, $-C(O)OR^e$, $-C(O)NR^fR^g$, $-C(NR^e)NR^fR^g$, $-OR^e$, $-OC(O)R^e$, $-OC(O)OR^e$, $-OC(O)NR^fR^g$, $-OC(=NR^e)NR^fR^g$, $-OS(O)R^e$, $-OS(O)_2R^e$, $-OS(O)NR^fR^g$, $-OS(O)_2NR^fR^g$, $-NR^fR^g$, $-NR^eC(O)R^h$, $-NR^eC(O)OR^f$, $-NR^eC(O)NR^fR^g$, $-NR^eC(=NR^h)NR^fR^g$, $-NR^eS(O)R^h$, $-NR^eS(O)_2R^h$, $-NR^eS(O)NR^fR^g$, $-NR^eS(O)_2NR^fR^g$, $-SR^e$, $-S(O)R^e$, $-S(O)_2R^e$, $-S(O)NR^fR^g$, and

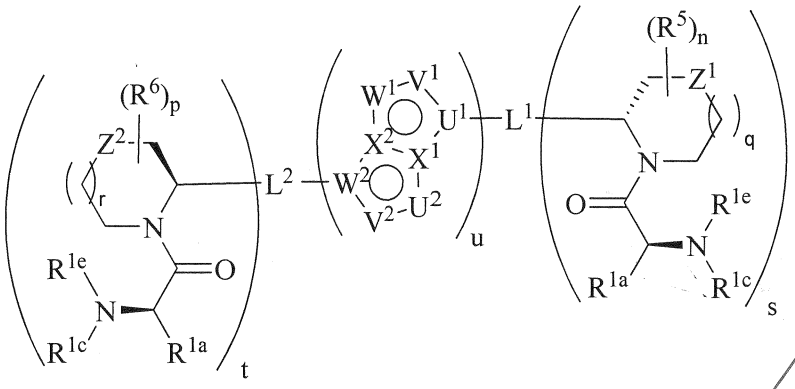
~~$S(O)_2NR^fR^g$; wherein each R^e, R^f, R^g, and R^h is independently (i) hydrogen; (ii) C_{1-6} alkyl,~~ C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (iii) R^f and R^g together with the N atom to which they are attached form heterocyclyl.

2. The compound of claim 1, having the structure of Formula IIIBa:



(IIIBa)

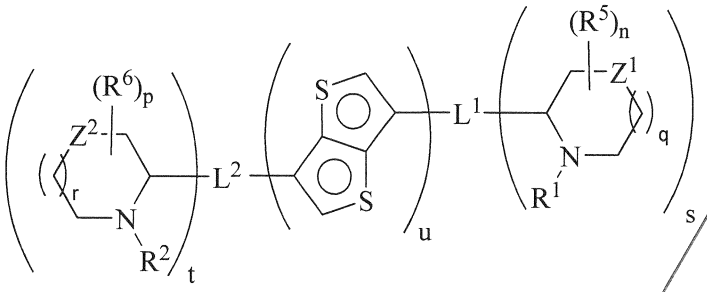
~~3. The compound of claim 2, having the structure of Formula IIIBd:~~



(IIIBd)

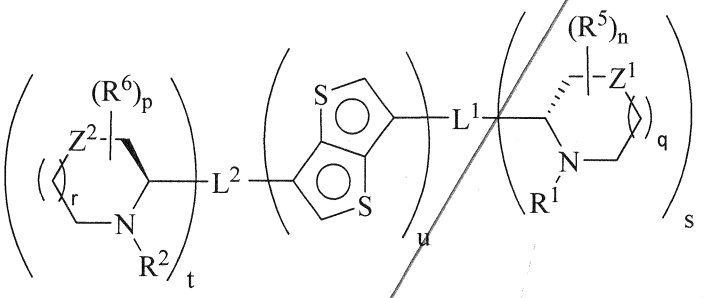
wherein each R^{1e} is independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q; or (c) $-C(O)R^{1b}$, $-C(O)OR^{1b}$, or $-C(O)NR^{1b}R^{1d}$.

4. ~~The compound of claim 1, having the structure of Formula IC:~~



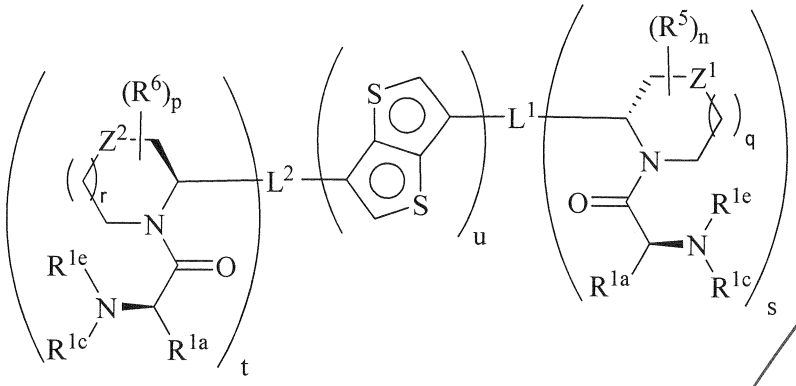
(IC)

5. The compound of claim 4, having the structure of Formula ICa:



(ICa)

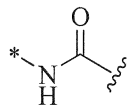
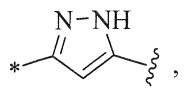
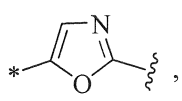
6. The compound of claim 5, having the structure of Formula ICd:

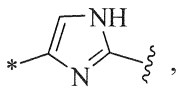
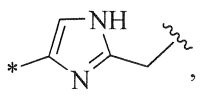
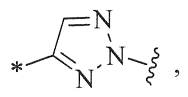
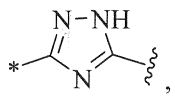


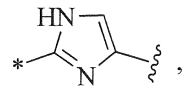
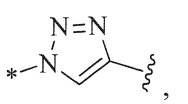
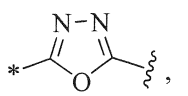
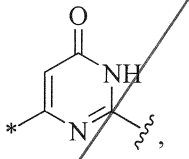
(ICd)

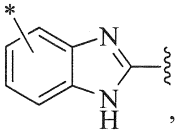
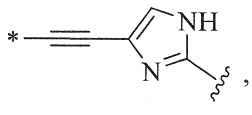
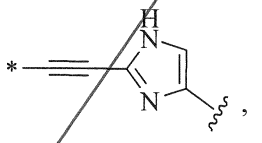
wherein each R^{1e} is independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q; or (c) $-C(O)R^{1b}$, $-C(O)OR^{1b}$, or $-C(O)NR^{1b}R^{1d}$.

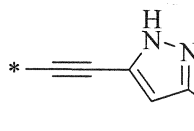
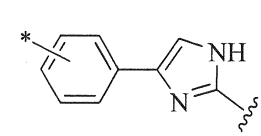
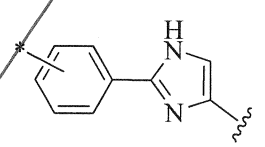
7. The compound of claim 1, wherein L^1 and L^2 are each independently selected from the group consisting of:

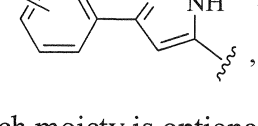
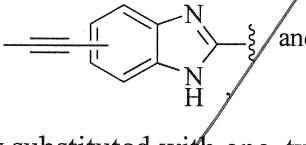
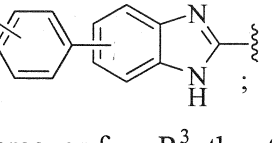
a bond,  ,  ,  ,

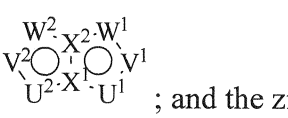
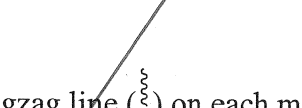
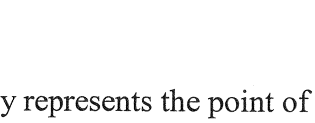
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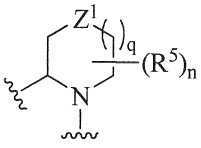
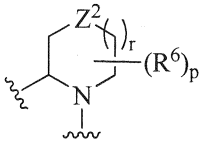
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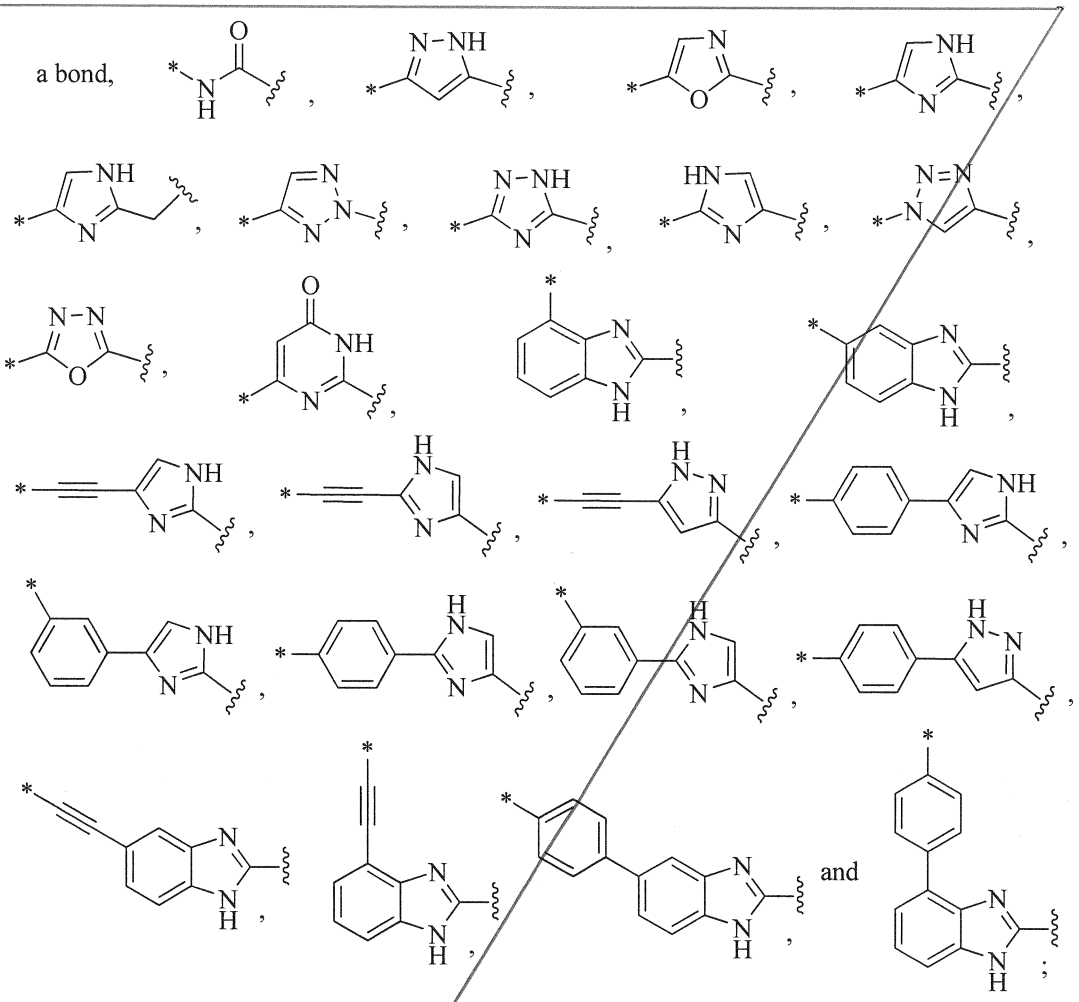
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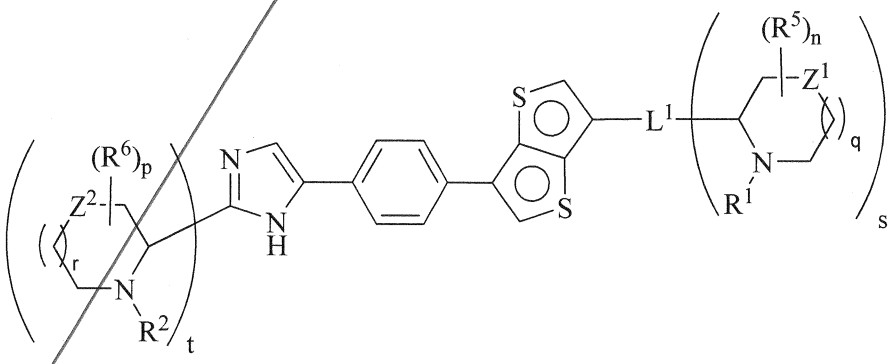
wherein each moiety is optionally substituted with one, two, three, or four R^3; the star (*) on each moiety represents the point of attachment through which the moiety is connected to U^1 or W^2 of ; and the zigzag line () on each moiety represents the point of attachment through which the moiety is connected to  or  .

8. The compound of claim 7, wherein L^1 and L^2 are each independently selected from the group consisting of:

a bond, 

wherein each moiety is optionally substituted with one, two, three, or four R^3.

9. A compound of Formula IIC:



(IIC)

or a single enantiomer, a racemic mixture, a mixture of diastereomers, or an isotopic variant thereof; or a pharmaceutically acceptable salt or solvate thereof;

wherein:

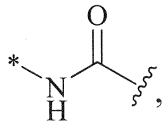
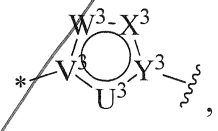
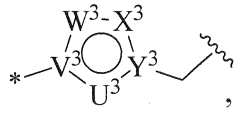
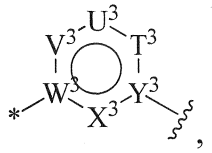
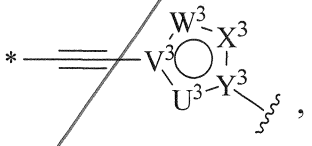
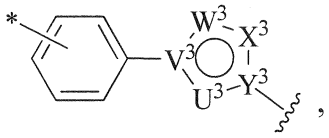
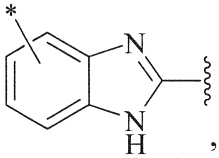
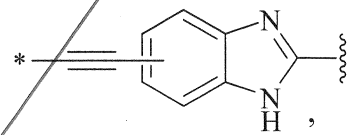
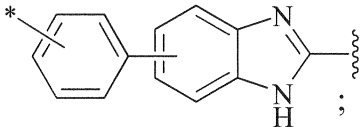
R^1 and R^2 are each independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) $-C(O)R^{1a}$,

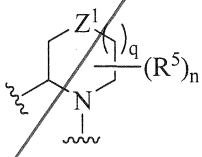
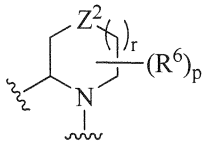
$-C(O)CH(NR^{1b}R^{1c})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)R^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)OR^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)NR^{1b}R^{1d})R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-P(O)(OR^{1a})R^{1d}$, $-CH_2P(O)(OR^{1a})R^{1d}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$;

each R^3, R^5, and R^6 is independently (a) cyano, halo, or nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) $-C(O)R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-OR^{1a}$, $-OC(O)R^{1a}$, $-OC(O)OR^{1a}$, $-OC(O)NR^{1b}R^{1c}$, $-OC(=NR^{1a})NR^{1b}R^{1c}$, $-OS(O)R^{1a}$, $-OS(O)_2R^{1a}$, $-OS(O)NR^{1b}R^{1c}$, $-OS(O)_2NR^{1b}R^{1c}$, $-NR^{1b}R^{1c}$, $-NR^{1a}C(O)R^{1d}$, $-NR^{1a}C(O)OR^{1d}$, $-NR^{1a}C(O)NR^{1b}R^{1c}$, $-NR^{1a}C(=NR^{1d})NR^{1b}R^{1c}$, $-NR^{1a}S(O)R^{1d}$, $-NR^{1a}S(O)_2R^{1d}$, $-NR^{1a}S(O)NR^{1b}R^{1c}$, $-NR^{1a}S(O)_2NR^{1b}R^{1c}$, $-SR^{1a}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$; or

two R^5 or two R^6 that are attached to the same ring are linked together to form a bond, $-O-$, $-NR^7-$, $-S-$, C_{1-6} alkylene, C_{1-6} heteroalkylene, C_{2-6} alkenylene, or C_{2-6} heteroalkenylene;

L^1 is independently selected from:

a bond, , , , , , , , , and ;

wherein each moiety is optionally substituted with one, two, three, or four R^3; the star (*) on each moiety represents the point of attachment thought which the moiety is connected to the thieno[3,2-*b*]thienyl moiety; and the zigzag line (≈) on each moiety represents the point of attachment through which the moiety is connected to  or ; and wherein T^3 is a bond, C, N, O, S, CR^{3a}, or NR^{3a}; U^3,

~~V^3, W^3, and X^3 are each independently C, N, O, S, CR^{3a}, or NR^{3a}; and Y^3 is C or N;~~

Z^1 and Z^2 are each a bond;

each R^{1a}, R^{1b}, R^{1c}, and R^{1d} is independently hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or R^{1a} and R^{1c} together with the C and N atoms to which they are attached form heterocyclyl; or R^{1b} and R^{1c} together with the N atom to which they are attached form heterocyclyl;

n and p are each independently an integer of 0, 1, 2, 3, 4, 5, 6, or 7;

q and r are each independently an integer of 1, 2, 3, or 4; and

s and t are each an integer of 1;

wherein each alkyl, alkylene, heteroalkylene, alkenyl, alkenylene, heteroalkenylene, alkynyl, cycloalkyl, aryl, aralkyl, heteroaryl, and heterocyclyl is optionally substituted with one or more substituents Q, where each Q is independently selected from (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl, each of which is further optionally substituted with one or more substituents Q^a; and (c) $-C(O)R^a$, $-C(O)OR^a$, $-C(O)NR^bR^c$, $-C(NR^a)NR^bR^c$, $-OR^a$,

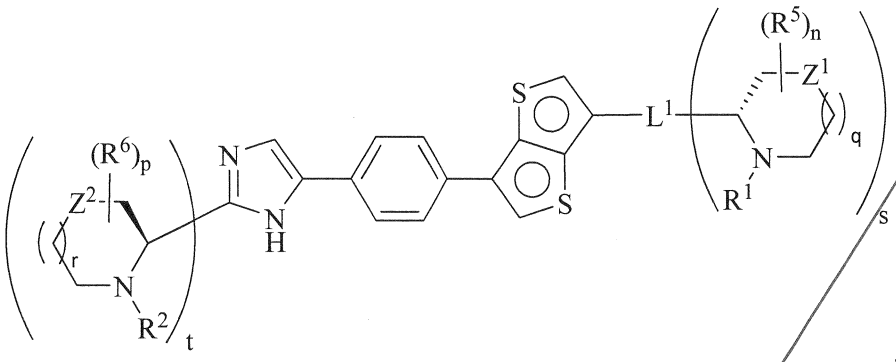
$-OC(O)R^a$, $-OC(O)OR^a$, $-OC(O)NR^bR^c$, $-OC(=NR^a)NR^bR^c$, $-OS(O)R^a$, $-OS(O)_2R^a$, $-OS(O)NR^bR^c$, $-OS(O)_2NR^bR^c$, $-NR^bR^c$, $-NR^aC(O)R^d$, $-NR^aC(O)OR^d$, $-NR^aC(O)NR^bR^c$, $-NR^aC(=NR^d)NR^bR^c$, $-NR^aS(O)R^d$, $-NR^aS(O)_2R^d$, $-NR^aS(O)NR^bR^c$, $-NR^aS(O)_2NR^bR^c$, $-SR^a$, $-S(O)R^a$, $-S(O)_2R^a$, $-S(O)NR^bR^c$, and $-S(O)_2NR^bR^c$, wherein each R^a, R^b, R^c, and R^d is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q^a; or (iii) R^b and R^c together with the N atom to which they are attached form heterocyclyl, optionally substituted with one or more substituents Q^a;

wherein each Q^a is independently selected from the group consisting of (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl; and (c) $-C(O)R^e$, $-C(O)OR^e$, $-C(O)NR^fR^g$, $-C(NR^e)NR^fR^g$, $-OR^e$,

$-OC(O)R^e$, $-OC(O)OR^e$, $-OC(O)NR^fR^g$, $-OC(=NR^e)NR^fR^g$, $-OS(O)R^e$, $-OS(O)_2R^e$, $-OS(O)NR^fR^g$, $-OS(O)_2NR^fR^g$, $-NR^fR^g$, $-NR^eC(O)R^h$, $-NR^eC(O)OR^f$, $-NR^eC(O)NR^fR^g$, $-NR^eC(=NR^h)NR^fR^g$, $-NR^eS(O)R^h$, $-NR^eS(O)_2R^h$, $-NR^eS(O)NR^fR^g$, $-NR^eS(O)_2NR^fR^g$, $-SR^e$, $-S(O)R^e$, $-S(O)_2R^e$, $-S(O)NR^fR^g$, and $-S(O)_2NR^fR^g$; wherein each R^e, R^f, R^g, and R^h is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (iii) R^f and R^g together with the N atom to

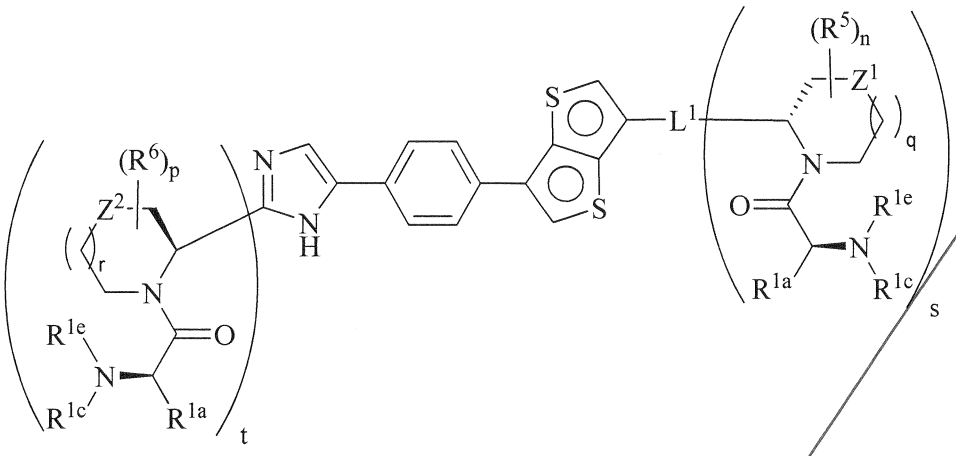
which they are attached form heterocyclyl.

10. The compound of claim 9, having the structure of Formula IICa:



(IICa)

11. The compound of claim 9, having the structure of Formula IICd:



(IICd)

wherein each R^{1e} is independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q; or (c) $-C(O)R^{1b}$, $-C(O)OR^{1b}$, or $-C(O)NR^{1b}R^{1d}$.

12. The compound of claim 9, wherein R^1 is $-C(O)R^{1a}$, $-C(O)CH(NR^{1b}R^{1c})R^{1a}$, $-C(O)CH[N(C(O)R^{1b})R^{1c}]R^{1a}$, $-C(O)CH[N(C(O)OR^{1b})R^{1c}]R^{1a}$, or $-C(O)CH[N(C(O)NR^{1d}R^{1b})R^{1c}]R^{1a}$.

13. The compound of claim 12, wherein R^1 is $-C(O)CH[N(C(O)OR^{1b})R^{1c}]R^{1a}$.

14. The compound of claim 9, wherein R^2 is $-C(O)R^{1a}$, $-C(O)CH(NR^{1b}R^{1c})R^{1a}$, $-C(O)CH[N(C(O)R^{1b})R^{1c}]R^{1a}$, $-C(O)CH[N(C(O)OR^{1b})R^{1c}]R^{1a}$, or $-C(O)CH[N(C(O)NR^{1d}R^{1b})R^{1c}]R^{1a}$.

15. The compound of claim 14, wherein R^2 is $-C(O)CH[N(C(O)OR^{1b})R^{1c}]R^{1a}$.

16. The compound of claim 11 , wherein R^{1e} is hydrogen or $-C(O)OR^{1b}$.

17. The compound of claim 11, wherein each R^{1a} is independently hydrogen, methyl, isopropyl, 2-methylpropyl, 1-methylpropyl, 2-methylthioethyl, phenyl, benzyl, 3-indolylmethyl, hydroxymethyl, 1-hydroxyethyl, sulfhydrylmethyl, 4-hydroxybenzyl, aminocarbonylmethyl, 2-(aminocarbonyl)ethyl, carboxymethyl, 2-carboxyethyl, 4-aminobutyl, 3-guanidinopropyl, or 5-imidazolylmethyl.

18. The compound of claim 16, wherein R^{1b} is methyl, ethyl, propyl, or butyl.

19. The compound of claim 11, wherein R^{1c} is hydrogen.

20. The compound of claim 1, wherein each R^{3a} is independently hydrogen, oxo, chloro, fluoro, nitro, amino, hydroxy, methyl, trifluoromethyl, cyclohexyl, phenyl, methoxy, or methoxycarbonyl.

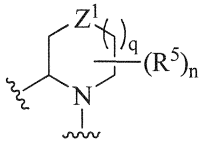
21. The compound of claim 1, wherein R^3 is oxo, chloro, fluoro, nitro, amino, hydroxy, methyl, trifluoromethyl, cyclohexyl, phenyl, methoxy, or methoxycarbonyl.

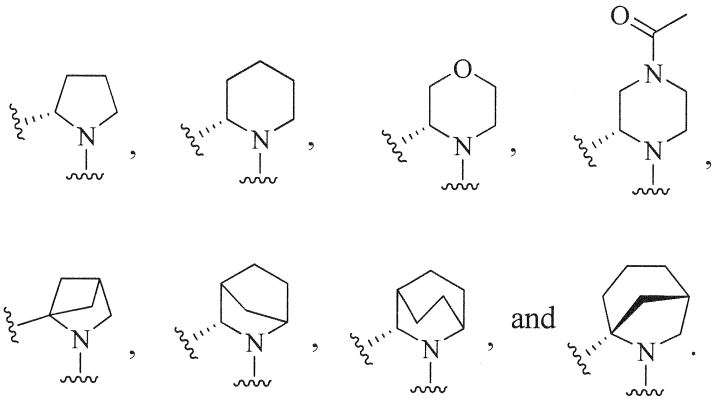
22. The compound of claim 9, wherein n is 0.

23. The compound of claim 1, wherein two R^5 groups are linked together to form C_{1-6} alkylene, optionally substituted with one or more substituents Q.

24. The compound of claim 1, wherein two R^5 groups are linked together to form methylene or ethylene.

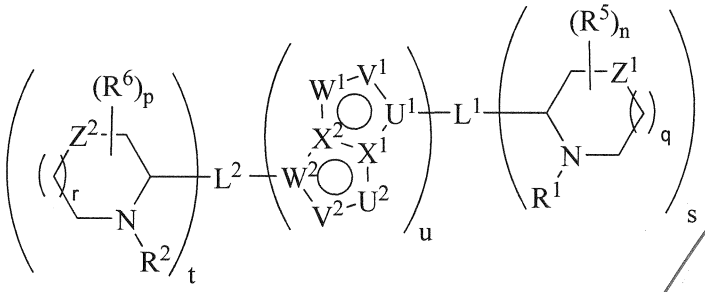
25. The compound of claim 1, wherein q is 1 or 2.

26. The compound of claim 9, wherein the moiety  has the structure of:



27. The compound of claim 9, wherein p is 0.

28. A compound of Formula IIIB:



(IIIB)

or a single enantiomer, a racemic mixture, a mixture of diastereomers, or an isotopic variant thereof; or a pharmaceutically acceptable salt or solvate thereof; wherein:

U^1, W^2, X^1, and X^2 are each C;

U^2 and W^1 are each S;

V^1 and V^2 are each independently CR^{3a};

R^1 and R^2 are each independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) $-C(O)R^{1a}$, $-C(O)CH(NR^{1b}R^{1c})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)R^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)OR^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)NR^{1b}R^{1d})R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-P(O)(OR^{1a})R^{1d}$, $-CH_2P(O)(OR^{1a})R^{1d}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$;

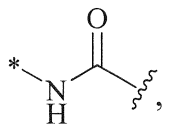
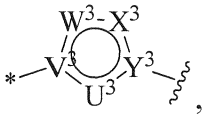
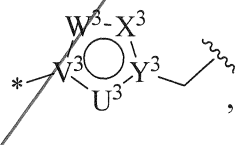
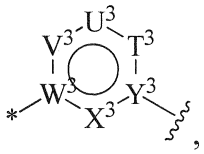
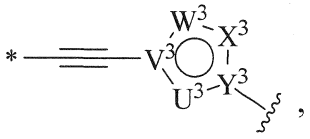
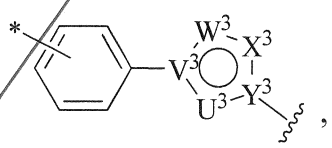
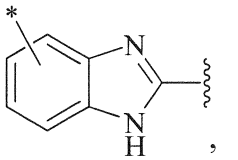
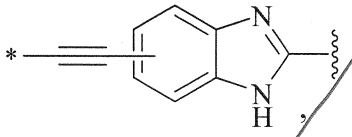
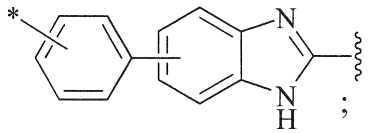
each R^{3a} is independently hydrogen or R^3;

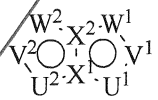
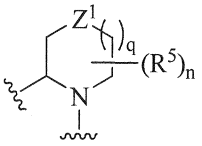
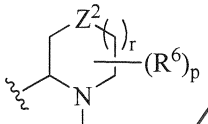
each R^3, R^5, and R^6 is independently (a) cyano, halo, or nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) $-C(O)R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-OR^{1a}$, $-OC(O)R^{1a}$, $-OC(O)OR^{1a}$,

~~$-OC(O)NR^{1b}R^{1c}$, $-OC(=NR^{1a})NR^{1b}R^{1c}$, $-OS(O)R^{1a}$, $-OS(O)_2R^{1a}$, $-OS(O)NR^{1b}R^{1c}$,~~ $-OS(O)_2NR^{1b}R^{1c}$, $-NR^{1b}R^{1c}$, $-NR^{1a}C(O)R^{1d}$, $-NR^{1a}C(O)OR^{1d}$, $-NR^{1a}C(O)NR^{1b}R^{1c}$, $-NR^{1a}C(=NR^{1d})NR^{1b}R^{1c}$, $-NR^{1a}S(O)R^{1d}$, $-NR^{1a}S(O)_2R^{1d}$, $-NR^{1a}S(O)NR^{1b}R^{1c}$, $-NR^{1a}S(O)_2NR^{1b}R^{1c}$, $-SR^{1a}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$; or

two R^5 or two R^6 that are attached to the same ring are linked together to form a bond, –O–, $-NR^7$–, –S–, C_{1-6} alkylene, C_{1-6} heteroalkylene, C_{2-6} alkenylene, or C_{2-6} heteroalkenylene;

L^1 and L^2 are each independently selected from:

a bond, , , , , , , , , and ;

wherein each moiety is optionally substituted with one, two, three, or four R^3; the star (*) on each moiety represents the point of attachment thought which the moiety is connected to U^1 or W^2 of ; and the zigzag line () on each moiety represents the point of attachment through which the moiety is connected to  or ; and wherein T^3 is a bond, C, N, O, S, CR^{3a}, or NR^{3a}; U^3, V^3, W^3, and X^3 are each independently C, N, O, S, CR^{3a}, or NR^{3a}; and Y^3 is C or N;

Z^1 and Z^2 are each a bond;

each R^{1a}, R^{1b}, R^{1c}, and R^{1d} is independently hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or R^{1a} and R^{1c} together with the C and N atoms to which they are attached form heterocyclyl; or R^{1b} and

R^{1c} together with the N atom to which they are attached form heterocyclyl;

n is an integer of 0, 1, 2, 3, 4, 5, 6, or 7;

p is an integer of 2, 3, 4, 5, 6, or 7;

q and r are each independently an integer of 1, 2, 3, or 4; and

s, t, and u are each an integer of 1;

wherein each alkyl, alkylene, heteroalkylene, alkenyl, alkenylene, heteroalkenylene, alkynyl, cycloalkyl, aryl, aralkyl, heteroaryl, and heterocyclyl is optionally substituted with one or more substituents Q, where each Q is independently selected from (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl, each of which is further optionally substituted with one or more substituents Q^a; and (c) $-C(O)R^a$, $-C(O)OR^a$, $-C(O)NR^bR^c$, $-C(NR^a)NR^bR^c$, $-OR^a$,

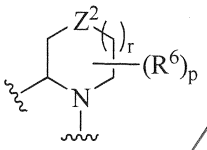
$-OC(O)R^a$, $-OC(O)OR^a$, $-OC(O)NR^bR^c$, $-OC(=NR^a)NR^bR^c$, $-OS(O)R^a$, $-OS(O)_2R^a$, $-OS(O)NR^bR^c$, $-OS(O)_2NR^bR^c$, $-NR^bR^c$, $-NR^aC(O)R^d$, $-NR^aC(O)OR^d$, $-NR^aC(O)NR^bR^c$, $-NR^aC(=NR^d)NR^bR^c$, $-NR^aS(O)R^d$, $-NR^aS(O)_2R^d$, $-NR^aS(O)NR^bR^c$, $-NR^aS(O)_2NR^bR^c$, $-SR^a$, $-S(O)R^a$, $-S(O)_2R^a$, $-S(O)NR^bR^c$, and $-S(O)_2NR^bR^c$, wherein each R^a, R^b, R^c, and R^d is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q^a; or (iii) R^b and R^c together with the N atom to which they are attached form heterocyclyl, optionally substituted with one or more substituents Q^a;

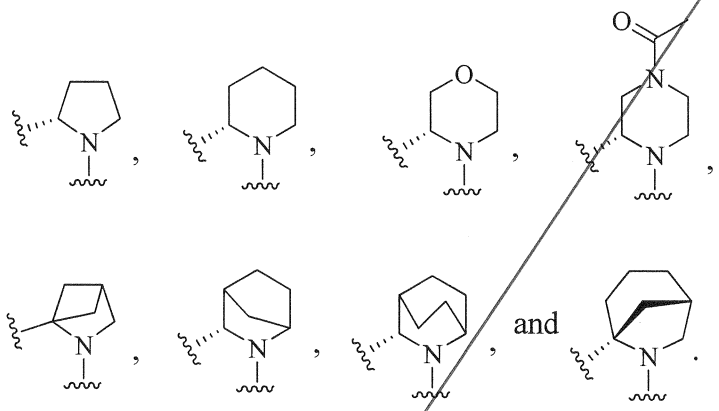
wherein each Q^a is independently selected from the group consisting of (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl; and (c) $-C(O)R^e$, $-C(O)OR^e$, $-C(O)NR^fR^g$, $-C(NR^e)NR^fR^g$, $-OR^e$, $-OC(O)R^e$, $-OC(O)OR^e$, $-OC(O)NR^fR^g$, $-OC(=NR^e)NR^fR^g$, $-OS(O)R^e$, $-OS(O)_2R^e$, $-OS(O)NR^fR^g$, $-OS(O)_2NR^fR^g$, $-NR^fR^g$, $-NR^eC(O)R^h$, $-NR^eC(O)OR^f$, $-NR^eC(O)NR^fR^g$, $-NR^eC(=NR^h)NR^fR^g$, $-NR^eS(O)R^h$, $-NR^eS(O)_2R^h$, $-NR^eS(O)NR^fR^g$, $-NR^eS(O)_2NR^fR^g$, $-SR^e$, $-S(O)R^e$, $-S(O)_2R^e$, $-S(O)NR^fR^g$, and $-S(O)_2NR^fR^g$; wherein each R^e, R^f, R^g, and R^h is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (iii) R^f and R^g together with the N atom to which they are attached form heterocyclyl.

29. The compound of claim 28, wherein two R^6 groups are linked together to form C_{1-6} alkylene, optionally substituted with one or more substituents Q.

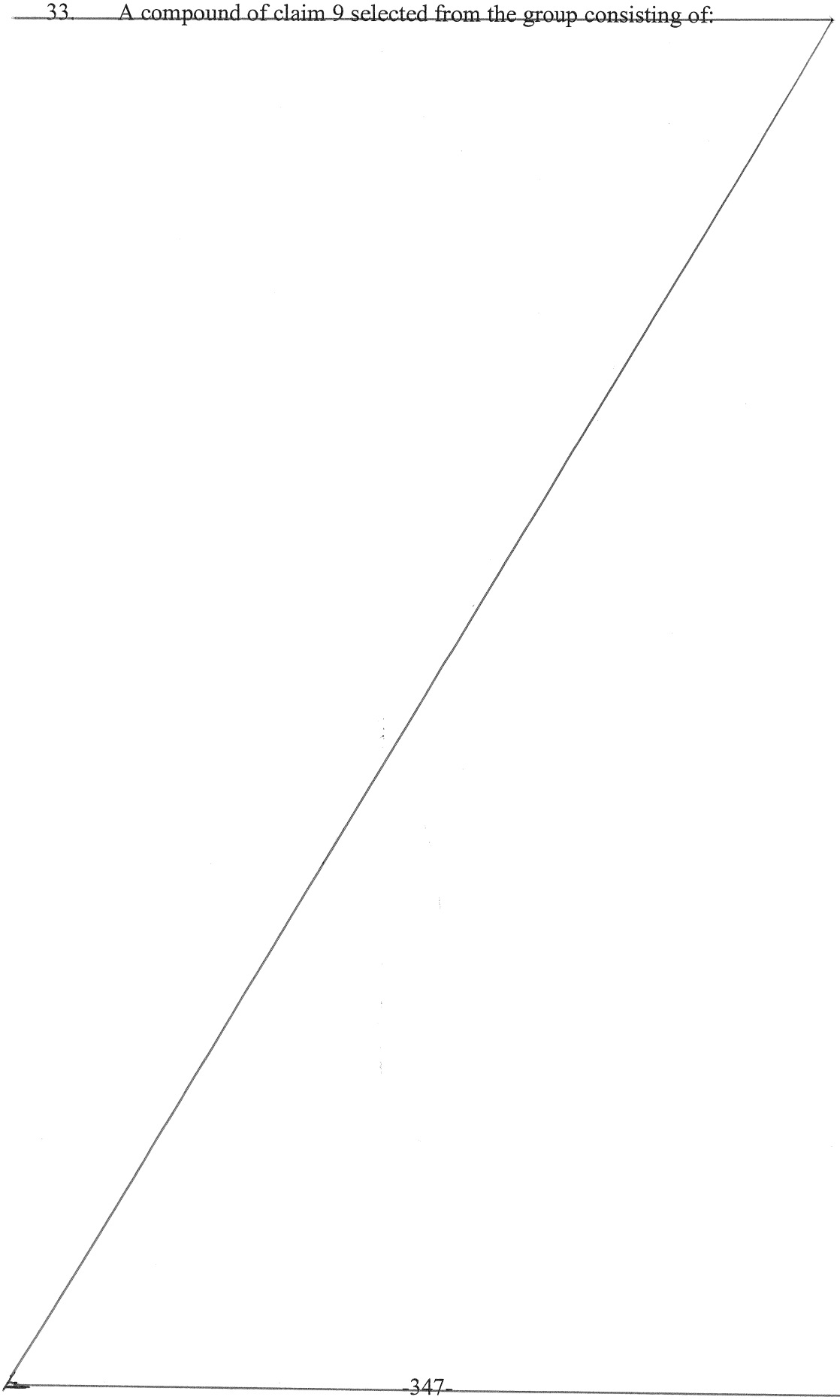
30. ~~The compound of claim 29, wherein two R^6 groups are linked together to form~~ methylene or ethylene.

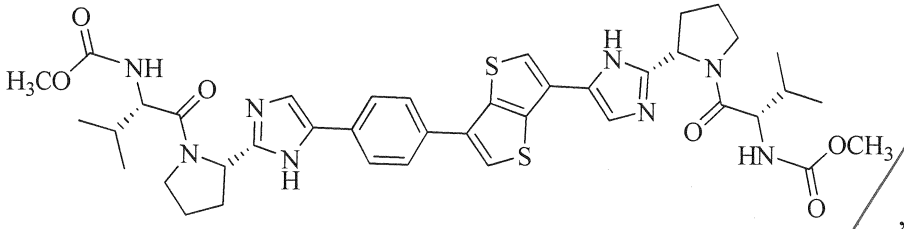
31. The compound of claim 28, wherein r is 1 or 2.

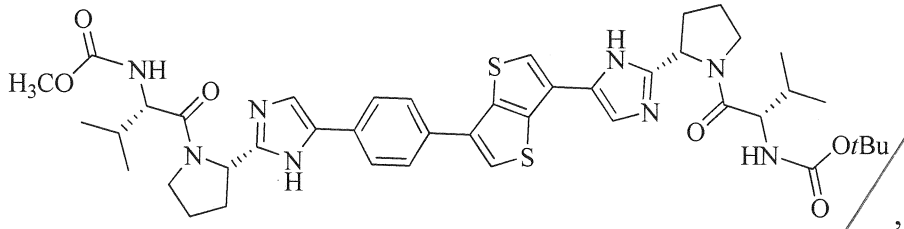
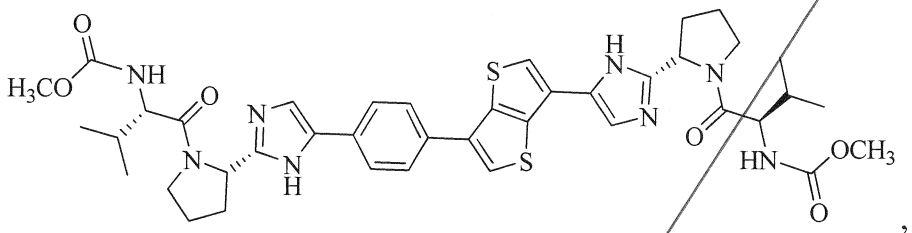
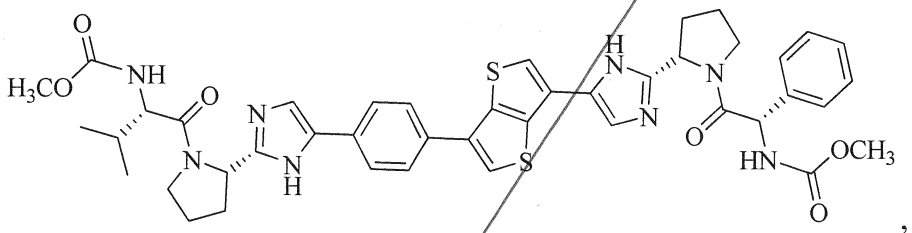
32. The compound of claim 9, wherein the moiety  has the structure of:

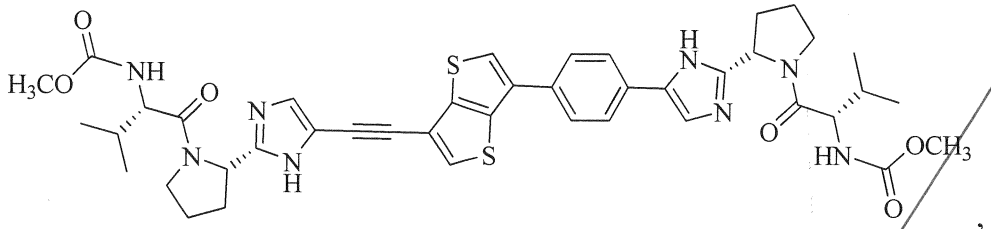


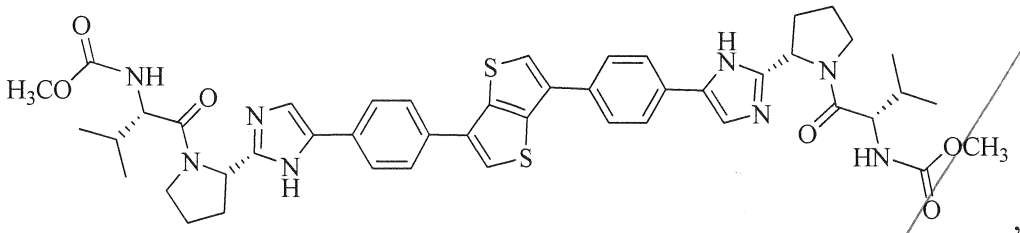
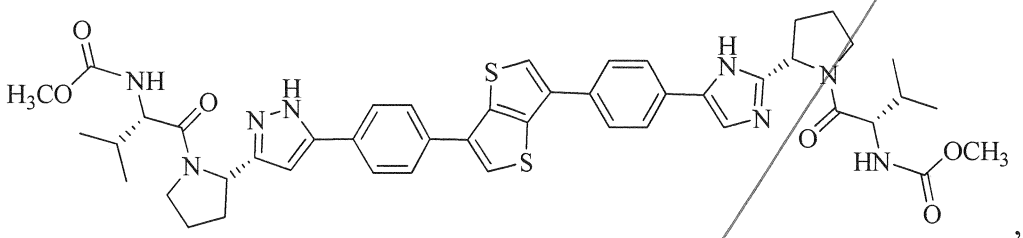
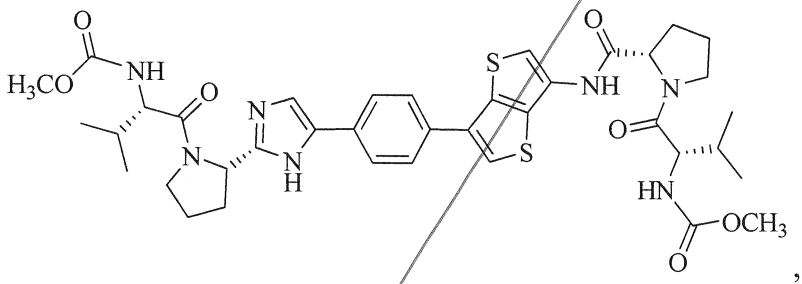
33. A compound of claim 9 selected from the group consisting of:

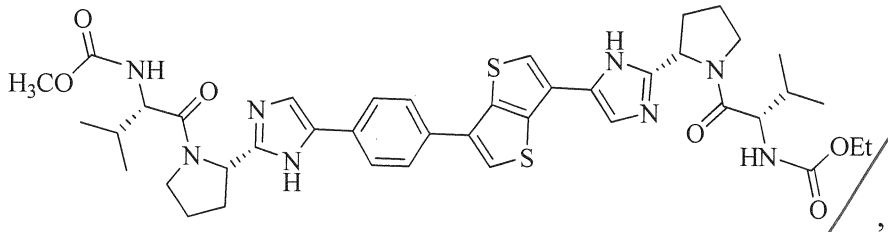


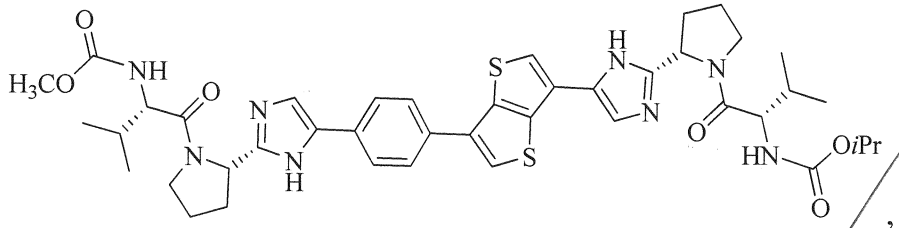
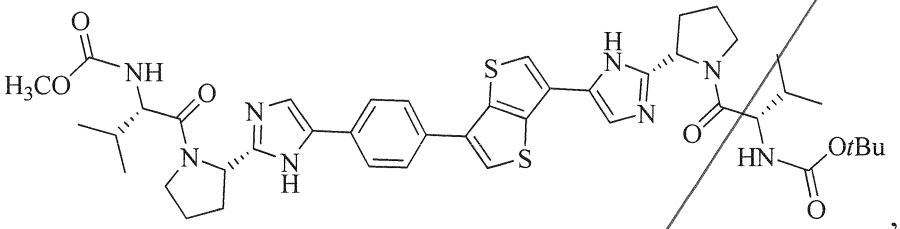
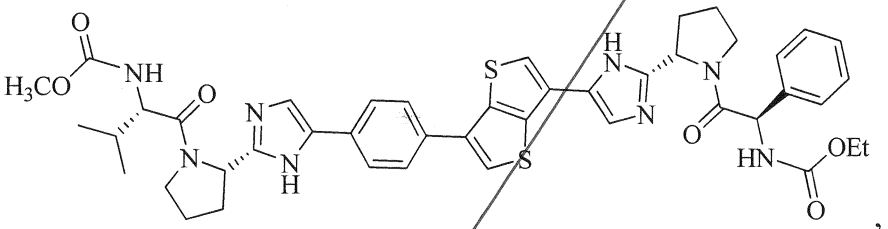
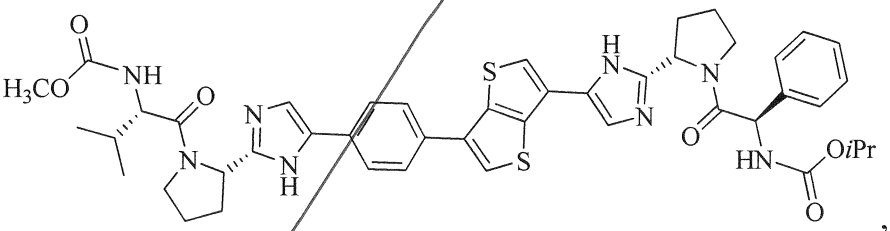
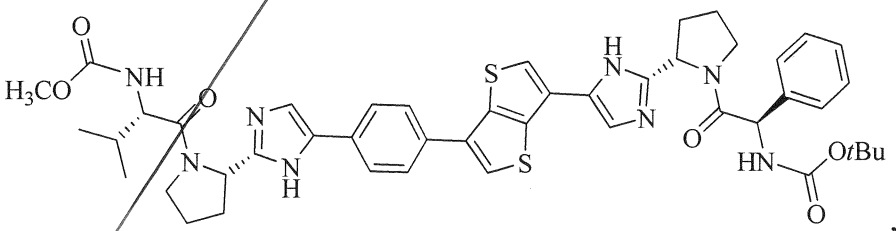
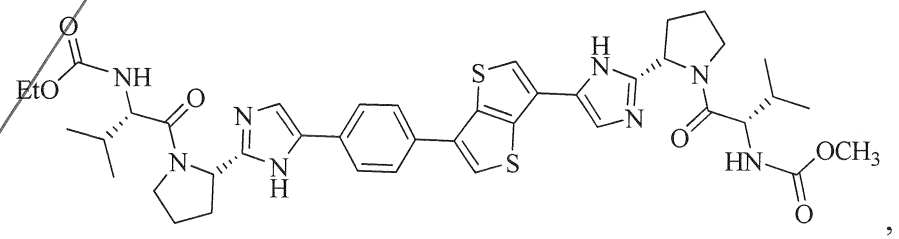
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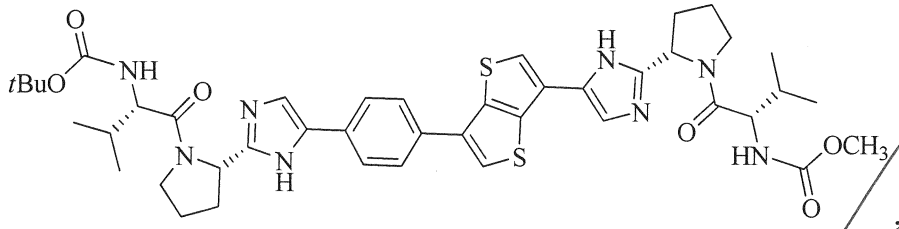
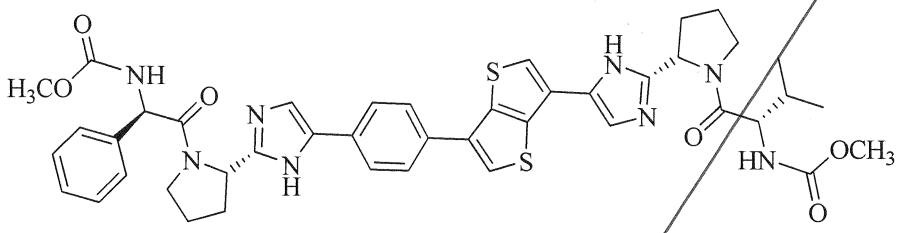
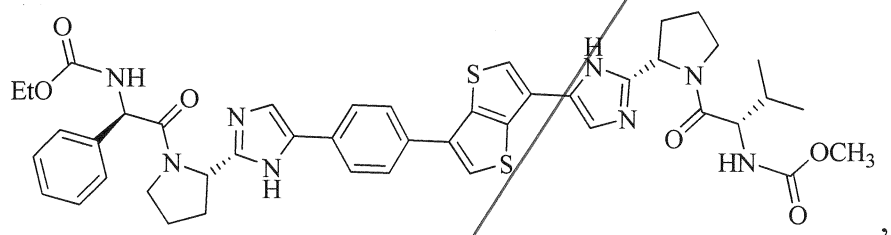
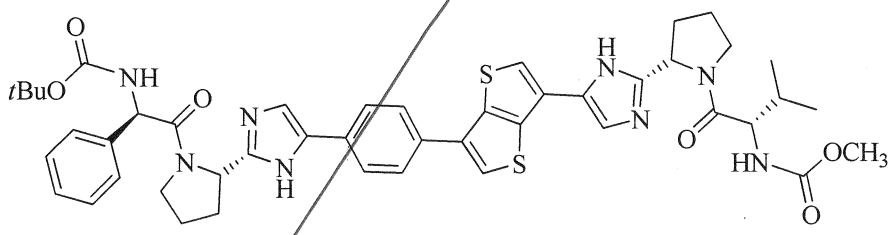
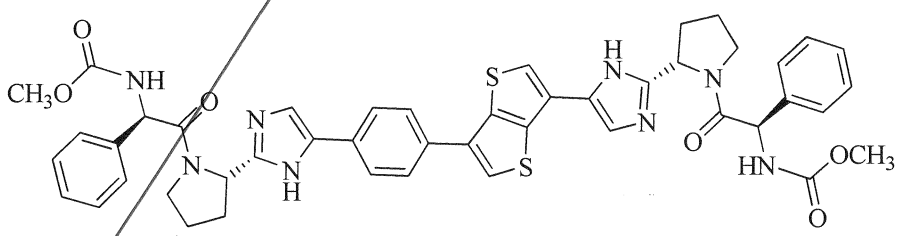
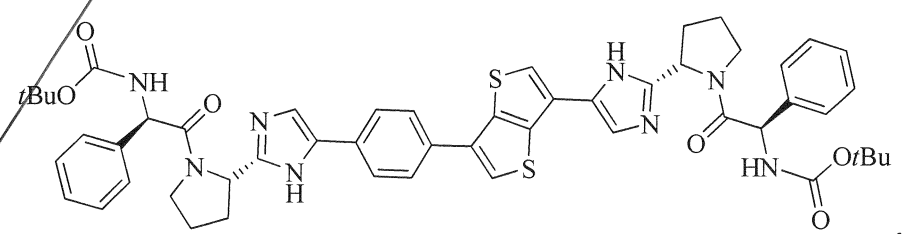
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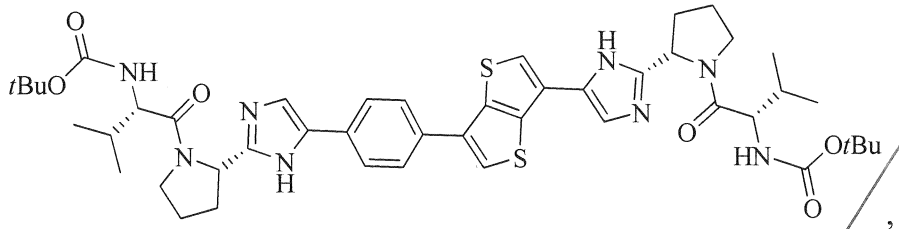
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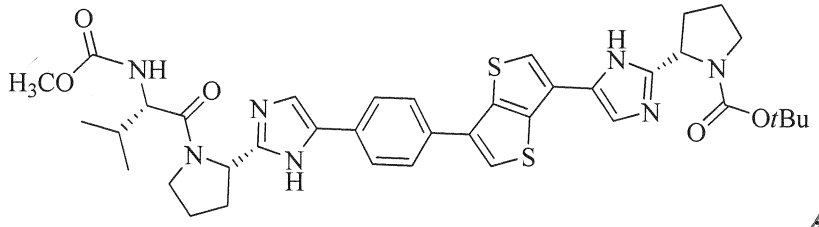
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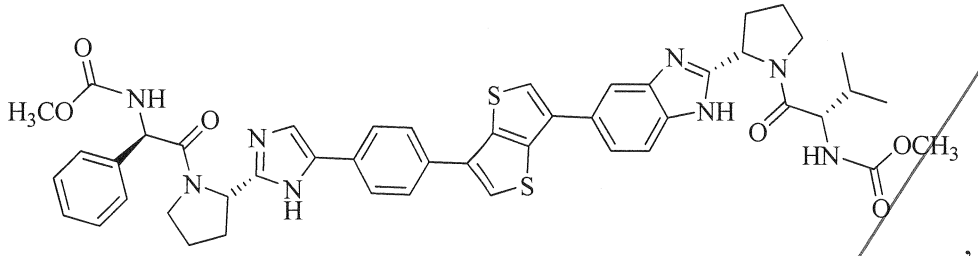
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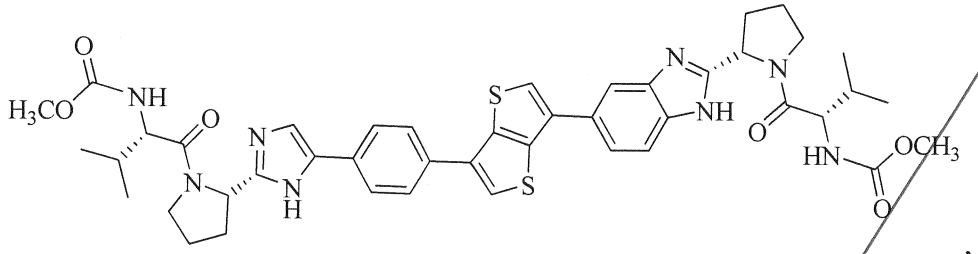
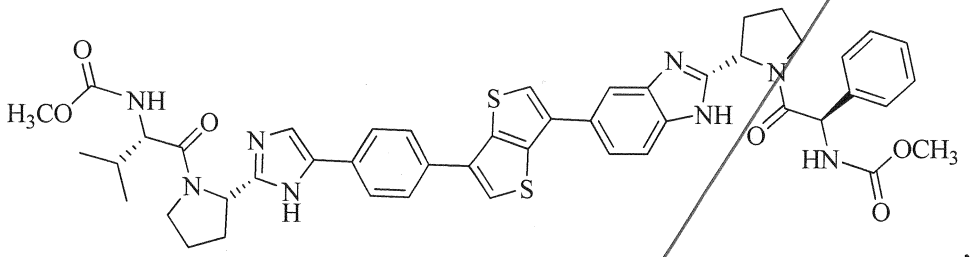
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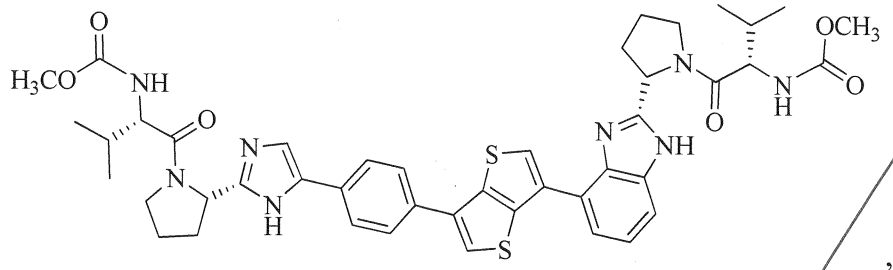
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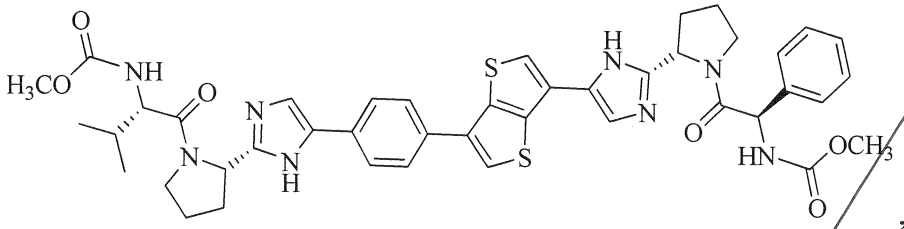
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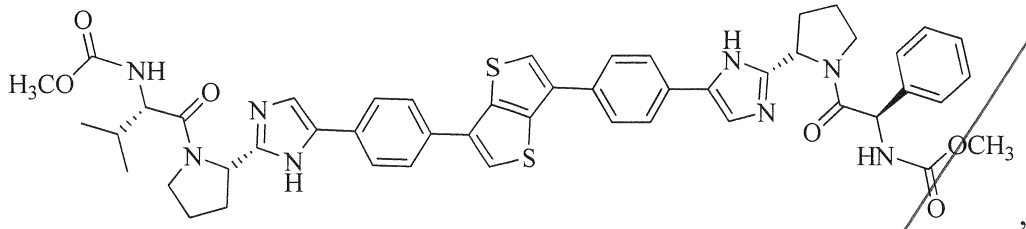
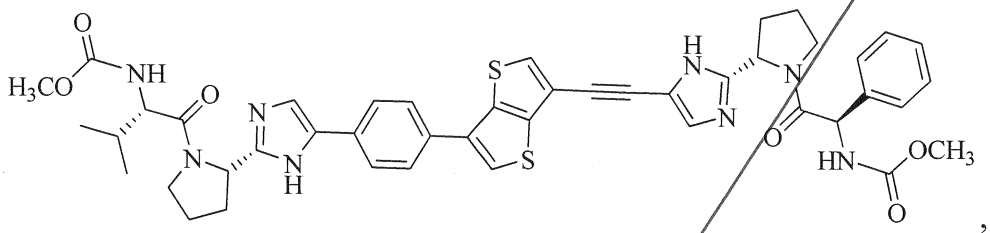
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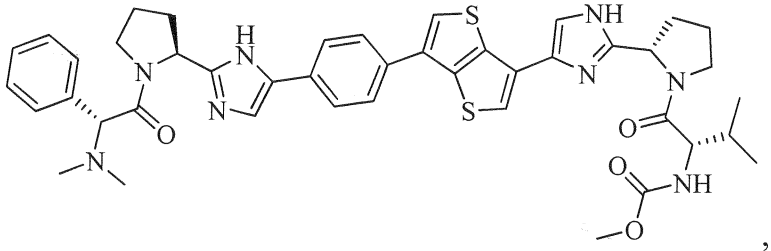
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~~and isotopic variants thereof; and pharmaceutically acceptable saltsand solvates thereof.~~

34. A pharmaceutical composition comprising the compound of claim 9, and one or more pharmaceutically acceptable carriers.

35. The pharmaceutical composition of claim 34, further comprising an antiviral agent.

36. The pharmaceutical composition of claim 35, wherein the antiviral agent is selected from the group consisting of an interferon, ribavirin, an interleukin, an NS3 protease inhibitor, a cysteine protease inhibitor, a phenathrenequinone, a thiazolidine, a benzanilide, a helicase inhibitor, a polymerase inhibitor, a nucleotide analogue, a liotoxin, acerulenin, an antisense phosphorothioate oligodeoxynucleotide, an inhibitor of IRES-dependent translation, and a ribozyme.

37. The pharmaceutical composition of claim 36, wherein the antiviral agent is an interferon.

38. The pharmaceutical composition of claim 37, wherein the interferon is selected from the group consisting of pegylated interferon alpha 2a, interferon alfahcon-1, natural interferon, albuferon, interferon beta-1a, omega interferon, interferon alpha, interferon gamma, interferon tau, interferon delta, and interferon gamma-1b.

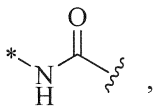
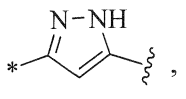
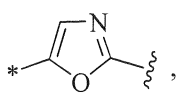
39. The pharmaceutical composition of claim 34, wherein the composition is formulated for single dose administration.

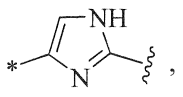
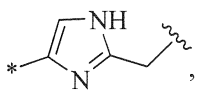
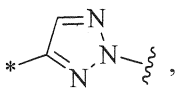
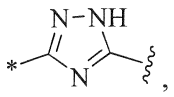
40. The pharmaceutical composition of claim 34, wherein the composition is formulated as oral, parenteral, or intravenous dosage form.

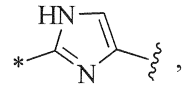
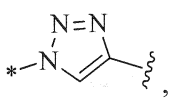
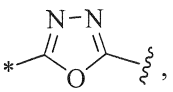
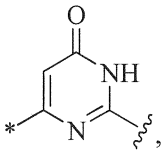
41. The pharmaceutical composition of claim 40, wherein the oral dosage form is a tablet or capsule.

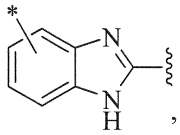
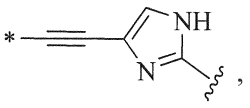
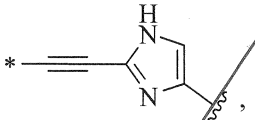
42. The pharmaceutical composition of claim 34, wherein the compound is administered in a dose of about 0.5 milligram to about 1,000 milligram daily.

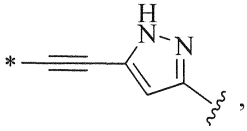
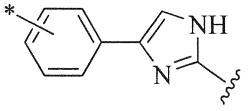
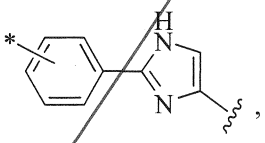
43. The compound of claim 9, wherein L^1 is independently selected from the group consisting of:

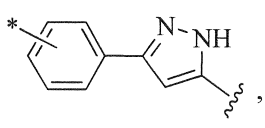
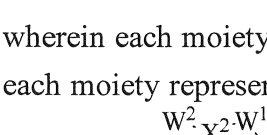
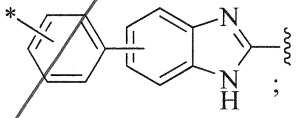
a bond,  ,  ,  ,

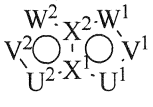
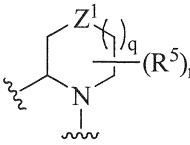
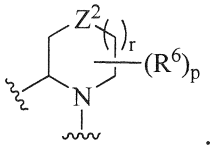
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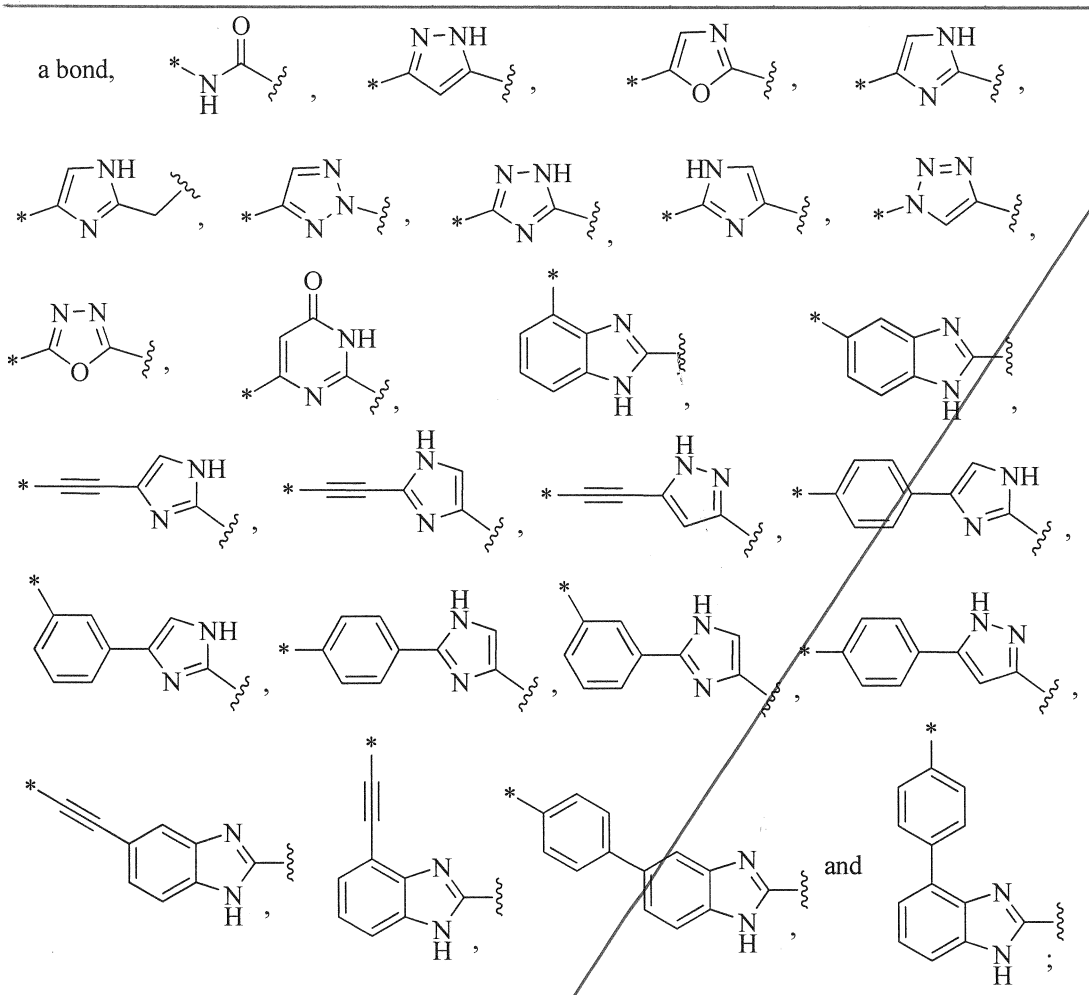
 ,  ,  ,

 ,  ,  ,

 ,  , and  ;

wherein each moiety is optionally substituted with one, two, three, or four R^3; the star (*) on each moiety represents the point of attachment through which the moiety is connected to U^1 or W^2 of  ; and the zigzag line ( ) on each moiety represents the point of attachment through which the moiety is connected to  or  .

44. The compound of claim 9, wherein L^1 is independently selected from the group consisting of:

a bond, 

wherein each moiety is optionally substituted with one, two, three, or four R^3.

45. The compound of claim 9, wherein n is an integer of 2 or more.

46. The compound of claim 45, wherein two R^5 groups are linked together to form C_{1-6} alkylene, optionally substituted with one or more substituents Q.

47. The compound of claim 45, wherein two R^5 groups are linked together to form methylene or ethylene.

48. The compound of claim 9, wherein q is 1 or 2.

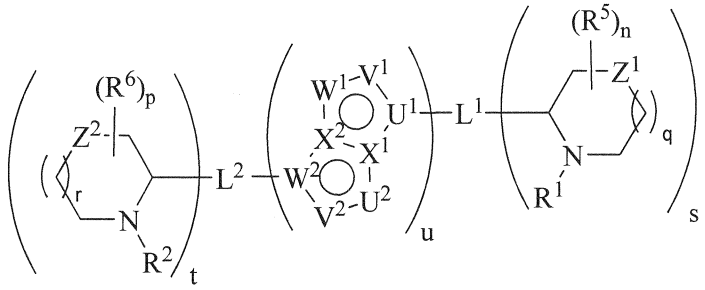
49. The compound of claim 9, wherein p is an integer of 2 or more.

50. The compound of claim 49, wherein two R^6 groups are linked together to form C_{1-6} alkylene, optionally substituted with one or more substituents Q.

51. The compound of claim 49, wherein two R^6 groups are linked together to form methylene or ethylene.

~~52. The compound of claim 9, wherein r is 1 or 2.~~

53. A compound of Formula IIIB:



(IIIB)

or a single enantiomer, a racemic mixture, a mixture of diastereomers, or an isotopic variant thereof; or a pharmaceutically acceptable salt or solvate thereof;

wherein:

U^1, W^2, X^1, and X^2 are each C;

U^2 and W^1 are each S;

V^1 and V^2 are each independently CR^{3a};

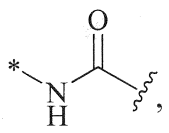
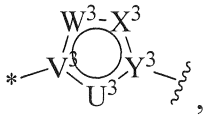
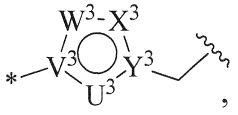
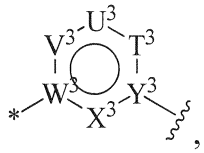
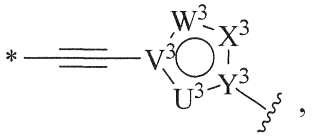
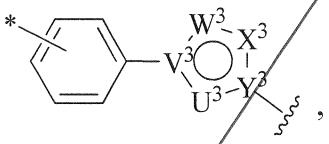
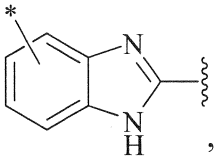
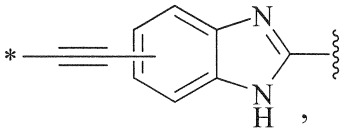
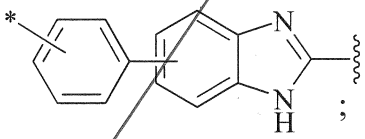
R^1 and R^2 are each independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) $-C(O)R^{1a}$, $-C(O)CH(NR^{1b}R^{1c})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)R^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)OR^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)NR^{1b}R^{1d})R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-P(O)(OR^{1a})R^{1d}$, $-CH_2P(O)(OR^{1a})R^{1d}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$;

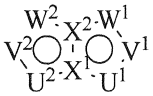
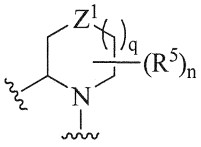
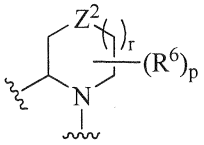
each R^{3a} is independently hydrogen or R^3;

each R^3, R^5, and R^6 is independently (a) cyano, halo, or nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) $-C(O)R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-OR^{1a}$, $-OC(O)R^{1a}$, $-OC(O)OR^{1a}$, $-OC(O)NR^{1b}R^{1c}$, $-OC(=NR^{1a})NR^{1b}R^{1c}$, $-OS(O)R^{1a}$, $-OS(O)_2R^{1a}$, $-OS(O)NR^{1b}R^{1c}$, $-OS(O)_2NR^{1b}R^{1c}$, $-NR^{1b}R^{1c}$, $-NR^{1a}C(O)R^{1d}$, $-NR^{1a}C(O)OR^{1d}$, $-NR^{1a}C(O)NR^{1b}R^{1c}$, $-NR^{1a}C(=NR^{1d})NR^{1b}R^{1c}$, $-NR^{1a}S(O)R^{1d}$, $-NR^{1a}S(O)_2R^{1d}$, $-NR^{1a}S(O)NR^{1b}R^{1c}$, $-NR^{1a}S(O)_2NR^{1b}R^{1c}$, $-SR^{1a}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$; or

two R^5 or two R^6 that are attached to the same ring are linked together to form a bond, $-O-$, $-NR^7-$, $-S-$, C_{1-6} alkylene, C_{1-6} heteroalkylene, C_{2-6} alkenylene, or C_{2-6} heteroalkenylene;

L^1 and L^2 are each independently selected from:

a bond, , , , , , , , , and ;

wherein each moiety is optionally substituted with one, two, three, or four R^3; the star (*) on each moiety represents the point of attachment thought which the moiety is connected to U^1 or W^2 of ; and the zigzag line () on each moiety represents the point of attachment through which the moiety is connected to  or ; and wherein T^3 is a bond, C, N, O, S, CR^{3a}, or NR^{3a}; U^3, V^3, W^3, and X^3 are each independently C, N, O, S, CR^{3a}, or NR^{3a}; and Y^3 is C or N;

Z^1 and Z^2 are each a bond;

R^{1a} and R^{1c} together with the C and N atoms to which they are attached form pyrrolidinyl;

each R^{1b} and R^{1d} is independently hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl;

n and p are each independently an integer of 0, 1, 2, 3, 4, 5, 6, or 7;

q and r are each independently an integer of 1, 2, 3, or 4; and

s, t, and u are each an integer of 1;

wherein each alkyl, alkylene, heteroalkylene, alkenyl, alkenylene, heteroalkenylene, alkynyl, cycloalkyl, aryl, aralkyl, heteroaryl, and heterocyclyl is optionally substituted with one or more substituents Q, where each Q is independently selected from (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-}

~~$_{15}$ aralkyl, heteroaryl, and heterocyclyl, each of which is further optionally substituted with~~ one or more substituents Q^a; and (c) $-C(O)R^a$, $-C(O)OR^a$, $-C(O)NR^bR^c$, $-C(NR^a)NR^bR^c$, $-OR^a$, $-OC(O)R^a$, $-OC(O)OR^a$, $-OC(O)NR^bR^c$, $-OC(=NR^a)NR^bR^c$, $-OS(O)R^a$, $-OS(O)_2R^a$, $-OS(O)NR^bR^c$, $-OS(O)_2NR^bR^c$, $-NR^bR^c$, $-NR^aC(O)R^d$, $-NR^aC(O)OR^d$, $-NR^aC(O)NR^bR^c$, $-NR^aC(=NR^d)NR^bR^c$, $-NR^aS(O)R^d$, $-NR^aS(O)_2R^d$, $-NR^aS(O)NR^bR^c$, $-NR^aS(O)_2NR^bR^c$, $-SR^a$, $-S(O)R^a$, $-S(O)_2R^a$, $-S(O)NR^bR^c$, and $-S(O)_2NR^bR^c$, wherein each R^a, R^b, R^c, and R^d is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q^a; or (iii) R^b and R^c together with the N atom to which they are attached form heterocyclyl, optionally substituted with one or more substituents Q^a;

wherein each Q^a is independently selected from the group consisting of (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl; and (c) $-C(O)R^e$, $-C(O)OR^e$, $-C(O)NR^fR^g$, $-C(NR^e)NR^fR^g$, $-OR^e$, $-OC(O)R^e$, $-OC(O)OR^e$, $-OC(O)NR^fR^g$, $-OC(=NR^e)NR^fR^g$, $-OS(O)R^e$, $-OS(O)_2R^e$, $-OS(O)NR^fR^g$, $-OS(O)_2NR^fR^g$, $-NR^fR^g$, $-NR^eC(O)R^h$, $-NR^eC(O)OR^f$, $-NR^eC(O)NR^fR^g$, $-NR^eC(=NR^h)NR^fR^g$, $-NR^eS(O)R^h$, $-NR^eS(O)_2R^h$, $-NR^eS(O)NR^fR^g$, $-NR^eS(O)_2NR^fR^g$, $-SR^e$, $-S(O)R^e$, $-S(O)_2R^e$, $-S(O)NR^fR^g$, and $-S(O)_2NR^fR^g$; wherein each R^e, R^f, R^g, and R^h is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (iii) R^f and R^g together with the N atom to which they are attached form heterocyclyl.

54. Use of a compound of any one of claims 1 to 33 and 43 to 53 in the manufacture of a medicament for treating or preventing an HCV infection.

55. Use of a compound of any one of claims 1 to 33 and 43 to 53 in the manufacture of a medicament of treating, preventing, or ameliorating one or more symptoms of a liver disease or disorder associated with an HCV infection.

56. The use of claim 54 or 55, wherein the medicament is manufactured for administration with a second antiviral agent, in combination or alternation.

57. The use of claim 56, wherein the second antiviral agent is selected from the group consisting of an interferon, ribavirin, amantadine, an interleukin, a NS3 protease inhibitor, a cysteine protease inhibitor, a phenathrenequinone, a thiazolidine, a benzanilide, a helicase inhibitor, a polymerase inhibitor, a nucleotide analogue, a liotoxin, acerulenin, an

antisense phosphorothioate oligodeoxynucleotide, an inhibitor of IRES-dependent translation, and a ribozyme.

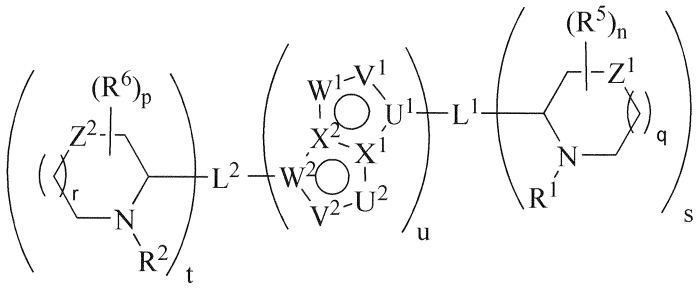
58. The use of claim 57, wherein the second antiviral agent is an interferon.

59. The use of claim 58, wherein the interferon is selected from the group consisting of pegylated interferon alpha 2a, interferon alfacon-1, natural interferon, albuferon, interferon beta-1a, omega interferon, interferon alpha, interferon gamma, interferon tau, interferon delta, and interferon gamma-1b.

60. Use of a compound of any one of claims 1 to 33 and 43 to 53 in the manufacture of a medicament for inhibiting replication of a virus.

CLAIMS

1. A compound of Formula IIIB:



(IIIB)

or a single enantiomer, a racemic mixture, a mixture of diastereomers, or an isotopic variant thereof; or a pharmaceutically acceptable salt or solvate thereof;

wherein:

U^1, W^2, X^1, and X^2 are each C;

U^2 and W^1 are each S;

V^1 and V^2 are each independently CR^{3a};

R^1 and R^2 are each independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) $-C(O)R^{1a}$, $-C(O)CH(NR^{1b}R^{1c})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)R^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)OR^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)NR^{1b}R^{1d})R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-P(O)(OR^{1a})R^{1d}$, $-CH_2P(O)(OR^{1a})R^{1d}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$;

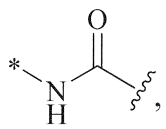
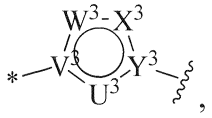
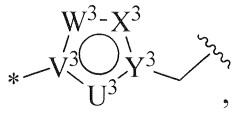
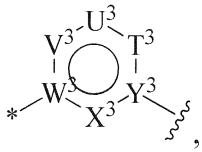
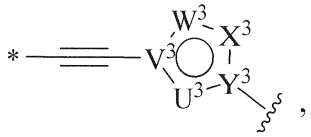
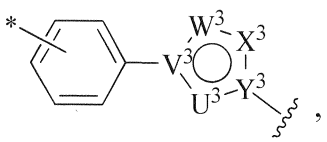
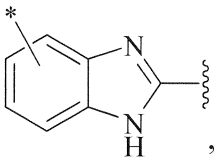
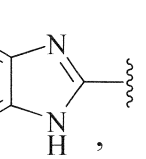
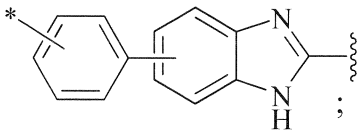
each R^{3a} is independently hydrogen or R^3;

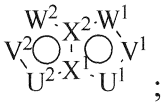
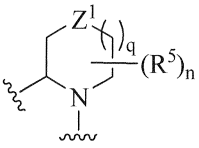
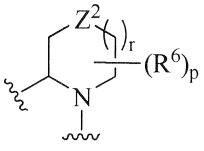
each R^3, R^5, and R^6 is independently (a) cyano, halo, or nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) $-C(O)R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-OR^{1a}$, $-OC(O)R^{1a}$, $-OC(O)OR^{1a}$, $-OC(O)NR^{1b}R^{1c}$, $-OC(=NR^{1a})NR^{1b}R^{1c}$, $-OS(O)R^{1a}$, $-OS(O)_2R^{1a}$, $-OS(O)NR^{1b}R^{1c}$, $-OS(O)_2NR^{1b}R^{1c}$, $-NR^{1b}R^{1c}$, $-NR^{1a}C(O)R^{1d}$, $-NR^{1a}C(O)OR^{1d}$, $-NR^{1a}C(O)NR^{1b}R^{1c}$, $-NR^{1a}C(=NR^{1d})NR^{1b}R^{1c}$, $-NR^{1a}S(O)R^{1d}$, $-NR^{1a}S(O)_2R^{1d}$, $-NR^{1a}S(O)NR^{1b}R^{1c}$,

$-NR^{1a}S(O)_2NR^{1b}R^{1c}$, $-SR^{1a}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$; or

two R^5 or two R^6 that are attached to the same ring are linked together to form a bond, –O–, $-NR^7-$, –S–, C_{1-6} alkylene, C_{1-6} heteroalkylene, C_{2-6} alkenylene, or C_{2-6} heteroalkenylene;

L^1 and L^2 are each independently selected from:

a bond, , , , , , , , , and ;

wherein each moiety is optionally substituted with one, two, three, or four R^3; the star (*) on each moiety represents the point of attachment thought which the moiety is connected to U^1 or W^2 of ; and the zigzag line () on each moiety represents the point of attachment through which the moiety is connected to  or ; and wherein T^3 is a bond, C, N, O, S, CR^{3a}, or NR^{3a}; U^3, V^3, W^3, and X^3 are each independently C, N, O, S, CR^{3a}, or NR^{3a}; and Y^3 is C or N;

Z^1 and Z^2 are each a bond;

each R^{1a}, R^{1b}, R^{1c}, and R^{1d} is independently hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or R^{1a} and R^{1c} together with the C and N atoms to which they are attached form heterocyclyl; or R^{1b} and R^{1c} together with the N atom to which they are attached form heterocyclyl;

n is an integer of 2, 3, 4, 5, 6, or 7;

p is an integer of 0, 1, 2, 3, 4, 5, 6, or 7;

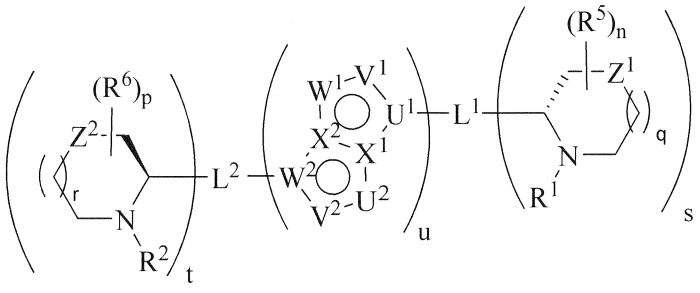
q and r are each independently an integer of 1, 2, 3, or 4; and

s, t, and u are each an integer of 1;

wherein each alkyl, alkylene, heteroalkylene, alkenyl, alkenylene, heteroalkenylene, alkynyl, cycloalkyl, aryl, aralkyl, heteroaryl, and heterocyclyl is optionally substituted with one or more substituents Q, where each Q is independently selected from (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl, each of which is further optionally substituted with one or more substituents Q^a; and (c) $-C(O)R^a$, $-C(O)OR^a$, $-C(O)NR^bR^c$, $-C(NR^a)NR^bR^c$, $-OR^a$,
$-OC(O)R^a$, $-OC(O)OR^a$, $-OC(O)NR^bR^c$, $-OC(=NR^a)NR^bR^c$, $-OS(O)R^a$, $-OS(O)_2R^a$, $-OS(O)NR^bR^c$, $-OS(O)_2NR^bR^c$, $-NR^bR^c$, $-NR^aC(O)R^d$, $-NR^aC(O)OR^d$, $-NR^aC(O)NR^bR^c$, $-NR^aC(=NR^d)NR^bR^c$, $-NR^aS(O)R^d$, $-NR^aS(O)_2R^d$, $-NR^aS(O)NR^bR^c$, $-NR^aS(O)_2NR^bR^c$, $-SR^a$,
$-S(O)R^a$, $-S(O)_2R^a$, $-S(O)NR^bR^c$, and $-S(O)_2NR^bR^c$, wherein each R^a, R^b, R^c, and R^d is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q^a; or (iii) R^b and R^c together with the N atom to which they are attached form heterocyclyl, optionally substituted with one or more substituents Q^a;

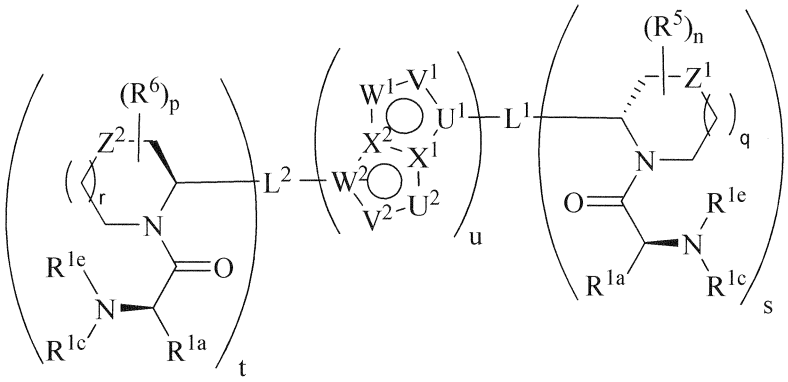
wherein each Q^a is independently selected from the group consisting of (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl; and (c) $-C(O)R^e$, $-C(O)OR^e$, $-C(O)NR^fR^g$, $-C(NR^e)NR^fR^g$, $-OR^e$, $-OC(O)R^e$, $-OC(O)OR^e$, $-OC(O)NR^fR^g$, $-OC(=NR^e)NR^fR^g$, $-OS(O)R^e$, $-OS(O)_2R^e$,
$-OS(O)NR^fR^g$, $-OS(O)_2NR^fR^g$, $-NR^fR^g$, $-NR^eC(O)R^h$, $-NR^eC(O)OR^f$, $-NR^eC(O)NR^fR^g$, $-NR^eC(=NR^h)NR^fR^g$, $-NR^eS(O)R^h$, $-NR^eS(O)_2R^h$, $-NR^eS(O)NR^fR^g$, $-NR^eS(O)_2NR^fR^g$, $-SR^e$, $-S(O)R^e$, $-S(O)_2R^e$, $-S(O)NR^fR^g$, and $-S(O)_2NR^fR^g$; wherein each R^e, R^f, R^g, and R^h is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (iii) R^f and R^g together with the N atom to which they are attached form heterocyclyl.

2. The compound of claim 1, having the structure of Formula IIIBa:



(IIIBa)

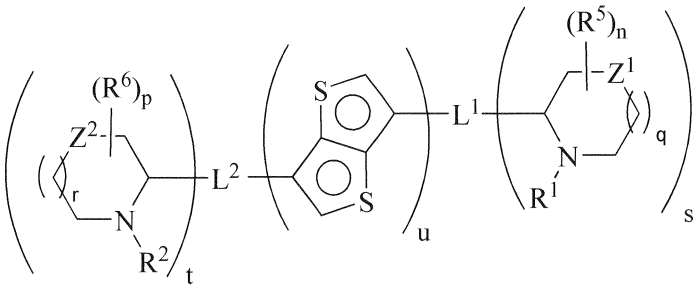
3. The compound of claim 2, having the structure of Formula IIIBd:



(IIIBd)

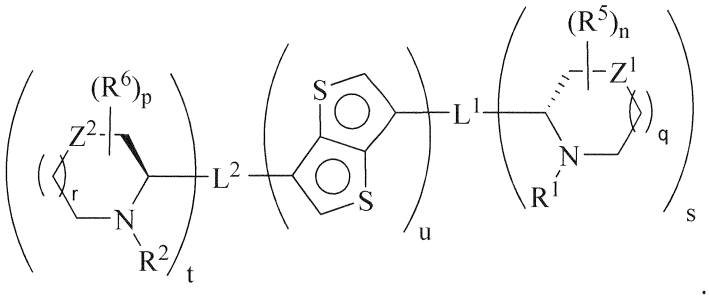
wherein each R^{1e} is independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q; or (c) $-C(O)R^{1b}$, $-C(O)OR^{1b}$, or $-C(O)NR^{1b}R^{1d}$.

4. The compound of claim 1, having the structure of Formula IC:



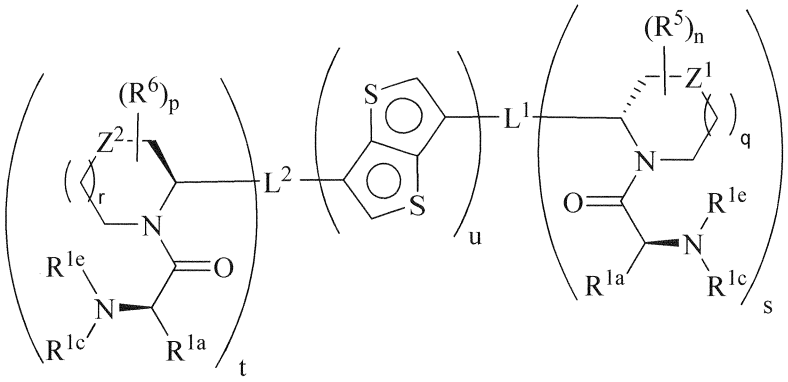
(IC)

5. The compound of claim 4, having the structure of Formula ICa:



(ICa)

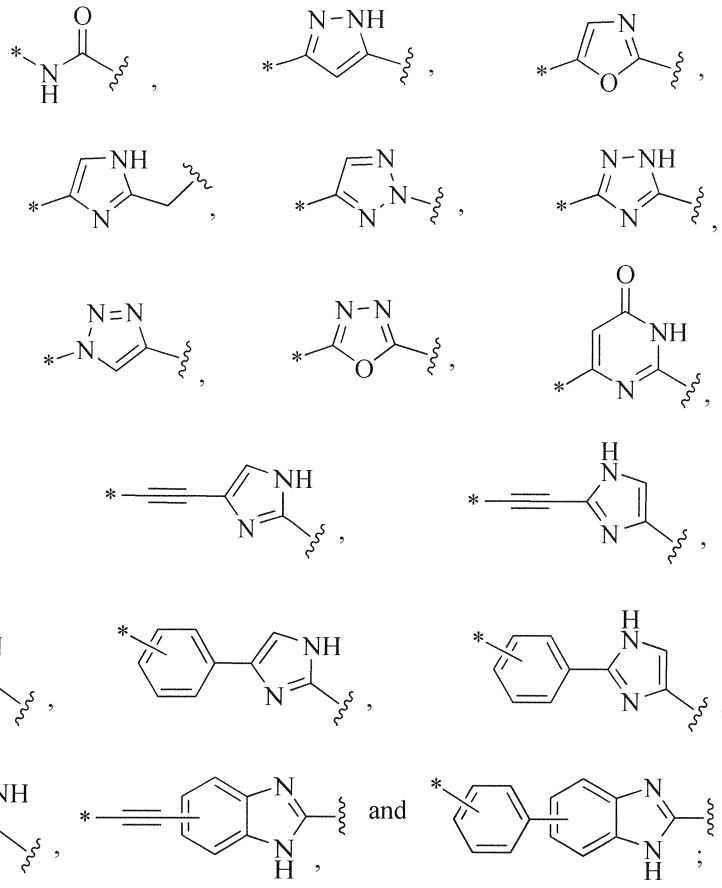
6. The compound of claim 5, having the structure of Formula ICd:

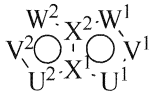
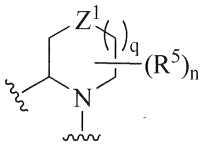
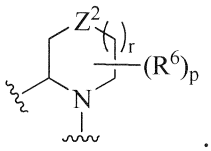


(ICd)

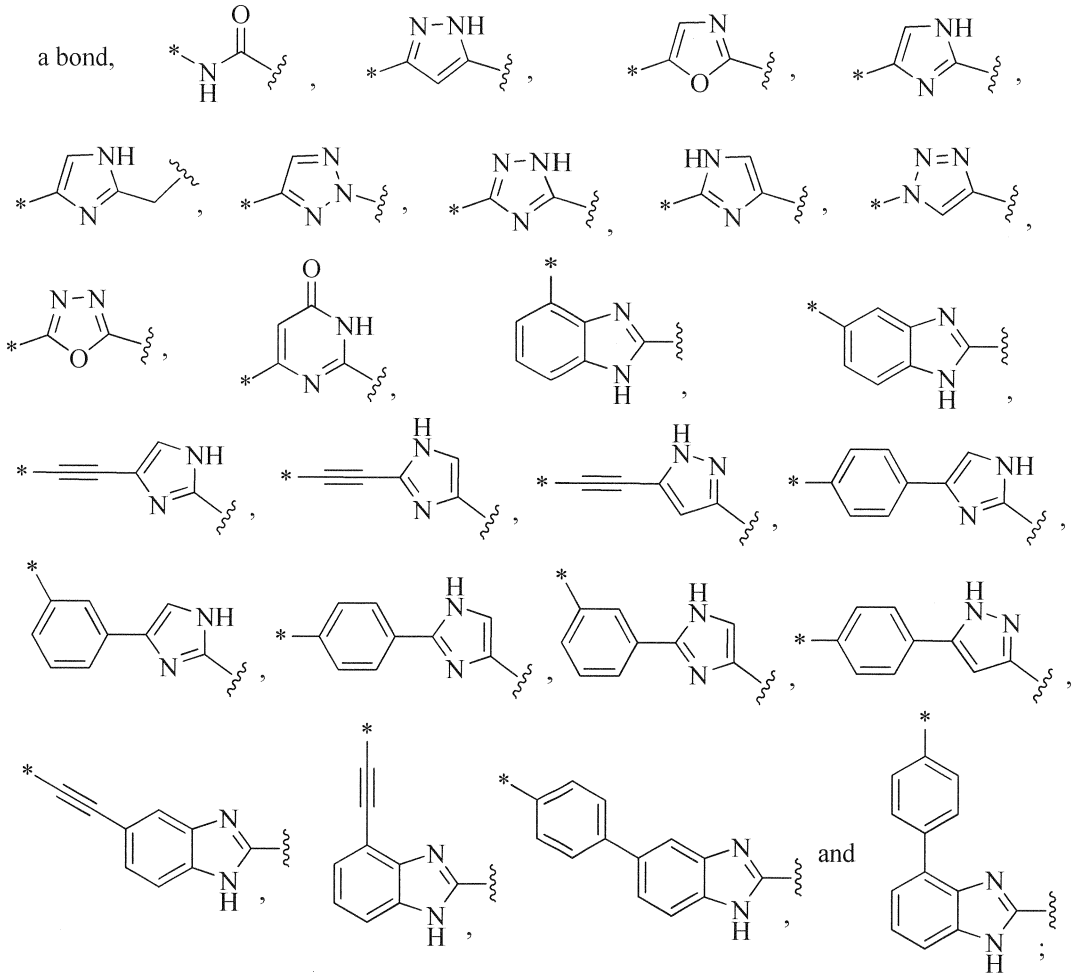
wherein each R^{1e} is independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q; or (c) $-C(O)R^{1b}$, $-C(O)OR^{1b}$, or $-C(O)NR^{1b}R^{1d}$.

7. The compound of claim 1, wherein L^1 and L^2 are each independently selected from the group consisting of:

a bond, 

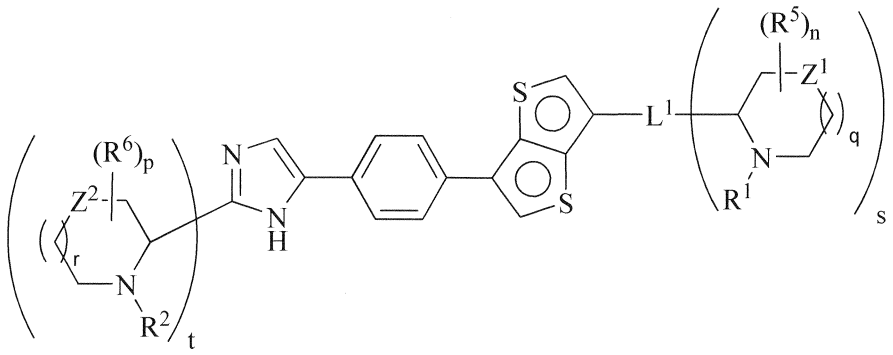
wherein each moiety is optionally substituted with one, two, three, or four R^3; the star (*) on each moiety represents the point of attachment through which the moiety is connected to U^1 or W^2 of  ; and the zigzag line () on each moiety represents the point of attachment through which the moiety is connected to  or  .

8. The compound of claim 7, wherein L^1 and L^2 are each independently selected from the group consisting of:

a bond, 

wherein each moiety is optionally substituted with one, two, three, or four R^3.

9. A compound of Formula IIC:



(IIC)

or a single enantiomer, a racemic mixture, a mixture of diastereomers, or an isotopic variant thereof; or a pharmaceutically acceptable salt or solvate thereof;

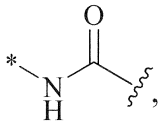
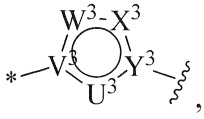
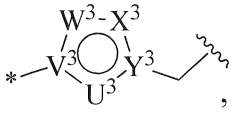
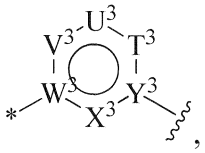
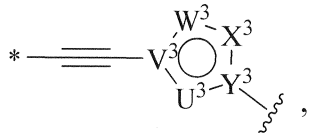
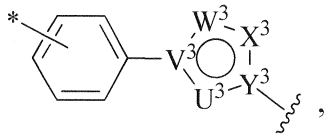
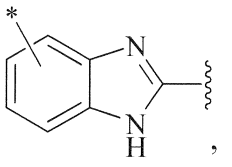
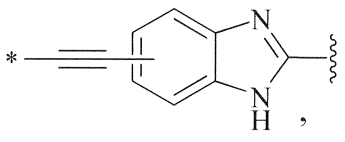
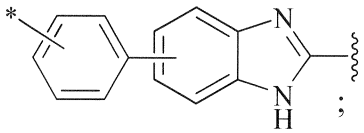
wherein:

R^1 and R^2 are each independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) –$C(O)R^{1a}$, –$C(O)CH(NR^{1b}R^{1c})R^{1a}$, –$C(O)CH(N(R^{1c})C(O)R^{1b})R^{1a}$, –$C(O)CH(N(R^{1c})C(O)OR^{1b})R^{1a}$, –$C(O)CH(N(R^{1c})C(O)NR^{1b}R^{1d})R^{1a}$, –$C(O)OR^{1a}$, –$C(O)NR^{1b}R^{1c}$, –$C(NR^{1a})NR^{1b}R^{1c}$, –$P(O)(OR^{1a})R^{1d}$, –$CH_2P(O)(OR^{1a})R^{1d}$, –$S(O)R^{1a}$, –$S(O)_2R^{1a}$, –$S(O)NR^{1b}R^{1c}$, or –$S(O)_2NR^{1b}R^{1c}$;

each R^3, R^5, and R^6 is independently (a) cyano, halo, or nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) –$C(O)R^{1a}$, –$C(O)OR^{1a}$, –$C(O)NR^{1b}R^{1c}$, –$C(NR^{1a})NR^{1b}R^{1c}$, –OR^{1a}, –$OC(O)R^{1a}$, –$OC(O)OR^{1a}$, –$OC(O)NR^{1b}R^{1c}$, –$OC(=NR^{1a})NR^{1b}R^{1c}$, –$OS(O)R^{1a}$, –$OS(O)_2R^{1a}$, –$OS(O)NR^{1b}R^{1c}$, –$OS(O)_2NR^{1b}R^{1c}$, –$NR^{1b}R^{1c}$, –$NR^{1a}C(O)R^{1d}$, –$NR^{1a}C(O)OR^{1d}$, –$NR^{1a}C(O)NR^{1b}R^{1c}$, –$NR^{1a}C(=NR^{1d})NR^{1b}R^{1c}$, –$NR^{1a}S(O)R^{1d}$, –$NR^{1a}S(O)_2R^{1d}$, –$NR^{1a}S(O)NR^{1b}R^{1c}$, –$NR^{1a}S(O)_2NR^{1b}R^{1c}$, –$SR^{1a}$, –$S(O)R^{1a}$, –$S(O)_2R^{1a}$, –$S(O)NR^{1b}R^{1c}$, or –$S(O)_2NR^{1b}R^{1c}$; or

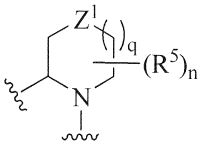
two R^5 or two R^6 that are attached to the same ring are linked together to form a bond, –O–, –NR^7–, –S–, C_{1-6} alkylene, C_{1-6} heteroalkylene, C_{2-6} alkenylene, or C_{2-6} heteroalkenylene;

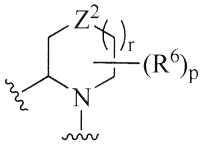
L^1 is independently selected from:

a bond, , , , , , , , , and ;

wherein each moiety is optionally substituted with one, two, three, or four R^3; the star (*) on each moiety represents the point of attachment thought which the moiety is connected to the thieno[3,2-*b*]thienyl moiety; and the zigzag line (≋) on each

moiety represents the point of attachment through which the moiety is connected to



or


; and wherein T^3 is a bond, C, N, O, S, CR^{3a}, or NR^{3a}; U^3, V^3, W^3, and X^3 are each independently C, N, O, S, CR^{3a}, or NR^{3a}; and Y^3 is C or N;

Z^1 and Z^2 are each a bond;

each R^{1a}, R^{1b}, R^{1c}, and R^{1d} is independently hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or R^{1a} and R^{1c} together with the C and N atoms to which they are attached form heterocyclyl; or R^{1b} and R^{1c} together with the N atom to which they are attached form heterocyclyl;

n and p are each independently an integer of 0, 1, 2, 3, 4, 5, 6, or 7;

q and r are each independently an integer of 1, 2, 3, or 4; and

s and t are each an integer of 1;

wherein each alkyl, alkylene, heteroalkylene, alkenyl, alkenylene, heteroalkenylene, alkynyl, cycloalkyl, aryl, aralkyl, heteroaryl, and heterocyclyl is optionally substituted with one or more substituents Q, where each Q is independently selected from (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl, each of which is further optionally substituted with one or more substituents Q^a; and (c) $-C(O)R^a$, $-C(O)OR^a$, $-C(O)NR^bR^c$, $-C(NR^a)NR^bR^c$, $-OR^a$,

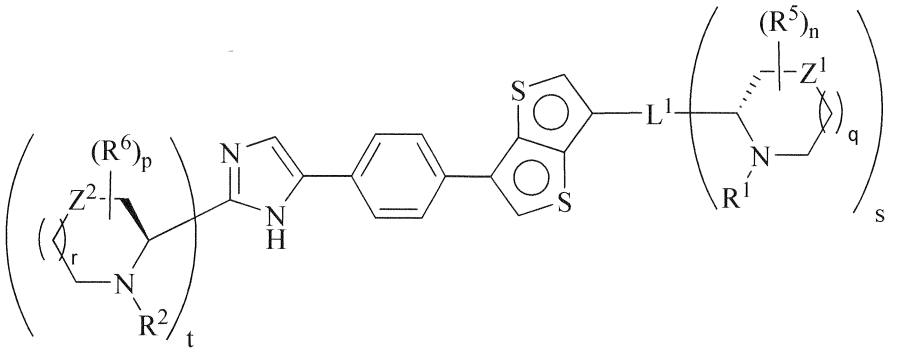
$-OC(O)R^a$, $-OC(O)OR^a$, $-OC(O)NR^bR^c$, $-OC(=NR^a)NR^bR^c$, $-OS(O)R^a$, $-OS(O)_2R^a$, $-OS(O)NR^bR^c$, $-OS(O)_2NR^bR^c$, $-NR^bR^c$, $-NR^aC(O)R^d$, $-NR^aC(O)OR^d$, $-NR^aC(O)NR^bR^c$, $-NR^aC(=NR^d)NR^bR^c$, $-NR^aS(O)R^d$, $-NR^aS(O)_2R^d$, $-NR^aS(O)NR^bR^c$, $-NR^aS(O)_2NR^bR^c$, $-SR^a$,

$-S(O)R^a$, $-S(O)_2R^a$, $-S(O)NR^bR^c$, and $-S(O)_2NR^bR^c$, wherein each R^a, R^b, R^c, and R^d is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q^a; or (iii) R^b and R^c together with the N atom to which they are attached form heterocyclyl, optionally substituted with one or more substituents Q^a;

wherein each Q^a is independently selected from the group consisting of (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl; and (c) $-C(O)R^e$, $-C(O)OR^e$, $-C(O)NR^fR^g$, –

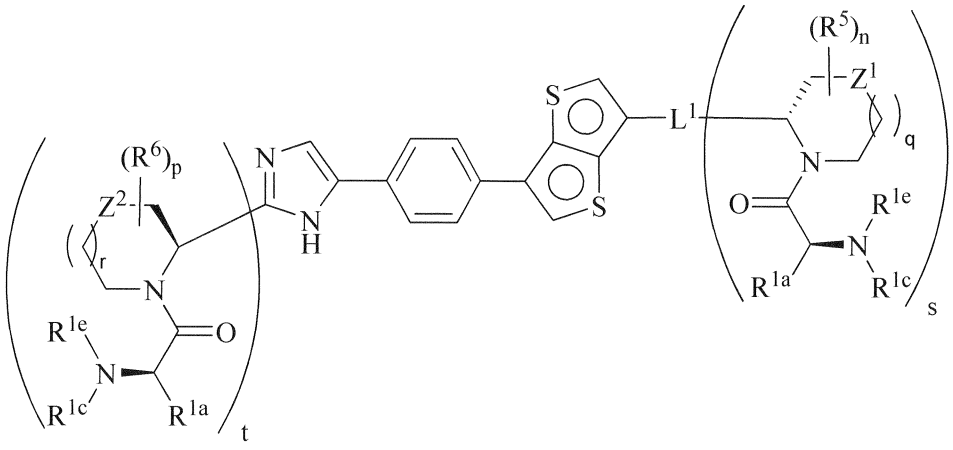
$C(NR^e)NR^fR^g$, $-OR^e$,
$-OC(O)R^e$, $-OC(O)OR^e$, $-OC(O)NR^fR^g$, $-OC(=NR^e)NR^fR^g$, $-OS(O)R^e$, $-OS(O)_2R^e$, $-OS(O)NR^fR^g$, $-OS(O)_2NR^fR^g$, $-NR^fR^g$, $-NR^eC(O)R^h$, $-NR^eC(O)OR^f$, $-NR^eC(O)NR^fR^g$, $-NR^eC(=NR^h)NR^fR^g$, $-NR^eS(O)R^h$, $-NR^eS(O)_2R^h$, $-NR^eS(O)NR^fR^g$, $-NR^eS(O)_2NR^fR^g$, $-SR^e$, $-S(O)R^e$, $-S(O)_2R^e$, $-S(O)NR^fR^g$, and $-S(O)_2NR^fR^g$; wherein each R^e, R^f, R^g, and R^h is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (iii) R^f and R^g together with the N atom to which they are attached form heterocyclyl.

10. The compound of claim 9, having the structure of Formula IICa:



(IICa)

11. The compound of claim 9, having the structure of Formula IICd:



(IICd)

wherein each R^{1e} is independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q; or (c) $-C(O)R^{1b}$, $-C(O)OR^{1b}$, or $-C(O)NR^{1b}R^{1d}$.

12. The compound of claim 9, wherein R^1 is $-C(O)R^{1a}$, $-C(O)CH(NR^{1b}R^{1c})R^{1a}$, $-C(O)CH[N(C(O)R^{1b})R^{1c}]R^{1a}$, $-C(O)CH[N(C(O)OR^{1b})R^{1c}]R^{1a}$, or $-C(O)CH[N(C(O)NR^{1d}R^{1b})R^{1c}]R^{1a}$.

13. The compound of claim 12, wherein R^1 is $-C(O)CH[N(C(O)OR^{1b})R^{1c}]R^{1a}$.

14. The compound of claim 9, wherein R^2 is $-C(O)R^{1a}$, $-C(O)CH(NR^{1b}R^{1c})R^{1a}$, $-C(O)CH[N(C(O)R^{1b})R^{1c}]R^{1a}$, $-C(O)CH[N(C(O)OR^{1b})R^{1c}]R^{1a}$, or $-C(O)CH[N(C(O)NR^{1d}R^{1b})R^{1c}]R^{1a}$.

15. The compound of claim 14, wherein R^2 is $-C(O)CH[N(C(O)OR^{1b})R^{1c}]R^{1a}$.

16. The compound of claim 11, wherein R^{1e} is hydrogen or $-C(O)OR^{1b}$.

17. The compound of claim 11, wherein each R^{1a} is independently hydrogen, methyl, isopropyl, 2-methylpropyl, 1-methylpropyl, 2-methylthioethyl, phenyl, benzyl, 3-indolylmethyl, hydroxymethyl, 1-hydroxyethyl, sulfhydrylmethyl, 4-hydroxybenzyl, aminocarbonylmethyl, 2-(aminocarbonyl)ethyl, carboxymethyl, 2-carboxyethyl, 4-aminobutyl, 3-guanidinopropyl, or 5-imidazolylmethyl.

18. The compound of claim 16, wherein R^{1b} is methyl, ethyl, propyl, or butyl.

19. The compound of claim 11, wherein R^{1c} is hydrogen.

20. The compound of claim 1, wherein each R^{3a} is independently hydrogen, oxo, chloro, fluoro, nitro, amino, hydroxy, methyl, trifluoromethyl, cyclohexyl, phenyl, methoxy, or methoxycarbonyl.

21. The compound of claim 1, wherein R^3 is oxo, chloro, fluoro, nitro, amino, hydroxy, methyl, trifluoromethyl, cyclohexyl, phenyl, methoxy, or methoxycarbonyl.

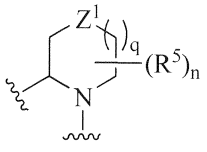
22. The compound of 9, wherein n is 0.

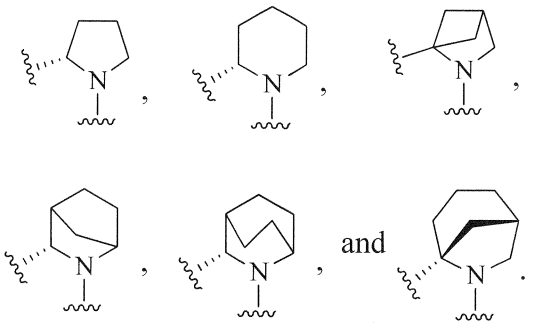
23. The compound of claim 1, wherein two R^5 groups are linked together to form C_{1-6} alkylene, optionally substituted with one or more substituents Q.

24. The compound of claim 1, wherein two R^5 groups are linked together to form

methylene or ethylene.

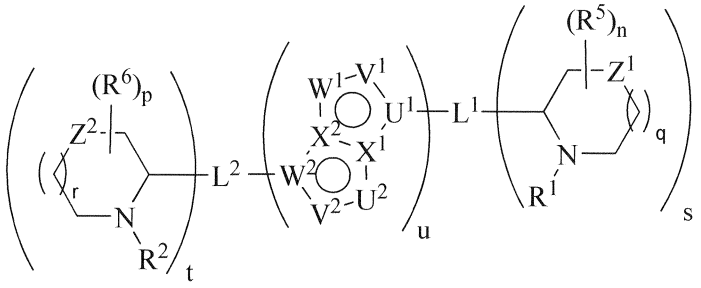
25. The compound of claim 1, wherein q is 1 or 2.

26. The compound of claim 9, wherein the moiety  has the structure of:



27. The compound of claim 9, wherein p is 0.

28. A compound of Formula IIIB:



(IIIB)

or a single enantiomer, a racemic mixture, a mixture of diastereomers, or an isotopic variant thereof; or a pharmaceutically acceptable salt or solvate thereof;

wherein:

U^1, W^2, X^1, and X^2 are each C;

U^2 and W^1 are each S;

V^1 and V^2 are each independently CR^{3a};

R^1 and R^2 are each independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) –$C(O)R^{1a}$,

$-C(O)CH(NR^{1b}R^{1c})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)R^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)OR^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)NR^{1b}R^{1d})R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-P(O)(OR^{1a})R^{1d}$, $-CH_2P(O)(OR^{1a})R^{1d}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$;

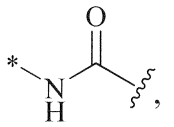
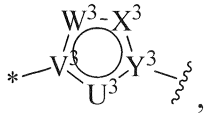
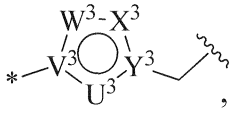
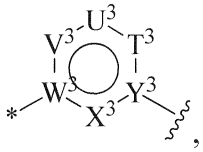
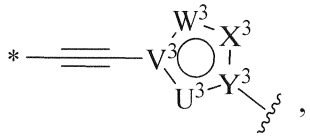
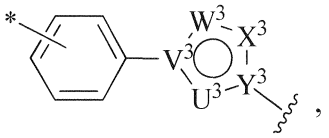
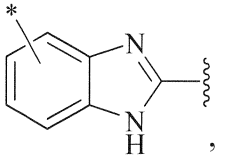
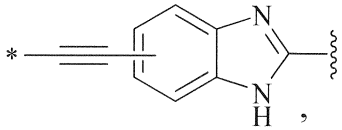
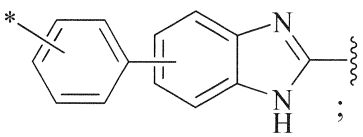
each R^{3a} is independently hydrogen or R^3;

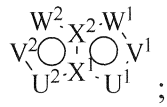
each R^3, R^5, and R^6 is independently (a) cyano, halo, or nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c)

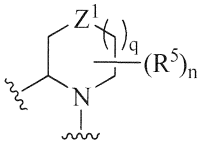
$-C(O)R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-OR^{1a}$, $-OC(O)R^{1a}$, $-OC(O)OR^{1a}$, $-OC(O)NR^{1b}R^{1c}$, $-OC(=NR^{1a})NR^{1b}R^{1c}$, $-OS(O)R^{1a}$, $-OS(O)_2R^{1a}$, $-OS(O)NR^{1b}R^{1c}$, $-OS(O)_2NR^{1b}R^{1c}$, $-NR^{1b}R^{1c}$, $-NR^{1a}C(O)R^{1d}$, $-NR^{1a}C(O)OR^{1d}$, $-NR^{1a}C(O)NR^{1b}R^{1c}$, $-NR^{1a}C(=NR^{1d})NR^{1b}R^{1c}$, $-NR^{1a}S(O)R^{1d}$, $-NR^{1a}S(O)_2R^{1d}$, $-NR^{1a}S(O)NR^{1b}R^{1c}$, $-NR^{1a}S(O)_2NR^{1b}R^{1c}$, $-SR^{1a}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$; or

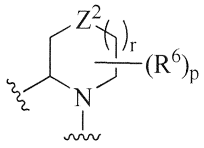
two R^5 or two R^6 that are attached to the same ring are linked together to form a bond, $-O-$, $-NR^7-$, $-S-$, C_{1-6} alkylene, C_{1-6} heteroalkylene, C_{2-6} alkenylene, or C_{2-6} heteroalkenylene;

L^1 and L^2 are each independently selected from:

a bond, , , , , , , , , and ;

wherein each moiety is optionally substituted with one, two, three, or four R^3; the star (*) on each moiety represents the point of attachment thought which the moiety is connected to U^1 or W^2 of ; and the zigzag line () on each moiety

represents the point of attachment through which the moiety is connected to 

or  ; and wherein T^3 is a bond, C, N, O, S, CR^{3a}, or NR^{3a}; U^3, V^3, W^3, and X^3 are each independently C, N, O, S, CR^{3a}, or NR^{3a}; and Y^3 is C or N;

Z^1 and Z^2 are each a bond;

each R^{1a}, R^{1b}, R^{1c}, and R^{1d} is independently hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or R^{1a} and R^{1c} together with the C and N atoms to which they are attached form heterocyclyl; or R^{1b} and R^{1c} together with the N atom to which they are attached form heterocyclyl;

n is an integer of 0, 1, 2, 3, 4, 5, 6, or 7;

p is an integer of 2, 3, 4, 5, 6, or 7;

q and r are each independently an integer of 1, 2, 3, or 4; and

s, t, and u are each an integer of 1;

wherein each alkyl, alkylene, heteroalkylene, alkenyl, alkenylene, heteroalkenylene, alkynyl, cycloalkyl, aryl, aralkyl, heteroaryl, and heterocyclyl is optionally substituted with one or more substituents Q, where each Q is independently selected from (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl, each of which is further optionally substituted with one or more substituents Q^a; and (c) $-C(O)R^a$, $-C(O)OR^a$, $-C(O)NR^bR^c$, $-C(NR^a)NR^bR^c$, $-OR^a$,

$-OC(O)R^a$, $-OC(O)OR^a$, $-OC(O)NR^bR^c$, $-OC(=NR^a)NR^bR^c$, $-OS(O)R^a$, $-OS(O)_2R^a$, $-OS(O)NR^bR^c$, $-OS(O)_2NR^bR^c$, $-NR^bR^c$, $-NR^aC(O)R^d$, $-NR^aC(O)OR^d$, $-NR^aC(O)NR^bR^c$, $-NR^aC(=NR^d)NR^bR^c$, $-NR^aS(O)R^d$, $-NR^aS(O)_2R^d$, $-NR^aS(O)NR^bR^c$, $-NR^aS(O)_2NR^bR^c$, $-SR^a$,

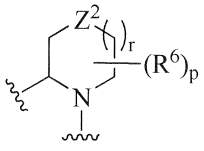
$-S(O)R^a$, $-S(O)_2R^a$, $-S(O)NR^bR^c$, and $-S(O)_2NR^bR^c$, wherein each R^a, R^b, R^c, and R^d is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q^a; or (iii) R^b and R^c together with the N atom to which they are attached form heterocyclyl, optionally substituted with one or more substituents Q^a;

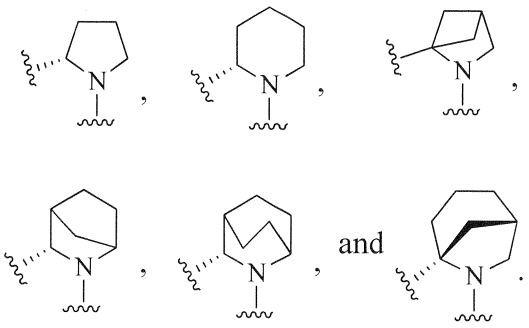
wherein each Q^a is independently selected from the group consisting of (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl; and (c) $-C(O)R^e$, $-C(O)OR^e$, $-C(O)NR^fR^g$, $-C(NR^e)NR^fR^g$, $-OR^e$, $-OC(O)R^e$, $-OC(O)OR^e$, $-OC(O)NR^fR^g$, $-OC(=NR^e)NR^fR^g$, $-OS(O)R^e$, $-OS(O)_2R^e$, $-OS(O)NR^fR^g$, $-OS(O)_2NR^fR^g$, $-NR^fR^g$, $-NR^eC(O)R^h$, $-NR^eC(O)OR^f$, $-NR^eC(O)NR^fR^g$, $-NR^eC(=NR^h)NR^fR^g$, $-NR^eS(O)R^h$, $-NR^eS(O)_2R^h$, $-NR^eS(O)NR^fR^g$, $-NR^eS(O)_2NR^fR^g$, $-SR^e$, $-S(O)R^e$, $-S(O)_2R^e$, $-S(O)NR^fR^g$, and $-S(O)_2NR^fR^g$; wherein each R^e, R^f, R^g, and R^h is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (iii) R^f and R^g together with the N atom to which they are attached form heterocyclyl.

29. The compound of claim 28, wherein two R^6 groups are linked together to form C_{1-6} alkylene, optionally substituted with one or more substituents Q.

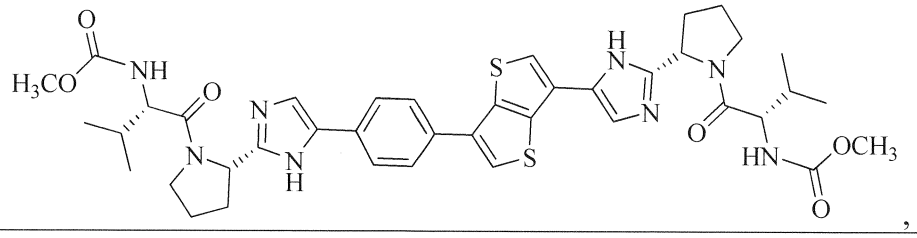
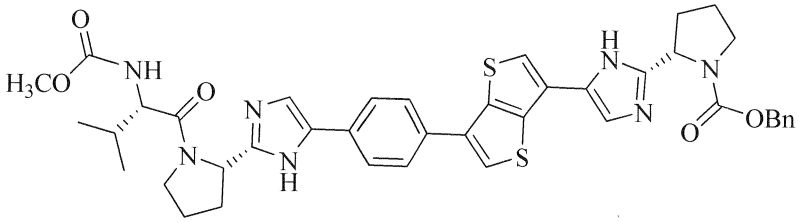
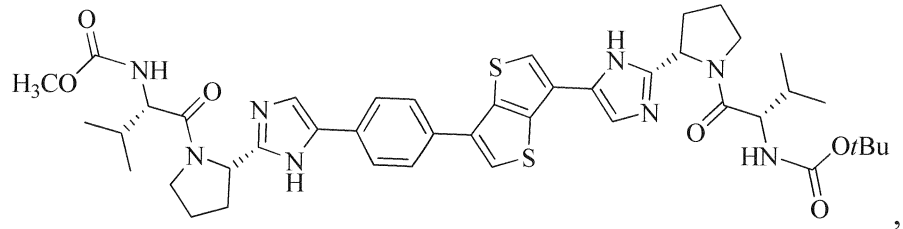
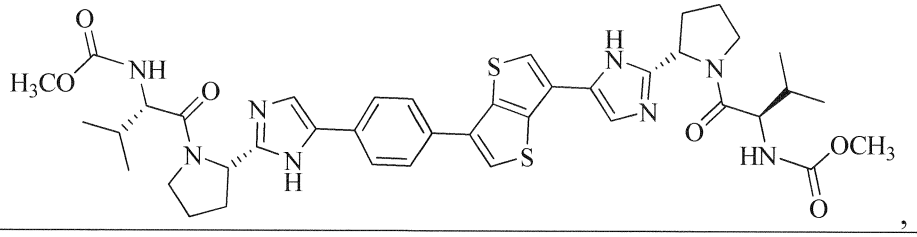
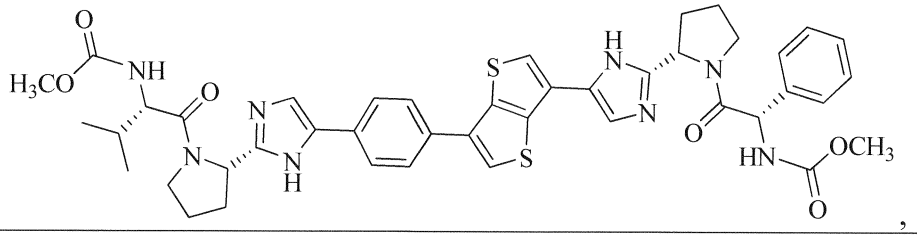
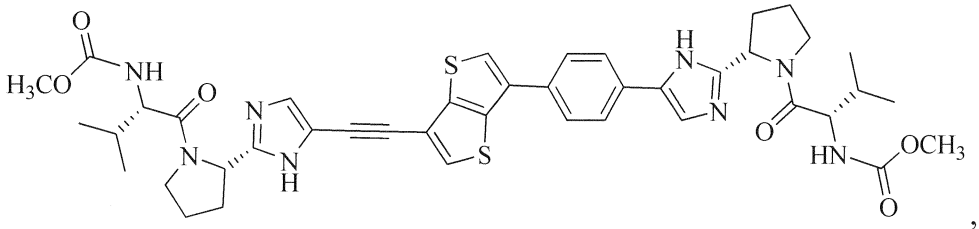
30. The compound of claim 29, wherein two R^6 groups are linked together to form methylene or ethylene.

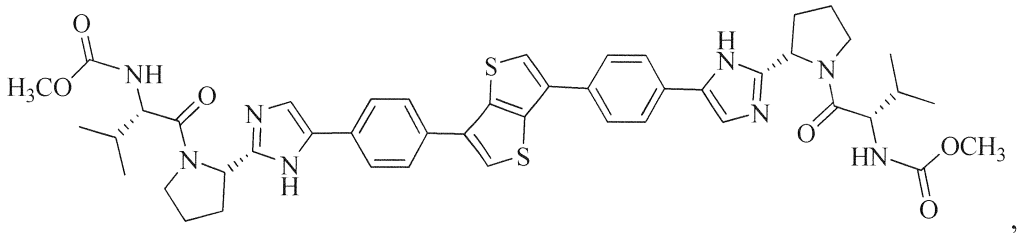
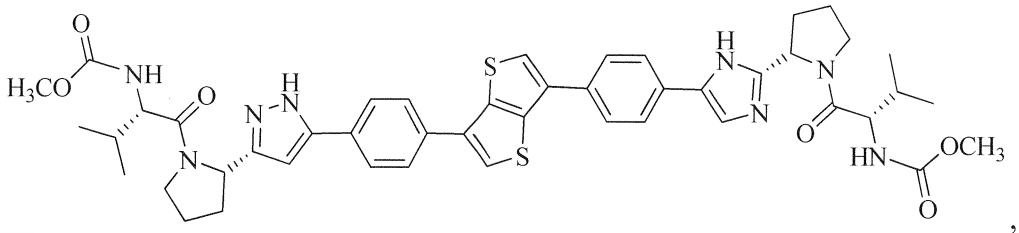
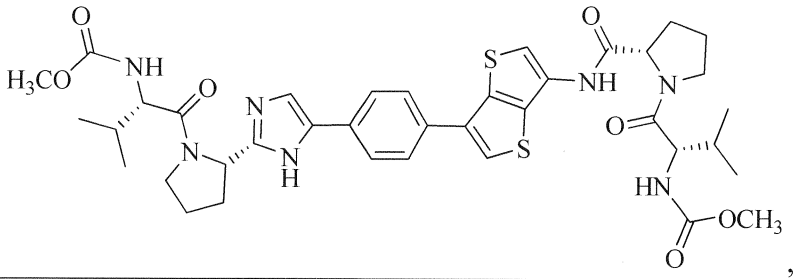
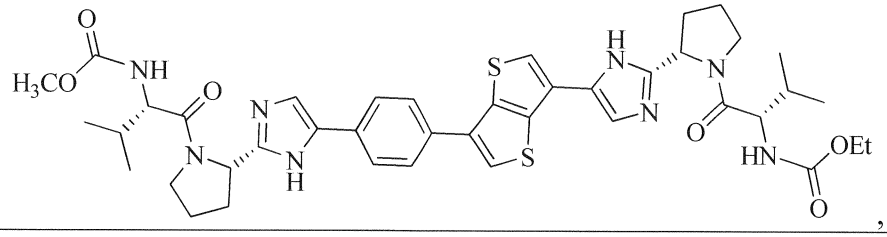
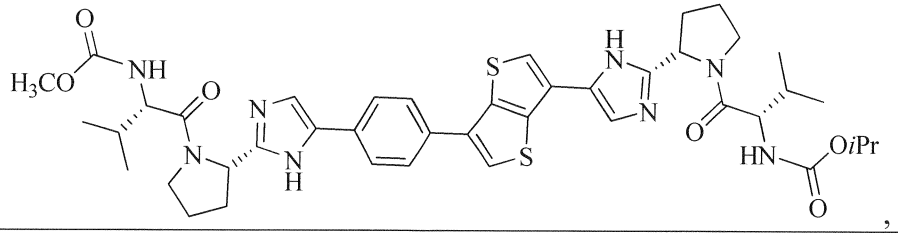
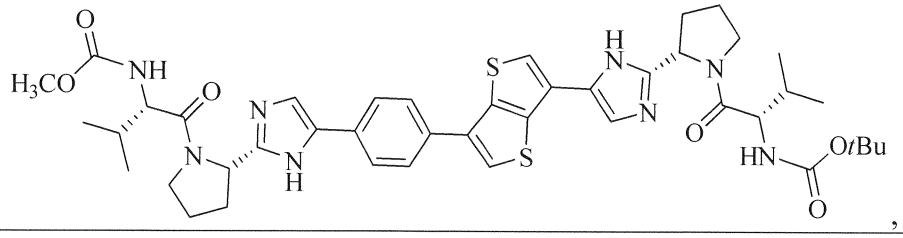
31. The compound of claim 28, wherein r is 1 or 2.

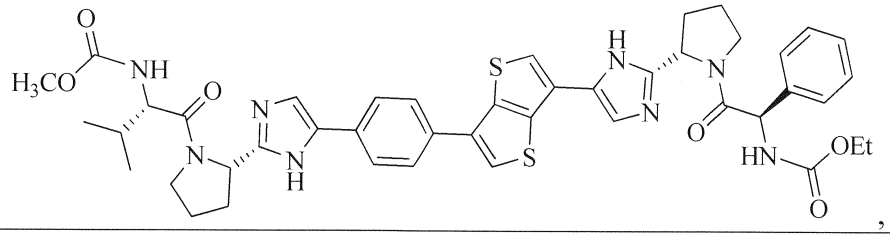
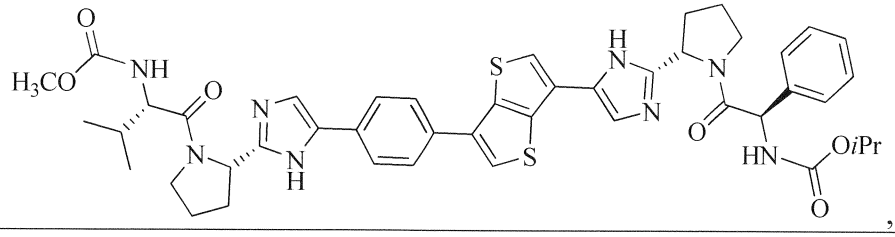
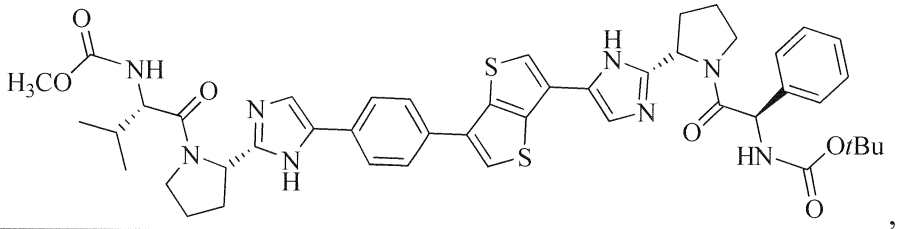
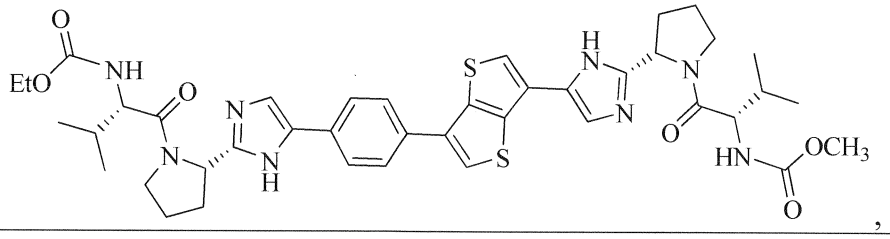
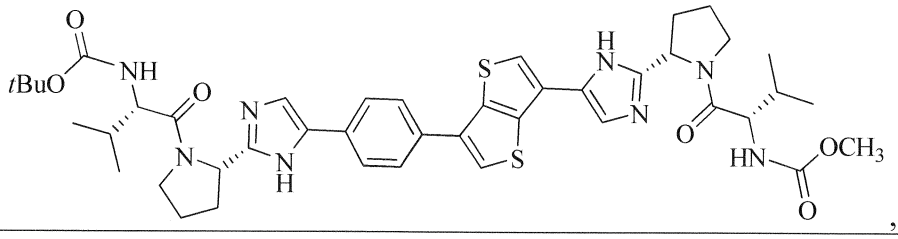
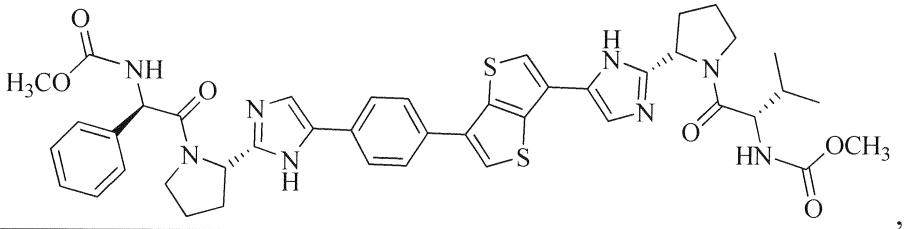
32. The compound of claim 9, wherein the moiety  has the structure of:

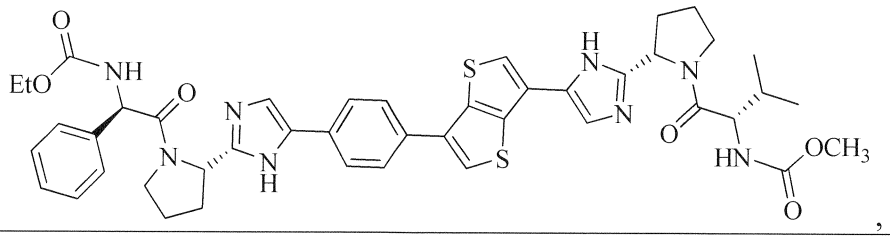
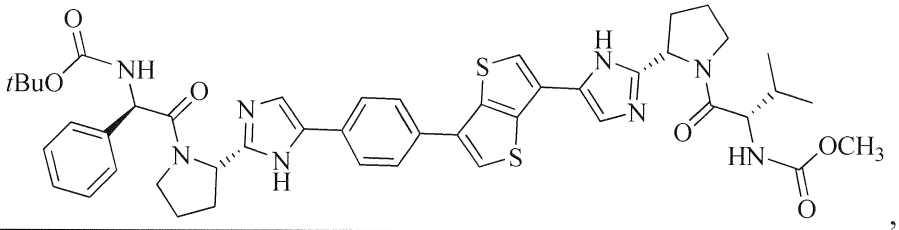
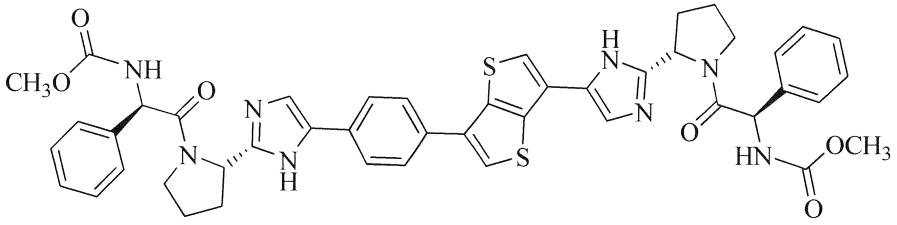
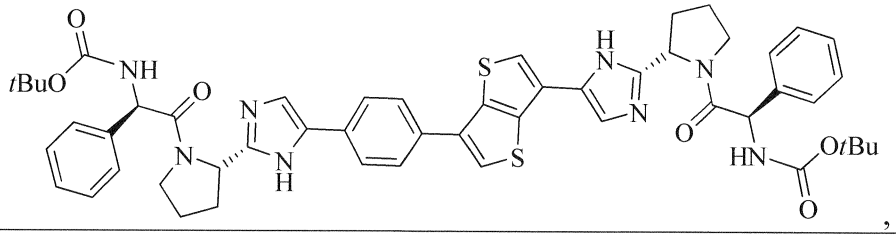
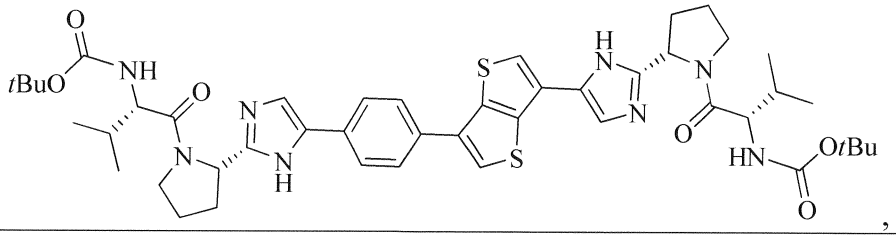
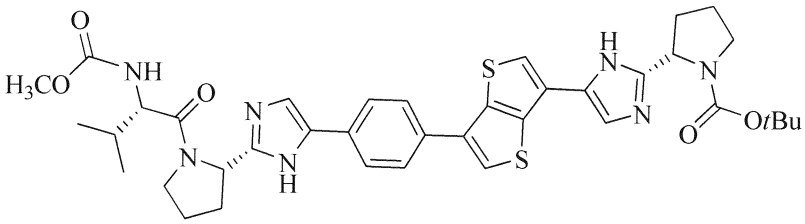


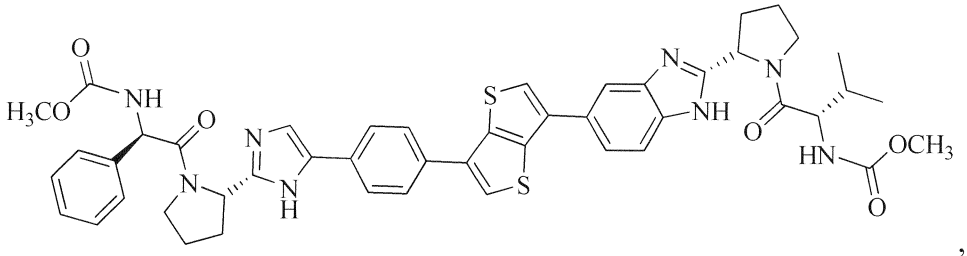
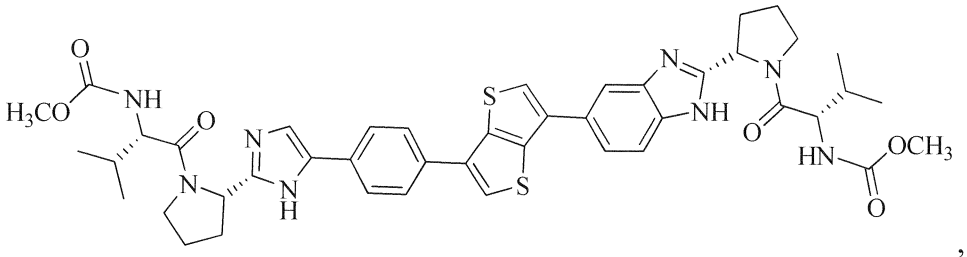
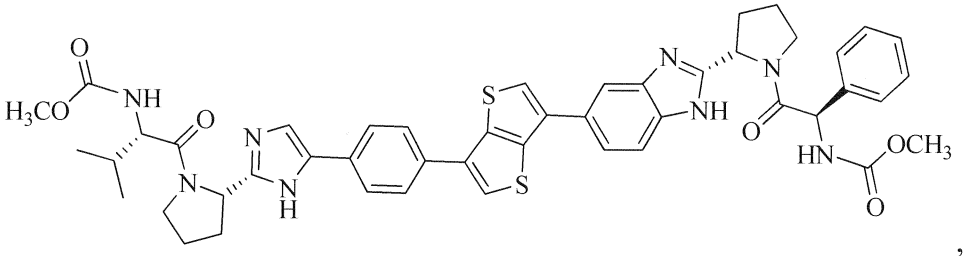
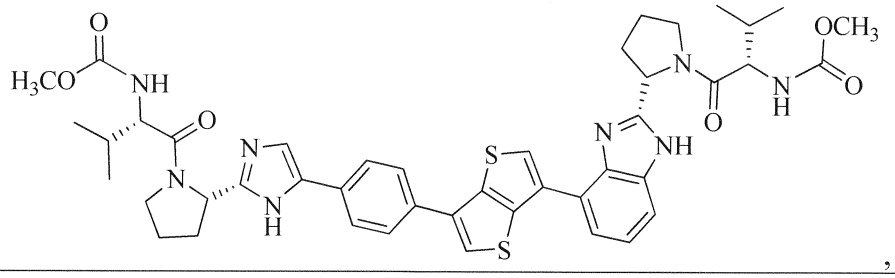
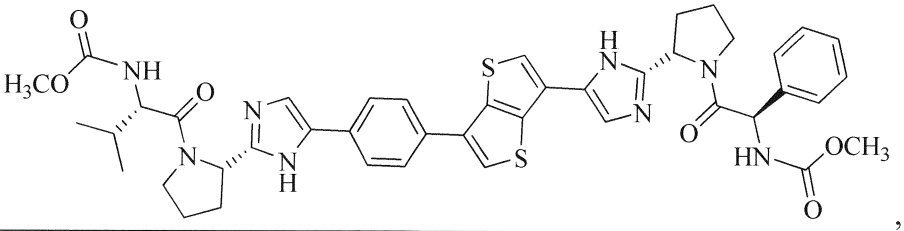
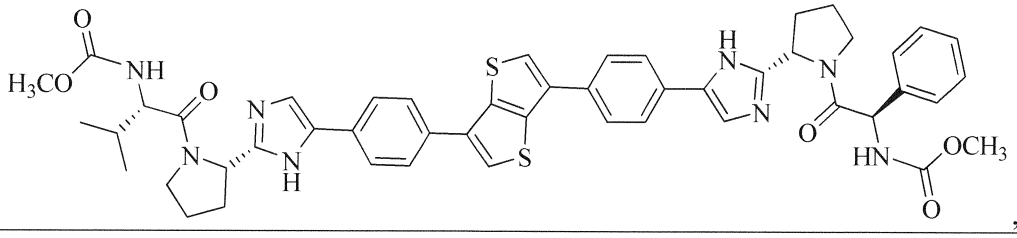
33. The compound of claim 9, selected from the group consisting of:

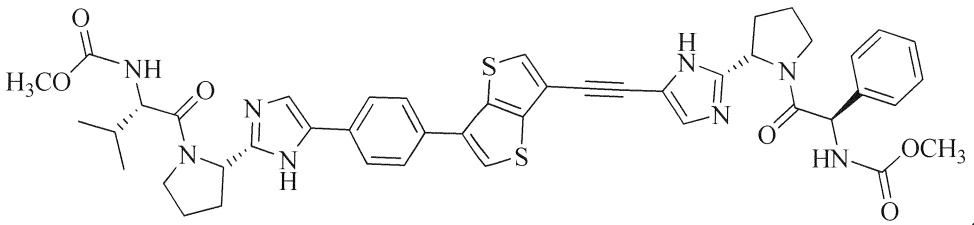
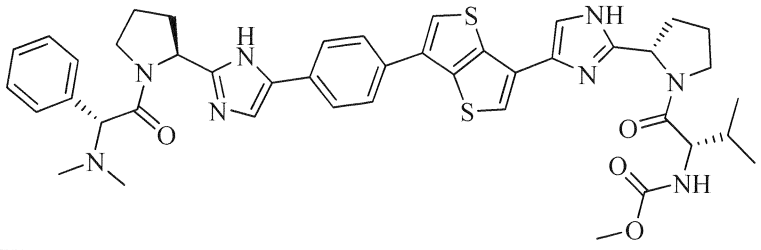
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A118	 ,
A119	 ,
A151	 ,

A169	 ,
A171	 ,
A172	 ,
A182	 ,
A200	 ,
A205	 ,

A206	 , and
A214	 ;

and isotopic variants thereof; and pharmaceutically acceptable salts and solvates thereof.

34. A pharmaceutical composition comprising the compound of claim 9 and one or more pharmaceutically acceptable carriers.

35. The pharmaceutical composition of claim 34, further comprising an antiviral agent.

36. The pharmaceutical composition of claim 35, wherein the antiviral agent is selected from the group consisting of an interferon, ribavirin, an interleukin, an NS3 protease inhibitor, a cysteine protease inhibitor, a phenathrenequinone, a thiazolidine, a benzanilide, a helicase inhibitor, a polymerase inhibitor, a nucleotide analogue, a liotoxin, acerulenin, an antisense phosphorothioate oligodeoxynucleotide, an inhibitor of IRES-dependent translation, and a ribozyme.

37. The pharmaceutical composition of claim 36, wherein the antiviral agent is an interferon.

38. The pharmaceutical composition of claim 37, wherein the interferon is selected from the group consisting of pegylated interferon alpha 2a, interferon alfahcon-1, natural interferon, albuferon, interferon beta-1a, omega interferon, interferon alpha, interferon gamma, interferon tau, interferon delta, and interferon gamma-1b.

39. The pharmaceutical composition of claim 34, wherein the composition is

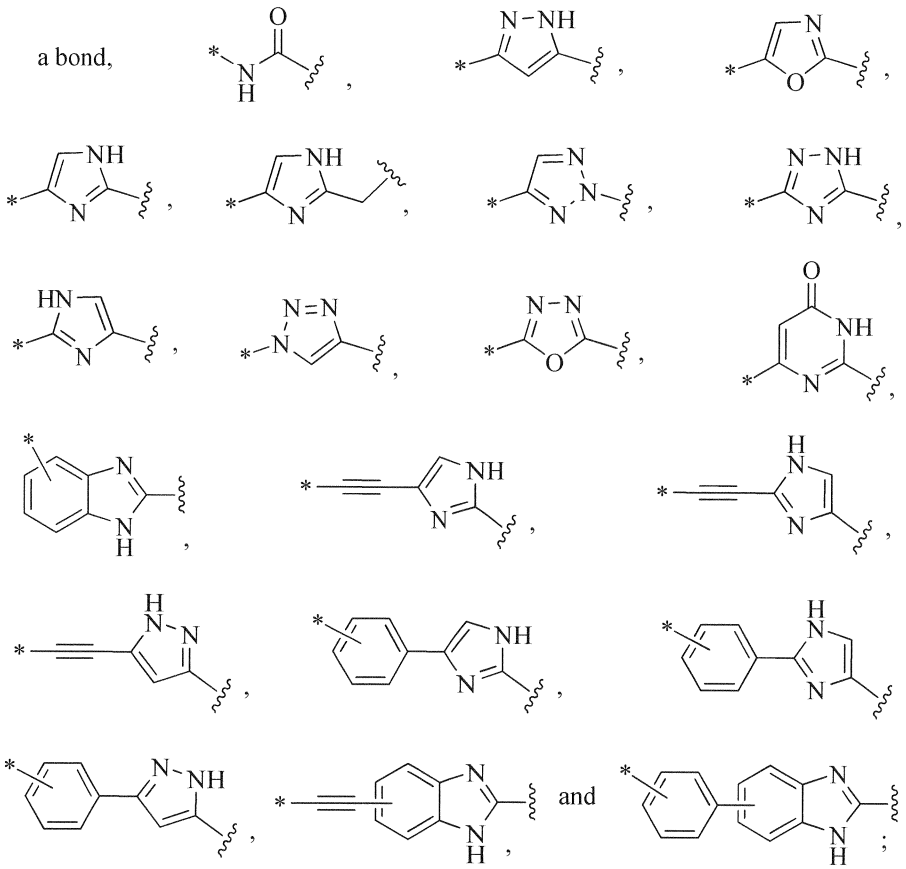
formulated for single dose administration.

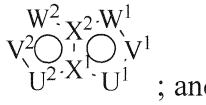
40. The pharmaceutical composition of claim 34, wherein the composition is formulated as oral, parenteral, or intravenous dosage form.

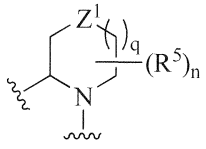
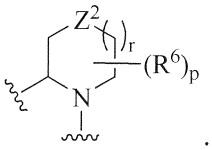
41. The pharmaceutical composition of claim 40, wherein the oral dosage form is a tablet or capsule.

42. The pharmaceutical composition of claim 34, wherein the compound is administered in a dose of about 0.5 milligram to about 1,000 milligram daily.

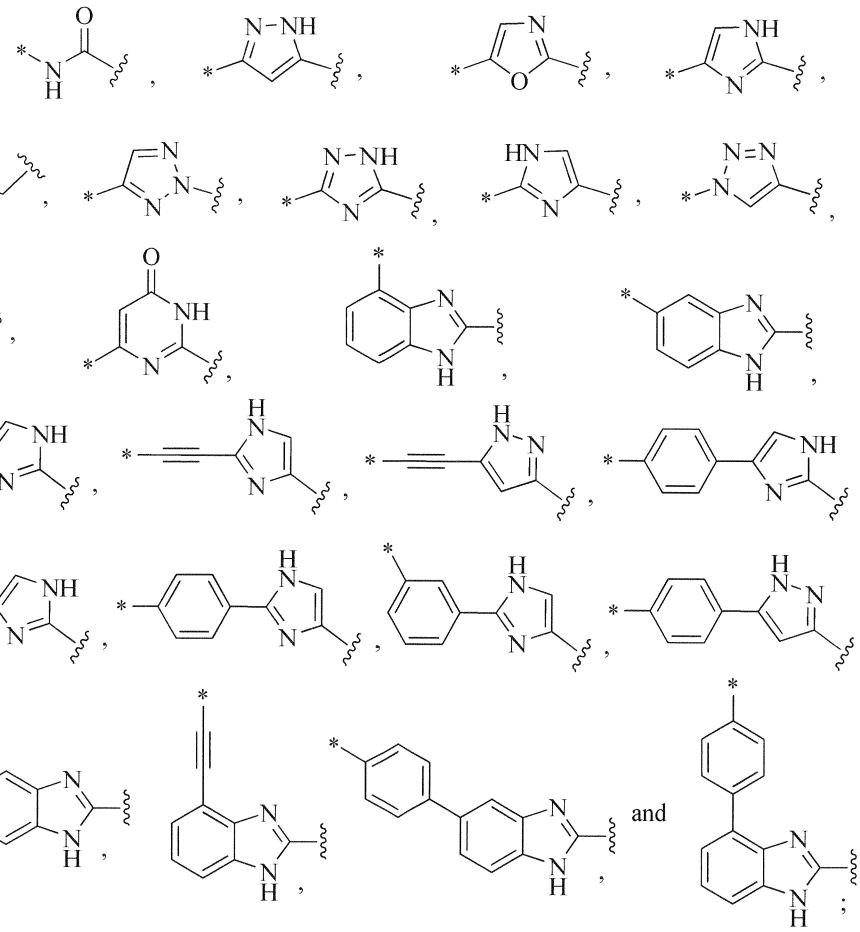
43. The compound of claim 9, wherein L^1 is independently selected from the group consisting of:

a bond, 
and
;

wherein each moiety is optionally substituted with one, two, three, or four R^3; the star (*) on each moiety represents the point of attachment through which the moiety is connected to U^1 or W^2 of 
; and the zigzag line () on each moiety represents the point of

attachment through which the moiety is connected to  or .

44. The compound of claim 9, wherein L^1 is independently selected from the group consisting of:

a bond, 

wherein each moiety is optionally substituted with one, two, three, or four R^3.

45. The compound of claim 9, wherein n is an integer of 2 or more.

46. The compound of claim 45, wherein two R^5 groups are linked together to form C_{1-6} alkylene, optionally substituted with one or more substituents Q.

47. The compound of claim 45, wherein two R^5 groups are linked together to form methylene or ethylene.

48. The compound of claim 9, wherein q is 1 or 2.

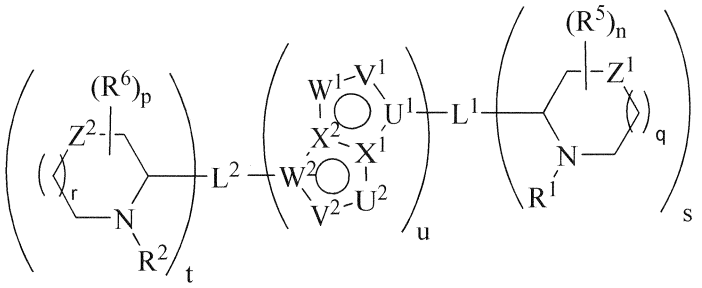
49. The compound of claim 9, wherein p is an integer of 2 or more.

50. The compound of claim 49, wherein two R^6 groups are linked together to form C_{1-6} alkylene, optionally substituted with one or more substituents Q.

51. The compound of claim 49, wherein two R^6 groups are linked together to form methylene or ethylene.

52. The compound of claim 9, wherein r is 1 or 2.

53. A compound of Formula IIIB:



(IIIB)

or a single enantiomer, a racemic mixture, a mixture of diastereomers, or an isotopic variant thereof; or a pharmaceutically acceptable salt or solvate thereof;

wherein:

U^1, W^2, X^1, and X^2 are each C;

U^2 and W^1 are each S;

V^1 and V^2 are each independently CR^{3a};

R^1 and R^2 are each independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) –$C(O)R^{1a}$, –$C(O)CH(NR^{1b}R^{1c})R^{1a}$, –$C(O)CH(N(R^{1c})C(O)R^{1b})R^{1a}$, –$C(O)CH(N(R^{1c})C(O)OR^{1b})R^{1a}$, –$C(O)CH(N(R^{1c})C(O)NR^{1b}R^{1d})R^{1a}$, –$C(O)OR^{1a}$, –$C(O)NR^{1b}R^{1c}$, –$C(NR^{1a})NR^{1b}R^{1c}$, –$P(O)(OR^{1a})R^{1d}$, –$CH_2P(O)(OR^{1a})R^{1d}$, –$S(O)R^{1a}$, –$S(O)_2R^{1a}$, –$S(O)NR^{1b}R^{1c}$, or –$S(O)_2NR^{1b}R^{1c}$;

each R^{3a} is independently hydrogen or R^3;

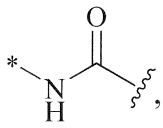
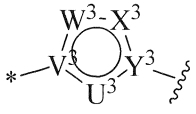
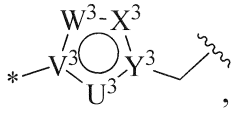
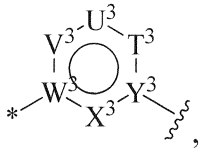
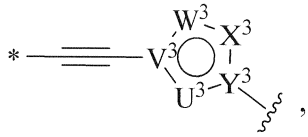
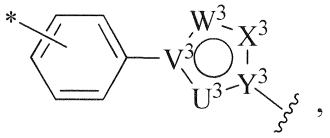
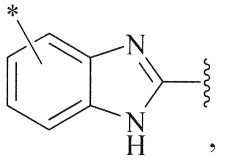
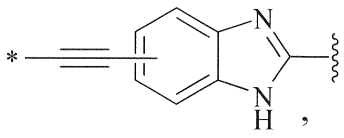
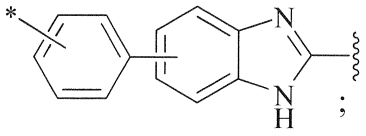
each R^3, R^5, and R^6 is independently (a) cyano, halo, or nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl;

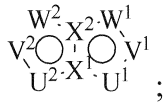
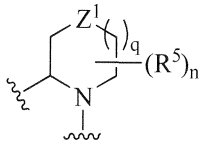
or (c)

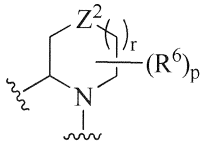
$-C(O)R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-OR^{1a}$, $-OC(O)R^{1a}$, $-OC(O)OR^{1a}$, $-OC(O)NR^{1b}R^{1c}$, $-OC(=NR^{1a})NR^{1b}R^{1c}$, $-OS(O)R^{1a}$, $-OS(O)_2R^{1a}$, $-OS(O)NR^{1b}R^{1c}$, $-OS(O)_2NR^{1b}R^{1c}$, $-NR^{1b}R^{1c}$, $-NR^{1a}C(O)R^{1d}$, $-NR^{1a}C(O)OR^{1d}$, $-NR^{1a}C(O)NR^{1b}R^{1c}$, $-NR^{1a}C(=NR^{1d})NR^{1b}R^{1c}$, $-NR^{1a}S(O)R^{1d}$, $-NR^{1a}S(O)_2R^{1d}$, $-NR^{1a}S(O)NR^{1b}R^{1c}$, $-NR^{1a}S(O)_2NR^{1b}R^{1c}$, $-SR^{1a}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$; or

two R^5 or two R^6 that are attached to the same ring are linked together to form a bond, –O–, $-NR^7$–, –S–, C_{1-6} alkylene, C_{1-6} heteroalkylene, C_{2-6} alkenylene, or C_{2-6} heteroalkenylene;

L^1 and L^2 are each independently selected from:

a bond, , , , , , , , , and ;

wherein each moiety is optionally substituted with one, two, three, or four R^3; the star (*) on each moiety represents the point of attachment thought which the moiety is connected to U^1 or W^2 of ; and the zigzag line () on each moiety represents the point of attachment through which the moiety is connected to 

or ; and wherein T^3 is a bond, C, N, O, S, CR^{3a}, or NR^{3a}; U^3, V^3, W^3, and X^3 are each independently C, N, O, S, CR^{3a}, or NR^{3a}; and Y^3 is C or N;

Z^1 and Z^2 are each a bond;

R^{1a} and R^{1c} together with the C and N atoms to which they are attached form pyrrolidinyl;

each R^{1b} and R^{1d} is independently hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl;

n and p are each independently an integer of 0, 1, 2, 3, 4, 5, 6, or 7;

q and r are each independently an integer of 1, 2, 3, or 4; and

s, t, and u are each an integer of 1;

wherein each alkyl, alkylene, heteroalkylene, alkenyl, alkenylene, heteroalkenylene, alkynyl, cycloalkyl, aryl, aralkyl, heteroaryl, and heterocyclyl is optionally substituted with one or more substituents Q, where each Q is independently selected from (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl, each of which is further optionally substituted with one or more substituents Q^a; and (c) $-C(O)R^a$, $-C(O)OR^a$, $-C(O)NR^bR^c$, $-C(NR^a)NR^bR^c$, $-OR^a$,
$-OC(O)R^a$, $-OC(O)OR^a$, $-OC(O)NR^bR^c$, $-OC(=NR^a)NR^bR^c$, $-OS(O)R^a$, $-OS(O)_2R^a$, $-OS(O)NR^bR^c$, $-OS(O)_2NR^bR^c$, $-NR^bR^c$, $-NR^aC(O)R^d$, $-NR^aC(O)OR^d$, $-NR^aC(O)NR^bR^c$, $-NR^aC(=NR^d)NR^bR^c$, $-NR^aS(O)R^d$, $-NR^aS(O)_2R^d$, $-NR^aS(O)NR^bR^c$, $-NR^aS(O)_2NR^bR^c$, $-SR^a$,
$-S(O)R^a$, $-S(O)_2R^a$, $-S(O)NR^bR^c$, and $-S(O)_2NR^bR^c$, wherein each R^a, R^b, R^c, and R^d is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q^a; or (iii) R^b and R^c together with the N atom to which they are attached form heterocyclyl, optionally substituted with one or more substituents Q^a;

wherein each Q^a is independently selected from the group consisting of (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl; and (c) $-C(O)R^e$, $-C(O)OR^e$, $-C(O)NR^fR^g$, $-C(NR^e)NR^fR^g$, $-OR^e$, $-OC(O)R^e$, $-OC(O)OR^e$, $-OC(O)NR^fR^g$, $-OC(=NR^e)NR^fR^g$, $-OS(O)R^e$, $-OS(O)_2R^e$,
$-OS(O)NR^fR^g$, $-OS(O)_2NR^fR^g$, $-NR^fR^g$, $-NR^eC(O)R^h$, $-NR^eC(O)OR^f$, $-NR^eC(O)NR^fR^g$, $-NR^eC(=NR^h)NR^fR^g$, $-NR^eS(O)R^h$, $-NR^eS(O)_2R^h$, $-NR^eS(O)NR^fR^g$, $-NR^eS(O)_2NR^fR^g$, $-SR^e$, $-S(O)R^e$, $-S(O)_2R^e$, $-S(O)NR^fR^g$, and $-S(O)_2NR^fR^g$; wherein each R^e, R^f, R^g, and R^h is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14}

aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (iii) R^f and R^g together with the N atom to which they are attached form heterocyclyl.

54. Use of the compound of any of claims 1 to 33 and 43 to 53 in the manufacture of a medicament for treating or preventing an HCV infection.

55. Use of the compound of any of claims 1 to 33 and 43 to 53 in the manufacture of a medicament of treating, preventing, or ameliorating one or more symptoms of a liver disease or disorder associated with an HCV infection.

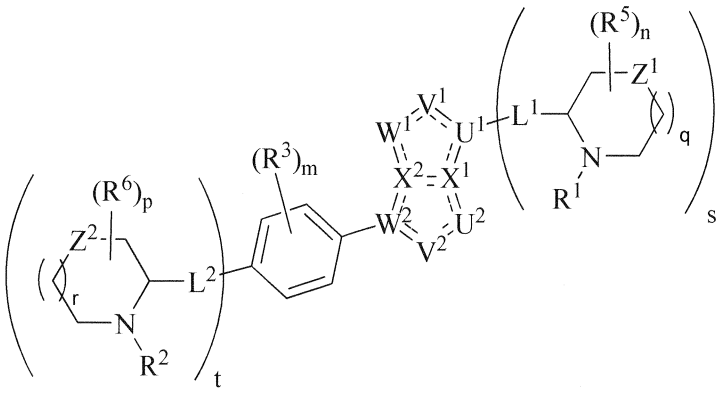
56. The use of claim 54 or 55, wherein the medicament is manufactured for administration with a second antiviral agent, in combination or alternation.

57. The use of claim 56, wherein the second antiviral agent is selected from the group consisting of an interferon, ribavirin, amantadine, an interleukin, a NS3 protease inhibitor, a cysteine protease inhibitor, a phenathrenequinone, a thiazolidine, a benzanilide, a helicase inhibitor, a polymerase inhibitor, a nucleotide analogue, a liotoxin, acerulenin, an antisense phosphorothioate oligodeoxynucleotide, an inhibitor of IRES-dependent translation, and a ribozyme.

58. The use of claim 57, wherein the second antiviral agent is an interferon.

59. The use of claim 58, wherein the interferon is selected from the group consisting of pegylated interferon alpha 2a, interferon alfacon-1, natural interferon, albuferon, interferon beta-1a, omega interferon, interferon alpha, interferon gamma, interferon tau, interferon delta, and interferon gamma-1b.

60. A compound of Formula IV:



or a single enantiomer, a racemic mixture, a mixture of diastereomers, or an isotopic variant thereof; or a pharmaceutically acceptable salt or solvate thereof;

wherein:

U^1, W^2, X^1, and X^2 are each C;

U^2 and W^1 are each S;

V^1 and V^2 are each independently CH;

R^1 and R^2 are each independently (a) hydrogen; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) $-C(O)R^{1a}$, $-C(O)CH(NR^{1b}R^{1c})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)R^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)OR^{1b})R^{1a}$, $-C(O)CH(N(R^{1c})C(O)NR^{1b}R^{1d})R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-P(O)(OR^{1a})R^{1d}$, $-CH_2P(O)(OR^{1a})R^{1d}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$;

each R^3, R^5, and R^6 is independently (a) cyano, halo, or nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (c) $-C(O)R^{1a}$, $-C(O)OR^{1a}$, $-C(O)NR^{1b}R^{1c}$, $-C(NR^{1a})NR^{1b}R^{1c}$, $-OR^{1a}$, $-OC(O)R^{1a}$, $-OC(O)OR^{1a}$, $-OC(O)NR^{1b}R^{1c}$, $-OC(=NR^{1a})NR^{1b}R^{1c}$, $-OS(O)R^{1a}$, $-OS(O)_2R^{1a}$, $-OS(O)NR^{1b}R^{1c}$, $-OS(O)_2NR^{1b}R^{1c}$, $-NR^{1b}R^{1c}$, $-NR^{1a}C(O)R^{1d}$, $-NR^{1a}C(O)OR^{1d}$, $-NR^{1a}C(O)NR^{1b}R^{1c}$, $-NR^{1a}C(=NR^{1d})NR^{1b}R^{1c}$, $-NR^{1a}S(O)R^{1d}$, $-NR^{1a}S(O)_2R^{1d}$, $-NR^{1a}S(O)NR^{1b}R^{1c}$, $-NR^{1a}S(O)_2NR^{1b}R^{1c}$, $-SR^{1a}$, $-S(O)R^{1a}$, $-S(O)_2R^{1a}$, $-S(O)NR^{1b}R^{1c}$, or $-S(O)_2NR^{1b}R^{1c}$; or

two R^5 or two R^6 that are attached to the same ring are linked together to form a bond, –O–, $-NR^7$–, –S–, C_{1-6} alkylene, C_{1-6} heteroalkylene, C_{2-6} alkenylene, or C_{2-6} heteroalkenylene;

L^1 and L^2 are each independently (a) a bond; (b) C_{1-6} alkylene, C_{2-6} alkenylene, C_{2-6} alkynylene, C_{3-7} cycloalkylene, C_{6-14} arylene, heteroarylene, heteroarylene-C_{1-6} alkylene, heteroarylene-C_{2-6} alkenylene, heteroarylene-C_{2-6} alkynylene, or heterocyclylene; or (c) –C(O)–, –C(O)O–, $-C(O)NR^{1a}$–, $-C(=NR^{1a})NR^{1c}$–, –O–, –OC(O)O–, $-OC(O)NR^{1a}$–, $-OC(=NR^{1a})NR^{1c}$–, $-OP(O)(OR^{1a})$–, $-NR^{1a}$–, $-NR^{1a}C(O)NR^{1c}$–, $-NR^{1a}C(=NR^{1b})NR^{1c}$–, $-NR^{1a}S(O)NR^{1c}$–, $-NR^{1a}S(O)_2NR^{1c}$–, –S–, –S(O)–, $-S(O)_2$–, $-S(O)NR^{1a}$–, or $-S(O)_2NR^{1a}$–;

Z^1 and Z^2 are each a bond;

each R^{1a}, R^{1b}, R^{1c}, and R^{1d} is independently hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or R^{1a} and R^{1c} together with the C and N atoms to which they are attached form heterocyclyl; or R^{1b} and R^{1c} together with the N atom to which they are attached form heterocyclyl;

m is an integer of 0, 1, 2, 3, or 4;

n is an integer of 0, 1, 2, 3, 4, 5, 6, or 7;

p is an integer of 0, 1, 2, 3, 4, 5, 6, or 7;

q and r are each independently an integer of 1, 2, 3, or 4; and

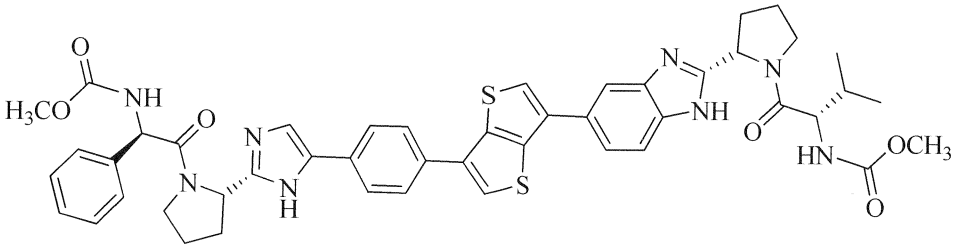
s and t are each an integer of 1;

wherein each alkyl, alkylene, heteroalkylene, alkenyl, alkenylene, heteroalkenylene, alkynyl, cycloalkyl, aryl, aralkyl, heteroaryl, and heterocyclyl is optionally substituted with one or more substituents Q, where each Q is independently selected from (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl, each of which is further optionally substituted with one or more substituents Q^a; and (c) $-C(O)R^a$, $-C(O)OR^a$, $-C(O)NR^bR^c$, $-C(NR^a)NR^bR^c$, $-OR^a$,
$-OC(O)R^a$, $-OC(O)OR^a$, $-OC(O)NR^bR^c$, $-OC(=NR^a)NR^bR^c$, $-OS(O)R^a$, $-OS(O)_2R^a$, $-OS(O)NR^bR^c$, $-OS(O)_2NR^bR^c$, $-NR^bR^c$, $-NR^aC(O)R^d$, $-NR^aC(O)OR^d$, $-NR^aC(O)NR^bR^c$, $-NR^aC(=NR^d)NR^bR^c$, $-NR^aS(O)R^d$, $-NR^aS(O)_2R^d$, $-NR^aS(O)NR^bR^c$, $-NR^aS(O)_2NR^bR^c$, $-SR^a$,
$-S(O)R^a$, $-S(O)_2R^a$, $-S(O)NR^bR^c$, and $-S(O)_2NR^bR^c$, wherein each R^a, R^b, R^c, and R^d is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl, each optionally substituted with one or more substituents Q^a; or (iii) R^b and R^c together with the N atom to which they are attached form heterocyclyl, optionally substituted with one or more substituents Q^a;

wherein each Q^a is independently selected from the group consisting of (a) cyano, halo, and nitro; (b) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, and heterocyclyl; and (c) $-C(O)R^e$, $-C(O)OR^e$, $-C(O)NR^fR^g$, $-C(NR^e)NR^fR^g$, $-OR^e$, $-OC(O)R^e$, $-OC(O)OR^e$, $-OC(O)NR^fR^g$, $-OC(=NR^e)NR^fR^g$, $-OS(O)R^e$, $-OS(O)_2R^e$,
$-OS(O)NR^fR^g$, $-OS(O)_2NR^fR^g$, $-NR^fR^g$, $-NR^eC(O)R^h$, $-NR^eC(O)OR^f$, $-NR^eC(O)NR^fR^g$,

$-NR^eC(=NR^h)NR^fR^g$, $-NR^eS(O)R^h$, $-NR^eS(O)_2R^h$, $-NR^eS(O)NR^fR^g$, $-NR^eS(O)_2NR^fR^g$, $-SR^e$, $-S(O)R^e$, $-S(O)_2R^e$, $-S(O)NR^fR^g$, and $-S(O)_2NR^fR^g$; wherein each R^e, R^f, R^g, and R^h is independently (i) hydrogen; (ii) C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-7} cycloalkyl, C_{6-14} aryl, C_{7-15} aralkyl, heteroaryl, or heterocyclyl; or (iii) R^f and R^g together with the N atom to which they are attached form heterocyclyl.

61. A compound having the structure of:



or an isotopic variant thereof; or a pharmaceutically acceptable salt or solvate thereof.