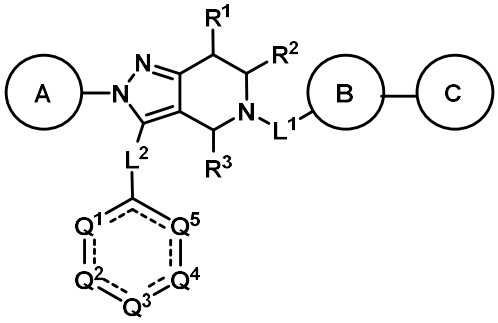
WHAT IS CLAIMED IS:

1. A compound of Formula (**I**):



Formula (**I**)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q^1, Q^2, Q^3, Q^4, and Q^5 are defined according to (**AA**) or (**BB**) below:

(AA)

Q^1 and Q^5 are independently selected from the group consisting of N, CH, and CR^{QA};

Q^2, Q^3, and Q^4 are independently selected from the group consisting of N, CH, CR^{QA}, and CR^{QB}, provided that at least one of Q^2, Q^3, and Q^4 is CR^{QB};

each ⎓ is a single bond or double bond, provided that the ring including Q^1-Q^5 is aromatic;

(BB)

Q^1 is a bond;

Q^2, Q^3, Q^4, and Q^5 are independently selected from the group consisting of O, S, N, NH, NR^c, CH, CR^{QA}, and CR^{QB}, provided that at least one of Q^2, Q^3, Q^4, and Q^5 is CR^{QB};

each ⎓ is a single bond or double bond, provided that the ring including Q^1-Q^5 is aromatic;

R^{QB} is $P(=O)R^aR^b$, wherein R^a and R^b are independently selected from the group consisting of C_{1-6} alkyl which is optionally substituted with from 1-6 substituents each independently selected from the group consisting of C_{1-6} alkoxy, C_{3-6} cycloalkyl, and halo; C_{3-6} cycloalkyl optionally substituted with from 1-3 substituents each independently

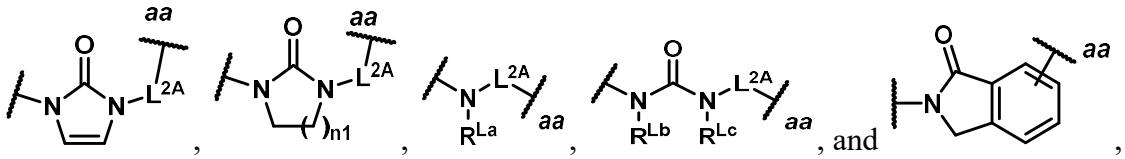
selected from the group consisting of C_{1-3} alkyl and halo; and C_{6-10} aryl optionally substituted with from 1-3 independently selected C_{1-3} alkyl; or

R^a and R^b taken together with the phosphorus atom to which each is attached form a ring including from 5-8 ring atoms, wherein from 0-2 ring atoms (in addition to the phosphorus attached to R^a and R^b) are heteroatoms each independently selected from the group consisting of: O, S, and N, wherein the ring is optionally substituted with from 1-3 independently selected C_{1-6} alkyl;

each R^{QA} is independently selected from the group consisting of: (a) halo; (b) cyano; (c) OH; (d) $-NR^cR^d$; (e) $C(=O)NR^cR^d$; (f) $S(=O)_{0-2}R^e$; (g) C_{1-6} alkyl optionally substituted with from 1-6 independently selected R^f; (h) C_{1-6} alkoxy optionally substituted with from 1-6 substituents each independently selected from the group consisting of: hydroxy, halo, and C_{1-6} alkoxy; (i) 3-12 membered heterocyclyl optionally substituted with one or more substituents each independently selected from the group consisting of C_{1-6} alkyl and $C(=O)(C_{1-6}$ alkyl); (j) C_{6-10} aryl optionally substituted with from 1-3 independently selected $C(=O)(C_{1-6}$ alkyl); and (k) 5-10 membered heteroaryl optionally substituted with from 1-6 independently selected R^g;

or a pair of R^{QA} on adjacent carbon atoms, taken together with the atom to which each is attached, forms a ring including from 5-8 ring atoms, wherein from 0-2 ring atoms are heteroatoms each independently selected from the group consisting of O, N, and S, wherein said ring is optionally substituted with from 1-2 independently selected R^h groups;

L^2 is selected from the group consisting of:



wherein *aa* represents the point of attachment to the ring containing Q^1-Q^5;

n1 is an integer from 1-3;

L^{2A} is a bond or C_{1-10} alkylene;

R^{La} is selected from the group consisting of H, C_{1-6} alkyl, and $C(=O)(C_{1-6}$ alkyl);

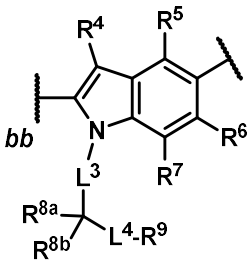
each of R^{Lb} and R^{Lc} is independently selected from the group consisting of H and C_{1-6} alkyl;

Ring A is C_{6-10} aryl, C_{5-7} cycloalkyl, 5-7 membered heterocyclyl, or 5-10 membered heteroaryl, each of which is optionally substituted with from 1-5 substituents each independently selected from the group consisting of halo, C_{1-6} alkyl, C_{1-6} haloalkyl, and C_{1-6} alkoxy;

R^1, R^2, and R^3 are each independently selected from the group consisting of H and C_{1-6} alkyl which is optionally substituted with from 1-6 substituents each independently selected from the group consisting of halo, -OH, and C_{1-6} alkoxy;

L^1 is selected from the group consisting of: -C(=O)-, -CH_2-, -CH(C_{1-6} alkyl)-, and -$S(=O)_2$;

Ring B is selected from the group consisting of:



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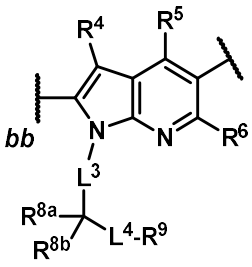

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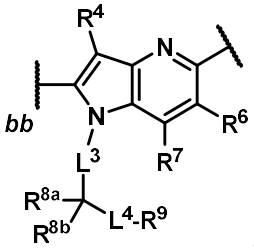

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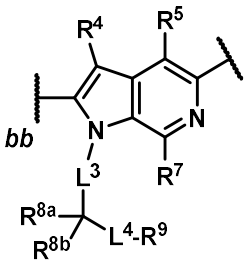


,

wherein *bb* represents point of attachment to L^1;

R^4, R^5, R^6, and R^7 are independently selected from the group consisting of: H, halo, and C_{1-6} alkyl;

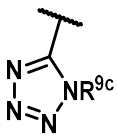
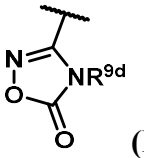
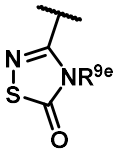
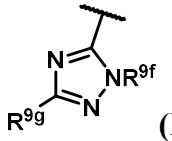
L^3 is a bond or C_{1-3} alkylene;

L^4 is a bond or C_{1-5} alkylene;

R^{8a} and R^{8b} are independently selected from the group consisting of: H and C_{1-6} alkyl optionally substituted with one or more substituents independently selected from the group consisting of: halo and C_{3-15} cycloalkyl; or

R^{8a} and R^{8b} taken together with the carbon atom to which each is attached forms a C_{3-15} cycloalkyl ring which is optionally substituted with from 1-3 independently selected C_{1-6} alkyl, wherein the C_{1-6} alkyl is optionally substituted with from 1-6 independently selected R^f;

R^9 is selected from the group consisting of: C(=O)OH, C(=O)(OC_{1-6} alkyl), $C(=O)NR^{9a}R^{9b}$, **(IX-1)**, **(IX-2)**, **(IX-3)**, and **(IX-4)**:

 **(IX-1)**,  **(IX-2)**,  **(IX-3)**, and  **(IX-4)**;

R^{9a} is H or C_{1-6} alkyl;

R^{9b} is H, C_{1-6} alkyl, C(=O)(C_{1-6} alkyl), S(O)$_{0-2}$(C_{1-6} alkyl), or cyano;

R^{9c}, R^{9d}, R^{9e}, R^{9f}, and R^{9g} are each independently selected from the group consisting of: H; C_{1-6} alkyl optionally substituted with from 1-6 independently selected halo and C_{1-6} alkoxy; and C(=O)(C_{1-6} alkyl);

Ring C is selected from the group consisting of 3-12 membered heterocyclyl; C_{3-15} cycloalkyl; and 5-10 membered heteroaryl, each of which is optionally substituted with from 1-3 R^{Ca};

each R^{Ca} is independently selected from the group consisting of: halo, C_{1-6} alkyl, C_{1-6} haloalkyl, C_{1-6} alkoxy, and NR^cR^d;

or a pair of R^{Ca} on the same or different ring atoms, taken together with the ring atom(s) to which each is attached, forms a carbocyclic ring including from 3-8 ring atoms;

each R^c and R^d are independently selected from the group consisting of: H, C_{1-6} alkyl, C(=O)(C_{1-6} alkyl), C(=O)(C_{3-6} cycloalkyl), C(=O)O(C_{1-6} alkyl), S(O)$_{1-2}$(C_{1-6} alkyl), and S(O)$_{1-2}$(C_{3-6} cycloalkyl), wherein the C_{1-6} alkyl, C(=O)(C_{1-6} alkyl), C(=O)(C_{3-6} cycloalkyl), C(=O)O(C_{1-6} alkyl), S(O)$_{1-2}$(C_{1-6} alkyl), and S(O)$_{1-2}$(C_{3-6} cycloalkyl) are each optionally substituted with from 1-6 substituents independently selected from the group consisting of: -OH, halo, and C_{1-6} alkoxy;

R^e is H, C_{1-6} alkyl, or C_{1-6} haloalkyl;

each R^f is independently selected from the group consisting of halo, -OH, NR^cR^d, C_{1-6} alkoxy, C_{1-6} haloalkoxy, and 3-12 membered heterocyclyl which is optionally substituted with from 1-4 substituents each independently selected from the group consisting of -OH, C_{1-6} alkyl, and 3-12 membered heterocyclyl;

each R^g is independently selected from the group consisting of: C_{1-6} alkyl, C_{1-6} alkoxy, NR^cR^d, and 3 to 12 membered heterocyclyl optionally substituted with one or more substituents each independently selected from the group consisting of C_{1-6} alkyl and C(=O)C_{1-6} alkyl; and

each R^h is independently selected from the group consisting of halo, cyano, C_{1-6} alkyl, C_{1-6} haloalkyl, -OH, NH_2, $NH(C_{1-3}$ alkyl), $N(C_{1-3}$ alkyl)$_2$, C_{1-3} alkoxy, and C_{1-3} haloalkoxy.

2. The compound of claim 1, wherein Q^1, Q^2, Q^3, Q^4, and Q^5 are as defined according to **(AA)**.

3. The compound of claim 2, wherein

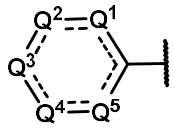
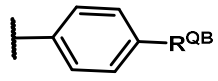
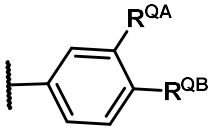
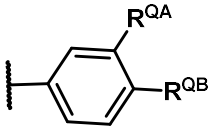
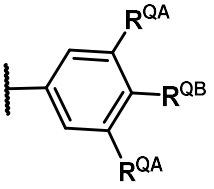
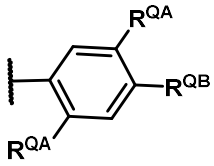
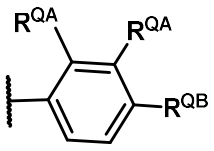
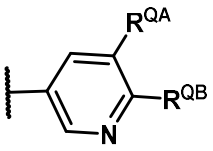
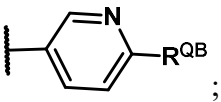
(i) Q^3 is CR^{QB}; and each one of Q^1, Q^2, Q^4, and Q^5 is independently CH or CR^{QA}; optionally wherein each one of Q^1, Q^2, Q^4, and Q^5 is CH;

or optionally wherein one of Q^1, Q^2, Q^4, and Q^5 is CR^{QA}; and each remaining one of Q^1, Q^2, Q^4, and Q^5 is CH; for example wherein Q^4 is CR^{QA}; and Q^1, Q^2, and Q^5 are CH;

or optionally wherein two of Q^1, Q^2, Q^4, and Q^5 are independently selected CR^{QA}; and each remaining one of Q^1, Q^2, Q^4, and Q^5 is CH; or

(ii) Q^3 is CR^{QB}; one of Q^1, Q^2, Q^4, and Q^5 is N; and each remaining one of Q^1, Q^2, Q^4, and Q^5 is independently CH or CR^{QA};

optionally wherein Q^4 is N; and/or optionally wherein Q^1, Q^2, and Q^5 are CH; or

(iii) Q^3 is CR^{QB}; and the  moiety is selected from the group consisting of: , , , , , , , and ; or

(iv) Q^4 is CR^{QB}; and each one of Q^1, Q^2, Q^3, and Q^5 is independently CH or CR^{QA}; optionally wherein each one of Q^1, Q^2, Q^3, and Q^5 is CH;

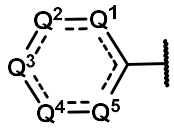
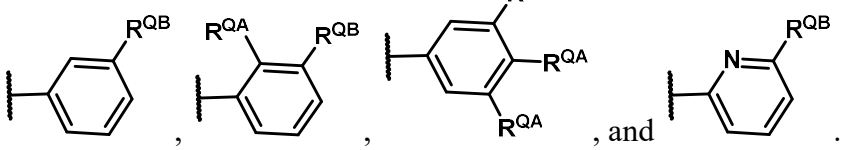
or optionally wherein one of Q^1, Q^2, Q^3, and Q^5 is CR^{QA}; and each remaining one of Q^1, Q^2, Q^3, and Q^5 is CH,

for example, wherein Q^5 is CR^{QA}; and Q^1, Q^2, and Q^3 are CH;

or optionally wherein two of Q^1, Q^2, Q^3, and Q^5 are independently selected CR^{QA}; and each remaining one of Q^1, Q^2, Q^3, and Q^5 is CH;

for example wherein Q^2 and Q^3 are independently selected CR^{QA}; and Q^1 and Q^5 are CH; or

(v) Q^4 is CR^{QB}; one of Q^1, Q^2, Q^3, and Q^5 is N; and each remaining one of Q^1, Q^2, Q^3, and Q^5 is independently CH or CR^{QA}; or

(vi) Q^4 is CR^{QB}; and the  moiety is selected from the group consisting of: .

4. The compound of any one of claims 1-3, wherein R^{QB} is $P(=O)R^aR^b$, wherein (i) R^a and R^b are independently selected from the group consisting of $C_{1\text{-}6}$ alkyl and $C_{3\text{-}6}$ cycloalkyl; or

(ii) R^a and R^b are independently $C_{1\text{-}3}$ alkyl;

optionally wherein R^a and R^b are the same or wherein R^a and R^b are different.

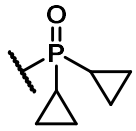
5. The compound of any one of claims 1-4 part (i), or the compound of claim 4 part (ii) wherein R^a and R^b are the same, wherein R^{QB} is $P(=O)Me_2$; or

wherein R^{QB} is $P(=O)Et_2$; or

wherein R^{QB} is $P(=O)iPr_2$.

6. The compound of any one of claims 1-4 part (i), or the compound of claim 4 part (ii) wherein R^a and R^b are different, wherein R^{QB} is P(=O)(Me)(tBu).

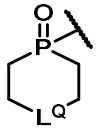
7. The compound of any one of claims 1-4 part (i), wherein R^{QB} is $P(=O)R^aR^b$, wherein R^a and R^b are each independently C_{3-6} cycloalkyl; and/or

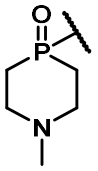
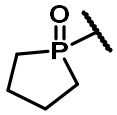
wherein R^{QB} is .

8. The compound of any one of claims 1-3, wherein

(i) R^{QB} is $P(=O)R^aR^b$, wherein R^a and R^b taken together with the phosphorus atom to which each is attached forms a ring including from 5-8 ring atoms, wherein from 0-2 ring atoms (in addition to the phosphorus attached to R^a and R^b) are heteroatoms each independently selected from the group consisting of: O, S, and N, wherein the ring is optionally substituted with from 1-3 independently selected C_{1-6} alkyl; and/or

(ii) R^{QB} is $P(=O)R^aR^b$, wherein R^a and R^b taken together with the phosphorus atom to which each is attached forms a ring including from 5-6 ring atoms, wherein from 0-1 ring atom (in addition to the phosphorus attached to R^a and R^b) is a heteroatom selected from the group consisting of: O, S, and N, wherein the ring is optionally substituted with from 1-2 independently selected C_{1-6} alkyl; and/or

(iii) R^{QB} is , wherein L^Q is a bond, CH_2, O, S, NH, or $N(C_{1-6}$ alkyl); and/or

(iv) R^{QB} is  or .

9. The compound of any one of claims 1-8, wherein one occurrence of R^{QA} is:

(i) halo; optionally wherein one occurrence of R^{QA} is –F; or

(ii) OH; or

(iii) NR^cR^d; optionally wherein one occurrence of R^{QA} is

(a) $NH(C_{1-3}$ alkyl); or

(b) NH_2; or

(c) $N(C_{1-3}$ alkyl$)_2$; or

(d) selected from the group consisting of NHC(=O)(C_{1-6} alkyl), NHC(=O)(C_{3-6} cycloalkyl), NHC(=O)O(C_{1-6} alkyl), NHS(O)$_{1-2}$(C_{1-6} alkyl), and NHS(O)$_{1-2}$(C_{3-6} cycloalkyl); optionally wherein one occurrence of R^{QA} is NHC(=O)(C_{1-3} alkyl), NHC(=O)(C_{3-6} cycloalkyl), or NHS(O)$_2$(C_{1-3} alkyl); or

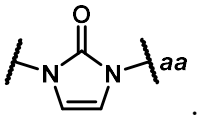
(iv) 5-6 membered heterocyclyl optionally substituted with one or more substituents each independently selected from the group consisting of C_{1-6} alkyl and C(=O)(C_{1-6} alkyl); optionally wherein one occurrence of R^{QA} is morpholinyl; or

(v) C_{1-6} alkoxy optionally substituted with from 1-6 substituents each independently selected from the group consisting of: hydroxy, halo, and C_{1-6} alkoxy; or

(vi) C_{1-6} alkoxy optionally substituted with from 1-6 independently selected halo;. optionally wherein R^{QA} is –Ome, $–OCF_3$, or $–OCHF_2$; or

(vii) C_{1-6} alkyl optionally substituted with from 1-6 independently selected R^f; or

(viii) C_{1-3} alkyl or C_{1-3} alkyl substituted with from 1-6 independently selected halo, optionally wherein R^{QA} is methyl, $-CF_3$, or $–CHF_2$.

10. The compound of any one of claims 1-9, wherein L^2 is 

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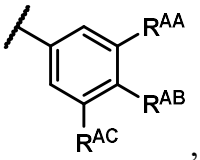
11. The compound of any one of claims 1-10, wherein Ring A is

(i) C_{6-10} aryl or 5-10 membered heteroaryl, each of which is optionally substituted with from 1-4 substituents each independently selected from the group consisting of halo, C_{1-6} alkyl, C_{1-6} haloalkyl, and C_{1-6} alkoxy; or

(ii) phenyl or pyridyl, each of which is optionally substituted with from 2-4 substituents each independently selected from the group consisting of halo, C_{1-6} alkyl, C_{1-6} haloalkyl, and C_{1-6} alkoxy; or

(iii) phenyl, which is optionally substituted with from 2-4 substituents each independently selected from the group consisting of halo and C_{1-6} alkyl; or

(iv) pyridyl, which is optionally substituted with from 2-4 substituents each independently selected from the group consisting of halo and C_{1-6} alkyl; or

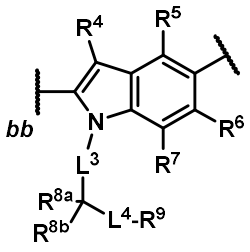
(v) 

, wherein R^{AA}, R^{AB}, and R^{AC} are independently halo or C_{1-6} alkyl.

12. The compound of any one of claims 1-11, wherein

(i) R^1 and R^2 are H; and R^3 is C_{1-6} alkyl; optionally wherein R^3 is methyl; and/or

(ii) L^1 is C(=O); and/or

(iii) Ring B is 

; and/or

(iv) R^4, R^5, and R^6 are each H; and/or

(v) R^7 is H; and/or

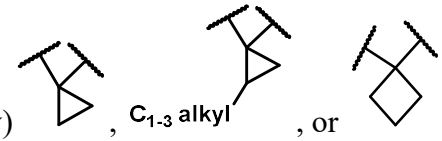
(vi) both of L^3 and L^4 are bonds.

13. The compound of any one of claims 1-12, wherein R^{8a} and R^{8b} taken together with the carbon atom to which each is attached forms:

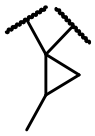
(i) a C_{3-8} cycloalkyl ring which is optionally substituted with from 1-2 independently selected C_{1-6} alkyl, wherein the C_{1-6} alkyl is optionally substituted with from 1-3 independently selected R^f; or

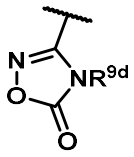
(ii) a C_{3-5} cycloalkyl ring which is optionally substituted with from 1-2 independently selected C_{1-6} alkyl, wherein the C_{1-6} alkyl is optionally substituted with from 1-3 independently selected R^f; or

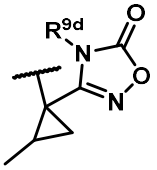
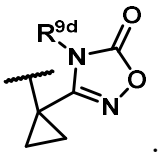
(iii) a C_{3-4} cycloalkyl ring which is optionally substituted with from 1-2 independently selected C_{1-6} alkyl; or

(iv) 

; or

(v)  .

14. The compound of any one of claims 1-13, wherein R^9 is  **(IX-2)**.

15. The compound of any one of claims 1-12 part (v), wherein the L^3-$C(R^{8a}R^{8b})$-L^4-R^9 moiety is:  ; or  .

16. The compound of claim 14 or 15, wherein R^{9d} is H.

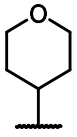
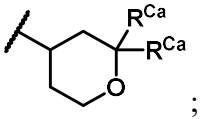
17. The compound of any one of claims 1-16, wherein Ring C is

(i) 3-12 membered heterocyclyl which is optionally substituted with from 1-3 independently selected R^{Ca}; or

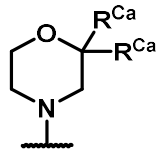
(ii) 4-8 membered heterocyclyl which is optionally substituted with from 1-3 independently selected R^{Ca}; or

(iii) 5-6 membered heterocyclyl which is optionally substituted with from 1-3 independently selected R^{Ca}; or

(iv) tetrahydropyranyl which is optionally substituted with from 1-3 independently R^{Ca}; or

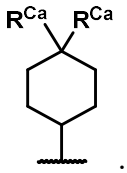
(v) selected from the group consisting of:  and  ; or

(vi) morpholinyl which is optionally substituted with from 1-3 independently selected R^{Ca}; or

(vii)  ; or

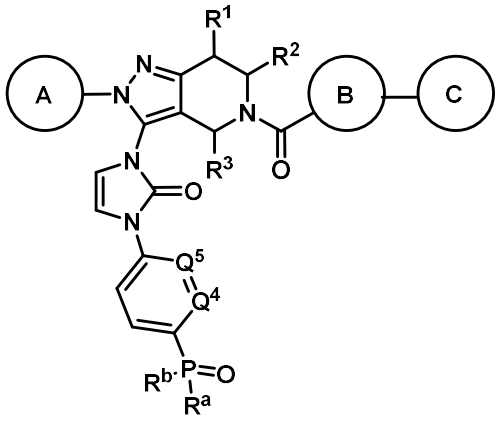
(viii) C_{3-10} cycloalkyl which is optionally substituted with from 1-3 R^{Ca}; or

(ix) C_{3-8} cycloalkyl which is optionally substituted with from 1-3 R^{Ca}; or

(x)  .

18. The compound of any one of claims 1-17, wherein each R^{Ca} is independently selected from the group consisting of: halo and C_{1-6} alkyl.

19. The compound of claim 1, wherein the compound of Formula **(I)** is a compound of Formula **(IA)**:



Formula **(IA)**

wherein Q^4 and Q^5 are independently selected from the group consisting of: N, CH, and CR^{QA};

or a pharmaceutically acceptable salt or solvate thereof;

optionally wherein

(i) each of Q^4 and Q^5 is CH; or

(ii) Q^4 is CR^{QA}; and Q^5 is CH; or

(iii) Q^4 is N; and Q^5 is CR^{QA} or CH, optionally wherein Q^5 is CH; or

(iv) Q^4 is CR^{QA}; and Q^5 is CR^{QA}.

20. The compound of claim 19, wherein

(i) R^a and R^b are each methyl; or

(ii) R^a and R^b are each ethyl; or

(iii) R^a and R^b are each isopropyl; or

(iv) R^a is methyl; and R^b is tert-butyl; or

(v) R^a and R^b are independently selected C_{3-6} cycloalkyl; or

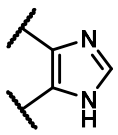
(vi) R^a and R^b are both cyclopropyl.

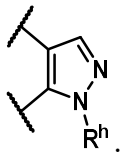
21. The compound of claim 19 or 20, wherein

(i) each R^{QA} is selected from the group consisting of: halo; cyano; OH; NR^cR^d; C_{1-6} alkyl optionally substituted with from 1-6 independently selected R^f; C_{1-6} alkoxy optionally substituted with from 1-6 substituents each independently selected from the group consisting of: hydroxy, halo, and C_{1-6} alkoxy; and 3-12 membered heterocyclyl optionally substituted with one or more substituents each independently selected from the group consisting of C_{1-6} alkyl and $C(=O)(C_{1-6}$ alkyl); or

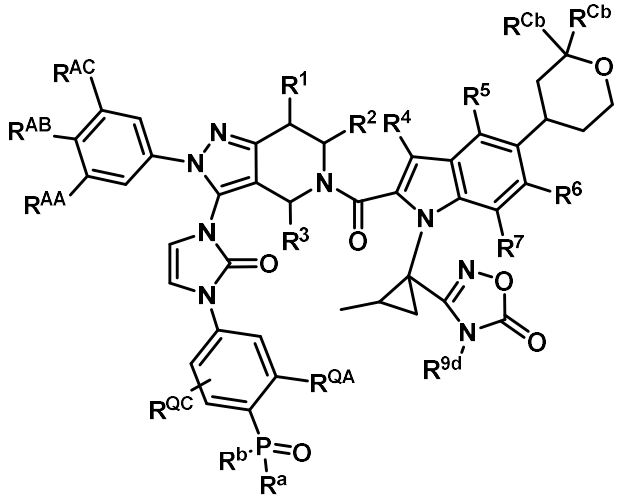
(ii) each R^{QA} is selected from the group consisting of: -F, OH, NH_2 NHMe, NHEt, NHiPr, $N(Me)_2$, NHC(=O)(cyclopropyl), $NHS(O)_2Me$, methyl, CF_3, CHF_2, OMe, OCF_3, $OCHF_2$, and morpholinyl; or

(iii) a pair of R^{QA} on adjacent carbon atoms, taken together with the atom to which each is attached, forms a ring including from 5-6 ring atoms, wherein from 1-2 ring atoms are heteroatoms each independently selected from the group consisting of O, N, and S, wherein said ring is optionally substituted with from 1-2 independently selected R^h groups; or

(iv) a pair of R^{QA} on adjacent carbon atoms, taken together with the atom to which each is attached forms:  ; or

(v) a pair of R^{QA} on adjacent carbon atoms, taken together with the atom to which each is attached forms: .

22. The compound of claim 1, wherein the compound of Formula **(I)** is a compound of Formula **(ID)**:



Formula **(ID)**

or a pharmaceutically acceptable salt or solvate thereof, wherein:

R^{AA}, R^{AB}, and R^{AC} are independently halo or C_{1-6} alkyl;

R^{QC} is H or halo; and

each R^{Cb} is independently selected from the group consisting of H and R^{Ca};

optionally wherein

(i) R^1 and R^2 are H; and/or

(ii) R^3 is C_{1-3} alkyl; optionally

wherein R^3 is methyl; and/or

(iii) R^4, R^5, R^6, and R^7 are H; and/or

(iv) R^{9d} is H; and/or

(v) R^{AA} and R^{AC} are independently C_{1-6} alkyl; optionally

wherein R^{AA} and R^{AC} are methyl; and/or

(vi) R^{AB} is halo; optionally wherein R^{AB} is –F; and/or

(vii) each R^{Cb} is H or methyl, optionally wherein each R^{Cb} is H.

23. The compound of claim 22, wherein

(i) R^a and R^b are independently C_{1-3} alkyl; or

(ii) R^a and R^b are methyl; or

(iii) R^a and R^b are ethyl; or

(iv) R^a and R^b are isopropyl; or

(v) R^a is methyl; and R^b is tert-butyl; or

(vi) R^a and R^b are independently C_{3-6} cycloalkyl; or

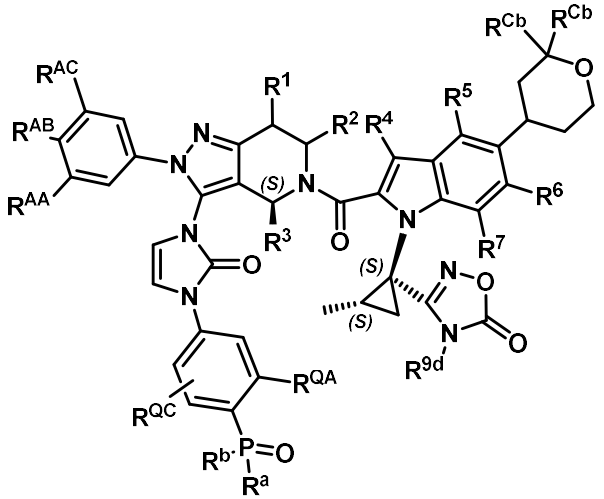
(vii) R^a and R^b are each cyclopropyl.

24. The compound of claim 22 or 23, wherein

(i) R^{QA} is NR^cR^d; optionally wherein R^{QA} is $NH(C_{1-3}$ alkyl); and/or

(ii) R^{QC} is H.

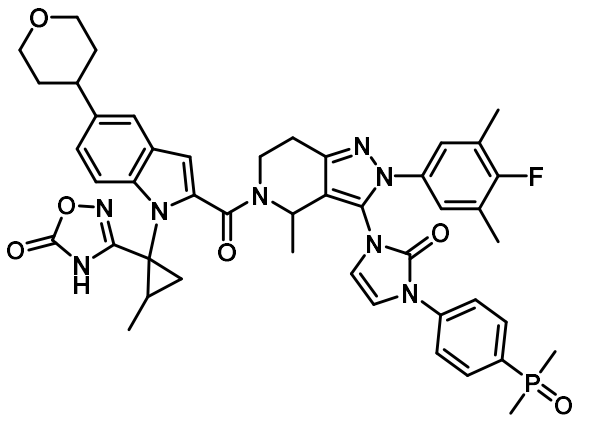
25. The compound of any one of claims 22-24, wherein the compound is a compound of Formula (*S, S, S*)-**(ID)**

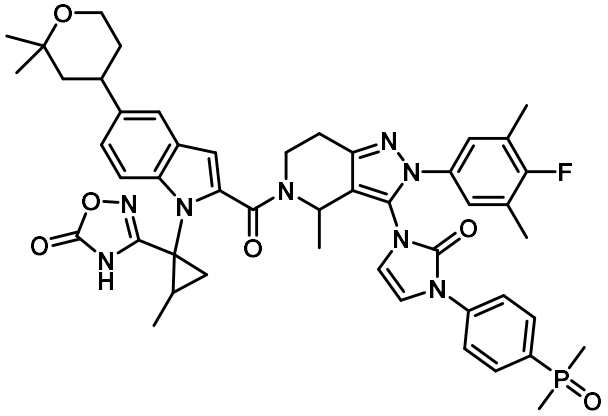


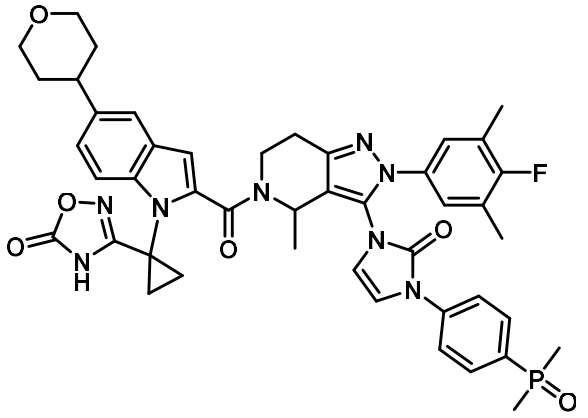
Formula (*S, S, S*)-**(ID)**

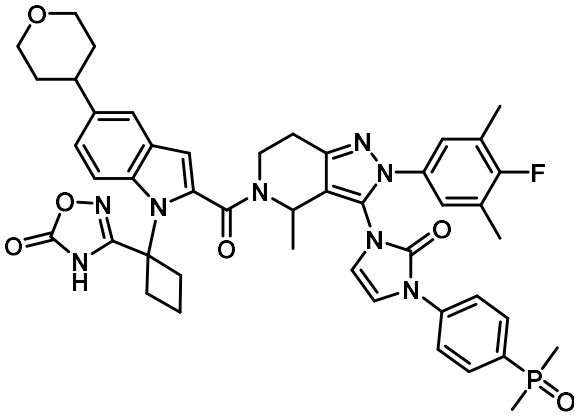
or a pharmaceutically acceptable salt thereof, wherein R^3 is C_{1-3} alkyl.

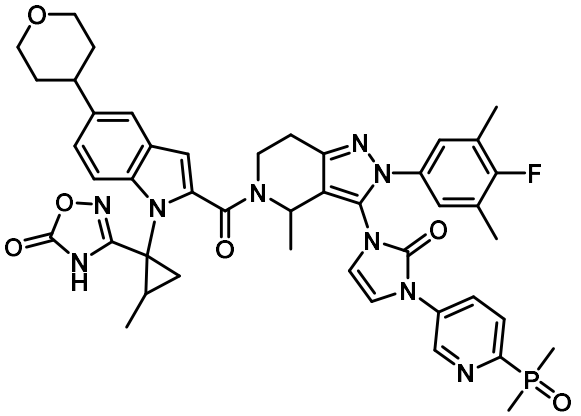
26. The compound of any one of claims 1-25, wherein the compound of Formula I is selected from the group consisting of the compounds:

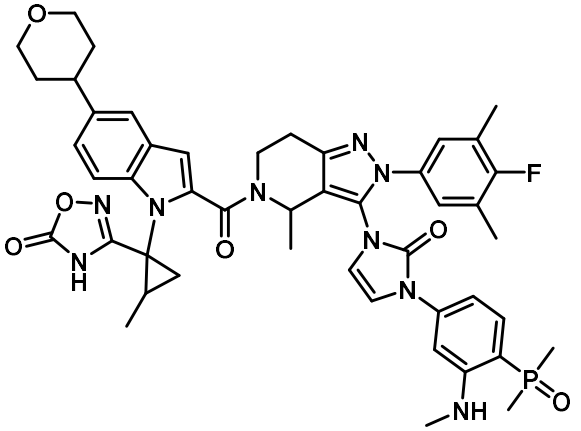


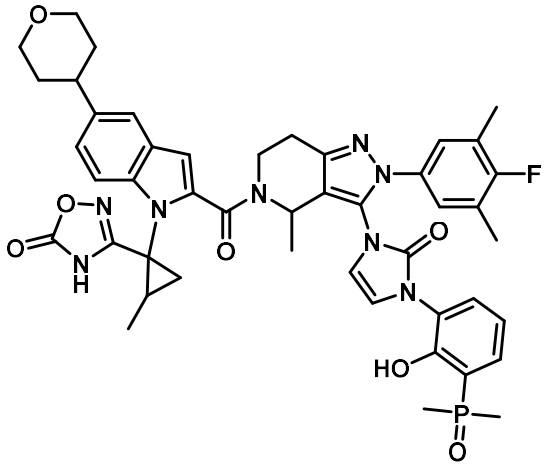


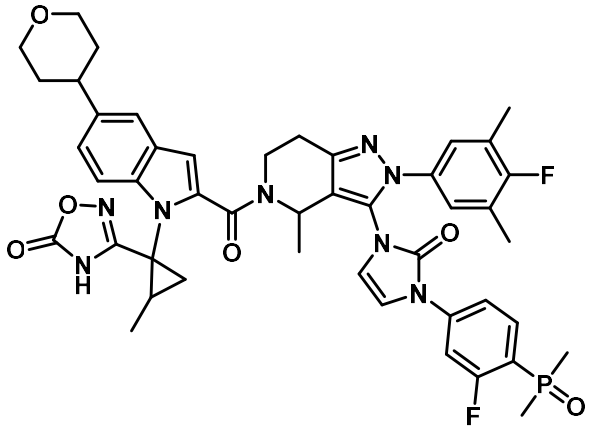


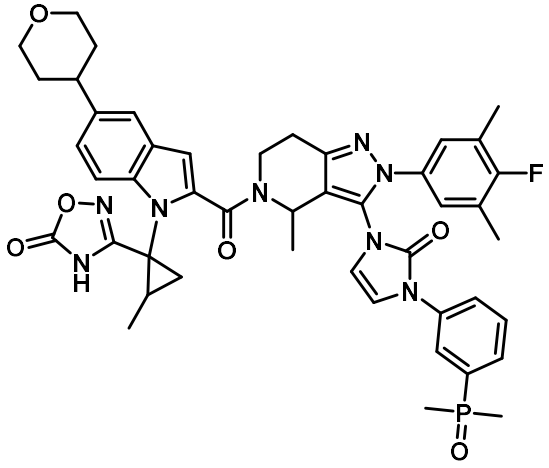


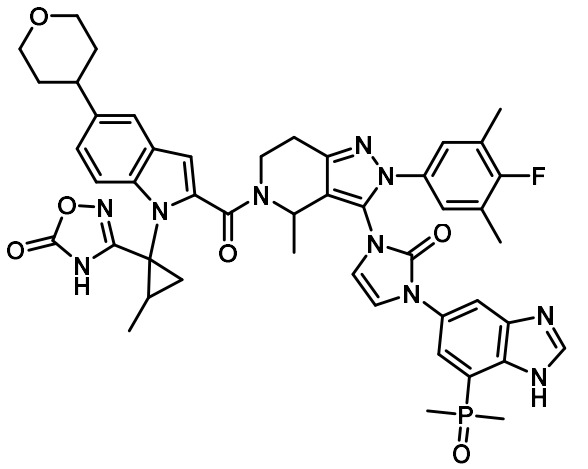


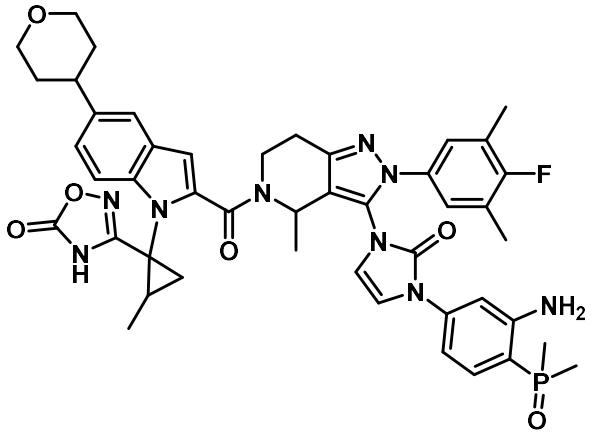


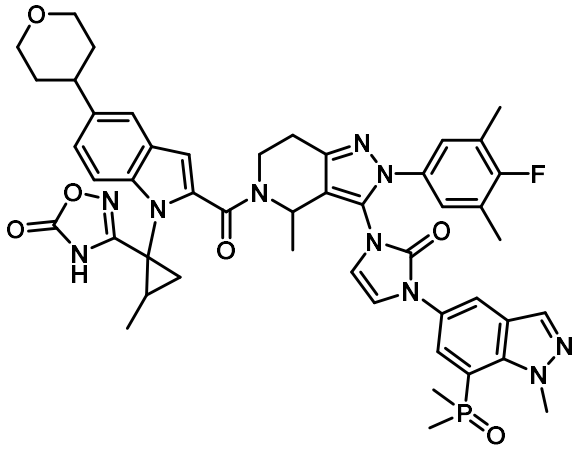


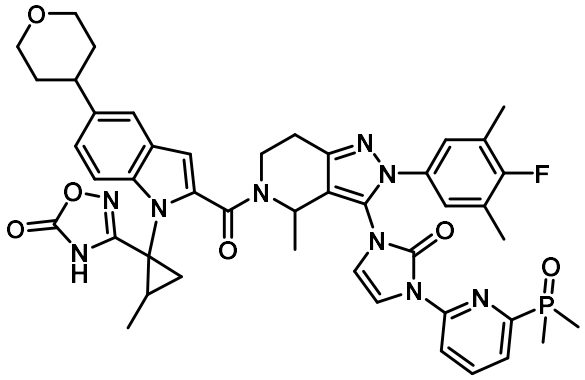


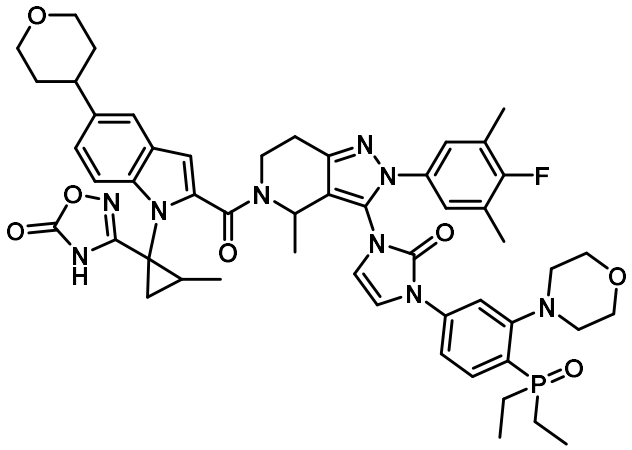


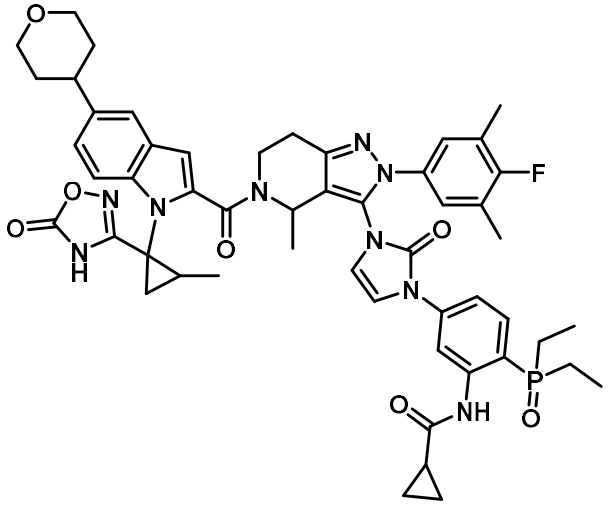


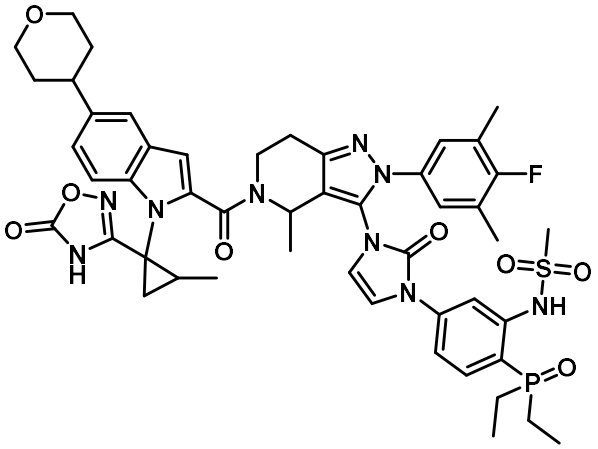


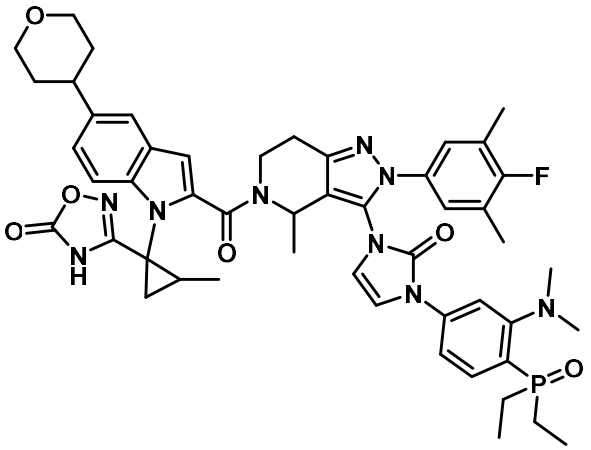


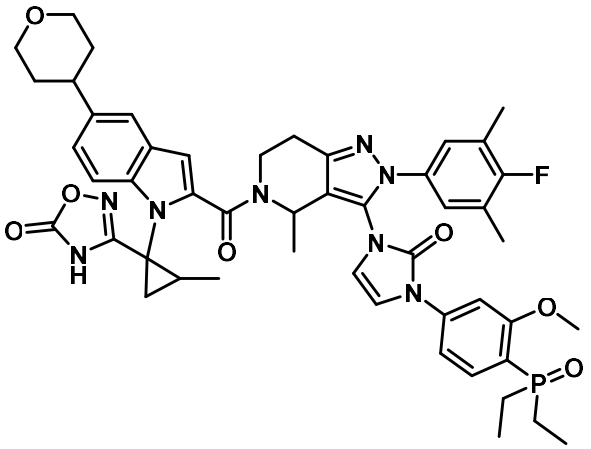


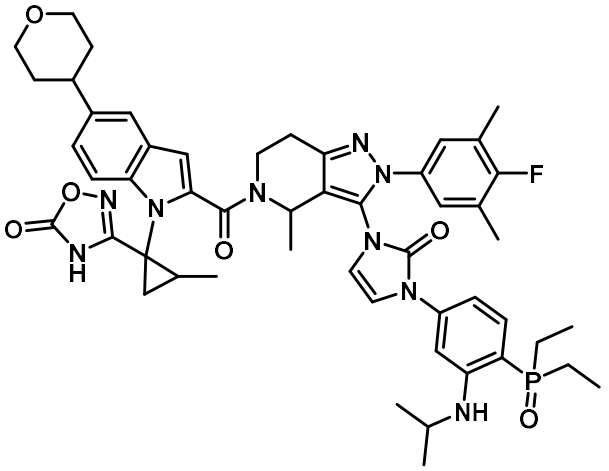


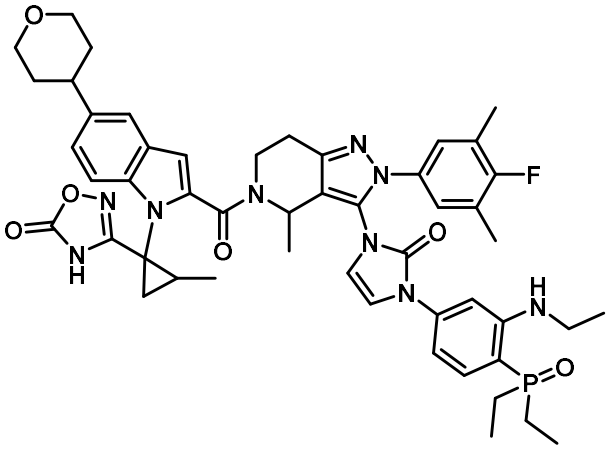


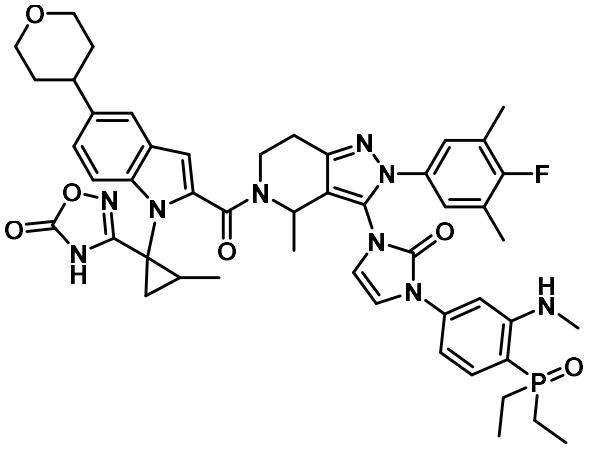


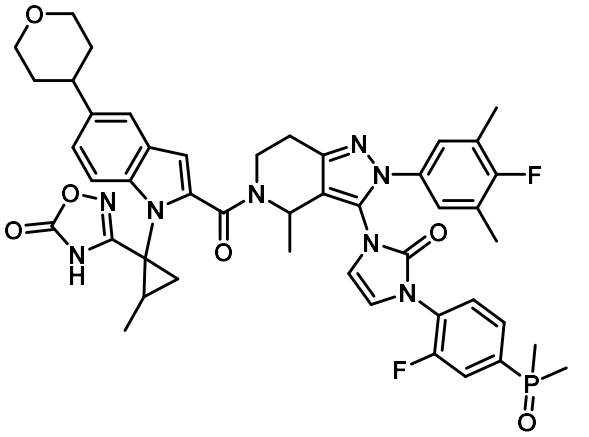


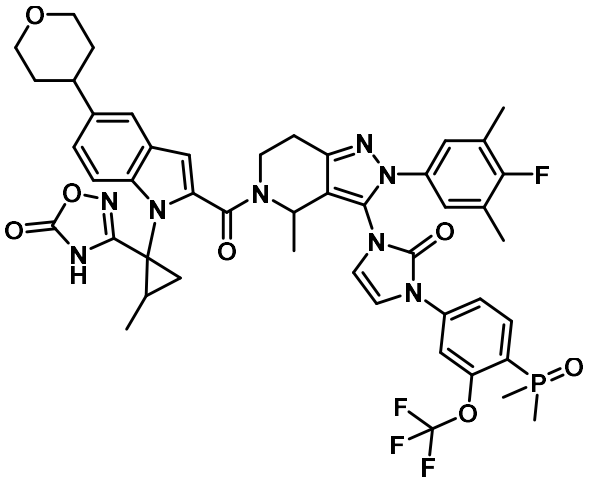


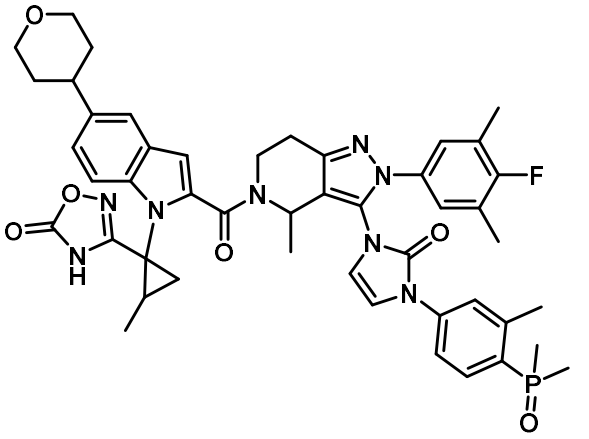


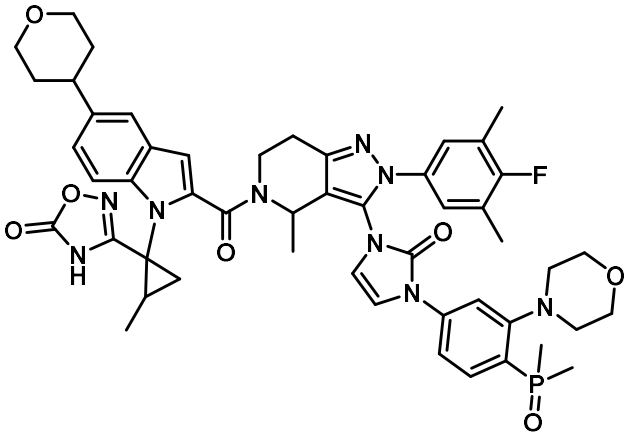


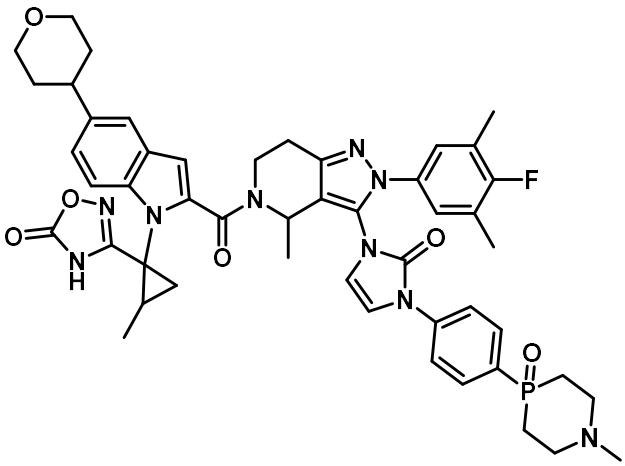


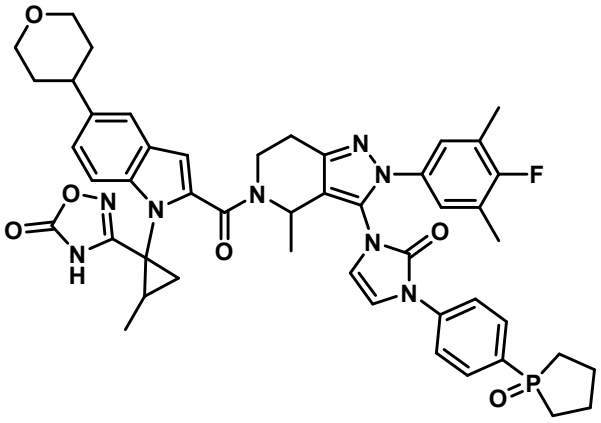


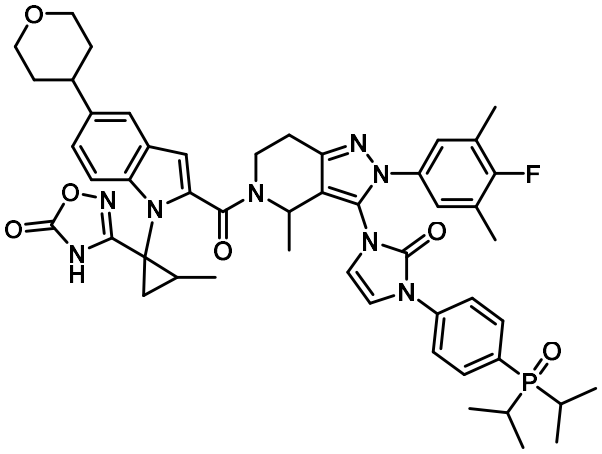


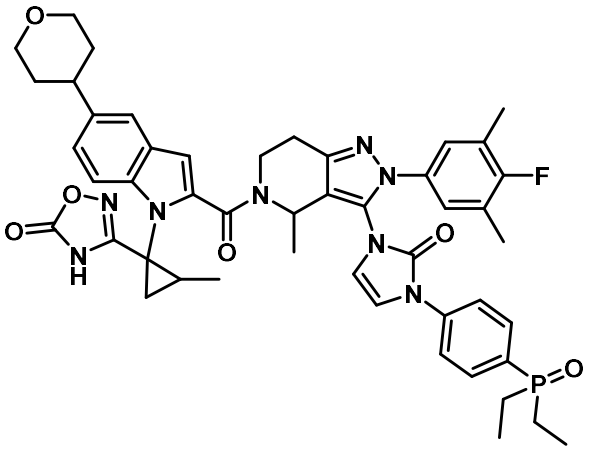


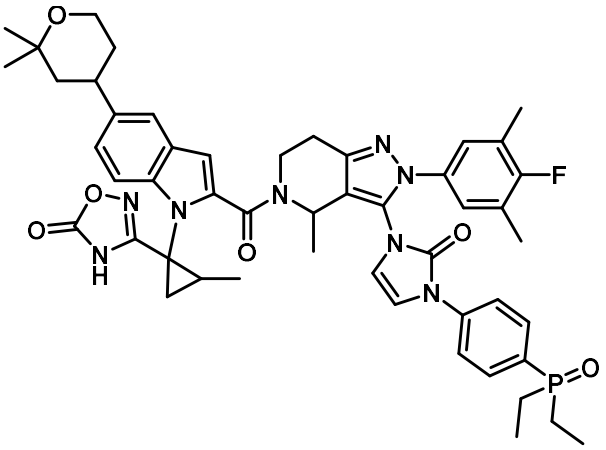


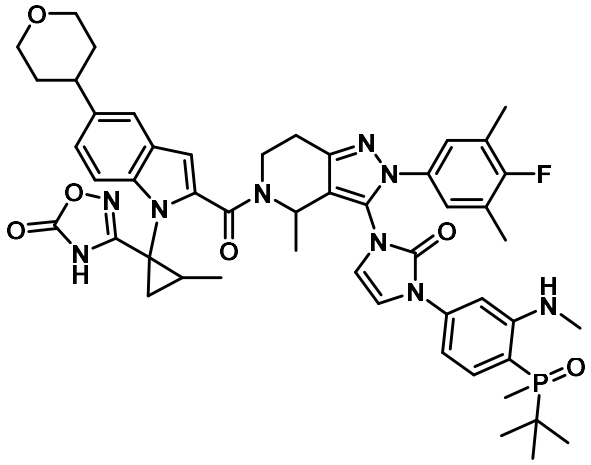


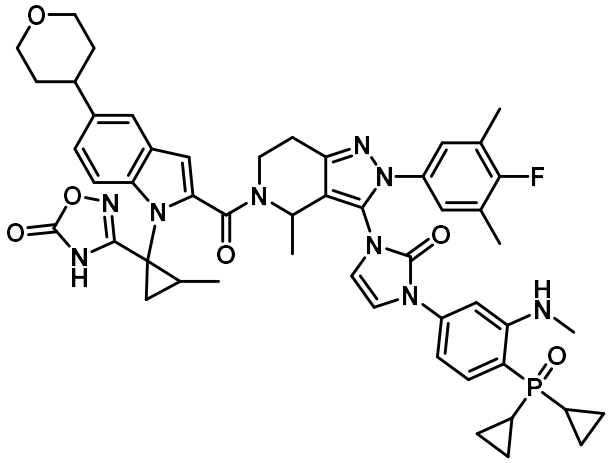


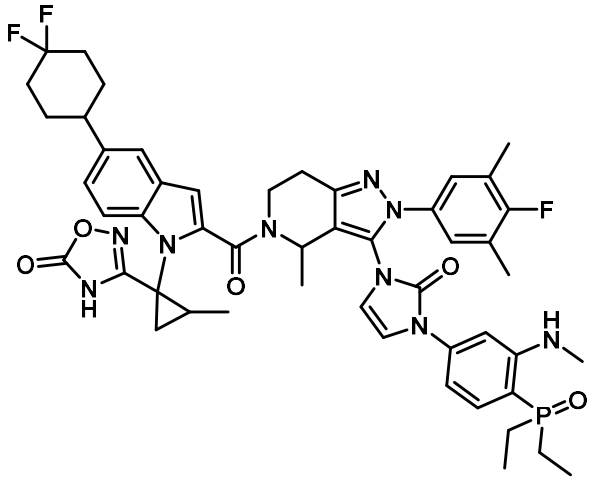


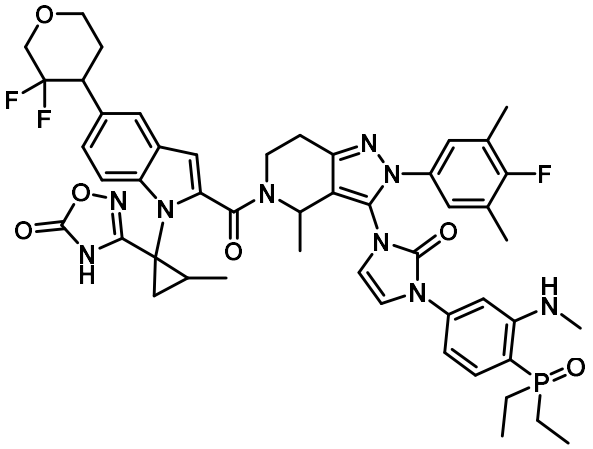


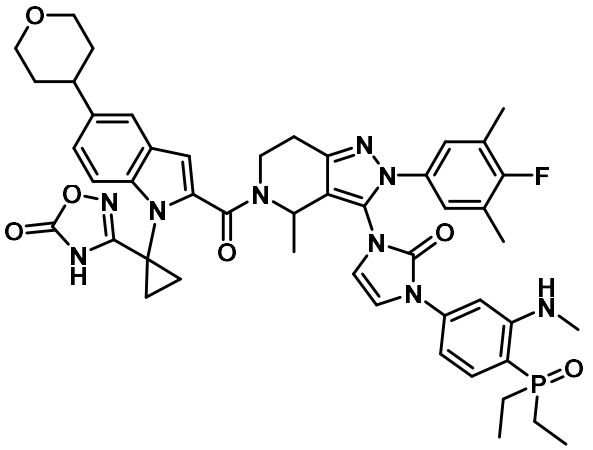


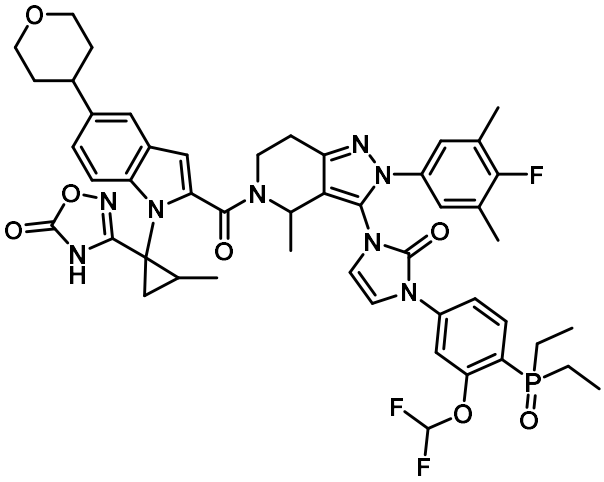


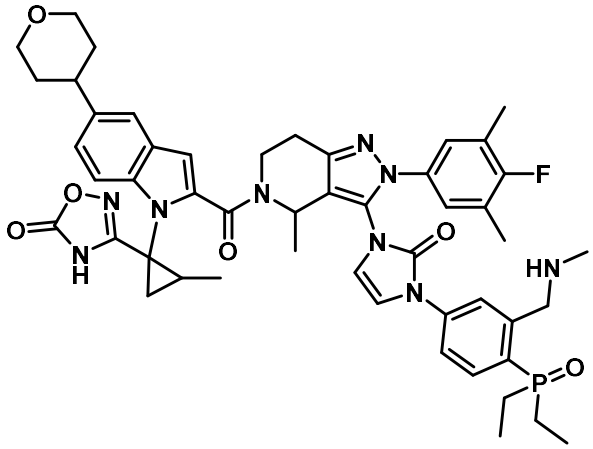


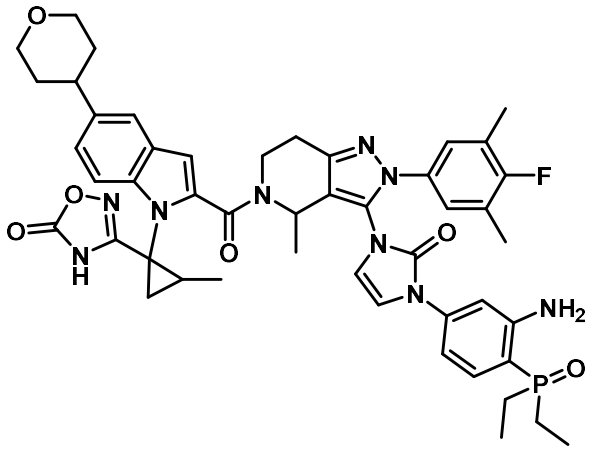


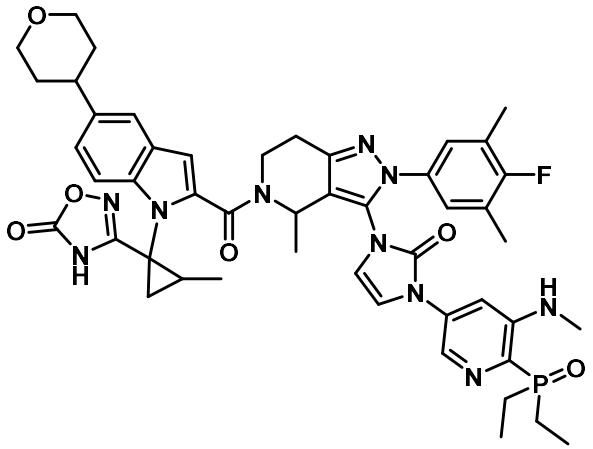


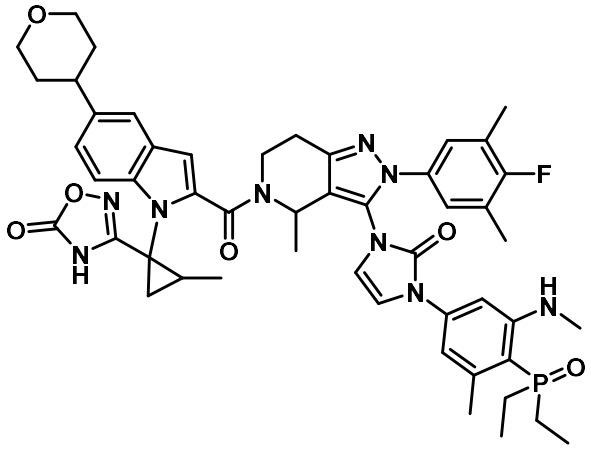


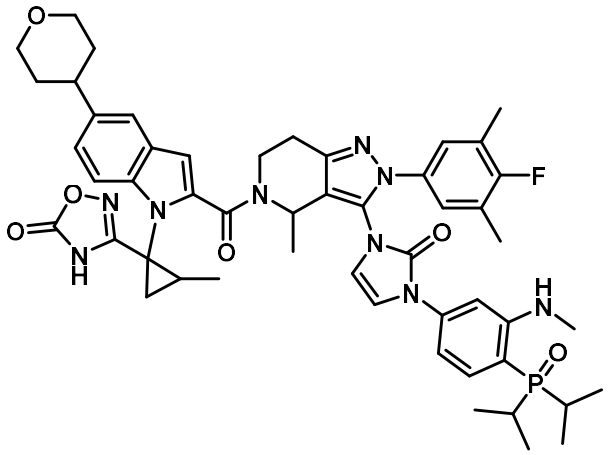


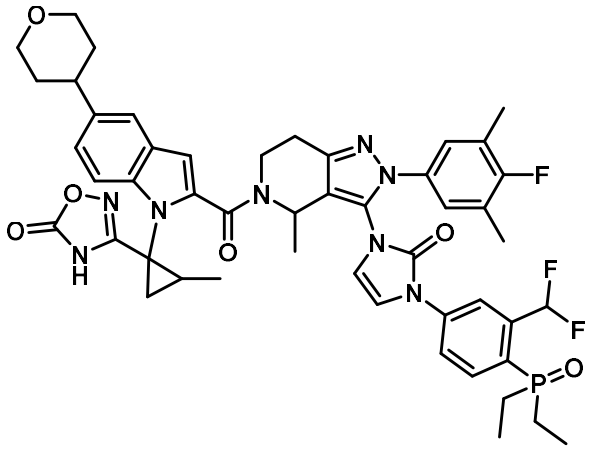


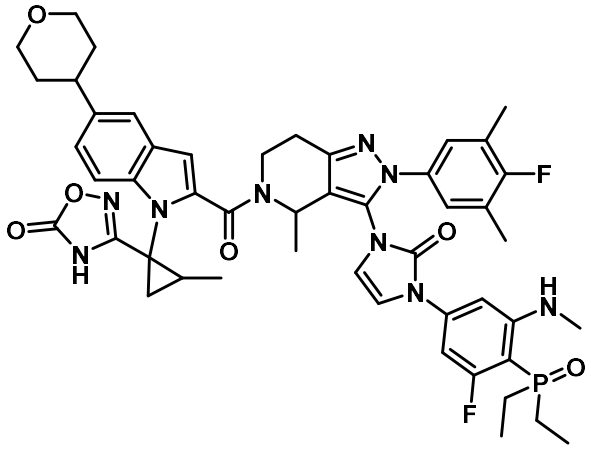


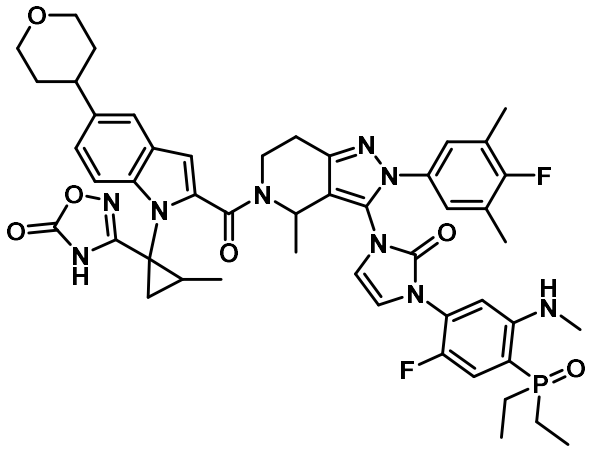


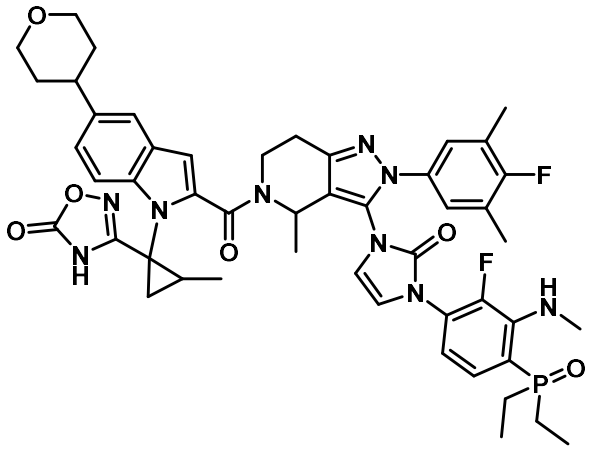


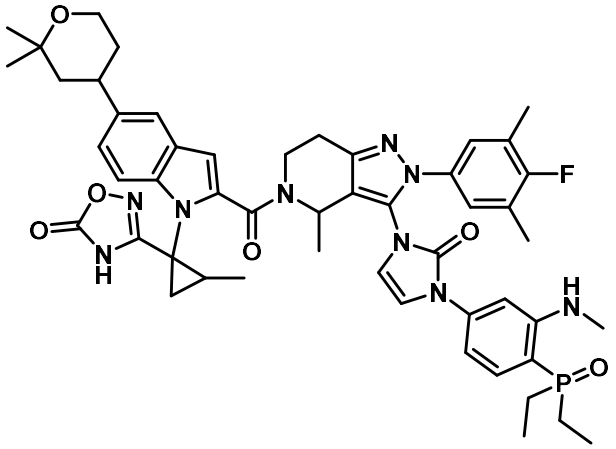


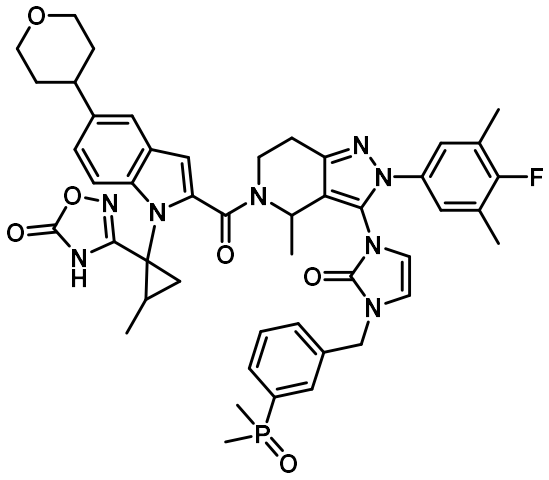


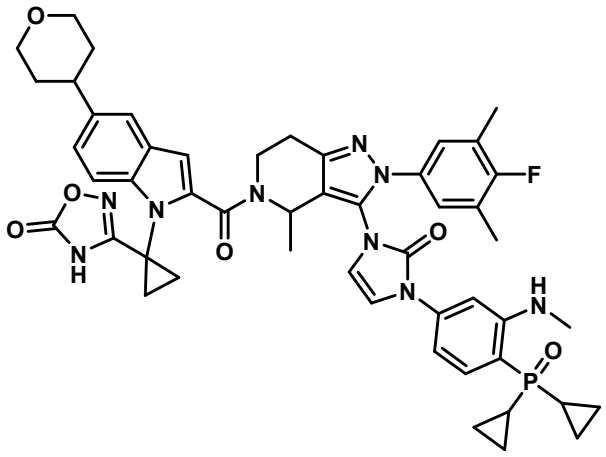


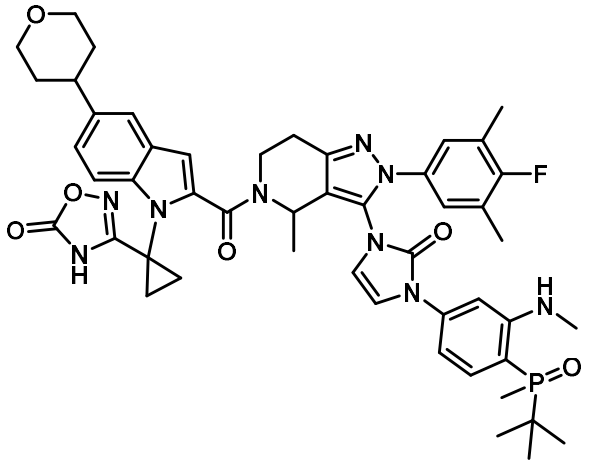


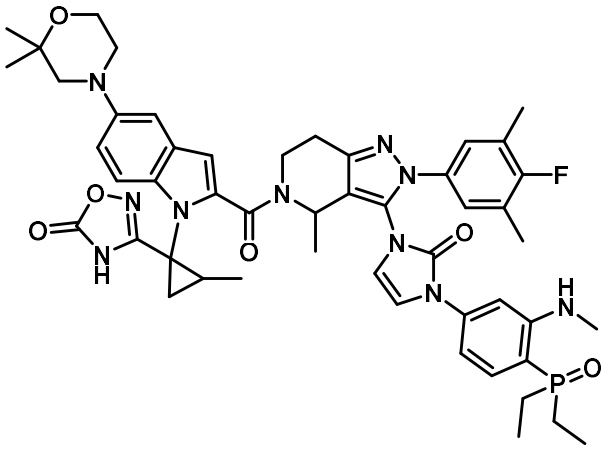


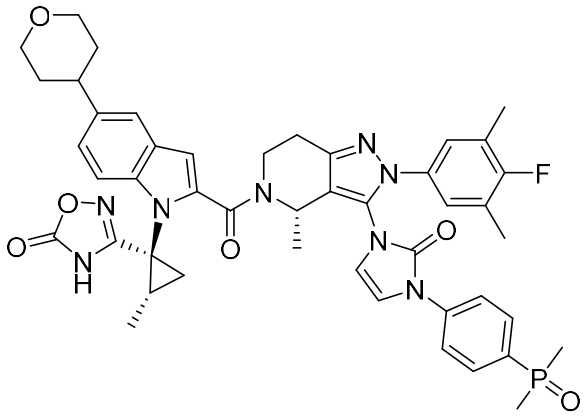


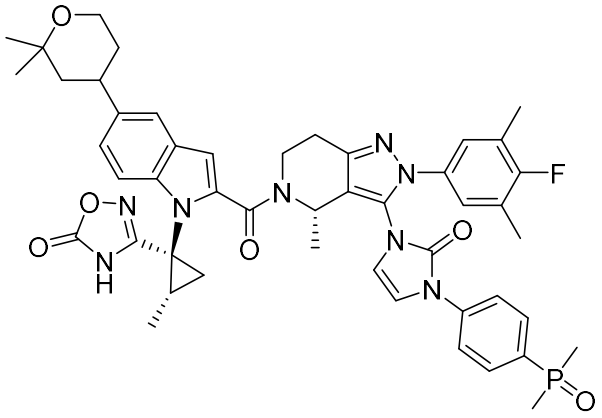


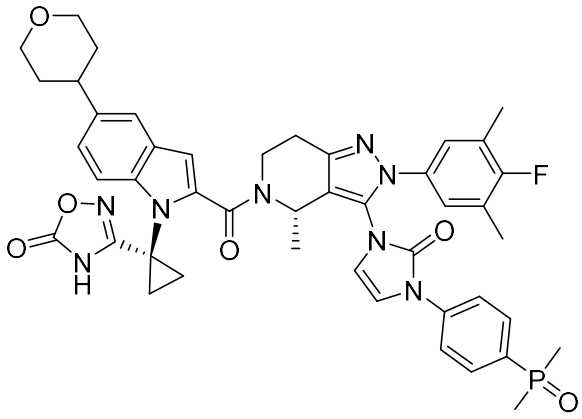


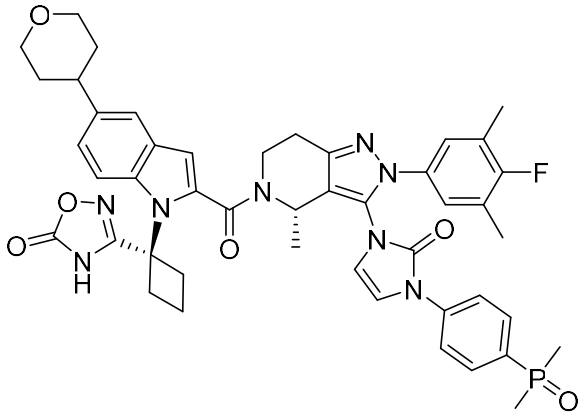


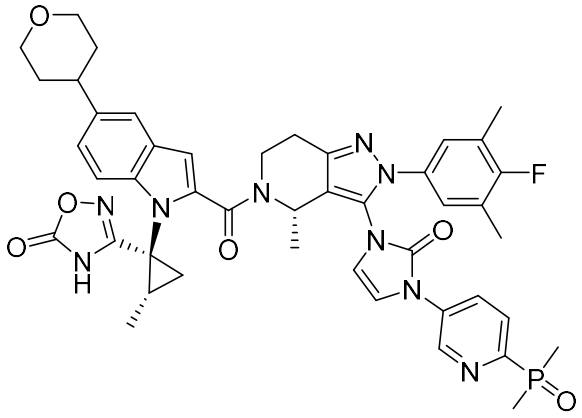


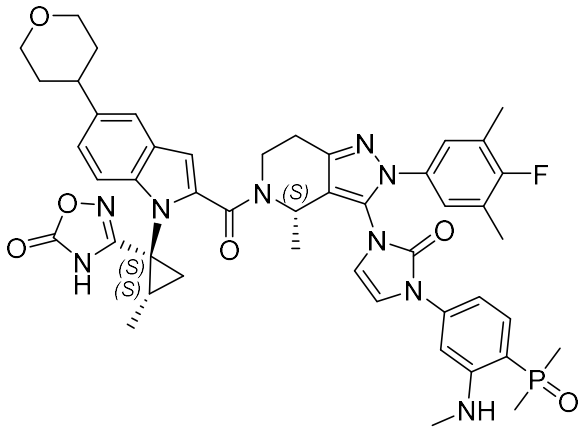


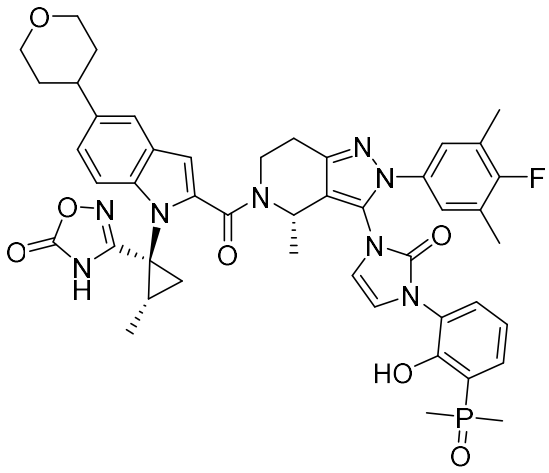


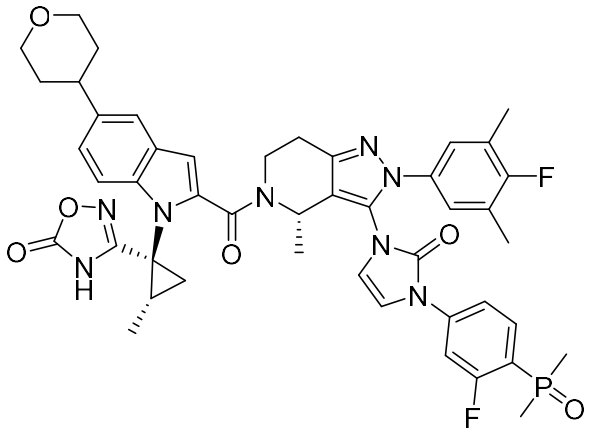


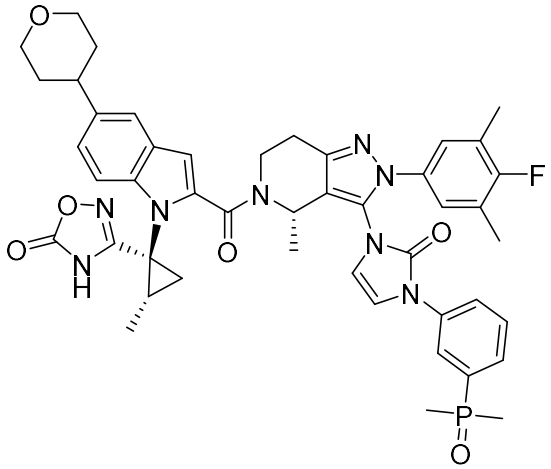


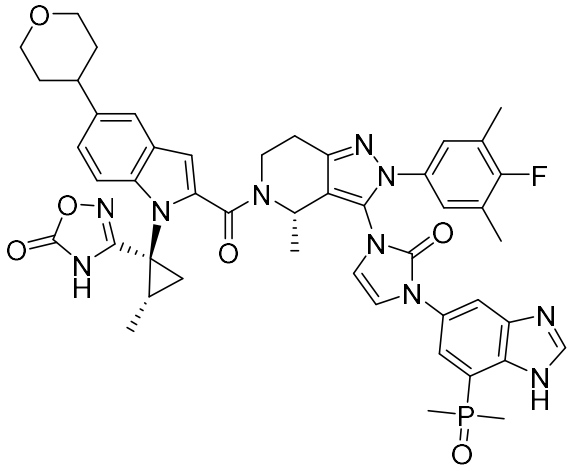


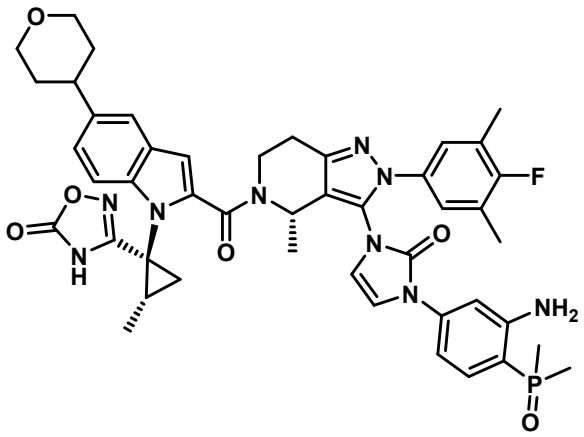


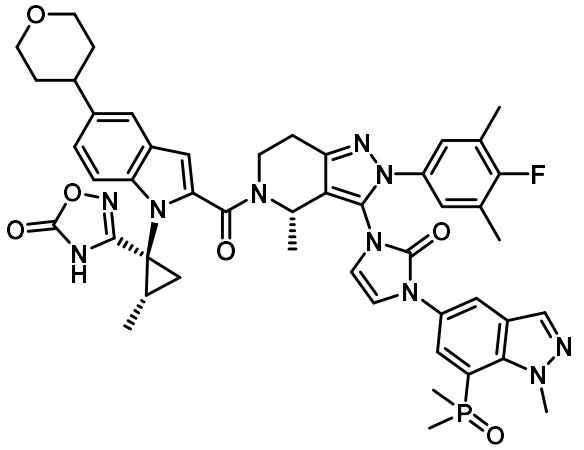


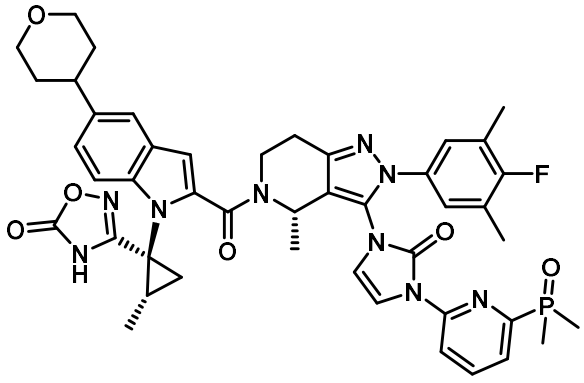


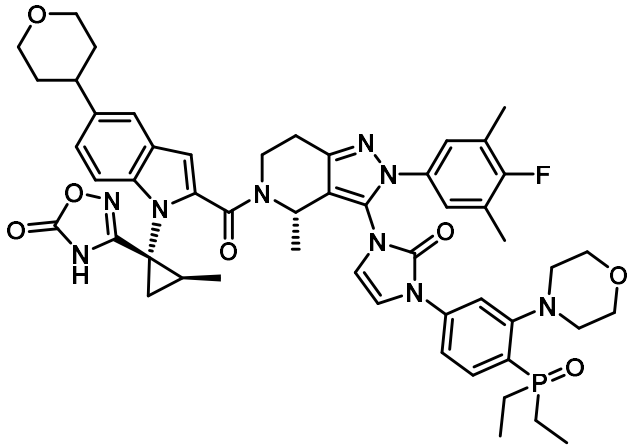


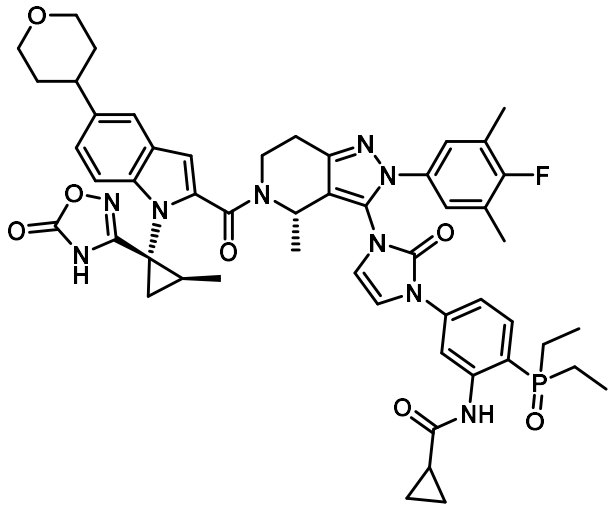


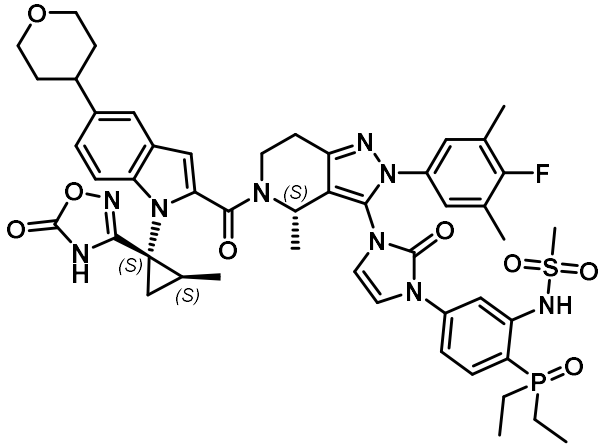


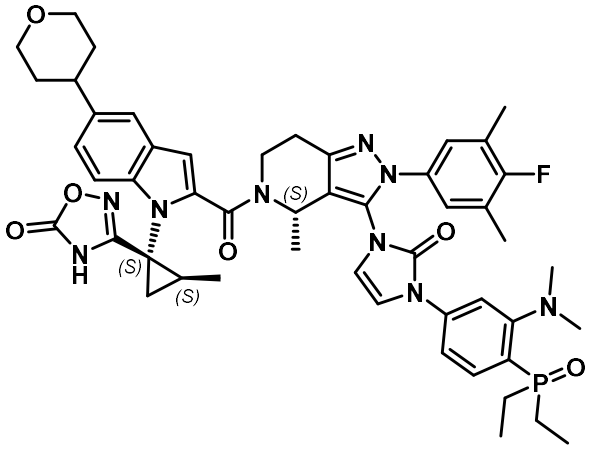


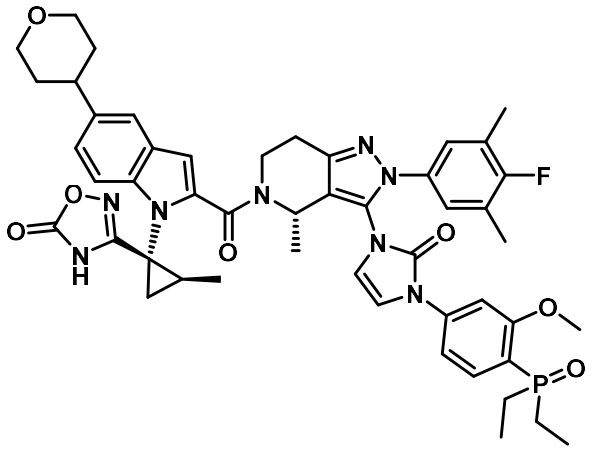


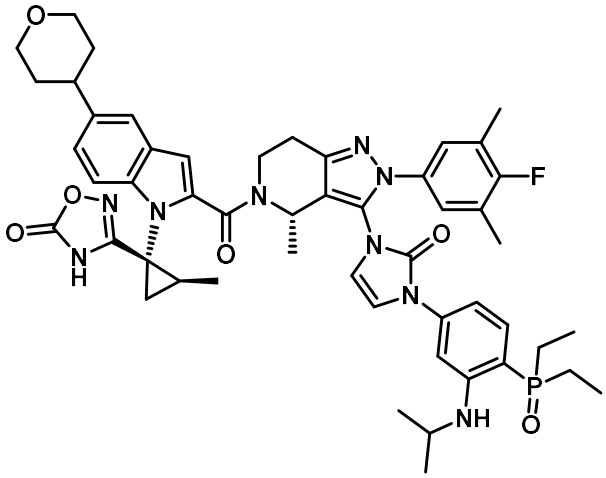


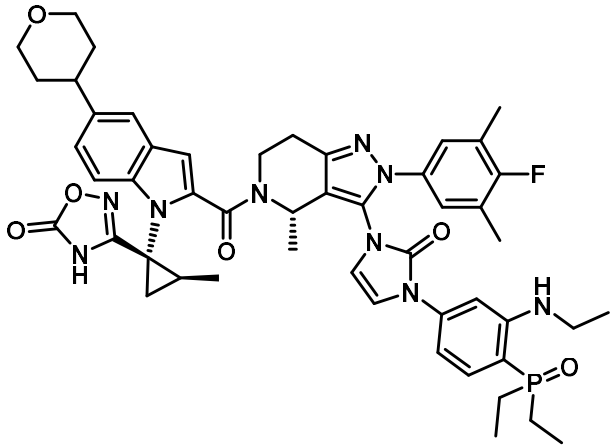


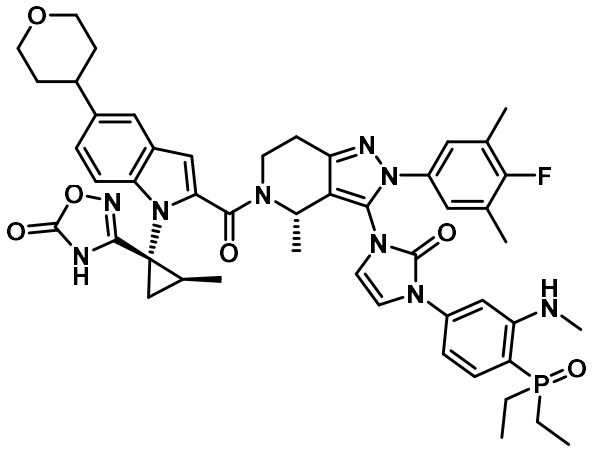


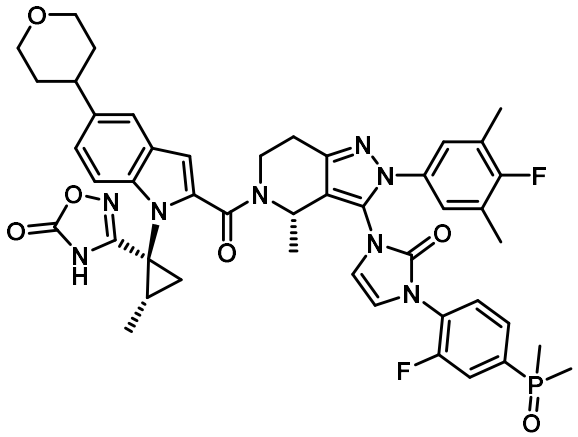


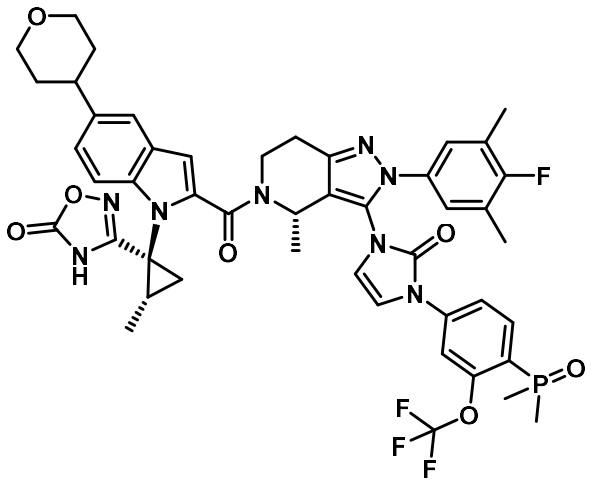


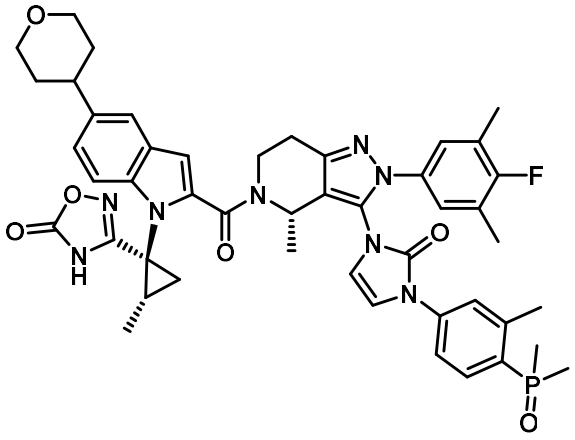


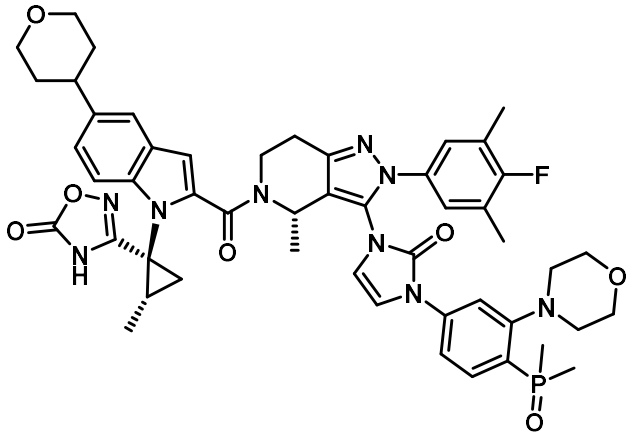


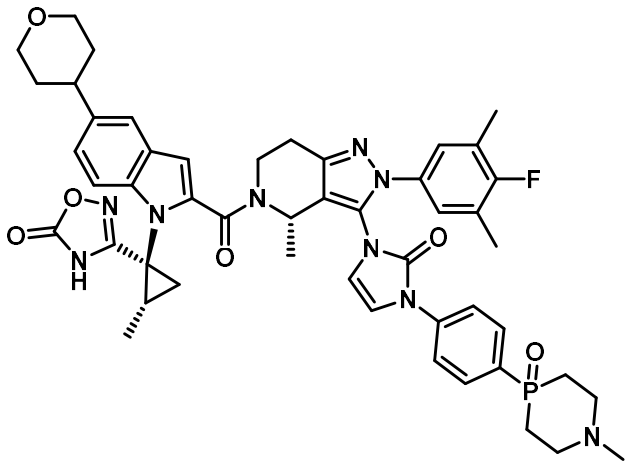


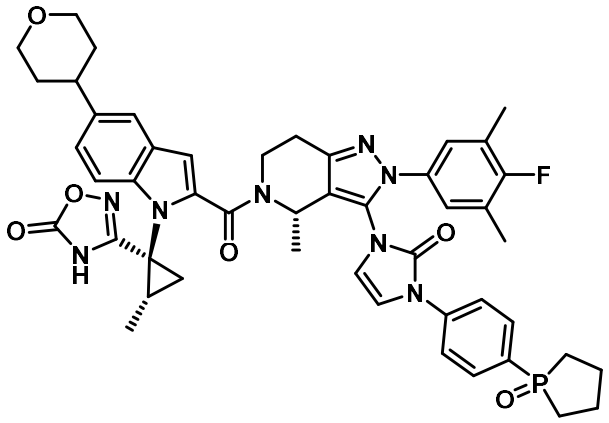


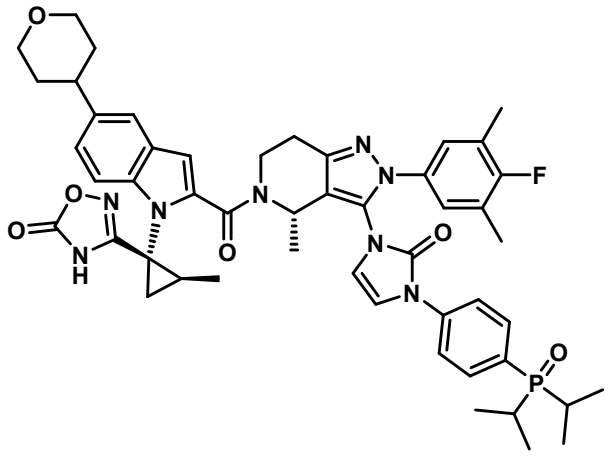


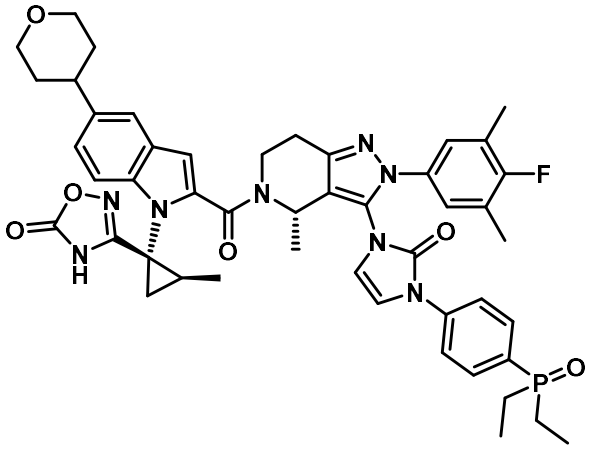


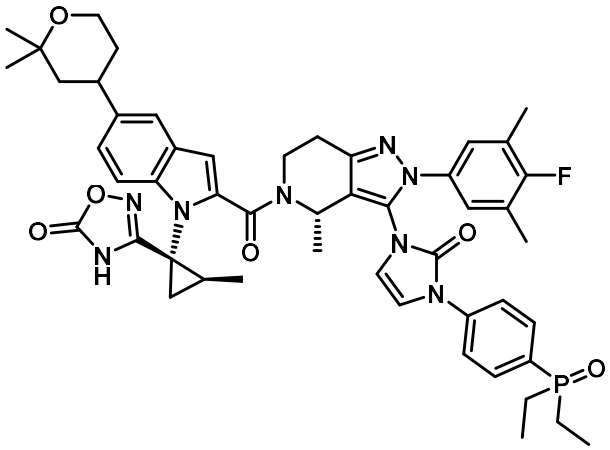


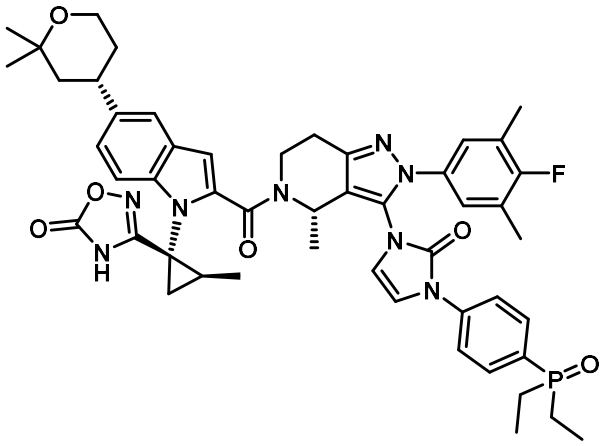


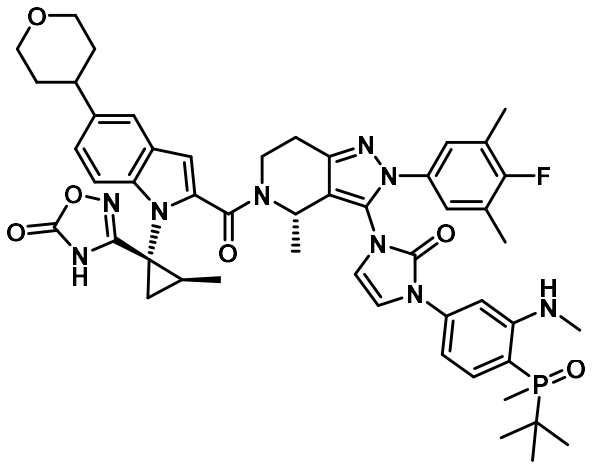


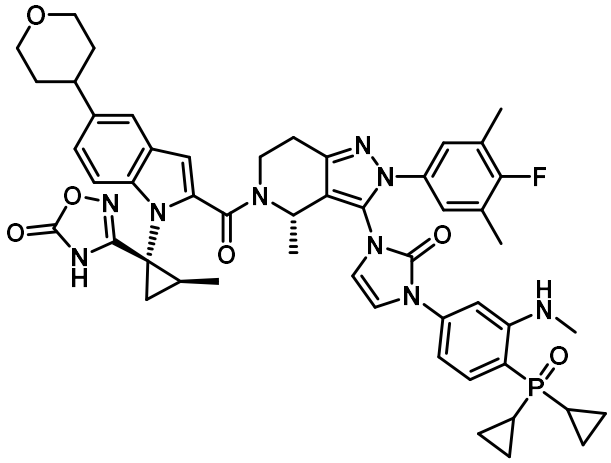


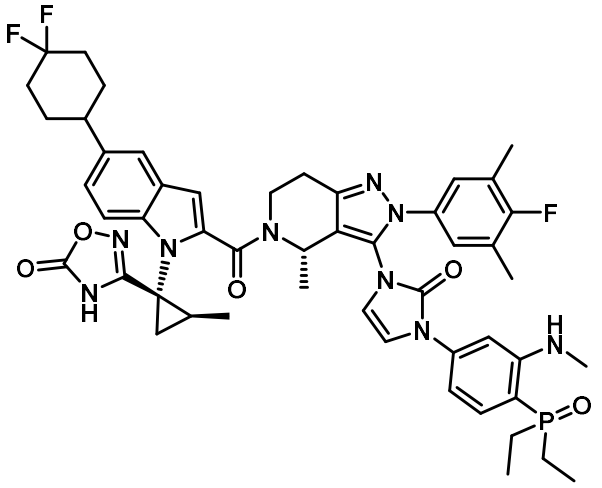


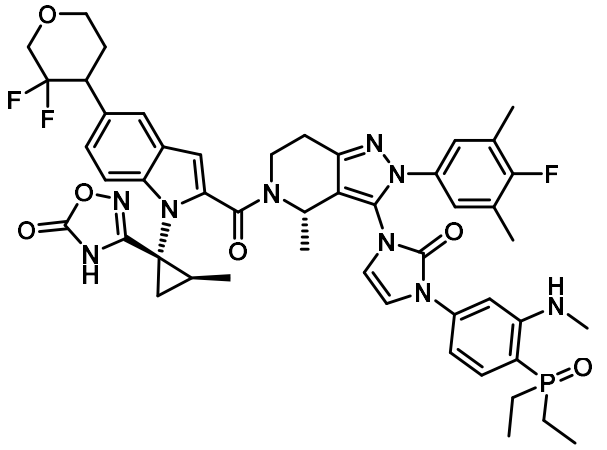


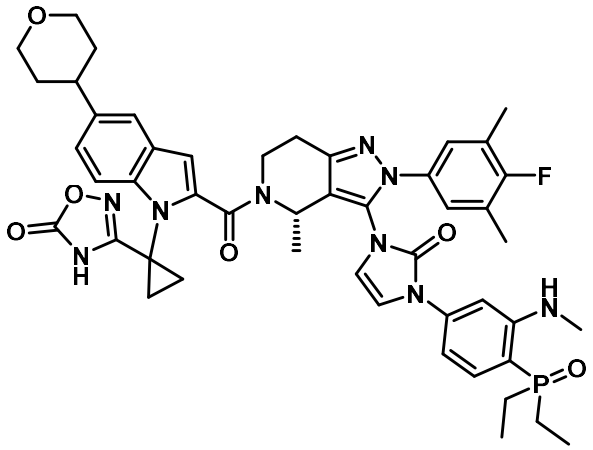


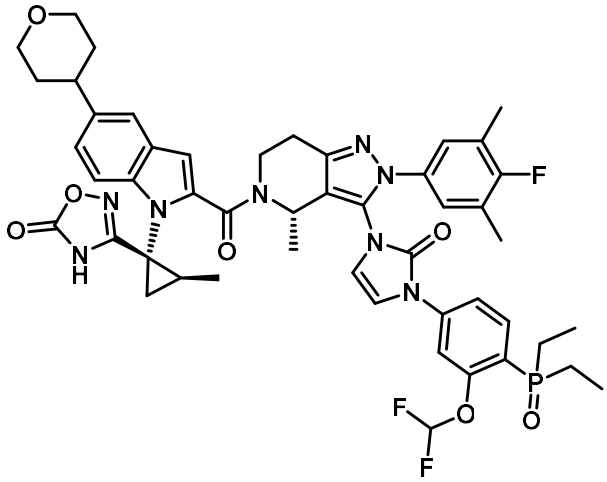


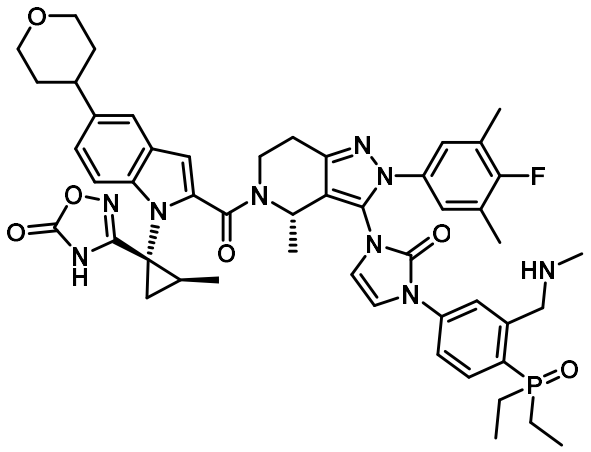


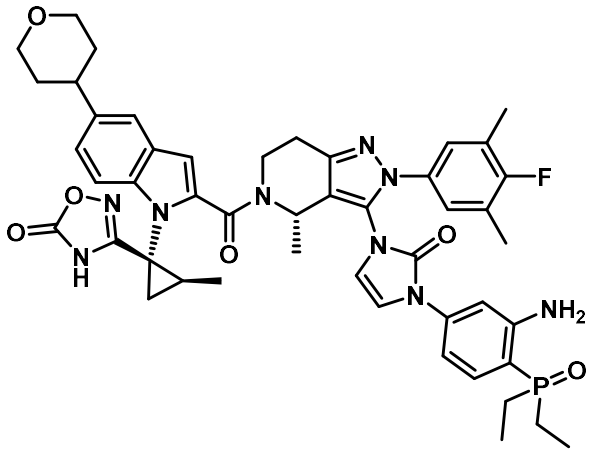


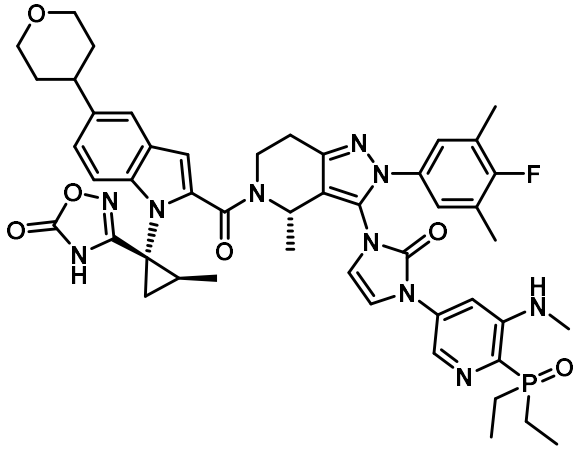


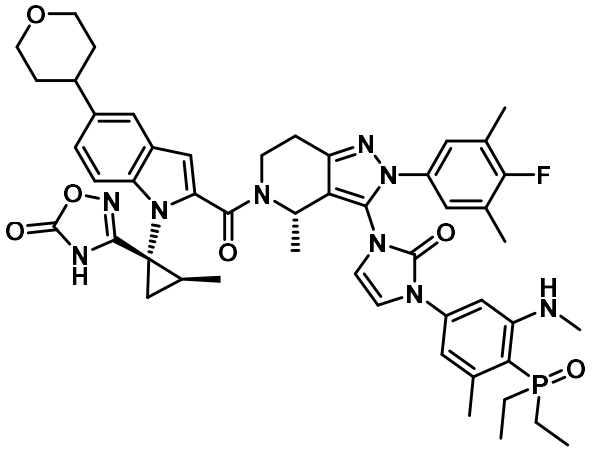


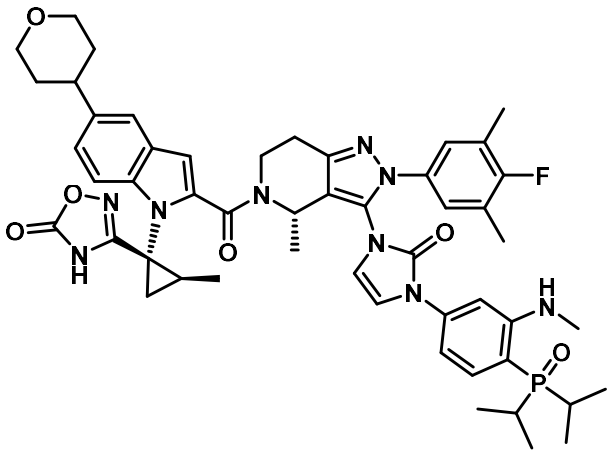


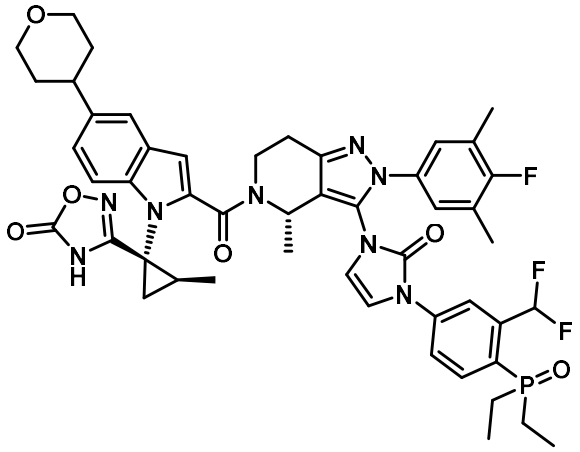


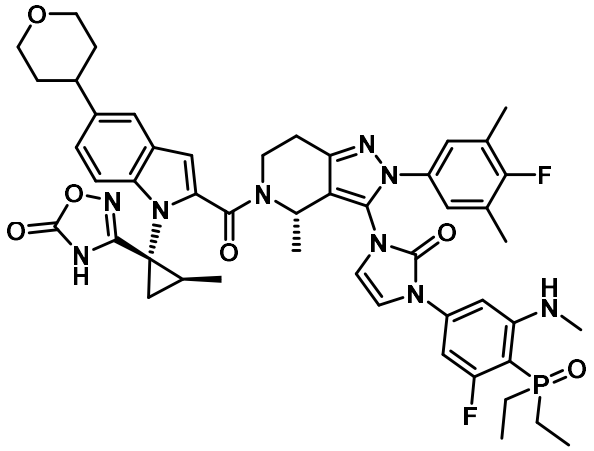


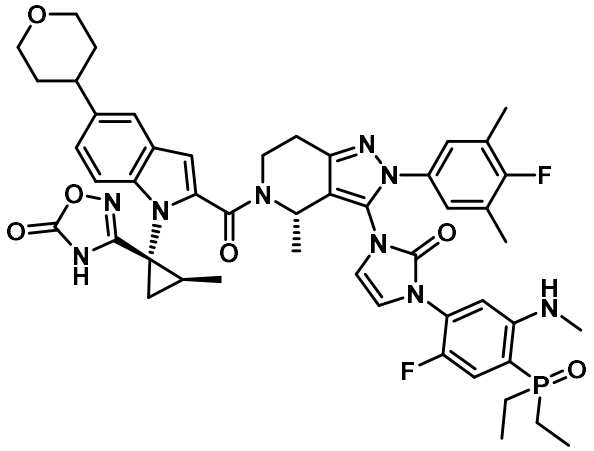


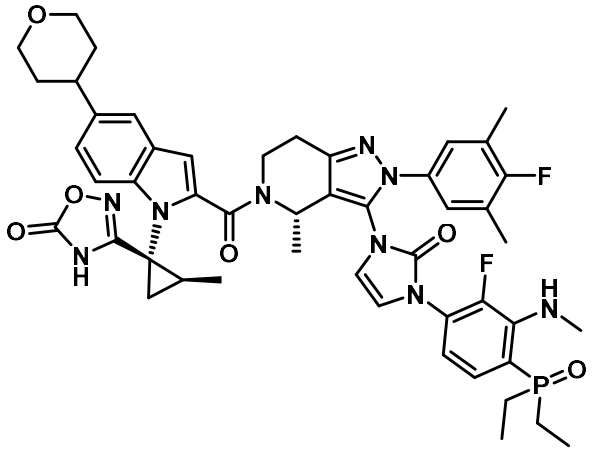


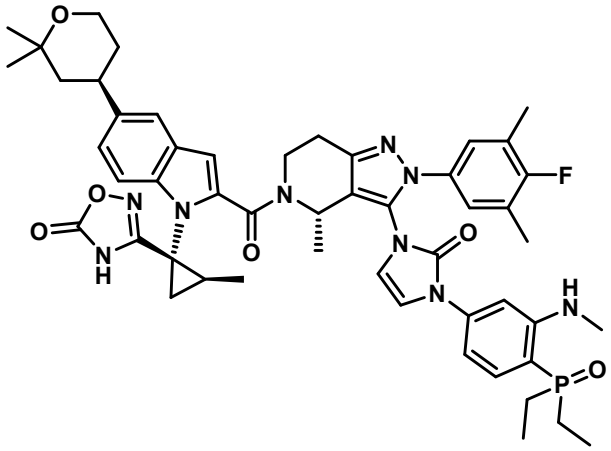


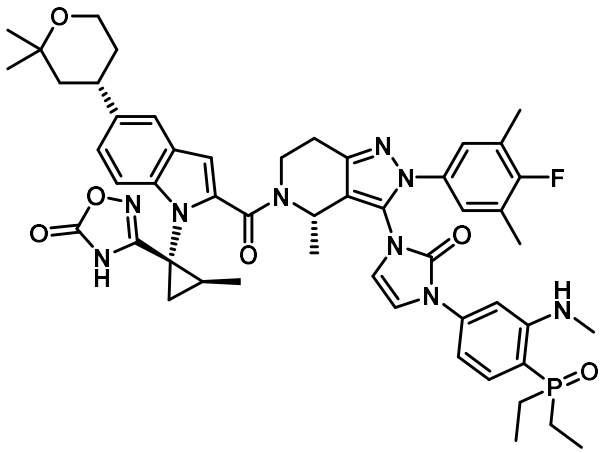


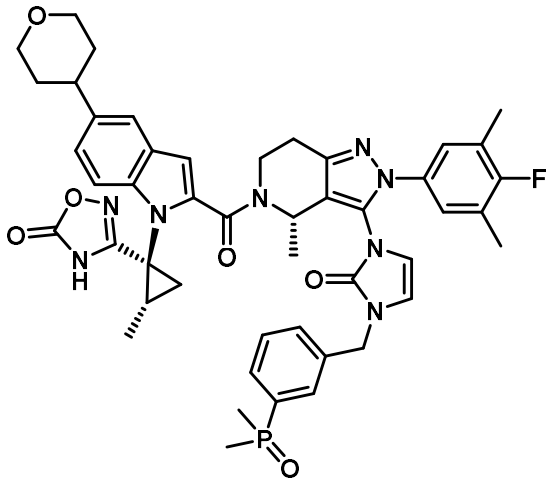


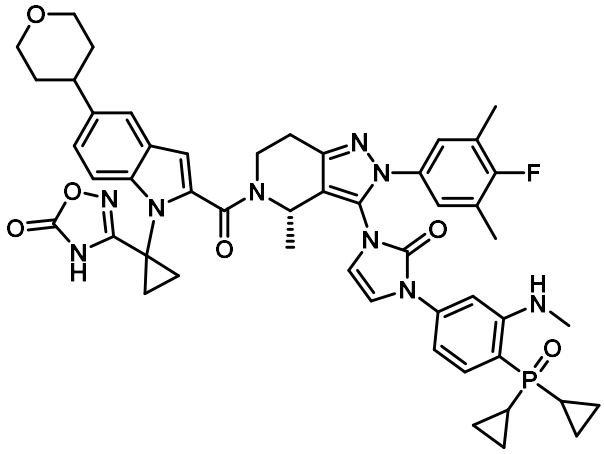


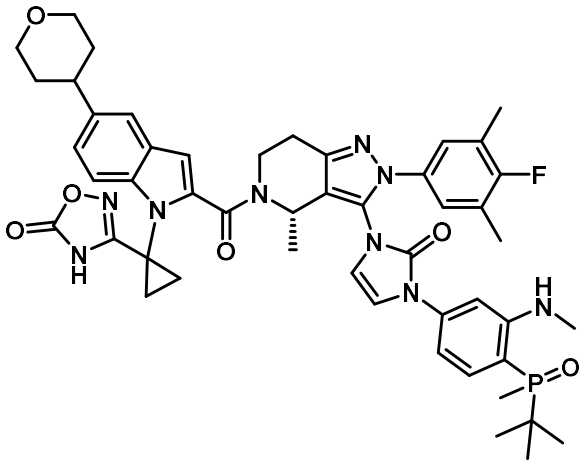




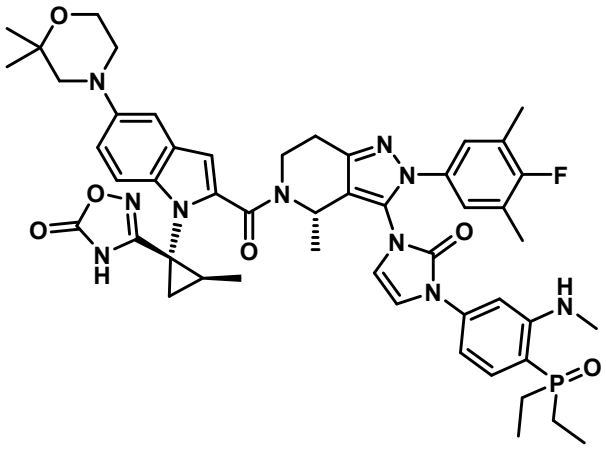






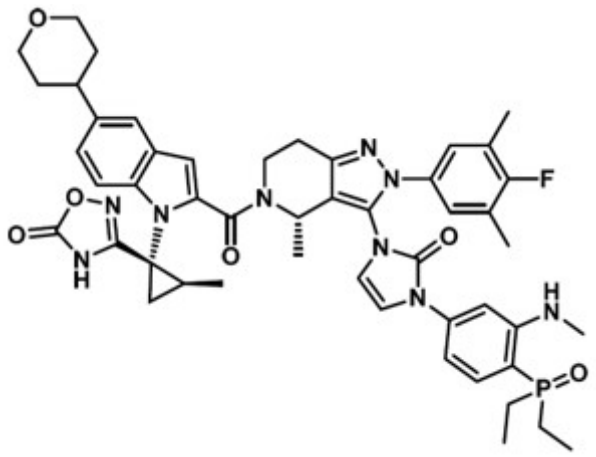


or



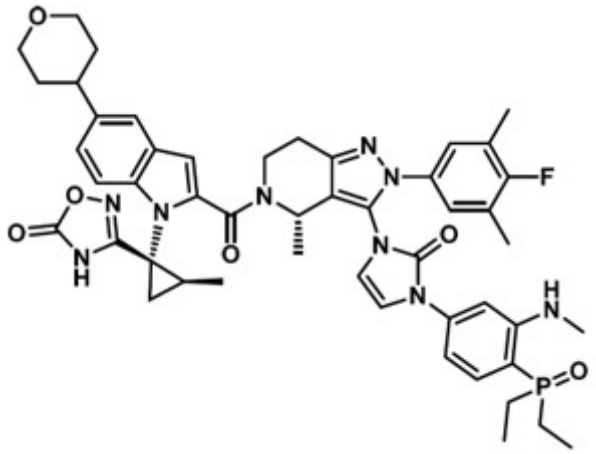
or a pharmaceutically acceptable salt or solvate thereof.

27. The compound of claim 1, wherein the compound is:



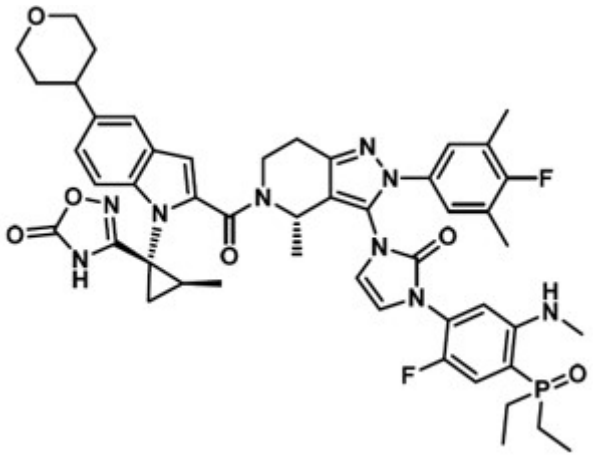
or a pharmaceutically acceptable salt thereof.

28. The compound of claim 1, wherein the compound is:



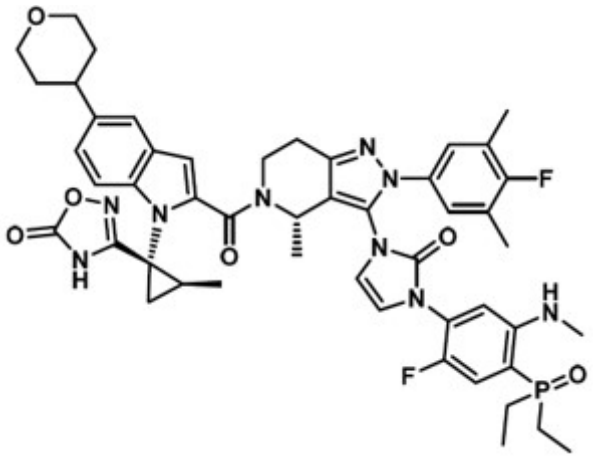
.

29. The compound of claim 1, wherein the compound is:



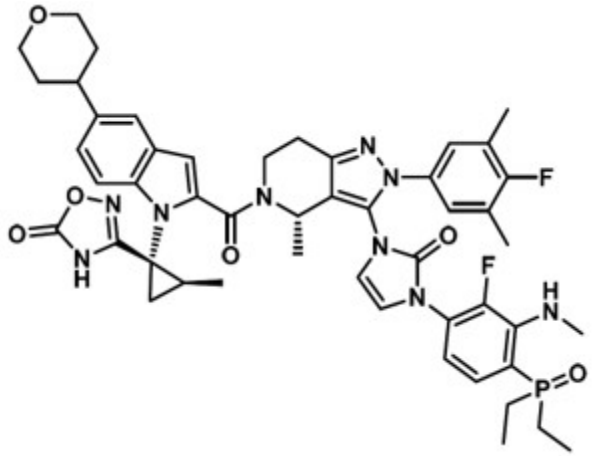
or a pharmaceutically acceptable salt thereof.

30. The compound of claim 1, wherein the compound is:



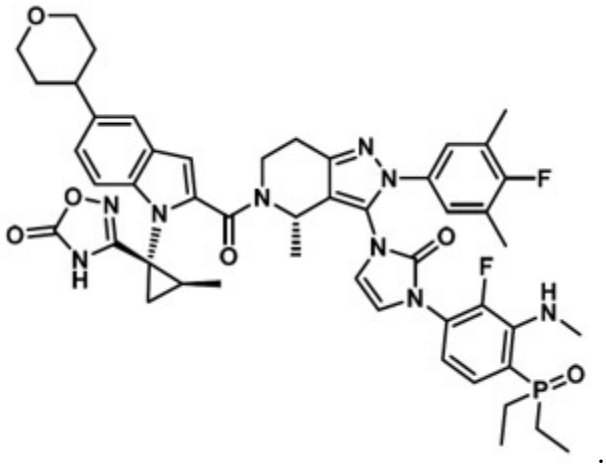
.

31. The compound of claim 1, wherein the compound is:



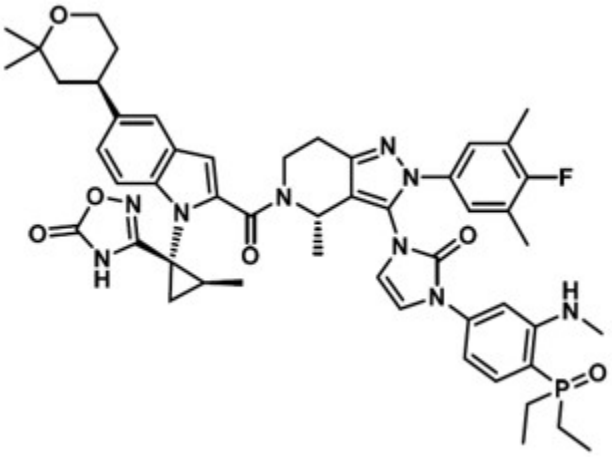
or a pharmaceutically acceptable salt thereof.

32. The compound of claim 1, wherein the compound is:



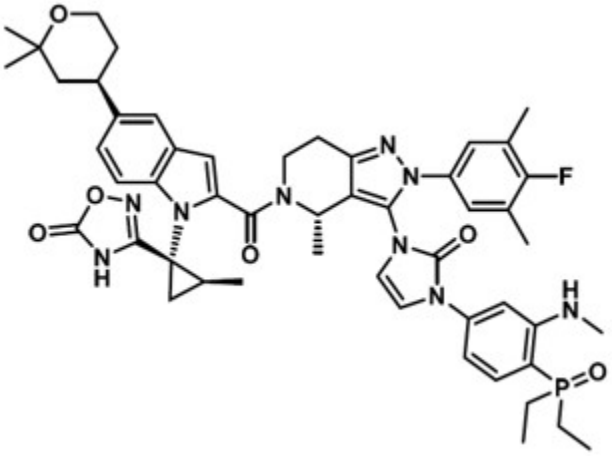
.

33. The compound of claim 1, wherein the compound is:



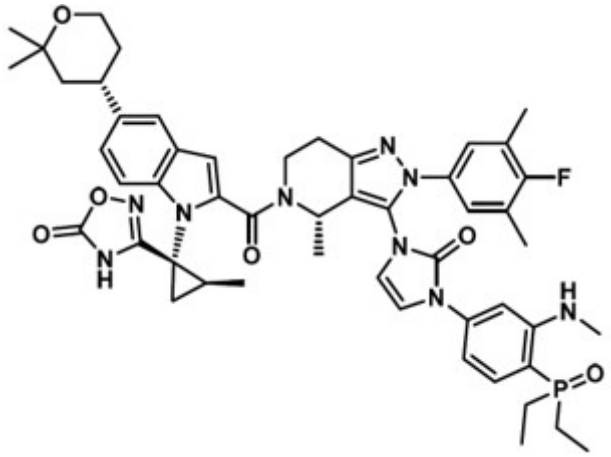
or a pharmaceutically acceptable salt thereof.

34. The compound of claim 1, wherein the compound is:



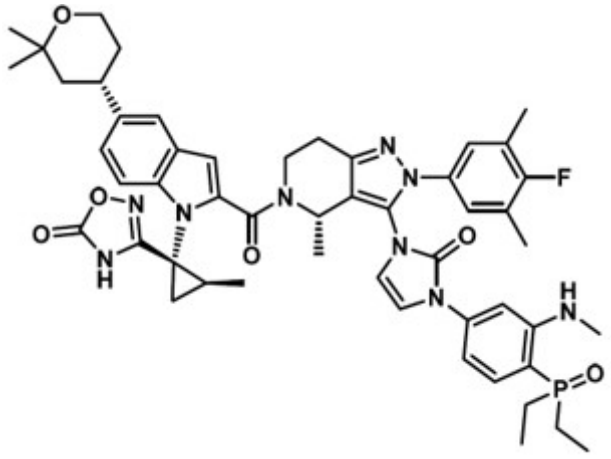
.

35. The compound of claim 1, wherein the compound is:



or a pharmaceutically acceptable salt thereof.

36. The compound of claim 1, wherein the compound is:



.

37. A pharmaceutical composition comprising a compound of any one of claims 1-36, or a pharmaceutically acceptable salt or solvate thereof, and a pharmaceutically acceptable excipient.

38. Use of a compound of any one of claims 1-36, or a pharmaceutically acceptable salt or solvate thereof, or a pharmaceutical composition of claim 37, in the manufacture of a medicament for treating type 2 diabetes mellitus.

39. The use according to claim 38, wherein the medicament is to be administered orally.

40. Use of a compound of any one of claims 1-36, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of claim 37, in the manufacture of a medicament for modulating insulin levels or glucose levels.

41. Use of a compound of any one of claims 1-36, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of claim 37, in the manufacture of a medicament for treating a GLP-1 associated disease, disorder, or condition,

wherein the disease, disorder, or condition is selected from the group consisting of type 1 diabetes mellitus, type 2 diabetes mellitus, early onset type 2 diabetes mellitus, idiopathic type 1 diabetes mellitus (Type 1b), youth-onset atypical diabetes (YOAD), maturity onset diabetes of the young (MODY), latent autoimmune diabetes in adults (LADA), obesity, weight gain from use of other agents, idiopathic intracranial hypertension, Wolfram syndrome, gout, excessive sugar craving, hypertriglyceridemia, dyslipidemia, malnutrition-related diabetes, gestational diabetes, kidney disease, adipocyte dysfunction, sleep apnea, visceral adipose deposition, eating disorders, cardiovascular disease, congestive heart failure, myocardial infarction, left ventricular hypertrophy, peripheral arterial disease, stroke, hemorrhagic stroke, ischemic stroke, transient ischemic attacks, atherosclerotic cardiovascular disease, traumatic brain injury, peripheral vascular disease, endothelial dysfunction, impaired vascular compliance, vascular restenosis, thrombosis, hypertension, pulmonary hypertension, restenosis after angioplasty, intermittent claudication, hyperglycemia, post-prandial lipemia, metabolic acidosis, ketosis, hyperinsulinemia, impaired glucose metabolism, insulin resistance, hepatic insulin resistance, alcohol use disorder, chronic renal failure, metabolic syndrome, syndrome X, smoking cessation, premenstrual syndrome, angina pectoris, diabetic nephropathy, impaired glucose tolerance, diabetic neuropathy, diabetic retinopathy, macular degeneration, cataract, glomerulosclerosis, arthritis, osteoporosis, treatment of addiction, cocaine dependence, bipolar disorder/major depressive disorder, skin and connective tissue disorders, foot ulcerations, psoriasis, primary polydipsia, non-alcoholic steatohepatitis (NASH), non-alcoholic fatty liver disease (NAFLD), ulcerative colitis, inflammatory

bowel disease, colitis, irritable bowel syndrome, Crohn's disease, short bowel syndrome, Parkinson's, Alzheimer's disease, impaired cognition, schizophrenia, Polycystic Ovary Syndrome (PCOS), or any combination thereof;

optionally wherein the disease, disorder, or condition is selected from the group consisting of type 2 diabetes mellitus, early onset type 2 diabetes mellitus, obesity, weight gain from use of other agents, gout, excessive sugar craving, hypertriglyceridemia, dyslipidemia, gestational diabetes, kidney disease, adipocyte dysfunction, sleep apnea, visceral adipose deposition, eating disorders, cardiovascular disease, congestive heart failure, myocardial infarction, left ventricular hypertrophy, peripheral arterial disease, stroke, hemorrhagic stroke, ischemic stroke, transient ischemic attacks, atherosclerotic cardiovascular disease, hyperglycemia, post-prandial lipemia, metabolic acidosis, ketosis, hyperinsulinemia, impaired glucose metabolism, insulin resistance, hepatic insulin resistance, alcohol use disorder, chronic renal failure, metabolic syndrome, syndrome X, smoking cessation, premenstrual syndrome, angina pectoris, diabetic nephropathy, impaired glucose tolerance, diabetic neuropathy, diabetic retinopathy, bipolar disorder/major depressive disorder, skin and connective tissue disorders, foot ulcerations, psoriasis, primary polydipsia, non-alcoholic steatohepatitis (NASH), non-alcoholic fatty liver disease (NAFLD), short bowel syndrome, Parkinson's disease, Polycystic Ovary Syndrome (PCOS), idiopathic intracranial hypertension, Wolfram syndrome, or any combination thereof;

optionally wherein the disease, disorder, or condition includes type 2 diabetes mellitus, early onset type 2 diabetes mellitus, obesity, weight gain from use of other agents, gout, excessive sugar craving, hypertriglyceridemia, dyslipidemia, gestational diabetes, adipocyte dysfunction, visceral adipose deposition, myocardial infarction, peripheral arterial disease, stroke, transient ischemic attacks, hyperglycemia, post-prandial lipemia, metabolic acidosis, ketosis, hyperinsulinemia, impaired glucose metabolism, insulin resistance, hepatic insulin resistance, chronic renal failure, syndrome X, angina pectoris, diabetic nephropathy, impaired glucose tolerance, diabetic neuropathy, diabetic retinopathy, skin and connective tissue disorders, foot ulcerations, idiopathic intracranial hypertension, Wolfram syndrome, or any combination thereof.

42. Use of a compound of any one of claims 1-36, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of claim 37, in the manufacture of a medicament for treating obesity.