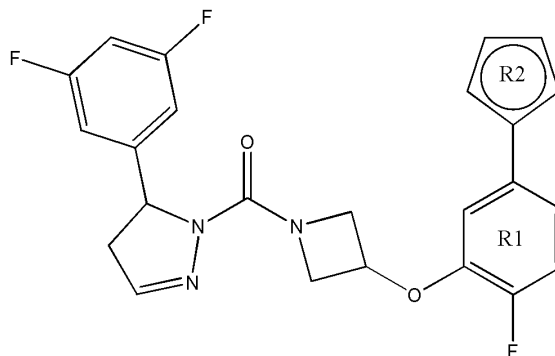


CLAIMS

1. A compound of formula I:



I

5

R1 is 1-F substituted C6 aryl comprising 0, 1 or 2 N heteroatoms; and

R2 is C5 aryl comprising 1, 2 or 3 N heteroatoms, or 1 or 2 N heteroatoms and an O or S heteroatom, substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbyl;

10

or a salt, hydrate or stereoisomer thereof.

2. The compound of claim 1 wherein:

the R2 substituents are independently C0-C6: aldehyde, aldimine, alkanoyloxy, alkoxy, alkoxy carbonyl, alkyloxy, alkyl, alkenyl, alkynyl, amine, azo, halogens, carbamoyl, carbonyl, carboxamido, carboxyl, cyanyl, ester, haloformyl, hydroperoxyl, hydroxyl, imine, isocyanide, iscyante, N-tert-butoxycarbonyl, nitrate, nitrile, nitrite, nitro, nitroso, phosphate, phosphono, sulfide, sulfonyl, sulfo, sulfhydryl, thiol, thiocyanyl, trifluoromethyl or trifluoromethyl ether (OCF₃);

15

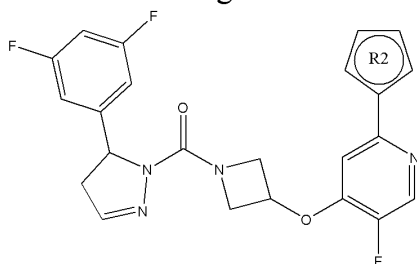
R1 comprises N2, N4 or N2/N4;

20

R2 comprises N1, N1/N2, N2/N3, N3/N4, N2/N5; N2/N4, S2/N4, N2/S4, S3/N4, N2/S3, N3/O4, N2/N3/S5, N2/N3/O5, N2/N3/N5 or N2/N3/N4; or

any combination of the foregoing substituents.

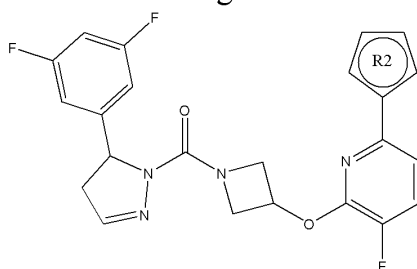
3. The compound, salt, hydrate, or stereoisomer of claim 1, wherein the compound has one of the following structural formula II(1):



II(1)

5 wherein R2 is C5 aryl comprising 1, 2 or 3 N heteroatoms, or 1 or 2 N heteroatoms and an O or S heteroatom, substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbyl.

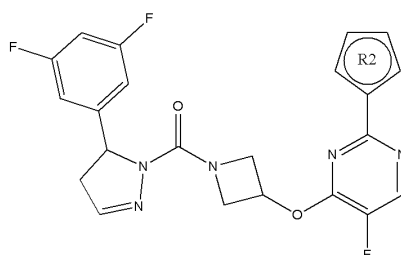
4. The compound, salt, hydrate, or stereoisomer of claim 1, wherein
10 the compound has one of the following structural formula II(2):



II(2)

15 wherein R2 is C5 aryl comprising 1, 2 or 3 N heteroatoms, or 1 or 2 N heteroatoms and an O or S heteroatom, substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbyl.

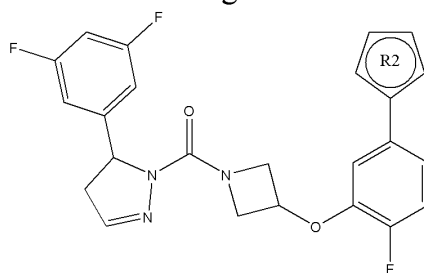
5. The compound, salt, hydrate, or stereoisomer of claim 1, wherein the compound has one of the following structural formula II(3):



II(3)

wherein R2 is C5 aryl comprising 1, 2 or 3 N heteroatoms, or 1 or 2 N heteroatoms and an O or S heteroatom, substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbyl.

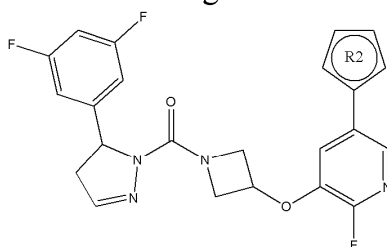
6. The compound, salt, hydrate, or stereoisomer of claim 1, wherein the compound has one of the following structural formula II(4):



II(4)

wherein R2 is C5 aryl comprising 1, 2 or 3 N heteroatoms, or 1 or 2 N heteroatoms and an O or S heteroatom, substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbyl.

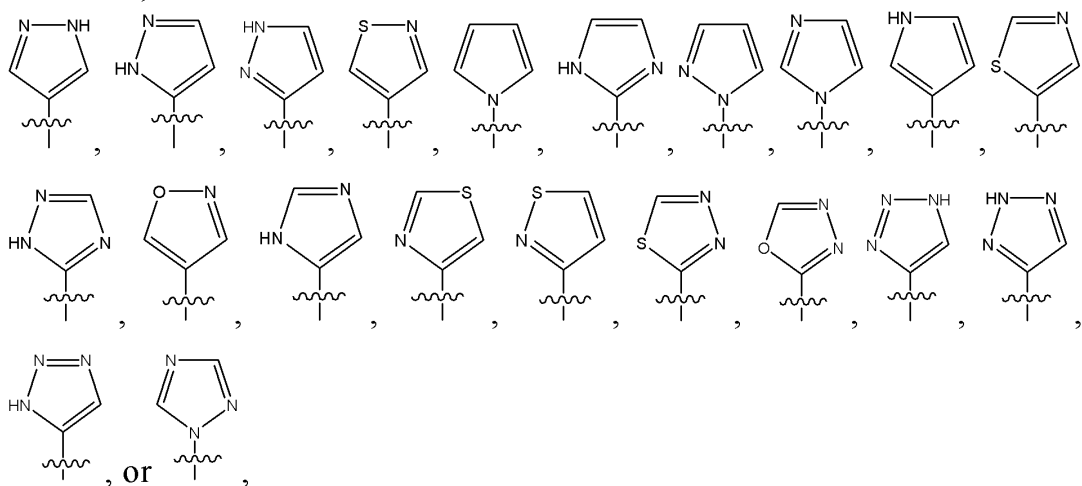
7. The compound, salt, hydrate, or stereoisomer of claim 1, wherein the compound has one of the following structural formula II(5):



II(5)

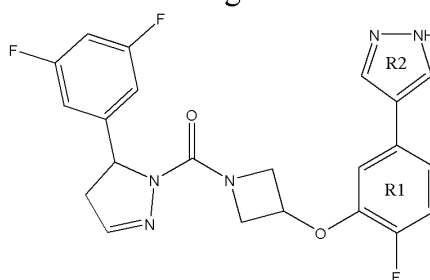
wherein R2 is C5 aryl comprising 1, 2 or 3 N heteroatoms, or 1 or 2 N heteroatoms and an O or S heteroatom, substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbyl.

- 5 8. The compound, salt, hydrate, or stereoisomer of any one of claims 1 and 3-7, wherein R2 is



- 10 substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbyl.

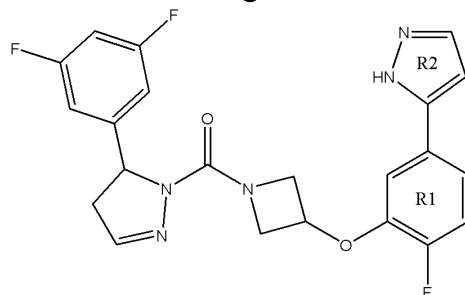
9. The compound, salt, hydrate, or stereoisomer of claims 1, wherein the compound has one of the following structural formula III(1):



- 15 III(1)

wherein R1 is 1-F substituted C6 aryl comprising 0, 1 or 2 N heteroatoms; and wherein R2 is a C5 aryl as set forth in structural formula III(1), substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbyl.

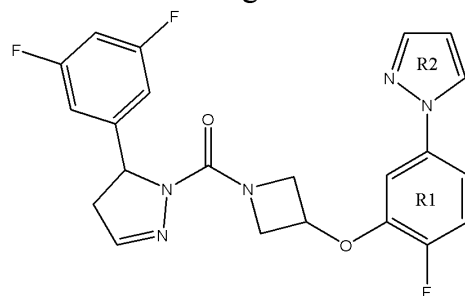
10. The compound, salt, hydrate, or stereoisomer of claims 1, wherein the compound has one of the following structural formula III(2):



III(2)

5 wherein R1 is 1-F substituted C6 aryl comprising 0, 1 or 2 N heteroatoms; and wherein R2 is a C5 aryl as set forth in structural formula III(2), substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbyl.

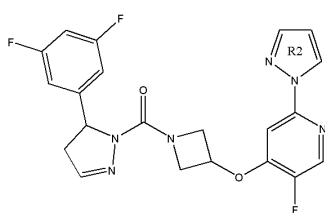
11. The compound, salt, hydrate, or stereoisomer of claims 1, wherein
10 the compound has one of the following structural formula III(3):



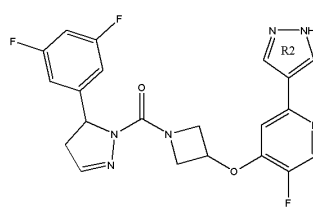
III(3)

15 wherein R1 is 1-F substituted C6 aryl comprising 0, 1 or 2 N heteroatoms; and wherein R2 is a C5 aryl as set forth in structural formula III(3), substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbyl.

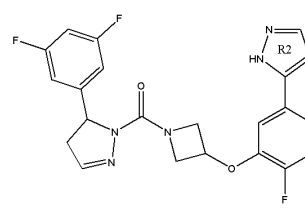
12. The compound, salt, hydrate, or stereoisomer of claim 1, wherein the compound has one of the following structural formulae IV(1)-IV(5):



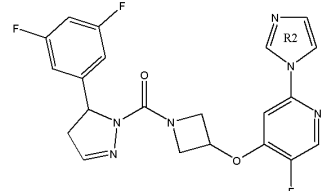
IV(1)



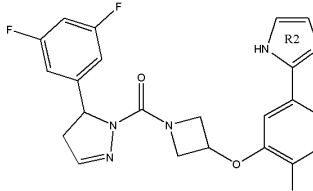
IV(2)



IV(3)



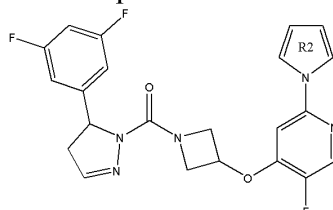
IV(4)



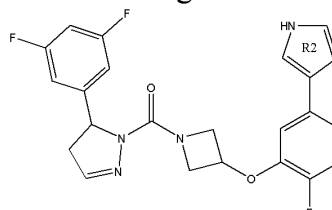
IV(5)

wherein R2 is a C5 aryl as set forth in structural formulae IV(1)-IV(5), substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbyl.

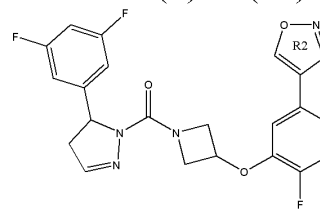
13. The compound, salt, hydrate, or stereoisomer of claim 1, wherein
5 the compound has one of the following structural formulae IV(6)-IV(10):



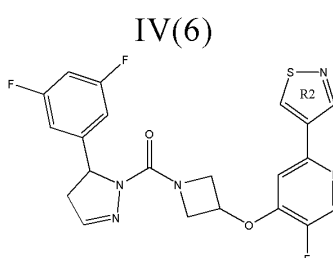
IV(6)



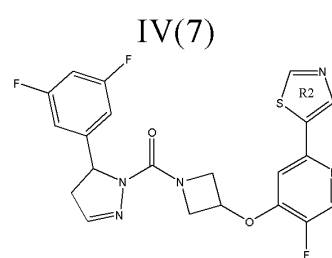
IV(7)



IV(8)



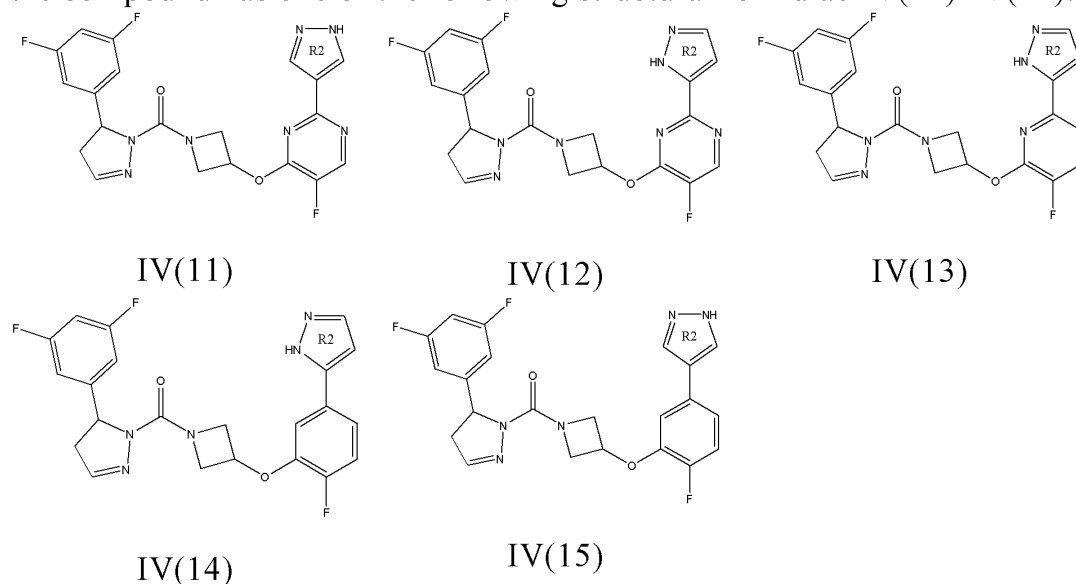
IV(9)



IV(10)

wherein R2 is a C5 aryl as set forth in structural formulae IV(6)-IV(10), substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbyl.

14. The compound, salt, hydrate, or stereoisomer of claim 1, wherein the compound has one of the following structural formulae IV(11)-IV(15):



wherein R² is a C₅ aryl as set forth in structural formulae IV(11)-IV(15), substituted with 0-3 substituents selected from halide, optionally-substituted N, S or O, and optionally-substituted hydrocarbonyl.

15. The compound, salt, hydrate, or stereoisomer of any one of claims 1 and 3-14, wherein R² is substituted with 0-3 R^a, wherein R^a, for each occurrence, is independently selected from:

halogen, cyano, C₁-C₆ alkyl, C₃-C₆ cycloalkyl, 3- to 6-membered heterocyclyl, C₂-C₆ alkenyl, C₁-C₆ alkoxy, -C(=O)(C₁-C₆ alkyl), -C(=O)(C₃-C₆ cycloalkyl), -C(=O)(3- to 6-membered heterocyclyl), =O, -NO₂, -C(=O)OR^s, -C(=O)NR^pR^q, -NR^pR^q, -NR^pC(=O)R^s, -NR^pC(=O)OR^s, -NR^pC(=O)NR^qR^t, -NR^pS(=O)_wR^s, -OR^s, -OC(=O)R^s, -OC(=O)OR^s, -OC(=O)NR^pR^q, -S(=O)_wR^s, and -S(=O)_wNR^pR^q; wherein

the C₁-C₆ alkyl, C₃-C₆ cycloalkyl, 3- to 6-membered heterocyclyl, C₂-C₆ alkenyl, and C₁-C₆ alkoxy of R^a, the C₁-C₆ alkyl of -C(=O)(C₁-C₆ alkyl), the C₃-C₆ cycloalkyl of -C(=O)(C₃-C₆ cycloalkyl), and the 3- to 6-membered heterocyclyl of -C(=O)(3- to 6-membered heterocyclyl) are each optionally substituted with 1 to 3 groups selected from halogen,

cyano, =O, -C(=O)R^s, -C(=O)OR^s, -C(=O)NR^pR^q, -NR^pR^q, -NR^pC(=O)R^s, -NR^pC(=O)OR^s, -NR^pC(=O)NR^qR^r, -NR^pS(=O)_wR^s, -OR^s, -OC(=O)R^s, -OC(=O)OR^s, -OC(=O)NR^pR^q, -S(=O)_wR^s, -S(=O)_wNR^pR^q, C₃-C₆ cycloalkyl, and 3- to 6-membered heterocyclyl; wherein

- 5 R^p, R^q, R^r, and R^s, for each occurrence, are each independently selected from hydrogen, OH, NH₂, C₁-C₄ alkyl, C₃-C₆ cycloalkyl, and 3- to 6-membered heterocyclyl; wherein

the C₁-C₄ alkyl, C₃-C₆ cycloalkyl, and 3- to 6-membered heterocyclyl of any one of R^p, R^q, R^r, and R^s are optionally substituted with 1 to 3
10 groups selected from halogen, cyano, -OH, C₁-C₆ alkyl, -O(C₁-C₆ alkyl), -C(=O)N(C₁-C₆ alkyl)(C₁-C₆ alkyl), -C(=O)NH(C₁-C₆ alkyl), -C(=O)(3- to 6-membered heterocyclyl), -C(=O)(C₃-C₆ cycloalkyl), C₃-C₆ cycloalkyl, phenyl, and 3- to 6-membered heterocyclyl; and wherein

w is an integer selected from 0, 1, and 2.

- 15 16. The compound, salt, hydrate or stereoisomer of any one of claims 1 and 3-15, wherein R₂ is substituted with 1-3 R^a, wherein R^a, for each occurrence, is independently selected from: halogen; cyano; 4- to 6-membered heterocyclyl optionally substituted with oxo; -C(=O)(C₁-C₆ alkyl); -C(=O)(C₃-C₆ cycloalkyl); -C(=O)(4- to 6-membered heterocyclyl);
20 3- to 4-membered cycloalkyl;

-C(=O)OR^s, wherein R^s is H or C₁-C₃ alkyl;

- C₁-C₃ alkyl, optionally substituted with OH, NH₂, cyano, halogen, C₁-C₃ alkoxy, 3- to 4-membered cycloalkyl, 4- to 6-membered heterocyclyl, -C(=O)OH, -C(=O)(4- to 6-membered heterocyclyl), -C(=O)NH(CH₂)₂OH,
25 or -C(=O)NH₂;

-C(=O)NR^pR^q, wherein R^p and R^q each are independently selected from H; OH; CN; 4- to 6-membered heterocyclyl; C₁-C₃ alkyl optionally substituted with OH; and 3- to 4-membered cycloalkyl optionally substituted with OH;

$-\text{NR}^{\text{p}}\text{R}^{\text{q}}$, wherein R^{p} and R^{q} each are independently selected from H, OH, $-\text{C}(=\text{O})\text{CH}_3$, and C_1 - C_3 alkyl optionally substituted with OH, 3- to 4-membered cycloalkyl, or 6-membered heterocyclyl;

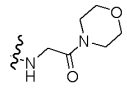
$-\text{NR}^{\text{p}}\text{C}(=\text{O})\text{NR}^{\text{q}}\text{R}^{\text{r}}$, wherein R^{p} , R^{q} and R^{r} each are independently selected from H and C_1 - C_3 alkyl;

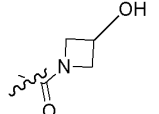
$-\text{NR}^{\text{p}}\text{C}(=\text{O})\text{R}^{\text{s}}$, wherein R^{p} is selected from H and C_1 - C_3 alkyl, and R^{s} is selected from C_1 - C_3 alkyl and 3- to 4-membered cycloalkyl;

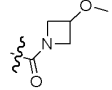
$-\text{S}(=\text{O})_{\text{w}}\text{R}^{\text{s}}$, wherein R^{s} is selected from C_1 - C_3 alkyl optionally substituted with phenyl or NH_2 , and wherein w is 0 or 2; and

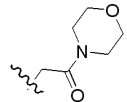
$-\text{S}(=\text{O})_{\text{w}}\text{NR}^{\text{p}}\text{R}^{\text{q}}$, wherein R^{p} and R^{q} each are independently selected from H, 3- to 6-membered cycloalkyl, 4- to 6-membered heterocyclyl, and C_1 - C_3 alkyl optionally substituted with OH, C_1 - C_3 alkoxy, or phenyl, and wherein w is 2.

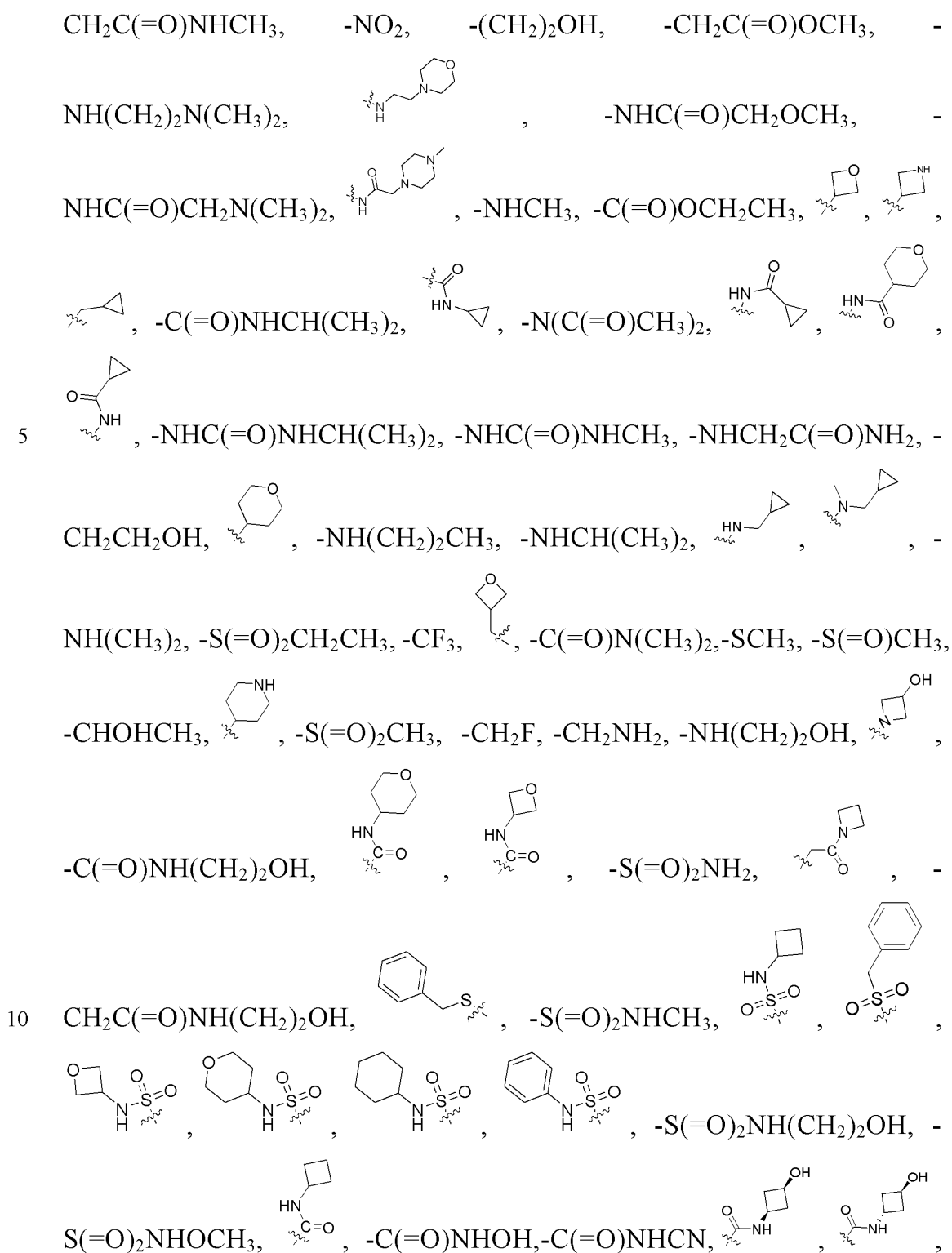
17. The compound, salt, hydrate, or stereoisomer of any one of claim 1 and 3-16, wherein R_2 is substituted with 1-3 R^{a} , wherein R^{a} , for each occurrence, is independently selected from methyl, ethyl, $-\text{NH}_2$, $-\text{CN}$, $-\text{OCH}_3$, $-\text{O}(\text{CH}_2)_2\text{N}(\text{CH}_3)_2$, $-\text{NHCH}_3$, $-\text{O}(\text{CH}_2)_2\text{OCH}_3$, $-\text{N}(\text{CH}_3)_2$, $-\text{NH}(\text{CH}_2)\text{OCH}_3$, $-\text{NHC}(=\text{O})\text{CH}_3$, $-\text{NHC}(=\text{O})\text{CH}_2\text{CH}_3$, $-\text{NHC}(=\text{O})\text{CH}(\text{CH}_3)_2$, $-\text{NHC}(=\text{O})\text{CH}_2\text{CH}(\text{CH}_3)_2$, $-\text{NHCH}_2\text{C}(=\text{O})\text{NHCH}_3$, $-\text{NHCH}_2\text{C}(=\text{O})\text{NHCH}_3$,

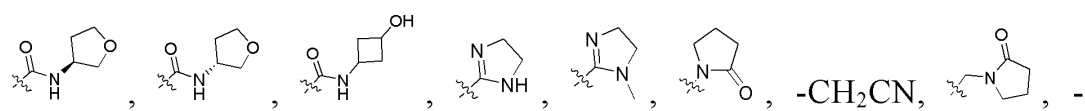
, $-\text{NHCH}_2\text{C}(=\text{O})\text{N}(\text{CH}_3)_2$, $-\text{C}(=\text{O})\text{OCH}_3$, $-\text{C}(=\text{O})\text{OH}$, $-\text{C}(=\text{O})\text{CH}_3$, $-\text{C}(=\text{O})\text{NH}_2$, $-\text{C}(=\text{O})\text{NHCH}_3$, $-\text{C}(=\text{O})\text{NH}(\text{CH}_2)_2\text{N}(\text{CH}_3)_2$,

$\text{C}(=\text{O})\text{NHCH}_2\text{N}(\text{CH}_3)_2$, $-\text{C}(=\text{O})\text{NHCH}_2\text{CH}_3$, , ,

, , , , $-\text{CH}_2\text{OH}$, $-\text{CH}_2\text{N}(\text{CH}_3)_2$, $-\text{CH}_2\text{OCH}_3$, $-\text{F}$,

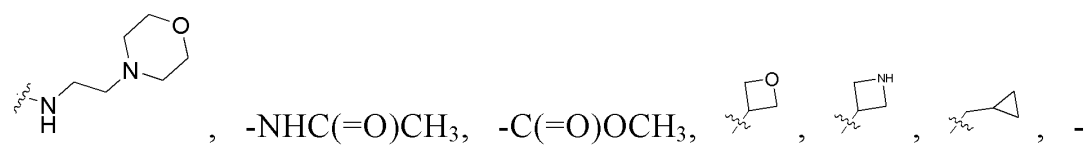
Cl , $-(\text{CH}_2)_2\text{OCH}_3$, $-\text{CH}_2\text{C}(=\text{O})\text{NH}_2$, $-\text{CH}_2\text{C}(=\text{O})\text{N}(\text{CH}_3)_2$, , $-\text{CH}_2\text{C}(=\text{O})\text{NHCH}_3$, $-\text{CH}_2\text{C}(=\text{O})\text{NHCH}_3$,

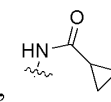
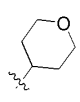
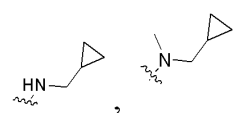
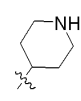
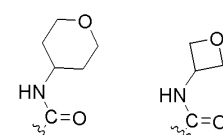
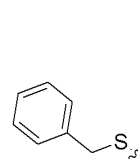
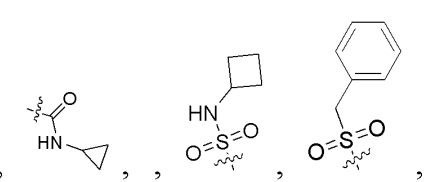
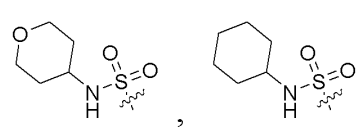
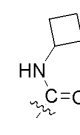
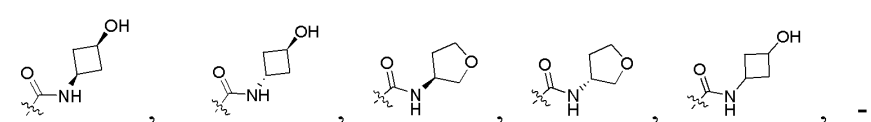




 $\text{CH}_2\text{C(=O)OH}$, $-\text{C(CH}_3)_2\text{C(=O)OH}$, and $-\text{C(CH}_3)_2\text{C(=O)NH}_2$.

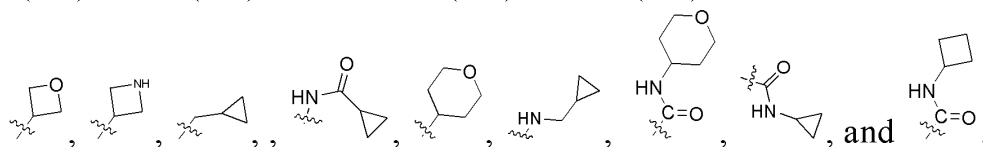
18. The compound of any one of claim 1 and 3-17, wherein R² is substituted with 1-3 R^a, wherein R^a, for each occurrence, is independently
 5 selected from methyl, ethyl, $-\text{NH}_2$, $-\text{NHCH}_3$, $-\text{CN}$, $-\text{CH}_2\text{CH}_2\text{OH}$,



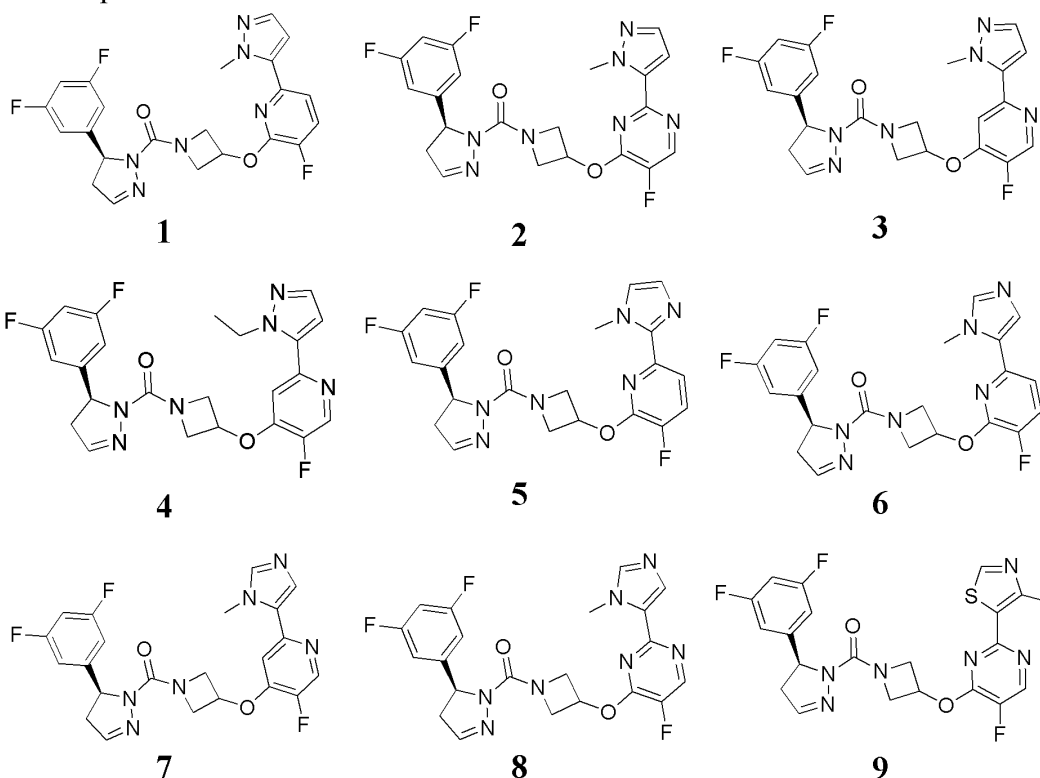
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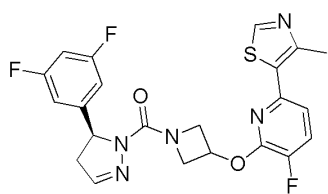
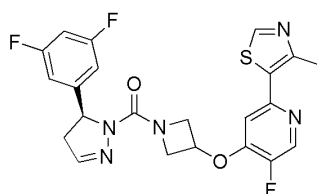
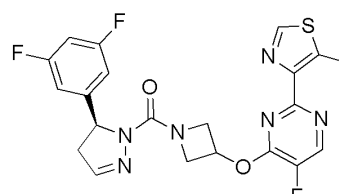
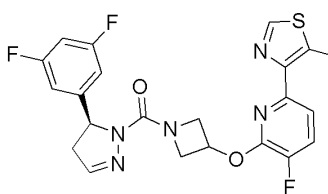
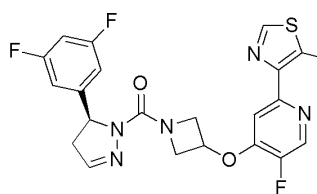
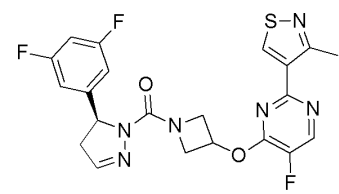
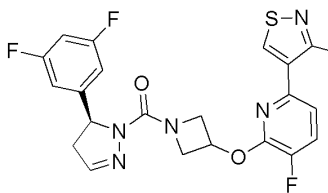
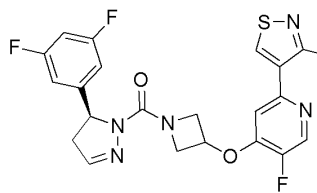
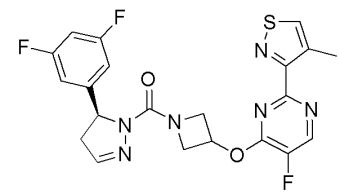
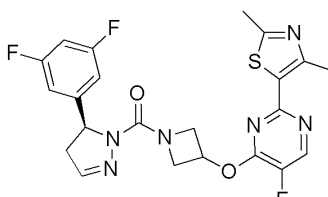
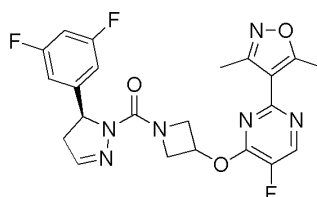
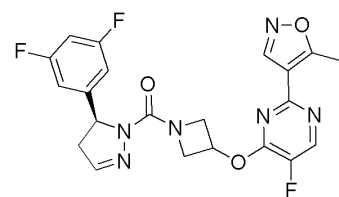
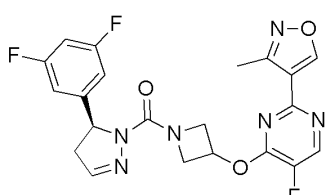
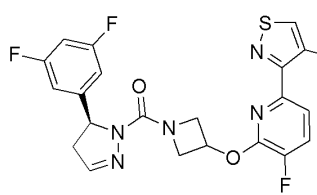
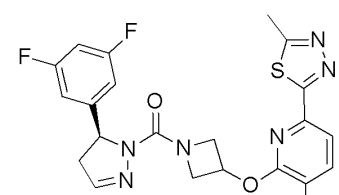
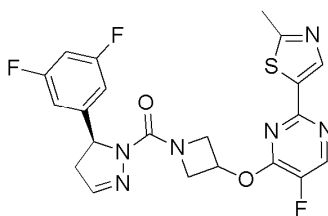
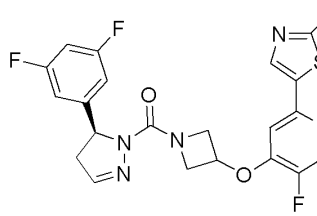
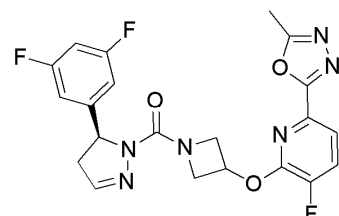
$C(=O)NHCH_2CH_2OH$, and $-CH_2CN$.

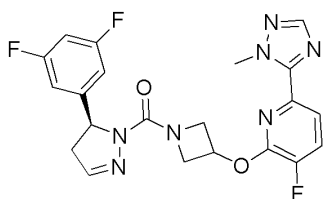
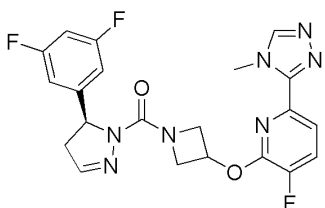
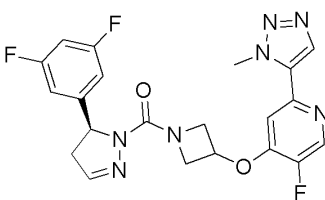
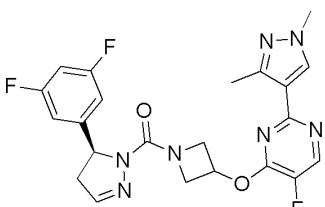
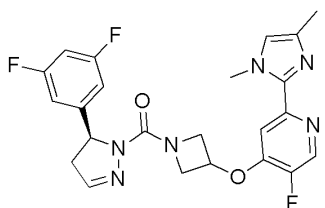
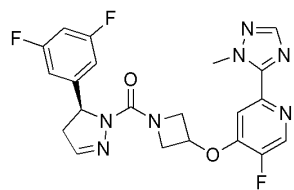
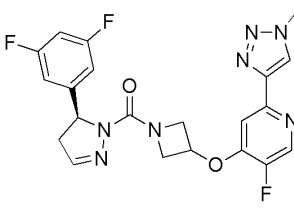
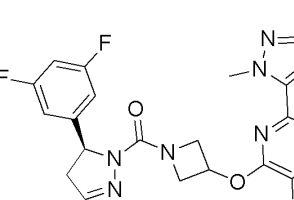
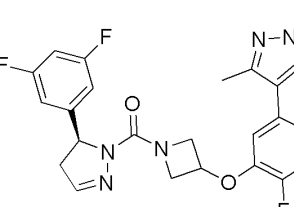
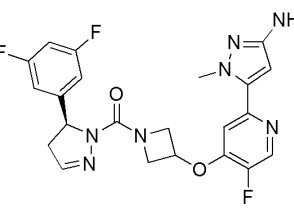
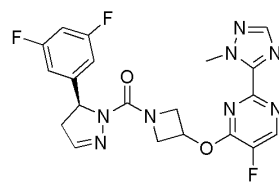
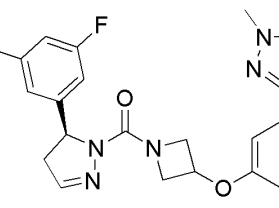
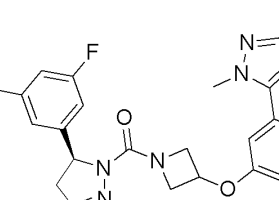
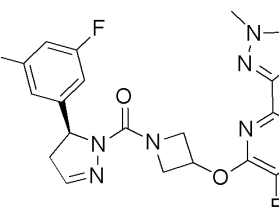
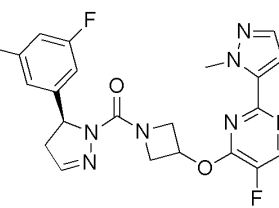
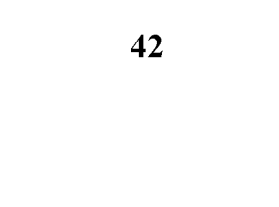
19. The compound, salt, hydrate, or stereoisomer of any one of claim 1 and 3-18, wherein R² is substituted with 1-3 R^a, wherein R^a, for each occurrence, is independently selected from methyl, ethyl, $-NH_2$, $-C(=O)NH_2$, $-NHCH_3$, $-CN$, $-CH_2CN$, $-NHCH_2OH$, $-CH_2NH_2$, $-SCH_3$, $CONHCH_3$, $-SO_2CH_3$, $-CH_2OH$, $-Cl$, $-N(CH_3)_2$, $-NHCH(CH_3)_2$, $-NHCH_2CH_2OCH_3$, $-CH_2CH_2OH$, $-C(=O)OCH_2CH_3$, $-C(=O)OCH_3$, $-C(=O)OH$, $-S(=O)_2NH_2$, $-CH_2C(=O)NH_2$, $-C(=O)NHCH_2CH_2OH$,

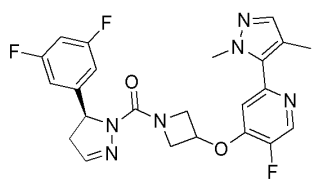


20. The compound, salt, hydrate, or stereoisomer of claim 1, wherein the compound has a structure selected from:

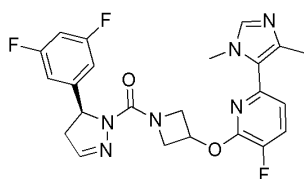


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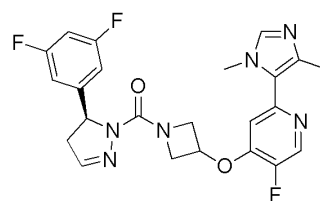
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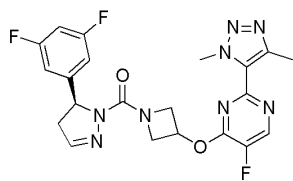
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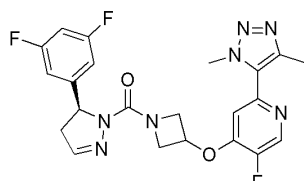
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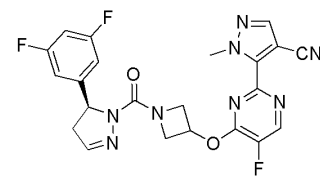
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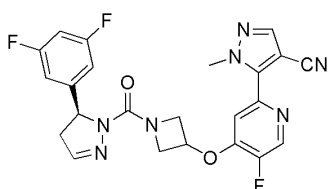
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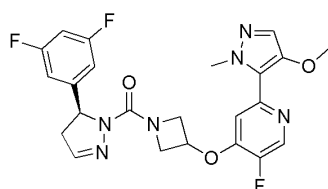
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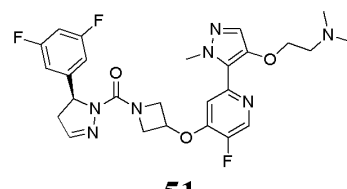
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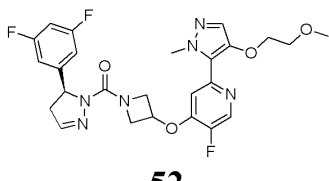
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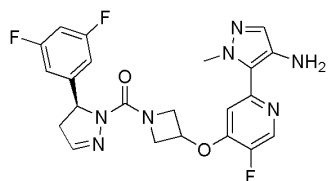
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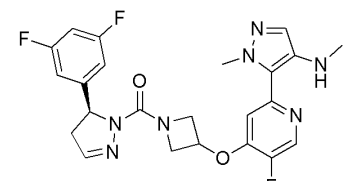
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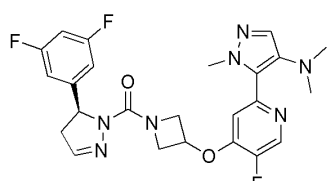
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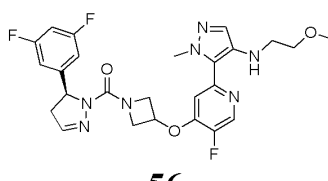
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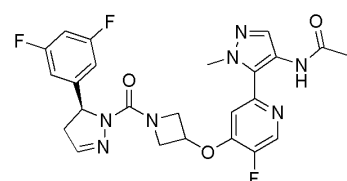
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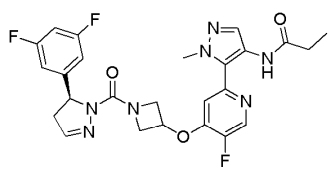
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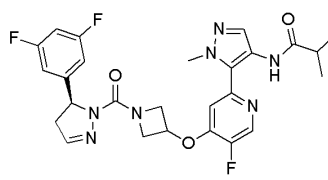
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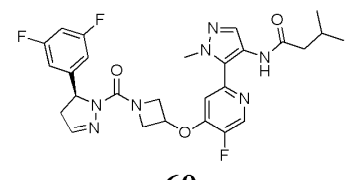
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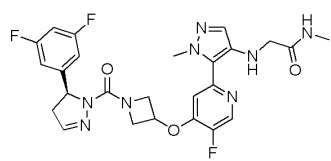
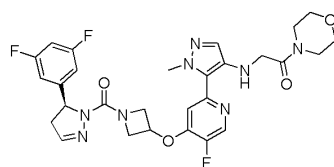
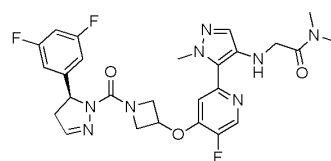
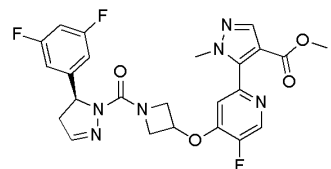
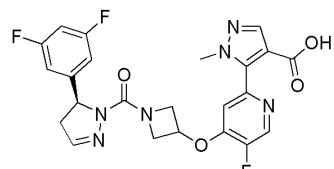
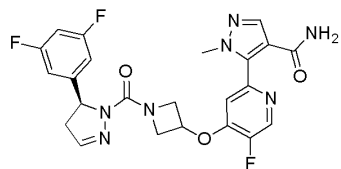
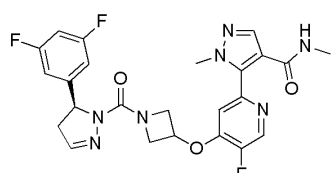
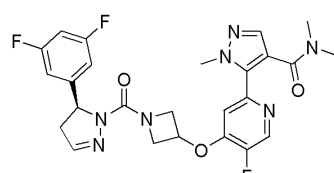
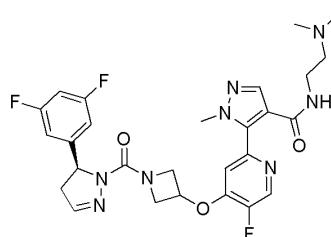
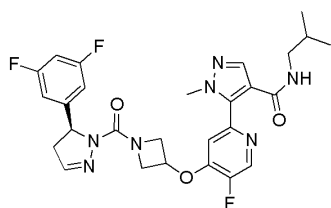
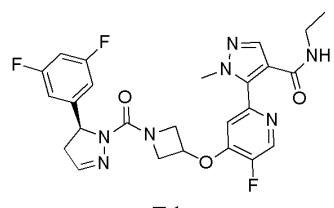
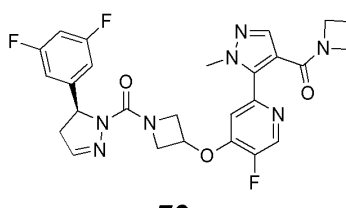
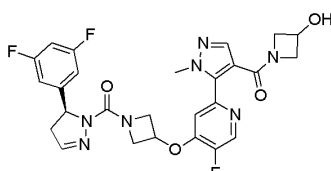
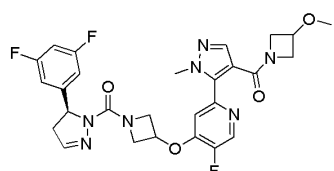
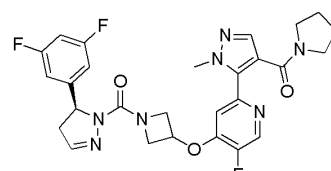
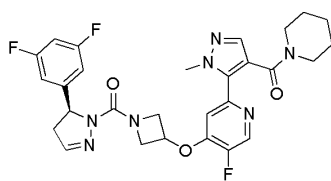
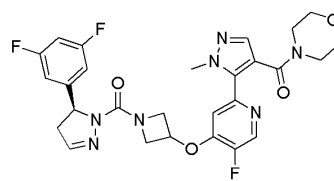
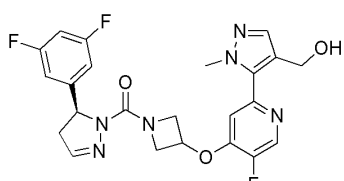
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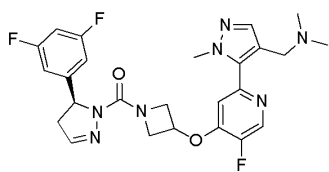


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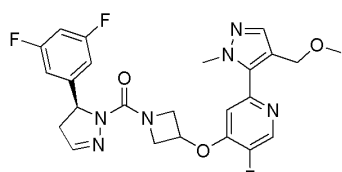


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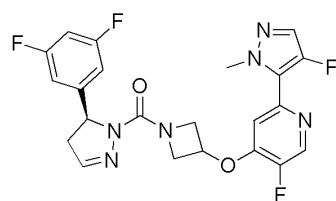
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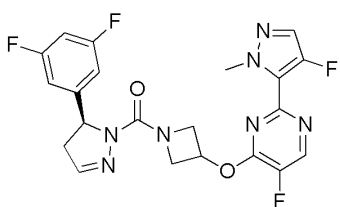
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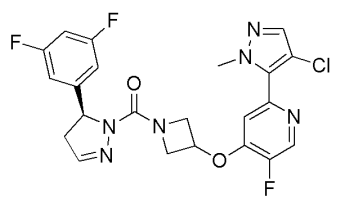
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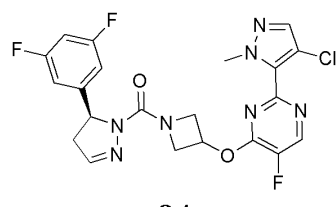
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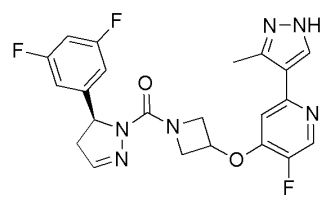
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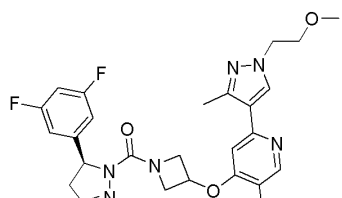
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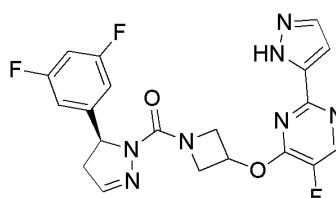
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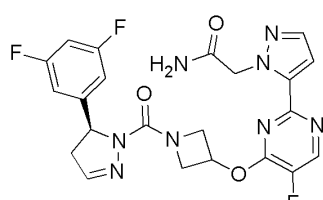
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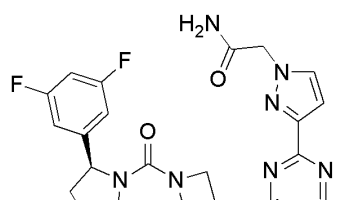
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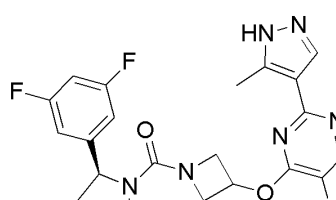
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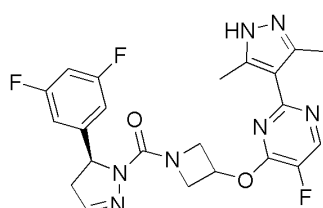
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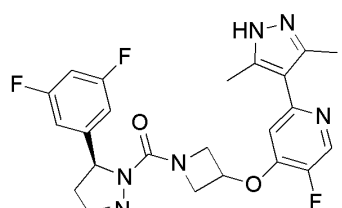
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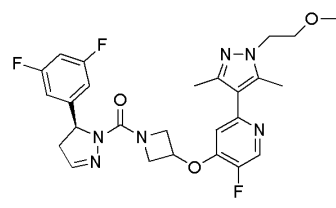
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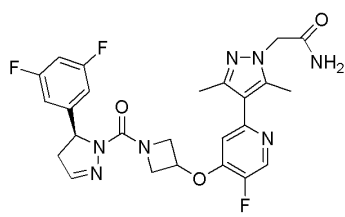
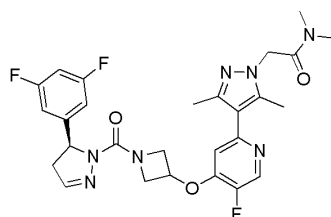
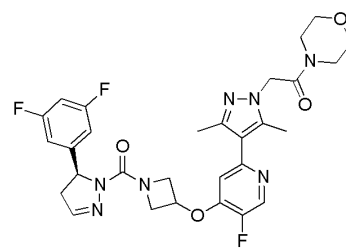
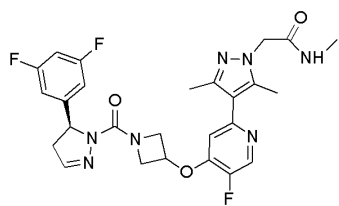
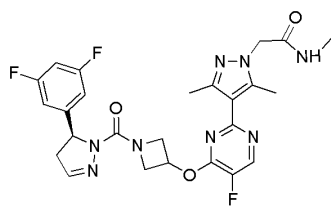
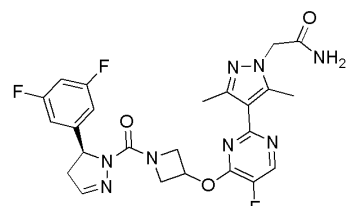
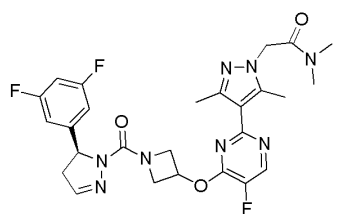
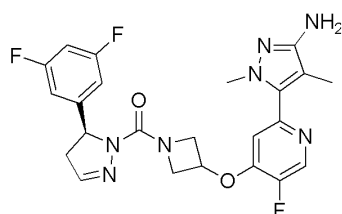
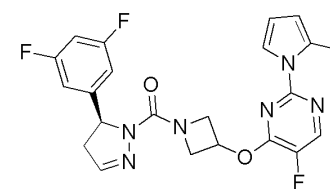
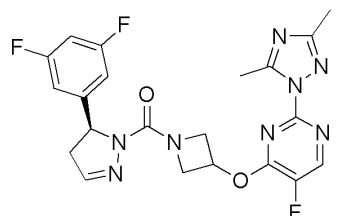
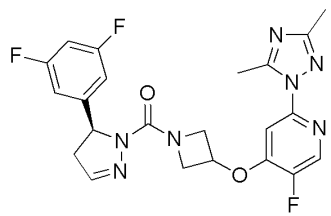
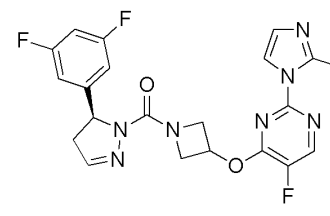
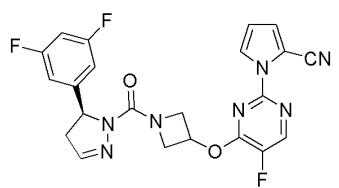
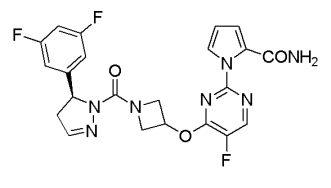
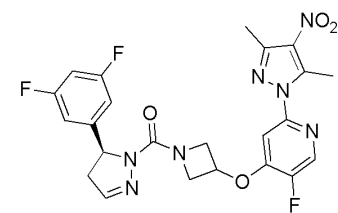
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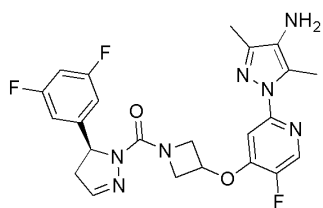
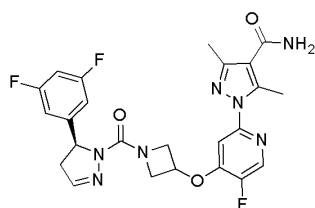
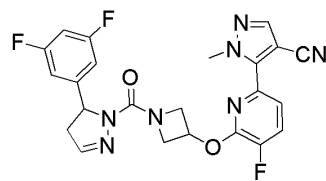
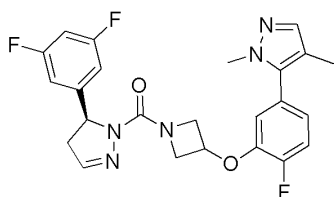
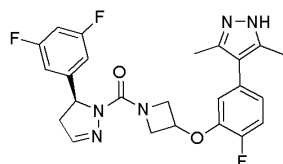
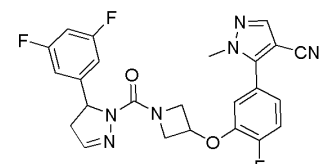
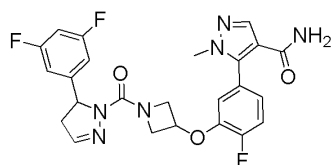
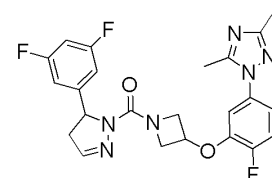
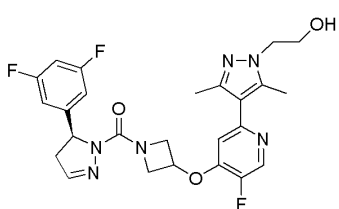
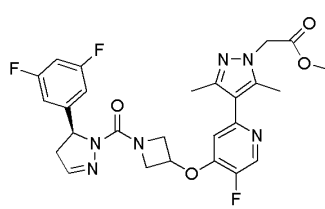
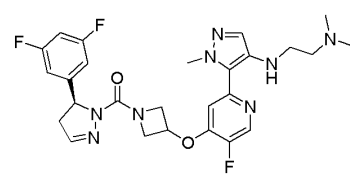
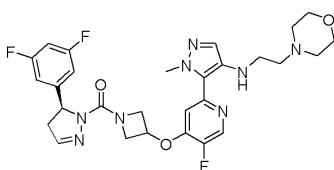
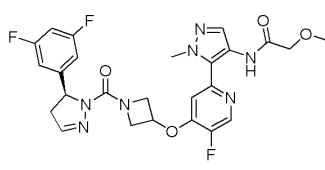
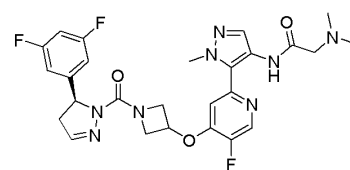
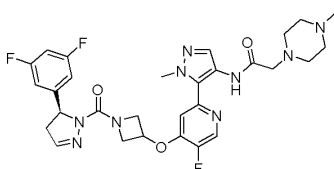
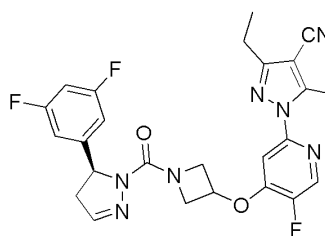
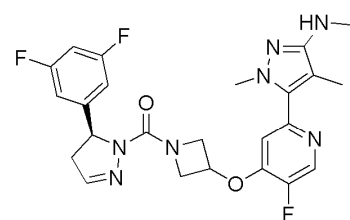


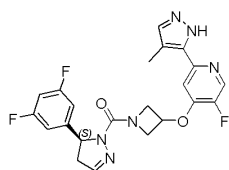
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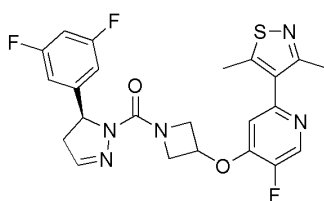
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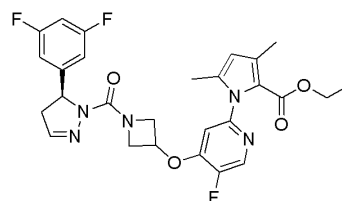
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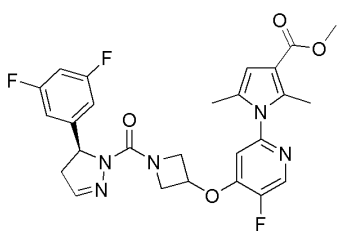
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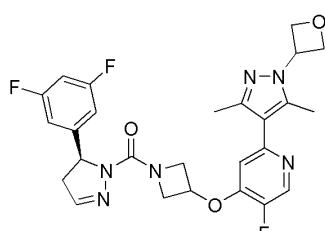
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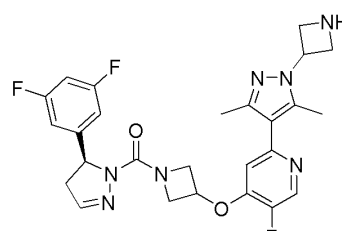
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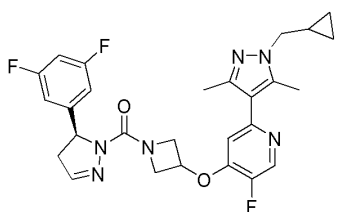
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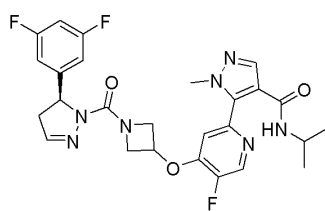
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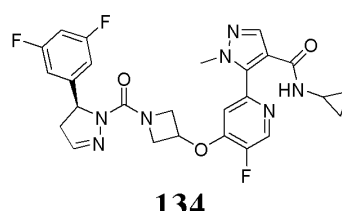
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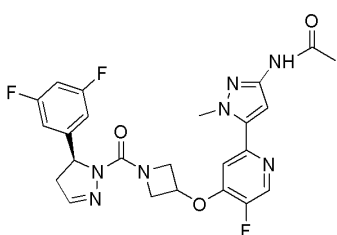
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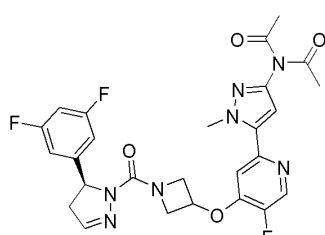
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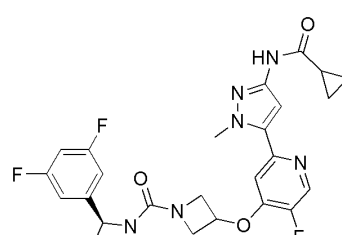
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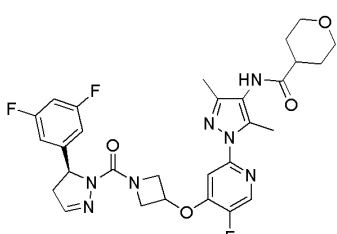
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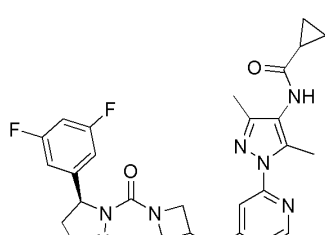
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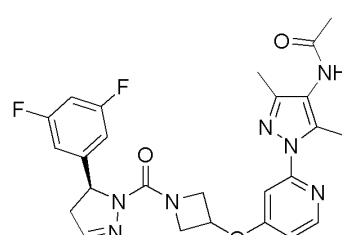
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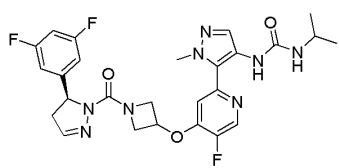
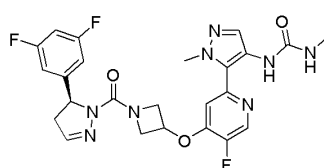
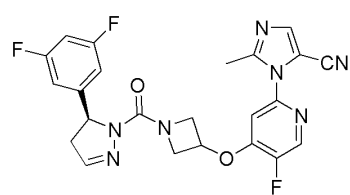
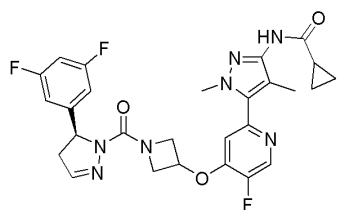
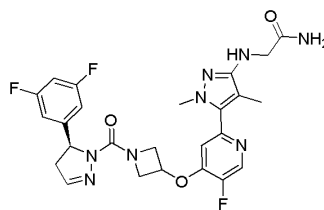
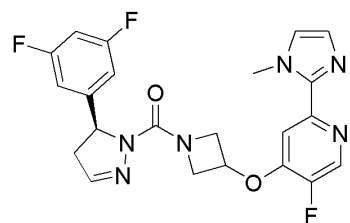
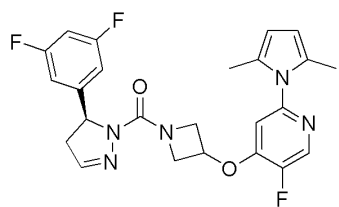
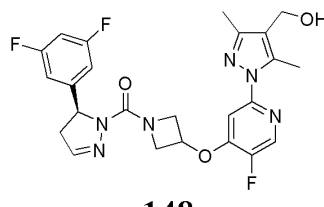
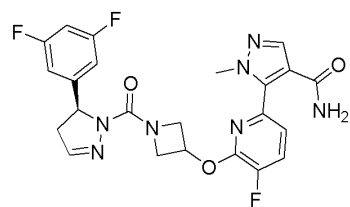
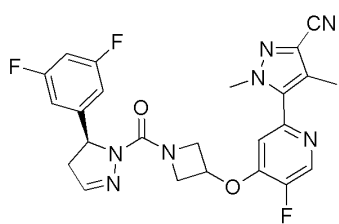
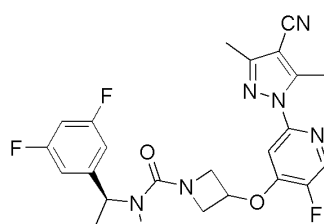
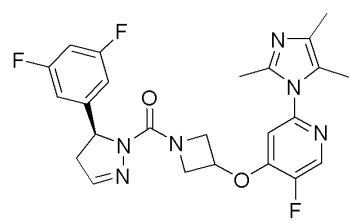
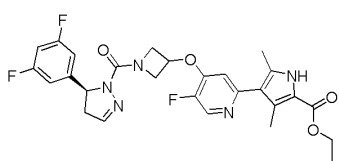
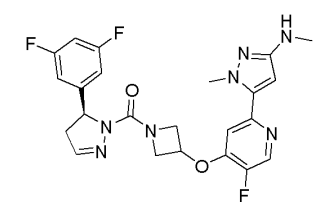
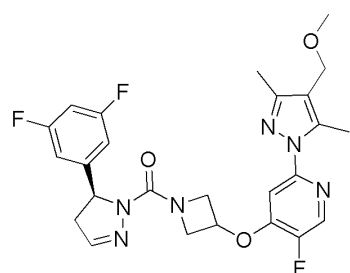
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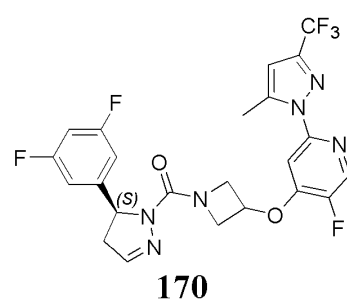
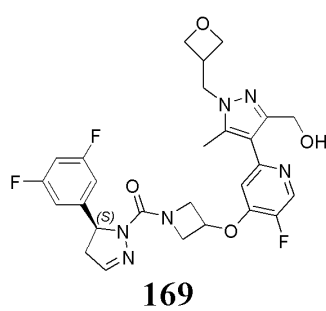
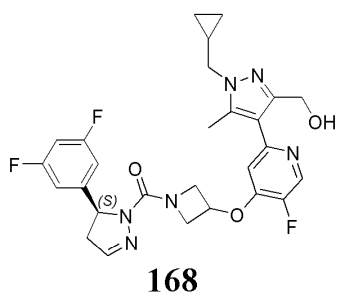
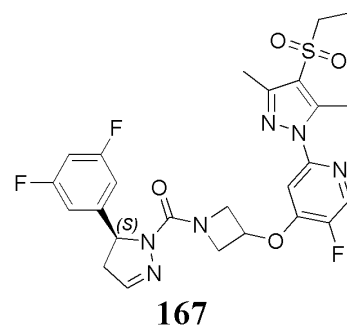
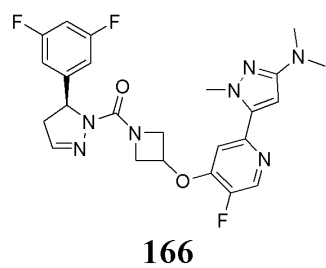
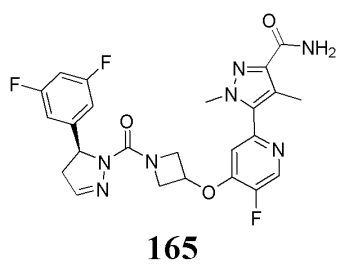
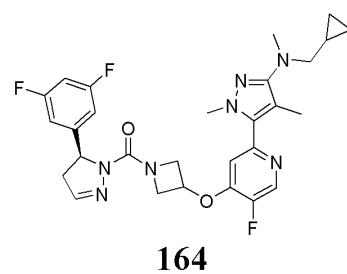
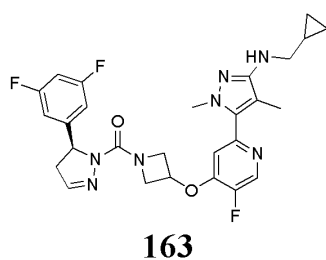
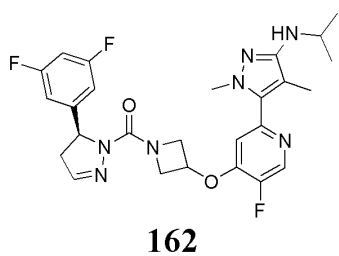
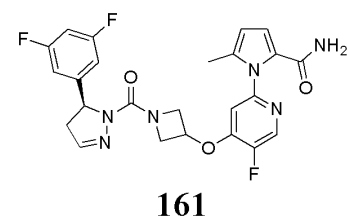
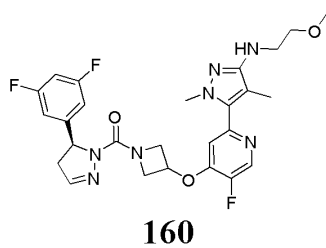
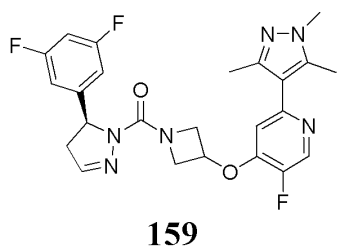
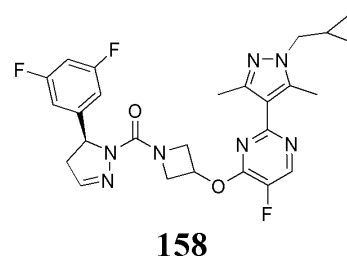
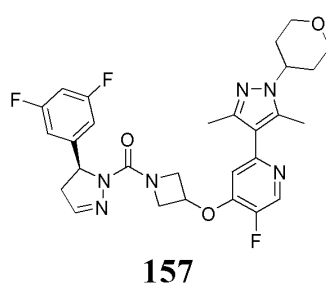
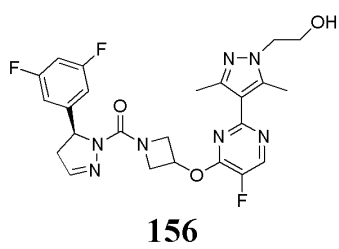


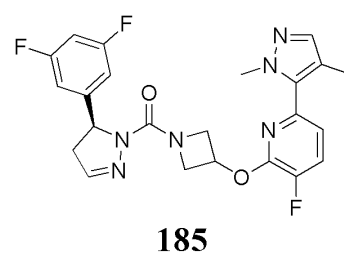
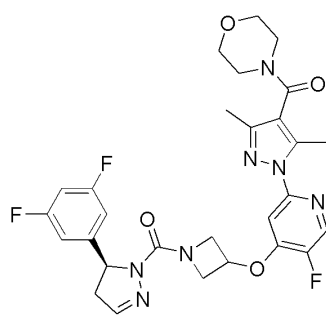
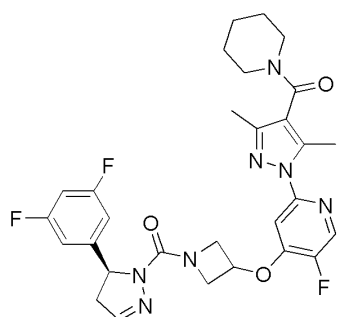
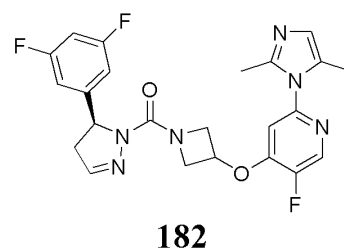
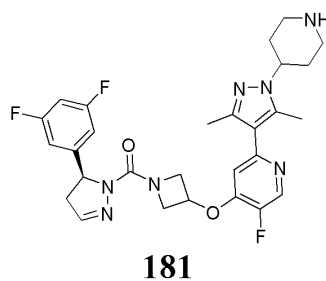
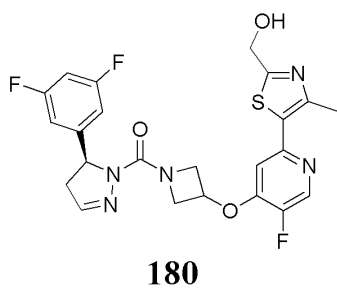
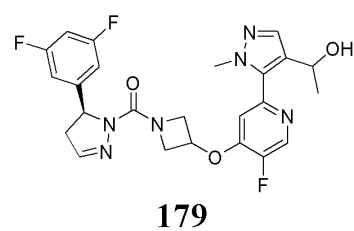
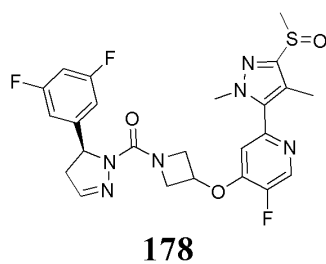
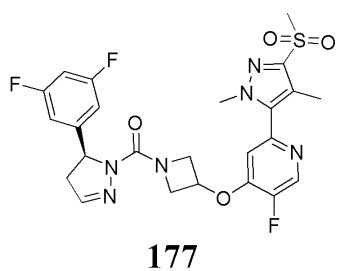
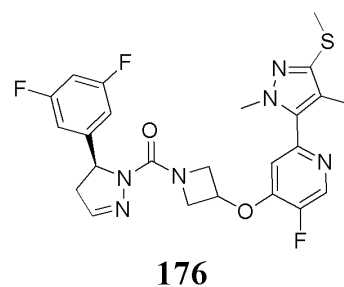
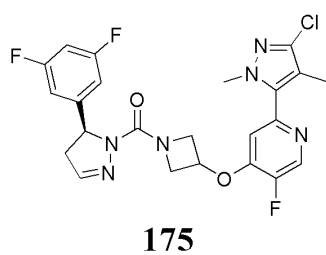
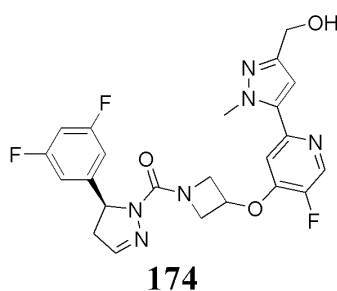
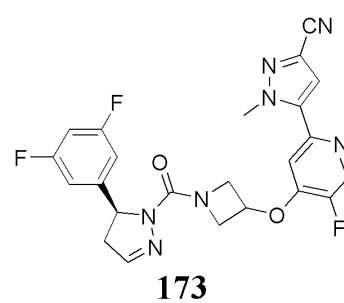
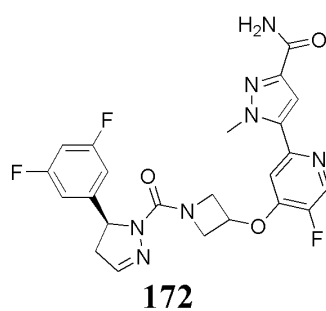
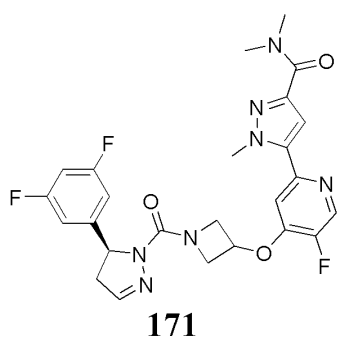
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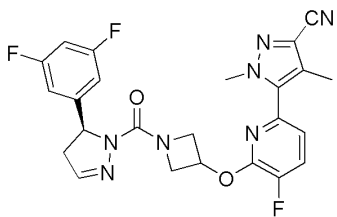
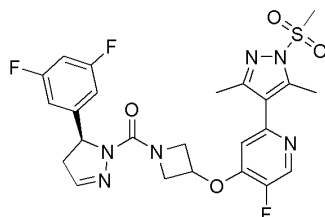
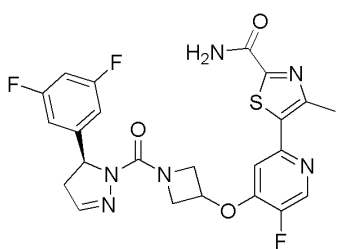
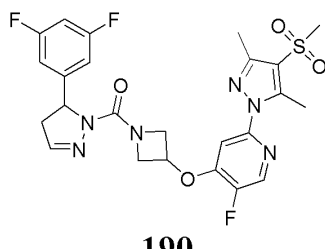
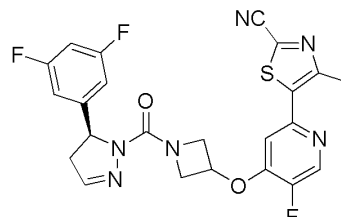
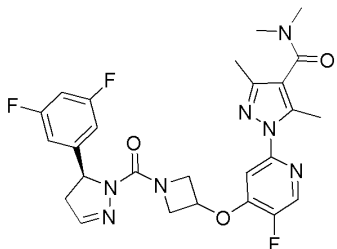
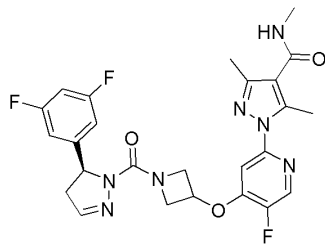
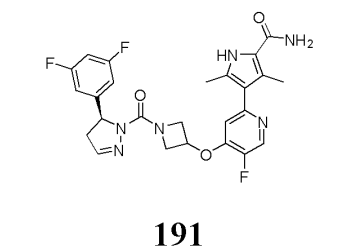
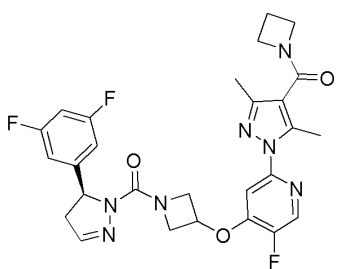
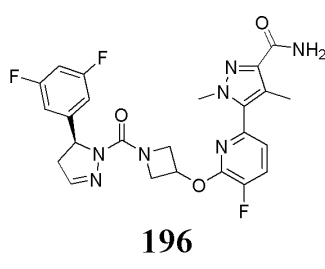
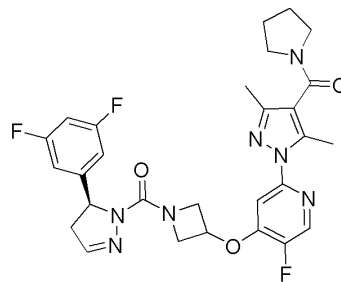
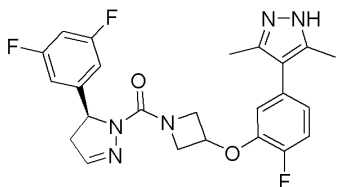
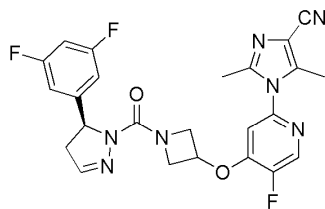
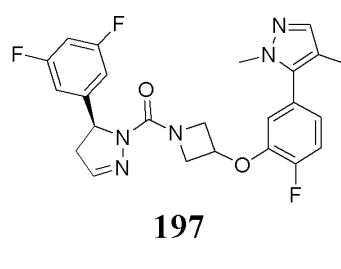
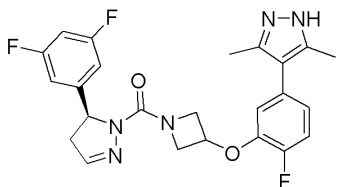
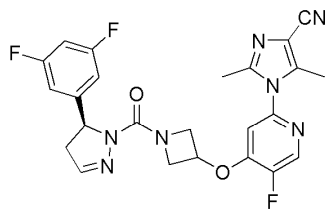
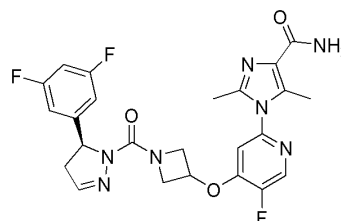


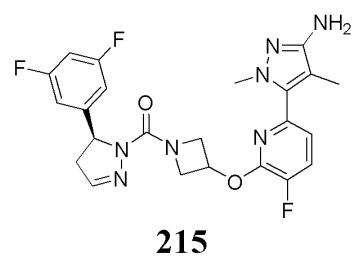
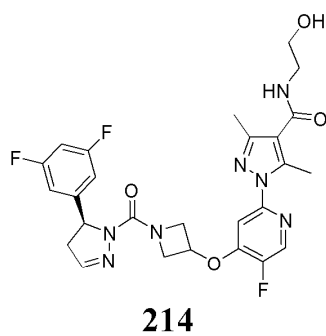
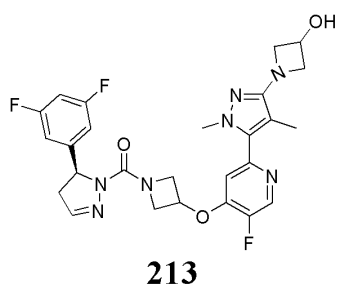
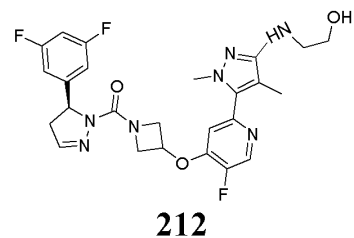
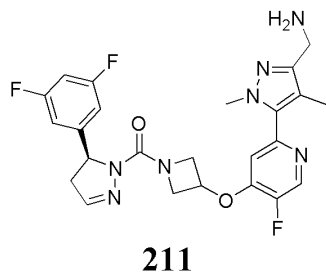
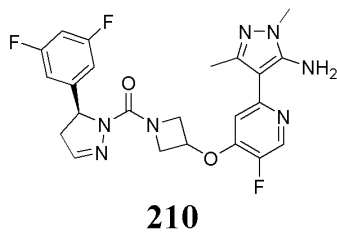
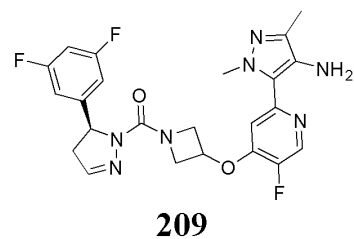
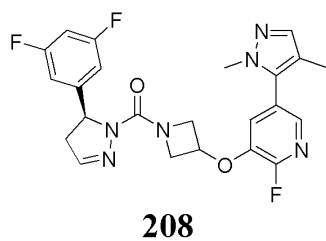
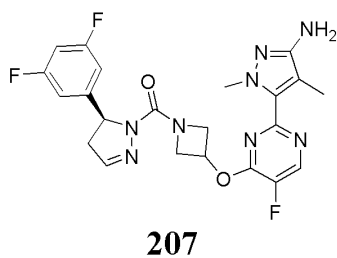
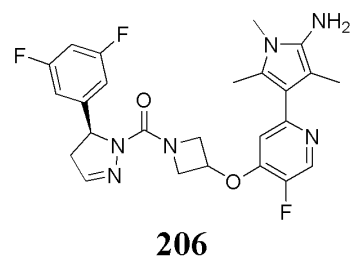
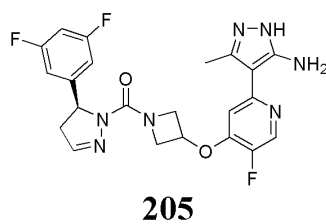
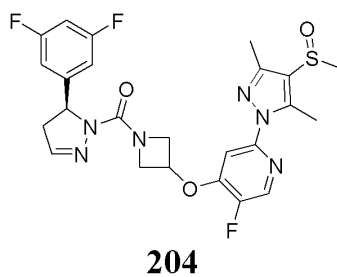
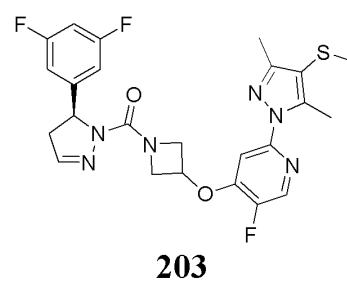
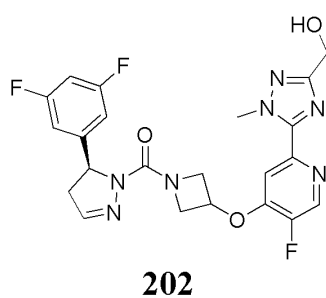
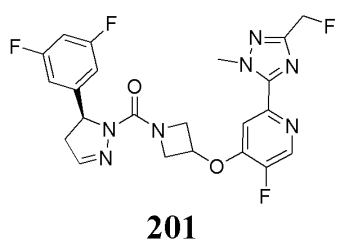
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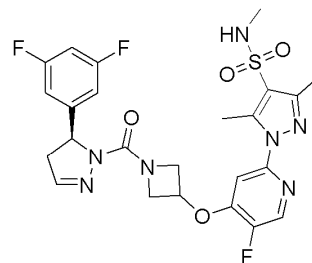
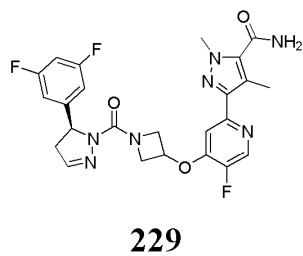
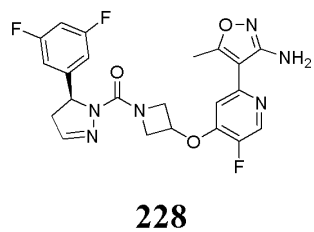
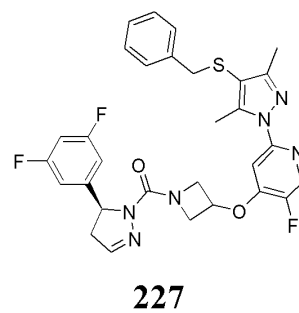
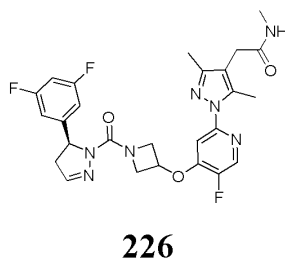
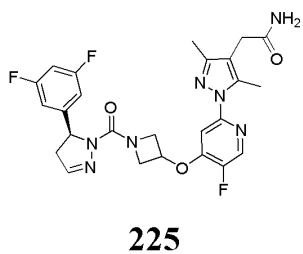
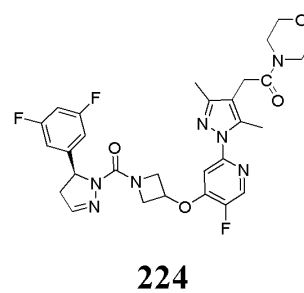
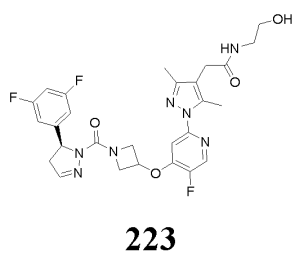
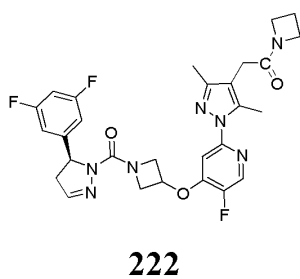
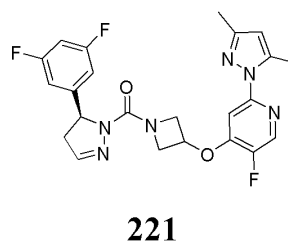
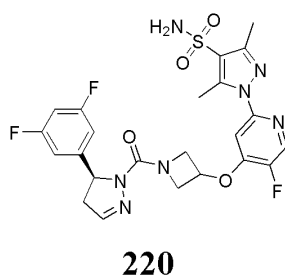
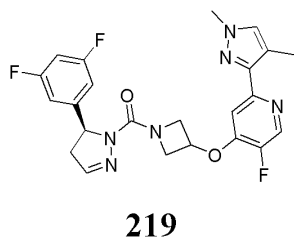
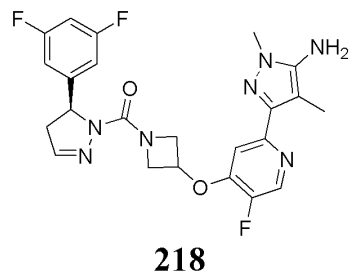
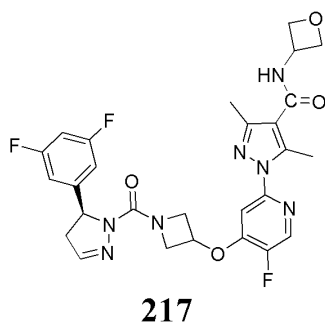
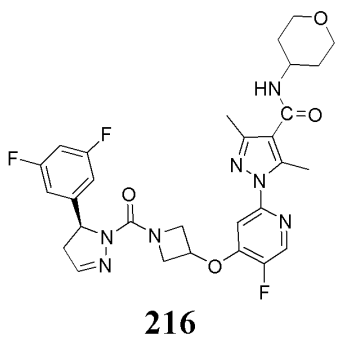
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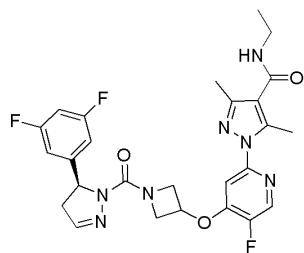




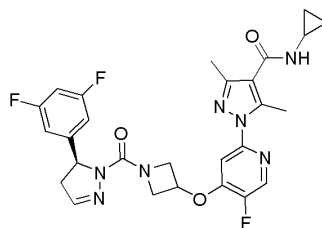
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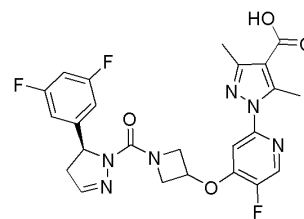




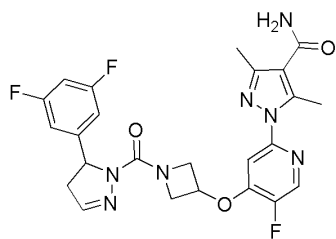
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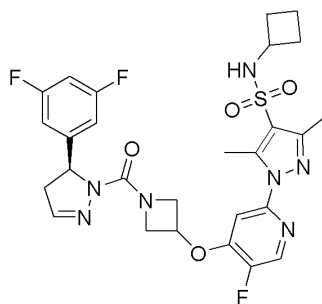
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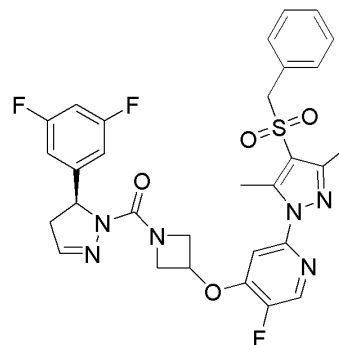
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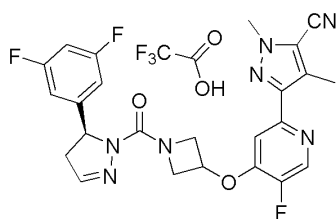
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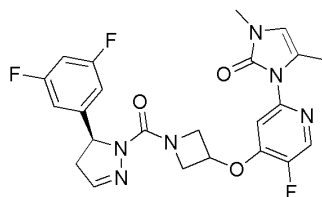
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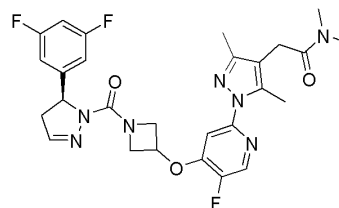
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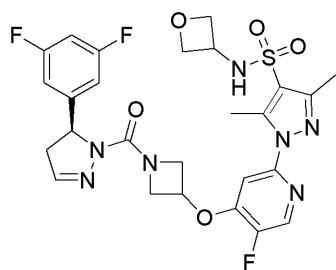
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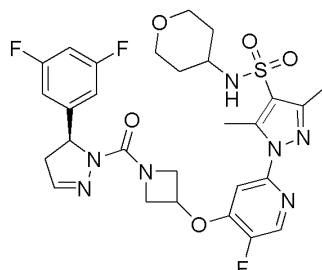
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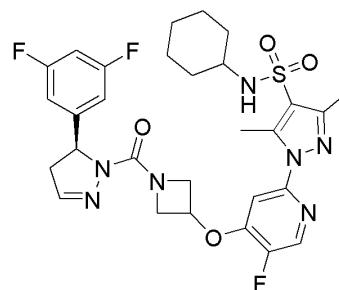
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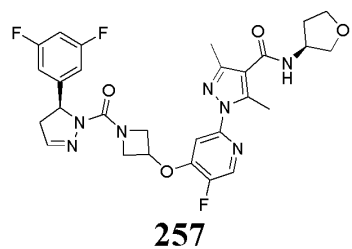
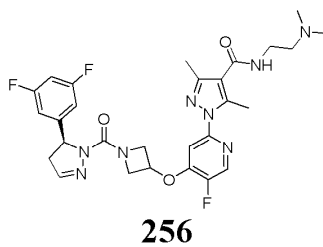
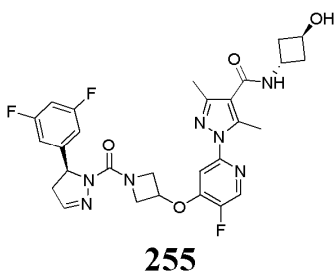
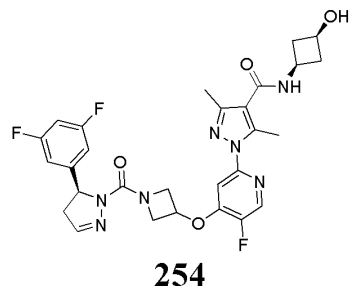
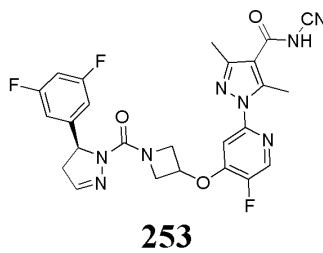
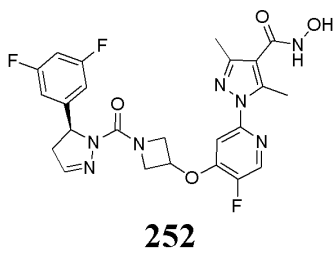
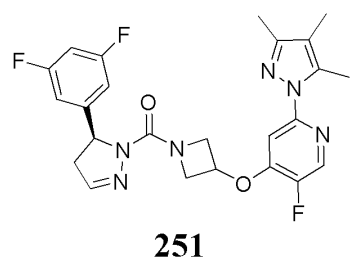
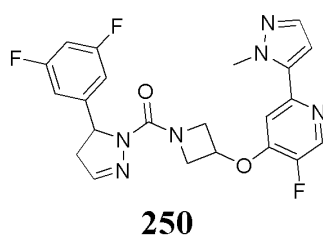
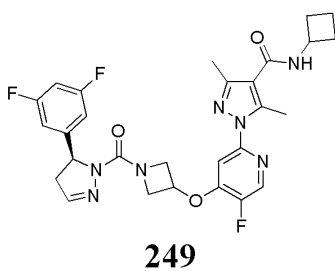
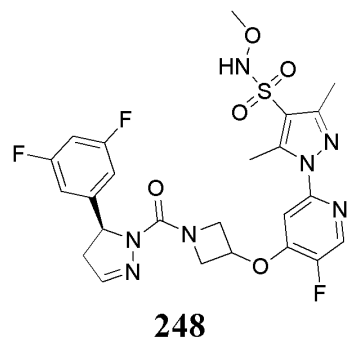
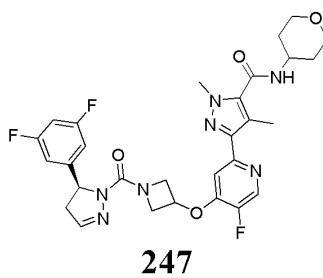
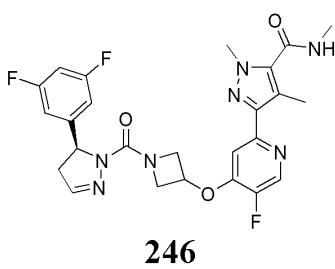
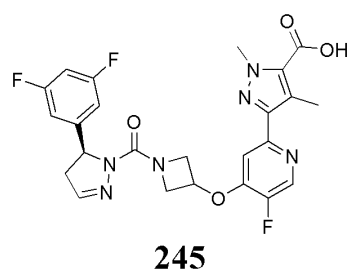
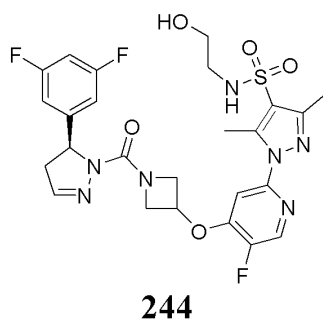
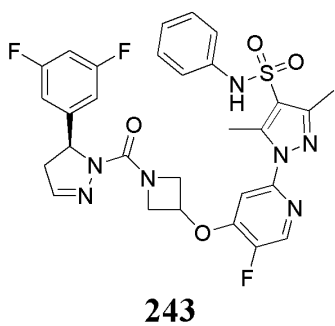
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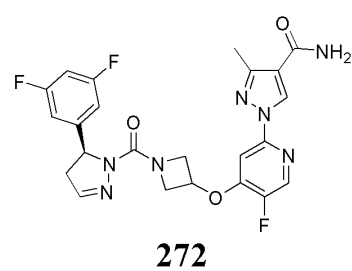
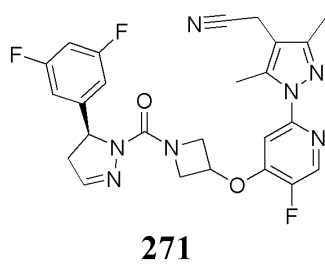
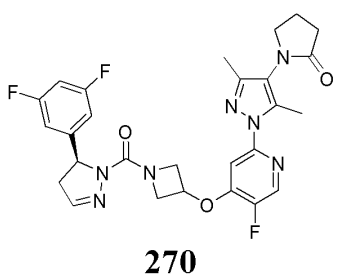
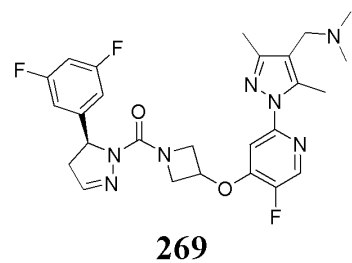
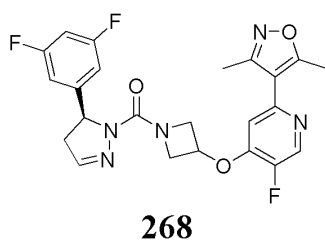
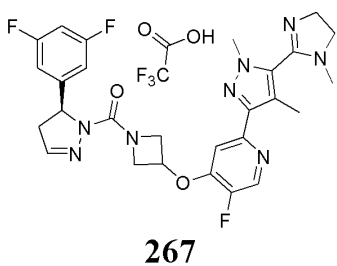
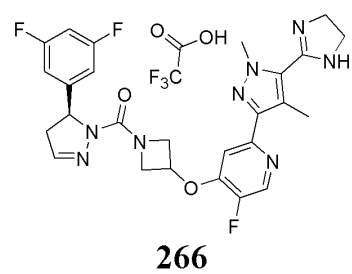
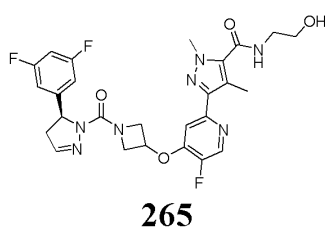
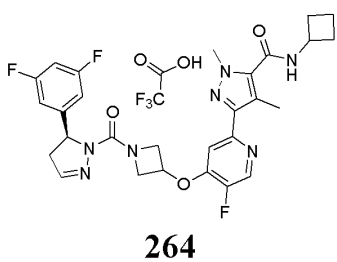
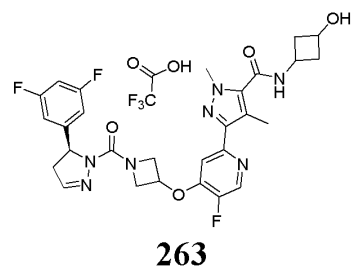
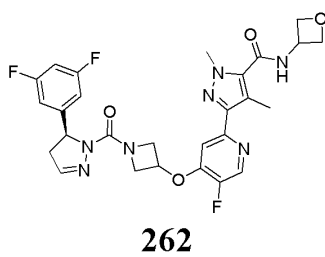
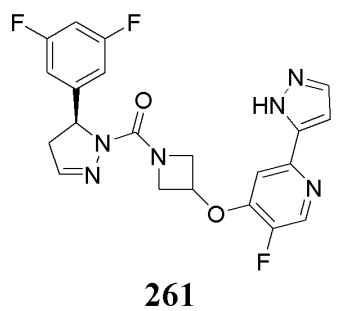
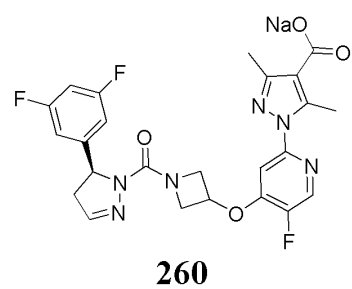
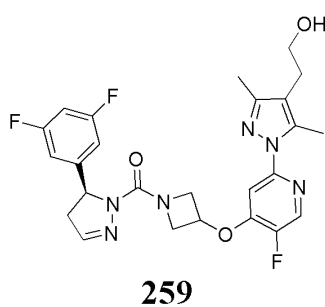
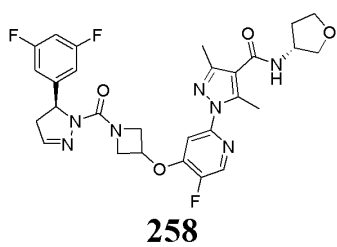


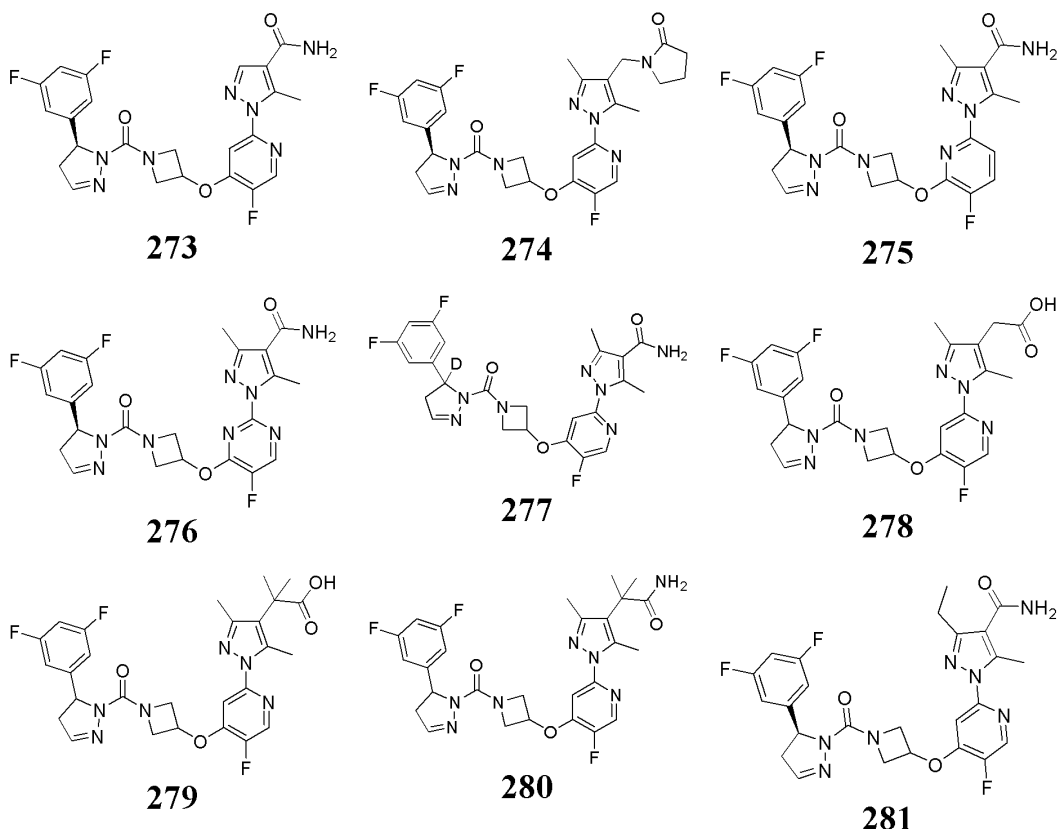
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21. A pharmaceutical composition comprising a therapeutically effective amount of the compound, salt, hydrate, or stereoisomer of any one of claims 1-20 and one or more pharmaceutically acceptable excipients, in predetermined, unit dosage form.

22. Use of the compound, salt, hydrate, or stereoisomer of any one of claims 1-20 or composition of claim 21 in the manufacture of a medicament for inhibiting necrosis, necroptosis, ferroptosis, human RIP1, or related indications, in a person in need thereof.

23. A compound, salt, hydrate, or stereoisomer of any one of claims 1-20 or composition of claim 21 for use in inhibiting necrosis, necroptosis, ferroptosis, human RIP1, or related indications in a person in need thereof, or in the manufacture of a medicament thereof in a person in need thereof.

24. A method of using a compound a salt, hydrate, or stereoisomer of any one of claims 1-20 or composition of claim 21 herein for inhibiting

necrosis, necroptosis, ferroptosis, human RIP1, or related indications in a person in need thereof, or in the manufacture of a medicament thereof in a person in need thereof.