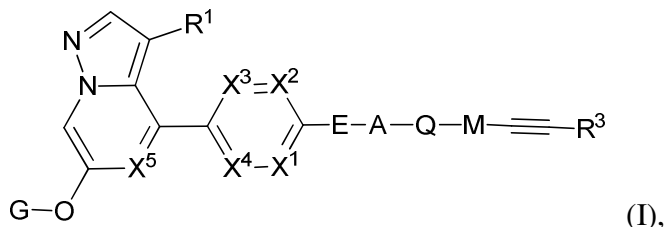


CLAIMS

1. A compound having Formula (I) or a stereoisomer, a geometric isomer, a tautomer, an *N*-oxide, a solvate, or a pharmaceutically acceptable salt thereof,



wherein,

each of X^1 , X^2 , X^3 , X^4 and X^5 is independently CR^4 or N, wherein 0, 1, or 2 of X^1 , X^2 , X^3 , X^4 are N;

E is a bond, $-NR^6-$ or $-O-$;

A is Cyc or hetCyc, wherein each of Cyc and hetCyc is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, oxo, NR^5R^6 , R^5O- , $R^5(C=O)NR^6-$, NR^5R^6 alkyl, $NR^5R^6(C=O)$ alkoxyalkyl, NR^6R^7 alkoxy, NR^6R^7 alkoxyalkyl, alkyl, haloalkyl, hydroxyalkyl, Cyc, hetCyc, hetCyc-alkyl, alkoxyalkyl, hetCyc-alkoxyalkyl, cycloalkylidene and heterocyclidene;

Q is $-(C=O)-$, $-O-$, $-(C=O)NR^5-$, $-(C=S)NR^5-$, $-S(=O)_2-$, $-S(=O)_2NR^5-$, $-NR^5(C=O)-$, $-NR^5(C=O)O-$, $-NR^5(C=O)NR^5-$, $-NR^5-$, $-(C=O)O-$ or a bond;

M is $-(C=O)-$, alkyl, alkenyl, alkynyl, alkylaryl, alkylheteroaryl, alkenylaryl, alkynylaryl, alkenylheteroaryl, alkynylheteroaryl, aryl, heteroaryl, Cyc, hetCyc, arylalkyl, heteroarylalkyl, Cyc-alkyl or hetCyc-alkyl, wherein each of alkyl, alkenyl, alkynyl, alkylaryl, alkylheteroaryl, alkenylaryl, alkynylaryl, alkenylheteroaryl, alkynylheteroaryl, aryl, heteroaryl, Cyc, hetCyc, arylalkyl, heteroarylalkyl, Cyc-alkyl and hetCyc-alkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, OH, CF_3 , NR^5R^6 , oxo, alkoxy, cycloalkylidene, heterocyclidene, hydroxyalkyl, alkyl, cycloalkyl, cycloalkylalkynyl and heterocyclic group;

R^1 is H, D, CN, F, Cl, Br, alkyl, alkenyl or cycloalkyl, wherein each of alkyl, alkenyl and cycloalkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, CN, NH_2 , OH and NO_2 ;

G is H, D, alkyl, hetCyc, Cyc, hetCyc-alkyl, Cyc-alkyl, heteroarylalkyl, aminoalkyl, alkylaminoalkyl, dialkylaminoalkyl, alkoxyalkyl, $R^5O(C=O)NR^6$ alkyl, $R^5(C=O)NR^6$ alkyl, $NR^5R^6(C=O)alkyl$, $R^5(C=O)alkyl$, $NR^5R^6(C=O)-$ or $R^5O-alkyl$, wherein each of alkyl, hetCyc, Cyc, hetCyc-alkyl, Cyc-alkyl, heteroarylalkyl, aminoalkyl, alkylaminoalkyl, dialkylaminoalkyl, alkoxyalkyl, and an alkyl moiety in $R^5O(C=O)NR^6$ alkyl, $R^5(C=O)NR^6$ alkyl, $R^5(C=O)alkyl$, $NR^5R^6(C=O)alkyl$ and R^5O alkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, OH, oxo, cycloalkylidene, heterocyclylidene, alkyl, alkoxy, alkoxyalkyl, $R^5(C=O)-$, $R^5O(C=O)-$;

R^3 is H, D, alkyl, Cyc, hetCyc, aryl, heteroaryl, Cyc-alkyl, hetCyc-alkyl, alkoxyalkyl, arylalkyl, heteroarylalkyl or aminoalkyl, wherein each of alkyl, Cyc, hetCyc, aryl, heteroaryl, Cyc-alkyl, hetCyc-alkyl, alkoxyalkyl, arylalkyl, heteroarylalkyl and aminoalkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, NR^5R^6 , R^5O- , $R^5O(C=O)-$, $R^5(C=O)-$, $NR^5R^6(C=O)NR^5-$, $R^5S(=O)_2-$, NO_2 , CN, CF_3 , alkyl and cycloalkyl;

R^4 is H, D, alkyl, F, Cl, Br or alkoxy, wherein each of alkyl and alkoxy can be independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, CN, NH_2 , OH and NO_2 ;

R^5 is H, D, alkyl, Cyc, hetCyc, aryl, heteroaryl, arylalkyl, heteroarylalkyl, alkoxyalkyl, aryloxyalkyl, aminoalkyl, alkylaminoalkyl, dialkylaminoalkyl, Cyc-alkyl or hetCyc-alkyl, wherein each of alkyl, Cyc, hetCyc, aryl, heteroaryl, arylalkyl, heteroarylalkyl, alkoxyalkyl, aryloxyalkyl, aminoalkyl, alkylaminoalkyl, dialkylaminoalkyl, Cyc-alkyl and hetCyc-alkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, OH, NR^6R^7 , alkyl, alkylsulfonyl, alkoxy, aryl and heteroaryl;

R^6 is H or alkyl;

R^7 is alkyl, arylalkyl or heteroarylalkyl;

each Cyc is independently cycloalkyl, bridged carbocyclyl or spirocarbocyclyl; and

each hetCyc is independently heterocyclyl, bridged heterocyclyl or spiroheterocyclyl.

2. The compound of claim 1, wherein

G is H, D, C_{1-6} alkyl, 3-12 membered hetCyc, 3-12 membered Cyc, (3-12 membered

hetCyc)-C₁₋₆ alkyl, (3-12 membered Cyc)-C₁₋₆ alkyl, (5-10 membered heteroaryl)-C₁₋₆ alkyl, amino C₁₋₆ alkyl, C₁₋₆ alkylamino-C₁₋₆ alkyl, di(C₁₋₆ alkyl)amino-C₁₋₆ alkyl, C₁₋₆ alkoxy C₁₋₆ alkyl, R⁵O(C=O)NR⁶C₁₋₆ alkyl, R⁵(C=O)NR⁶C₁₋₆ alkyl, NR⁵R⁶(C=O)C₁₋₆ alkyl, R⁵(C=O)C₁₋₆ alkyl, NR⁵R⁶(C=O)-, R⁵OC₁₋₆ alkyl, wherein each of C₁₋₆ alkyl, 3-12 membered hetCyc, 3-12 membered Cyc, (3-12 membered hetCyc)-C₁₋₆ alkyl, (3-12 membered Cyc)-C₁₋₆ alkyl, (5-10 membered heteroaryl)-C₁₋₆ alkyl, amino C₁₋₆ alkyl, C₁₋₆ alkylamino-C₁₋₆ alkyl, di(C₁₋₆ alkyl)amino-C₁₋₆ alkyl, C₁₋₆ alkoxy C₁₋₆ alkyl, and a C₁₋₆ alkyl moiety in R⁵O(C=O)NR⁶C₁₋₆ alkyl, R⁵(C=O)NR⁶C₁₋₆ alkyl, NR⁵R⁶(C=O)C₁₋₆ alkyl, R⁵(C=O)C₁₋₆ alkyl, R⁵OC₁₋₆ alkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from oxo, F, Cl, Br, OH, C₃₋₆ cycloalkylidene, 3-6 membered heterocyclylidene, C₁₋₆ alkyl, C₁₋₆ alkoxy, C₁₋₆ alkoxy C₁₋₆ alkyl, R⁵(C=O)- and R⁵O(C=O)-; or

G is H, D, C₁₋₄ alkyl, 3-10 membered hetCyc, 3-10 membered Cyc, (3-10 membered hetCyc)-C₁₋₄ alkyl, (3-10 membered Cyc)-C₁₋₄ alkyl, (5-10 membered heteroaryl)-C₁₋₄ alkyl, amino C₁₋₄ alkyl, C₁₋₄ alkylamino-C₁₋₄ alkyl, di(C₁₋₄ alkyl)amino-C₁₋₄ alkyl, C₁₋₄ alkoxy C₁₋₄ alkyl, R⁵O(C=O)NR⁶C₁₋₄ alkyl, R⁵(C=O)NR⁶C₁₋₄ alkyl, NR⁵R⁶(C=O)C₁₋₄ alkyl, R⁵(C=O)C₁₋₄ alkyl, NR⁵R⁶(C=O)-, R⁵OC₁₋₄ alkyl, wherein each of C₁₋₄ alkyl, 3-10 membered hetCyc, 3-10 membered Cyc, (3-10 membered hetCyc)-C₁₋₄ alkyl, (3-10 membered Cyc)-C₁₋₄ alkyl, (5-10 membered heteroaryl)-C₁₋₄ alkyl, amino C₁₋₄ alkyl, C₁₋₄ alkylamino-C₁₋₄ alkyl, di(C₁₋₄ alkyl)amino-C₁₋₄ alkyl, C₁₋₄ alkoxy C₁₋₄ alkyl, and a C₁₋₄ alkyl moiety in R⁵O(C=O)NR⁶C₁₋₄ alkyl, R⁵(C=O)NR⁶C₁₋₄ alkyl, NR⁵R⁶(C=O)C₁₋₄ alkyl, R⁵(C=O)C₁₋₄ alkyl, R⁵OC₁₋₄ alkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, OH, C₃₋₆ cycloalkylidene, 3-6 membered heterocyclylidene, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ alkoxy C₁₋₄ alkyl, R⁵(C=O)- and R⁵O(C=O)-; or,

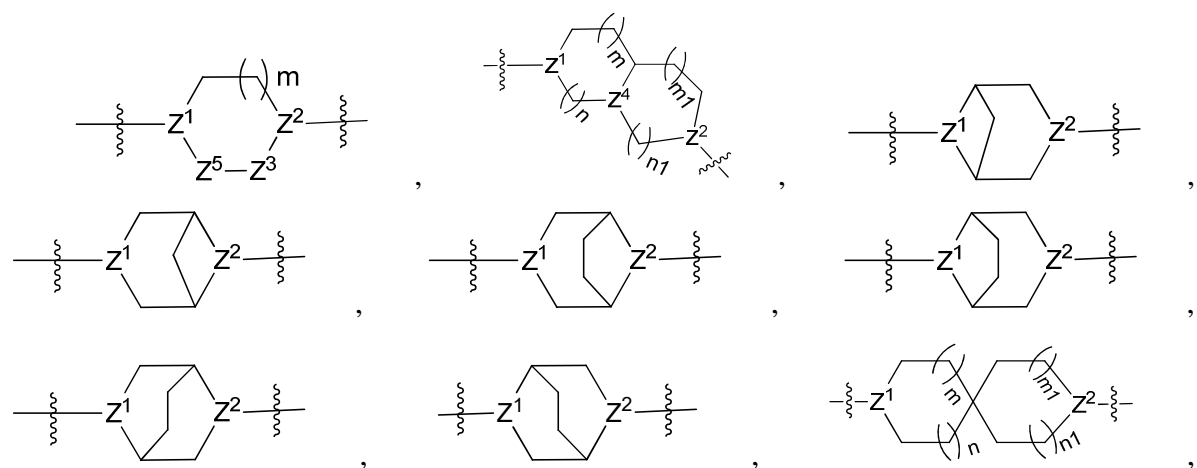
G is H, D, C₁₋₄ alkyl, 3-6 membered hetCyc, 3-6 membered Cyc, (3-6 membered hetCyc)-C₁₋₄ alkyl, (3-6 membered Cyc)-C₁₋₄ alkyl, (5-6 membered heteroaryl)-C₁₋₄ alkyl, amino C₁₋₄ alkyl, C₁₋₄ alkylamino-C₁₋₄ alkyl, di(C₁₋₄ alkyl)amino-C₁₋₄ alkyl, C₁₋₄ alkoxy C₁₋₄ alkyl, R⁵O(C=O)NR⁶C₁₋₄ alkyl, R⁵(C=O)NR⁶C₁₋₄ alkyl, NR⁵R⁶(C=O)C₁₋₄ alkyl, R⁵(C=O)C₁₋₄ alkyl, NR⁵R⁶(C=O)- or R⁵OC₁₋₄ alkyl, wherein each of C₁₋₄ alkyl, 3-6 membered hetCyc, 3-6 membered Cyc, (3-6 membered hetCyc)-C₁₋₄ alkyl, (3-6 membered Cyc)-C₁₋₄ alkyl, (5-6

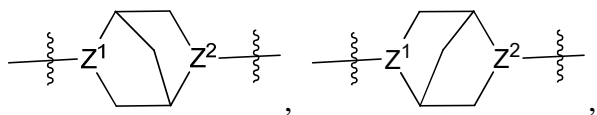
membered heteroaryl)-C₁₋₄ alkyl, amino C₁₋₄ alkyl, C₁₋₄ alkylamino-C₁₋₄ alkyl, di(C₁₋₄ alkyl)amino-C₁₋₄ alkyl, C₁₋₄ alkoxy C₁₋₄ alkyl, and a C₁₋₄ alkyl moiety in R⁵O(C=O)NR⁶C₁₋₄ alkyl, R⁵(C=O)NR⁶C₁₋₄ alkyl, NR⁵R⁶(C=O)C₁₋₄ alkyl, R⁵(C=O)C₁₋₄ alkyl and R⁵OC₁₋₄ alkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from oxo, F, Cl, Br, OH, cyclopropylidene, cyclobutylidene, cyclopentylidene, cyclohexylidene, azetanylidene, oxetanylidene, pyrrolidinylidene, pyrazolidinylidene, tetrahydrofuranylidene, methyl, ethyl, *n*-propyl, isopropyl, *tert*-butyl, *n*-butyl, isobutyl, methoxy, ethoxy, *n*-propoxy, isopropoxy, *n*-butoxy, isobutoxy, *tert*-butoxy, methoxymethyl, ethoxymethyl, *n*-propoxymethyl, isopropoxymethyl, methoxyethyl, ethoxyethyl, *n*-propoxyethyl, isopropoxyethyl, methoxypropyl, ethoxypropyl, *n*-propoxypropyl, isopropoxypropyl, CH₃(C=O)-, CH₃O(C=O)-, CH₃CH₂O(C=O)- and (CH₃)₃CO(C=O)-.

3. The compound of any one of claims 1 to 2, wherein

A is 3-12 membered Cyc or 3-12 membered hetCyc, wherein each of 3-12 membered Cyc and 3-12 membered hetCyc is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, oxo, NR⁵R⁶, R⁵O-, R⁵(C=O)NR⁶-, NR⁵R⁶C₁₋₆ alkyl, NR⁵R⁶(C=O)C₁₋₆ alkoxy C₁₋₆ alkyl, NR⁶R⁷C₁₋₆ alkoxy, NR⁶R⁷C₁₋₆ alkoxy C₁₋₆ alkyl, C₁₋₆alkyl, C₁₋₆ haloalkyl, C₁₋₆ hydroxyalkyl, 3-12 membered Cyc, 3-12 membered hetCyc, 3-12 membered hetCyc-C₁₋₆ alkyl, C₁₋₆ alkoxy C₁₋₆ alkyl, 3-12 membered hetCyc-C₁₋₆ alkoxy C₁₋₆ alkyl, C₃₋₆ cycloalkylidene and 3-6 membered heterocyclylidene; or

A is one of the following sub-formulae:





wherein each Z^1 , Z^2 and Z^4 is independently CH or N;

each of Z^3 and Z^5 is independently a bond, CH_2 , O, S, NH, C=O, S=O or $\text{S}(=\text{O})_2$;

each m is 0, 1, or 2;

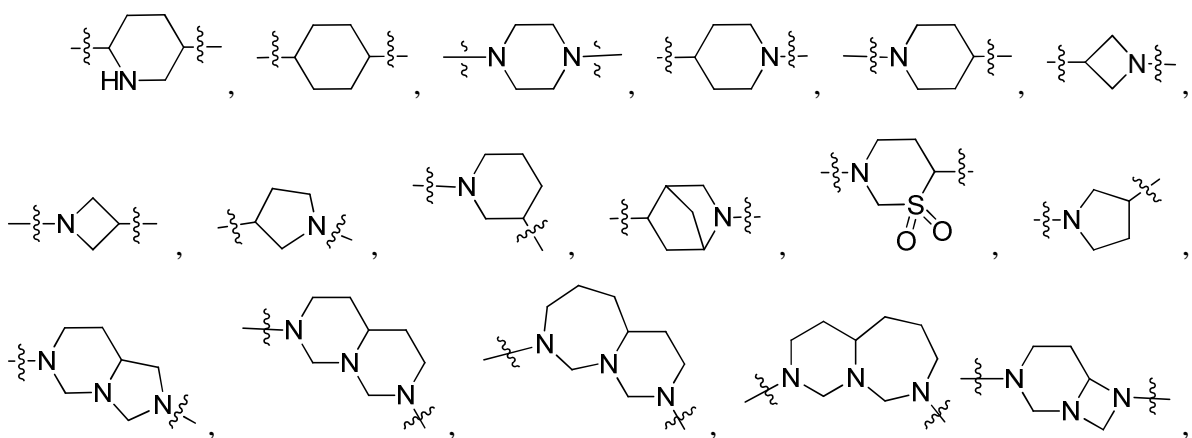
each n , $m1$ and $n1$ is independently 0 or 1;

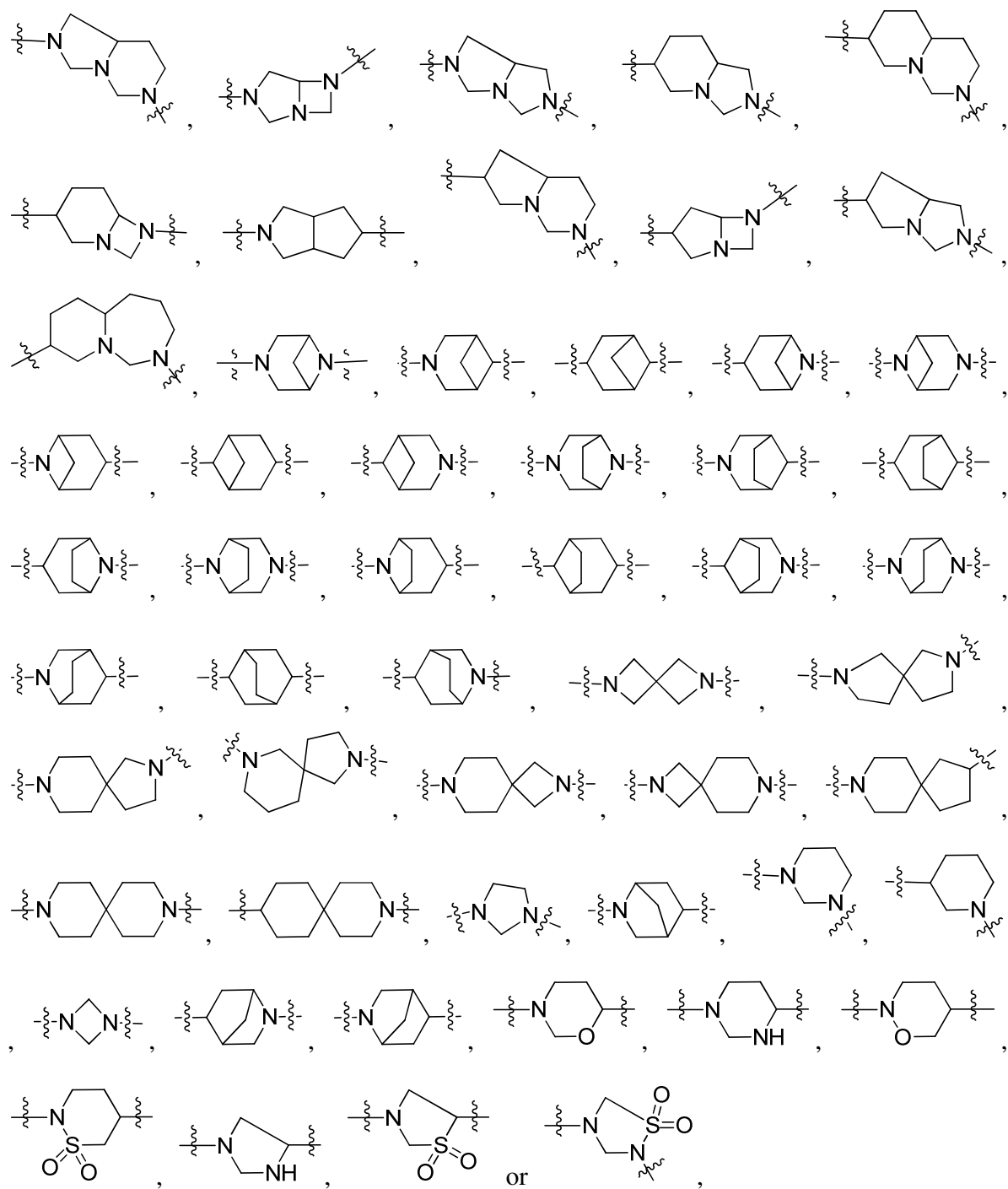
each sub-formula of A is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, oxo, NR^5R^6 , $\text{R}^5\text{O}-$, $\text{R}^5(\text{C}=\text{O})\text{NR}^6-$, $\text{NR}^5\text{R}^6\text{C}_{1-6}$ alkyl, $\text{NR}^5\text{R}^6(\text{C}=\text{O})\text{C}_{1-6}$ alkoxy C_{1-6} alkyl, $\text{NR}^6\text{R}^7\text{C}_{1-6}$ alkoxy, $\text{NR}^6\text{R}^7\text{C}_{1-6}$ alkoxy C_{1-6} alkyl, C_{1-6} alkyl, C_{1-6} haloalkyl, C_{1-6} hydroxyalkyl, 3-10 membered Cyc, 3-10 membered hetCyc, 3-10 membered hetCyc- C_{1-6} alkyl, C_{1-6} alkoxy C_{1-6} alkyl, 3-10 membered hetCyc- C_{1-6} alkoxy C_{1-6} alkyl, C_{3-6} cycloalkylidene and 3-6 membered heterocyclylidene; or,

each sub-formula of A is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, oxo, NR^5R^6 , $\text{R}^5\text{O}-$, $\text{R}^5(\text{C}=\text{O})\text{NR}^6-$, $\text{NR}^5\text{R}^6\text{C}_{1-4}$ alkyl, $\text{NR}^5\text{R}^6(\text{C}=\text{O})\text{C}_{1-4}$ alkoxy C_{1-4} alkyl, $\text{NR}^6\text{R}^7\text{C}_{1-4}$ alkoxy, $\text{NR}^6\text{R}^7\text{C}_{1-4}$ alkoxy C_{1-4} alkyl, C_{1-4} alkyl, C_{1-4} haloalkyl, C_{1-4} hydroxyalkyl, 3-10 membered Cyc, 3-10 membered hetCyc, 3-10 membered hetCyc- C_{1-4} alkyl, C_{1-4} alkoxy C_{1-4} alkyl, 3-10 membered hetCyc- C_{1-4} alkoxy C_{1-4} alkyl, C_{3-6} cycloalkylidene and 3-6 membered heterocyclylidene.

4. The compound according to any one of claims 1 to 3, wherein

A is one of the following sub-formulae:





wherein each sub-formula of A is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, oxo, NR⁵R⁶, R⁵O-, R⁵(C=O)NR⁶-, NR⁵R⁶C₁₋₄ alkyl, NR⁶R⁷C₁₋₄ alkoxy, C₁₋₄ alkyl, C₁₋₄ haloalkyl, 3-10 membered Cyc, 3-10 membered hetCyc, 3-10 membered hetCyc-C₁₋₄ alkyl, 3-10 membered hetCyc-C₁₋₄ alkoxy C₁₋₄ alkyl, C₃₋₆ cycloalkylidene and 3-6 membered heterocyclylidene; or,

each sub-formula of A is independently and optionally substituted by 1, 2, 3 or 4

substituents selected from F, Cl, Br, oxo, OH, NH₂, NHCH₃, NH(CH₂)₃CH₃, N(CH₃)₂, benzyl OCH₂NH-, benzyl (C=O)NH-, pyridylmethyl (C=O)NH-, CH₃CH₂(C=O)NH-, methoxy, ethoxy, *n*-propoxy, isopropoxy, *n*-butoxy, isobutoxy, phenoxy-(CH₂)₂O-, NH₂(CH₂)₂O-, N(CH₃)₂(CH₂)₂O-, 1-ethylcyclopropylmethyl, fluoropyridylethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, pyrrolidinyl, pyrazolidinyl, piperidinyl, morpholinyl, piperazinyl, methyl, ethyl, propyl, monofluoromethyl, difluoromethyl, trifluoromethyl, monochloromethyl, dichloromethyl, trichloromethyl, 1,2-dichloroethyl, 1,2-difluoroethyl, hydroxymethyl, hydroxyethyl, methoxymethyl, methoxyethyl, ethoxymethyl, cyclopropylidene, cyclobutylidene, cyclopentylidene, cyclohexylidene, azetidinyldiene, oxetanyldiene, pyrrolidinylidene or pyrazolidinylidene.

5. The compound of any one of claims 1 to 4, wherein

M is -(C=O)-, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ alkyl-C₆₋₁₀ aryl, C₁₋₆ alkyl-(5-10 membered heteroaryl), C₂₋₆ alkenyl-C₆₋₁₀ aryl, C₂₋₆ alkynyl-C₆₋₁₀ aryl, C₂₋₆ alkenyl-(5-10 membered heteroaryl), C₂₋₆ alkynyl-(5-10 membered heteroaryl), C₆₋₁₀ aryl, 5-10 membered heteroaryl, 3-12 membered hetCyc, 3-12 membered Cyc, C₆₋₁₀ aryl-C₁₋₆ alkyl, (5-10 membered heteroaryl)-C₁₋₆ alkyl, (3-12 membered hetCyc)-C₁₋₆ alkyl or (3-12 membered Cyc)-C₁₋₆ alkyl, wherein each of C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ alkyl-C₆₋₁₀ aryl, C₁₋₆ alkyl-(5-10 membered heteroaryl), C₂₋₆ alkenyl-C₆₋₁₀ aryl, C₂₋₆ alkynyl-C₆₋₁₀ aryl, C₂₋₆ alkenyl-(5-10 membered heteroaryl), C₂₋₆ alkynyl-(5-10 membered heteroaryl), C₆₋₁₀ aryl, 5-10 membered heteroaryl, 3-12 membered hetCyc, 3-12 membered Cyc, C₆₋₁₀ aryl-C₁₋₆ alkyl, (5-10 membered heteroaryl)-C₁₋₆ alkyl, (3-12 membered hetCyc)-C₁₋₆ alkyl and (3-12 membered Cyc)-C₁₋₆ alkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, OH, CF₃, NR⁵R⁶, oxo, C₁₋₆ alkoxy, C₃₋₆ cycloalkylidene, 3-6 membered heterocyclyldiene, hydroxy C₁₋₆ alkyl, C₁₋₆ alkyl, C₃₋₆ cycloalkyl, C₃₋₆ cycloalkyl C₂₋₆ alkynyl and 3-7 membered heterocyclic group; or,

M is -(C=O)-, C₁₋₄ alkyl, C₂₋₄ alkenyl, C₂₋₄ alkynyl, C₁₋₄ alkylphenyl, C₁₋₄ alkyl-(5-10 membered heteroaryl), C₂₋₄ alkenylphenyl, C₂₋₄ alkynylphenyl, C₂₋₄ alkenyl-(5-10 membered heteroaryl), C₂₋₄ alkynyl-(5-10 membered heteroaryl), phenyl, 5-10 membered heteroaryl, 3-10 membered hetCyc, 3-10 membered Cyc, phenyl-C₁₋₄ alkyl, (5-10 membered heteroaryl)-C₁₋₄

alkyl, (3-10 membered hetCyc)-C₁₋₄ alkyl or (3-10 membered Cyc)-C₁₋₄ alkyl, wherein each of C₁₋₄ alkyl, C₂₋₄ alkenyl, C₂₋₄ alkynyl, C₁₋₄ alkylphenyl, C₁₋₄ alkyl-(5-10 membered heteroaryl), C₂₋₄ alkenylphenyl, C₂₋₄ alkynylphenyl, C₂₋₄ alkenyl-(5-10 membered heteroaryl), C₂₋₄ alkynyl-(5-10 membered heteroaryl), phenyl, 5-10 membered heteroaryl, 3-10 membered hetCyc, 3-10 membered Cyc, phenyl-C₁₋₄ alkyl, (5-10 membered heteroaryl)-C₁₋₄ alkyl, (3-10 membered hetCyc)-C₁₋₄ alkyl and (3-10 membered Cyc)-C₁₋₄ alkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, OH, CF₃, NR⁵R⁶, oxo, C₁₋₄ alkoxy, C₃₋₆ cycloalkylidene, 3-6 membered heterocyclylidene, hydroxy C₁₋₄ alkyl, C₁₋₄ alkyl, C₃₋₆ cycloalkyl, C₃₋₆ cycloalkyl C₂₋₄ alkynyl and 3-6 membered heterocyclic group; or

M is -(C=O)-, -CH₂-, -(CH₂)₂-, -(CH₂)₃-, -(CH₂)₄-, -CH=CH-, -CH₂CH=CH-, -CH₂CH=CHCH₂-, -C≡C-, -CH₂C≡C-, -CH₂C≡CCH₂-, -CH=CH-phenyl, -CH₂CH=CH-phenyl, -CH₂CH=CH-CH₂-phenyl, -C≡C-phenyl, -CH₂C≡C-phenyl, -CH₂C≡C-CH₂-phenyl, -CH=CH-pyridyl, -CH₂CH=CH-pyridyl, -CH₂CH=CH-CH₂-pyridyl, -CH=CH-pyrazolyl, -CH₂CH=CH-pyrazolyl, -CH=CH-pyrimidinyl, -CH=CH-pyrazinyl, -CH=CH-benzimidazolyl, -CH=CH-benzopyrazolyl, -C≡C-pyridyl, -CH₂C≡C-pyridyl, -CH₂C≡C-CH₂-pyridyl, -C≡C-pyrazolyl, -CH₂C≡C-pyrazolyl, -C≡C-pyrimidinyl, -C≡C-pyrazinyl, -C≡C-benzimidazolyl, -C≡C-benzopyrazolyl, phenyl, pyridyl, pyrimidinyl, pyrazinyl, imidazolyl, pyrazolyl, furyl, thienyl, -CH₂-pyridyl, -CH₂CH₂-pyridyl, -CH₂-phenyl, -CH₂CH₂-phenyl, -CH₂-pyrimidinyl, -CH₂-pyrazinyl, -CH₂-imidazolyl, -CH₂-pyrazolyl, phenyl-CH₂-, phenyl-CH₂CH₂-, pyridyl-CH₂-, pyridyl-CH₂CH₂-, pyrimidinyl-CH₂-, pyrazinyl-CH₂-, imidazolyl-CH₂- or pyrazolyl-CH₂-, wherein each of -CH₂-, -(CH₂)₂-, -(CH₂)₃-, -(CH₂)₄-, -CH=CH-, -CH₂CH=CH-, -CH₂CH=CHCH₂-, -C≡C-, -CH₂C≡C-, -CH₂C≡CCH₂-, -CH=CH-phenyl, -CH₂CH=CH-phenyl, -CH₂CH=CH-CH₂-phenyl, -C≡C-phenyl, -CH₂C≡C-phenyl, -CH₂C≡C-CH₂-phenyl, -CH=CH-pyridyl, -CH₂CH=CH-pyridyl, -CH₂CH=CH-CH₂-pyridyl, -CH=CH-pyrazolyl, -CH₂CH=CH-pyrazolyl, -CH=CH-pyrimidinyl, -CH=CH-pyrazinyl, -CH=CH-benzimidazolyl, -CH=CH-benzopyrazolyl, -C≡C-pyridyl, -CH₂C≡C-pyridyl, -CH₂C≡C-CH₂-pyridyl, -C≡C-pyrazolyl, -CH₂C≡C-pyrazolyl, -C≡C-pyrimidinyl, -C≡C-pyrazinyl, -C≡C-benzimidazolyl, -C≡C-benzopyrazolyl, phenyl, pyridyl, pyrimidinyl, pyrazinyl, imidazolyl, pyrazolyl, furyl, thienyl, -CH₂-pyridyl, -CH₂CH₂-pyridyl, -CH₂-phenyl, -CH₂CH₂-phenyl, -CH₂-pyrimidinyl, -CH₂-

pyrazinyl, -CH₂-imidazolyl, -CH₂-pyrazolyl, phenyl-CH₂-, phenyl-CH₂CH₂-, pyridyl-CH₂-, pyridyl-CH₂CH₂-, pyrimidinyl-CH₂-, pyrazinyl-CH₂-, imidazolyl-CH₂- and pyrazolyl-CH₂- is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, OH, CF₃, NH₂, oxo, methoxy, ethoxy, *n*-propoxy, isopropoxy, cyclopropylidene, cyclobutylidene, cyclopentylidene, azetidinyldiene, hydroxymethyl, hydroxyethyl, 2-hydroxy-2-propyl, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *tert*-butyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclopropylethynyl, pyrrolidinyl, morpholinyl.

6. The compound of any one of claims 1 to 5, wherein

R³ is H, D, C₁₋₆ alkyl, 3-12 membered Cyc, 3-12 membered hetCyc, C₆₋₁₀ aryl, 5-10 membered heteroaryl, (3-12 membered Cyc)-C₁₋₆ alkyl, (3-12 membered hetCyc)-C₁₋₆ alkyl, C₁₋₆ alkoxy C₁₋₆ alkyl, C₆₋₁₀ aryl C₁₋₆ alkyl, (5-10 membered heteroaryl) C₁₋₆ alkyl or amino C₁₋₆ alkyl, wherein each of C₁₋₆ alkyl, 3-12 membered Cyc, 3-12 membered hetCyc, C₆₋₁₀ aryl, 5-10 membered heteroaryl, (3-12 membered Cyc)-C₁₋₆ alkyl, (3-12 membered hetCyc)-C₁₋₆ alkyl, C₁₋₆ alkoxy C₁₋₆ alkyl, C₆₋₁₀ aryl C₁₋₆ alkyl, (5-10 membered heteroaryl) C₁₋₆ alkyl and amino C₁₋₆ alkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, NR⁵R⁶, R⁵O-, R⁵O(C=O)-, R⁵(C=O)-, NR⁵R⁶(C=O)NR⁵-, R⁵S(=O)₂-, NO₂, CN, CF₃, C₁₋₆ alkyl and C₃₋₆ cycloalkyl; or

R³ is H, D, C₁₋₄ alkyl, 3-10 membered Cyc, 3-10 membered hetCyc, phenyl, 5-10 membered heteroaryl, (3-10 membered Cyc)-C₁₋₄ alkyl, (3-10 membered hetCyc)-C₁₋₄ alkyl, C₁₋₄ alkoxy C₁₋₄ alkyl, phenyl C₁₋₄ alkyl, (5-10 membered heteroaryl)-C₁₋₄ alkyl or amino C₁₋₄ alkyl, wherein each of C₁₋₄ alkyl, 3-10 membered Cyc, 3-10 membered hetCyc, phenyl, 5-10 membered heteroaryl, (3-10 membered Cyc)-C₁₋₄ alkyl, (3-10 membered hetCyc)-C₁₋₄ alkyl, C₁₋₄ alkoxy C₁₋₄ alkyl, phenyl C₁₋₄ alkyl, (5-10 membered heteroaryl)-C₁₋₄ alkyl and amino C₁₋₄ alkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, NR⁵R⁶, R⁵O-, R⁵O(C=O)-, R⁵(C=O)-, NR⁵R⁶(C=O)NR⁵-, R⁵S(=O)₂-, NO₂, CN, CF₃, C₁₋₄ alkyl and C₃₋₆ cycloalkyl; or

R³ is H, D, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *tert*-butyl, trifluoromethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclopentylmethyl, cyclopropylmethyl, cyclobutylmethyl, cyclohexylmethyl, spiro[4.4]decylmethyl, bicyclo[3.3.0]octyl, pyrrolidinyl,

azetidiny, piperidiny, morpholiny, azetidinylmethyl, piperidinylmethyl, morpholinylmethyl, methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, *n*-propoxymethyl, isopropoxymethyl, isopropoxyethyl, *n*-butoxymethyl, isobutoxymethyl, *tert*-butoxymethyl, *tert*-butoxyethyl, phenyl, pyridyl, imidazolyl, pyrazolyl, pyrimidinyl, 3*H*-indolyl, indolyl, benzimidazolyl, 3,8*a*-dihydroindoliziny, phenylmethyl, 3,8*a*-dihydroindolizinylmethyl, pyridylmethyl, imidazolylmethyl, pyrazolylmethyl, pyrimidinylmethyl, 3*H*-indolylmethyl, indolylmethyl, benzimidazolylmethyl, NH₂CH₂-, NH(CH₃)CH₂-, N(CH₃)₂CH₂-, NH₂(CH₂)₂-, NH(CH₃)CH₂-, NH(CH₃)(CH₂)₂- or N(CH₃)₂(CH₂)₂-, wherein each of methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *tert*-butyl, trifluoromethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclopentylmethyl, cyclopropylmethyl, cyclobutylmethyl, cyclohexylmethyl, spiro[4.4]decylmethyl, bicyclo[3.3.0]octyl, pyrrolidinyl, azetidiny, piperidiny, morpholiny, azetidinylmethyl, piperidinylmethyl, morpholinylmethyl, methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, *n*-propoxymethyl, isopropoxymethyl, isopropoxyethyl, *n*-butoxymethyl, isobutoxymethyl, *tert*-butoxymethyl, *tert*-butoxyethyl, phenyl, pyridyl, imidazolyl, pyrazolyl, pyrimidinyl, 3*H*-indolyl, indolyl, benzimidazolyl, 3,8*a*-dihydroindoliziny, phenylmethyl, 3,8*a*-dihydroindolizinylmethyl, pyridylmethyl, imidazolylmethyl, pyrazolylmethyl, pyrimidinylmethyl, 3*H*-indolylmethyl, indolylmethyl, benzimidazolylmethyl, NH₂CH₂-, NH(CH₃)CH₂-, N(CH₃)₂CH₂-, NH₂(CH₂)₂-, NH(CH₃)CH₂-, NH(CH₃)(CH₂)₂- and N(CH₃)₂(CH₂)₂- is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, OH, NH₂, NO₂, CN, CF₃, C(CH₃)₃O(C=O)-, CH₃(C=O)-, NH₂(C=O)NH-, NHCH₃(C=O)NH-, CH₃S(=O)₂-, methyl, methoxy, ethoxy, *n*-propoxy, isopropoxy, phenoxy, pyridyloxy, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl.

7. The compound of any one of claims 1 to 6, wherein

R¹ is H, D, CN, F, Cl, Br, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *tert*-butyl, vinyl, cyclopropyl, cyclobutyl, cyclopentyl or cyclohexyl, wherein each of methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *tert*-butyl, vinyl, cyclopropyl, cyclobutyl, cyclopentyl and cyclohexyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, CN, NH₂, OH and NO₂; and

R⁴ is H, D, F, Cl, Br, CN, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *tert*-

butylmethoxy, ethoxy, *n*-propoxy, isopropoxy, *n*-butoxy, isobutoxy or *tert*-butoxy, wherein each of methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *tert*-butylmethoxy, ethoxy, *n*-propoxy, isopropoxy, *n*-butoxy, isobutoxy and *tert*-butoxy is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, CN, NH₂, OH and NO₂.

8. The compound of any one of claims 1 to 7, wherein

R⁵ is H, D, C₁₋₆ alkyl, 3-12 membered Cyc, 3-12 membered hetCyc, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₆₋₁₀ aryl C₁₋₆ alkyl, (5-10 membered heteroaryl)-C₁₋₆ alkyl, C₁₋₆ alkoxy C₁₋₆ alkyl, C₆₋₁₀ aryloxy C₁₋₆ alkyl, amino C₁₋₆ alkyl, C₁₋₆ alkylamino C₁₋₆ alkyl, di(C₁₋₆ alkyl)amino C₁₋₆ alkyl, (3-12 membered Cyc)-C₁₋₆ alkyl or (3-12 membered hetCyc)-C₁₋₆ alkyl, wherein each of C₁₋₆ alkyl, 3-12 membered Cyc, 3-12 membered hetCyc, C₆₋₁₀ aryl, 5-10 membered heteroaryl, C₆₋₁₀ aryl C₁₋₆ alkyl, (5-10 membered heteroaryl)-C₁₋₆ alkyl, C₁₋₆ alkoxy C₁₋₆ alkyl, C₆₋₁₀ aryloxy C₁₋₆ alkyl, amino C₁₋₆ alkyl, C₁₋₆ alkylamino C₁₋₆ alkyl, di(C₁₋₆ alkyl)amino C₁₋₆ alkyl, (3-12 membered Cyc)-C₁₋₆ alkyl and (3-12 membered hetCyc)-C₁₋₆ alkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, OH, NR⁶R⁷, C₁₋₆ alkyl, C₁₋₆ alkylsulfonyl, C₁₋₆ alkoxy, C₆₋₁₀ aryl and 5-10 membered heteroaryl;

R⁶ is H, D or C₁₋₆ alkyl; and

R⁷ is H, D, C₁₋₆ alkyl, C₆₋₁₀ aryl C₁₋₆ alkyl or (5-10 membered heteroaryl) C₁₋₆ alkyl; or

R⁵ is H, D, C₁₋₄ alkyl, 3-10 membered Cyc, 3-10 membered hetCyc, phenyl, 5-10 membered heteroaryl, phenyl C₁₋₄ alkyl, (5-10 membered heteroaryl)-C₁₋₄ alkyl, C₁₋₄ alkoxy C₁₋₄ alkyl, phenoxy C₁₋₄ alkyl, amino C₁₋₄ alkyl, C₁₋₄ alkylamino C₁₋₄ alkyl, di(C₁₋₄ alkyl)amino C₁₋₄ alkyl, (3-10 membered Cyc)-C₁₋₄ alkyl or hetCyc-C₁₋₄ alkyl, wherein each of C₁₋₄ alkyl, 3-10 membered Cyc, 3-10 membered hetCyc, phenyl, 5-10 membered heteroaryl, phenyl C₁₋₄ alkyl, (5-10 membered heteroaryl)-C₁₋₄ alkyl, C₁₋₄ alkoxy C₁₋₄ alkyl, phenoxy C₁₋₄ alkyl, amino C₁₋₄ alkyl, C₁₋₄ alkylamino C₁₋₄ alkyl, di(C₁₋₄ alkyl)amino C₁₋₄ alkyl, (3-10 membered Cyc)-C₁₋₄ alkyl and hetCyc-C₁₋₄ alkyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, OH, NR⁶R⁷, C₁₋₆ alkyl, C₁₋₄ alkylsulfonyl, C₁₋₄ alkoxy, phenyl and 5-10 membered heteroaryl;

R⁶ is H, D or C₁₋₄ alkyl; and

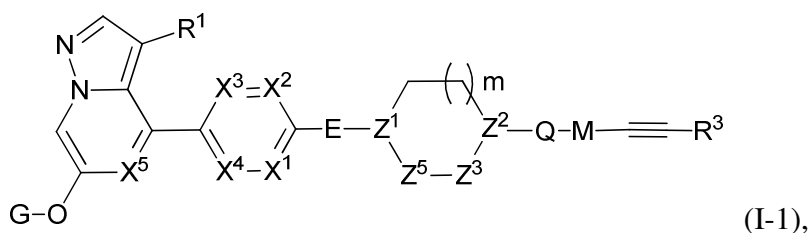
R^7 is H, D, C_{1-4} alkyl, phenyl C_{1-4} alkyl or (5-10 membered heteroaryl) C_{1-4} alkyl; or

R^5 is H, D, NH_2CH_2- , $NH_2(CH_2)_2-$, $NH(CH_3)CH_2-$, $NH(CH_3)(CH_2)_2-$, $N(CH_3)_2CH_2-$, $NH(CH_3)_2(CH_2)_2-$, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *tert*-butyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclopropylmethyl, cyclopropylethyl, cyclobutylethyl, cyclobutylmethyl, cyclopentylmethyl, cyclopentylethyl, cyclohexylmethyl, cyclohexylethyl, methoxymethyl, methoxyethyl, ethoxyethyl, phenylmethyl, phenylethyl, phenyl-*n*-propyl, pyridylmethyl, pyridylethyl, pyridyl-*n*-propyl, phenoxymethyl, phenoxyethyl, phenoxy-*n*-propyl, azetidiny, oxetanyl or tetrahydropyranyl, wherein each of NH_2CH_2- , $NH_2(CH_2)_2-$, $NH(CH_3)CH_2-$, $NH(CH_3)(CH_2)_2-$, $N(CH_3)_2CH_2-$, $NH(CH_3)_2(CH_2)_2-$, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *tert*-butyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclopropylmethyl, cyclopropylethyl, cyclobutylethyl, cyclobutylmethyl, cyclopentylmethyl, cyclopentylethyl, cyclohexylmethyl, cyclohexylethyl, methoxymethyl, methoxyethyl, ethoxyethyl, phenylmethyl, phenylethyl, phenyl-*n*-propyl, pyridylmethyl, pyridylethyl, pyridyl-*n*-propyl, phenoxymethyl, phenoxyethyl, phenoxy-*n*-propyl, azetidiny, oxetanyl and tetrahydropyranyl is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, OH, NH_2 , $NH(CH_3)$, $CH_3S(=O)_2-$, $CH_3CH_2S(=O)_2-$, $CH(CH_3)_2S(=O)_2-$, $C(CH_3)_3S(=O)_2-$, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *tert*-butyl, methoxy, ethoxy, *n*-propoxy, phenyl, pyridyl, pyrazolyl, pyrimidinyl;

R^6 is H, D, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl or *tert*-butyl; and

R^7 is H, D, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *tert*-butyl, phenylmethyl, phenylethyl, phenyl-*n*-propyl, imidazolylmethyl, pyrazolylmethyl, pyridylmethyl, pyridylethyl, pyrimidinylmethyl or pyrimidinylethyl.

9. The compound of any one of claims 1 to 8 having Formula (I-1), or a stereoisomer, a geometric isomer, a tautomer, an *N*-oxide, a solvate, or a pharmaceutically acceptable salt thereof,

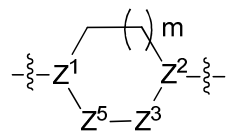


wherein,

each of Z^1 and Z^2 is independently CH or N;

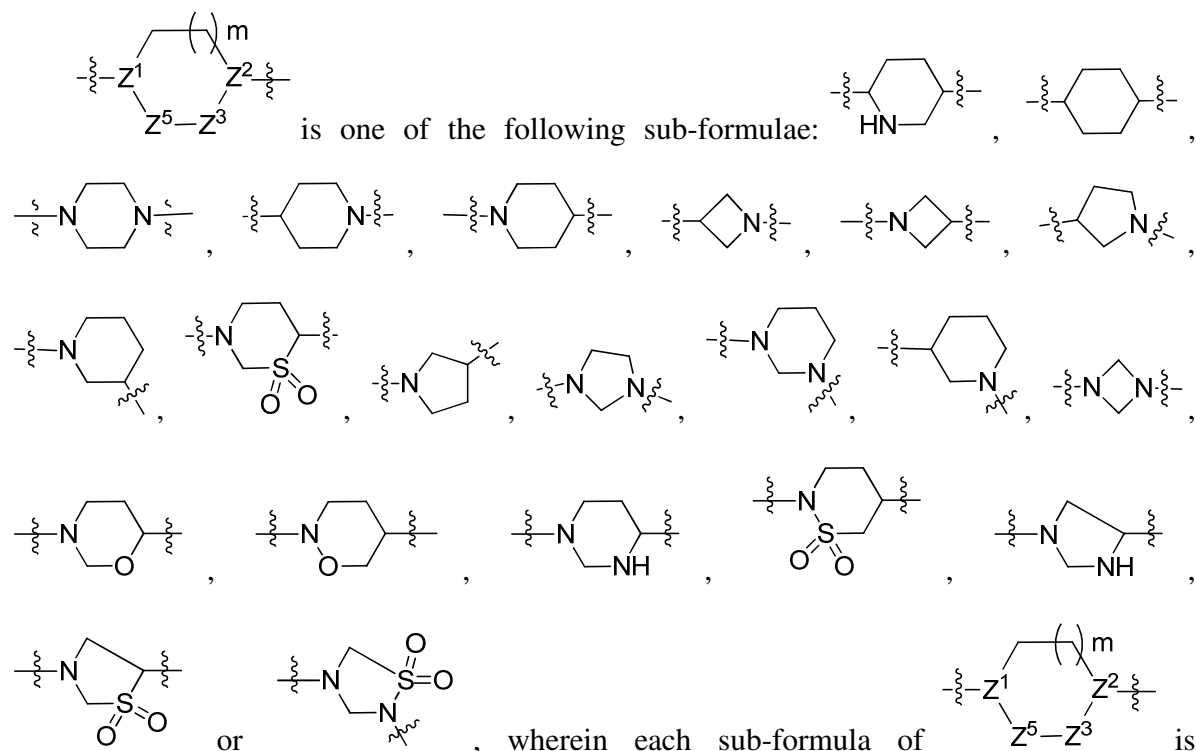
each of Z^3 and Z^5 is independently a bond, CH_2 , O, S, NH, C=O, S=O or $\text{S}(=\text{O})_2$;

m is 0, 1 or 2;



is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, oxo, NR^5R^6 , $\text{R}^5\text{O}-$, $\text{R}^5(\text{C}=\text{O})\text{NR}^6-$, $\text{NR}^5\text{R}^6\text{C}_{1-6}$ alkyl, $\text{NR}^5\text{R}^6(\text{C}=\text{O})\text{C}_{1-6}$ alkoxy C_{1-6} alkyl, $\text{NR}^6\text{R}^7\text{C}_{1-6}$ alkoxy, $\text{NR}^6\text{R}^7\text{C}_{1-6}$ alkoxy C_{1-6} alkyl, C_{1-6} alkyl, C_{1-6} haloalkyl, C_{1-6} hydroxyalkyl, 3-10 membered Cyc, 3-10 membered hetCyc, 3-10 membered hetCyc- C_{1-6} alkyl, C_{1-6} alkoxy C_{1-6} alkyl, 3-10 membered hetCyc- C_{1-6} alkoxy C_{1-6} alkyl, C_{3-6} cycloalkylidene and 3-6 membered heterocyclidene.

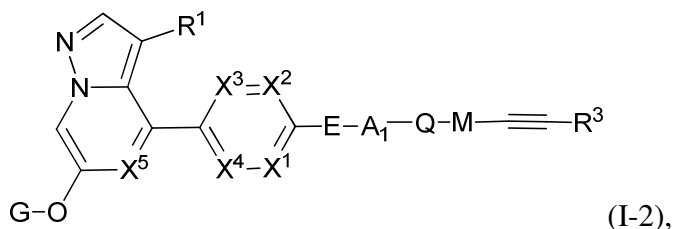
10. The compound of claim 9, wherein



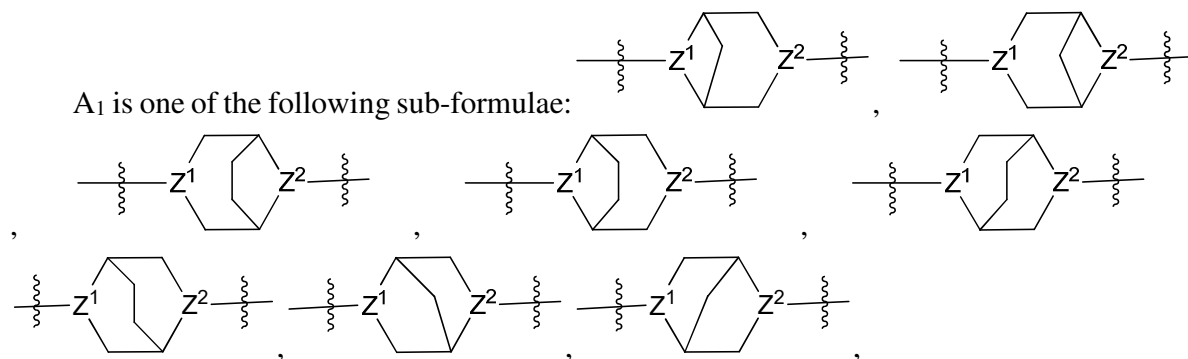
independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, oxo, NH_2 , NHCH_3 , $\text{NH}(\text{CH}_2)_3\text{CH}_3$, $\text{N}(\text{CH}_3)_2$, benzyl $\text{OCH}_2\text{NH}-$, benzyl $(\text{C}=\text{O})\text{NH}-$, pyridylmethyl $(\text{C}=\text{O})\text{NH}-$, $\text{CH}_3\text{CH}_2(\text{C}=\text{O})\text{NH}-$, methoxy, ethoxy, *n*-propoxy, isopropoxy, *n*-butoxy, isobutoxy, phenoxy- $(\text{CH}_2)_2\text{O}-$, $\text{NH}_2(\text{CH}_2)_2\text{O}-$, $\text{N}(\text{CH}_3)_2(\text{CH}_2)_2\text{O}-$, 1-

ethylcyclopropylmethyl, fluoropyridylethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, pyrrolidinyl, pyrazolidinyl, piperidinyl, morpholinyl, piperazinyl, methyl, ethyl, propyl, monofluoromethyl, difluoromethyl, trifluoromethyl, monochloromethyl, dichloromethyl, trichloromethyl, 1,2-dichloroethyl, 1,2-difluoroethyl, hydroxymethyl, hydroxyethyl, pyrrolidinylidene, methoxymethyl, methoxyethyl, ethoxymethyl, cyclopropylidene, cyclobutylidene, cyclopentylidene, cyclohexylidene, azetidinyldiene, oxetanylidene or pyrazolyldiene.

11. The compound of any one of claims 1 to 8 having Formula (I-2), or a stereoisomer, a geometric isomer, a tautomer, an *N*-oxide, a solvate, or a pharmaceutically acceptable salt thereof,



wherein,

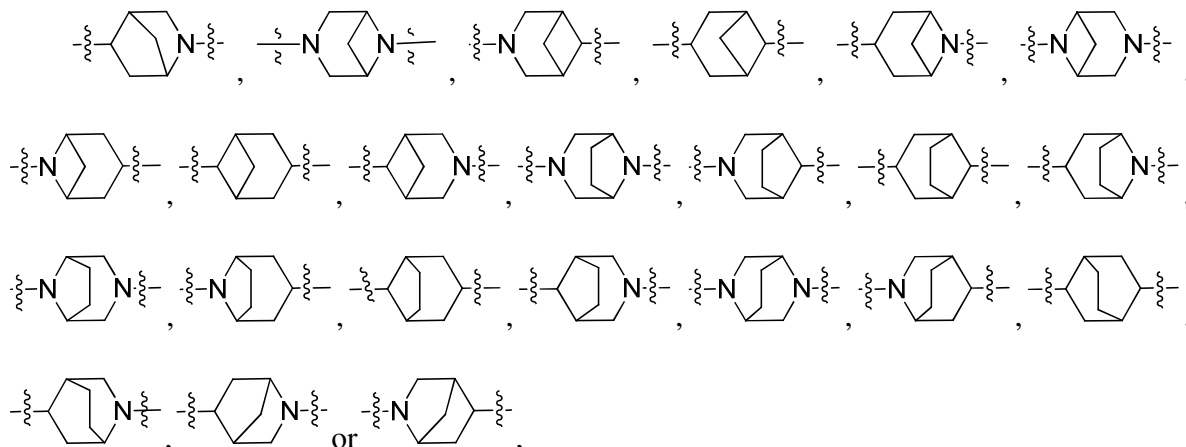


each Z^1 and Z^2 is independently CH or N;

each sub-formula of A_1 is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, oxo, NR^5R^6 , R^5O- , $R^5(C=O)NR^6-$, $NR^5R^6C_{1-6}$ alkyl, $NR^5R^6(C=O)C_{1-6}$ alkoxy C_{1-6} alkyl, $NR^6R^7C_{1-6}$ alkoxy, $NR^6R^7C_{1-6}$ alkoxy C_{1-6} alkyl, C_{1-6} alkyl, C_{1-6} haloalkyl, C_{1-6} hydroxyalkyl, 3-10 membered Cyc, 3-10 membered hetCyc, 3-10 membered hetCyc- C_{1-6} alkyl, C_{1-6} alkoxy C_{1-6} alkyl, 3-10 membered hetCyc- C_{1-6} alkoxy C_{1-6} alkyl, C_{3-6} cycloalkylidene and 3-6 membered heterocyclylidene.

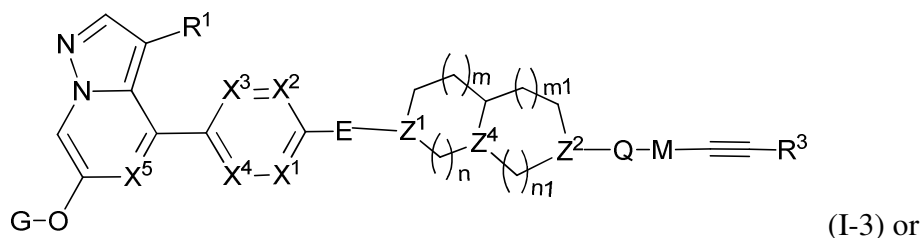
12. The compound of claim 11, wherein

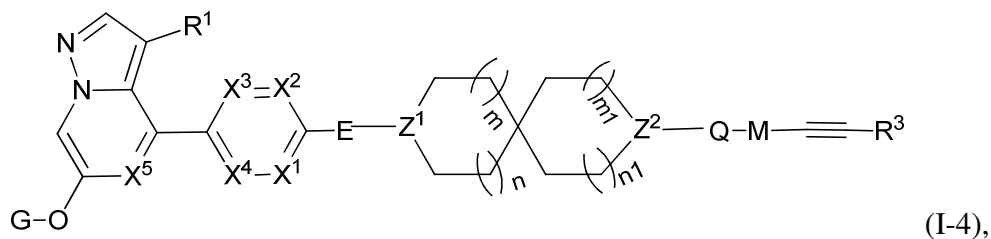
A₁ is one of the following sub-formulae:



wherein each sub-formula of A₁ is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, oxo, NH₂, NHCH₃, NH(CH₂)₃CH₃, N(CH₃)₂, benzyl OCH₂NH-, benzyl (C=O)NH-, pyridylmethyl (C=O)NH-, CH₃CH₂(C=O)NH-, methoxy, ethoxy, *n*-propoxy, isopropoxy, *n*-butoxy, isobutoxy, phenoxy-(CH₂)₂O-, NH₂(CH₂)₂O-, N(CH₃)₂(CH₂)₂O-, 1-ethylcyclopropylmethyl, fluoropyridylethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, pyrrolidinyl, pyrazolidinyl, piperidinyl, morpholinyl, piperazinyl, methyl, ethyl, propyl, monofluoromethyl, difluoromethyl, trifluoromethyl, monochloromethyl, dichloromethyl, trichloromethyl, 1,2-dichloroethyl, 1,2-difluoroethyl, hydroxymethyl, hydroxyethyl, pyrrolidinylidene, methoxymethyl, methoxyethyl, ethoxymethyl, cyclopropylidene, cyclobutylidene, cyclopentylidene, cyclohexylidene, azetidinyldene, oxetanylidene or pyrazolidinyldene.

13. The compound of any one of claims 1 to 8 having Formula (I-3) or (I-4), or a stereoisomer, a geometric isomer, a tautomer, an *N*-oxide, a solvate, or a pharmaceutically acceptable salt thereof,

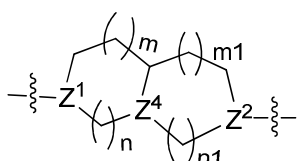
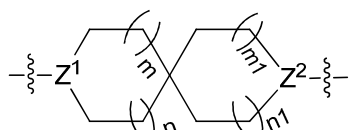




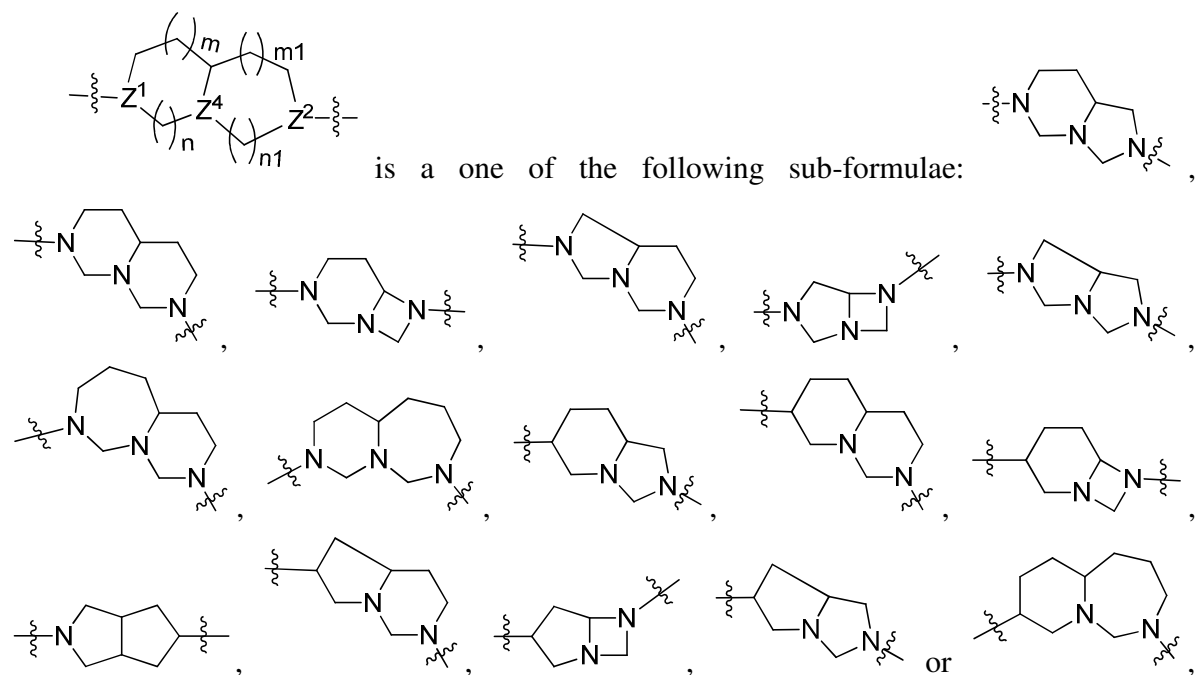
wherein each Z^1 , Z^2 and Z^4 is independently CH or N;

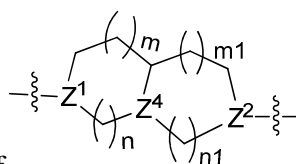
each m is 0, 1, or 2;

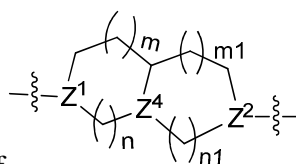
each n , $m1$ and $n1$ is independently 0 or 1;

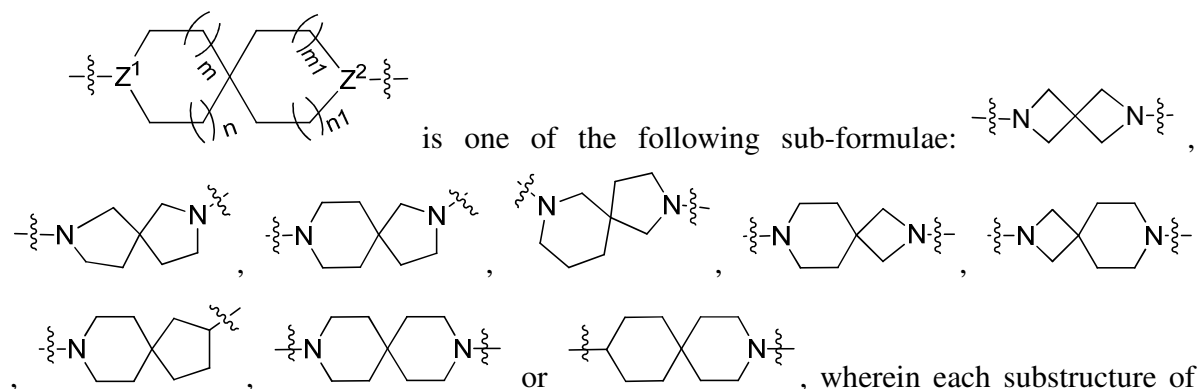
each of  and  is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, oxo, NR^5R^6 , R^5O- , $R^5(C=O)NR^6-$, $NR^5R^6C_{1-6}$ alkyl, $NR^5R^6(C=O)C_{1-6}$ alkoxy C_{1-6} alkyl, $NR^6R^7C_{1-6}$ alkoxy, $NR^6R^7C_{1-6}$ alkoxy C_{1-6} alkyl, C_{1-6} alkyl, C_{1-6} haloalkyl, C_{1-6} hydroxyalkyl, 3-10 membered Cyc, 3-10 membered hetCyc, 3-10 membered hetCyc- C_{1-6} alkyl, C_{1-6} alkoxy C_{1-6} alkyl, 3-10 membered hetCyc- C_{1-6} alkoxy C_{1-6} alkyl, C_{3-6} cycloalkylidene, 3-6 membered heterocyclidene; or

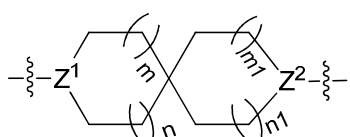
wherein





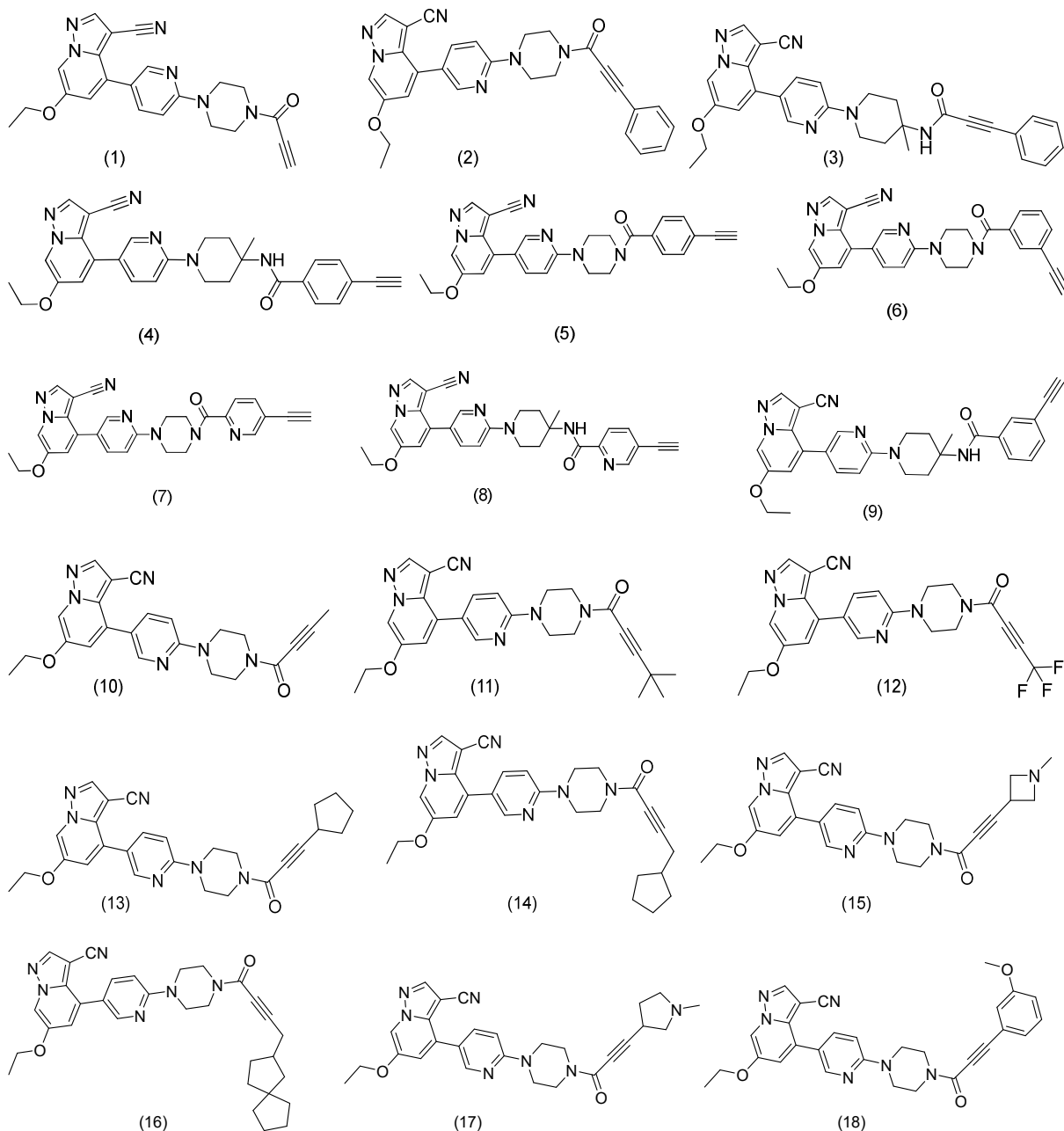
wherein each sub-formula of  is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, oxo, NH₂, NHCH₃, NH(CH₂)₃CH₃, N(CH₃)₂, benzyl OCH₂NH-, benzyl (C=O)NH-, pyridylmethyl (C=O)NH-, CH₃CH₂(C=O)NH-, methoxy, ethoxy, *n*-propoxy, isopropoxy, *n*-butoxy, isobutoxy, phenoxy-(CH₂)₂O-, NH₂(CH₂)₂O-, N(CH₃)₂(CH₂)₂O-, 1-ethylcyclopropylmethyl, fluoropyridylethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, pyrrolidinyl, pyrazolidinyl, piperidinyl, morpholinyl, piperazinyl, methyl, ethyl, propyl, monofluoromethyl, difluoromethyl, trifluoromethyl, monochloromethyl, dichloromethyl, trichloromethyl, 1,2-dichloroethyl, 1,2-difluoroethyl, hydroxymethyl, hydroxyethyl, pyrrolidinylidene, methoxymethyl, methoxyethyl, ethoxymethyl, cyclopropylidene, cyclobutylidene, cyclopentylidene, cyclohexylidene, azetidinyldiene, oxetanylidene or pyrazolyldiene;

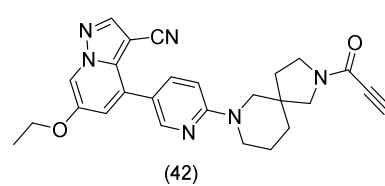
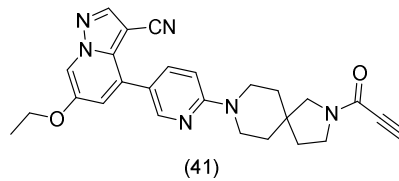
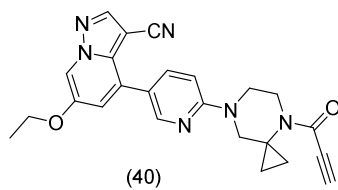
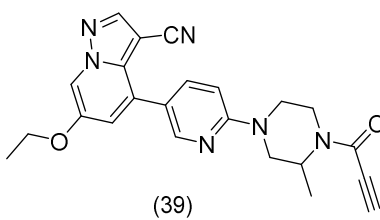
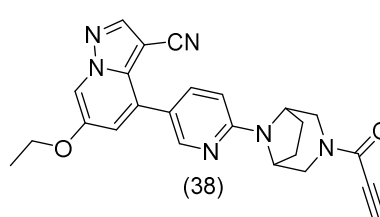
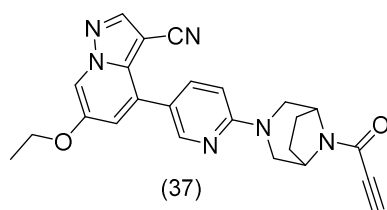
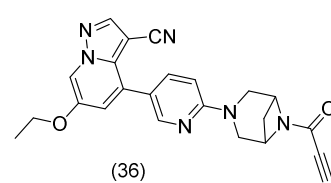
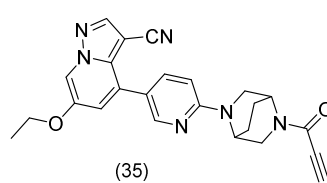
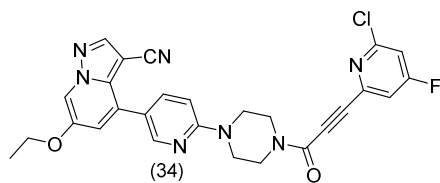
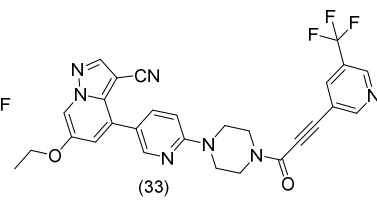
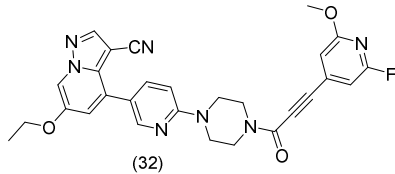
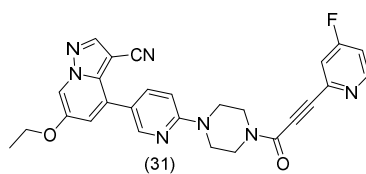
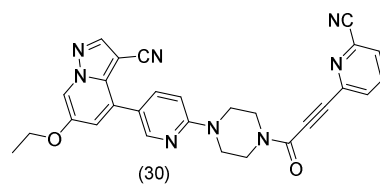
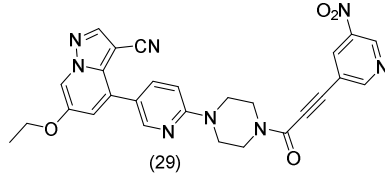
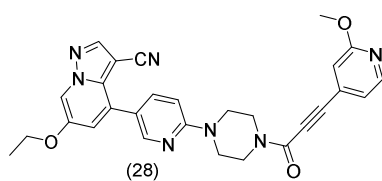
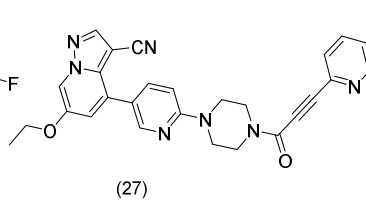
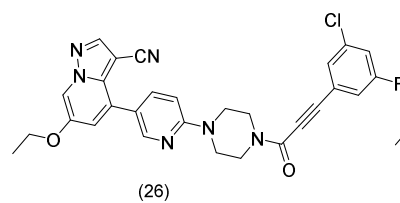
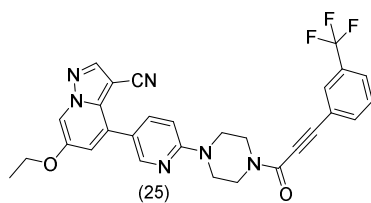
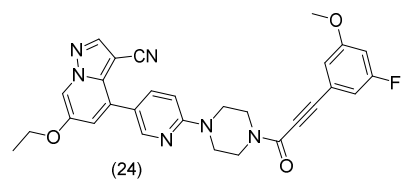
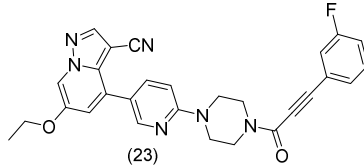
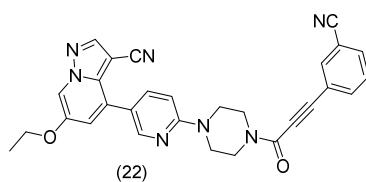
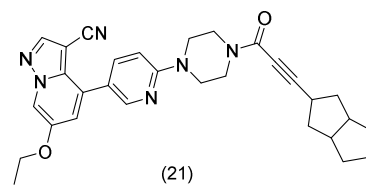
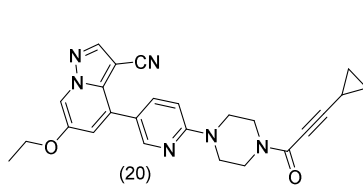
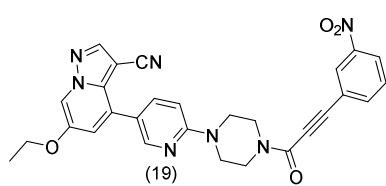


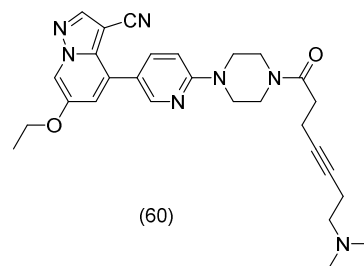
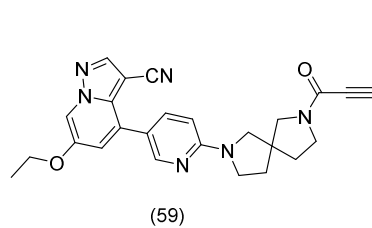
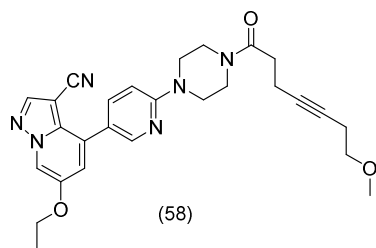
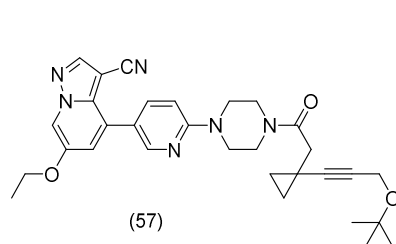
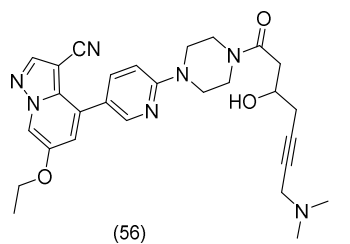
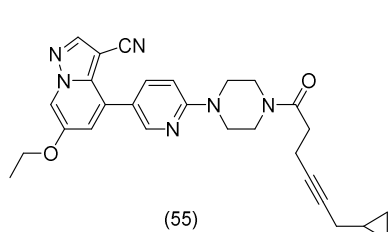
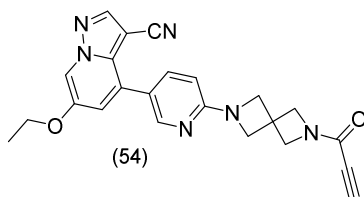
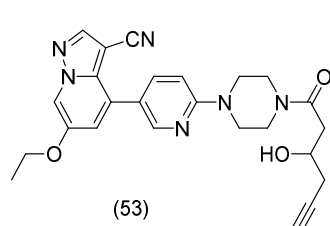
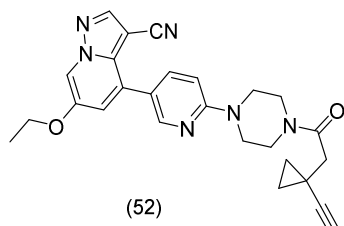
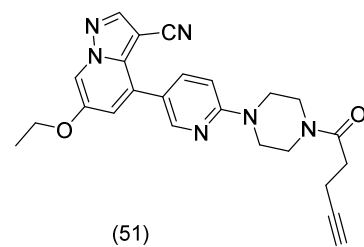
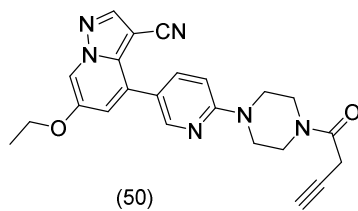
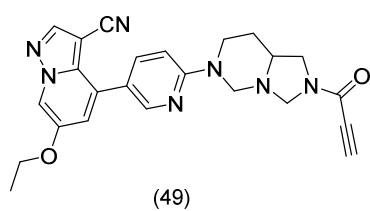
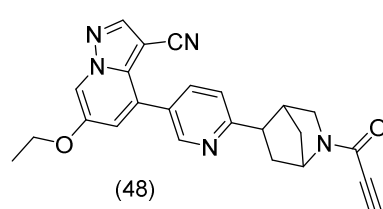
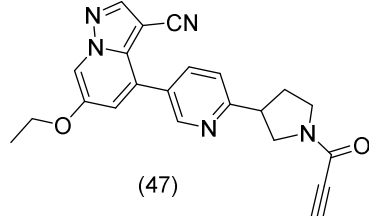
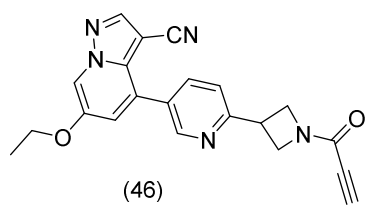
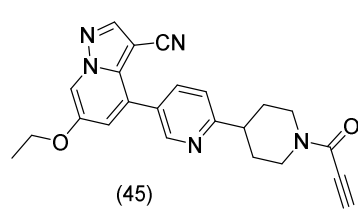
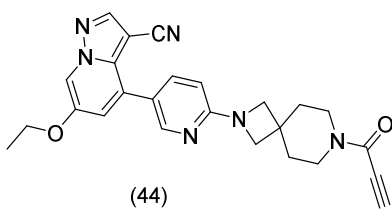
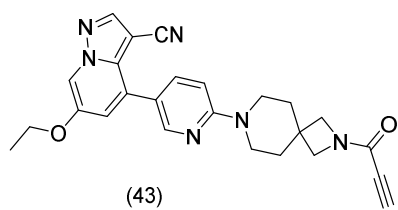
 is independently and optionally substituted by 1, 2, 3 or 4 substituents selected from F, Cl, Br, oxo, NH₂, NHCH₃, NH(CH₂)₃CH₃, N(CH₃)₂, benzyl OCH₂NH-, benzyl (C=O)NH-, pyridylmethyl (C=O)NH-, CH₃CH₂(C=O)NH-, methoxy, ethoxy, *n*-propoxy, isopropoxy, *n*-butoxy, isobutoxy, phenoxy-(CH₂)₂O-, NH₂(CH₂)₂O-, N(CH₃)₂(CH₂)₂O-, 1-ethylcyclopropylmethyl, fluoropyridylethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, pyrrolidinyl, pyrazolidinyl, piperidinyl, morpholinyl, piperazinyl, methyl, ethyl, propyl, monofluoromethyl, difluoromethyl, trifluoromethyl, monochloromethyl, dichloromethyl, trichloromethyl, 1,2-dichloroethyl, 1,2-difluoroethyl, hydroxymethyl,

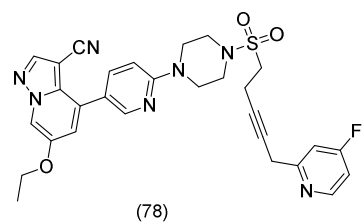
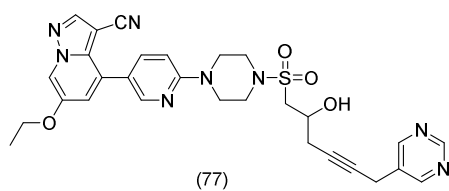
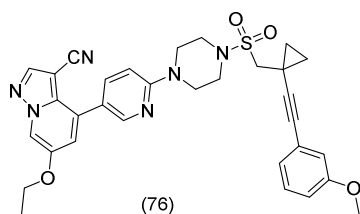
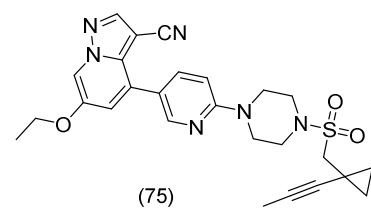
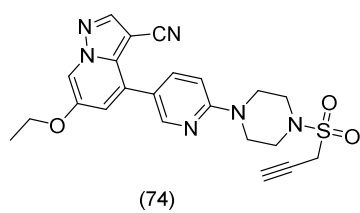
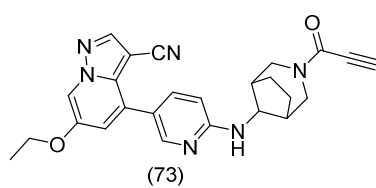
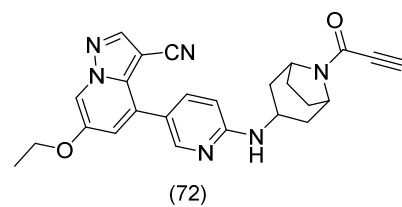
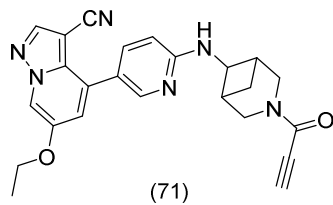
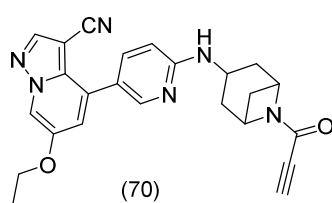
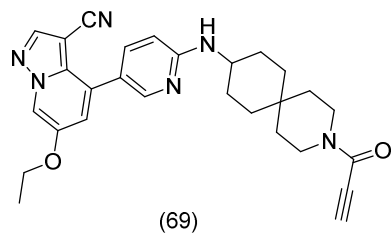
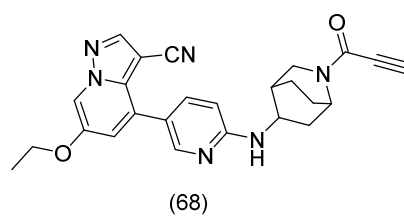
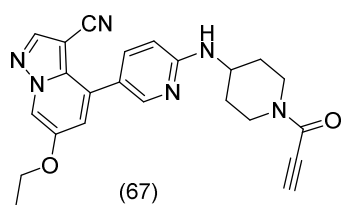
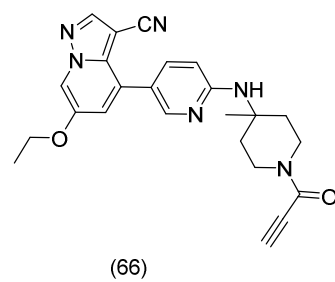
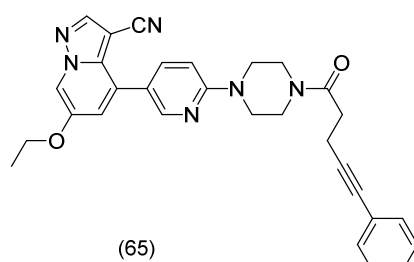
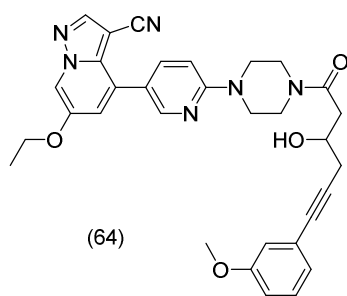
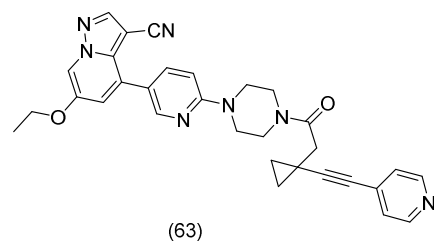
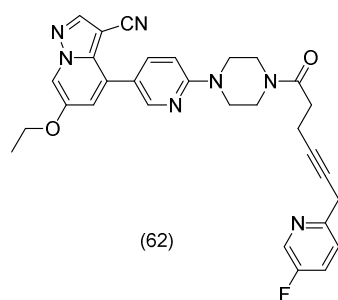
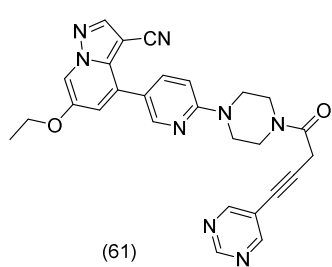
hydroxyethyl, pyrrolidinylidene, methoxymethyl, methoxyethyl, ethoxymethyl, cyclopropylidene, cyclobutylidene, cyclopentylidene, cyclohexylidene, azetidinyldene, oxetanylidene and pyrazolylidene.

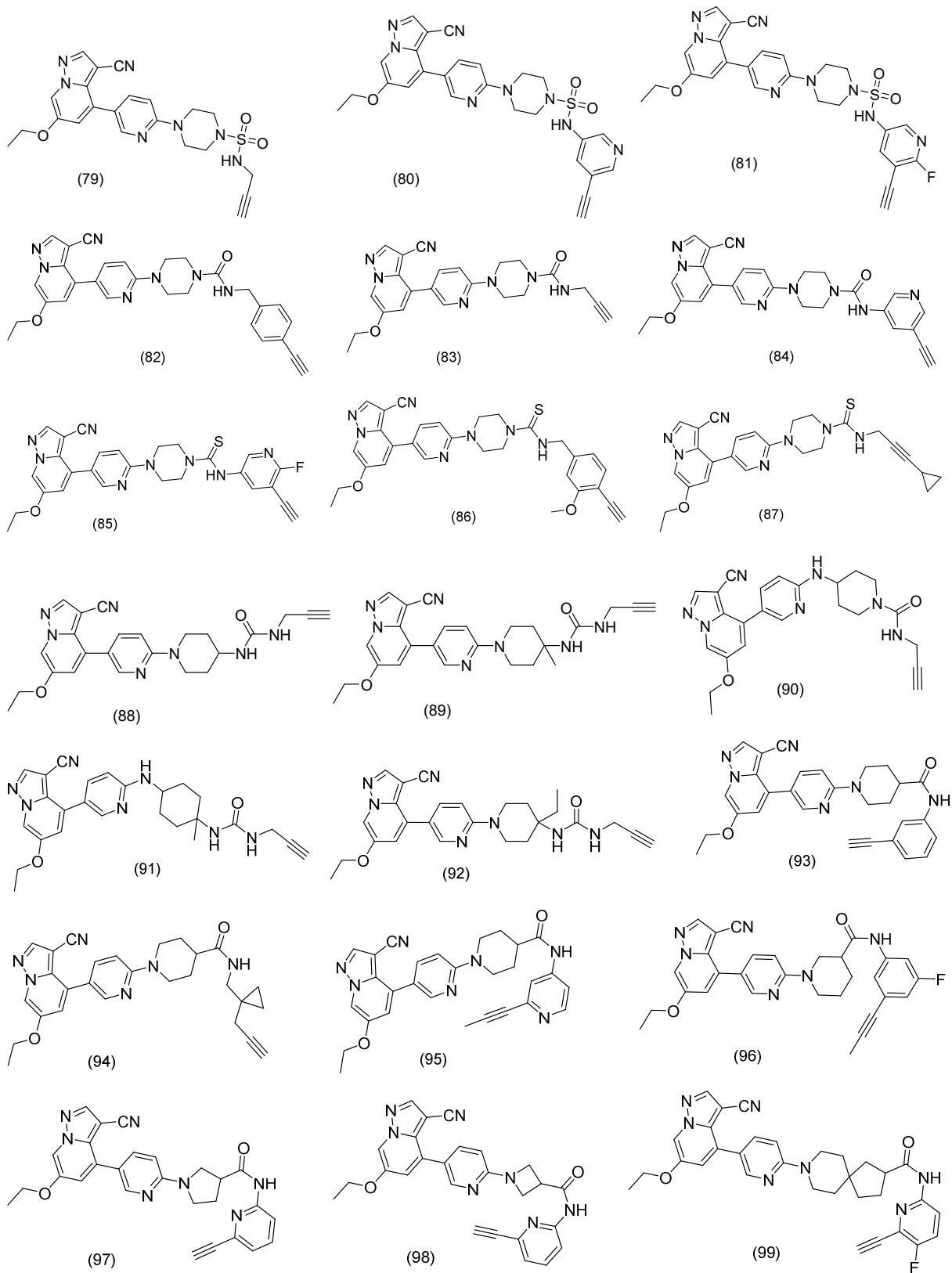
14. The compound of any one of claims 1 to 13 having one of the following structures, or a stereoisomer, a geometric isomer, a tautomer, an *N*-oxide, a solvate, or a pharmaceutically acceptable salt thereof,

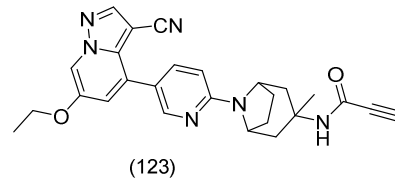
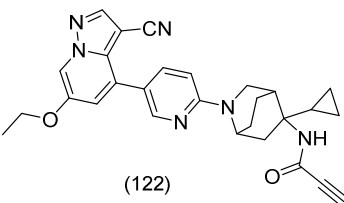
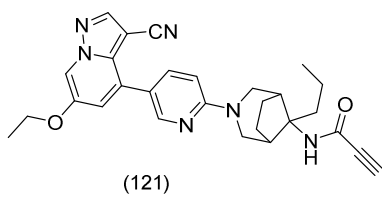
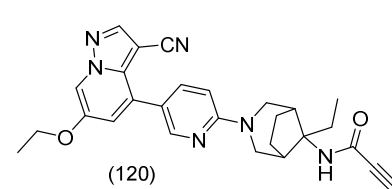
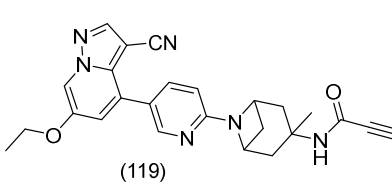
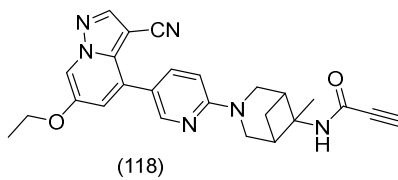
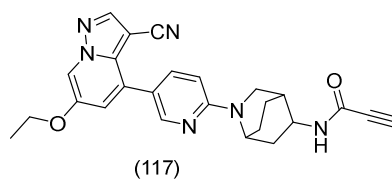
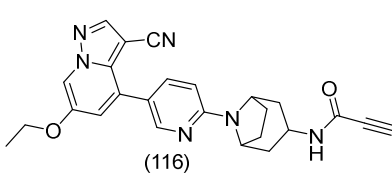
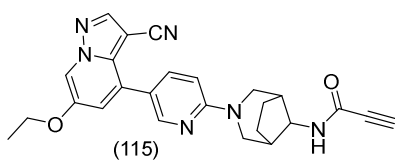
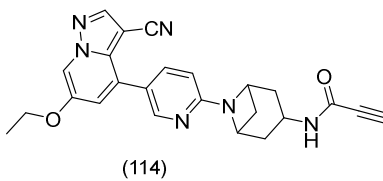
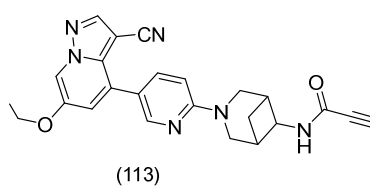
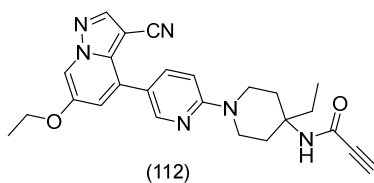
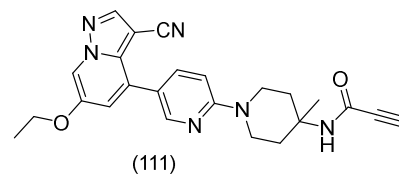
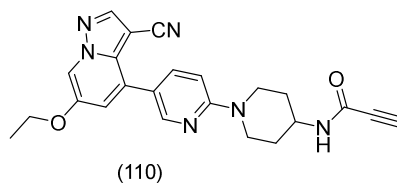
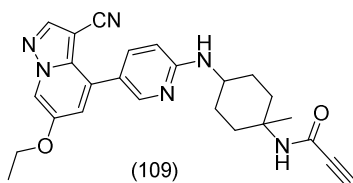
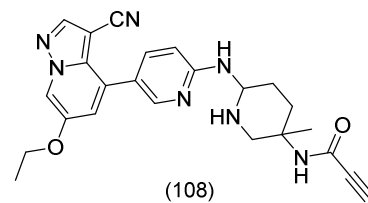
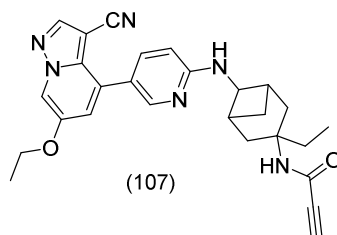
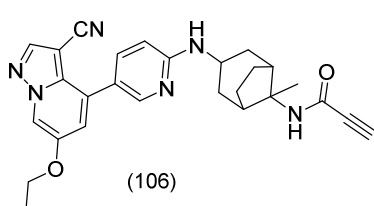
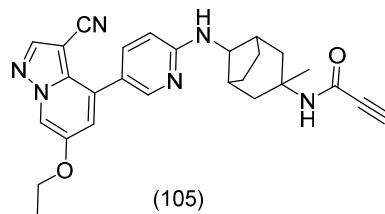
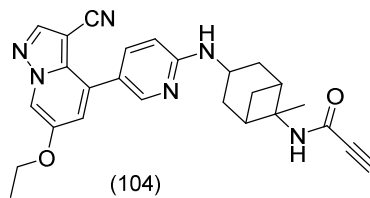
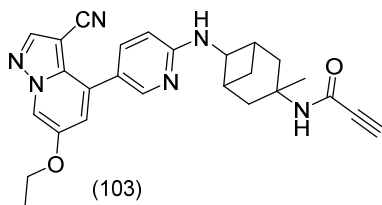
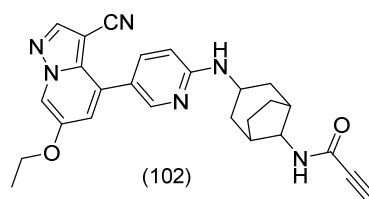
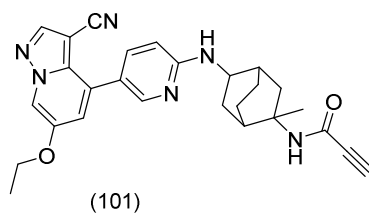
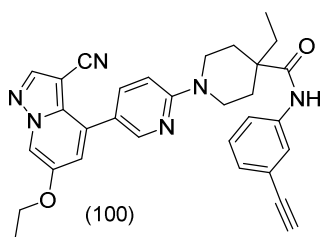


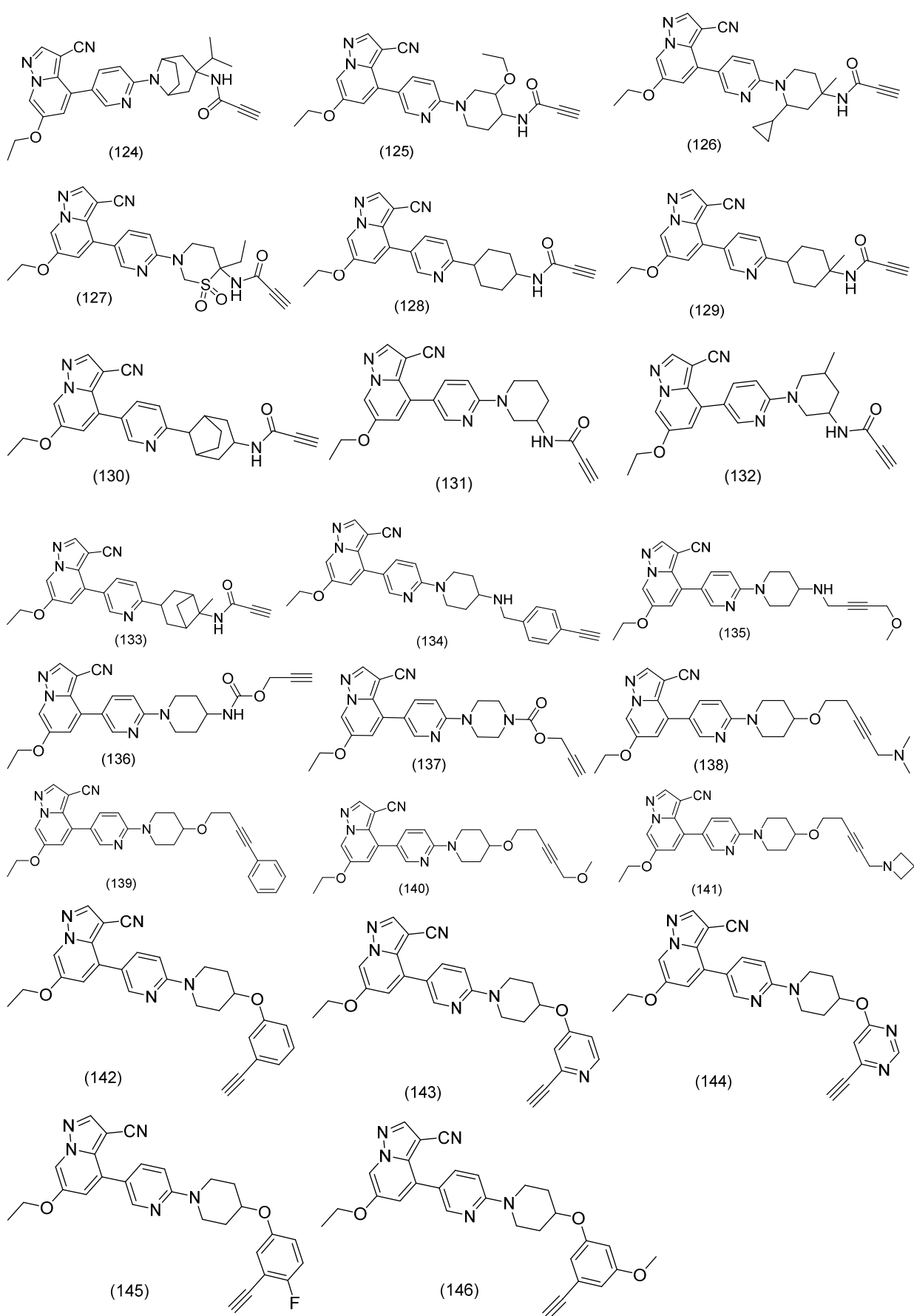


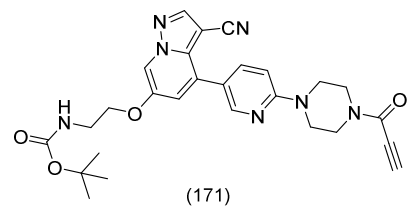
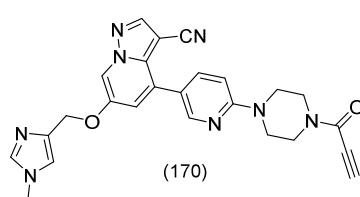
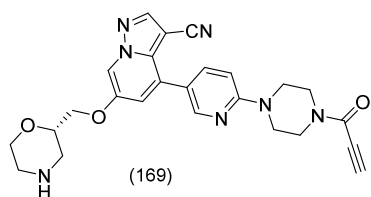
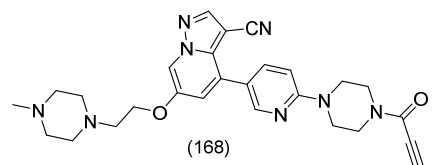
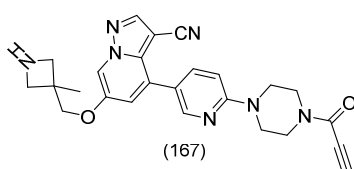
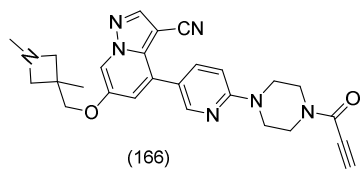
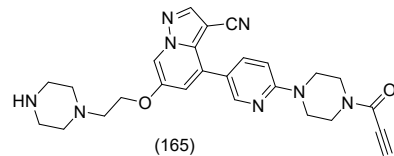
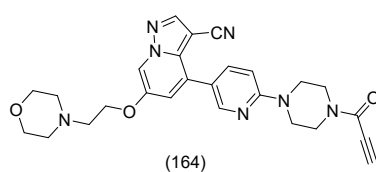
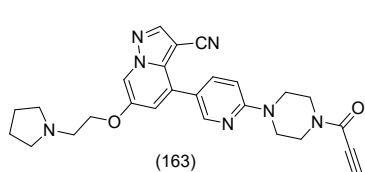
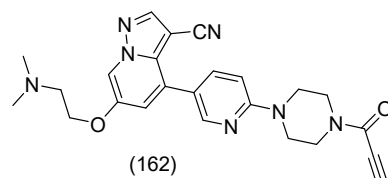
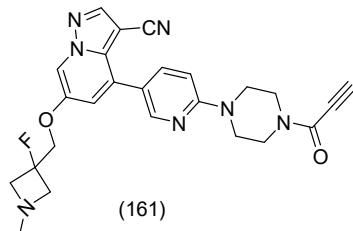
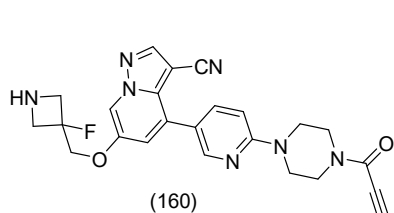
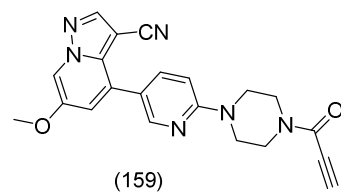
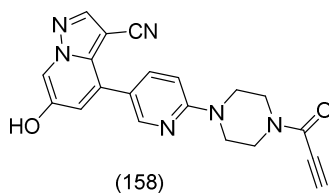
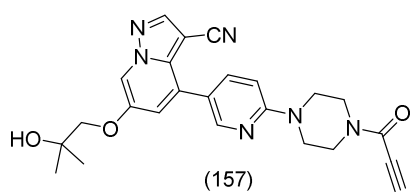
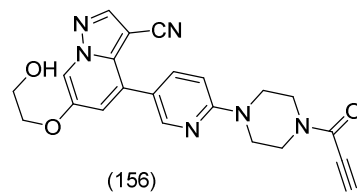
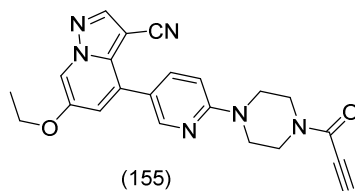
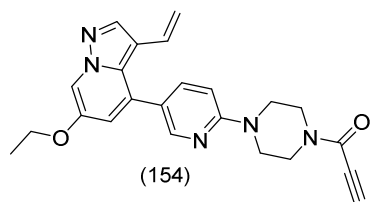
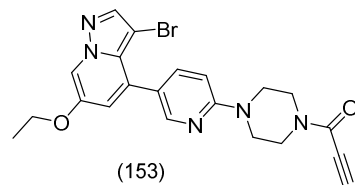
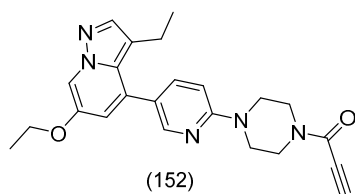
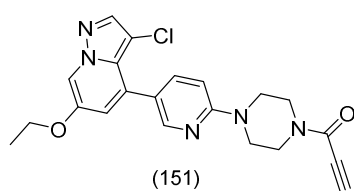
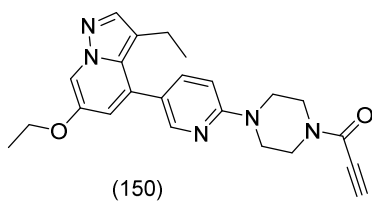
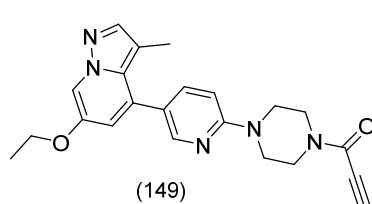
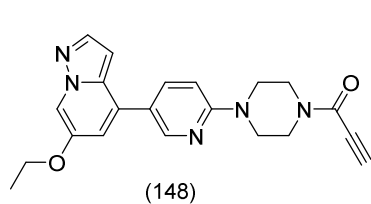


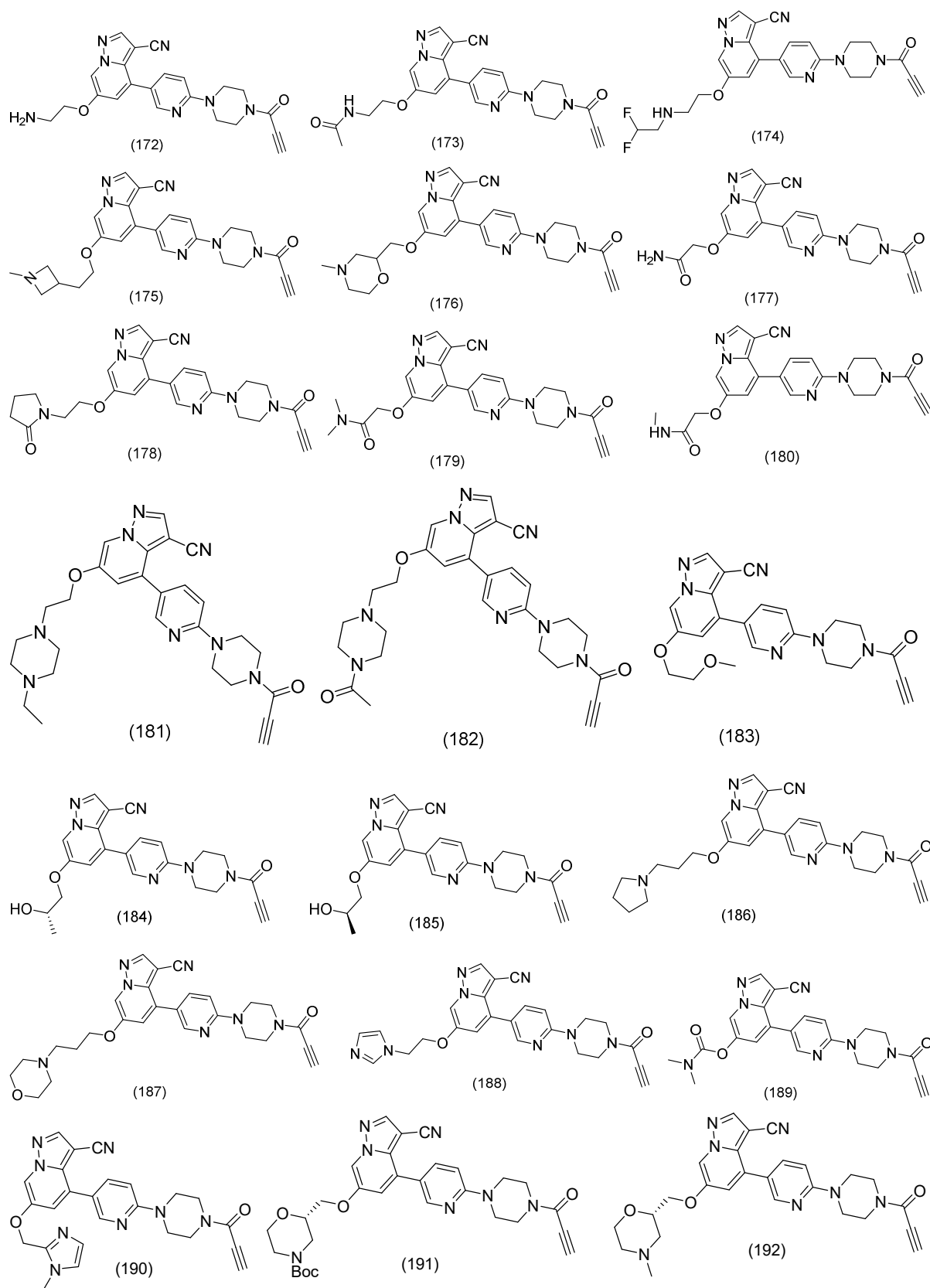


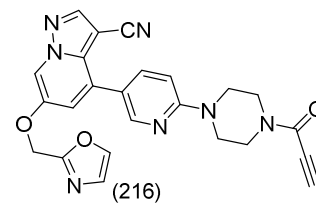
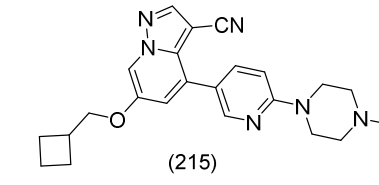
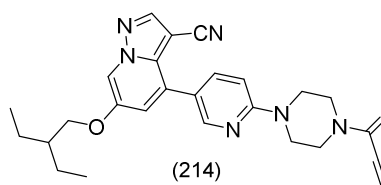
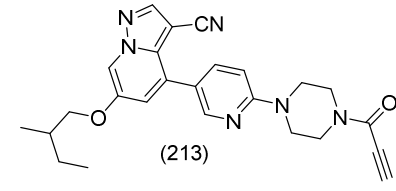
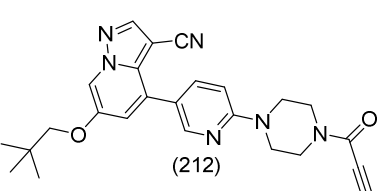
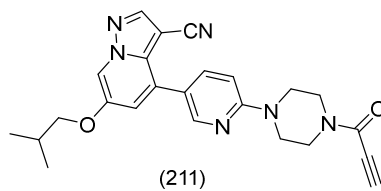
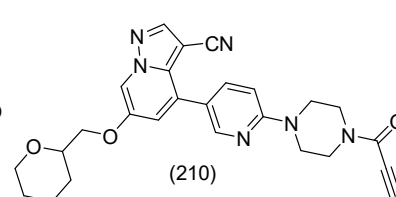
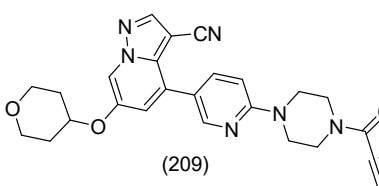
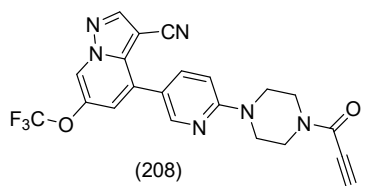
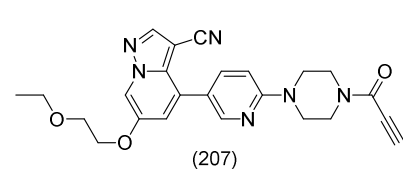
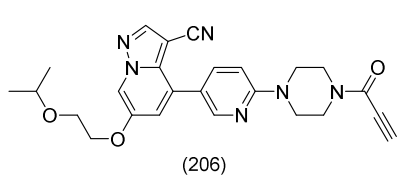
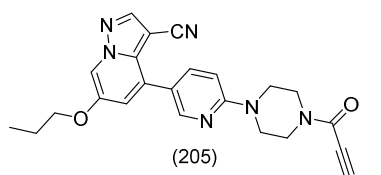
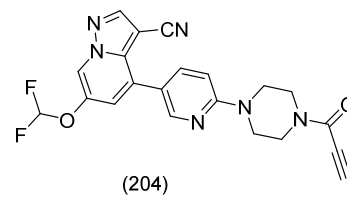
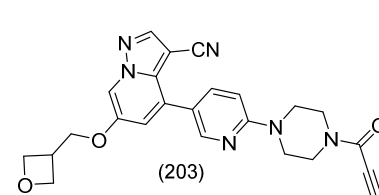
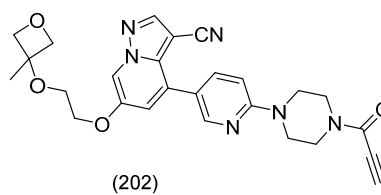
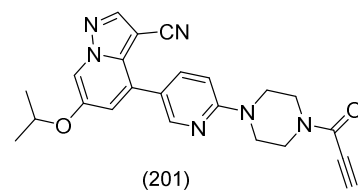
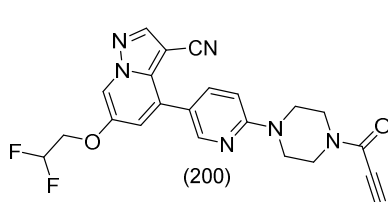
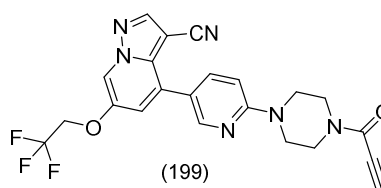
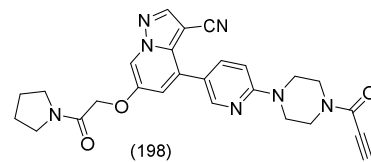
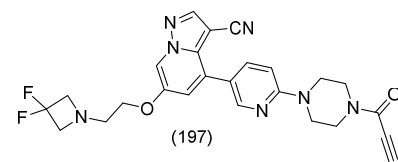
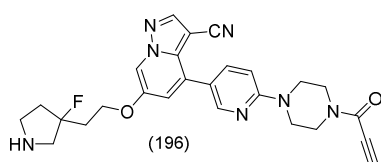
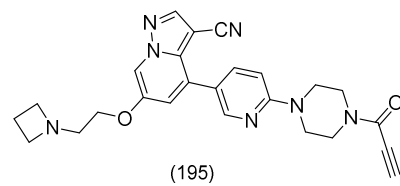
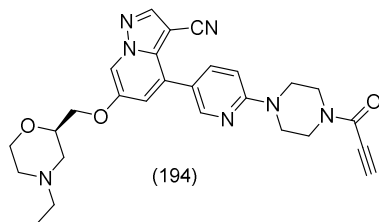
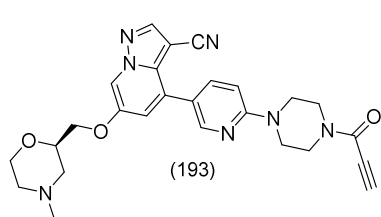


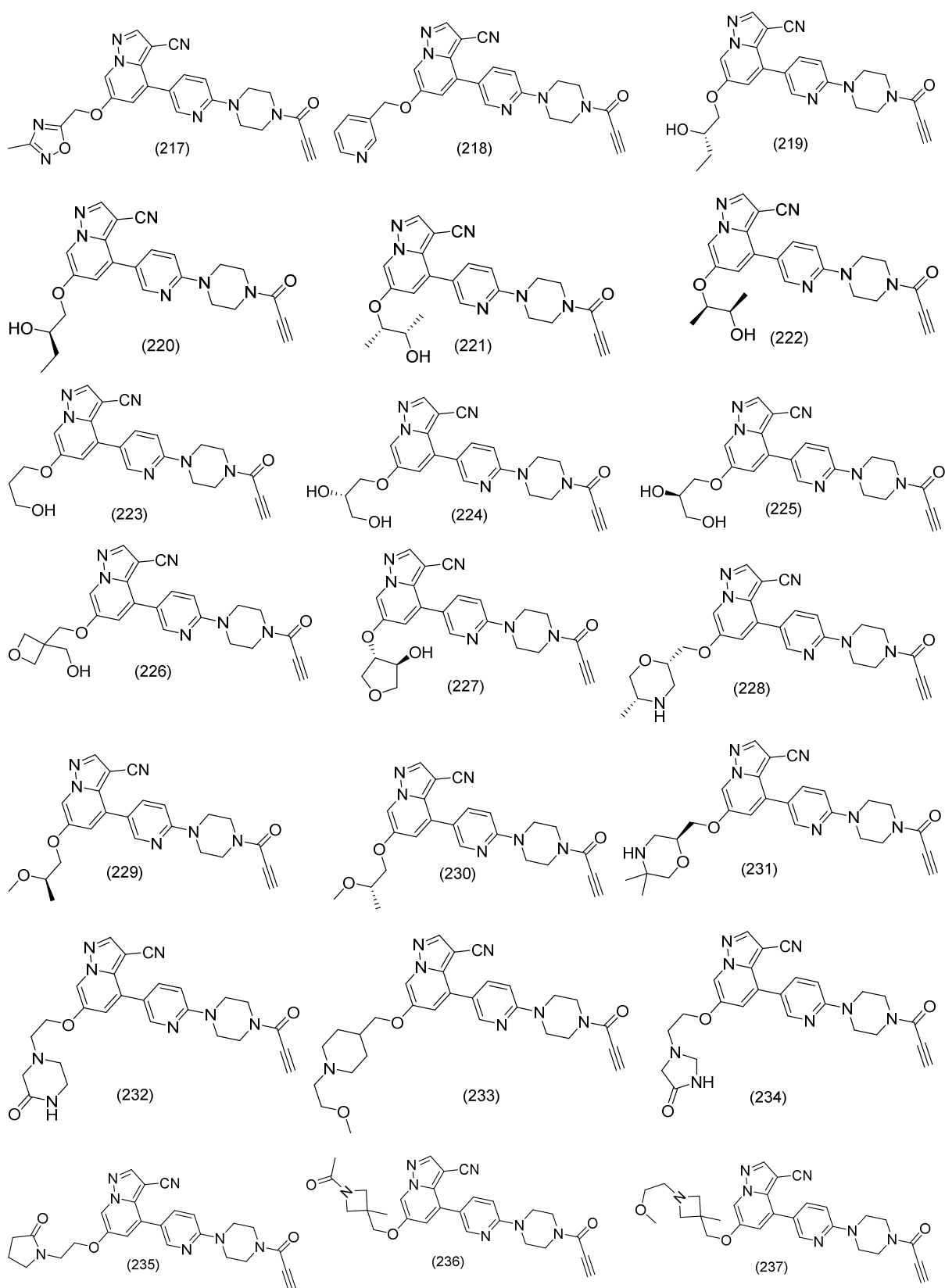


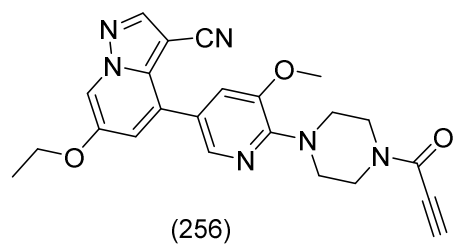
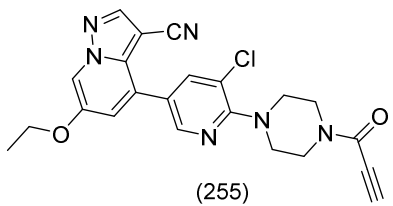
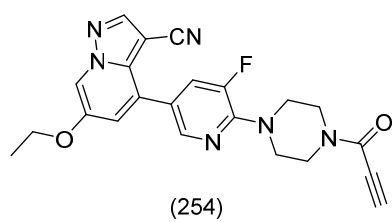
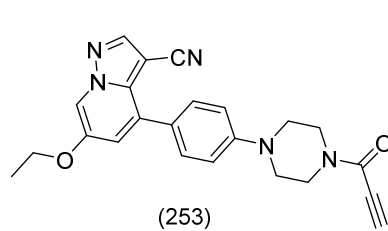
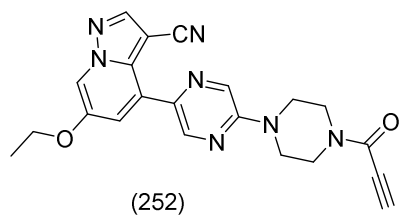
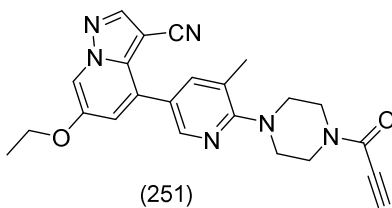
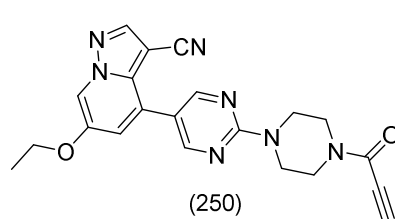
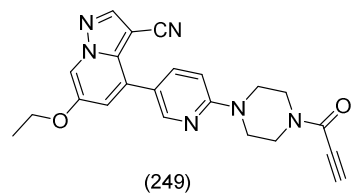
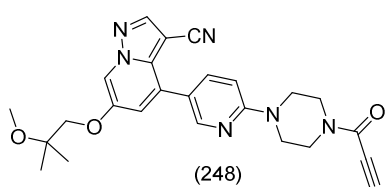
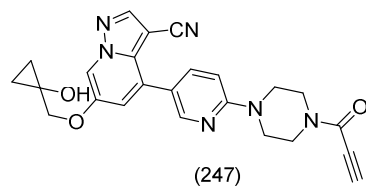
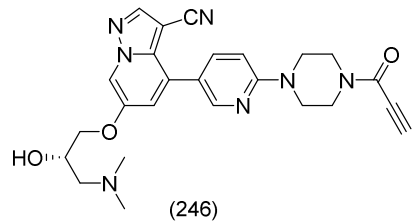
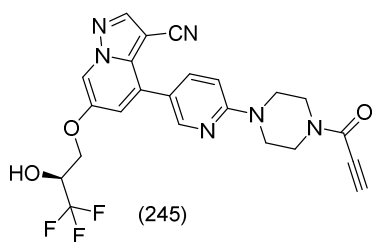
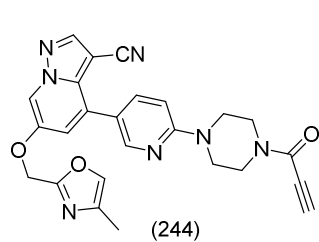
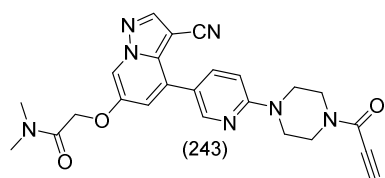
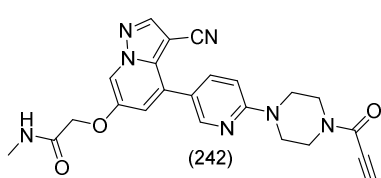
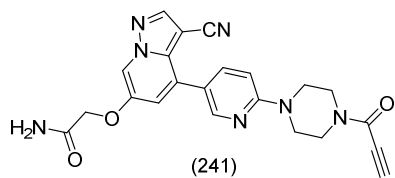
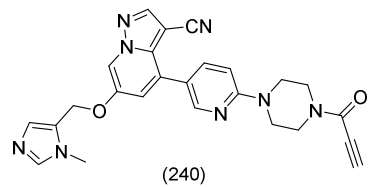
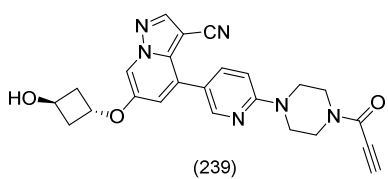
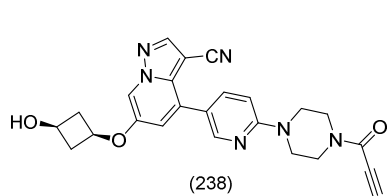


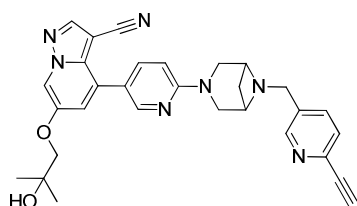




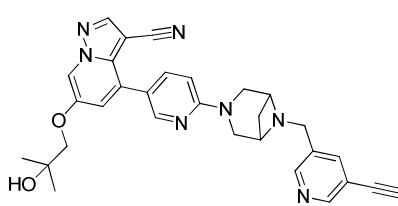




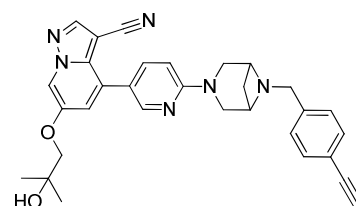




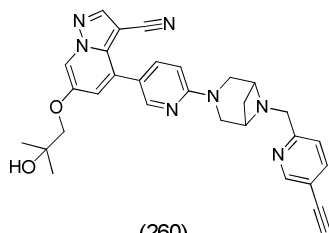
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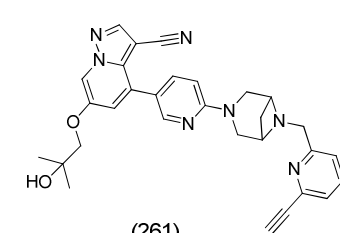
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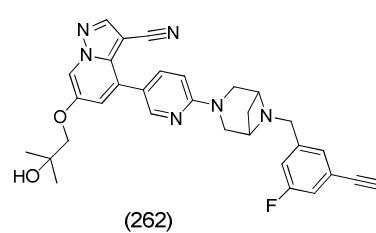
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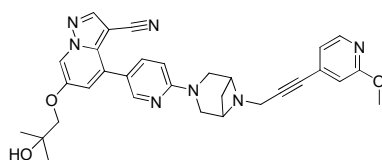
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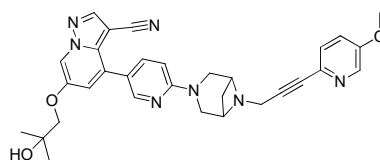
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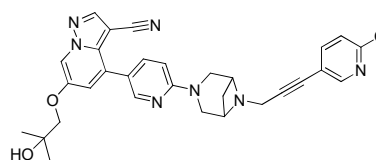
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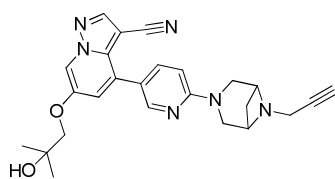
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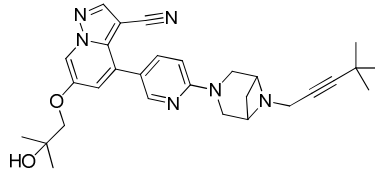
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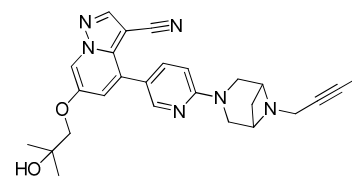
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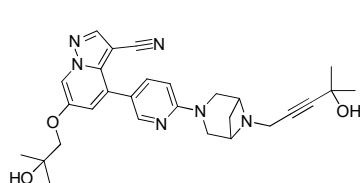
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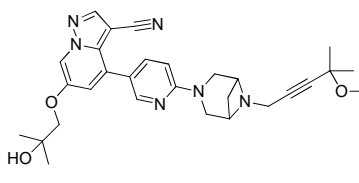
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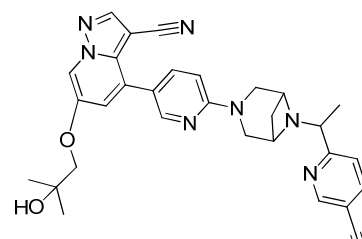
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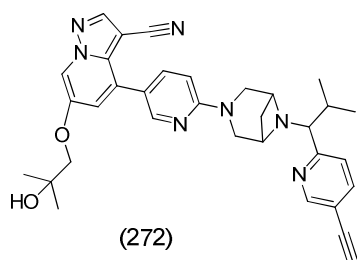
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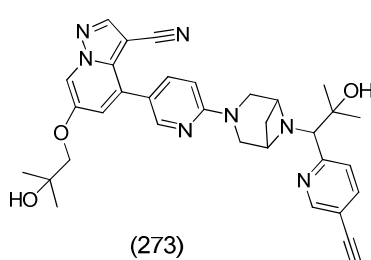
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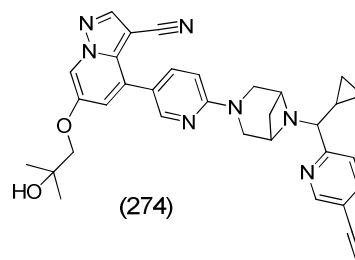
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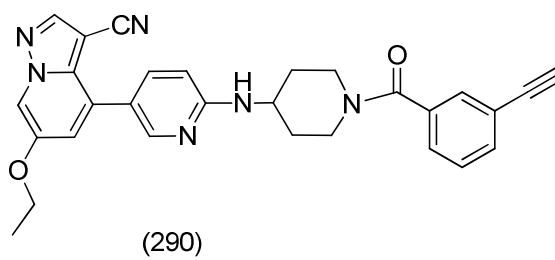
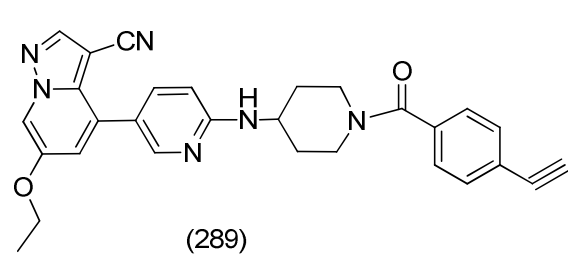
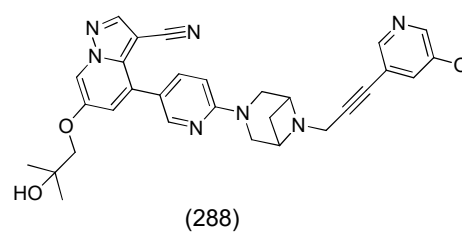
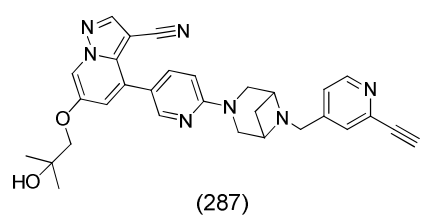
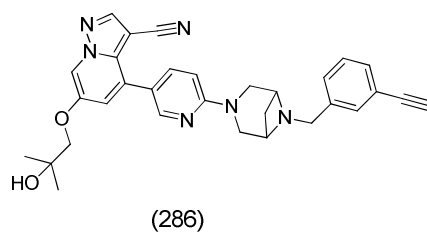
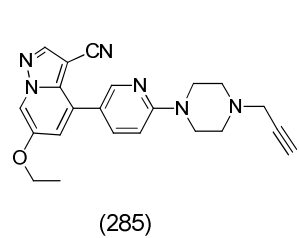
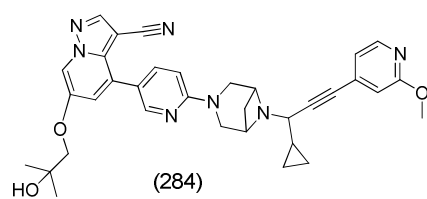
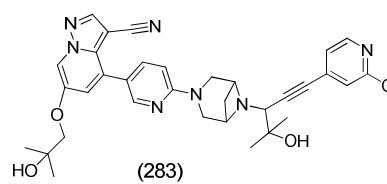
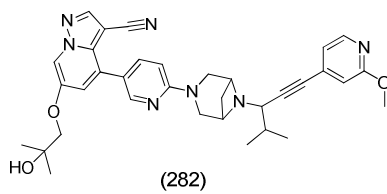
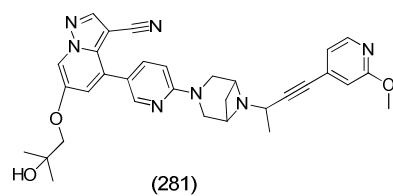
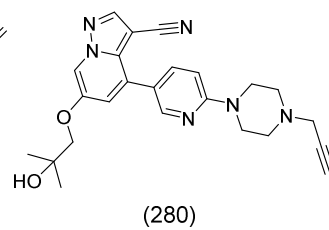
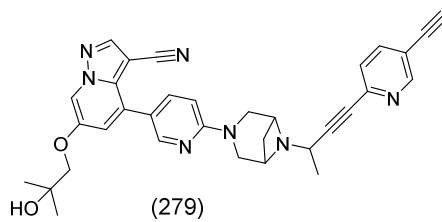
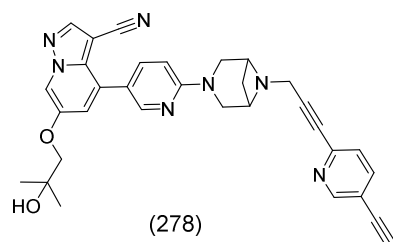
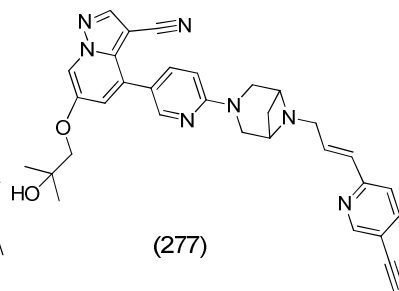
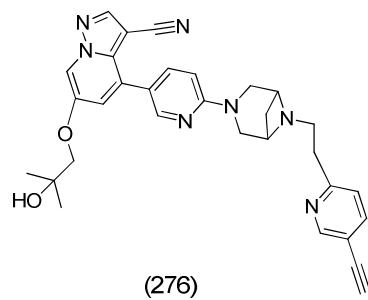
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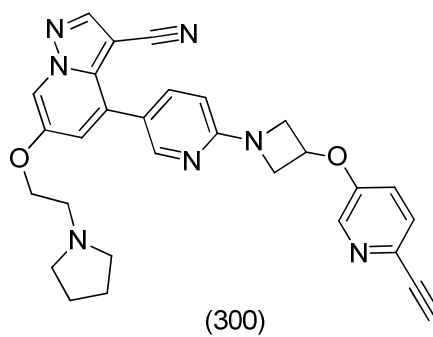
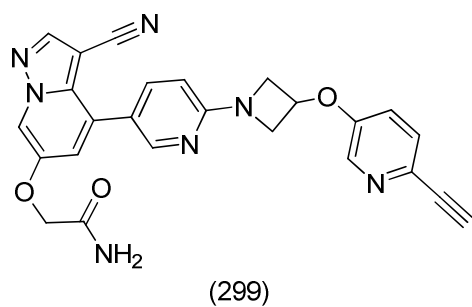
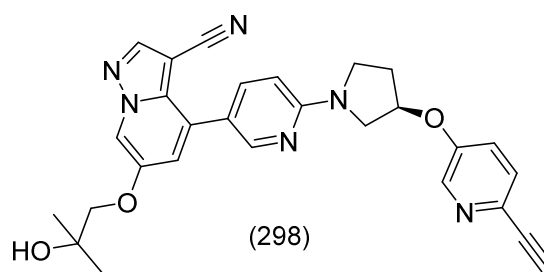
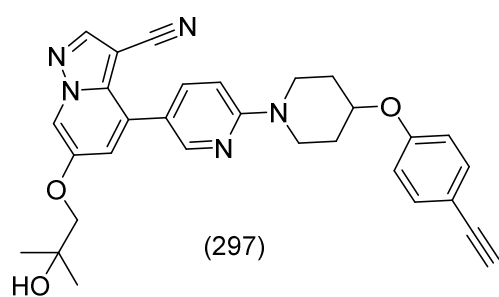
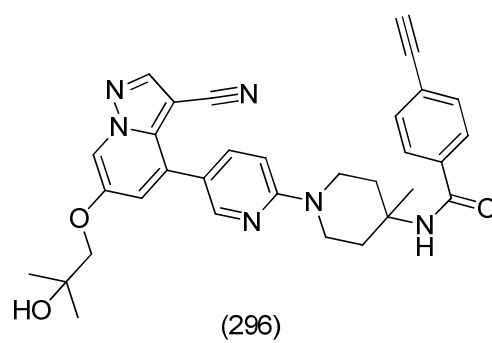
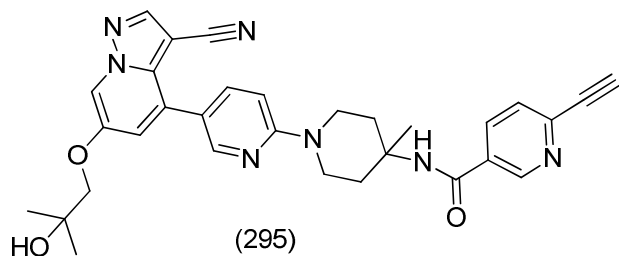
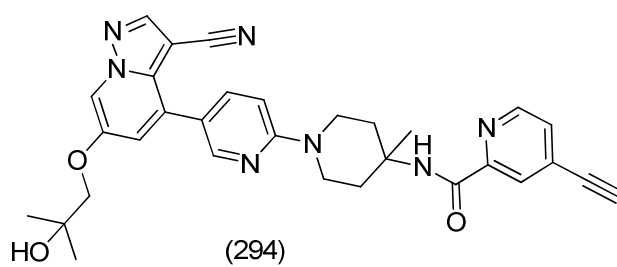
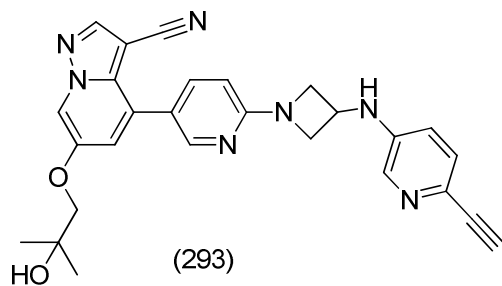
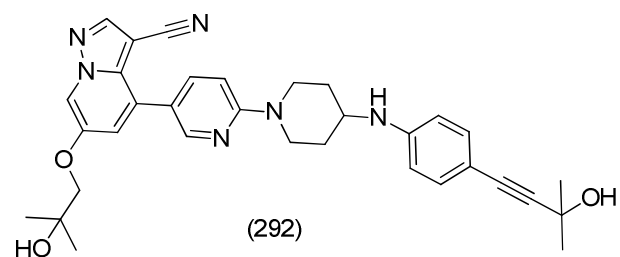
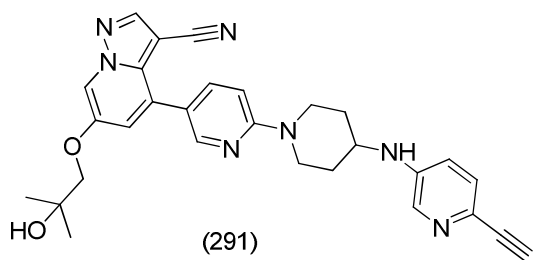


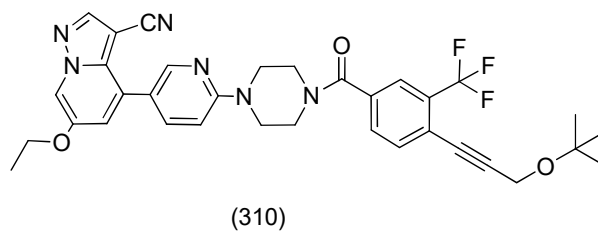
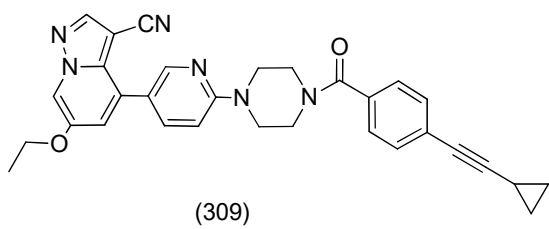
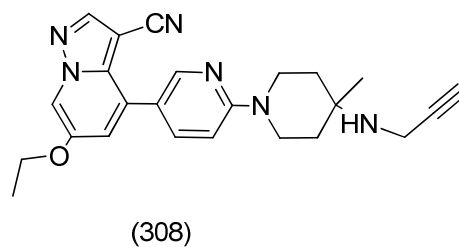
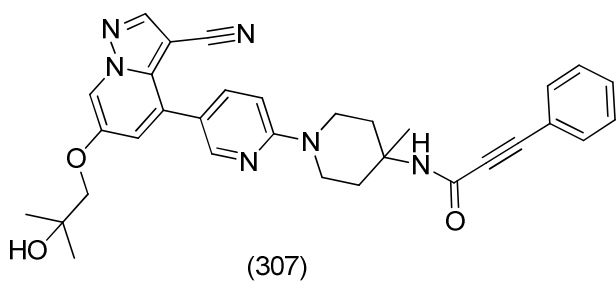
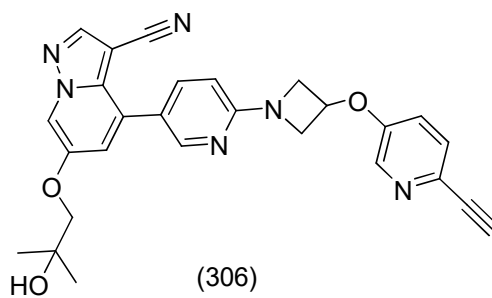
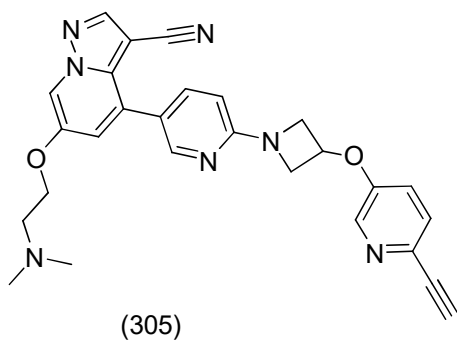
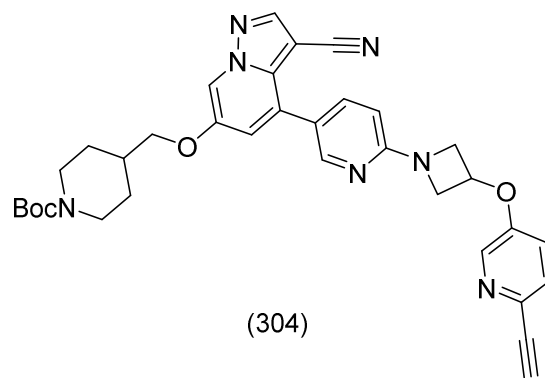
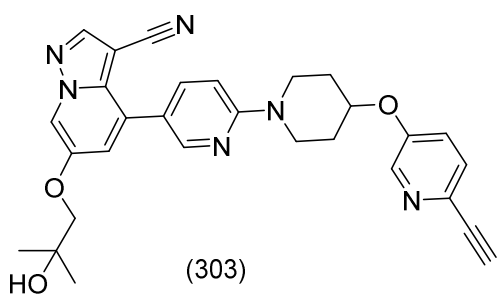
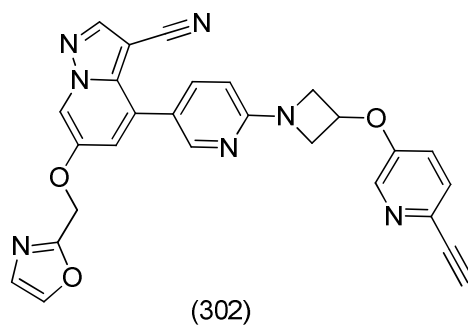
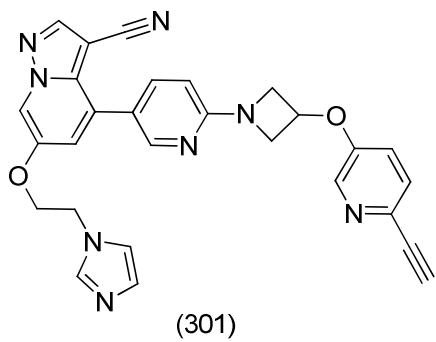
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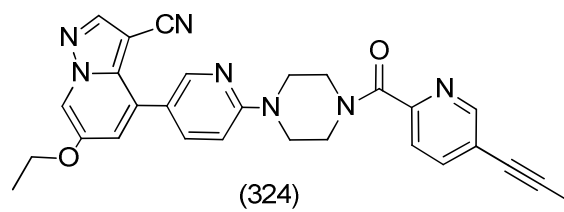
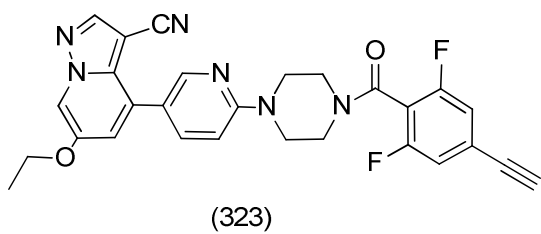
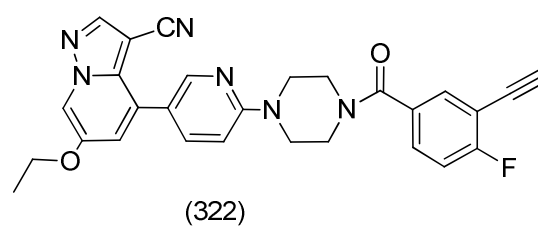
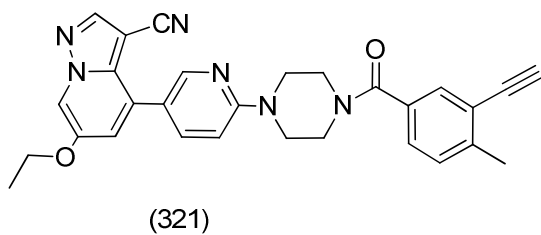
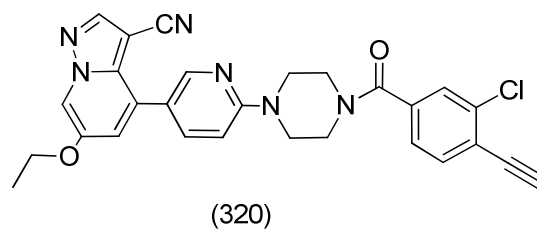
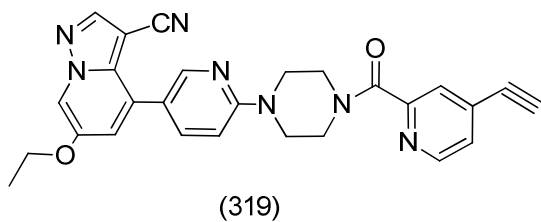
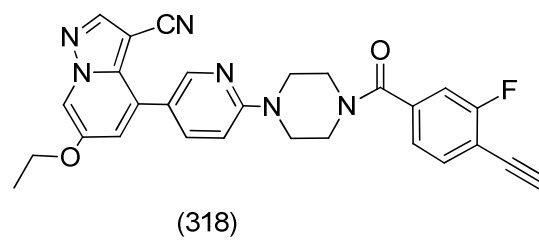
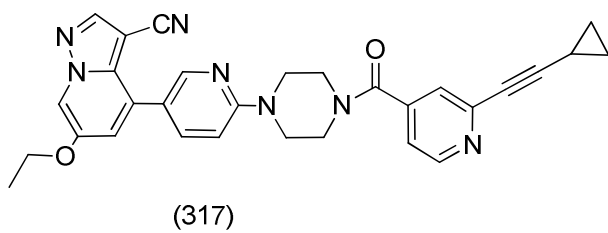
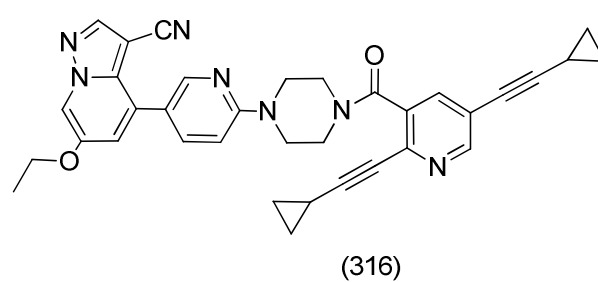
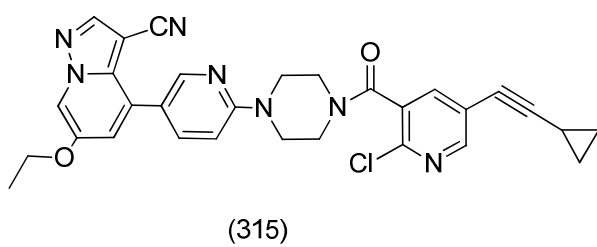
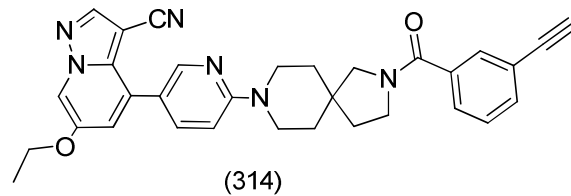
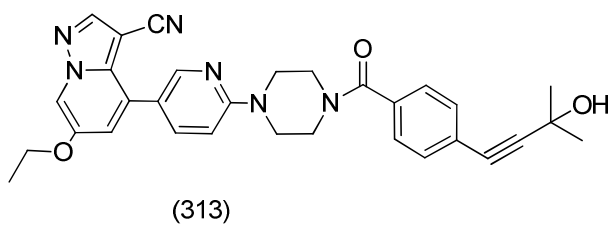
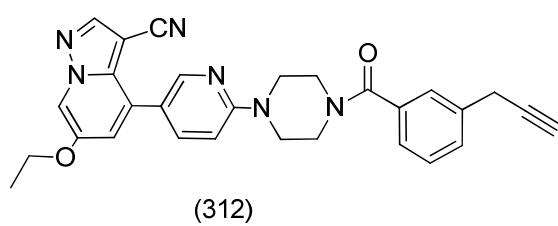
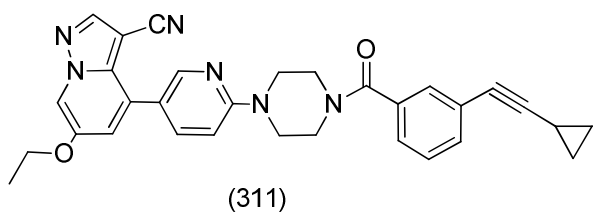


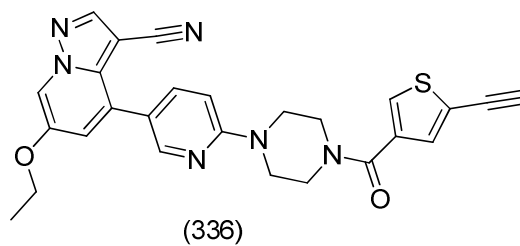
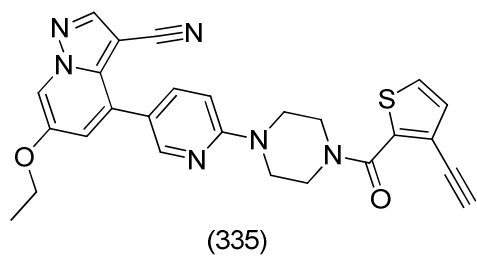
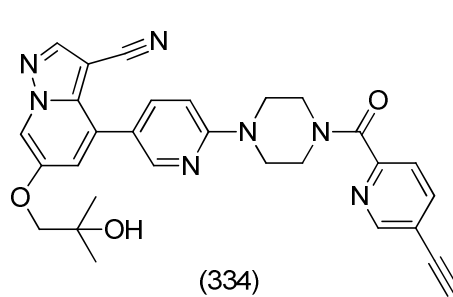
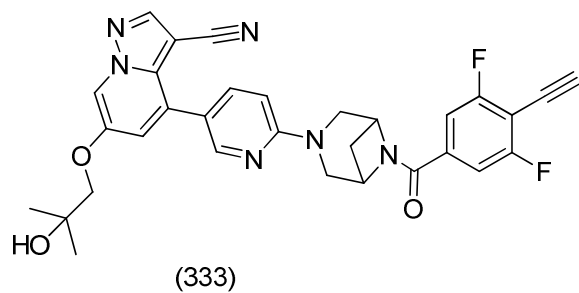
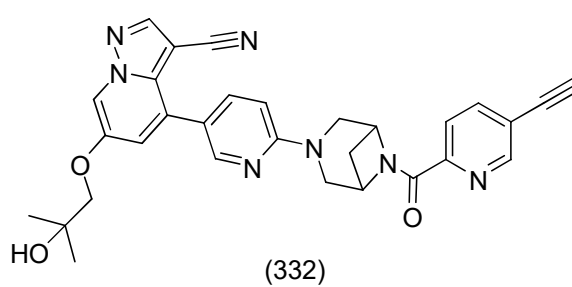
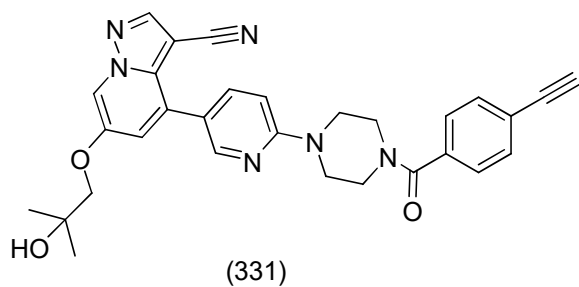
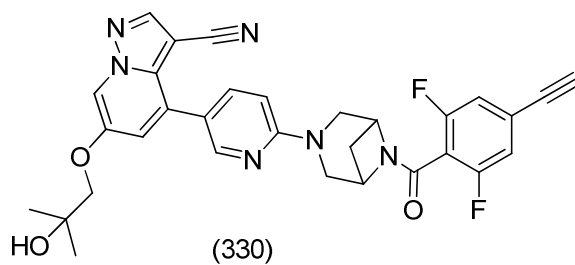
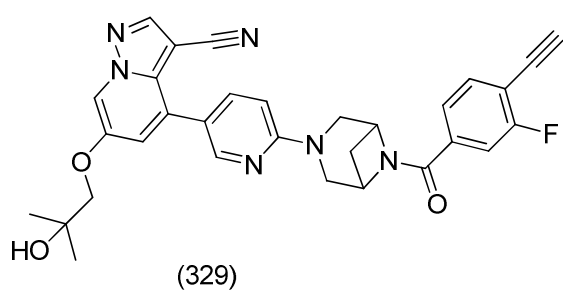
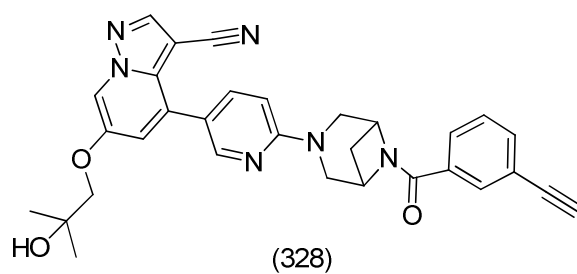
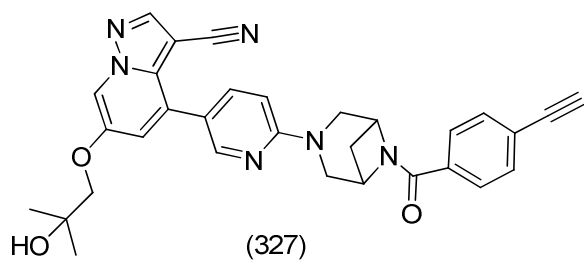
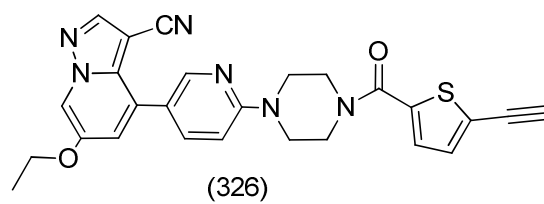
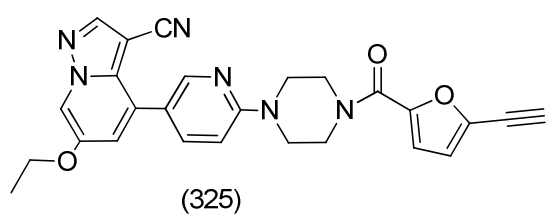
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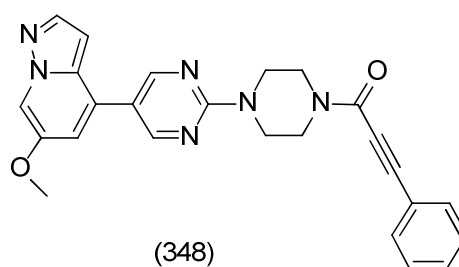
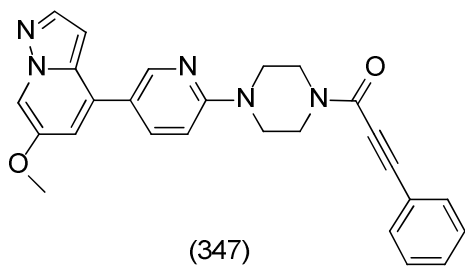
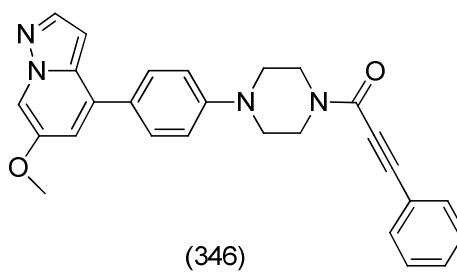
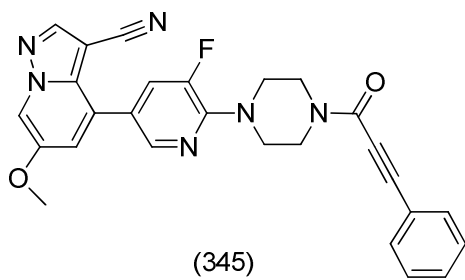
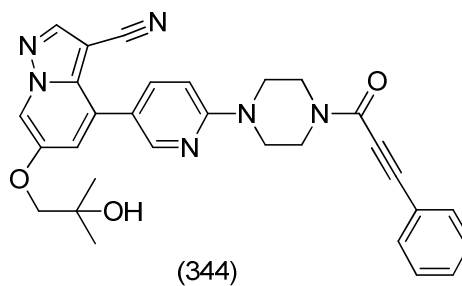
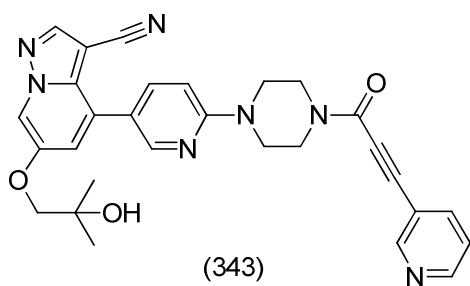
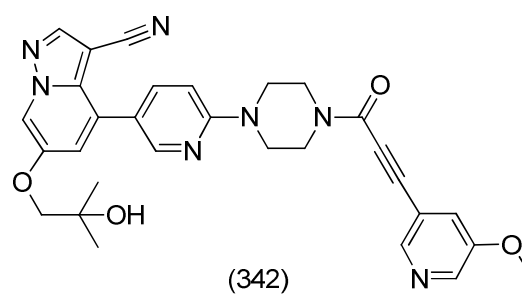
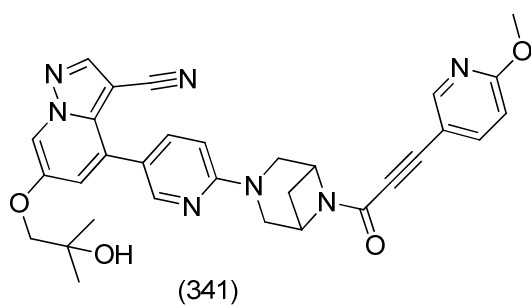
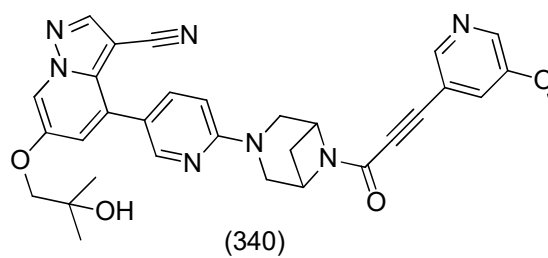
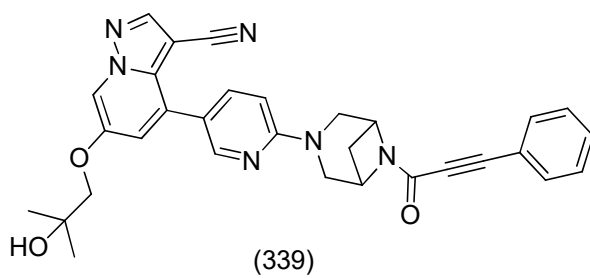
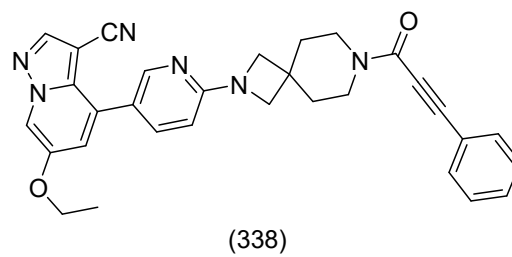
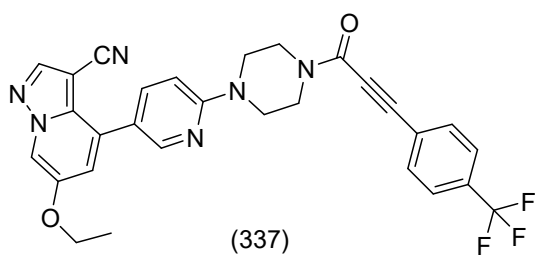


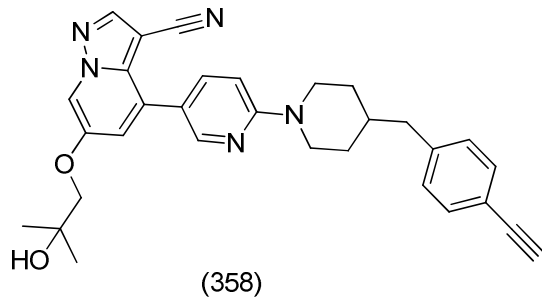
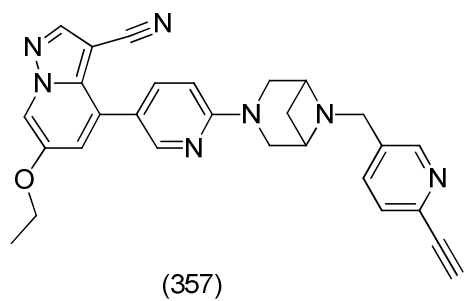
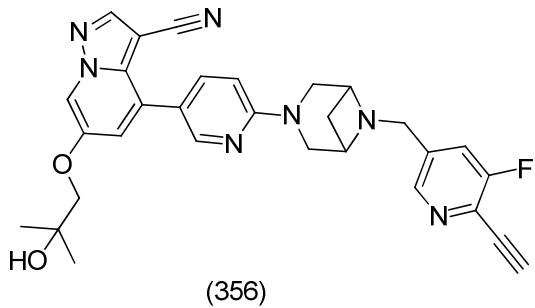
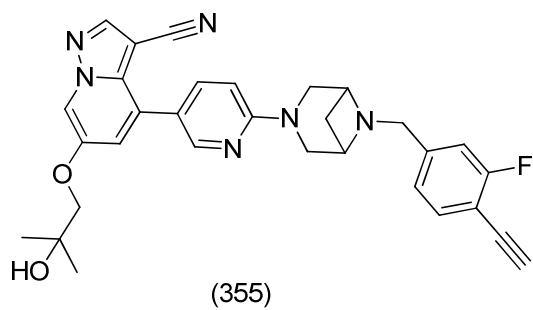
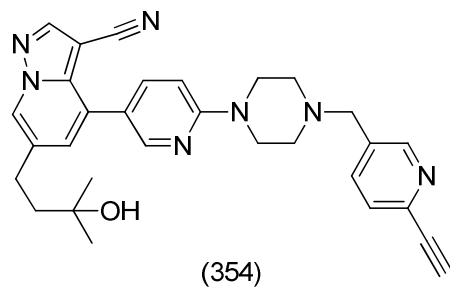
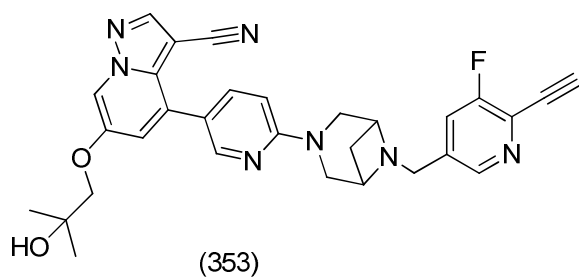
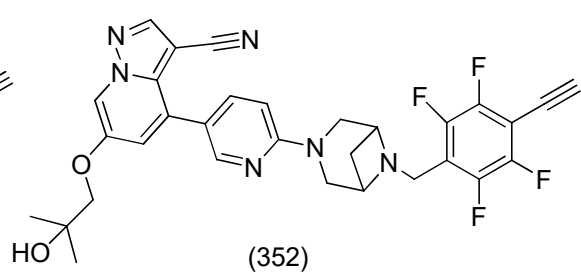
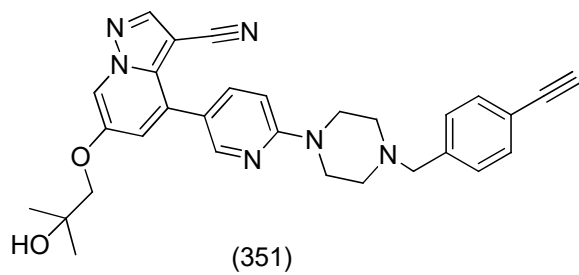
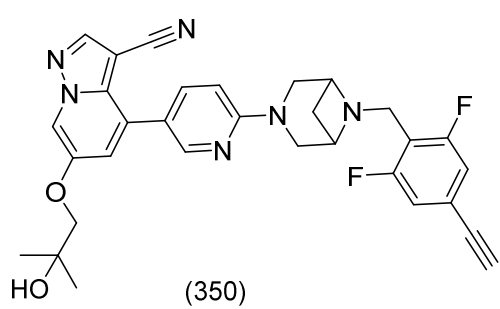
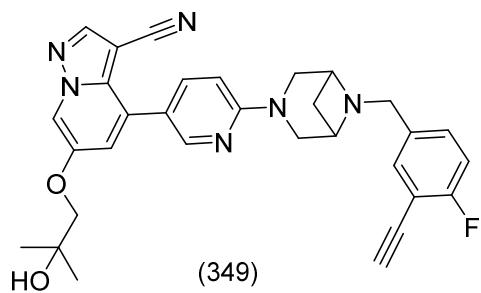


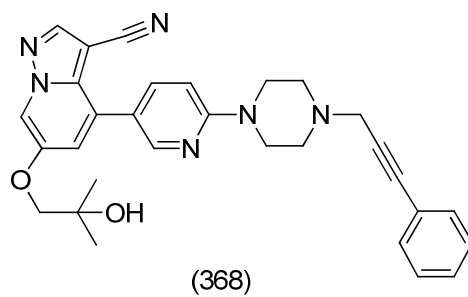
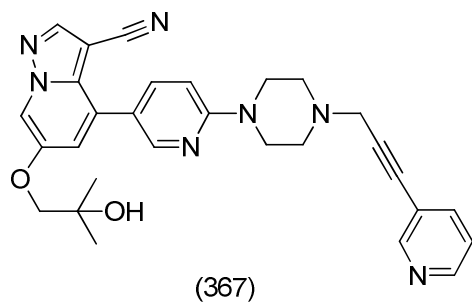
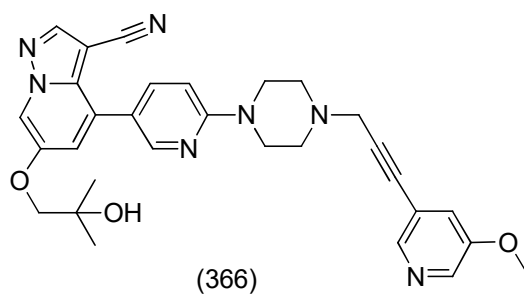
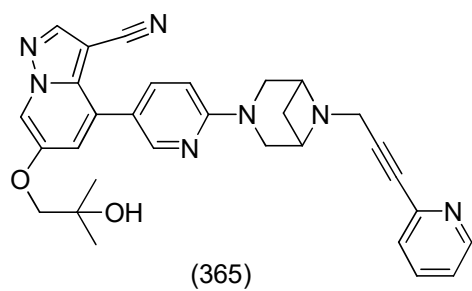
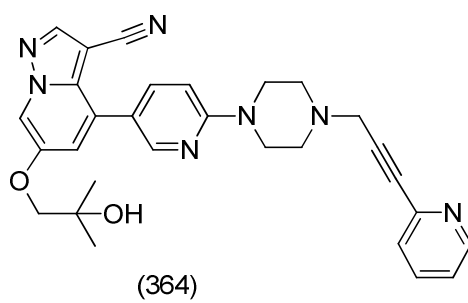
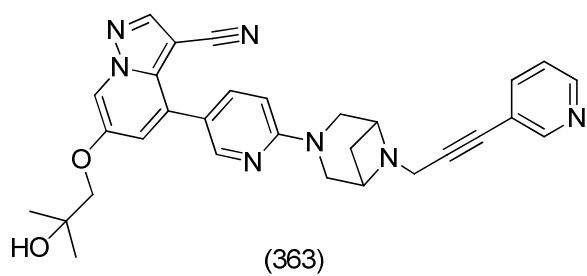
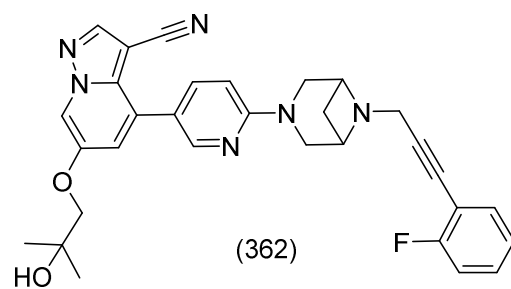
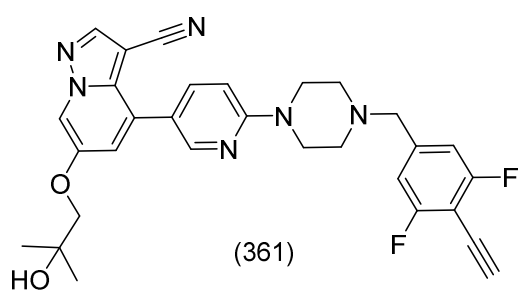
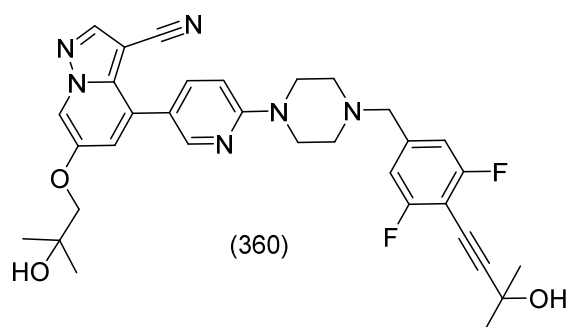
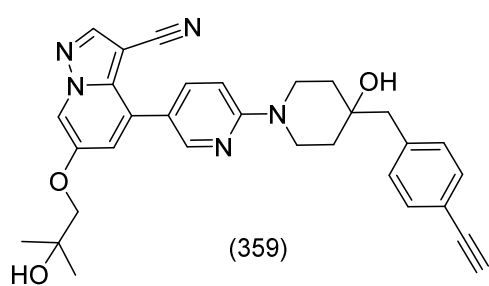


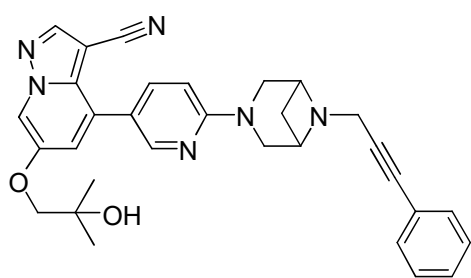




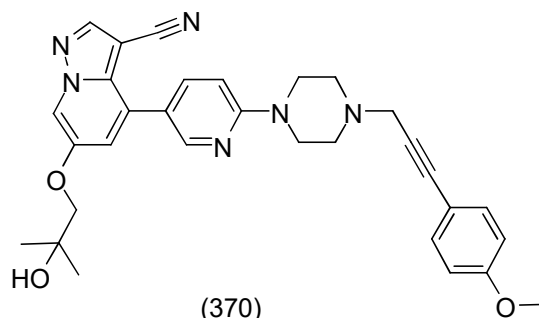




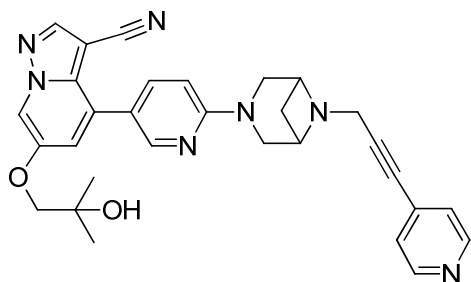




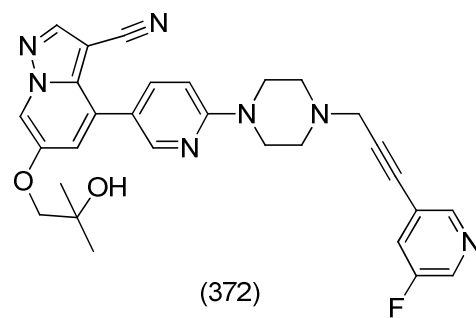
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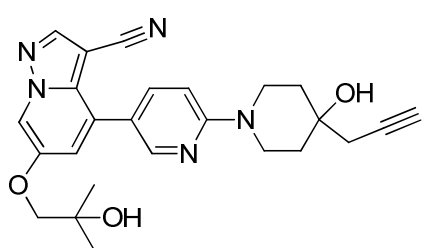
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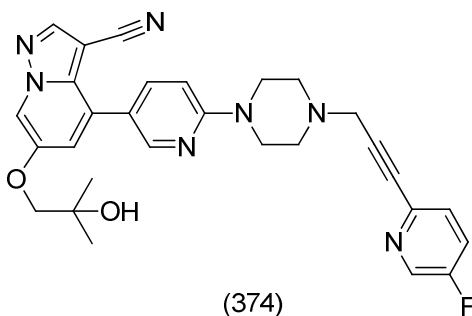
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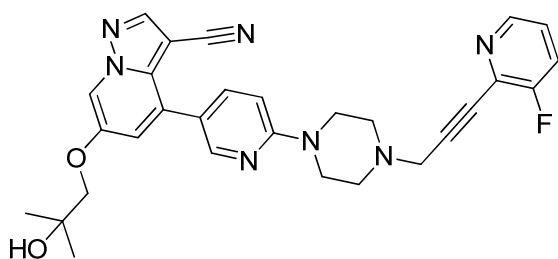
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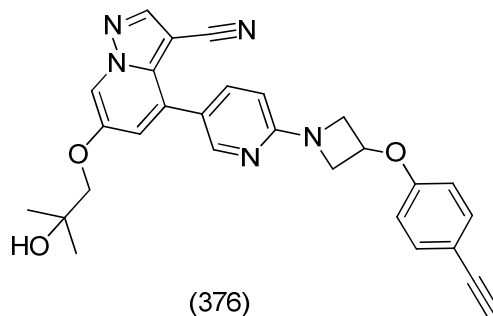
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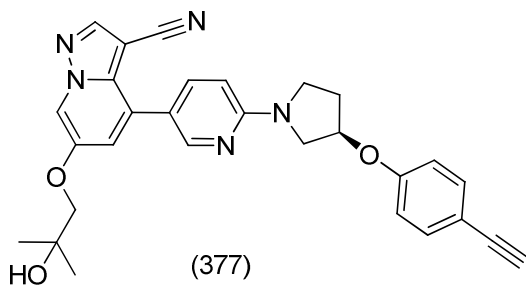
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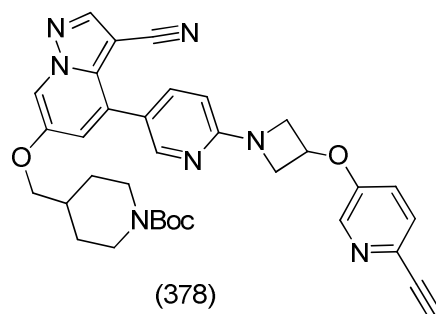
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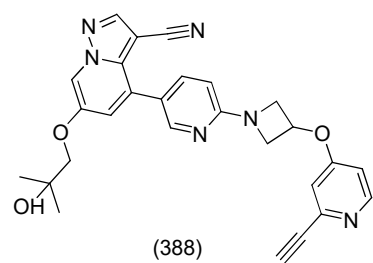
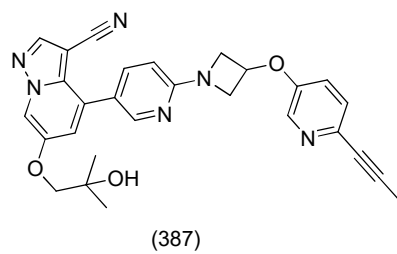
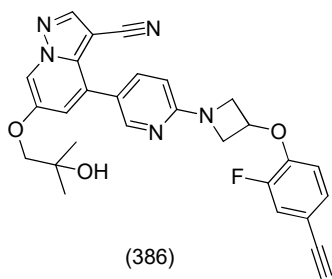
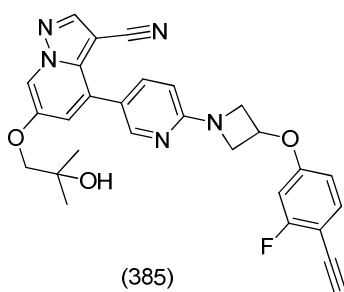
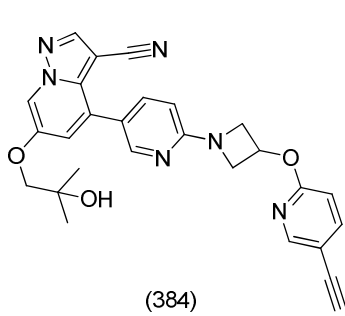
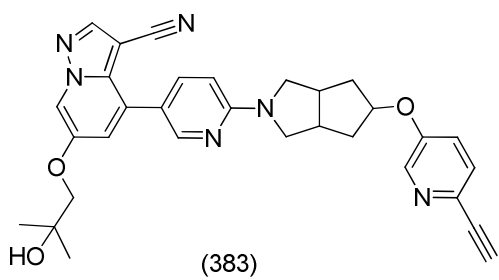
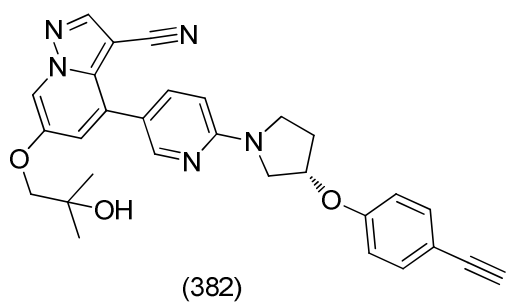
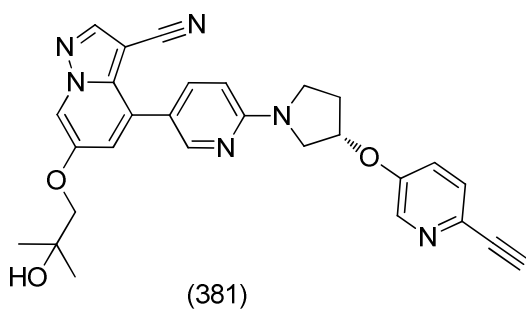
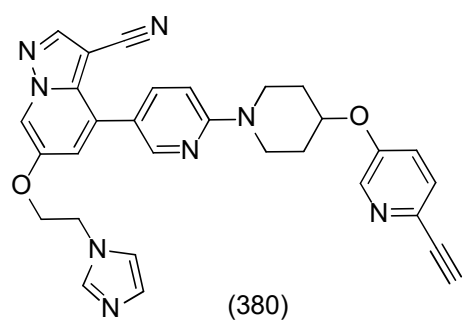
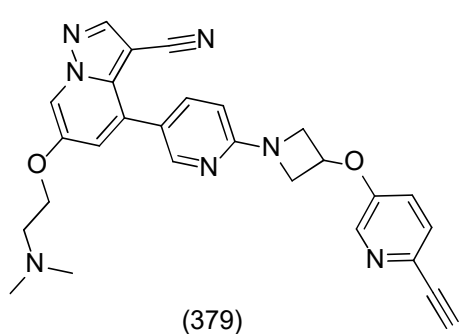
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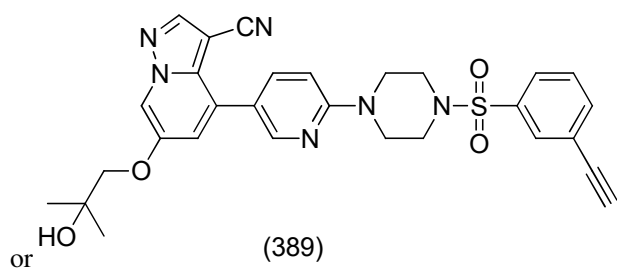


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15. A pharmaceutical composition comprising the compound of any one of claims 1 to 14 and a pharmaceutically acceptable adjuvant.

16. The compound of any one of claims 1 to 14 or the pharmaceutical composition of claim 15 for use in preventing or treating a RET-related disease.

17. The compound or the pharmaceutical composition of claim 16, wherein the RET-related disease is cancer, irritable bowel syndrome and/or pain associated with irritable bowel syndrome.