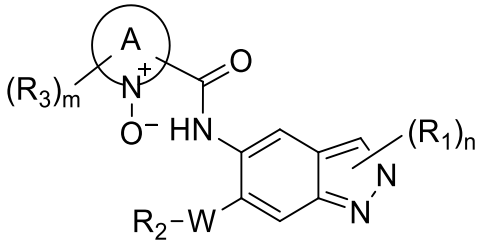
CLAIMS

1. A compound of formula I, or a stereoisomer, a racemate, a tautomer, or a pharmaceutically acceptable salt thereof,



Formula I

wherein,

ring A is 5-14 membered heteroaryl or 5-12 heterocyclyl containing at least one N;

R_1 and R_3 are each independently selected from hydrogen, halogen, CN, OH and the following groups optionally substituted with one, two or more R: (C_1-C_{12})aliphatic hydrocarbyl, (C_1-C_{12})aliphatic hydrocarbyl optionally comprising one, two or more heteroatoms, C_{3-12} cycloalkyl, 3-12 membered heterocyclyl, C_{6-20} aryl or 5-14 membered heteroaryl, and -NR_aR_b;

R_2 is selected from halogen, CN, OH and the following groups optionally substituted with one, two or more R: (C_1-C_{12})aliphatic hydrocarbyl, (C_1-C_{12})aliphatic hydrocarbyl optionally comprising one, two or more heteroatoms, C_{3-12} cycloalkyl, 3-12 membered heterocyclyl, C_{6-20} aryl or 5-14 membered heteroaryl, and -NR_aR_b;

W is selected from O, S, NH and a single bond;

R_a and R_b are each independently selected from H and (C_1-C_{12})aliphatic hydrocarbyl;

each R is independently selected from halogen, CN, OH, SH, NR_aR_b and the following groups optionally substituted with one, two or more R': (C_1-C_{12})aliphatic hydrocarbyl, (C_1-C_{12})aliphatic hydrocarbyl optionally comprising one, two or more heteroatoms, C_{3-12} cycloalkyl, 3-12 membered heterocyclyl, and C_{6-20} aryl or 5-14 membered heteroaryl;

each R' is independently selected from halogen, CN, OH, SH and NR_aR_b; and

n is selected from 1, 2 and 3; and m is selected from 1, 2, 3, 4, 5 and 6.

2. The compound according to claim 1, wherein each "(C_1-C_{12})aliphatic hydrocarbyl optionally comprising one, two or more heteroatoms" is independently selected from (C_1-C_{12})aliphatic hydrocarbyloxy, (C_1-C_{12})aliphatic hydrocarbylthio, (C_1-C_6)aliphatic hydrocarbyloxy(C_1-C_6)aliphatic hydrocarbyl, (C_1-C_6)aliphatic hydrocarbylthio(C_1-C_6)aliphatic hydrocarbyl, *N*-(C_1-C_3)aliphatic hydrocarbylamino(C_1-C_6)aliphatic hydrocarbyl, and *N*,*N*-di-(C_1-C_3)aliphatic hydrocarbylamino(C_1-C_6)aliphatic hydrocarbyl;

ring A is selected from pyridine, pyrrole, piperidine and tetrahydropyrrole;

each (C_1-C_{12})aliphatic hydrocarbyl is independently selected from (C_1-C_{12})alkyl, (C_2-C_{12})alkenyl and (C_2-C_{12})alkynyl;

each "halogen" is independently selected from F, Cl, Br and I; and

each "C_{3-12} cycloalkyl" is independently selected from cyclopropyl, cyclobutyl, cyclopentyl and cyclohexyl.

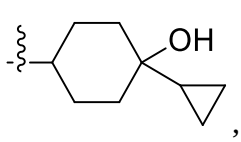
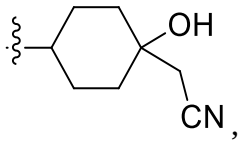
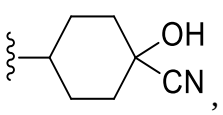
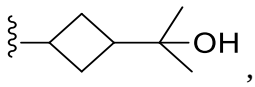
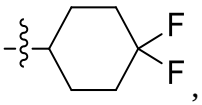
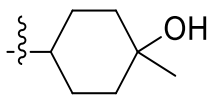
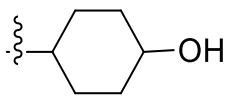
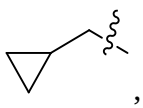
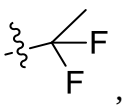
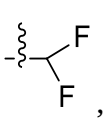
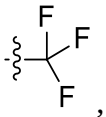
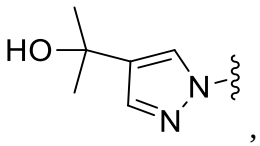
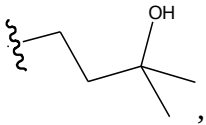
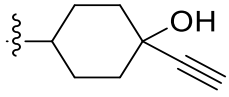
3. The compound according to claim 1, wherein each (C_1-C_{12})aliphatic hydrocarbyl is independently selected from (C_1-C_6)alkyl, (C_2-C_6)alkenyl and (C_2-C_6)alkynyl.

4. The compound according to claim 1, wherein ring A is 5-14 membered heteroaryl having one N.

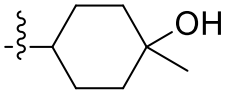
5. The compound according to claim 1, wherein

R_1, R_2 and R_3 are each independently selected from the following groups optionally substituted with one, two or more R: methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *tert*-butyl, *n*-pentyl, isopentyl, neopentyl, *n*-hexyl, ethenyl, 1-propenyl, 2-propenyl, 1-methylethenyl, 1-butenyl, 1-ethylethenyl, 1-methyl-2-propenyl, 2-butenyl, 3-butenyl, 2-methyl-1-propenyl, 2-methyl-2-propenyl, 1-pentenyl, 1-hexenyl, ethynyl, 1-propynyl, 2-propynyl, 1-butynyl, 1-methyl-2-propynyl, 3-butynyl, 1-pentynyl, 1-hexynyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, methoxy, ethoxyl, propoxy, butoxy, pentyloxy, methoxymethyl, ethoxylmethyl, propoxymethyl, methoxyethyl, ethoxylethyl, propoxyethyl, methoxypropyl, ethoxylpropyl, propoxypropyl, *N*-methylaminomethyl, *N*-methylaminoethyl, *N*-ethylaminoethyl, *N*,*N*-dimethylaminomethyl, *N*,*N*-dimethylaminoethyl, *N*,*N*-diethylaminoethyl, amino, *N*,*N*-dimethylamino, *N*,*N*-diethylamino,

tetrahydropyrrolyl, piperidinyl, pyridyl, pyrazinyl, pyrrolyl, imidazolyl, pyrazolyl, oxazolyl, isoxazolyl,

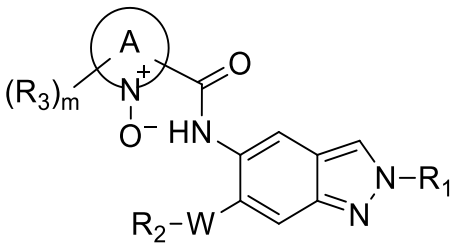













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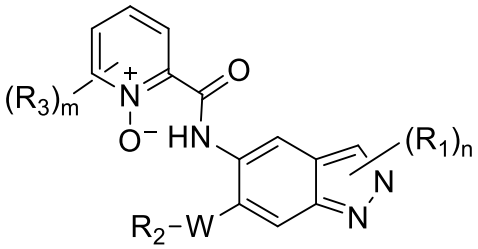
the "" denotes the connection site of the group.

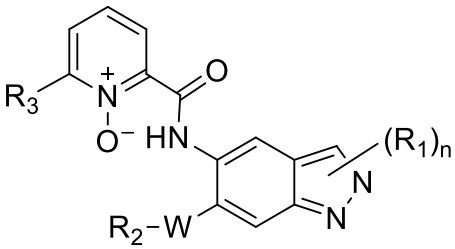
6. The compound according to claim 1, wherein R_1 is , or a stereoisomer thereof.

7. The compound according to claim 1, wherein R_2 and R_3 are each independently methyl or ethyl, optionally substituted with one, two, or more R.

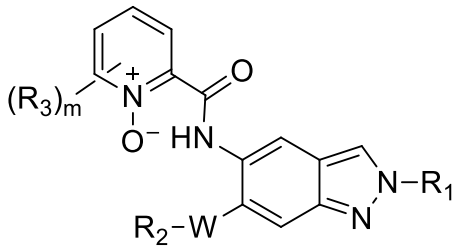
8. The compound according to any one of claims 1-7,
which is a compound of formula Ia, formula Ib, formula Ic, formula Id, or formula Ie:


formula Ia

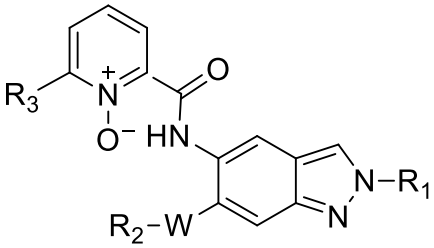

formula Ib



formula Ic



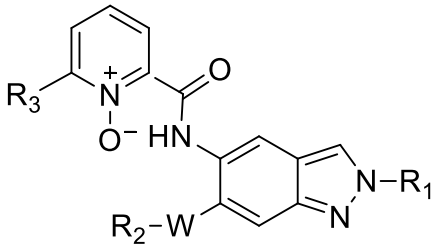
formula Id



formula Ie

or a stereoisomer, a racemate, a tautomer, or a pharmaceutically acceptable salt thereof.

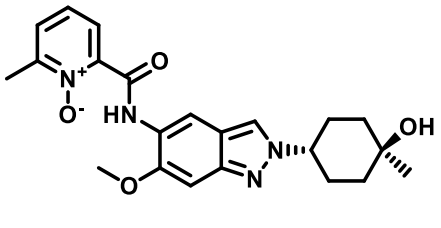
9. The compound according to claim 8, which is a compound of formula Ie:



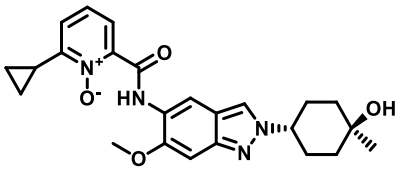
formula Ie

or a stereoisomer, a racemate, or a pharmaceutically acceptable salt thereof.

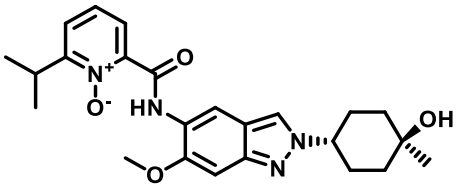
10. A compound selected from the following structures:



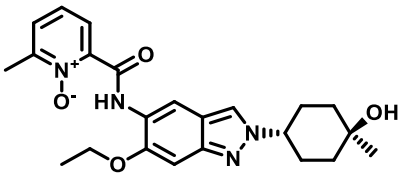
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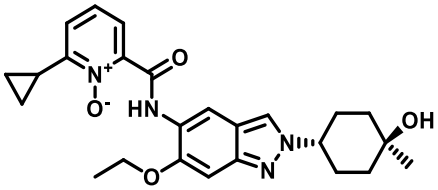
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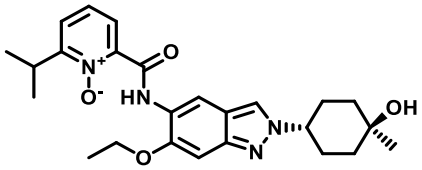
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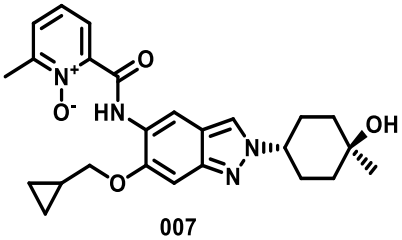
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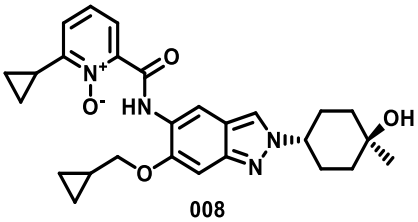
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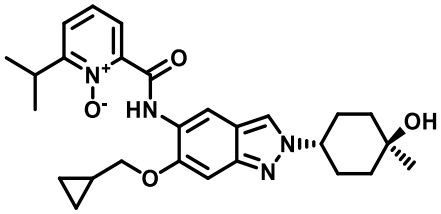
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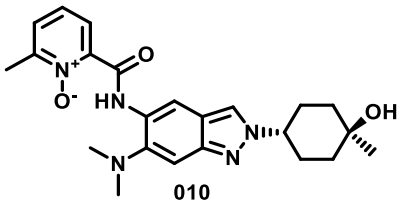
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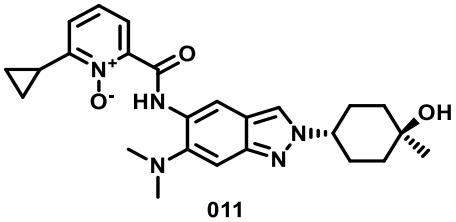
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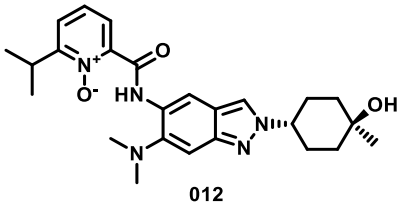
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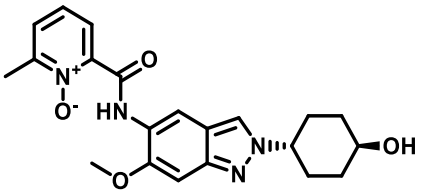
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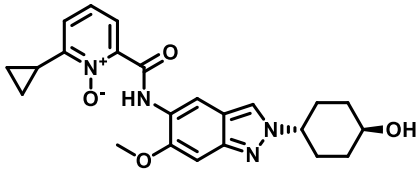
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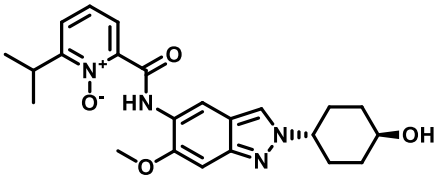
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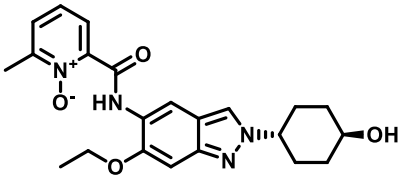
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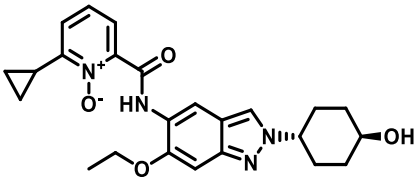
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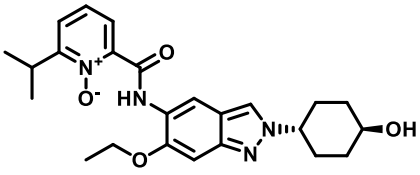
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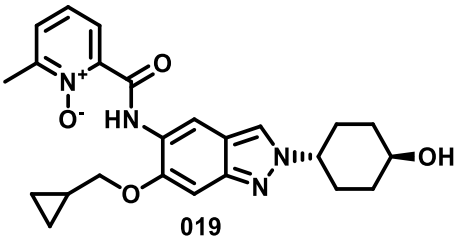
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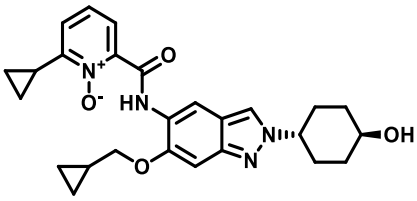
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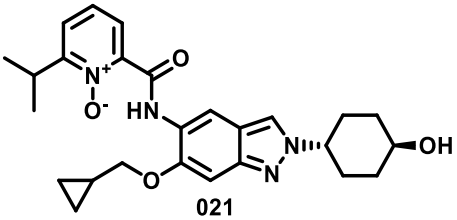
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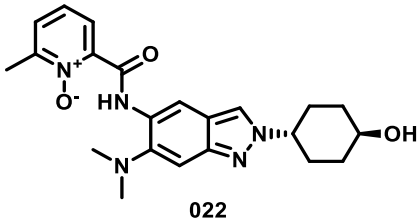
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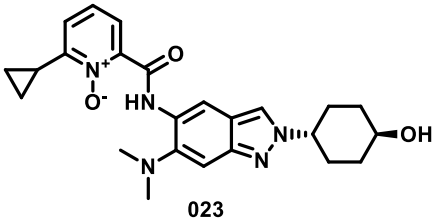
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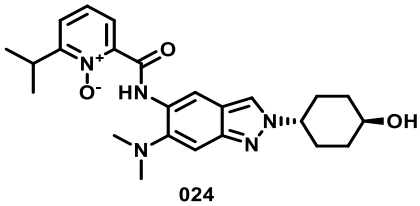
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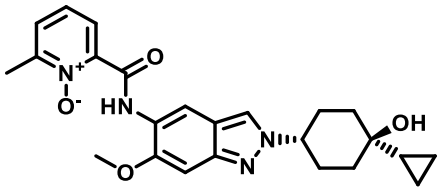
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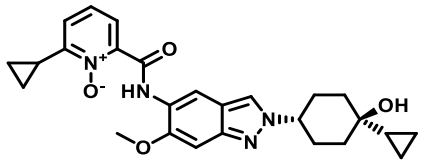
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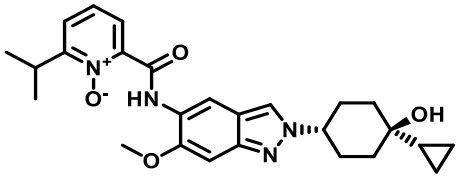
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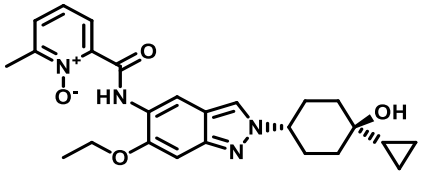
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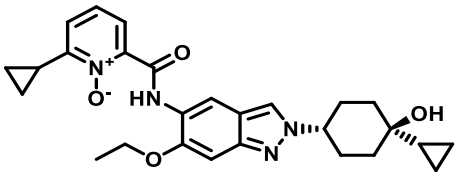
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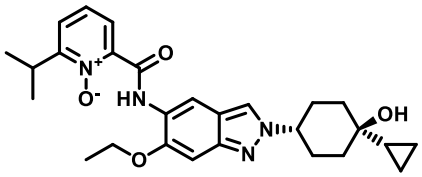
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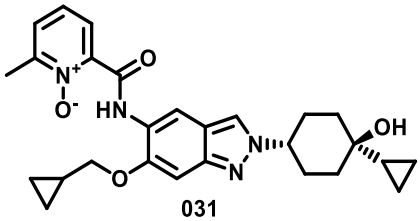
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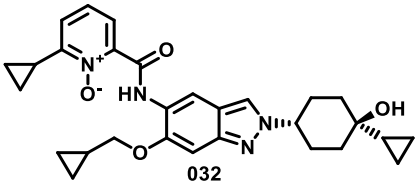
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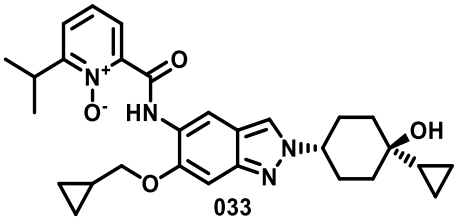
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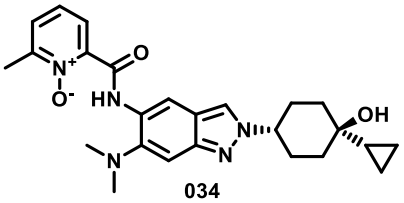
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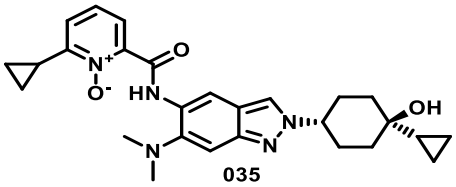
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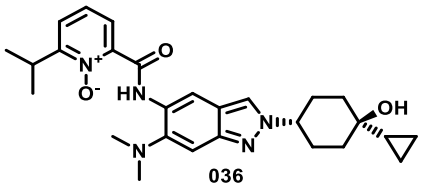
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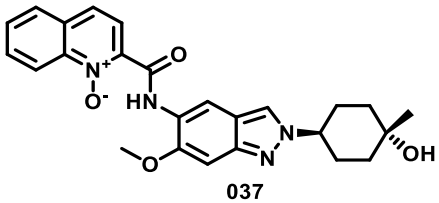
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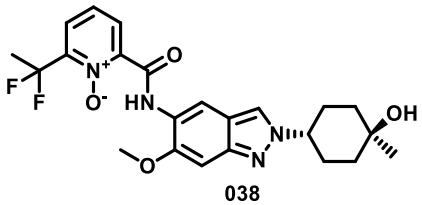
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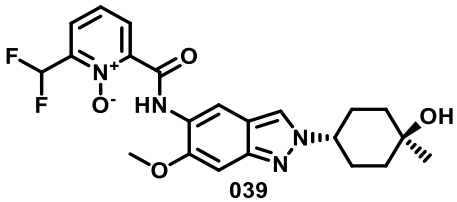
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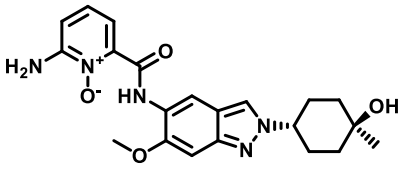
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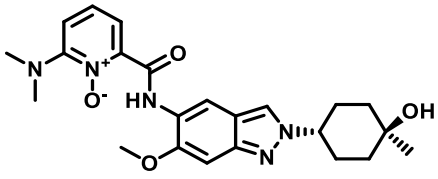
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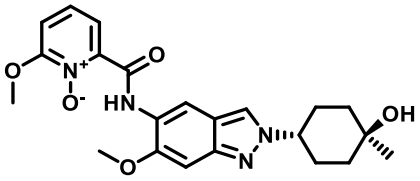
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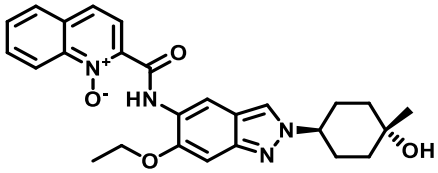
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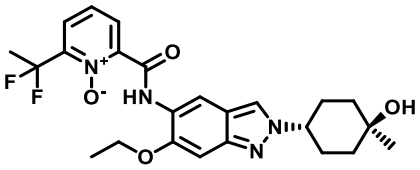
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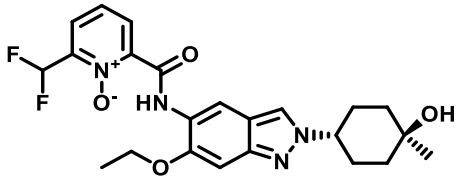
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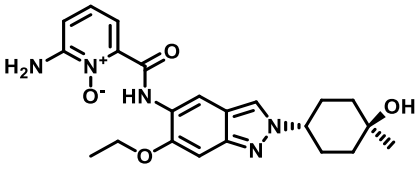
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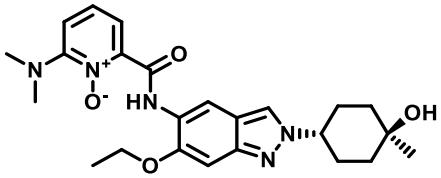
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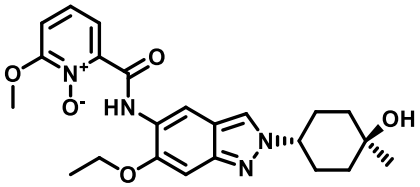
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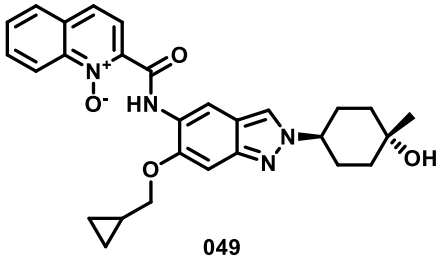
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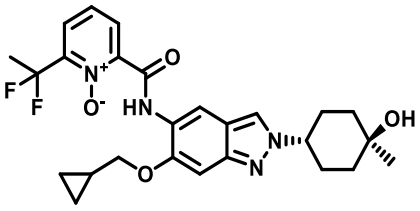
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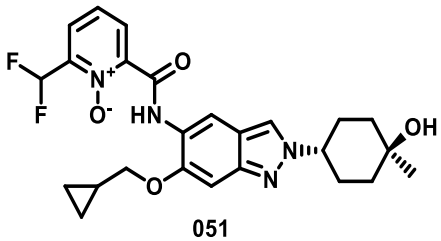
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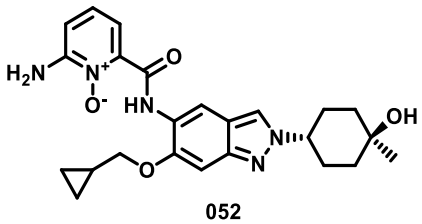
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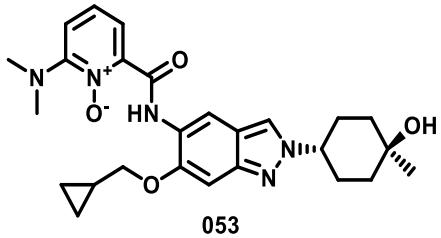
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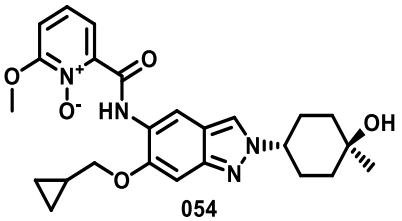
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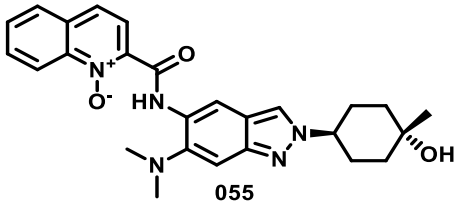
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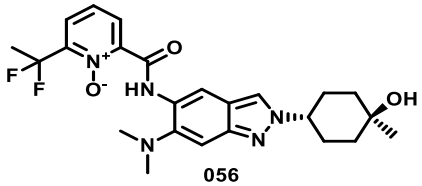
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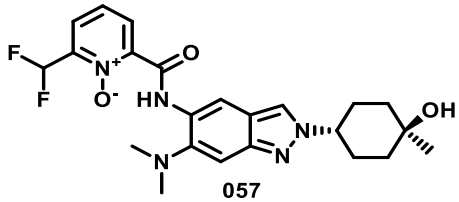
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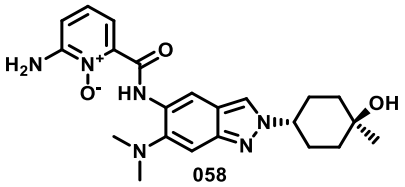
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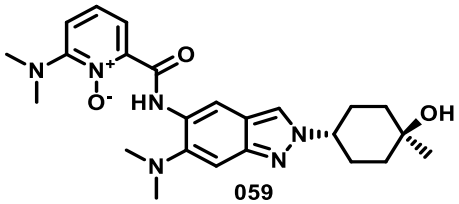
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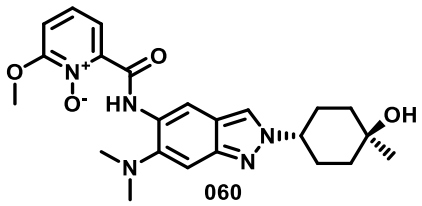
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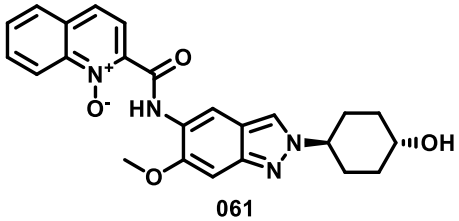
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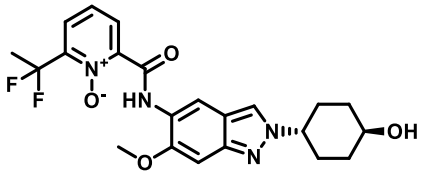
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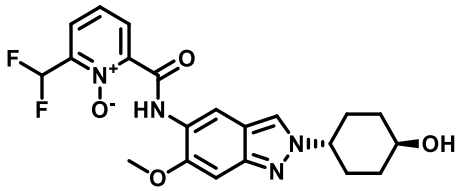
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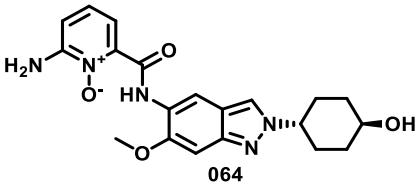
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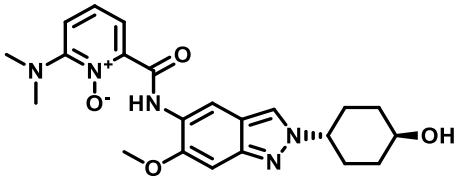
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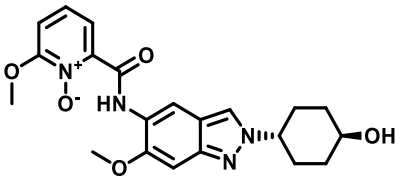
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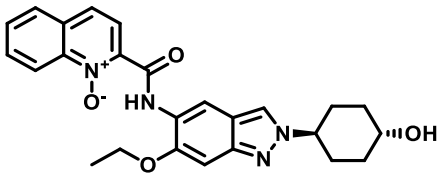
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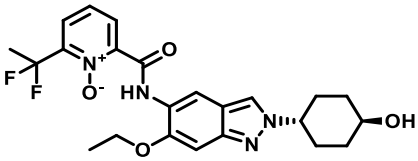
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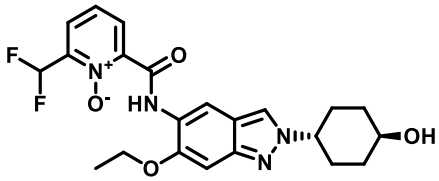
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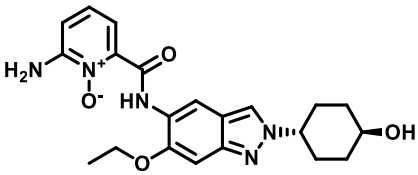
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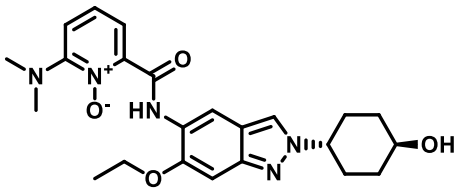
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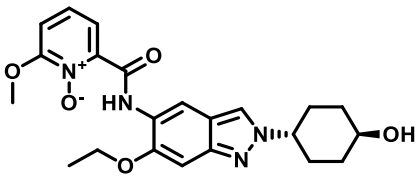
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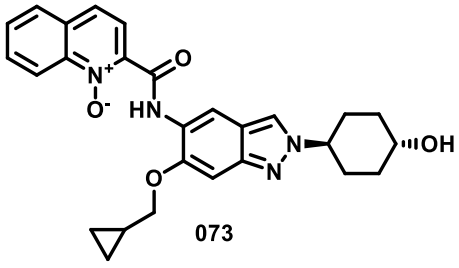
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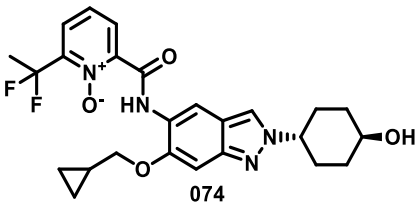
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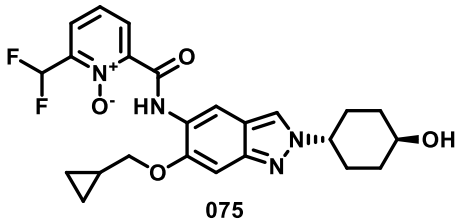
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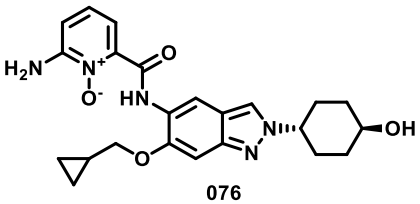
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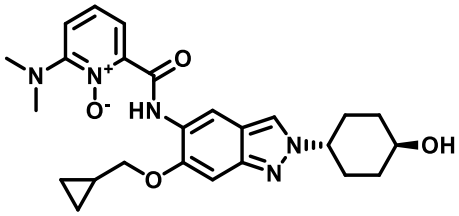
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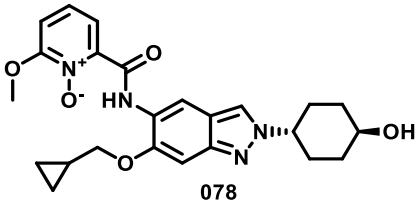
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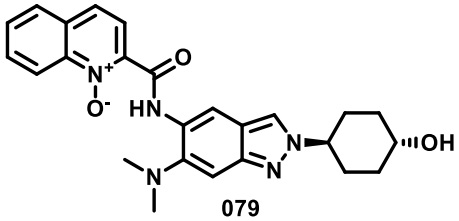
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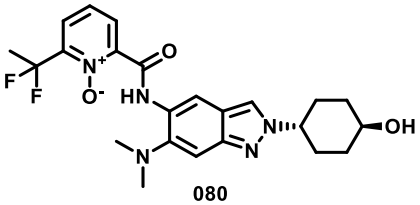
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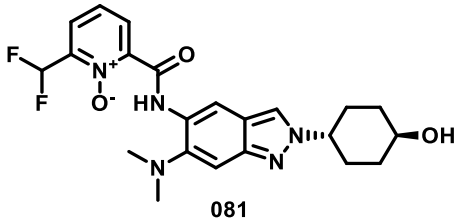
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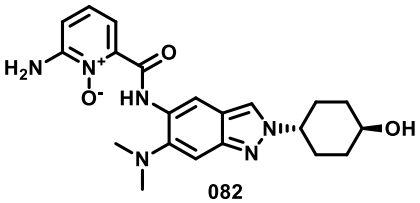
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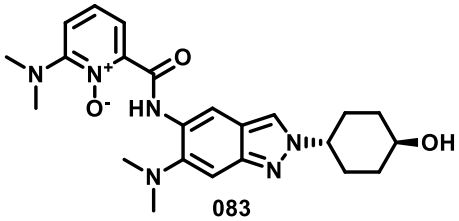
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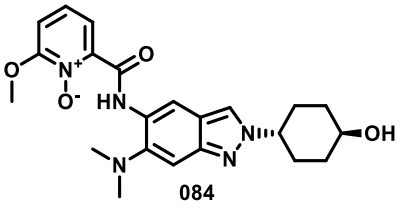
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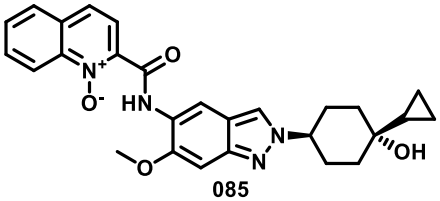
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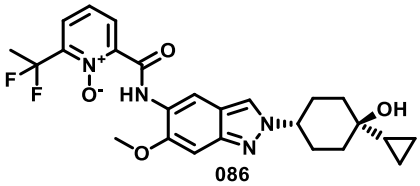
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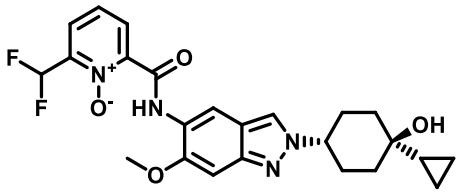
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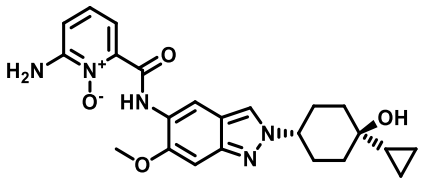
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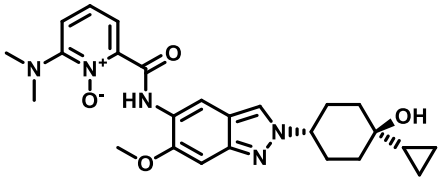
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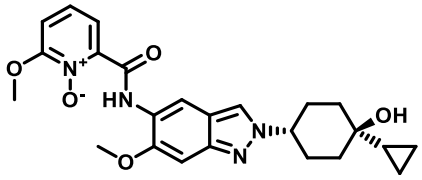
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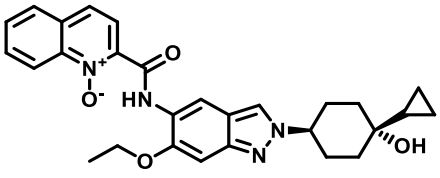
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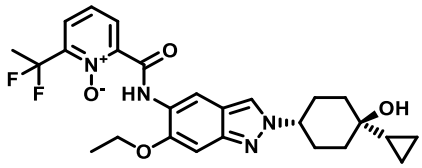
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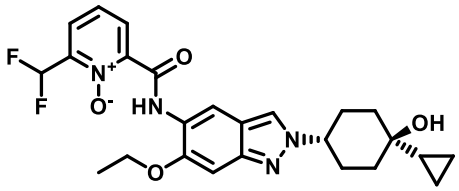
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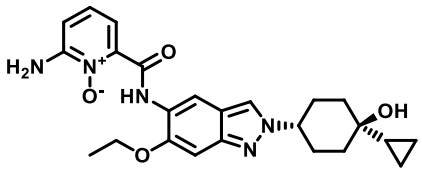
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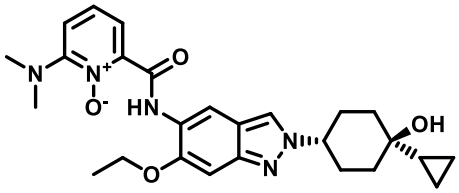
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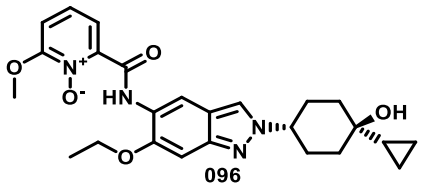
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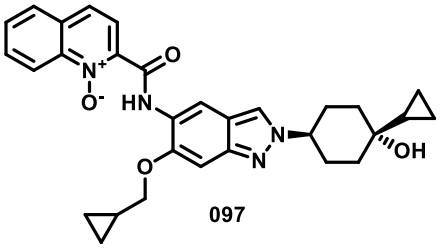
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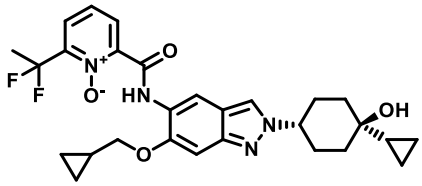
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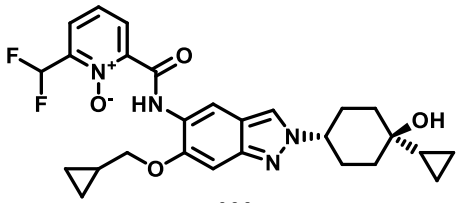
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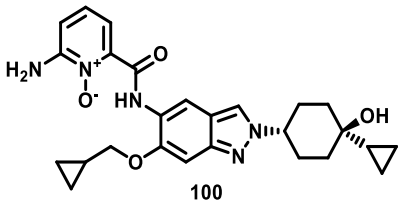
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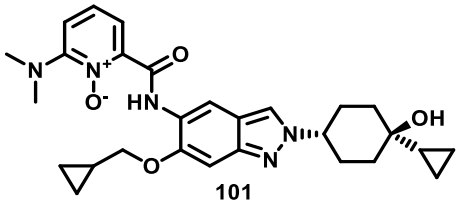
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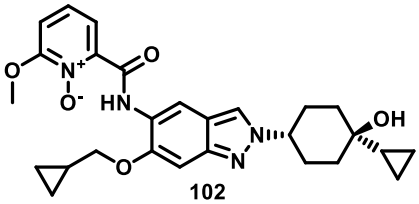
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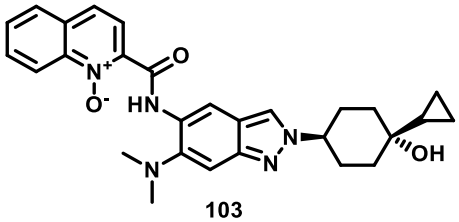
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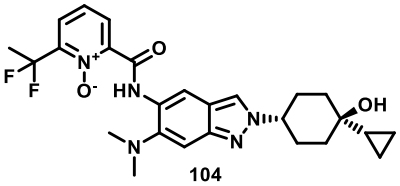
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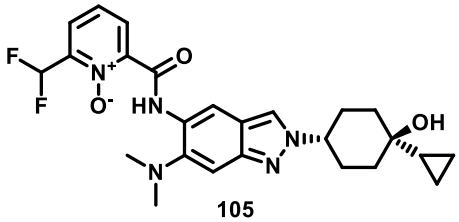
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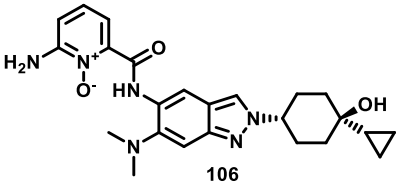
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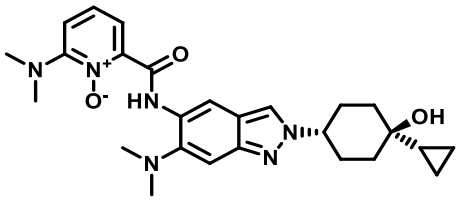
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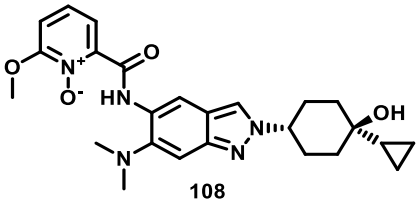
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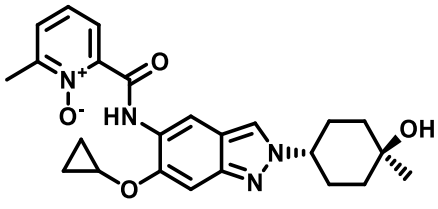
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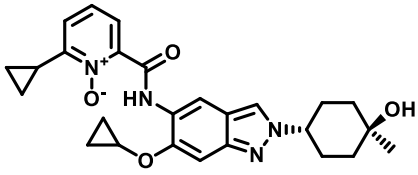
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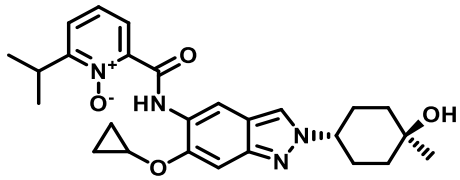
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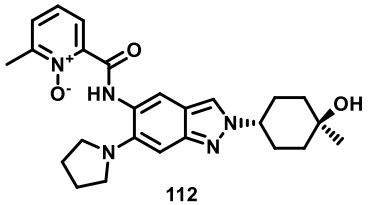
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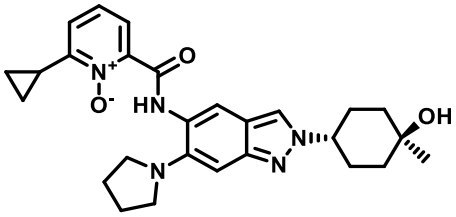
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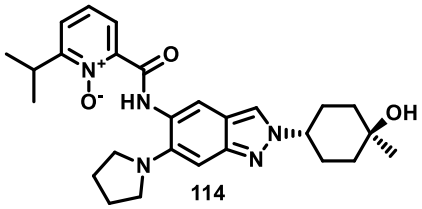
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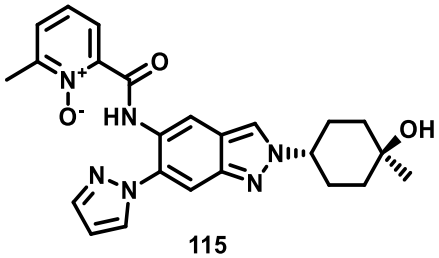
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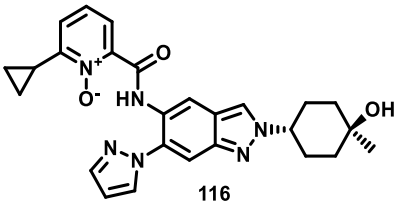
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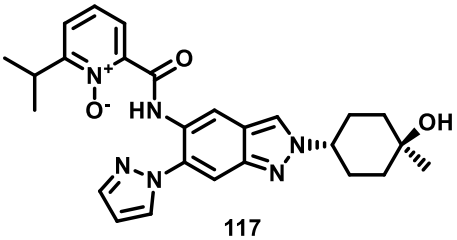
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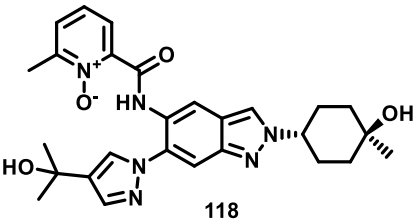
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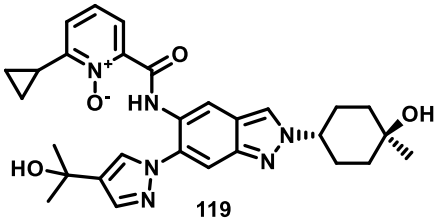
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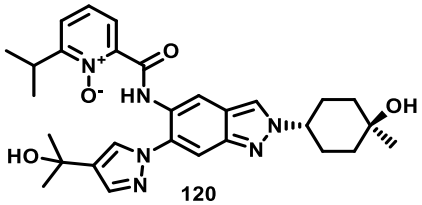
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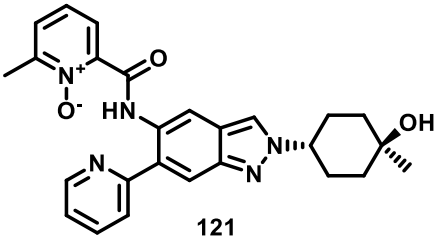
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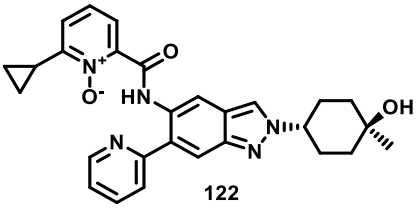
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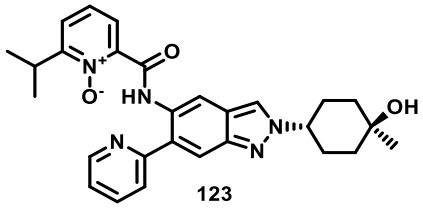
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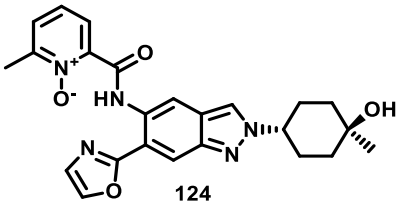
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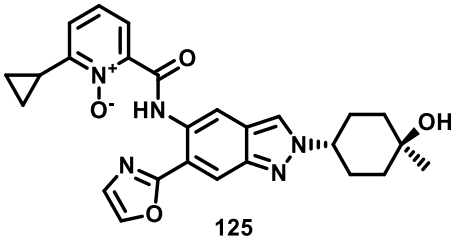
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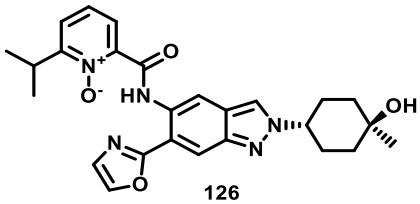
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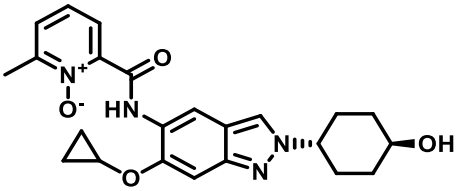
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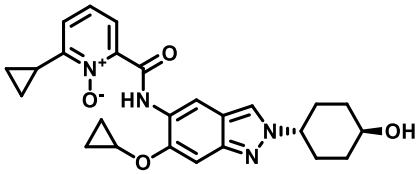
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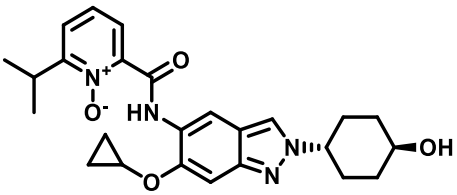
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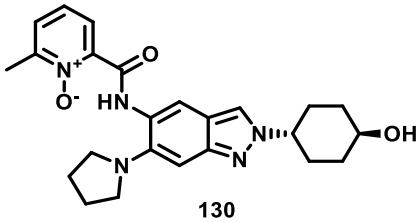
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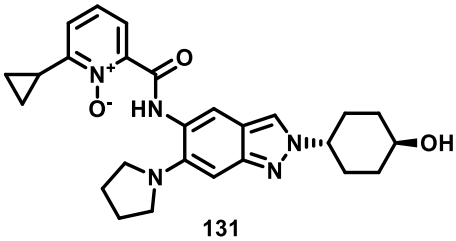
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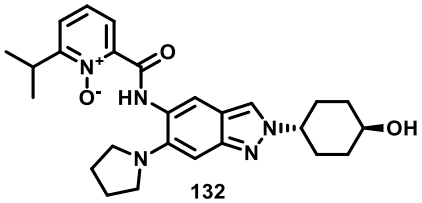
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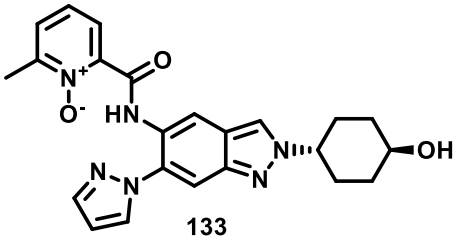
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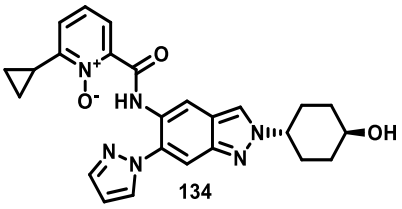
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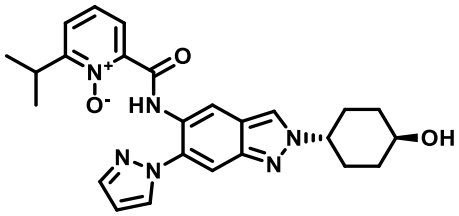
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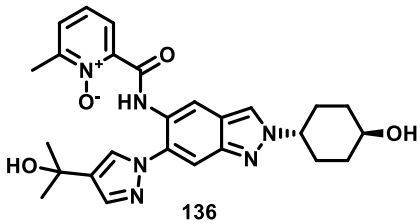
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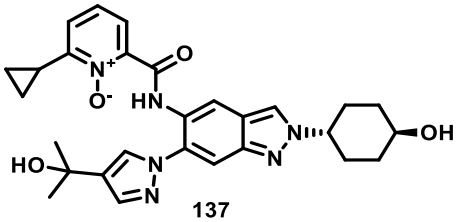
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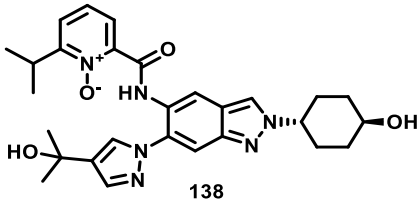
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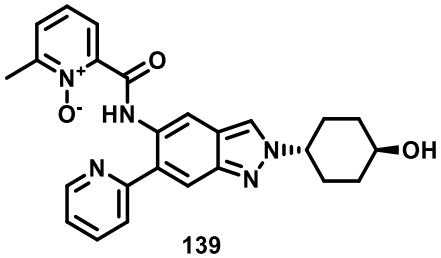
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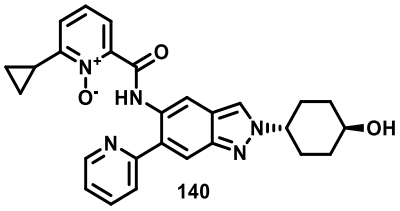
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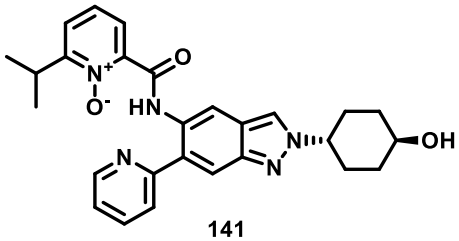
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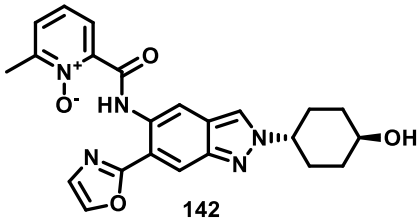
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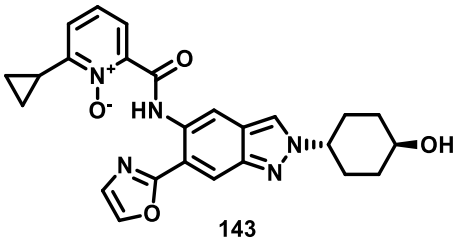
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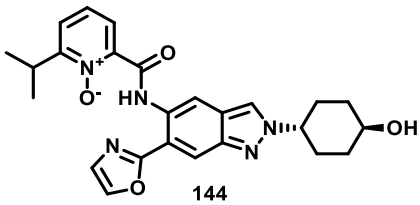
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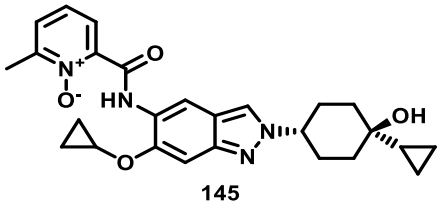
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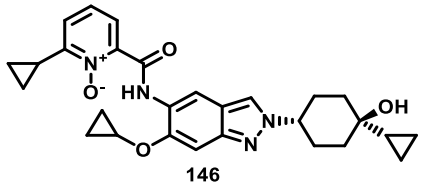
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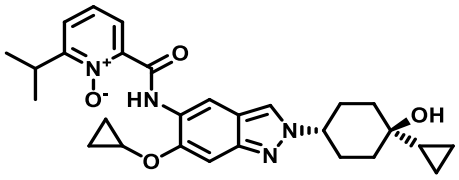
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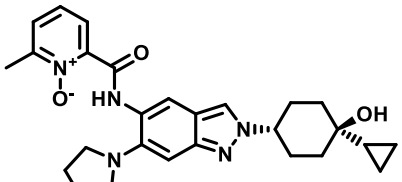
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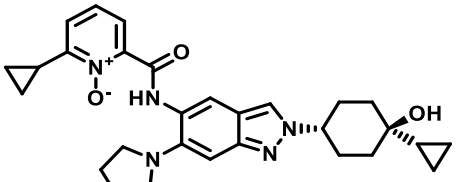
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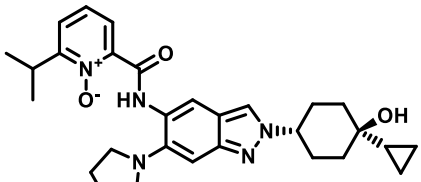
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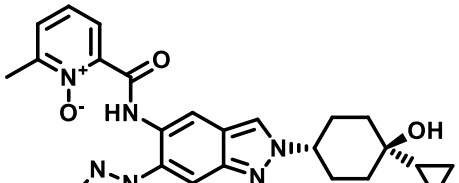
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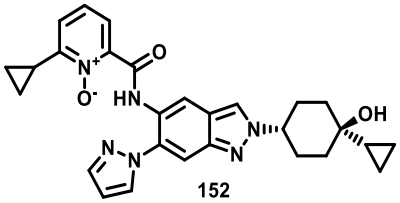
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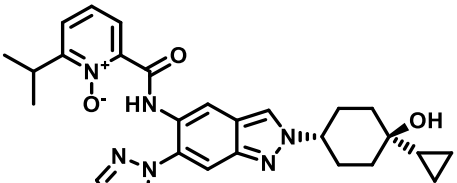
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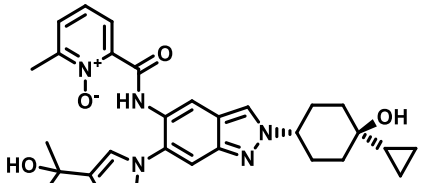
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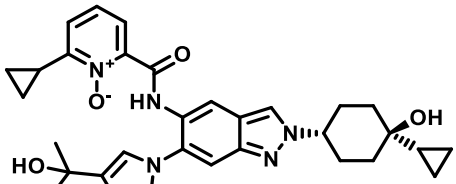
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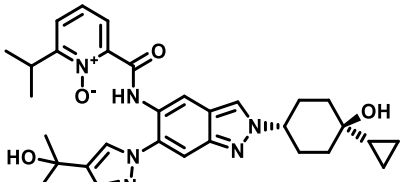
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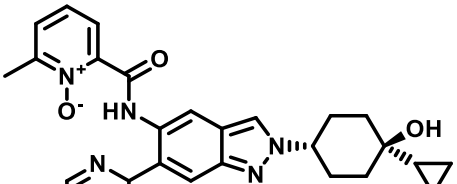
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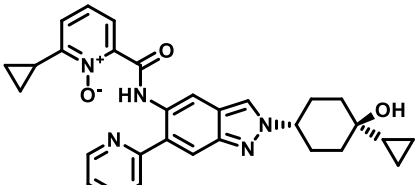
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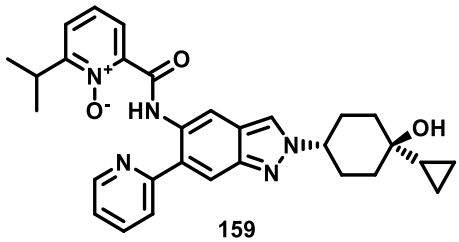
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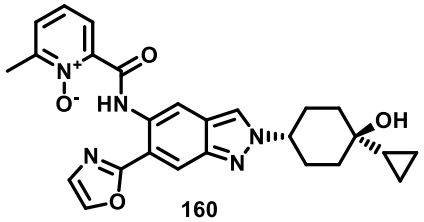
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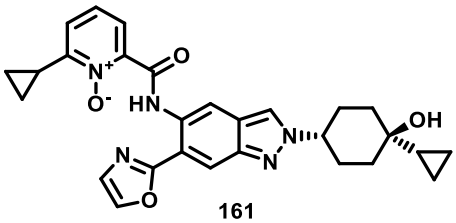
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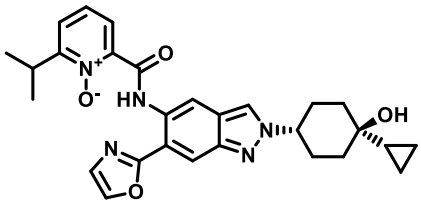
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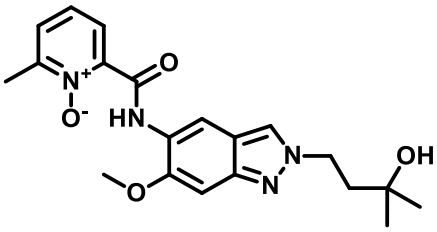
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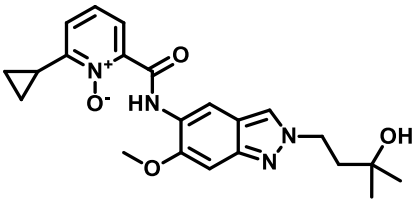
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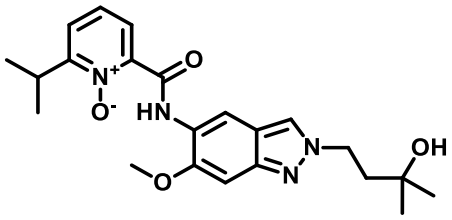
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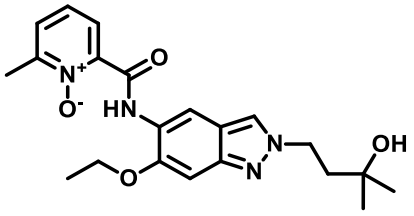
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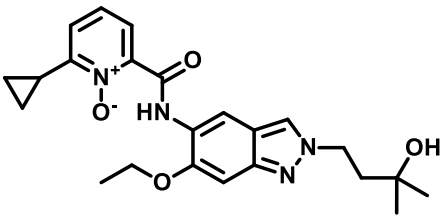
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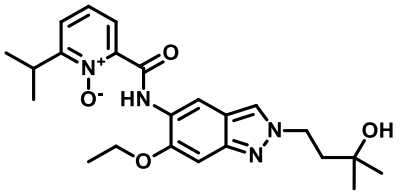
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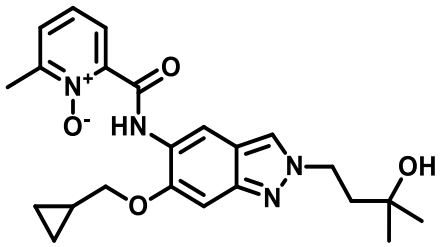
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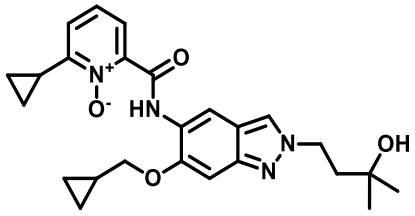
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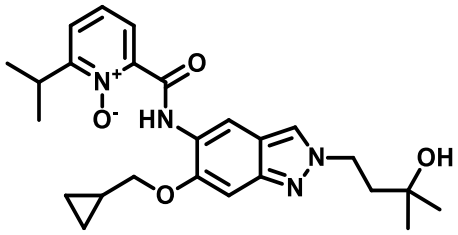
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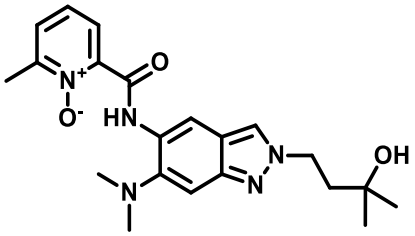
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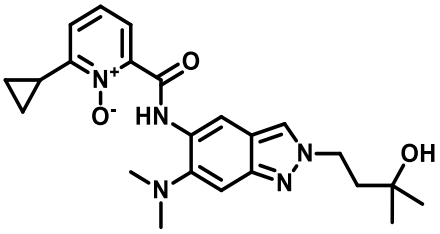
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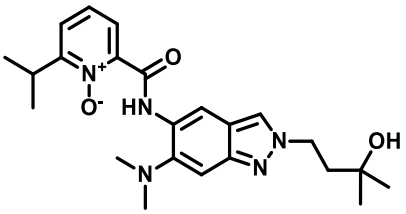
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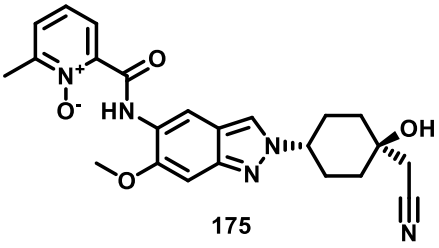
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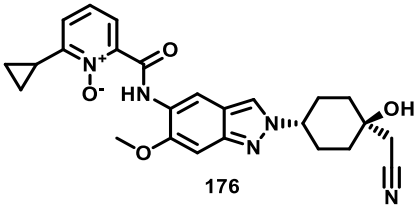
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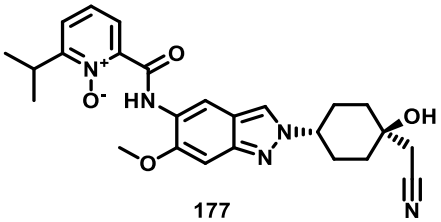
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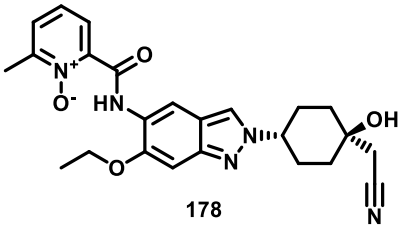
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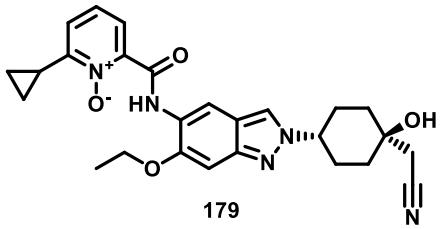
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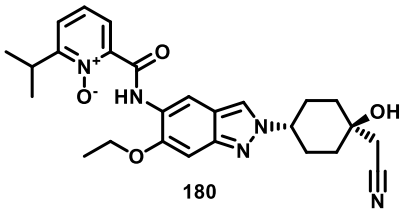
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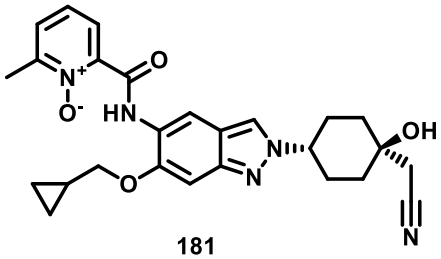
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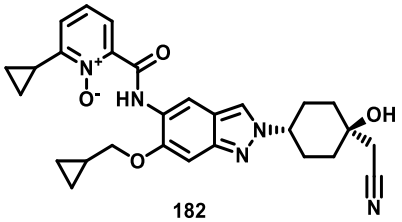
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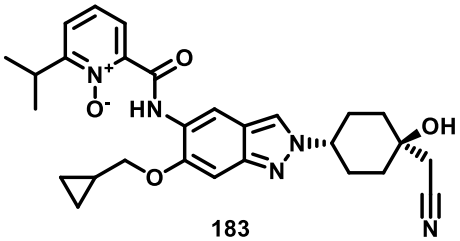
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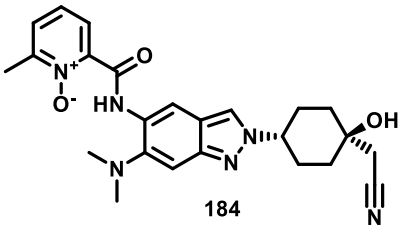
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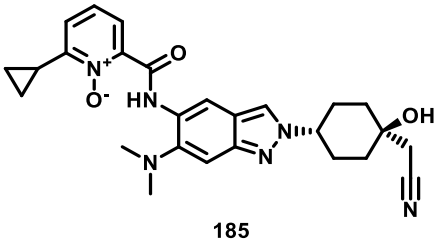
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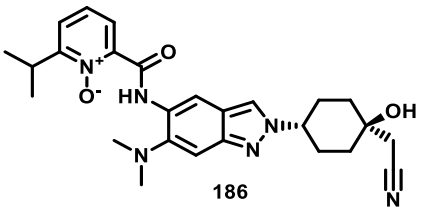
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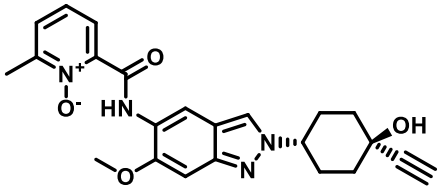
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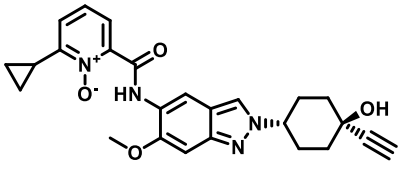
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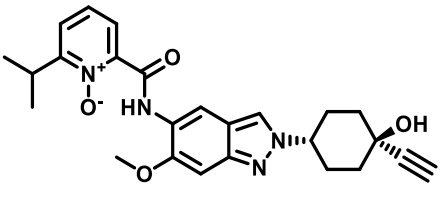
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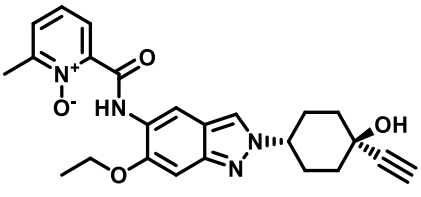
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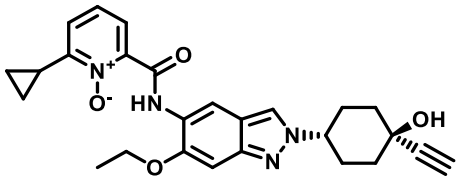
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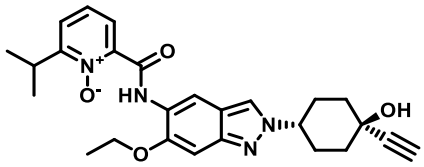
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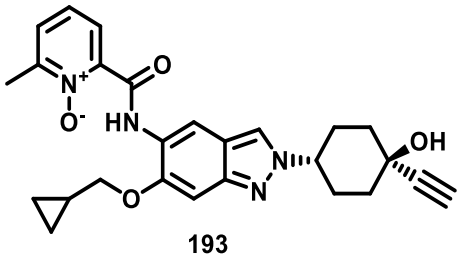
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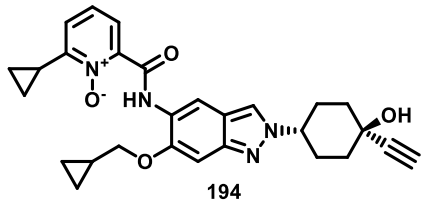
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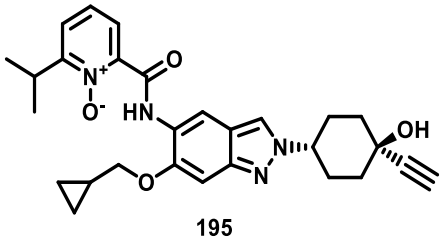
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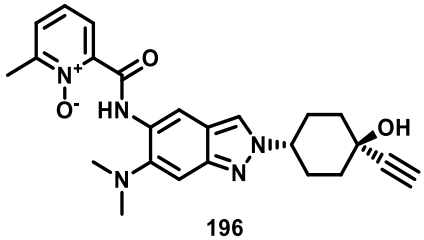
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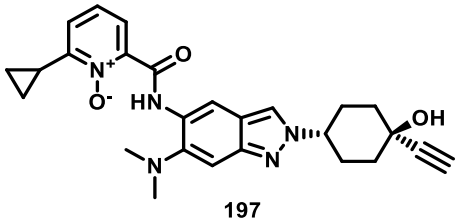
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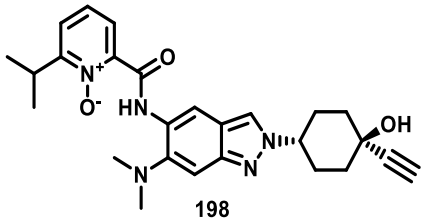
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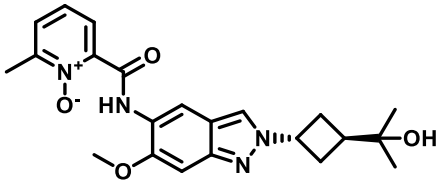
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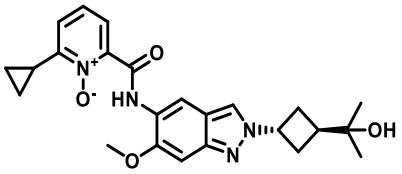
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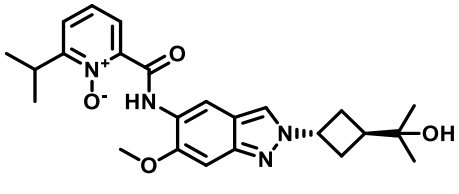
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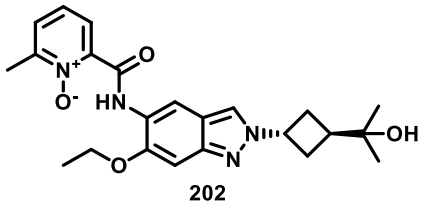
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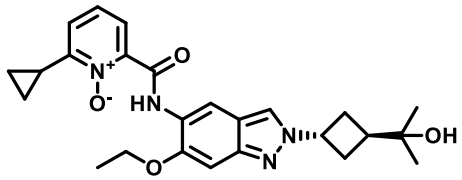
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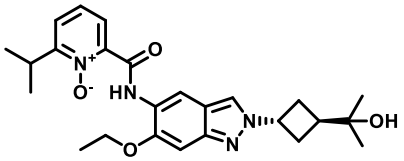
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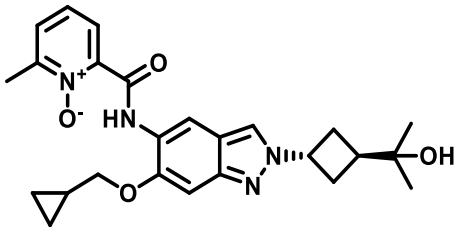
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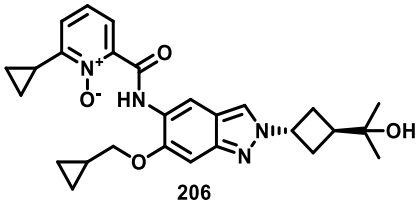
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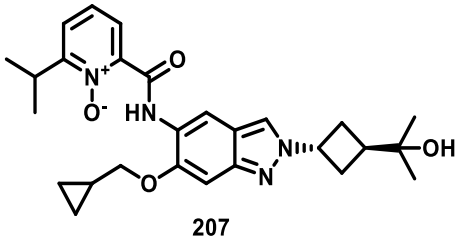
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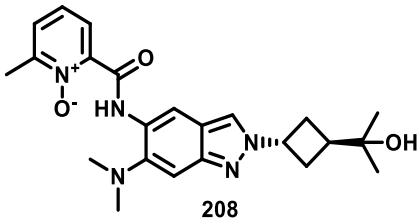
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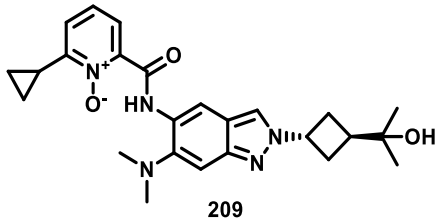
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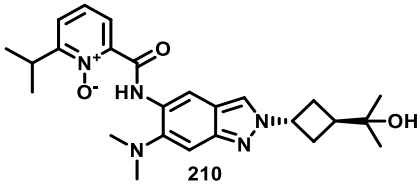
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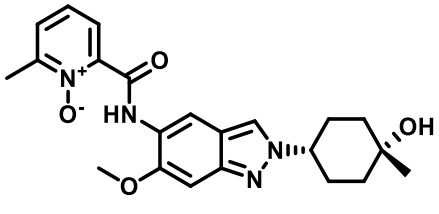
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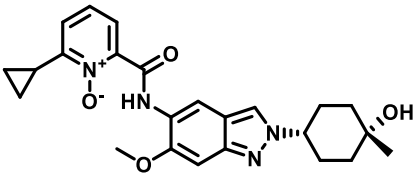
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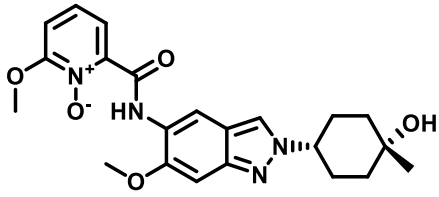
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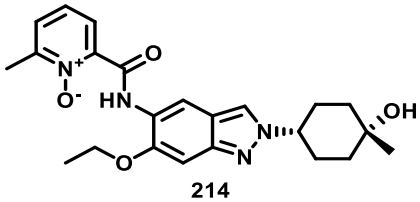
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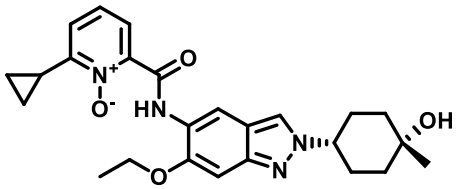
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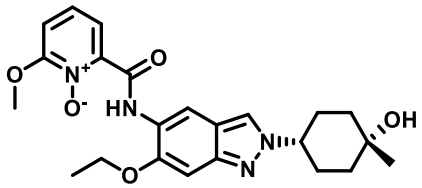
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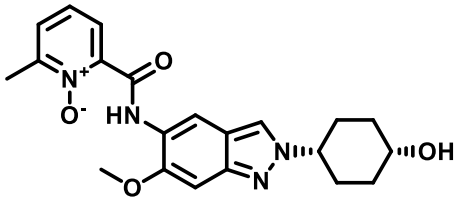
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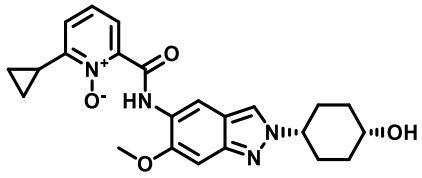
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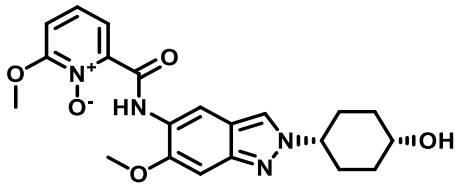
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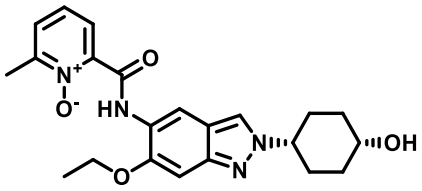
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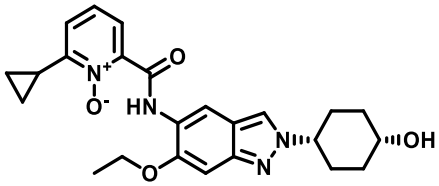
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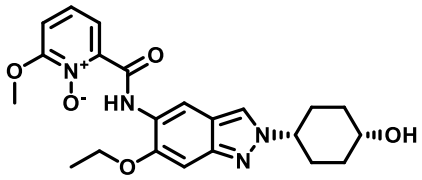
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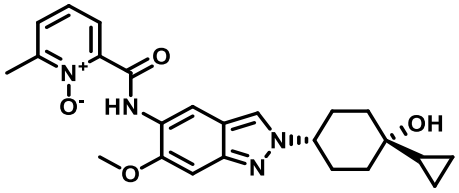
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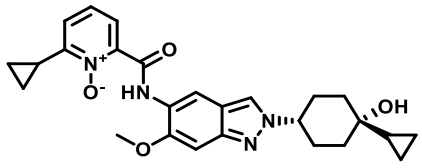
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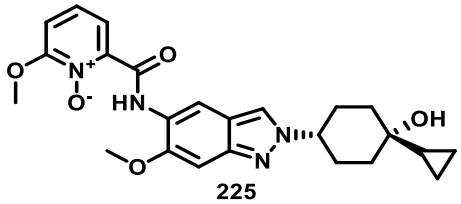
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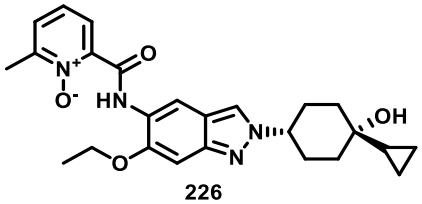
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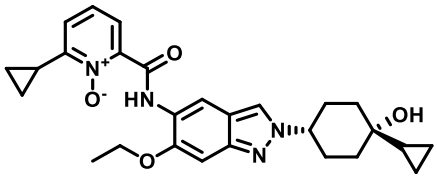
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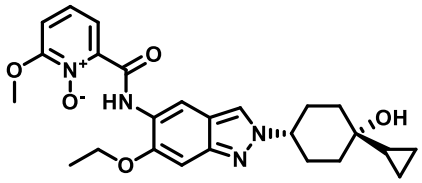
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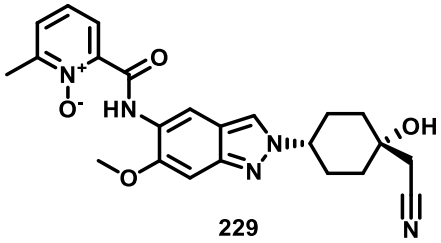
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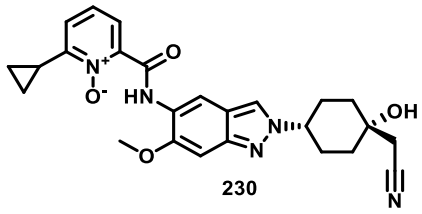
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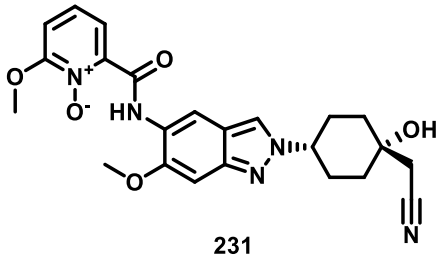
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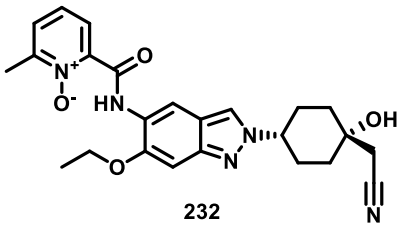
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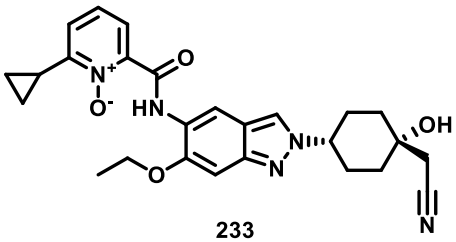
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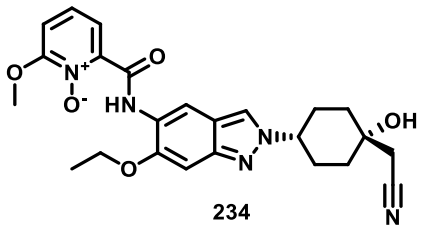
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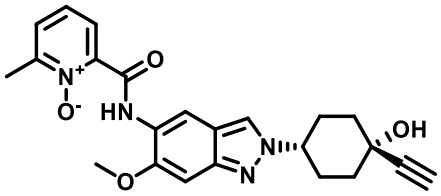
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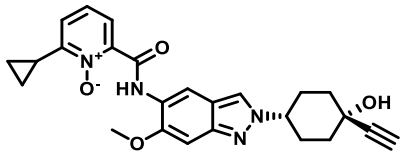
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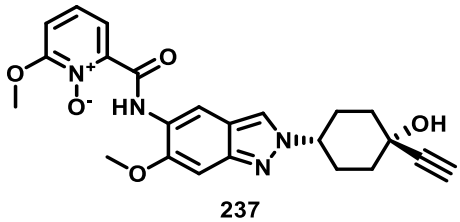
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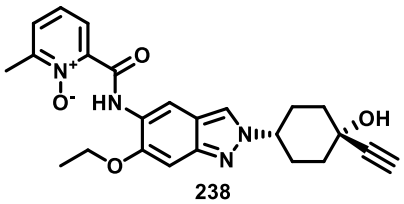
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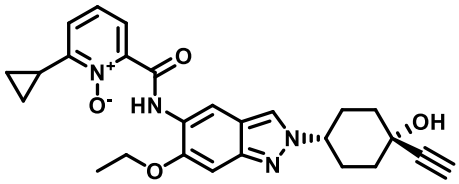
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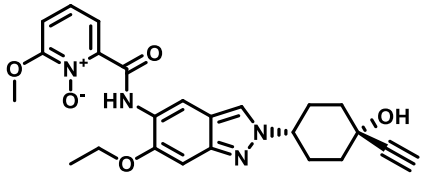
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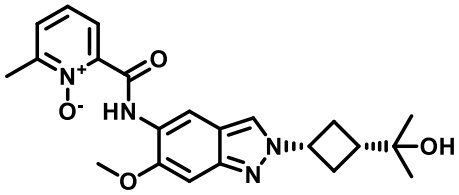
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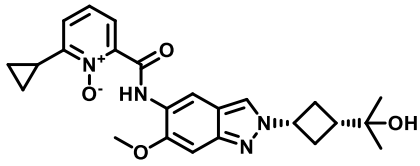
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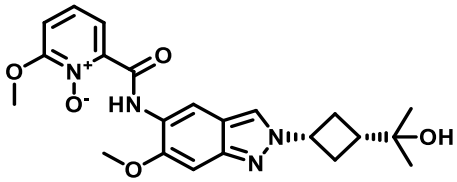
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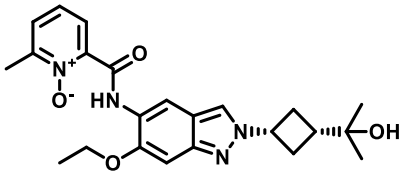
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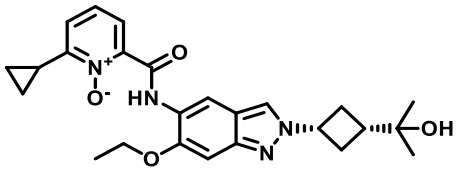
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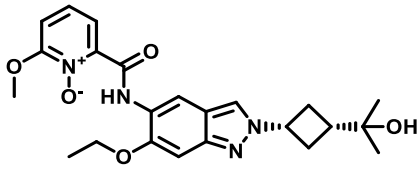
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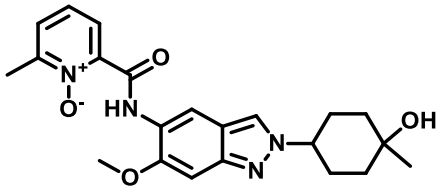
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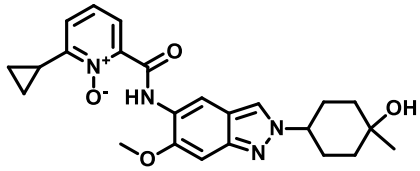
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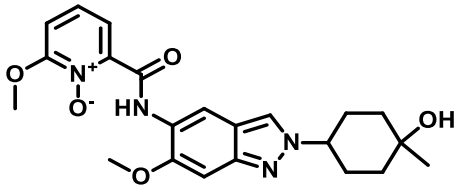
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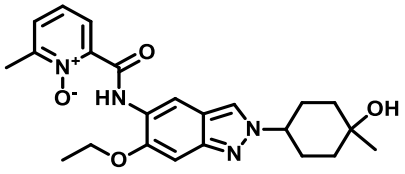
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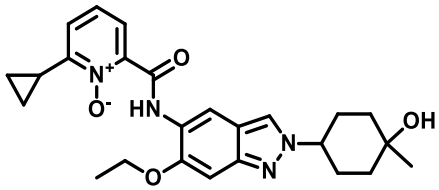
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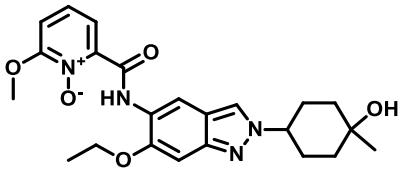
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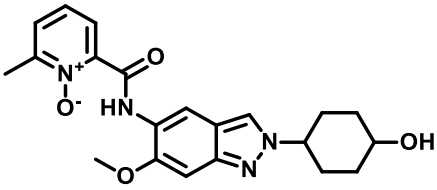
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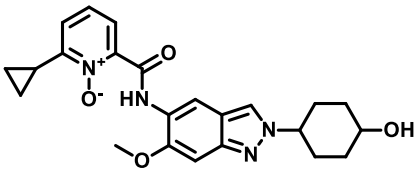
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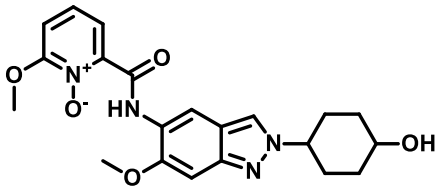
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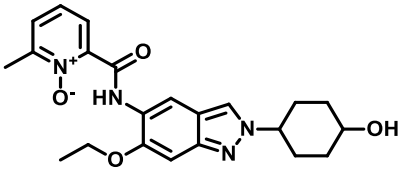
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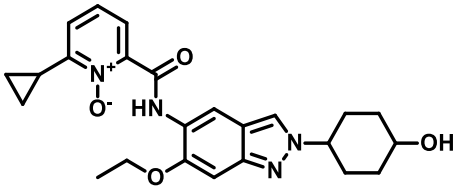
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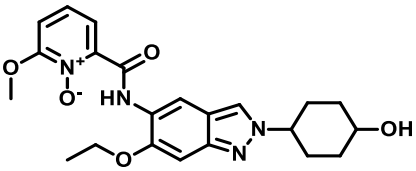
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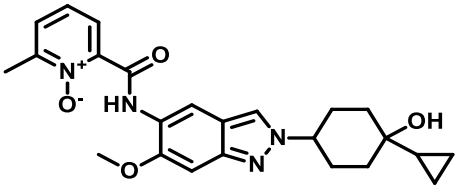
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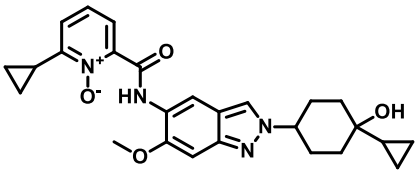
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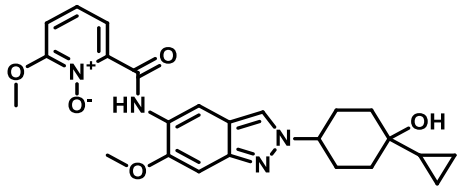
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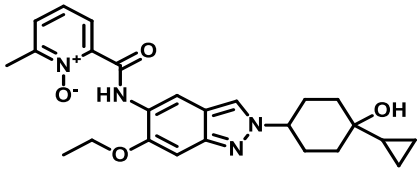
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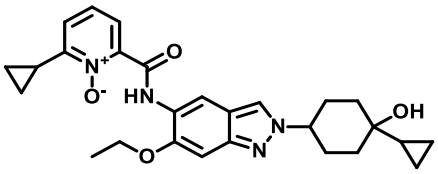
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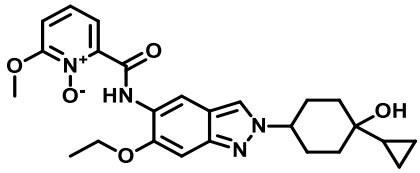
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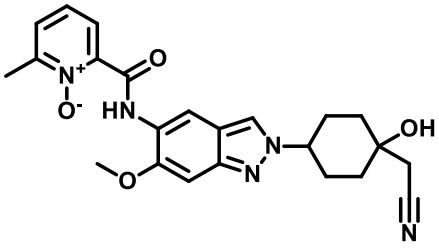
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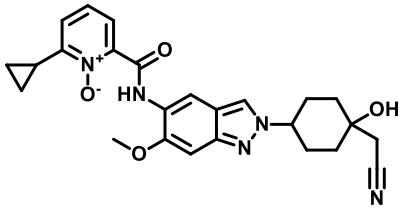
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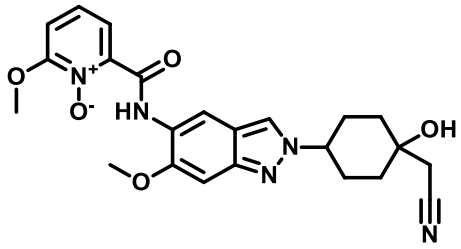
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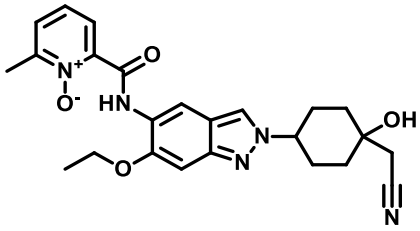
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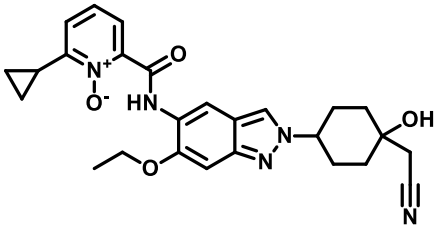
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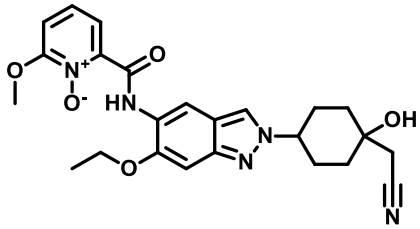
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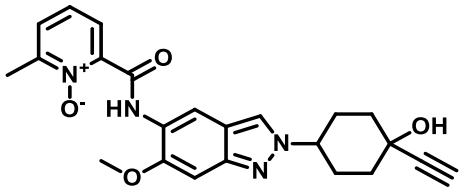
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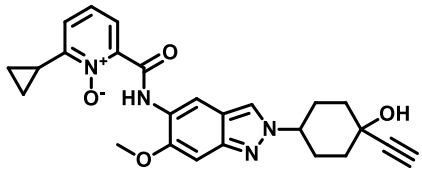
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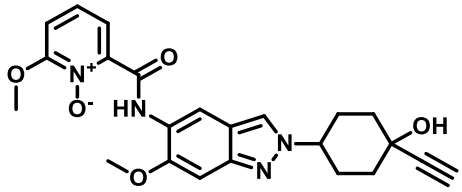
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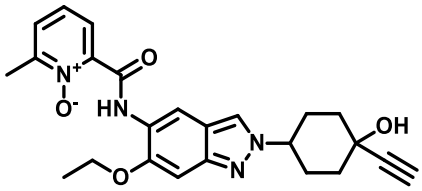
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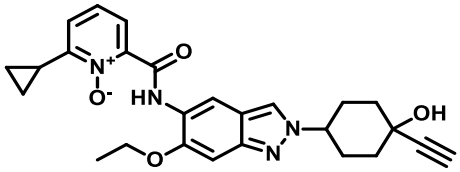
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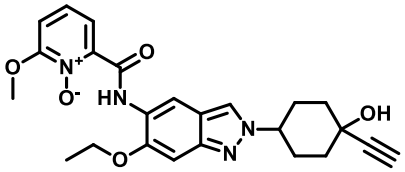
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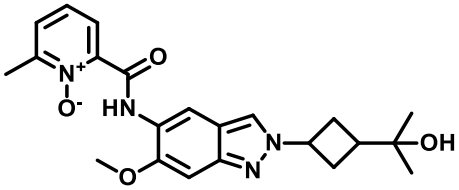
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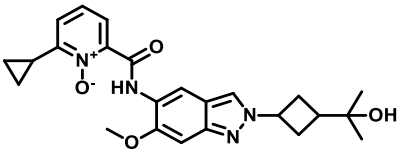
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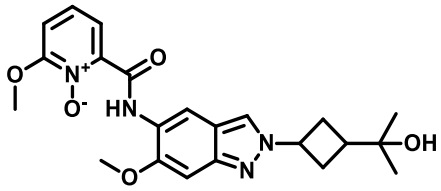
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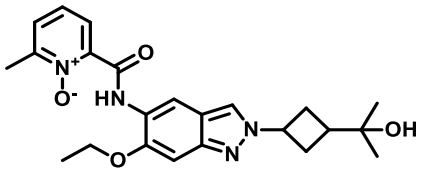
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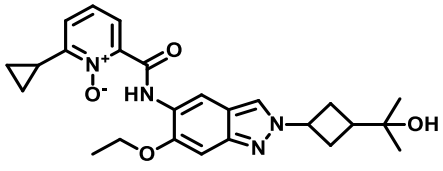
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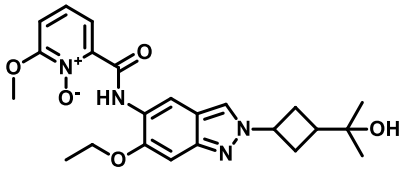
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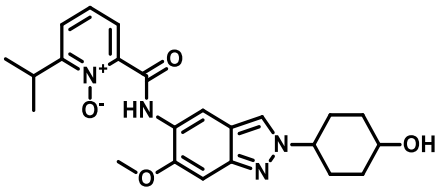
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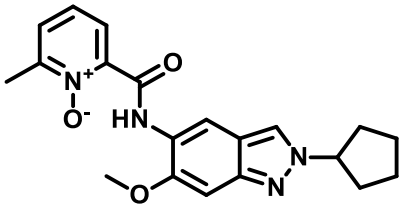
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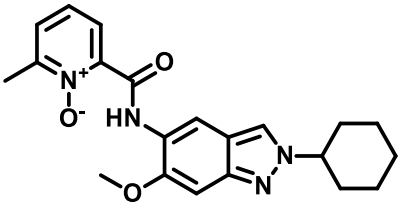
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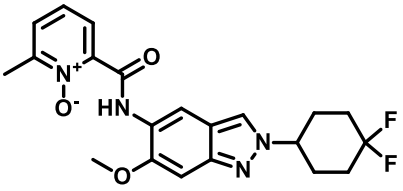
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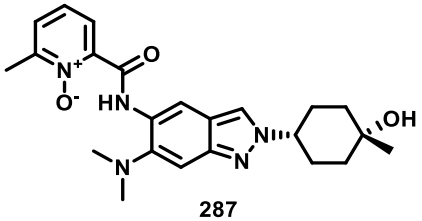
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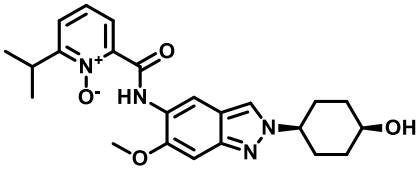
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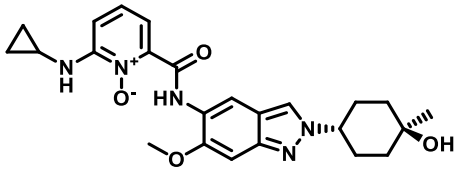
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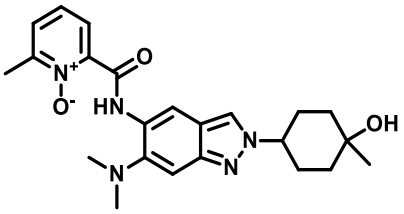
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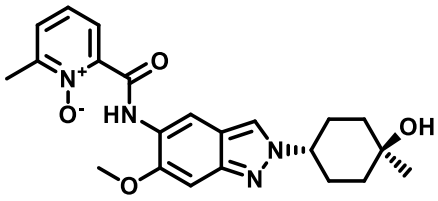
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or a stereoisomer, a racemate, a tautomer, or a pharmaceutically acceptable salt thereof.

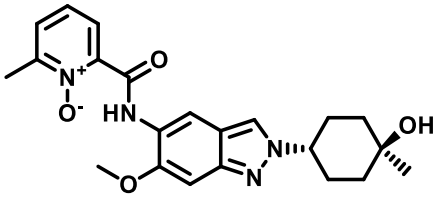
11. A compound, which is:



001

or a stereoisomer, a racemate, or a pharmaceutically acceptable salt thereof.

12. The compound of claim 11, which is:



001

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13. A pharmaceutical composition comprising the compound according to any one of claims 1-12.

14. Use of the compound according to any one of claims 1-12 or the pharmaceutical composition according to claim 13 in preparing a medicament for preventing and/or treating diseases or disorders selected from tumors, gout, systemic lupus erythematosus, multiple sclerosis, metabolic syndrome, atherosclerosis, myocardial infarction, sepsis, inflammatory bowel disease, asthma, rheumatoid arthritis, and allergy.