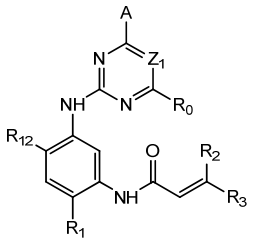
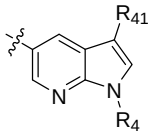
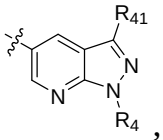
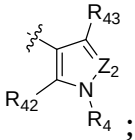
What we claim:

1. A compound of formula (I), or a pharmaceutically acceptable salt, stereoisomer, solvate thereof:



(I)

wherein,

A is any one selected from  ,  , or  ;

wherein Z_2 is CR_5 or N; R_5 is a hydrogen, halogen, trifluoromethyl or $C_{1\text{-}10}$ alkoxy;

R_4 is a hydrogen or $C_{1\text{-}10}$ alkyl, $C_{3\text{-}10}$ cycloalkyl, $C_{3\text{-}10}$ heterocycloalkyl, or $C_{1\text{-}10}$ haloalkyl;

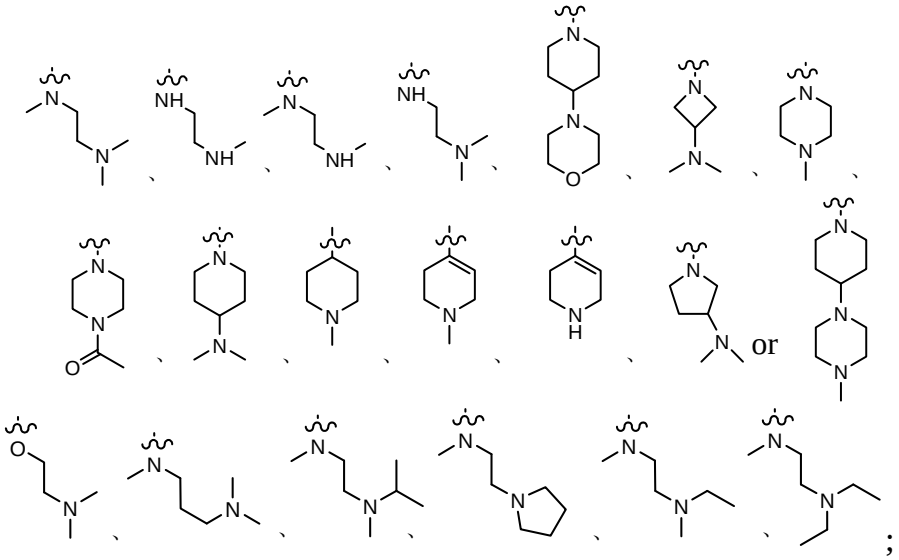
each of R_{42}, R_{43} is independently a hydrogen or $C_{1\text{-}10}$ alkyl,

R_{41} is a hydrogen, halogen, trifluoromethyl, $C_{1\text{-}10}$ alkyl or $C_{1\text{-}10}$ alkoxy;

R_0 is a hydrogen, halogen, $C_{1\text{-}10}$ alkyl, $-NR_aR_b$ or $-CO\text{-}NR_aR_b$, wherein each of R_a, R_b is independently $C_{1\text{-}10}$ alkyl;

Z1 is CR_6; wherein R_6 is a hydrogen, halogen, trifluoromethyl, methoxy or $-CO_2C_{1\text{-}10}$ alkyl;

R_1 is a hydrogen, or any one selected from the group consisting of:

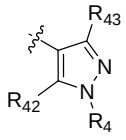


;

each of R_2 and R_3 is independently a hydrogen;

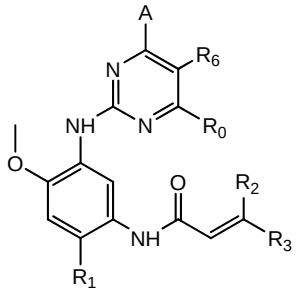
R_{12} is a hydrogen, halogen, $C_{1\text{-}10}$ alkyl or $C_{1\text{-}10}$ alkoxy.

2. The compound of Claim 1, or a pharmaceutically acceptable salt, stereoisomer,

solvate thereof, wherein A is  ;

wherein R_4, R_{42}, R_{43} are defined as in Claim 1.

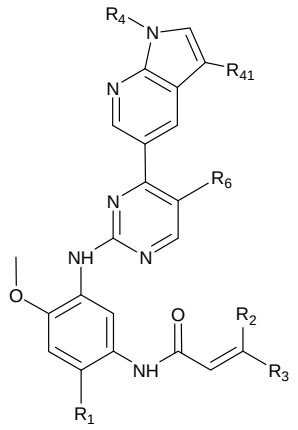
3. The compound of Claim 1, or a pharmaceutically acceptable salt, stereoisomer, solvate thereof, wherein the compound of formula (I) is a compound represented by formula (IV-1):



(IV-1)

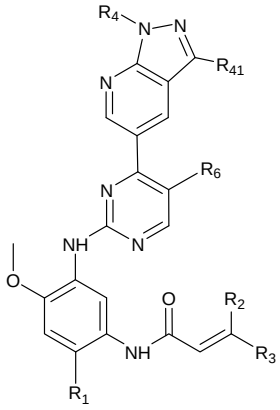
in formula (IV-1), A, R_0, R_1, R_2, R_3 and R_6 are defined as in Claim 1.

4. The compound of Claim 1 or a pharmaceutically acceptable salt, stereoisomer, solvate thereof, wherein the compound of formula (I) is a compound represented by formula (V-1), (VI-1), (XI-1) or:



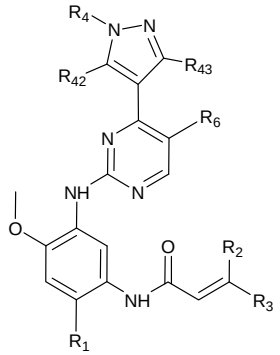
(V-1)

in formula (V-1), R_1, R_2, R_3, R_4, R_{41} and R_6 are defined as in Claim 1;



(VI-1)

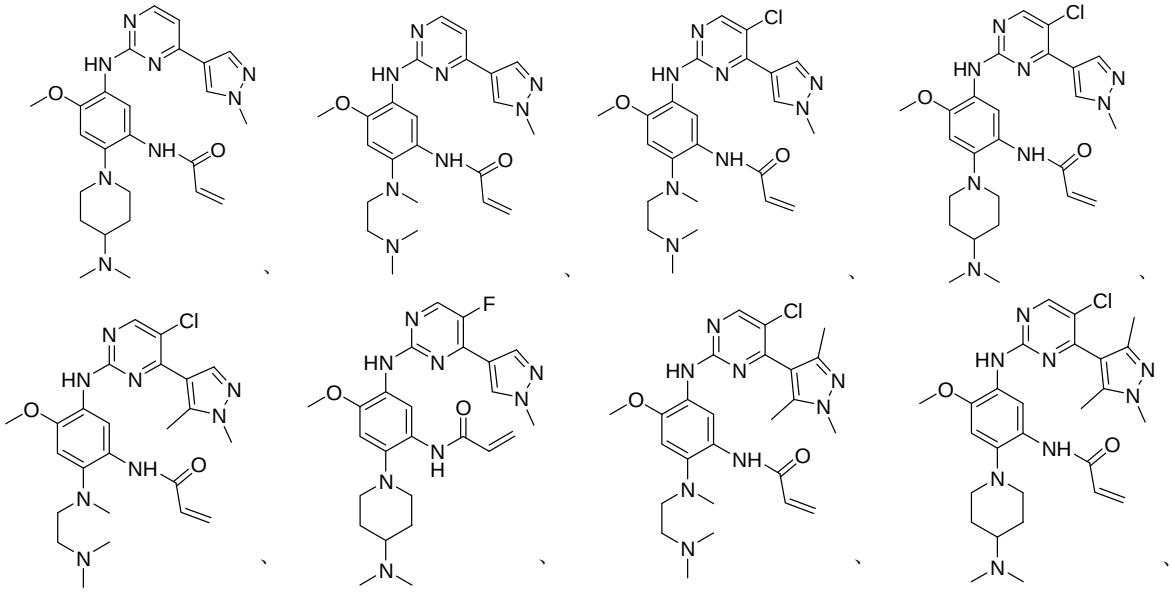
in formula (VI-1), R_1, R_2, R_3, R_4, R_{41} and R_6 are defined as in Claim 1;

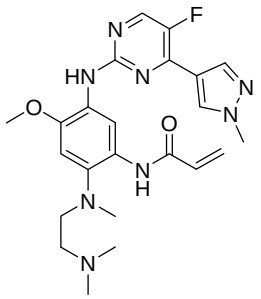


(XI-1)

in formula (XI-1), R_1, R_2, R_3, R_4, R_{42}, R_{43} and R_6 are defined as in Claim 1.

5. The compound of Claim 1 or a pharmaceutically acceptable salt, stereoisomer, solvate thereof, wherein the compound of formula (I) is selected from:

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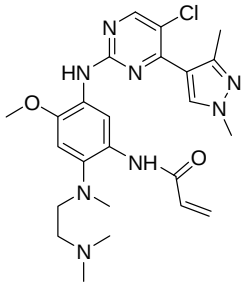
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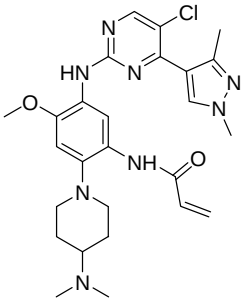
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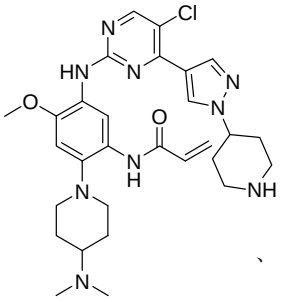
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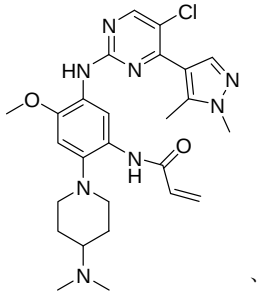
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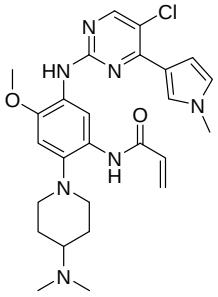
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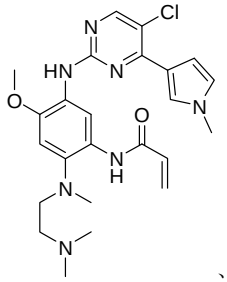
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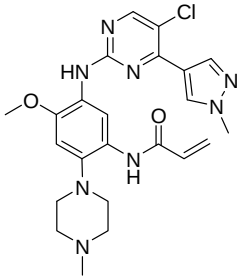
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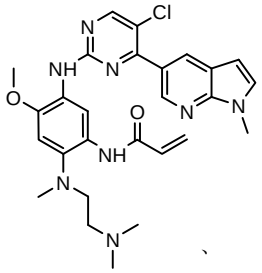
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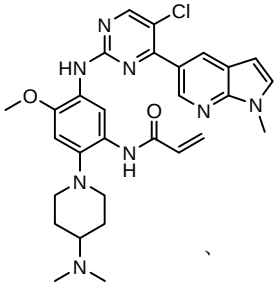
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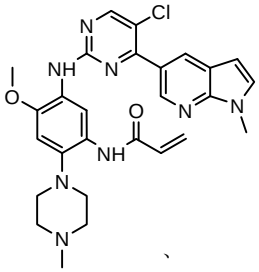
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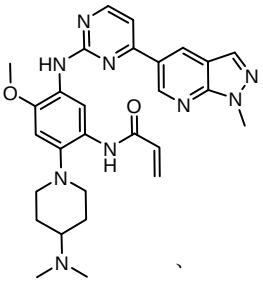
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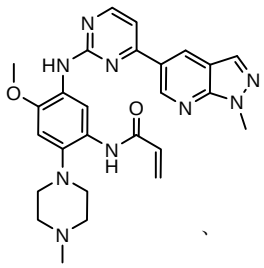
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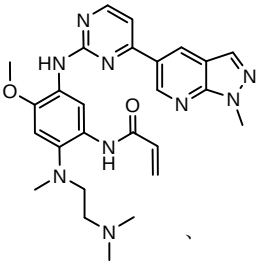
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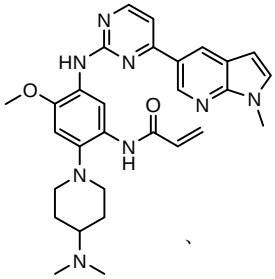
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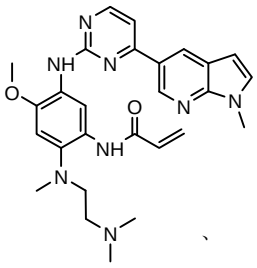
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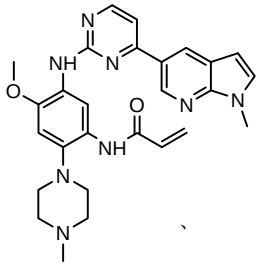
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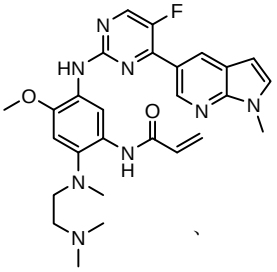
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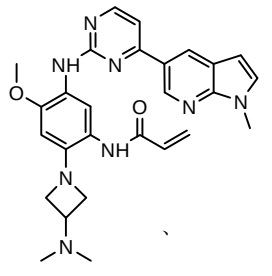
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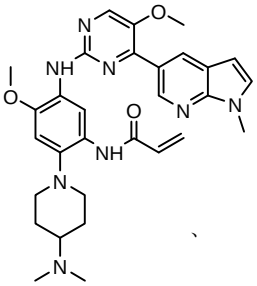
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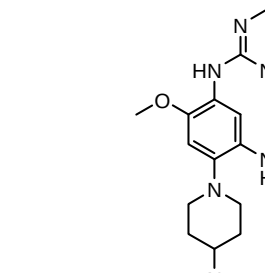
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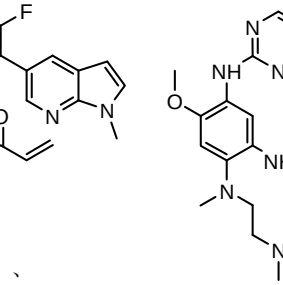
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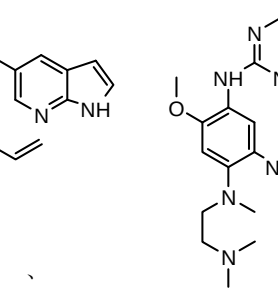
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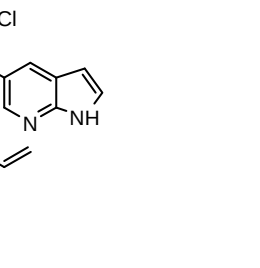
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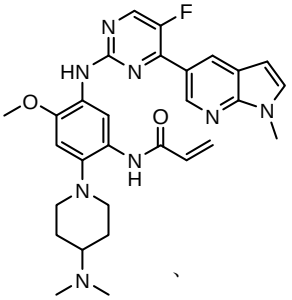
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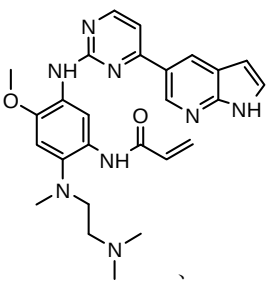
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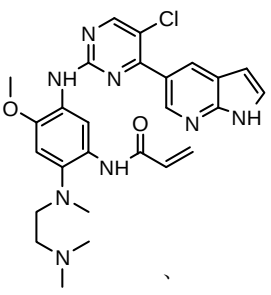
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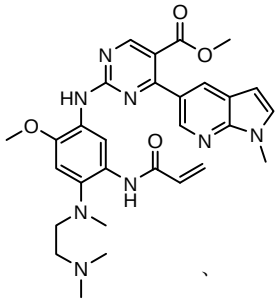
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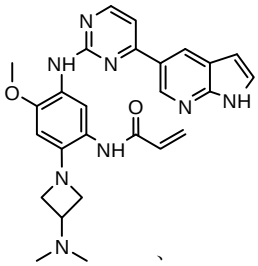
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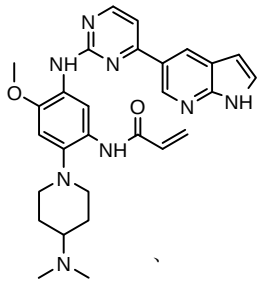
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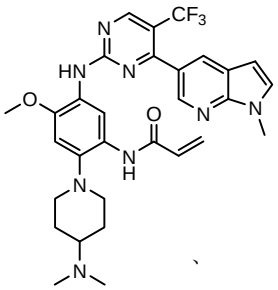
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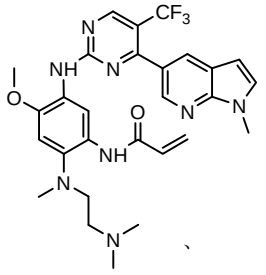
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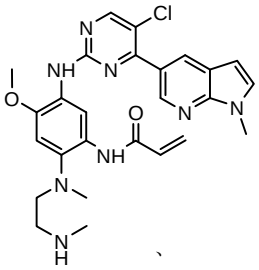
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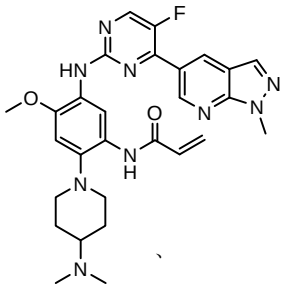
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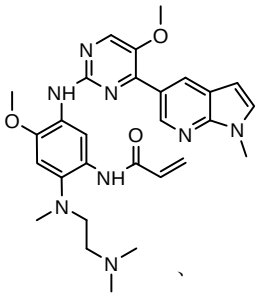
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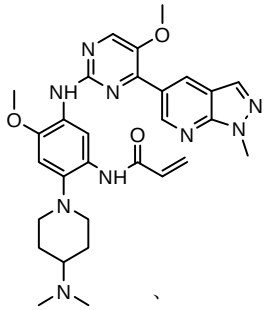
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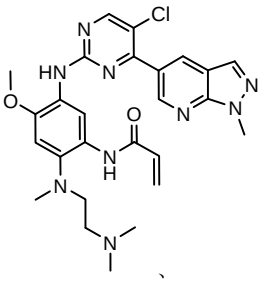
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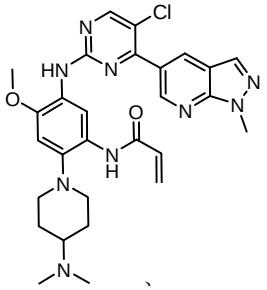
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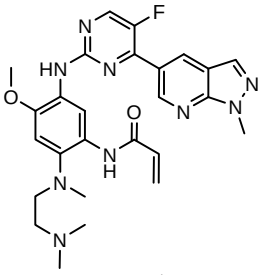
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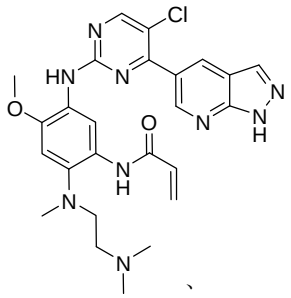
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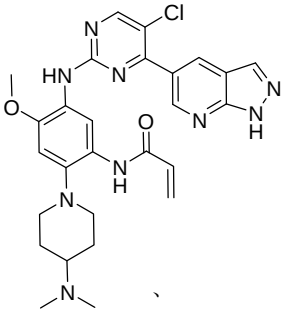
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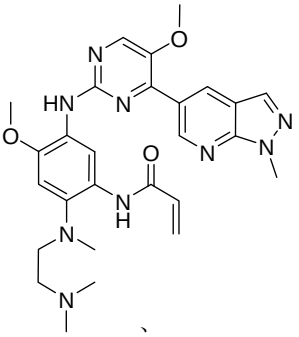
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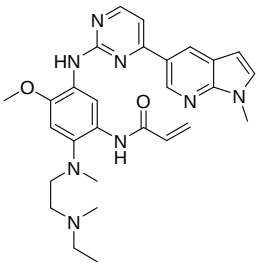
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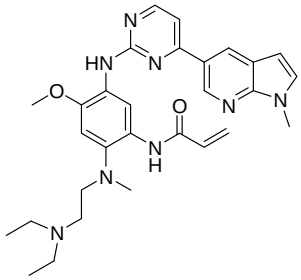
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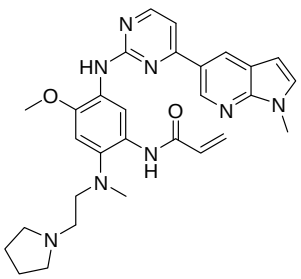
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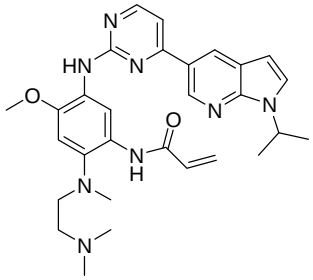
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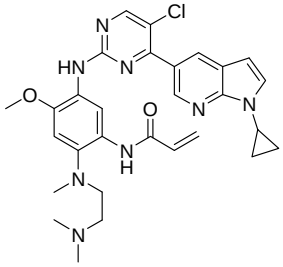
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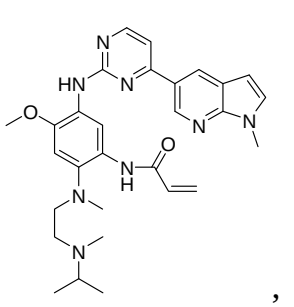
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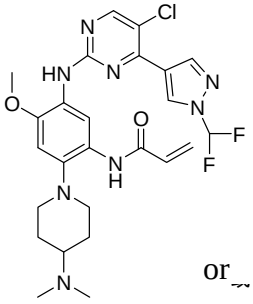
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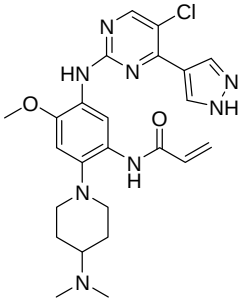
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6. A pharmaceutical composition including a compound of any one of Claims 1-5, or a pharmaceutically acceptable salt, stereoisomer, solvate thereof, and a pharmaceutically acceptable carrier.

7. Use of the compound of any one of Claims 1-5 or a pharmaceutically acceptable salt, stereoisomer, solvate thereof in the manufacture of a medicament for treating EGFR-related diseases, wherein the EGFR-related disease is cancer, diabetes, immune system diseases, neurodegenerative diseases, cardiovascular diseases.

8. A pharmaceutical composition including the compound of any one of Claims 1-5 or a pharmaceutically acceptable salt, stereoisomer, solvate thereof, as well as other drug which is one or more selected from the following group: gefitinib, erlotinib, icotinib, lapatinib, XL647, NVP-AEE-788, ARRY-334543, EKB-569, BIBW2992, HKI272, BMS-690514, CI-1033, vandetanib, PF00299804, WZ4002, cetuximab, trastuzumab, panitumumab, matuzumab, nimotuzumab, zalutumumab, pertuzumab, MDX -214, CDX-110, IMC-11F8, Zemab, Her2 vaccine PX 1041, HSP90 inhibitors, CNF2024, tanespimycin, alvespimycin, IPI-504, SNX-5422, NVP-AUY922, or combinations thereof.