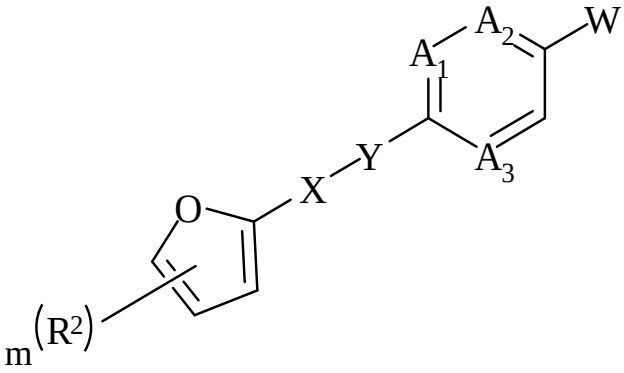
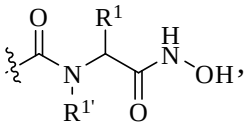
Claims

1. A compound represented by the general formula (I), a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof:



(I)

wherein,

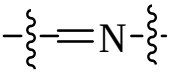
W represents ,

R^1 is selected from a group consisting of $-(CH_2)_{0-4}C(R^{1a},R^{1b})(CH_2)_{0-4}OR^3$, and $-(CH_2)_{0-4}C(R^{1a},R^{1b})(CH_2)_{0-4}S(O)_{0-2}R^6$,

wherein, R^{1a}, R^{1b}, R^3, and R^6 are each independently selected from a group consisting of H, C_{1-6} alkyl and OH;

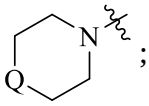
$R^{1'}$ is selected from a group consisting of hydrogen and C_{1-6}alkyl;

A_1, A_2, and A_3 are each independently selected from a group consisting of CH and N;

X and Y are each independently selected from a group consisting of a benzene ring group, an alkenyl group, an alkynyl group and ;

R^2 is ,

B represents $-(C_{1-8}$alkyl$)-$, wherein 0-2 carbon atoms in said $-(C_{1-8}$alkyl$)-$ are replaced with -O- or $-NR^8-$,

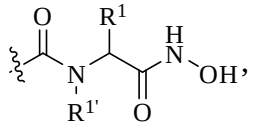
C is selected from a group consisting of $-OR^9$, $-NR^9R^{9'}$, and ;

Q is a group selected from a group consisting of NR^c and O;

R^8, R^9 and $R^{9'}$ are each independently selected from hydrogen atom, and C_{1-6}alkyl; and

m is 1, 2 or 3.

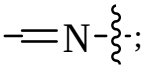
2. The compound according to claim 1, a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof:
wherein,

W represents ,

R^1 is -C(R^{1a}, R^{1b})OR^3, wherein, R^{1a}, R^{1b}, and R^3 are each independently selected from a group consisting of hydrogen atom, methyl and hydroxyl;

$R^{1'}$ is selected from a group consisting of hydrogen and C_{1-4}alkyl;

A_1, A_2, and A_3 are each independently selected from a group consisting of CH and N;

X and Y are each independently selected from a group consisting of a benzene ring group, an alkenyl group, an alkynyl group and ;

R^2 is ,

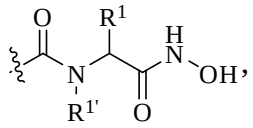
B represents -(C_{1-4}alkyl)-,

C is selected from a group consisting of -OR^9 and -N$R^9R^{9'}$,

R^9 and $R^{9'}$ are each independently selected from hydrogen atom, methyl, ethyl, isopropyl; and

m is 1 or 2.

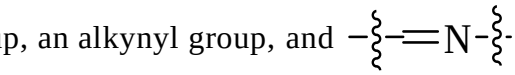
3. The compound according to claim 1 or 2, a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof:
wherein,

W represents ,

R^1 is -C(H,CH_3)OH;

$R^{1'}$ is selected from a group consisting of H, methyl, and ethyl;

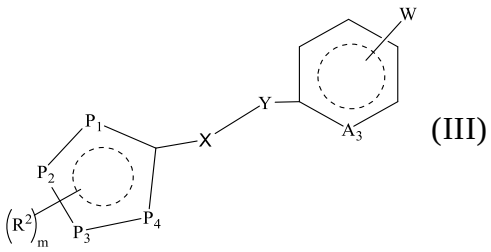
A_1, A_2, and A_3 are each independently selected from a group consisting of CH and N;

X and Y are each independently selected from a group consisting of a benzene ring group, an alkenyl group, an alkynyl group, and ;

R^2 is $-CH_2OH$; and

m is 1.

4. A compound represented by the general formula (III), a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof:



(III)

wherein,

W represents $-(C_{0-8}alkyl)-C(O)-N(R^{1'})-(C_{1-8}alkyl$ optionally substituted by $R^1)-C(O)-N(H)-OH$;

R^1 is each independently selected from a group consisting of C_{1-8}alkyl optionally substituted by OH and $-(C_{0-8}alkyl)S(O)_{1-2}R^3$, wherein, R^3 is selected from a group consisting of hydrogen atom and C_{1-8}alkyl optionally substituted by a substituent group;

$R^{1'}$ is selected from a group consisting of hydrogen atom, hydroxyl, methyl, ethyl, propyl, isopropyl, butyl, sec-butyl and tert-butyl;

A_3 is selected from a group consisting of CR^aR^a and NR^c;

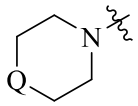
X and Y are each independently selected from a group consisting of_a benzene ring group optionally substituted by a substituent group, -(C=C)-, -(C≡C)-, =N-, and -C(O)-NR^c-, wherein X and Y are not simultaneously each a benzene ring group optionally substituted by a substituent group;

the five-membered ring moiety containing P_1, P_2, P_3, and P_4 as shown in general formula (III) is selected from a group consisting of a furan group, a pyrrole group, a pyrazole group, a triazole group and a thiophene group;

m represents 1, 2 or 3;

in each occurrence, R^2 each independently represents ;

in each occurrence, B independently represents a bond, or is each independently selected from a group consisting of C_{1-8}alkyl optionally in which at least one carbon atom is replaced with at least one group of O and NR^c;

in each occurrence, C independently represents $-OR^c$, $-NR^cR^c$, or 

;

Q is a group selected from a group consisting of NR^c and O;

R^a either is absent or in each occurrence are each independently selected from a group consisting of hydrogen atom and C_{1-8}alkyl;

R^c either is absent or in each occurrence are each independently selected from a group consisting of hydrogen atom and C_{1-8}alkyl;

said substituent group in "optionally substituted by a substituent group" is each independently selected from a group consisting of hydroxyl and C_{1-8}alkyl;

 in the five-membered ring and the six-membered ring represents a double bond optionally present in the ring;

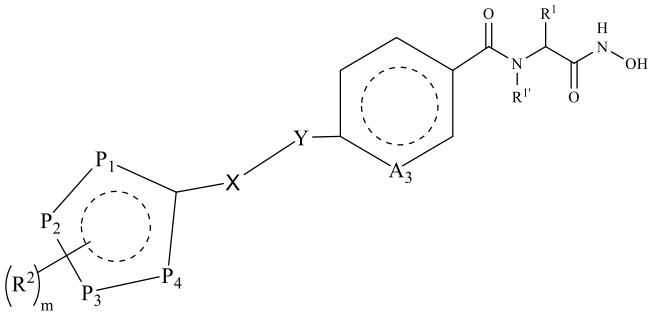
provided that:

when R^1 represents the C_{1-8}alkyl substituted by a substituent, and the substituent contains hydroxyl, each carbon atom of the C_{1-8}alkyl carries at least one hydrogen;

when R^1 represents the C_{1-8}alkyl substituted by a substituent, and the substituent contains amino, C_{1-8}alkylamino or $(C_{1-8}alkyl)_2$amino, at least one of X and Y represents a benzene ring group optionally substituted by a substituent group; and

when the five-membered ring contains one nitrogen atom, the five-membered ring is bonded to X through a non-nitrogen atom.

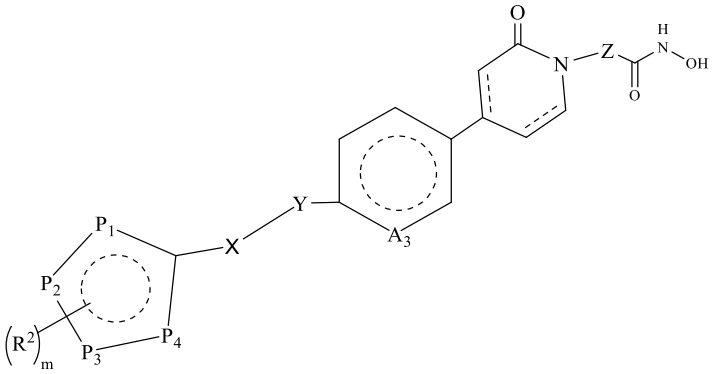
5. The compound according to claim 4, a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof, which compound is a compound represented by the following general formula (IV):



(IV)

wherein each group is defined as in claim 4.

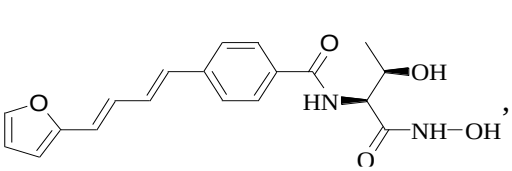
6. The compound according to claim 4, a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof, which compound is a compound represented by the following general formula (V):

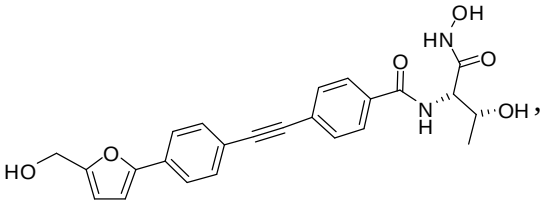


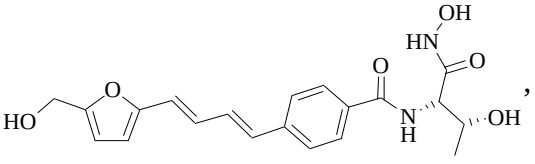
(V)

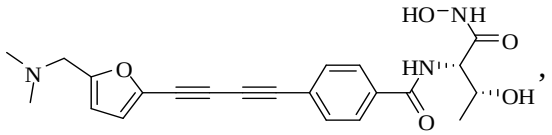
wherein each group is defined as in claim 4, Z represents $C_{1\text{-}8}$alkyl optionally substituted by R^1, ⎓ represents a double bond.

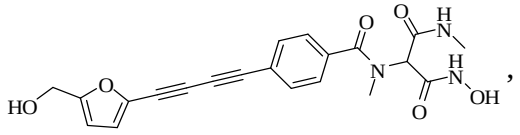
7. A compound, a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof, which compound is selected from a group consisting of the following compounds:

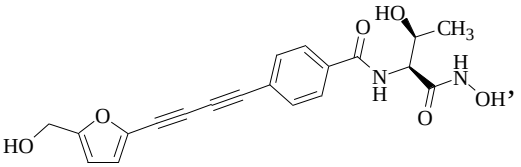


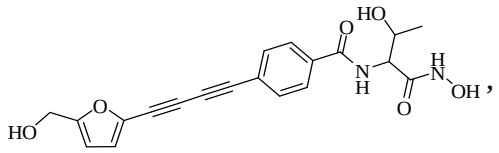


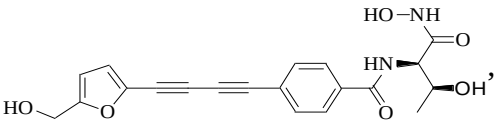


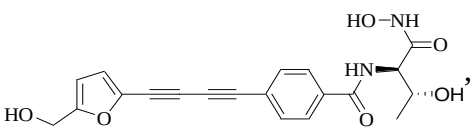
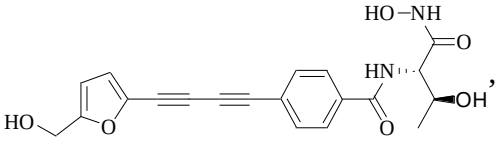
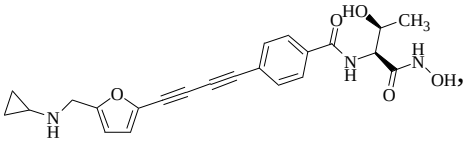
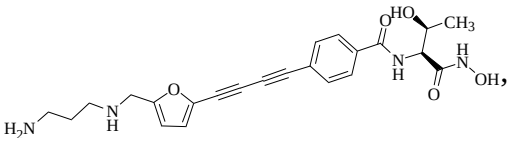
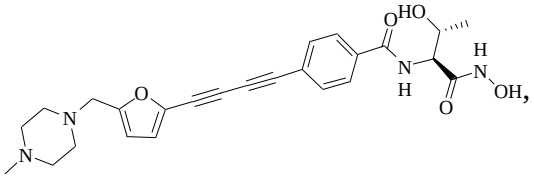
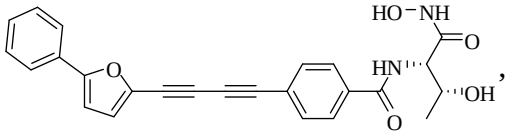
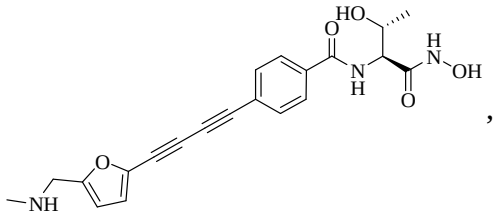
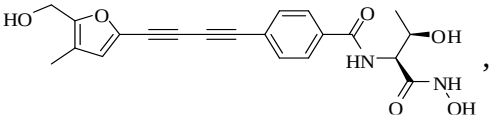
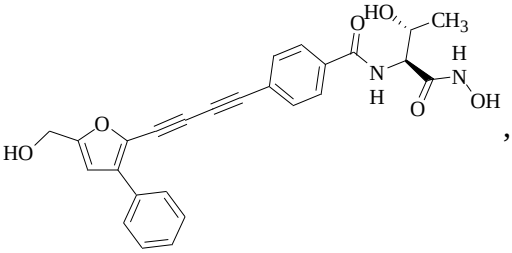
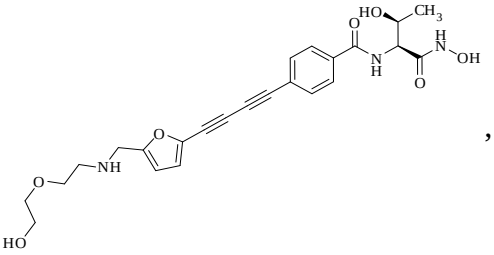
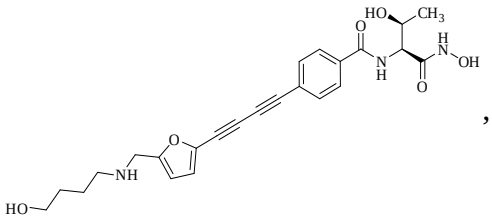
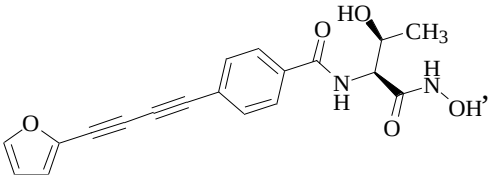
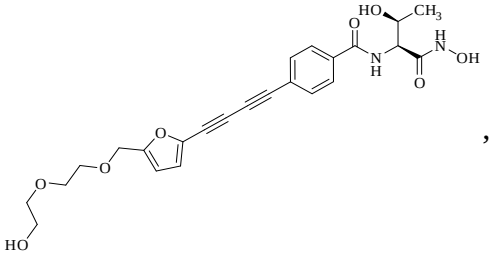
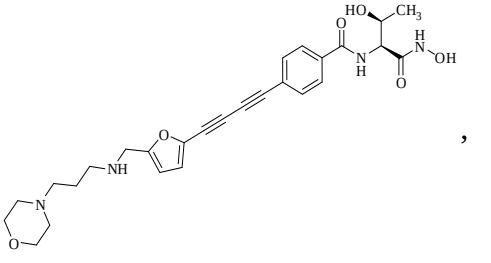
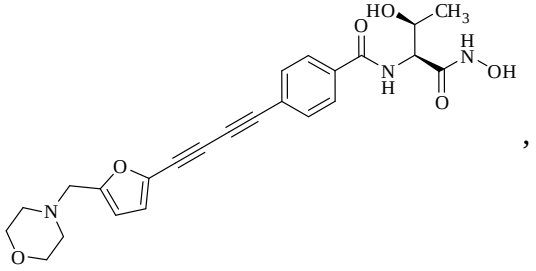
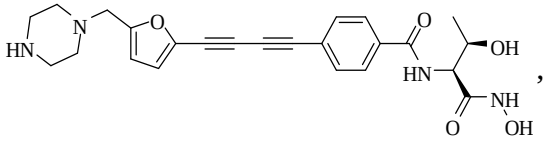


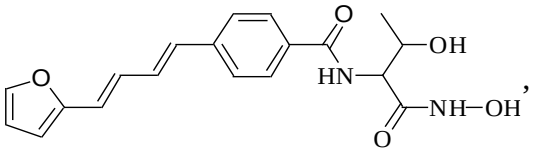


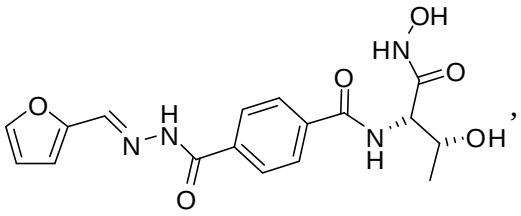


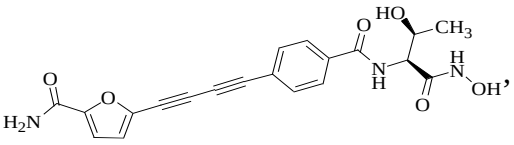


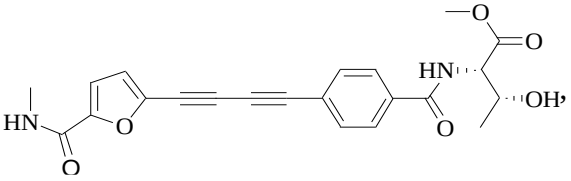


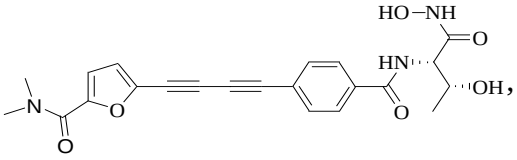

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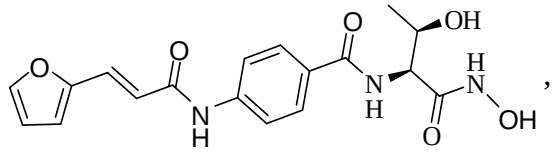


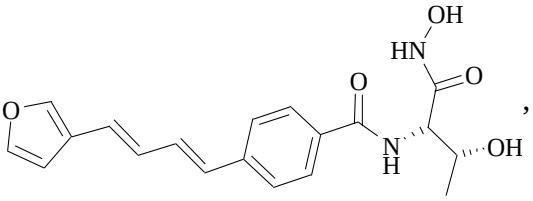


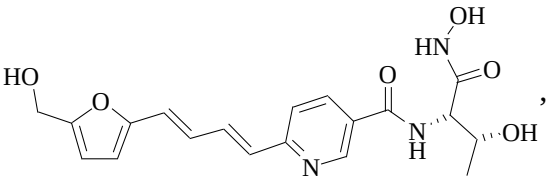


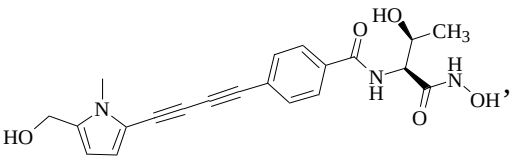


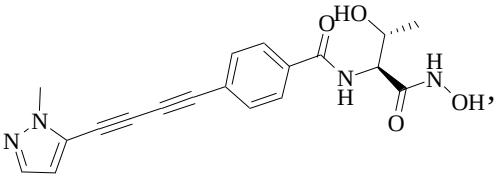


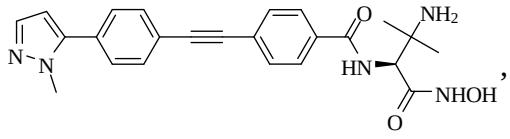


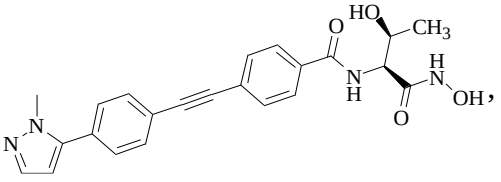


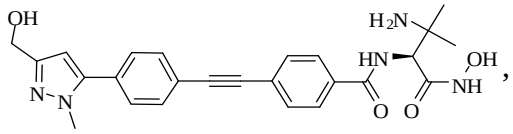


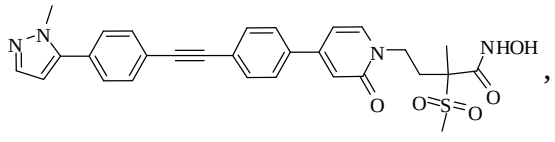


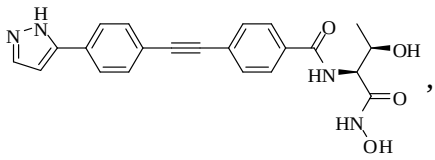


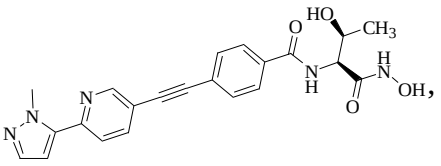


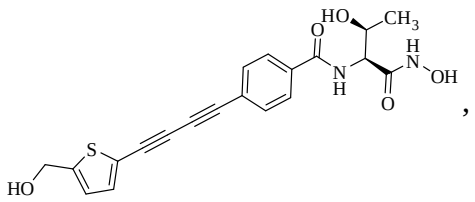


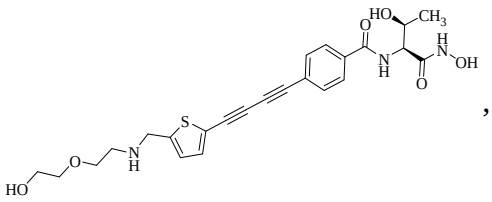


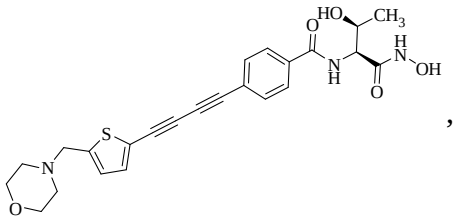
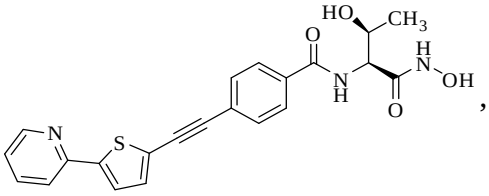
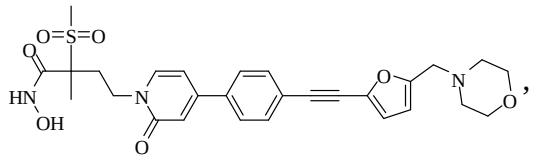
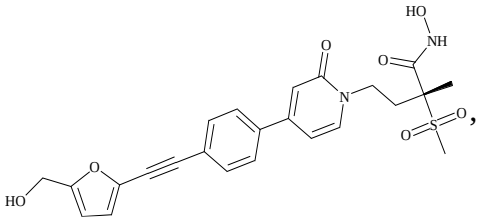
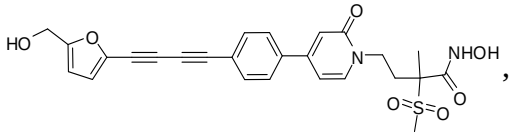
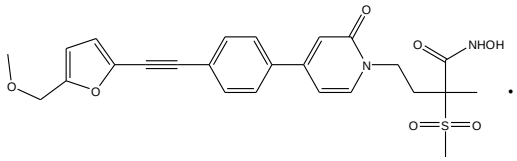











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and

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8. A pharmaceutical composition, comprising the compound according to claim 1, a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof.

9. The compound according to claim 1, a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof, or a pharmaceutical composition comprising the compound according to claim 1 for use in the treatment of infectious diseases caused by Gram-negative bacteria.

10. A pharmaceutical composition, comprising the compound according to claim 4, a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof.

11. The compound according to claim 4, a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof, or a pharmaceutical composition comprising the compound according to claim 4 for use in the treatment of infectious diseases caused by Gram-negative bacteria.

12. A pharmaceutical composition, comprising the compound according to claim 7, a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof.

13. The compound according to claim 7, a pharmaceutically acceptable salt thereof, a solvate thereof, or a deuterated analog thereof, or a stereoisomer thereof, or a pharmaceutical composition comprising the compound according to claim 7 for use in the treatment of infectious diseases caused by Gram-negative bacteria.