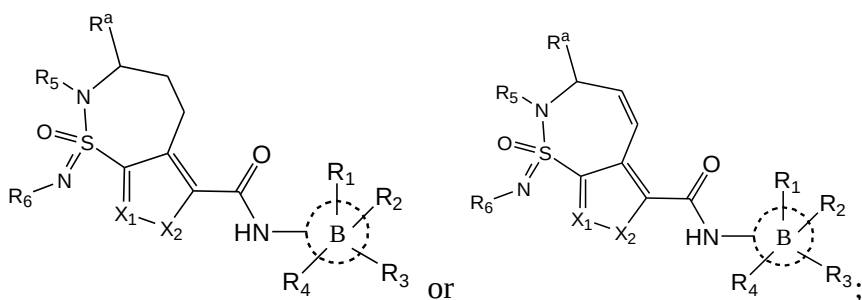
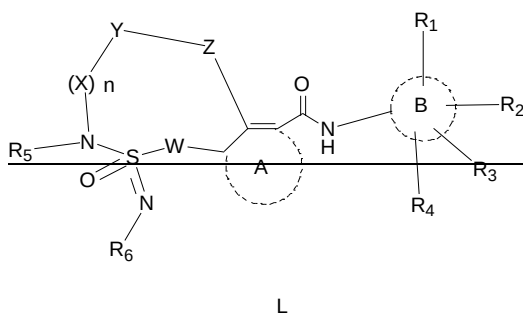
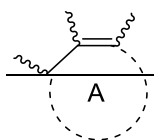


What we claim is:

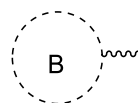
1. A compound represented by the following formula L, or a stereoisomer or tautomer thereof, or a pharmaceutically acceptable salt, hydrate or solvate thereof, wherein the formula L have any of the following structure:



wherein X₁ is -CR= or -N=, X₂ is -NR-; and R is H or C₁-C₄ alkyl;
wherein n is 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10;



~~is a substituted or unsubstituted five or six membered ring,~~
~~wherein the five or six membered ring optionally contains one or more~~
~~heteroatoms selected from the group consisting of O, S, N or P; the substituted~~
~~means that the hydrogen atoms on the group are substituted by one or more~~
~~substituents selected from the group consisting of C1-C3 alkyl (especially~~
~~methyl), C3-C4 cycloalkyl, cyano, or halogen;~~



~~is a substituted or unsubstituted five or six-membered aromatic~~
~~ring, or a substituted or unsubstituted five- or six-membered heteroaromatic ring;~~

~~X is CR^aR^b;~~

~~Y is substituted or unsubstituted C1-C7 alkylene, substituted or unsubstituted C2-C7 alkenylene, wherein, the substituent is selected from the group consisting of C1-C4 alkyl, hydroxyl;~~

~~Z is selected from the group consisting of O, S, N, P, or Z is C-C single bond (i.e. Z is none);~~

~~W is NR_c or none;~~

R₁, R₂, R₃ and R₄ are each independently selected from the group consisting of H, halogen, cyano, substituted or unsubstituted C₃-C₄ cycloalkyl, substituted or unsubstituted C₁-C₄ alkyl, substituted or unsubstituted C₁-C₄ alkoxy; wherein the substituted means that hydrogen atoms on the group are substituted by one or more substituents selected from the group consisting of halogen, C₁-C₄ alkyl (such as difluoromethyl, difluoroethyl, monofluoromethyl, trifluoromethyl, trifluoromethoxy);

R⁵, and R⁶ are each independently selected from the group consisting of H, halogen, -CN, hydroxyl, amino, carboxyl, -(C=O)-substituted or unsubstituted C₁-C₈ alkyl, substituted or unsubstituted C₁-C₈ alkyl, substituted or unsubstituted C₂-C₆ alkenyl, substituted or unsubstituted C₂-C₆ alkynyl, substituted or unsubstituted C₁-C₈ alkylamino, substituted or unsubstituted C₁-C₈ alkoxy, substituted or unsubstituted C₃-C₁₀ cycloalkyl, substituted or unsubstituted 3-10 membered heterocycloalkyl having 1-3 heteroatoms selected from the group consisting of N, S and O, substituted or unsubstituted C₆-C₁₀ aryl, and substituted or unsubstituted 5-10 membered heteroaryl having 1-3 heteroatoms selected from the group consisting of N, S and O;

~~R^a and R^b are each independently~~ is H, halogen, -CN, hydroxyl, amino, carboxyl, -(C=O) -substituted or unsubstituted C₁-C₈ alkyl, substituted or unsubstituted C₁-C₈ alkyl, substituted or unsubstituted C₂-C₆ alkenyl, substituted or unsubstituted C₂-C₆ alkynyl, substituted or unsubstituted C₁-C₈ alkylamino, substituted or unsubstituted C₁-C₈ alkoxy, substituted or unsubstituted C₁-C₆ alkoxy-alkyl, substituted or unsubstituted C₃-C₁₀ cycloalkyl, substituted or unsubstituted 3-10 membered heterocycloalkyl having 1-3 heteroatoms selected from the group consisting of N, S and O, substituted or unsubstituted C₆-C₁₀ aryl,

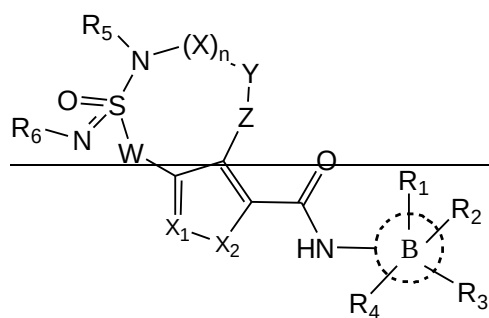
or substituted or unsubstituted 5-10 membered heteroaryl having 1-3 heteroatoms selected from the group consisting of N, S and O;

~~Re is H, halogen, CN, hydroxyl, amino, carboxyl, (C=O) substituted or unsubstituted C₁-C₈ alkyl, substituted or unsubstituted C₁-C₈ alkyl, substituted or unsubstituted C₂-C₆ alkenyl, substituted or unsubstituted C₂-C₆ alkynyl, substituted or unsubstituted C₁-C₈ alkylamino, substituted or unsubstituted C₁-C₈ alkoxy, substituted or unsubstituted C₃-C₁₀ cycloalkyl, substituted or unsubstituted 3-10 membered heterocycloalkyl having 1-3 heteroatoms selected from the group consisting of N, S and O, substituted or unsubstituted C₆-C₁₀ aryl, or substituted or unsubstituted 5-10 membered heteroaryl having 1-3 heteroatoms selected from the group consisting of N, S and O;~~

unless otherwise specified, “substituted” means that the group substituted by one or more (such as 2, 3, 4, etc.) substituents selected from the group consisting of halogen, C₁-C₆ alkyl, halogenated C₁-C₆ alkyl, C₁-C₆ alkoxy, halogenated C₁-C₆ alkoxy, C₃-C₈ cycloalkyl, halogenated C₃-C₈ cycloalkyl, oxo, -CN, hydroxyl, amino, carboxyl, and the following groups unsubstituted or substituted by one or more substituents: C₆-C₁₀ aryl, halogenated C₆-C₁₀ aryl, 5-10 membered heteroaryl having 1-3 heteroatoms selected from the group consisting of N, S and O, halogenated 5-10 membered heteroaryl having 1-3 heteroatoms selected from N, S and O; and the substituent is selected from the group consisting of halogen and C₁-C₆ alkoxy.

2. The compound of claim 1, or a stereoisomer or tautomer thereof, or a pharmaceutically acceptable salt, hydrate or solvate thereof, wherein R₁, R₂, R₃ and R₄ are each independently selected from the group consisting of H, halogen, cyano, substituted or unsubstituted C₃-C₄ cycloalkyl, C₁-C₄ alkyl, difluoromethyl, difluoroethyl, monofluoromethyl, trifluoromethyl, trifluoromethoxy substituted or unsubstituted C₁-C₄ alkoxy; wherein the substituted means that hydrogen atoms on the group are substituted by one or more substituents selected from the group consisting of halogen, C₁-C₄ alkyl.

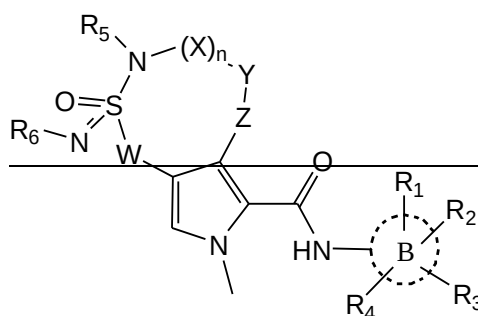
23. The compound of claim 1, or a stereoisomer or tautomer thereof, or a pharmaceutically acceptable salt, hydrate or solvate thereof, wherein—~~the compound has a structure according to Formula II:~~



II

wherein X_1 is CR^- or N^- , X_2 is NR^- ; and R is H or $\text{C}_1\text{-C}_4$ alkyl. R^a is selected from the group consisting of substituted or unsubstituted $\text{C}_3\text{-C}_6$ cycloalkyl, $\text{C}_1\text{-C}_4$ alkyl substituted by substituted or unsubstituted $\text{C}_3\text{-C}_6$ cycloalkyl, halogenated phenyl.

3. The compound of claim 1, stereoisomers or tautomers thereof, or pharmaceutically acceptable salts, hydrates or solvates thereof, wherein the compound has a structure according to Formula III:

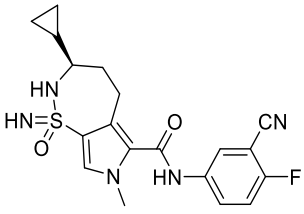
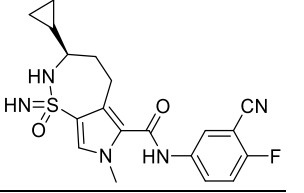
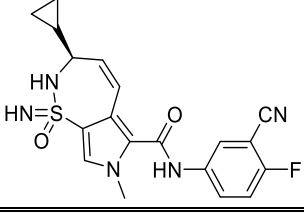
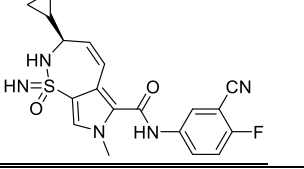
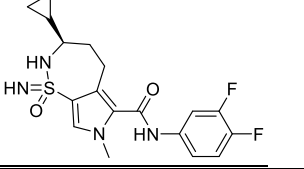
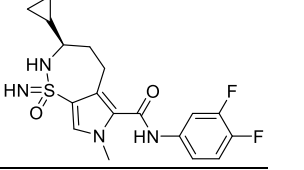
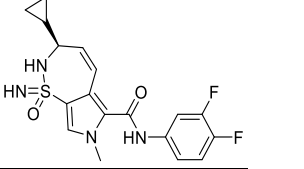


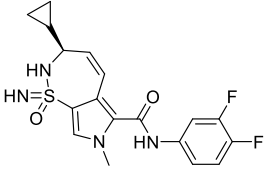
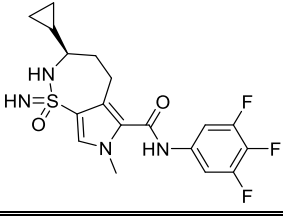
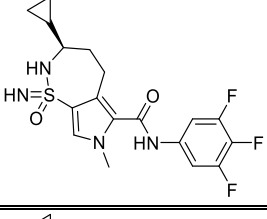
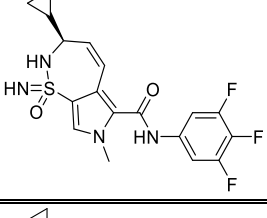
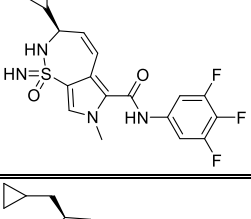
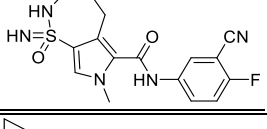
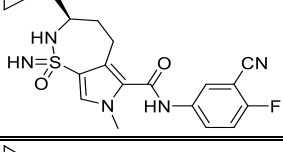
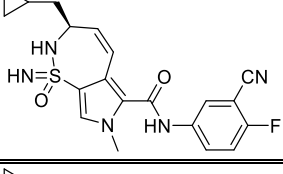
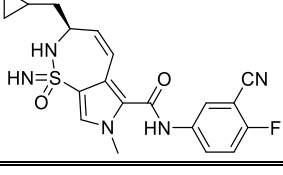
III

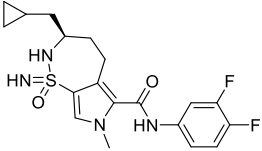
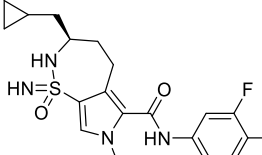
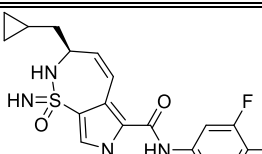
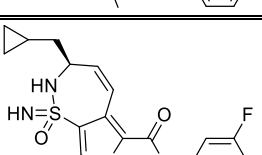
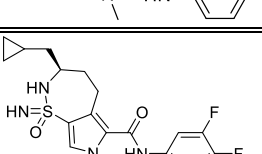
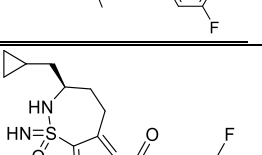
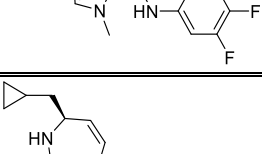
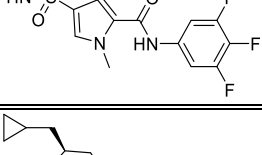
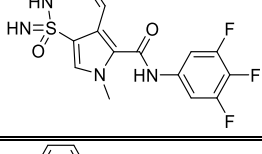
4. The compound of claim 1, or a stereoisomer or tautomer thereof, or a pharmaceutically acceptable salt, hydrate or solvate thereof, wherein R^a is selected from the group consisting of cyclopropyl, methylene cyclopropyl, 4-fluorophenyl, 4-methoxyphenyl is selected from the group consisting of substituted or unsubstituted $\text{C}_1\text{-C}_8$ alkyl, substituted or unsubstituted $\text{C}_1\text{-C}_8$ alkoxy, substituted or unsubstituted $\text{C}_1\text{-C}_6$ alkoxy alkyl; substituted or unsubstituted $\text{C}_3\text{-C}_6$ cycloalkyl, $\text{C}_1\text{-C}_4$ alkyl substituted by substituted or unsubstituted $\text{C}_3\text{-C}_6$ cycloalkyl, halogenated phenyl, substituted or unsubstituted $\text{C}_1\text{-C}_6$ alkoxy phenyl;

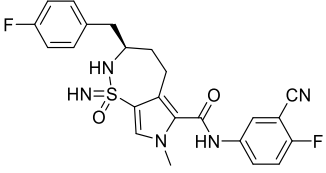
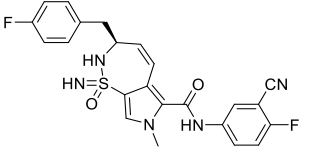
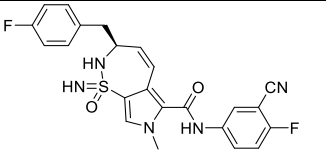
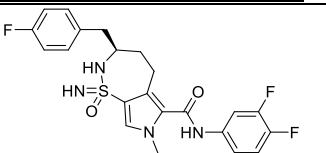
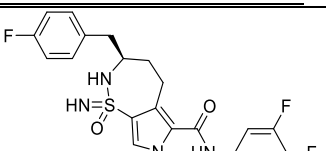
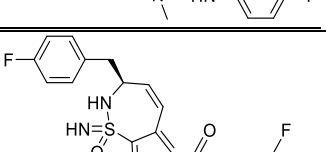
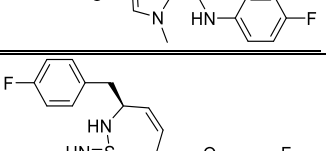
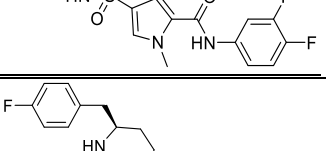
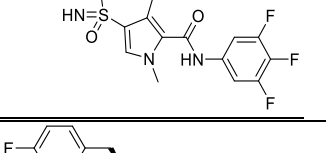
R^b is H.

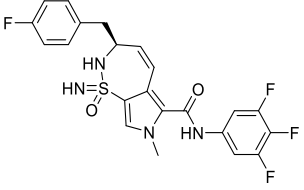
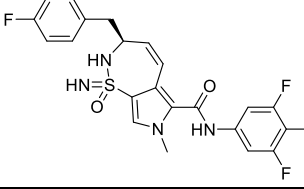
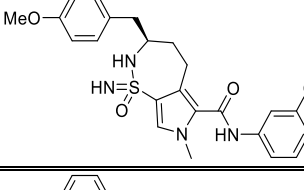
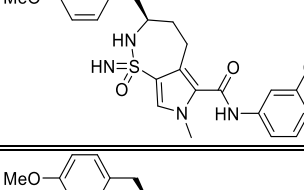
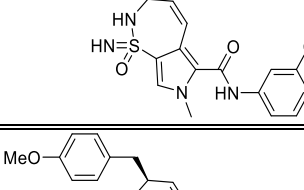
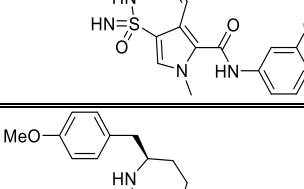
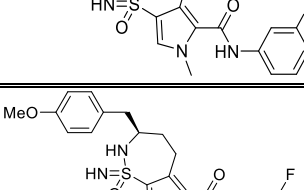
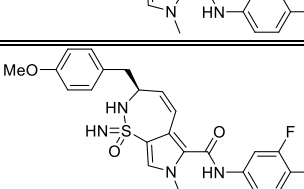
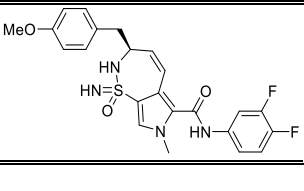
5. The compound of claim 1, or a stereoisomer or tautomer thereof, or a pharmaceutically acceptable salt, hydrate or solvate thereof, wherein the compound is ~~the compound 10a1-100c20 as described in Table 1a~~ a compound selected from the group consisting of:

<u>No.</u>	<u>Structure</u>	<u>Remark</u>
<u>100a01</u>		<u>Peak1 (HPLC)</u>
<u>100a02</u>		<u>Peak2 (HPLC)</u>
<u>100a03</u>		<u>Peak1 (HPLC)</u>
<u>100a04</u>		<u>Peak2 (HPLC)</u>
<u>100a05</u>		<u>Peak1 (HPLC)</u>
<u>100a06</u>		<u>Peak2 (HPLC)</u>
<u>100a07</u>		<u>Peak1 (HPLC)</u>

<u>100a08</u>		<u>Peak2 (HPLC)</u>
<u>100a09</u>		<u>Peak1 (HPLC)</u>
<u>100a10</u>		<u>Peak2 (HPLC)</u>
<u>100a11</u>		<u>Peak1 (HPLC)</u>
<u>100a12</u>		<u>Peak2 (HPLC)</u>
<u>100b01</u>		<u>Peak1 (HPLC)</u>
<u>100b02</u>		<u>Peak2 (HPLC)</u>
<u>100b03</u>		<u>Peak1 (HPLC)</u>
<u>100b04</u>		<u>Peak2 (HPLC)</u>

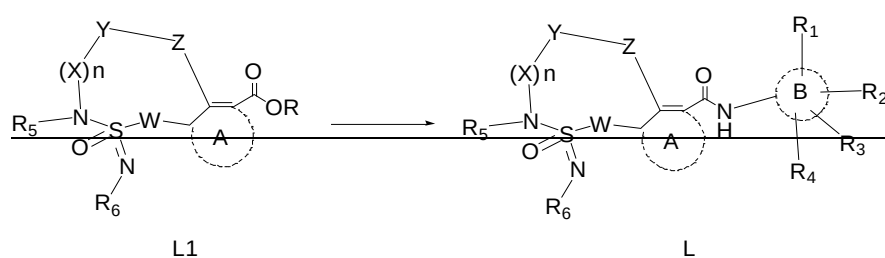
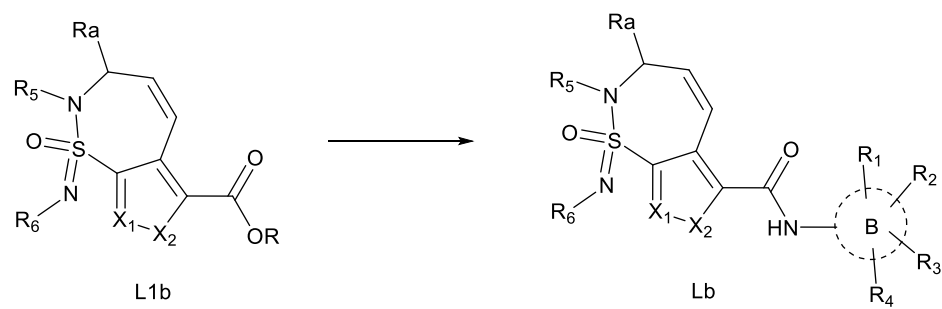
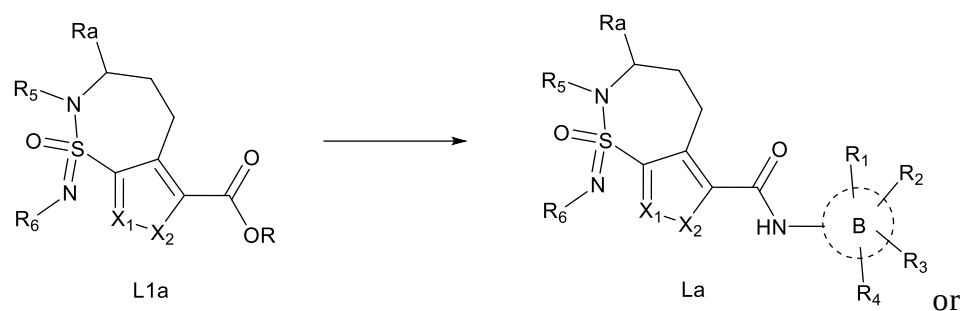
<u>100b05</u>		<u>Peak1 (HPLC)</u>
<u>100b06</u>		<u>Peak2 (HPLC)</u>
<u>100b07</u>		<u>Peak1 (HPLC)</u>
<u>100b08</u>		<u>Peak2 (HPLC)</u>
<u>100b09</u>		<u>Peak1 (HPLC)</u>
<u>100b10</u>		<u>Peak2 (HPLC)</u>
<u>100b11</u>		<u>Peak1 (HPLC)</u>
<u>100b12</u>		<u>Peak2 (HPLC)</u>
<u>100c01</u>		<u>Peak1 (HPLC)</u>

<u>100c02</u>		<u>Peak2 (HPLC)</u>
<u>100c03</u>		<u>Peak1 (HPLC)</u>
<u>100c04</u>		<u>Peak2 (HPLC)</u>
<u>100c05</u>		<u>Peak1 (HPLC)</u>
<u>100c06</u>		<u>Peak2 (HPLC)</u>
<u>100c07</u>		<u>Peak1 (HPLC)</u>
<u>100c08</u>		<u>Peak2 (HPLC)</u>
<u>100c09</u>		<u>Peak1 (HPLC)</u>
<u>100c10</u>		<u>Peak2 (HPLC)</u>

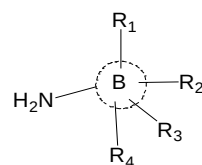
<u>100c11</u>		<u>Peak1 (HPLC)</u>
<u>100c12</u>		<u>Peak2 (HPLC)</u>
<u>100c13</u>		<u>Peak1 (HPLC)</u>
<u>100c14</u>		<u>Peak2 (HPLC)</u>
<u>100c15</u>		<u>Peak1 (HPLC)</u>
<u>100c16</u>		<u>Peak2 (HPLC)</u>
<u>100c17</u>		<u>Peak1 (HPLC)</u>
<u>100c18</u>		<u>Peak2 (HPLC)</u>
<u>100c19</u>		<u>Peak1 (HPLC)</u>
<u>100c20</u>		<u>Peak2 (HPLC)</u>

—wherein Peak 1 and Peak 2 refer to the order of the enantiomers' peaks in reversed-phase HPLC, wherein Peak 1 is the first peak in the enantiomer, and Peak 2 is the latter peak of the enantiomer.

6. A method for preparation of compound of claim 1, or a stereoisomer or tautomer thereof, or a pharmaceutically acceptable salt, hydrate or solvate thereof, wherein ~~the formula L compound is a compound represented by formula VII-1, and~~ the method comprises the following steps:



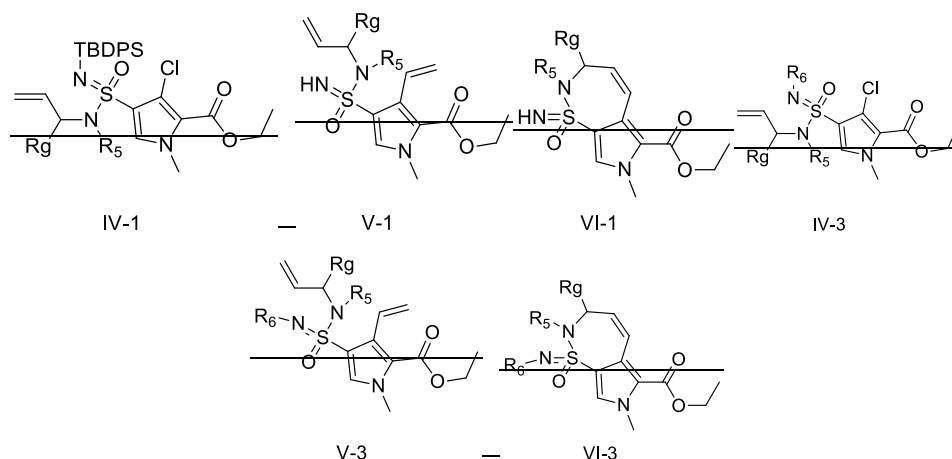
in inert solvents, compound L1a or L1b reacts with the compound according to formula La or Lb;



to afford

wherein, OR is a leaving group, and the remaining groups are defined as described in claim 1.

~~7. A compound selected from the group consisting of:~~



~~in each formula, R_g is selected from the group consisting of H, halogen, -CN, hydroxyl, amino, carboxyl, (C=O) substituted or unsubstituted C₁-C₈ alkyl, substituted or unsubstituted C₄-C₈ alkyl, substituted or unsubstituted C₂-C₆ alkenyl, substituted or unsubstituted C₂-C₆ alkynyl, substituted or unsubstituted C₁-C₈ alkylamino, substituted or unsubstituted C₁-C₈ alkoxy, substituted or unsubstituted C₃-C₁₀ cycloalkyl, substituted or unsubstituted 3-10 membered heterocycloalkyl having 1-3 heteroatoms selected from the group consisting of N, S and O, substituted or unsubstituted C₆-C₁₀ aryl, and substituted or unsubstituted 5-10 membered heteroaryl having 1-3 heteroatoms selected from the group consisting of N, S and O;~~

~~each group is defined as described in claim 1.~~

~~87. A pharmaceutical composition, wherein comprises (1) the compound, or the stereoisomer thereof, tautomer thereof, or a pharmaceutically acceptable salt, hydrate or solvate of claim 1 and (2) pharmaceutically acceptable carriers.~~

~~98. A use of the compound, or a stereoisomer or tautomer thereof, or a pharmaceutically acceptable salt, hydrate or solvate thereof of claim 1, or the pharmaceutical composition of claim 11-7 in the preparation of a medicine for prevention and/or treatment of hepatitis B virus infection.~~

109. A hepatitis B virus inhibitor which comprises a compound, or a stereoisomer or a tautomer thereof, or a pharmaceutically acceptable salt, hydrate or solvate thereof of claim 1.

110. A method for in vitro inhibiting hepatitis B virus, which comprises the step: contacting the compound, or a stereoisomer or tautomer thereof, or a pharmaceutically acceptable salt, hydrate or solvate thereof of claim 1 with hepatitis B virus so as to inhibit the replication of hepatitis B virus.