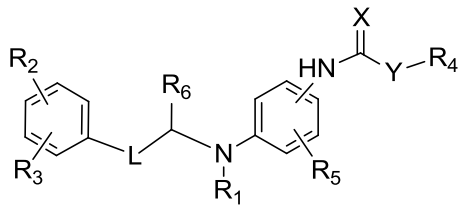
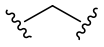
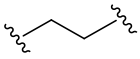
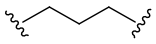
1. A compound of the following general formula I or a pharmaceutically acceptable salt thereof:



I

wherein,

L is not present, or L is a linking radical selected from the group consisting of ,  and , optionally substituted by C_1-C_4 alkyl;

R_1 is a radical selected from the group consisting of ~~H,~~C_1-C_6 alkyl, C_3-C_6 cycloalkyl, C_1-C_6 alkylcarbonyl, C_1-C_6 alkoxylcarbonyl, C_1-C_6 alkylamino carbonyl, C_2-C_8 alkenyl, C_5-C_7 cycloalkenyl, C_2-C_8 alkynyl and C_6-C_{10} aryl; wherein, the C_1-C_6 alkyl is unsubstituted or optionally substituted by hydroxyl, amino, C_1-C_4 alkoxyl, C_1-C_4 alkylcarbonyl, halogen atom, C_6-C_{10} aryl or halogenated C_6-C_{10} aryl; the C_2-C_8 alkenyl is unsubstituted or optionally substituted by hydroxyl, amino, C_1-C_4 alkylcarbonyl, C_1-C_4 alkoxyl, halogen atom, C_6-C_{10} aryl or halogenated C_6-C_{10} aryl; and the C_2-C_8 alkynyl is unsubstituted or optionally substituted by hydroxyl, amino, C_1-C_4 alkylcarbonyl, C_1-C_4 alkoxyl, halogen atom, C_6-C_{10} aryl or halogenated C_6-C_{10} aryl;

R_2 is a radical selected from the group consisting of halogen atom and C_1-C_4 alkoxyl;

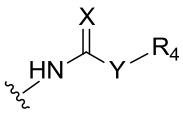
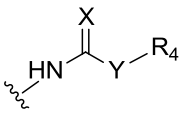
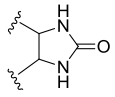
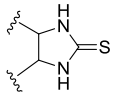
R_3 is a radical selected from the group consisting of H, halogen atom, trifluoromethyl, cyano, nitro, C_1-C_4 alkylcarbonyl and C_1-C_4 alkoxylcarbonyl;

X is O, S or NH;

Y is not present, or Y is O or NR_7, wherein R_7 is a radical selected from the group consisting of H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl and C_3-C_8 cycloalkyl;

R_4 is a radical selected from the group consisting of C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl and C_6-C_{10} aryl;

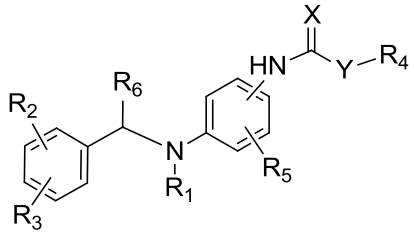
R_5 is a radical selected from the group consisting of H, halogen atom, amino, C_1-C_6

alkylamino and , or R_5, together with adjacent , forms a fused-ring structure of  or ;

R_6 is H, C_1-C_6 alkyl or C_3-C_6 cycloalkyl; and

in the above said definitions of substituents, the halogen atom or the halogen atom in halogenated group is F, Cl or Br.

2. The compound or the pharmaceutically acceptable salt thereof according to claim 1, wherein the compound or the pharmaceutically acceptable salt has a structure of general formula II:



II

wherein,

R_1 is a radical selected from the group consisting of ~~H,~~C_1-C_6 alkyl, C_3-C_6 cycloalkyl, C_1-C_6 alkylcarbonyl, C_1-C_6 alkoxylcarbonyl, C_1-C_6 alkylaminocarbonyl, C_2-C_8 alkenyl, C_5-C_7 cycloalkenyl, C_2-C_8 alkynyl and C_6-C_{10} aryl; wherein, the C_1-C_6 alkyl is unsubstituted or optionally substituted by hydroxyl, amino, C_1-C_4 alkylcarbonyl, halogen atom, C_6-C_{10} aryl or halogenated C_6-C_{10} aryl; the C_2-C_8 alkenyl is unsubstituted or optionally substituted by hydroxyl, amino, C_1-C_4 alkylcarbonyl, C_1-C_4 alkoxyl, halogen atom, C_6-C_{10} aryl or halogenated C_6-C_{10} aryl; the C_2-C_8 alkynyl is unsubstituted or optionally substituted by hydroxyl, amino, C_1-C_4 alkylcarbonyl, C_1-C_4 alkoxyl, halogen atom, C_6-C_{10} aryl or halogenated C_6-C_{10} aryl;

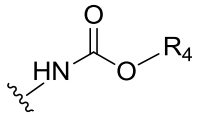
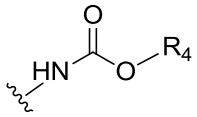
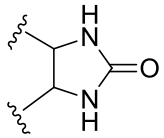
R_2 is a radical selected from the group consisting of halogen atom and C_1-C_4 alkoxyl;

R_3 is a radical selected from the group consisting of H, halogen atom, trifluoromethyl and nitro;

X is O;

Y is not present or Y is O;

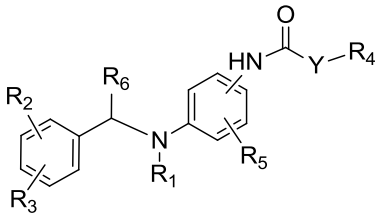
R_4 is a radical selected from the group consisting of C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl and C_6-C_{10} aryl;

R_5 is a radical selected from the group consisting of H, halogen atom, amino and , or R_5, together with adjacent , forms a fused-ring structure of ;

R_6 is H, C_1-C_6 alkyl or C_3-C_6 cycloalkyl;

in the above said definitions of substituents, the halogen atom or the halogen atom in halogenated group is F, Cl or Br.

3. The compound or the pharmaceutically acceptable salt thereof according to claim 1, wherein the compound has a structure of general formula III:



III

wherein,

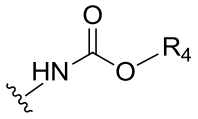
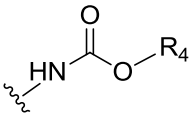
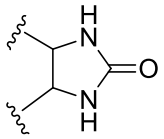
R_1 is a radical selected from the group consisting of ~~H,~~C_1-C_6 alkyl, C_2-C_8 alkenyl, C_5-C_7 cycloalkenyl and C_2-C_8 alkynyl; wherein, the C_1-C_6 alkyl is unsubstituted or optionally substituted by hydroxyl, amino, C_1-C_4 alkylcarbonyl, halogen atom, phenyl or halogenated phenyl; the C_2-C_8 alkenyl is unsubstituted or optionally substituted by hydroxyl, amino, halogen atom, phenyl or halogenated phenyl; the C_2-C_8 alkynyl is unsubstituted or optionally substituted by hydroxyl, amino, halogen atom, phenyl or halogenated phenyl;

R_2 is a radical selected from the group consisting of F, Cl and methoxyl;

R_3 is a radical selected from the group consisting of H, halogen atom and trifluoromethyl;

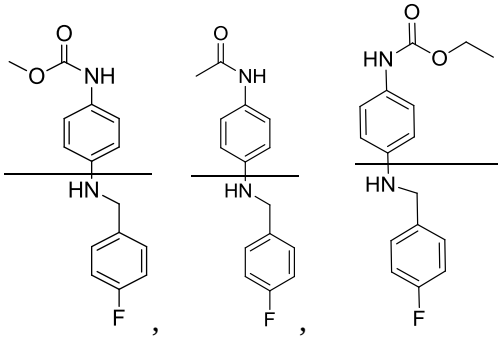
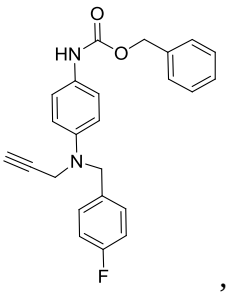
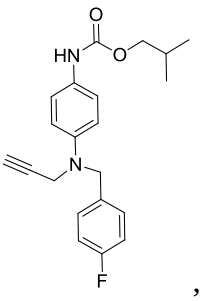
Y is not present or Y is O;

R_4 is a radical selected from the group consisting of C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl and C_6-C_{10} aryl;

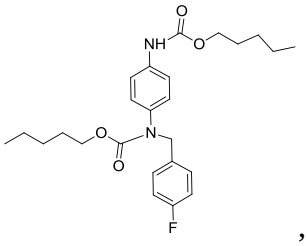
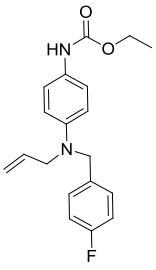
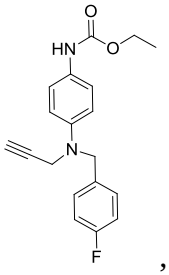
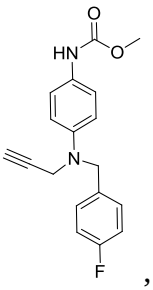
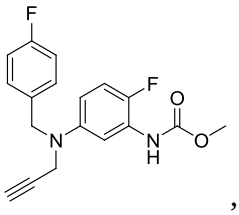
R_5 is a radical selected from the group consisting of H, halogen atom, amino and  , or R_5, together with adjacent  , forms a fused-ring structure of  ;

R_6 is H or C_1-C_6 alkyl.

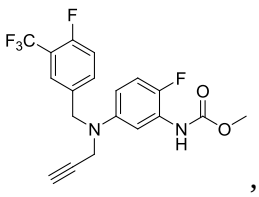
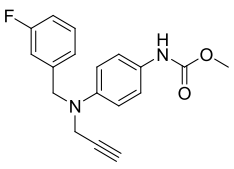
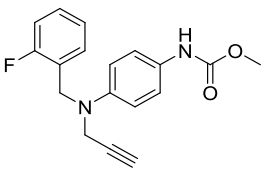
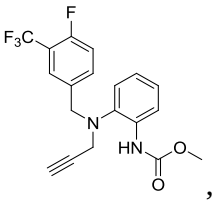
4. The compound or the pharmaceutically acceptable salt thereof according to claim 1, wherein the compound is one selected from compounds K1 to K39:

 , , ,  ,  ,

~~K1~~ ~~K2~~ ~~K3~~ K4 K5

 ,  ,  ,  ,  ,

K6 K7 K8 K9 K10

 ,  ,  ,  ,

K11 K12 K13 K14