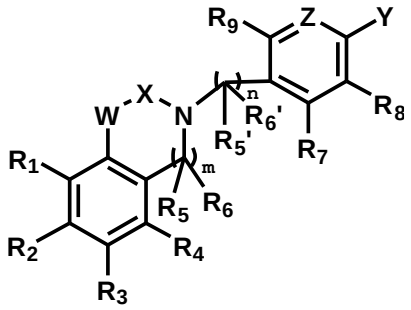
Claims

1. The compound of formula I or a stereoisomer, or a pharmaceutically acceptable salt thereof:



Formula I

wherein,

R_1, R_3 are chlorine;

R_2, R_4, R_5, R_5', R_6, R_6', R_7, R_8 and R_9 are hydrogen;

X is ;

W is O;

m is 1;

n is 0;

Z is N;

Y is $COOR_{15}$;

$R_{15}$is selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{3-8} cycloalkyl, C_{6-10} aryl, 3-15 membered saturated or unsaturated heterocycloalkyl or heteroaryl containing one or more (e.g. 2, 3 or 4) heteroatoms selected from N, S or O, and -(C_{1-6} alkylene)(3-15 membered saturated or unsaturated heterocycloalkyl or heteroaryl containing one or more (e.g. 2, 3, 4 or 5) heteroatoms selected from N, S or O); the alkyl, cycloalkyl, aryl, heteroaryl and heterocycloalkyl are optionally substituted by one or more (e.g. 2, 3 or 4) substituents selected from the group consisting of hydroxyl, C_{1-6} alkylene hydroxyl, -$NR_{20}R_{21}$, C_{2-6} alkynyl, C_{2-6} alkenyl, C_{1-6} alkyl, C_{3-8} cycloalkyl, 3-8 membered heterocycloalkyl containing one or more (e.g. 2, 3 or 4) heteroatoms selected from N, S or O unsubstituted or substituted by C_{1-6} alkyl, halogenated C_{1-6} alkyl, C_{1-6} alkyl substituted by amino and carboxyl, C_{1-6} alkoxy, and -COO(C_{1-6} alkyl);

R_{20} and R_{21} are independently selected from the group consisting of hydrogen, C_{1-6} alkyl.

2. The compound or the stereoisomer, or the pharmaceutically acceptable salt thereof of claim 1, wherein

R_1, R_3 are chlorine;

R_2, R_4, R_7, R_8 and R_9 are hydrogen;

R_5, R_5', R_6 and R_6' are each hydrogen;

W is O;

X is ;

Z is N;

Y is $COOR_{15}$;

R_{15} is selected from the group consisting of hydrogen, C_{1-6} alkyl, and C_{3-8} cycloalkyl; the alkyl and cycloalkyl are optionally substituted by one or more (e.g. 2, 3 or 4) C_{1-6} alkoxy;

m = 1 and n = 0.

3. The compound or the stereoisomer, or the pharmaceutically acceptable salt thereof of claim 1, wherein

R_1, R_3 are chlorine;

R_2, R_4, R_7, R_8 and R_9 are hydrogen;

R_5, R_5', R_6 and R_6' are each hydrogen;

W is O;

X is ;

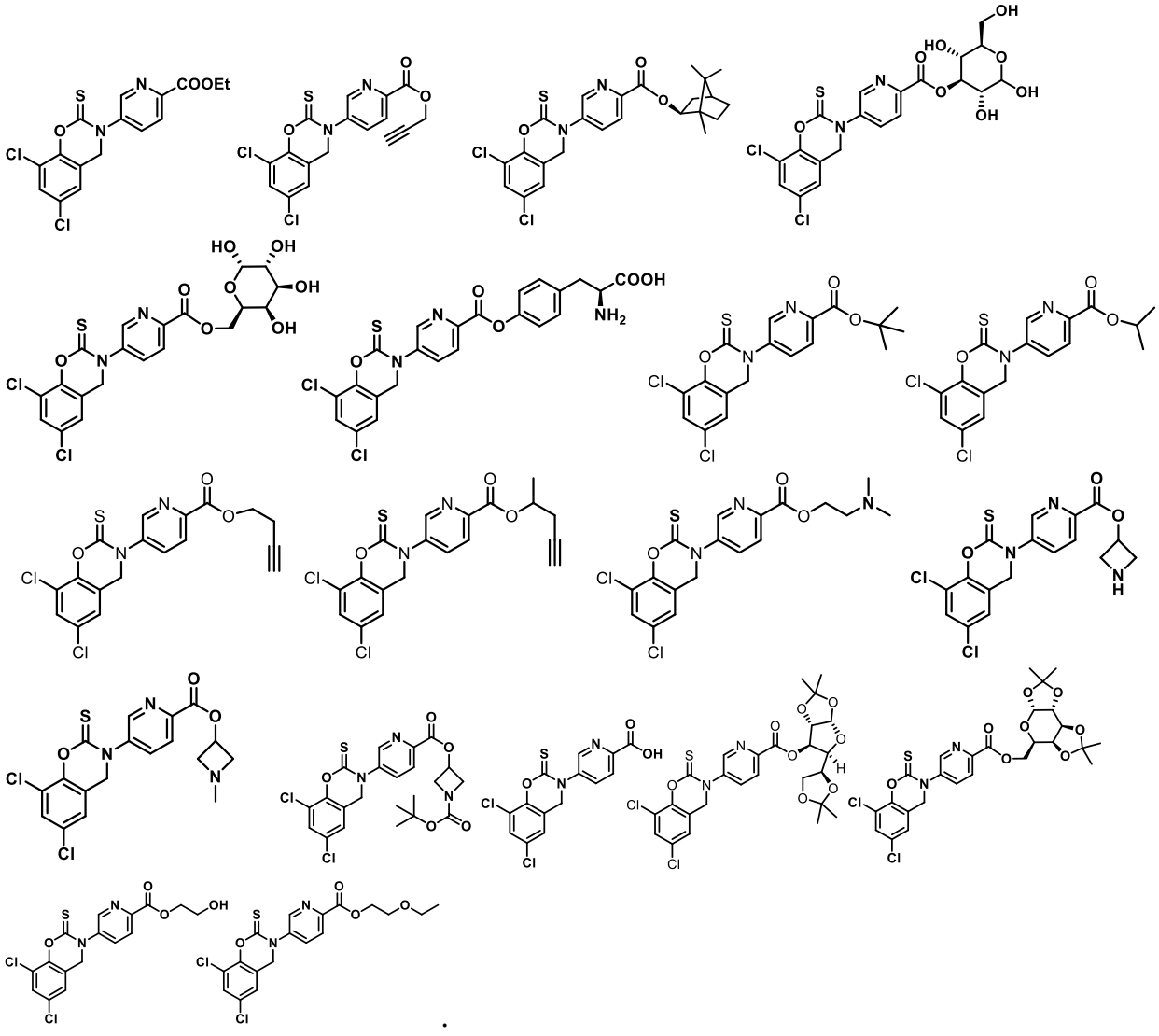
Z is N;

Y is $COOR_{15}$;

R_{15} is C_{1-6} alkyl substituted by C_{1-6} alkoxy;

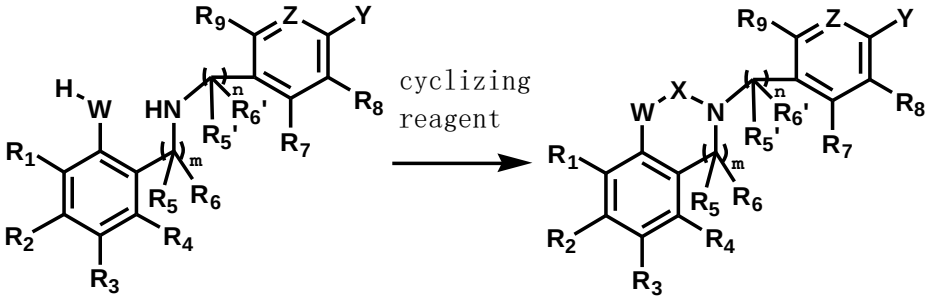
m = 1 and n = 0.

4. The compound or the stereoisomer, or the pharmaceutically acceptable salt thereof of claim 1, wherein the compound is selected from the group consisting of



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5. A preparation method for the compound or the stereoisomer, or the pharmaceutically acceptable salt thereof of claim 1 comprising the following steps:



formula I’ formula I

reacting a compound of formula I’ with a cyclizing reagent to obtain the compound of formula I;

wherein, R_1, R_2, R_3, R_4, R_5, R_5', R_6, R_6', R_7, R_8, R_9, W, X, Z, Y, m and n are as defined in claim 1.

6. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and one or more compounds or the stereoisomer or the pharmaceutically acceptable salt thereof of claim 1.

7. Use of the compound or the stereoisomer or the pharmaceutically acceptable salt thereof of claim 1 for the preparation of a medicament for the prevention and/or treatment of neuronal damage-affected diseases or disorders.

8. The use of claim 7, wherein the neuronal damage-affected diseases or disorders are selected from the group consisting of neuropathic pain, migraine, inflammatory pain, chronic pain, stroke, brain injury, depression, Alzheimer's disease, epilepsy, affective disorders, and neurodegenerative diseases.