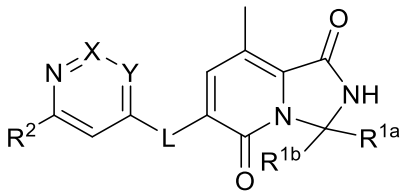
CLAIMS

1. A compound having the following Structure (II):



(II)

or a pharmaceutically acceptable salt, stereoisomer, tautomer, or prodrug thereof, wherein

R^{1a} is C_1-C_6 alkyl or aryl;

R^{1b} is C_1-C_6 alkyl or aryl,

or R^{1a} and R^{1b}, together with the carbon to which they are both attached, join to form cycloalkyl, cycloalkenyl, heterocyclyl, aryl, or heteroaryl;

R^2 is $–NHR^{3a}$, $–NHC(=O)R^{3b}$, $–NHC(=S)R^{3b}$, or $–C(=O)R^{3c}$;

R^{3a} is hydrogen, C_1-C_6 alkyl, or C_3-C_6 cycloalkyl, each of which is optionally substituted with one or more substituents selected from the group consisting of hydroxyl, C_3-C_6 cycloalkyl, $-NHS(O)_2CH_3$, heterocyclyl, $-C(=O)OH$, $-C(=O)N(R^{3d})R^{3d}$, or $-N(R^{3d})R^{3d}$;

R^{3b} is C_1-C_6 alkyl, C_3-C_6 cycloalkyl, or heterocyclyl each of which is optionally substituted with one or more substituents selected from the group consisting of hydroxyl, halo, C_1-C_6 alkyl, C_3-C_6 cycloalkyl, $-NHS(O)_2CH_3$, $-N(R^{3d})R^{3d}$, heterocyclyl, $-C(=O)OH$, $-C(=O)N(R^{3d})R^{3d}$, $-NHC(=O)CH_3$, $-CH_2C(=O)OH$,

R^{3c} is $-N(R^{3d})R^{3d}$ or heterocyclyl;

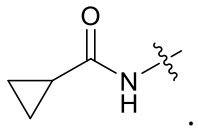
R^{3d} is, at each occurrence, independently hydrogen, C_1-C_6 alkyl, or C_3-C_6 cycloalkyl;

L is $–NH–$ or $–CH_2NH–$; and

X is N and Y is CH or X is CH and Y is N,

provided that:

when R^{1a} and R^{1b} are both $–CH_3$ or when R^{1a} and R^{1b} join to form a 5- or 6-membered cycloalkyl or heterocyclyl, then R^2 does not have the following structure:

$–NH_2$ or .

2. The compound of claim 1, wherein R^{1a} is C_1-C_6 alkyl, preferably methyl.

3. The compound of claim 1, wherein R^{1a} is aryl, preferably phenyl.

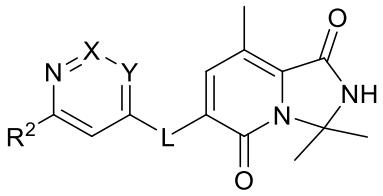
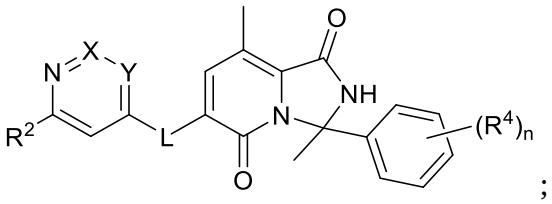
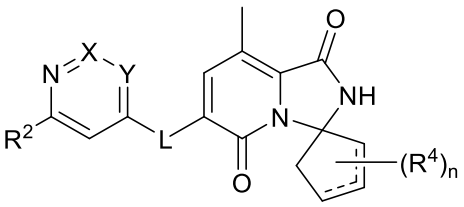
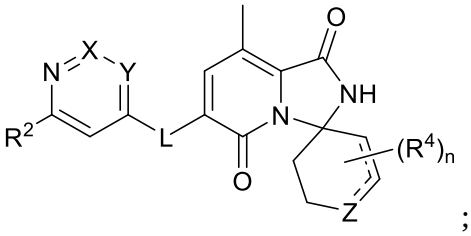
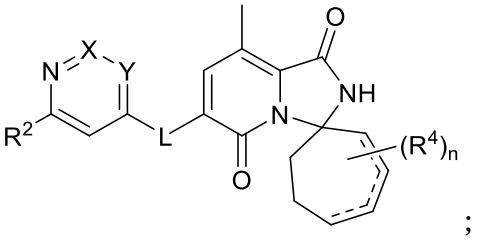
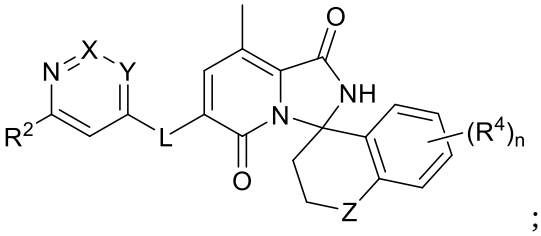
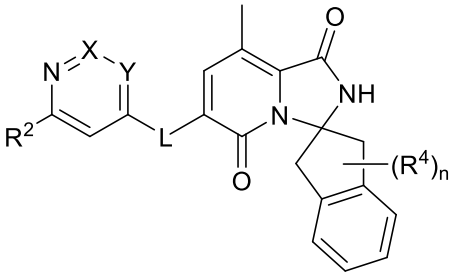
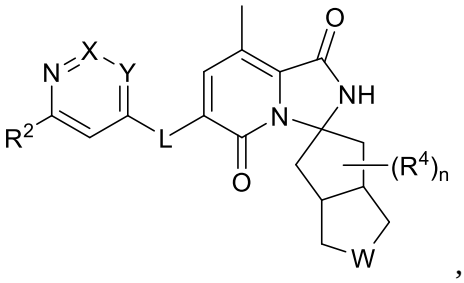
4. The compound of any one of claims 1-3, wherein R^{1b} is C_1-C_6 alkyl, preferably methyl.

5. The compound of claim 1, wherein R^{1a} and R^{1b}, together with the carbon to which they are both attached, join to form cycloalkyl, preferably cyclopentyl or cyclohexyl.

6. The compound of claim 1, wherein R^{1a} and R^{1b}, together with the carbon to which they are both attached, join to form cycloalkenyl, preferably cyclopentenyl, cyclohexenyl, or cycloheptenyl.

7. The compound of claim 1, wherein R^{1a} and R^{1b}, together with the carbon to which they are both attached, join to form heterocyclyl, aryl, or heteroaryl.

8. The compound of any one of claims 1-7, wherein the compound has one of the following structures:


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or

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or a pharmaceutically acceptable salt, stereoisomer, tautomer, or prodrug thereof, wherein

---- indicates a double or single bond;

R^4 is, at each occurrence, independently C_1-C_6 alkyl, C_3-C_6 cycloalkyl, halo, haloalkyl, hydroxyl, -$NHS(O)_2CH_3$, or -C(O)OH,

or two R^4, together with the carbon to which they are both attached, join to form a cycloalkyl;

W is N or O;

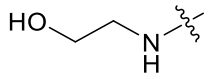
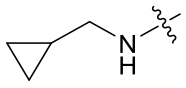
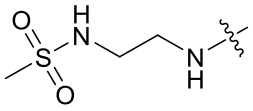
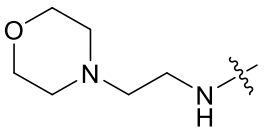
Z is C or O; and

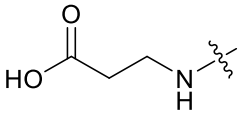
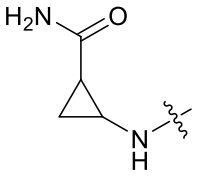
n is 0, 1, 2, 3, or 4.

9. The compound of claim 8, wherein n is 0, 1, or 2.

10. The compound of any one of claims 1-9, wherein R^2 is $–NHR^{3a}$; or

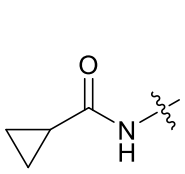
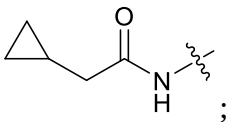
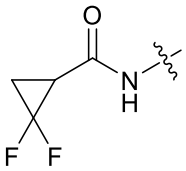
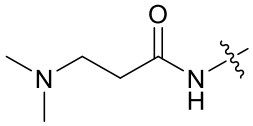
R^2 has one of the following structures:

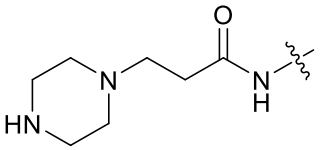
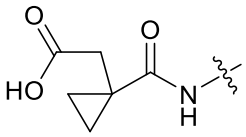
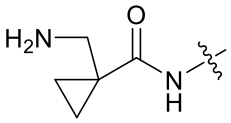
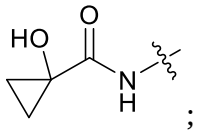
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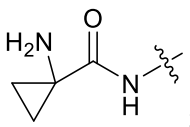
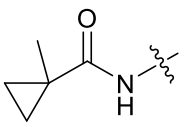
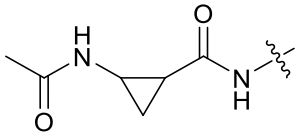
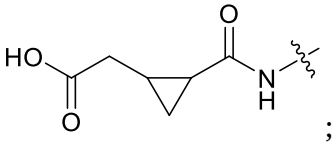
 or  ; or

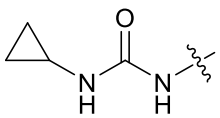
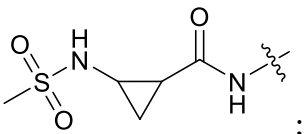
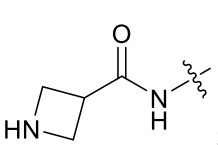
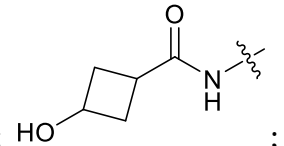
R^2 is $–NHC(=O)R^{3b}$; or

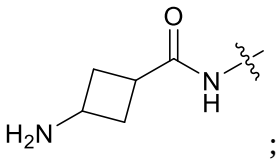
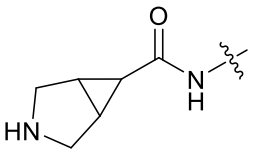
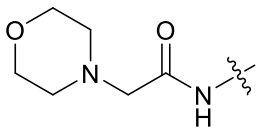
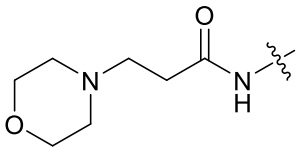
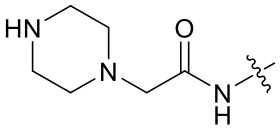
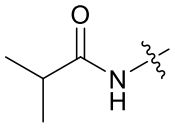
R^2 has one of the following structures:

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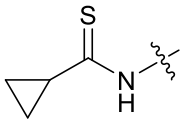
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or 
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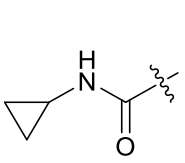
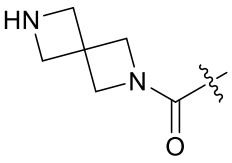
R^2 is –NHC(=S)R^{3b}; or

R^2 has the following structure:

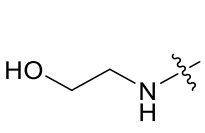
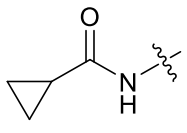
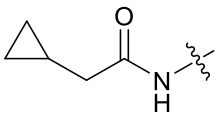
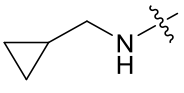
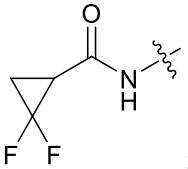
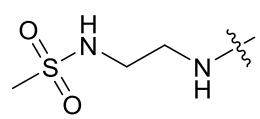
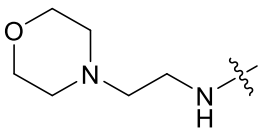
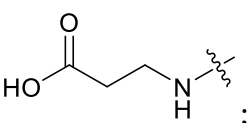

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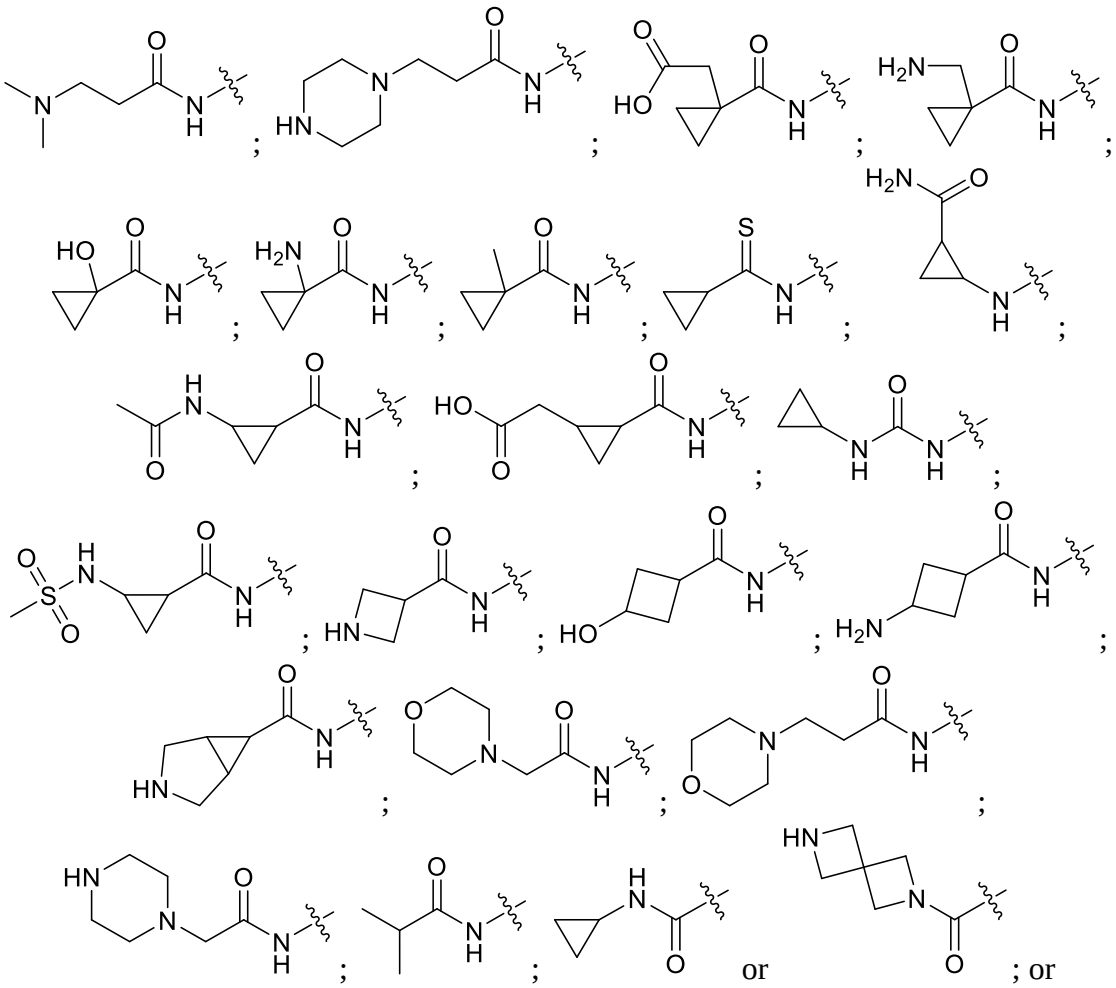
R^2 is –C(=O)R^{3c}; or

R^2 has one of the following structures:

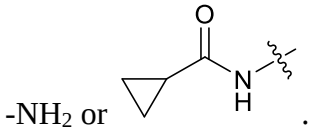

or 
; or

R^2 has one of the following structures:

-NH_2; 
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; 
;



R^2 has one of the following structures:



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11. The compound of any one of claims 1-10, wherein X is CH and Y is N.

12. The compound of any one of claims 1-10, wherein X is N and Y is CH.

13. The compound of any one of claims 1-12, wherein L is –NH–.

14. The compound of any one of claims 1-12, wherein L is –CH_2NH–.

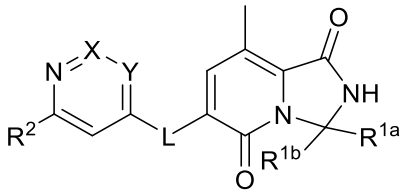
15. The compound of any one of claims 1-14, wherein the compound is selected from Table 1, or a pharmaceutically acceptable salt, stereoisomer, tautomer, or prodrug thereof.

16. A pharmaceutical composition comprising the compound of any one of claims 1-15, and a pharmaceutically acceptable carrier, diluent or excipient.

17. A compound of any one of claims 1-15, or the pharmaceutical composition of claim 16 for use in treating a disease or disorder.

18. Use of a compound of any one of claims 1-15, or the pharmaceutical composition of claim 16 in the manufacture of a medicament for treating a disease or a disorder, wherein the disease or disorder is Huntington’s disease, Alzheimer's, high fat induced obesity, Fragile X Symdrome, lupus, Covid19 related acute respiratory distress syndrome (ARDS), non-alcoholic fatty liver disease (NAFLD), or viral induced pain.

19. A compound for use in treating neuropathic pain, the compound having the following Structure (II):



(II)

or a pharmaceutically acceptable salt, stereoisomer, tautomer, or prodrug thereof, wherein

R^{1a} is C_1-C_6 alkyl or aryl;

R^{1b} is C_1-C_6 alkyl or aryl,

or R^{1a} and R^{1b}, together with the carbon to which they are both attached, join to form cycloalkyl, cycloalkenyl, heterocyclyl, aryl, or heteroaryl;

R^2 is heterocyclyl, –NHR^{3a}, –$NHC(=O)R^{3b}$, –$NHC(=S)R^{3b}$, or –$C(=O)R^{3c}$;

R^{3a} is hydrogen, C_1-C_6 alkyl, or C_3-C_6 cycloalkyl, each of which is optionally substituted with one or more substituents selected from the group consisting of hydroxyl, C_3-C_6 cycloalkyl, -$NHS(O)_2CH_3$, heterocyclyl, -$C(=O)OH$, -$C(=O)N(R^{3d})R^{3d}$, or -$N(R^{3d})R^{3d}$;

R^{3b} is C_1-C_6 alkyl, C_3-C_6 cycloalkyl, or heterocyclyl each of which is optionally substituted with one or more substituents selected from the group consisting of hydroxyl, halo, C_1-C_6 alkyl, C_3-C_6 cycloalkyl, -$NHS(O)_2CH_3$, -$N(R^{3d})R^{3d}$, heterocyclyl, -$C(=O)OH$, -$C(=O)N(R^{3d})R^{3d}$, -$NHC(=O)CH_3$, -$CH_2C(=O)OH$,

R^{3c} is -$N(R^{3d})R^{3d}$ or heterocyclyl;

R^{3d} is, at each occurrence, independently hydrogen, C_1-C_6 alkyl, or C_3-C_6 cycloalkyl;

L is –NH– or –CH_2NH–; and

X is N and Y is CH or X is CH and Y is N, to a subject in need thereof.

20. A compound from Table 1 or a pharmaceutically acceptable salt, stereoisomer, tautomer, or prodrug thereof for use in treating neuropathic pain.