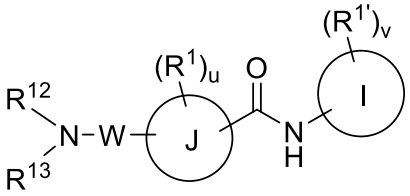
Claims

1. A compound of the following formula:



(V)

or a pharmaceutically acceptable salt, wherein:

when R^1 and $R^{1'}$ are attached to a carbon, they are, independently, hydrogen, halogen, SF_5, CF_3, hydroxy, $N(R')S(O)_2R'$, $S(O)_2R'$, $S(O)_2N(R')_2$, C_{1-6} alkoxy, C_{1-6} haloalkoxy, C_{2-6} alkenyl, cyano, C_{2-6} alkynyl, C_{3-6} alkoxyalkyl, alkoxycarbonyl, alkoxycarbonylalkyl, C_{1-6} alkyl, arylalkoxycarbonyl, carboxy, C_{1-6} haloalkyl, heterocyclylalkyl, or C_{1-6} hydroxyalkyl;

when R^1 and $R^{1'}$ are attached to a nitrogen, they are, independently, hydrogen, C_{2-6} alkoxy, C_{3-6} alkoxyalkyl, C_{2-6} alkenyl, alkoxycarbonyl, carbonylalkyl, carbonyl aryl, C_{1-6} alkyl, heterocyclylalkyl, C_{2-6} hydroxyalkyl, or $S(O)_2R'$;

each R' is independently H, C_{1-6} alkyl, C_{1-6} haloalkyl, C_{1-6} alkoxy, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, aryl, heteroaryl, alkylaryl, or arylalkyl, or if two R' reside on the same nitrogen atom, they can come together to form a C_{3-6} ring optionally containing a N, O, or S heteroatom;

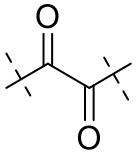
the R' groups, when other than H, can optionally be substituted with one or more substituents, which substituents are, independently, halo, C_{1-6} haloalkyl, C_{1-6} hydroxyalkyl, hydroxyl, carboxyl, acyl, aryl, acyloxy, amino, amido, carboxyl derivatives, alkylamino, dialkylamino, arylamino, alkoxy, alkoxyalkyl, aryloxy, nitro, cyano, sulfonic acid, thiol, imine, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, ester, carboxylic acid, amide, phosphonyl, phosphinyl, phosphoryl, phosphine, thioester, thioether, acid halide, anhydride, oxime, hydrozine, carbamate, phosphonic acid, or phosphonate;

u and v are independently 0, 1, 2, 3, 4, or 5;

I is phenyl, a six-membered heteroaromatic ring containing one, two, or three nitrogen atoms, a five-membered heteroaromatic ring containing one, two, or three

heteroatoms, which are, independently, N, O, or S, a C_{4-14} bicyclic ring, alkylheteroaryl, or alkylaryl;

J is a five-membered heteroaromatic ring containing one, two, or three heteroatoms, which are, independently, N, O, or S;

W is  ;

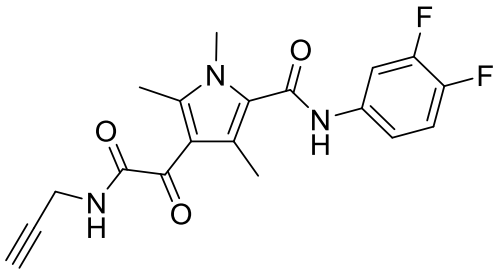
R^{12} is H, C_{1-6} alkyl, C_{1-6} haloalkyl, C_{2-6} alkenyl, or C_{2-6} alkynyl; and

R^{13} is C_{2-6} alkenyl, C_{2-6} alkynyl, aryl, heteroaryl, alkylaryl, arylalkyl, a C_{4-14} bicyclic ring, or a six-membered bridged or spiro-fused ring containing zero, one, or two heteroatoms which are, independently, N, O, or S;

R^{13} is optionally substituted with one or more substituents each independently selected from the group consisting of hydrogen, halogen, CF_3, SF_5, hydroxy, $N(R')S(O)_2R'$, $S(O)_2R'$, $S(O)_2N(R')_2$, $C(O)R'$, C_{1-6} alkoxy, C_{1-6} haloalkoxy, cyano, azido, C_{2-6} alkynyl, C_{3-6} alkoxyalkyl, alkoxycarbonyl, alkoxycarbonylalkyl, C_{1-6} alkyl, cycloalkyl, arylalkoxycarbonyl, carboxyl, haloalkyl, heterocyclylalkyl, C_{1-6} hydroxyalkyl, aryl, substituted aryl, heteroaryl, and substituted heteroaryl, where substituents on the substituted aryl and the substituted heteroaryl are selected from the group consisting of halogen, SF_5, CF_3, hydroxy, $N(R')S(O)_2R'$, $S(O)_2R'$, $S(O)_2N(R')_2$, $C(O)R'$, C_{1-6} alkoxy, cyano, azido, C_{2-6} alkynyl, C_{3-6} alkoxyalkyl, alkoxycarbonyl, alkoxycarbonylalkyl, and C_{1-6} alkyl;

or R^{12} and R^{13} together with the nitrogen to which they are attached form a 3 to 4 membered ring optionally substituted with one or more substituents each independently selected from the group consisting of hydrogen, halogen, CF_3, hydroxy, $N(R')S(O)_2R'$, $S(O)_2R'$, $S(O)_2N(R')_2$, C_{1-6} alkoxy, cyano, azido, C_{2-6} alkynyl, C_{3-6} alkoxyalkyl, alkoxycarbonyl, alkoxycarbonylalkyl, C_{1-6} alkyl, arylalkoxycarbonyl, carboxy, C_{1-6} haloalkyl, heterocyclylalkyl, and C_{1-6} hydroxyalkyl.

2. The compound of Claim 1 selected from the group consisting of: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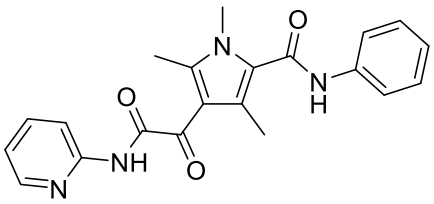
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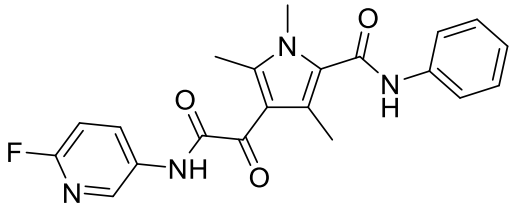
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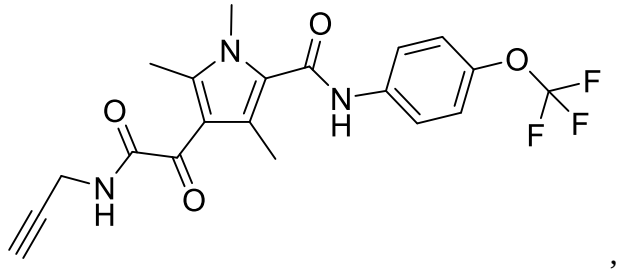
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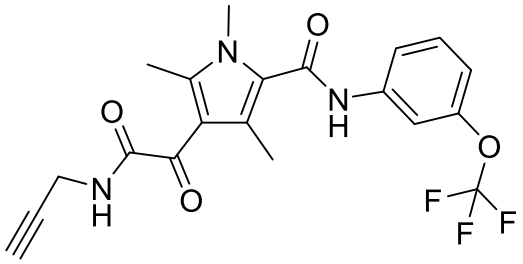
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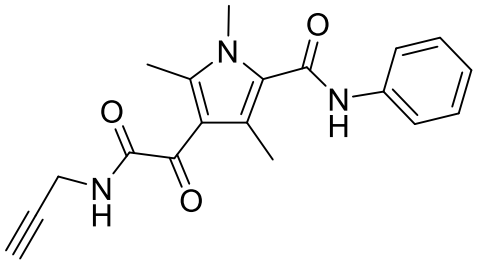
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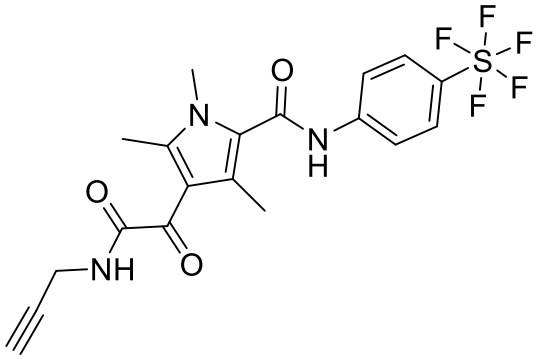
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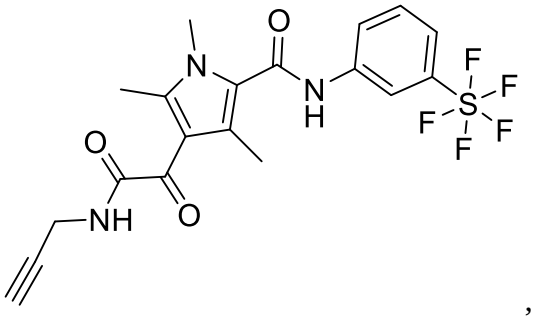
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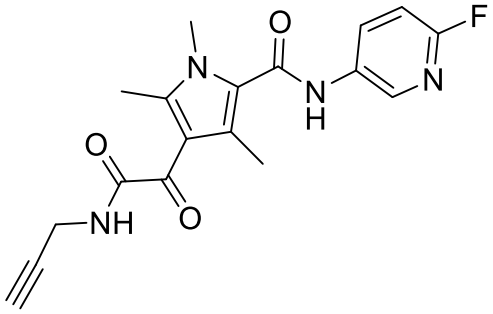
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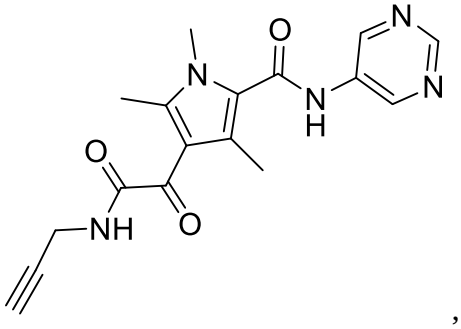
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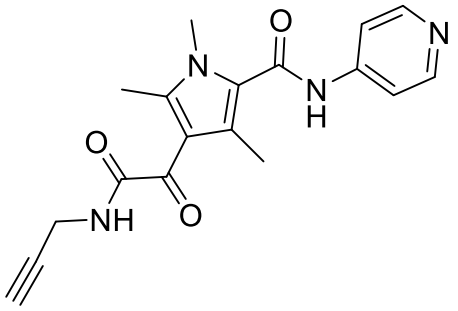
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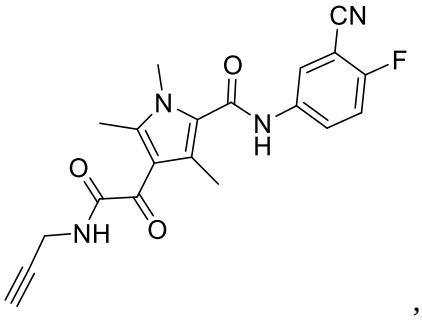
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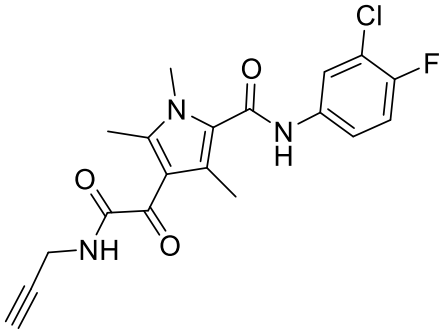
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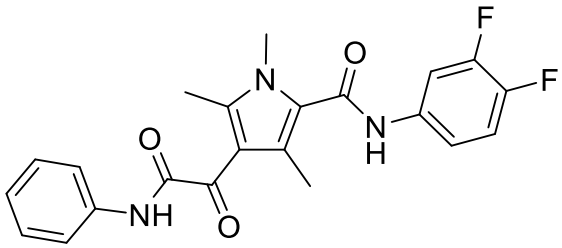
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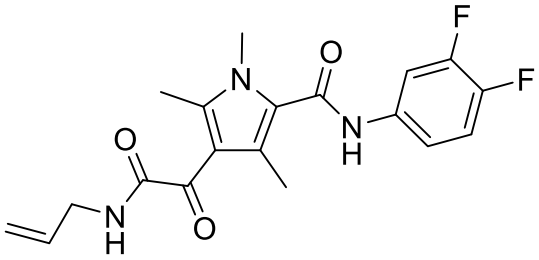
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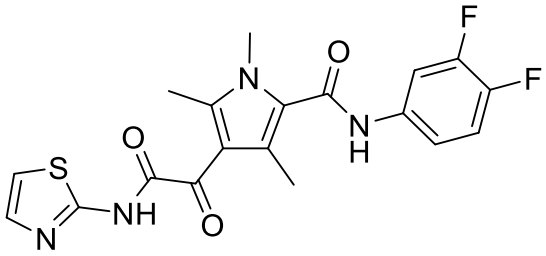
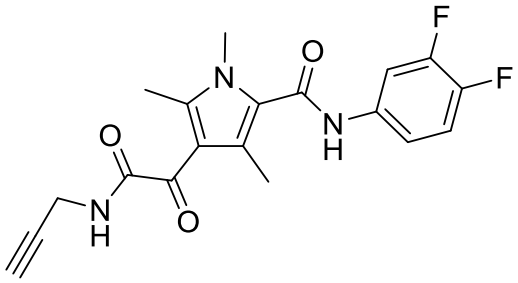
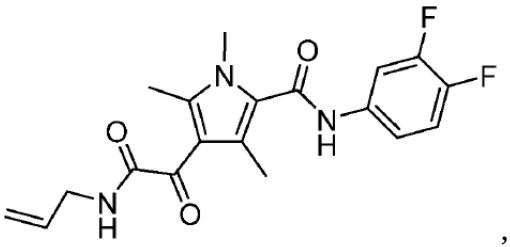

, and pharmaceutically acceptable salts thereof.

3. The compound of claim 2, wherein the compound is:

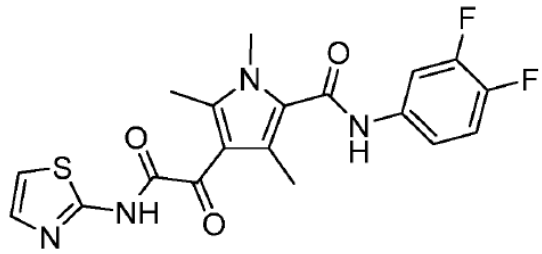

, and pharmaceutically acceptable salts thereof.

4. The compound of Claim 2 is:



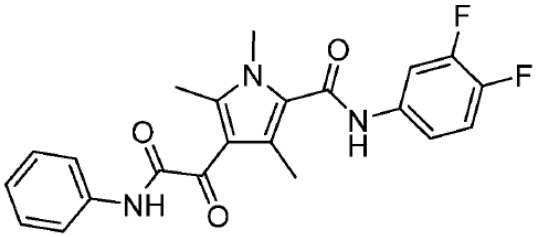
, and pharmaceutically-acceptable salts thereof.

5. The compound of Claim 2 is:



, and pharmaceutically-acceptable salts thereof.

6. The compound of Claim 2 is:



, and pharmaceutically-acceptable salts thereof.

7. The compound of Claim 1, wherein R^{12} is hydrogen.

8. The compound of Claim 1, wherein R^{13} is C_{2-6} alkenyl, C_{2-6} alkynyl, aryl, or heteroaryl.

9. The compound of Claim 8, wherein R^{13} is C_{2-6} alkenyl.

10. The compound of Claim 8, wherein R^{13} is C_{2-6} alkynyl.

11. The compound of Claim 8, wherein R^{13} is aryl.

12. The compound of Claim 8, wherein R^{13} is heteroaryl.

13. The compound of Claim 8, wherein J is pyrrolyl.

14. The compound of Claim 1, wherein I is phenyl.

15. The compound of Claim 1, wherein u is 3.

16. The compound of Claim 1, wherein R^1 is C_{1-6} alkyl.

17. The compound of Claim 1, wherein v is 2.

18. The compound of Claim 1, wherein $R^{1'}$ is halogen.

19. A pharmaceutical composition comprising a compound of any of Claims 1-18 and a pharmaceutically-acceptable carrier.

20. Use of a compound according to any one of claims 1-18 in the manufacture of a medicament for treating HBV infection, preventing HBV infection, or reducing the biological activity of an infection with HBV.

21. The use of Claim 20, wherein the treating HBV infection, or reducing the biological activity of an infection with HBV comprises suppressing HDV infection.

22. Use of a compound according to any one of claims 1-18 in the manufacture of a medicament for treating West Nile Virus infection, or reducing the biological activity of an infection with West Nile Virus.

23. Use of a compound according to any one of claims 1-18 in the manufacture of a medicament for treating flaviviridae virus infection, or reducing the biological activity of an infection with one of these viruses in a host.

24. Compound according to any one of claims 1-18 for use in the treatment of HBV infection, West Nile Virus infection, or flaviviridae virus infection.