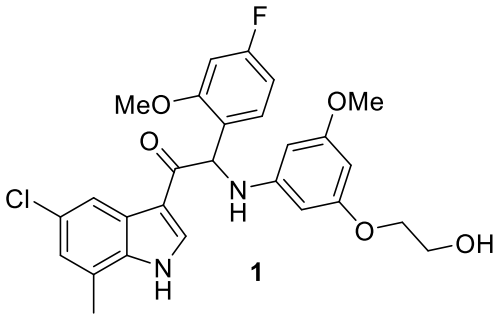
One aspect of the disclosure is the provision of a compound or its stereoisomeric form, a pharmaceutically acceptable salt, solvate or polymorph thereof wherein said compound is selected from the group:



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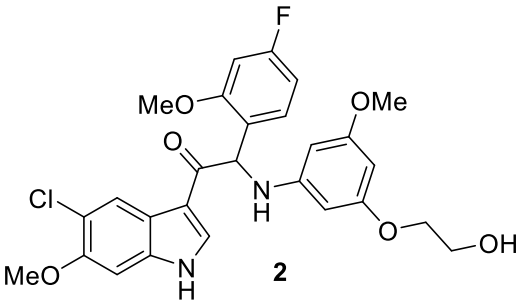

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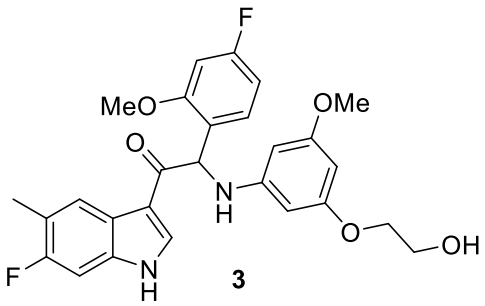

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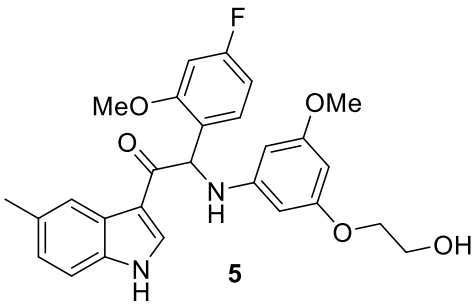

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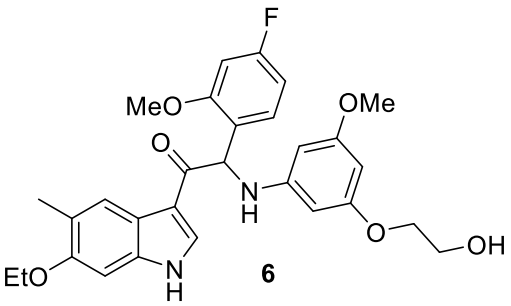

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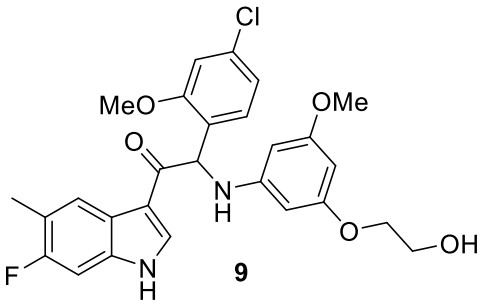

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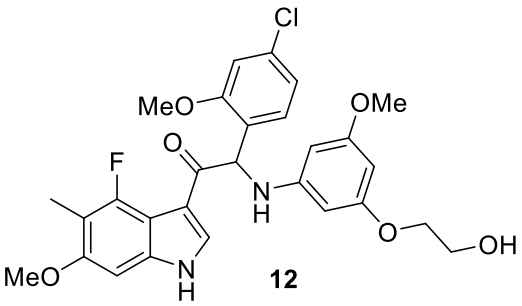

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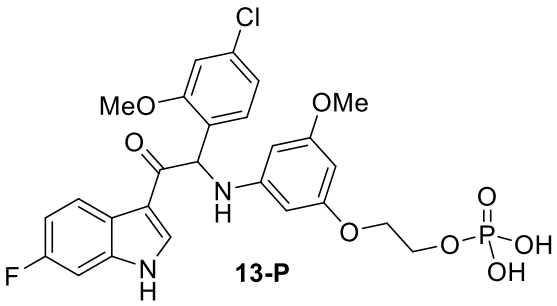

13-P

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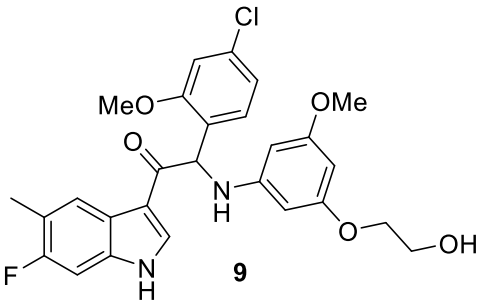
One embodiment of the disclosure is the provision of compounds of formula (Ia or Ib).



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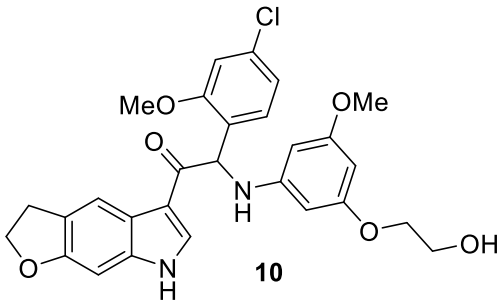

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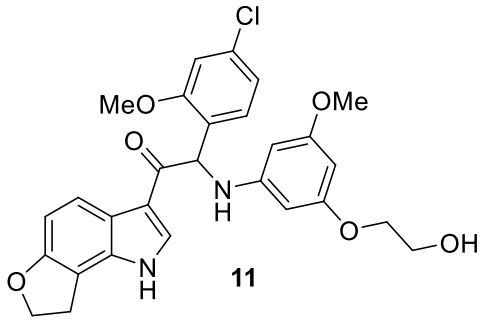

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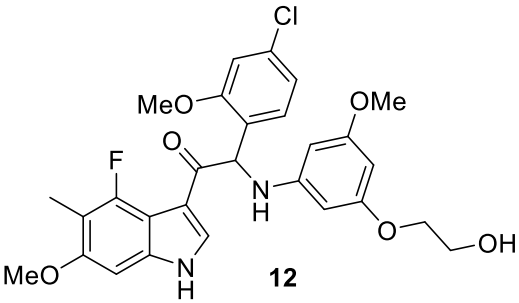

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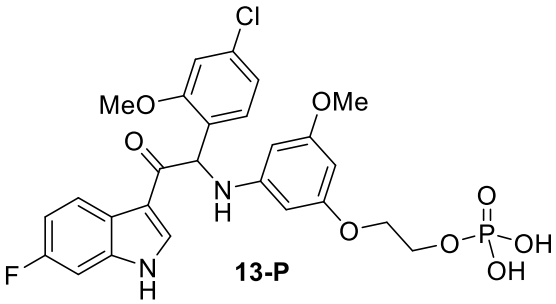
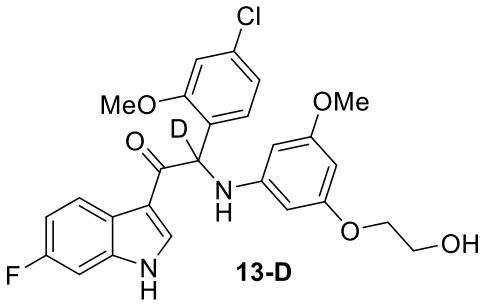
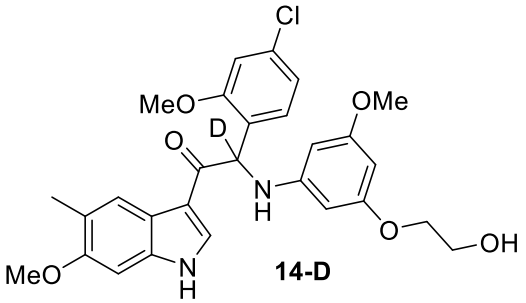


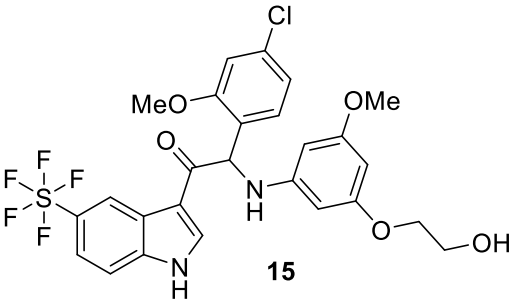
13-P



13-D



14-D



15

Another aspect of the current disclosure is also a pharmaceutical composition comprising a compound of formula (Ia, Ib, II, III or IV) or a compound as defined herein or a stereoisomeric form, a pharmaceutically acceptable salt, solvate or polymorph thereof together with one or more pharmaceutically acceptable excipients, diluents or carriers.

Pharmaceutically acceptable salts of the compounds of formula (Ia, Ib, II, III or IV) include the acid addition and base salts thereof. Suitable acid addition salts are formed from acids which form non-toxic salts. Suitable base salts are formed from bases which form non-toxic salts.

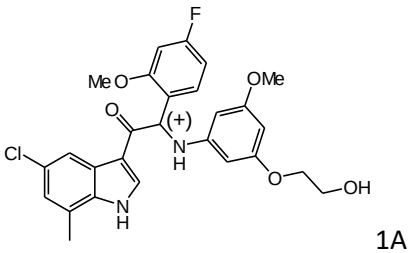
Another aspect of the current disclosure is a compound as defined herein or a stereoisomeric form, a pharmaceutically acceptable salt, solvate or polymorph thereof or a pharmaceutical composition as defined herein for use as a medicament.

Another aspect of the current disclosure is a compound as defined herein or a stereoisomeric form, a pharmaceutically acceptable salt, solvate or polymorph thereof or a pharmaceutical composition as defined herein for use in the treatment of dengue.

Another aspect of the current disclosure is use of a compound as represented by any of the structural formula as defined herein, a stereoisomeric form, a pharmaceutically acceptable salt, solvate or polymorph thereof in the manufacture of a medicament for inhibiting the replication of dengue virus(es) in a patient.

Another aspect of the current disclosure is use of a compound as represented by any of the structural formula as defined herein, a stereoisomeric form, a pharmaceutically acceptable salt, solvate or polymorph thereof for inhibiting the replication of dengue virus(es) in a biological sample.

Another aspect of the current disclosure is a compound selected from



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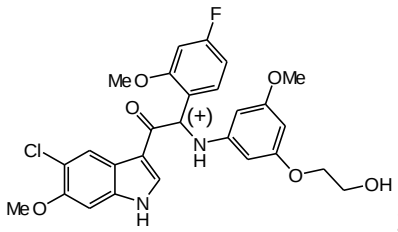

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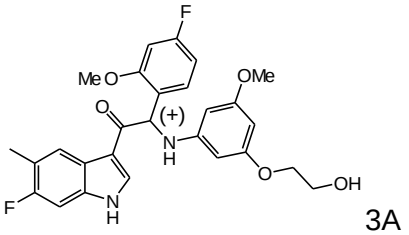

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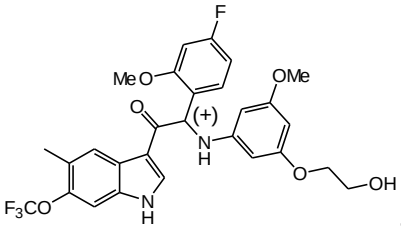

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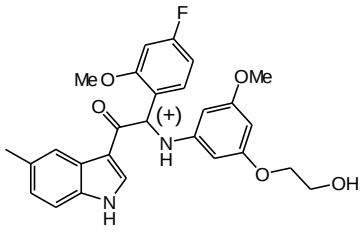
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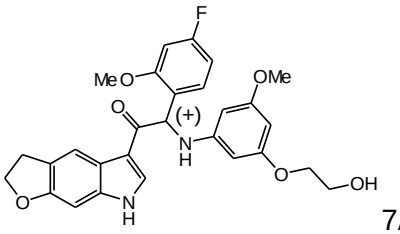
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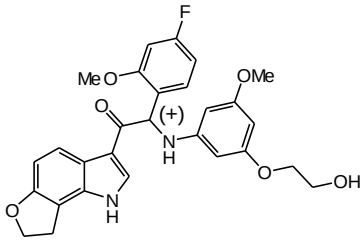
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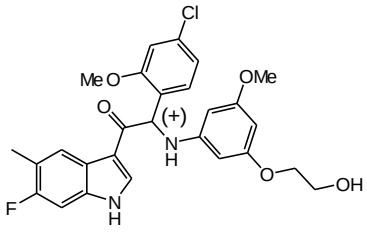
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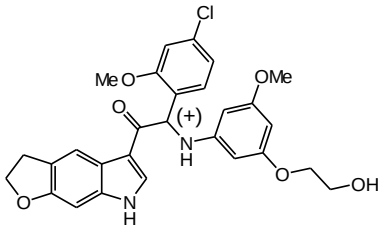
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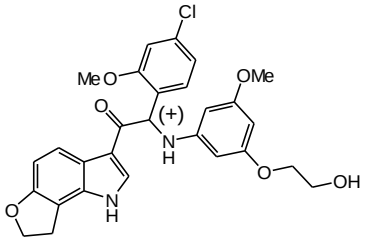
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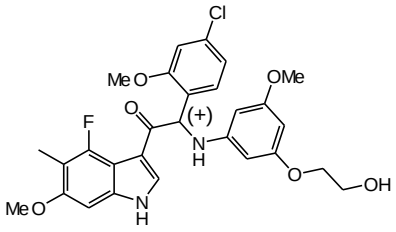
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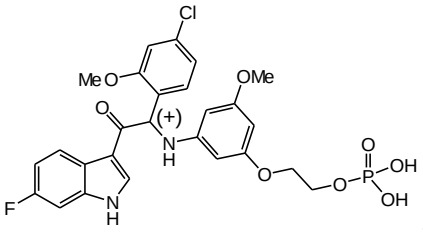
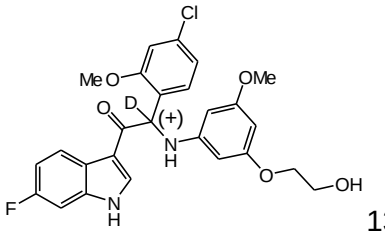
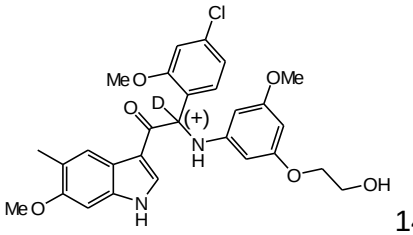

13A-P


13A-D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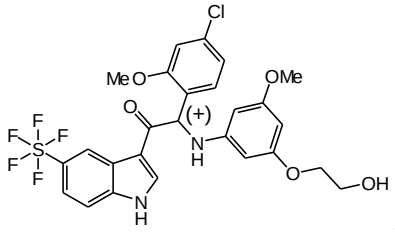
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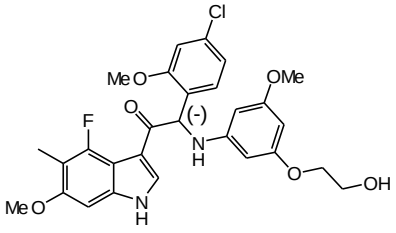

12A

or a pharmaceutically acceptable salt, solvate or polymorph thereof.

Another aspect of the current disclosure is a pharmaceutical composition comprising a compound as defined herein, a pharmaceutically acceptable salt, solvate or polymorph thereof together with one or more pharmaceutically acceptable excipients, diluents or carriers.

Another aspect of the current disclosure is a compound as defined herein, a pharmaceutically acceptable salt, solvate or polymorph thereof or a pharmaceutical composition as defined herein for use as a medicament.

Another aspect of the current disclosure is a compound as defined herein, a pharmaceutically acceptable salt, solvate or polymorph thereof or a pharmaceutical composition as defined herein for use in the treatment of dengue.

Another aspect of the current disclosure is use of a compound as represented by any of the structural formula as defined herein, a pharmaceutically acceptable salt, solvate or polymorph thereof in the manufacture of a medicament for inhibiting the replication of dengue virus(es) in a patient.

Another aspect of the current disclosure is use of a compound as represented by any of the structural formula as defined herein, a pharmaceutically acceptable salt, solvate or polymorph thereof for inhibiting the replication of dengue virus(es) in a biological sample.

The compounds of the invention may also exist in un-solvated and solvated forms. The term “solvate” is used herein to describe a molecular complex comprising the compound of the invention and one or more pharmaceutically acceptable solvent molecules, for example, ethanol.

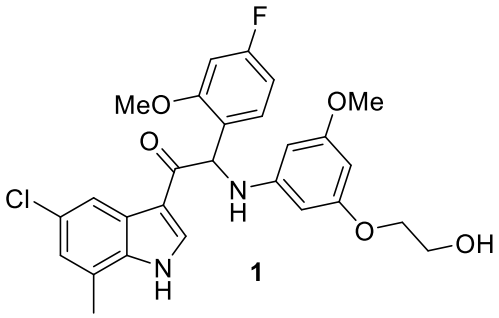
The term “polymorph” refers to the ability of the compound of the invention to exist in more than one form or crystal structure.

The compounds of the present invention may be administered as crystalline or amorphous products. They may be obtained for example as solid plugs, powders, or films by methods such as precipitation, crystallization, freeze drying, spray drying, or evaporative drying. They may be administered alone or in combination with one or more other compounds of the invention or in combination with one or more other drugs. Generally, they will be administered as a formulation in association with one or more pharmaceutically acceptable excipients. The term “excipient” is used herein to describe any ingredient other than the compound(s) of the invention. The choice of excipient depends largely on factors such as the particular mode of administration, the effect of the excipient on solubility and stability, and the nature of the dosage form.

The compounds of the present invention or any subgroup thereof may be formulated into various pharmaceutical forms for administration purposes. As appropriate compositions there may be cited all compositions usually employed for systemically administering drugs. To prepare the pharmaceutical compositions of this invention, an effective amount of the particular compound, optionally in addition salt form, as the active ingredient is combined in intimate admixture with a pharmaceutically acceptable carrier, which carrier may take a wide variety of forms depending on the form of preparation desired for administration. These pharmaceutical compositions are desirably in unitary dosage form suitable, for example, for oral or rectal administration. For example, in preparing the compositions in oral dosage form, any of the usual pharmaceutical media may be employed such as, for example, water, glycols, oils, alcohols and the like in the case of oral liquid preparations such as suspensions, syrups, elixirs, emulsions, and solutions; or solid carriers such as starches, sugars, kaolin, diluents,

Claims

1. A compound or its stereoisomeric form, a pharmaceutically acceptable salt, solvate or polymorph thereof wherein said compound is selected from the group:



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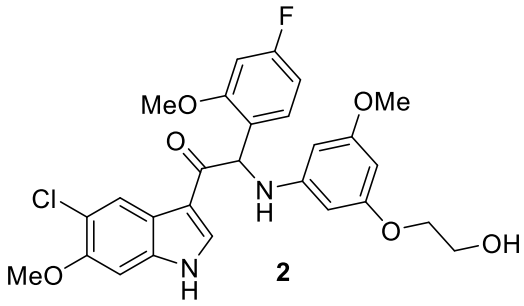

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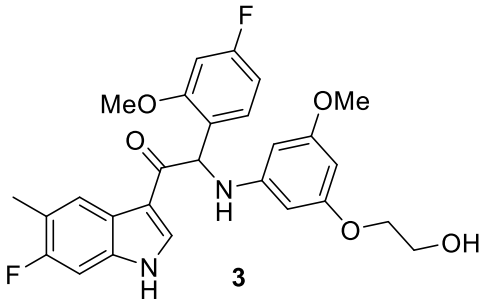

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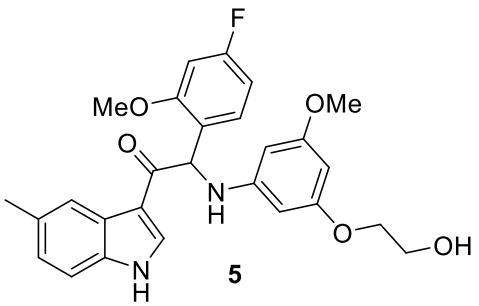

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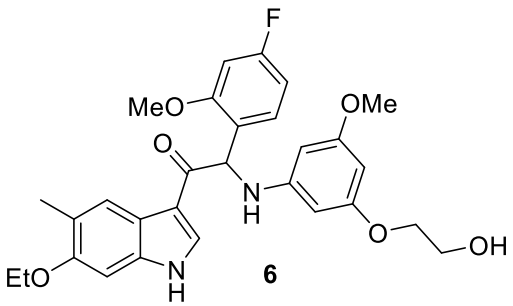

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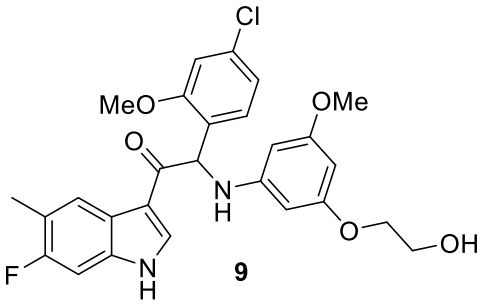

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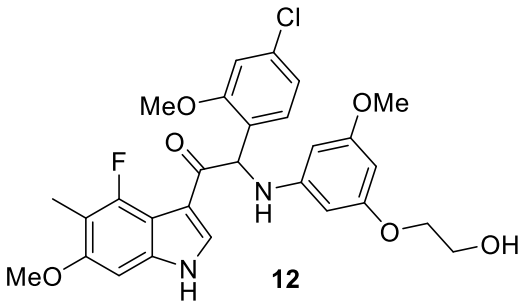

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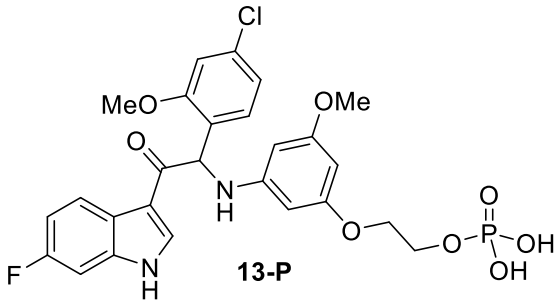

13-P

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2. A pharmaceutical composition comprising a compound according to claim 1 or a stereoisomeric form, a pharmaceutically acceptable salt, solvate or polymorph thereof together with one or more pharmaceutically acceptable excipients, diluents or carriers.

3. A compound according to claim 1 or a stereoisomeric form, a pharmaceutically acceptable salt, solvate or polymorph thereof or a pharmaceutical composition according to claim 2 for use as a medicament.

4. A compound according to claim 1 or a stereoisomeric form, a pharmaceutically acceptable salt, solvate or polymorph thereof or a pharmaceutical composition according to claim 2 for use in the treatment of dengue.

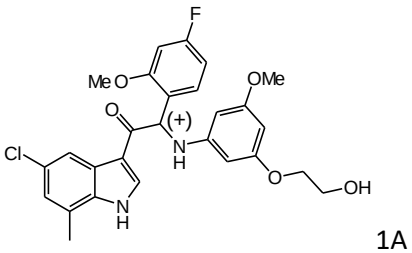
5. A use of a compound as represented by any of the structural formula from claim 1, a stereoisomeric form, a pharmaceutically acceptable salt, solvate or polymorph thereof in the manufacture of a medicament for inhibiting the replication of dengue virus(es) in a patient.

6. A use of a compound as represented by any of the structural formula from claim 1, a stereoisomeric form, a pharmaceutically acceptable salt, solvate or polymorph thereof for inhibiting the replication of dengue virus(es) in a biological sample.

7. The use of a compound according to claim 5 or 6 further comprising an additional therapeutic agent.

8. The use of claim 7 wherein said additional therapeutic agent is selected from an antiviral agent or dengue vaccine, or both.

9. A compound selected from



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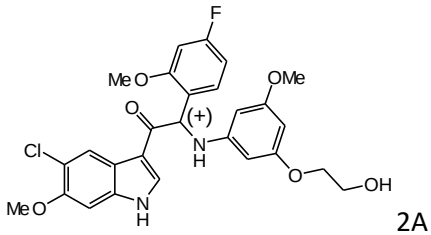

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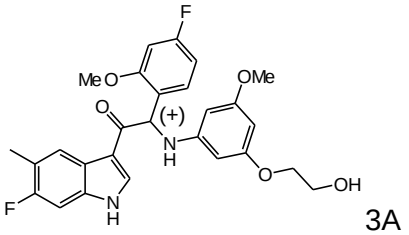

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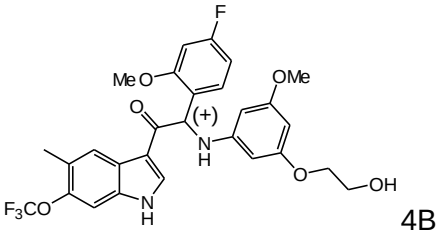

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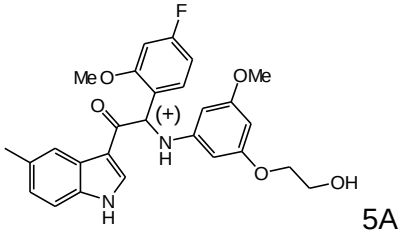

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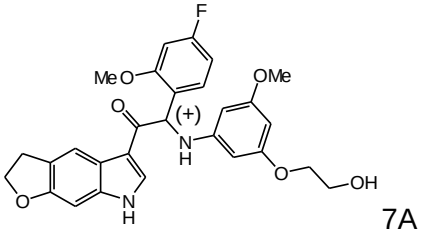
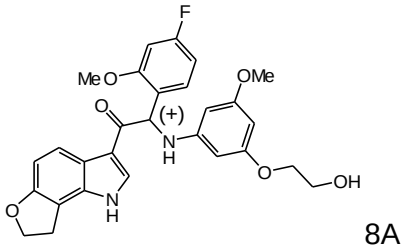


7A



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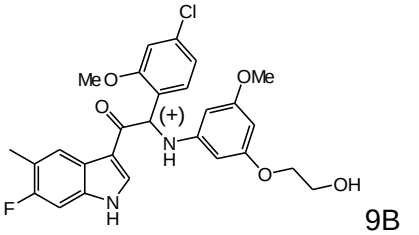

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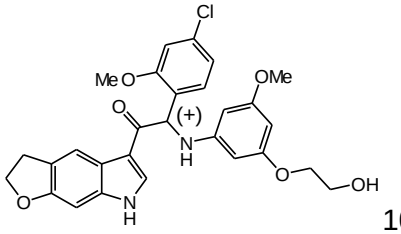
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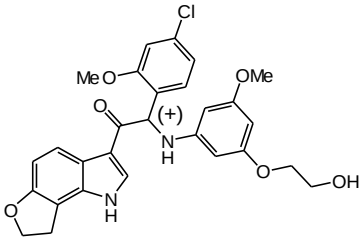
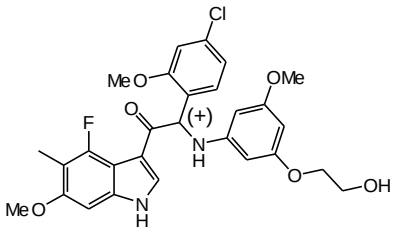
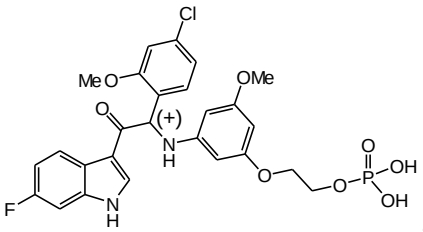
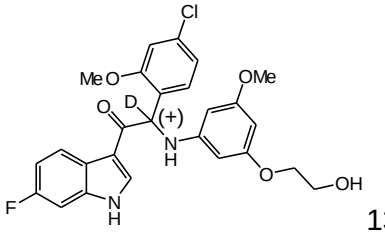
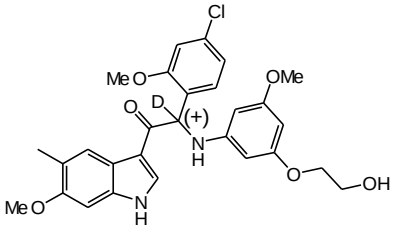
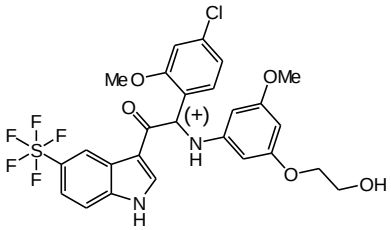

11A

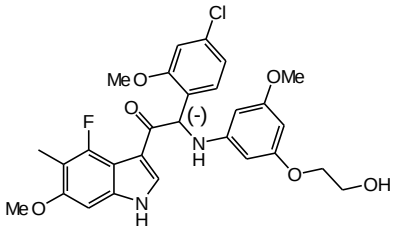

12B


13A-P


13A-D


14A-D


15A


12A

or a pharmaceutical acceptable salt, solvate or polymorph thereof.

10. A pharmaceutical composition comprising a compound according to claim 9, a pharmaceutically acceptable salt, solvate or polymorph thereof together with one or more pharmaceutically acceptable excipients, diluents or carriers.

11. A compound according to claim 9, a pharmaceutically acceptable salt, solvate or polymorph thereof or a pharmaceutical composition according to claim 10 for use as a medicament.

12. A compound according to claim 9, a pharmaceutically acceptable salt, solvate or polymorph thereof or a pharmaceutical composition according to claim 10 for use in the treatment of dengue.

13. A use of a compound as represented by any of the structural formula from claim 9, a pharmaceutically acceptable salt, solvate or polymorph thereof in the manufacture of a medicament for inhibiting the replication of dengue virus(es) in a patient.

14. A use of a compound as represented by any of the structural formula from claim 9, a pharmaceutically acceptable salt, solvate or polymorph thereof for inhibiting the replication of dengue virus(es) in a biological sample.

15. The use according to claim 13 or 14 which use further comprises an additional therapeutic agent.

16. The use according to claim 15 wherein said additional therapeutic agent is selected from an antiviral agent or dengue vaccine, or both.