

independently selected from the group consisting of halo, CF<sub>3</sub>, CHF<sub>2</sub>, OCF<sub>3</sub>, OCHF<sub>2</sub>, OCH<sub>2</sub>F, 5- or 6-membered heteroaryl, OH, oxo, hydroxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub> alkyl and C<sub>1</sub>-C<sub>4</sub> alkoxy, and 0 to 2 additional heteroatoms selected from N, NR<sup>13</sup>, O and S(O)<sub>p</sub>;

R<sup>13</sup> is independently, at each occurrence, selected from the group consisting of H, C<sub>1</sub>-C<sub>6</sub> alkyl and -(CH<sub>2</sub>)phenyl;

R<sup>14</sup> is independently, at each occurrence, selected from the group consisting of H, C<sub>1</sub>-C<sub>6</sub> alkyl, halo-C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxycarbonylamino, (C<sub>6</sub>-C<sub>10</sub> arylcarbonylamino) and -(CH<sub>2</sub>)<sub>n</sub><sup>1</sup>phenyl substituted by 0 to 3 groups independently selected from the group consisting of halo, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> alkyl, cyclopropyl, CF<sub>3</sub>, OCF<sub>3</sub>, 5- or 6-membered heteroaryl, OH, OCHF<sub>2</sub>, di-C<sub>1</sub>-C<sub>4</sub>-alkylamino, and cyano,

R<sup>7</sup> is selected from the group consisting of H, halo, hydroxyl, oxo, C<sub>1</sub>-C<sub>4</sub> alkyl, hydroxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, halo-C<sub>1</sub>-C<sub>4</sub>-alkyl, which contains 1 to 5 halogens, and C<sub>1</sub>-C<sub>4</sub>-alkoxy;

R<sup>10</sup> is selected from the group consisting of C<sub>1</sub>-C<sub>4</sub> alkyl, halo, and halo-C<sub>1</sub>-C<sub>2</sub>-alkyl, which contains 1 to 5 halogens, where halo is F or Cl;

n<sup>1</sup>, at each occurrence, is selected from 0, 1, 2, 3 or 4; and

p, at each occurrence, is selected from 0, 1 and 2.

12. The compound as defined in Claim 1, wherein the compound is selected from one of the examples.

13. A pharmaceutical composition, which comprises a pharmaceutically acceptable carrier and a compound as defined in Claim 1, or stereoisomers, tautomers, pharmaceutically acceptable salts, or solvates thereof, alone or in combination with another therapeutic agent.

14. A method for the treatment of a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder, which comprises the steps of administering to a patient in need thereof Use of a therapeutically effective amount of a compound as defined in Claim 1, or stereoisomers, tautomers, pharmaceutically acceptable salts, or solvates thereof in the manufacture of a medicament for the treatment of a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder, wherein the thromboembolic disorder is selected

from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

15. ~~A method of inhibiting or preventing platelet aggregation, which comprises the step of administering to a subject in need thereof~~ Use of a therapeutically effective amount of a PAR4 antagonist, as defined in Claim 1, in the manufacture of a medicament for inhibiting or preventing platelet aggregation.

16. The compound as defined in Claim 1 wherein:

Y is S or -CH=CH-;

R<sup>1</sup> and R<sup>1a</sup> are selected from the group consisting of:

CH<sub>3</sub>,

SCH<sub>3</sub>,

OCH<sub>3</sub>,

CHF(CH<sub>3</sub>),

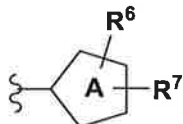
CF<sub>2</sub>(CH<sub>3</sub>), and

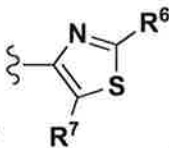
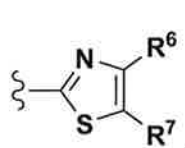
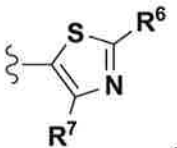
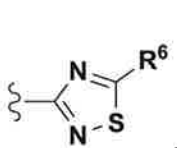
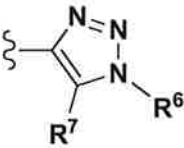
CF<sub>3</sub>;

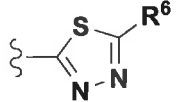
X<sup>1</sup> is CH or N;

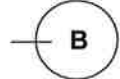
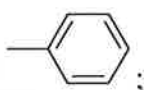
X<sup>2</sup> and X<sup>4</sup> are each CH; and

X<sup>3</sup> is CR<sup>3</sup> where R<sup>3</sup> is OCH<sub>3</sub>, F or Cl;

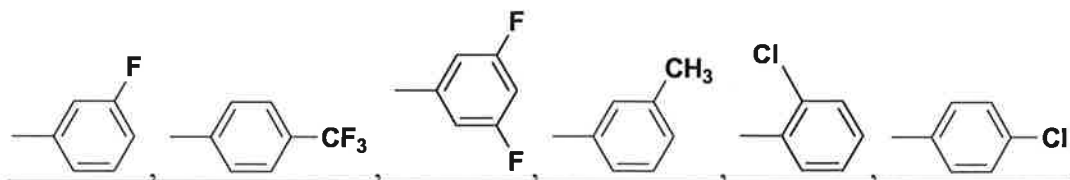
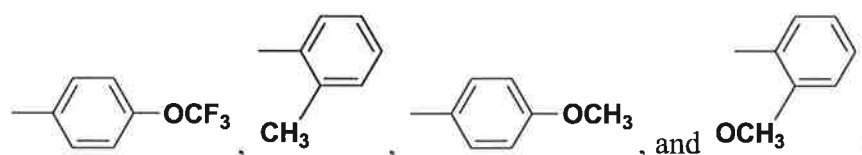
the 5-membered heteroaryl ring  is selected from the group consisting

of , , , ,  and

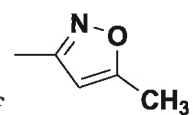
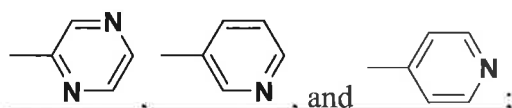
.

 is selected from the group consisting of .

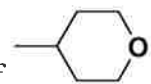
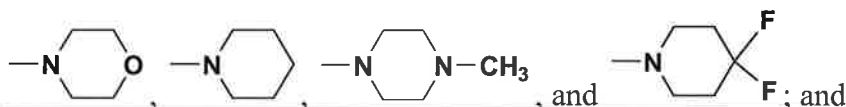
substituted phenyl, which is selected from the group consisting of



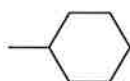
heteroaryl, which is selected from the group consisting of



heterocyclyl, which is selected from the group consisting of



cycloalkyl, which is



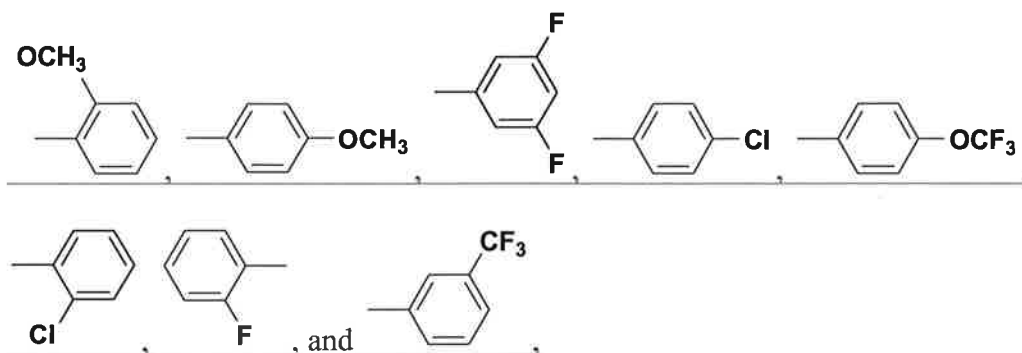
$R^7$  is selected from H or  $C_1$ - $C_4$  alkyl.

17. The compound as defined in Claim 1 wherein:

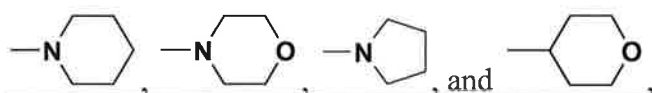
$R^6$  is selected from the group consisting of:

a) phenyl or substituted phenyl, which is selected from the group

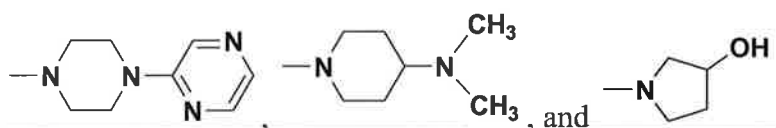




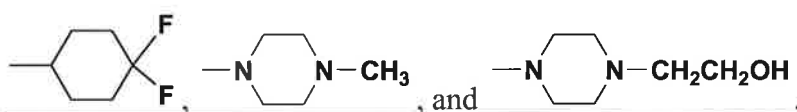
b) heterocyclyl, which is selected from the group consisting of

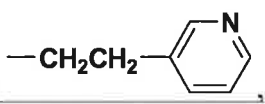


c) substituted heterocyclyl, which is selected from the group consisting of

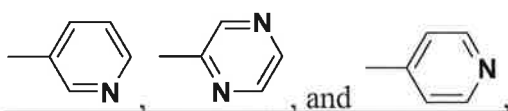


d) cycloalkyl, which is selected from the group consisting of

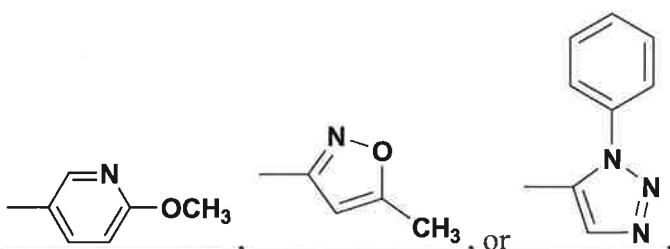


e) heteroaryl- $C_1$ - $C_3$ -alkyl, which is 

f) heteroaryl, which is selected from the group consisting of



g) substituted heteroaryl, which is selected from the group consisting of

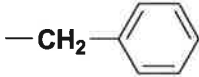


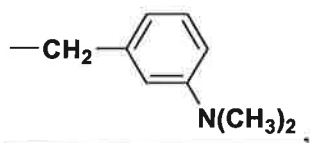
h) haloalkyl, which is  $-CF_3$ ,

i) halo, which is Br,

j) alkoxyalkoxyalkyl, which is  $-\text{CH}_2\text{OCH}_2\text{CH}_2\text{OCH}_3$ ,

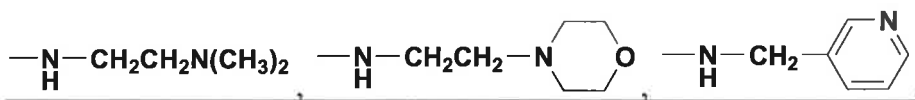
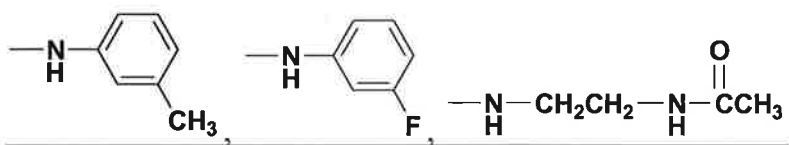
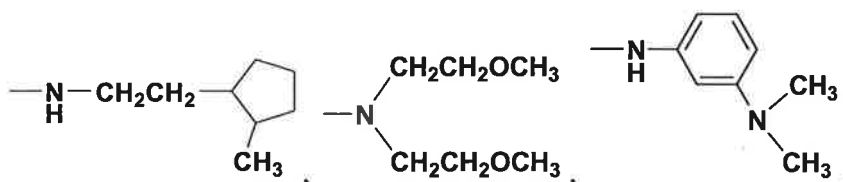
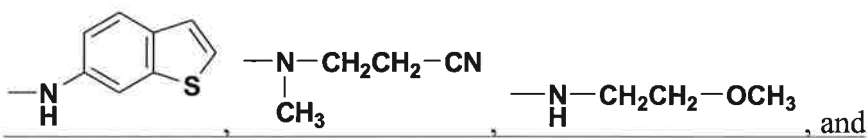
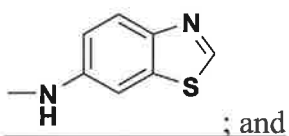
k) alkyl which is selected from  $-\text{CH}_2\text{CH}_3$  or  $\text{CH}_3$ ,

l) aryl- $\text{C}_1$ - $\text{C}_3$ -alkyl, which is selected from  $-\text{CH}_2$ - or



m) H,

n)  $-\text{NR}^{11}\text{R}^{12}$ , which is selected from the group consisting of



$\text{R}^7$  is selected from the group consisting of H and  $\text{C}_1$ - $\text{C}_4$  alkyl.

18. The compound as defined in Claim 1 wherein:

Y is S;

R<sup>1</sup> is selected from the group consisting of:

CH<sub>3</sub>,

SCH<sub>3</sub>,

OCH<sub>3</sub>,

CHF(CH<sub>3</sub>),

CF<sub>2</sub>(CH<sub>3</sub>), and

CF<sub>3</sub>;

R<sup>1a</sup> is selected from the group consisting of:

Cl,

CH<sub>3</sub>, and

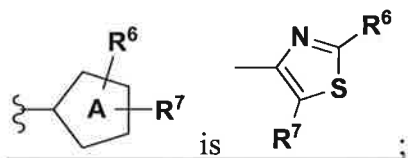
OCH<sub>3</sub>;

X<sup>1</sup> is CH or N;

X<sup>2</sup> and X<sup>4</sup> are each CH; and

X<sup>3</sup> is CR<sup>3</sup> where R<sup>3</sup> is OCH<sub>3</sub>, F or Cl;

R<sup>4</sup> and R<sup>5</sup> are H;



R<sup>6</sup> is selected from the group consisting of:

a) phenyl substituted by 0 to 3 groups independently selected from the group consisting of chloro, -CF<sub>3</sub>, cyano, -OCH<sub>3</sub>, -OCF<sub>3</sub>, -SO<sub>2</sub>CH<sub>3</sub> and (C=O)N(CH<sub>3</sub>)<sub>2</sub>;

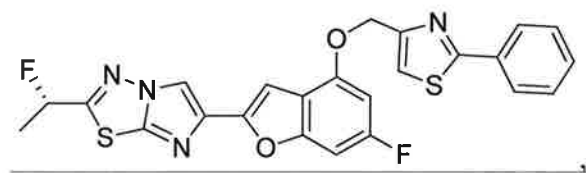
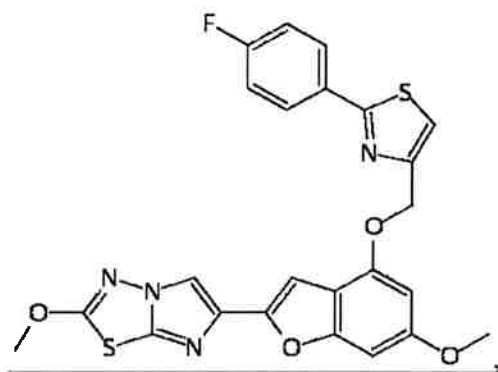
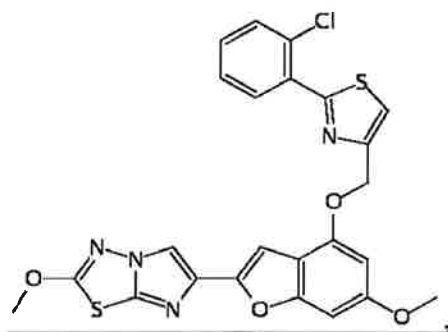
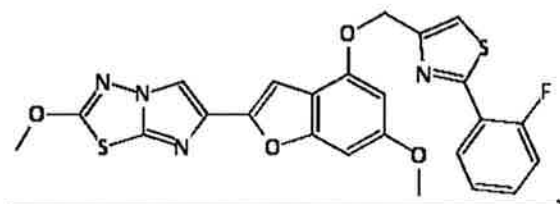
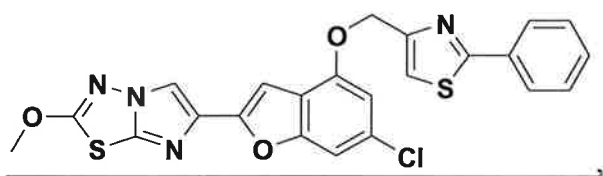
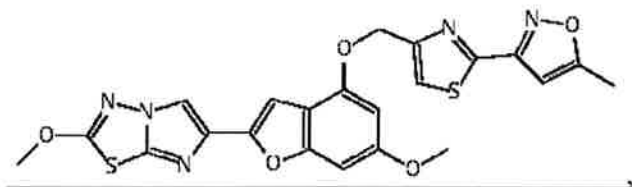
b) pyridinyl or pyrimidinyl substituted by 0 to 3 groups independently selected from the group consisting of fluoro, chloro, -CH<sub>3</sub> and -OCH<sub>3</sub>; and

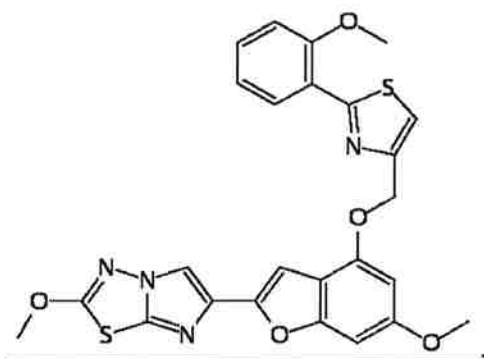
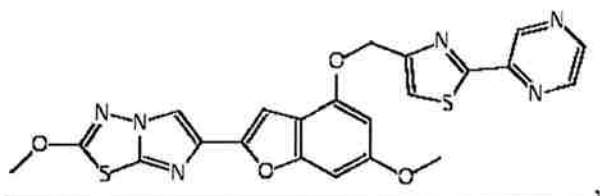
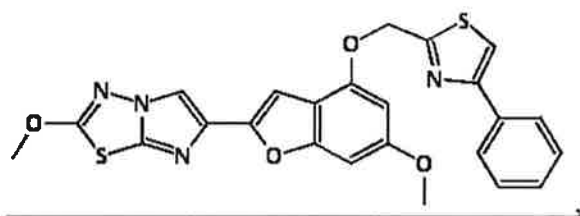
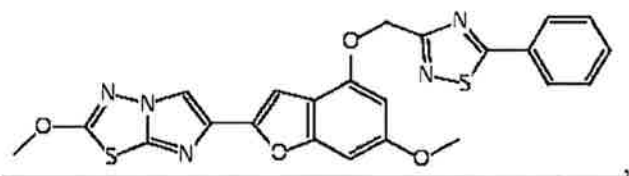
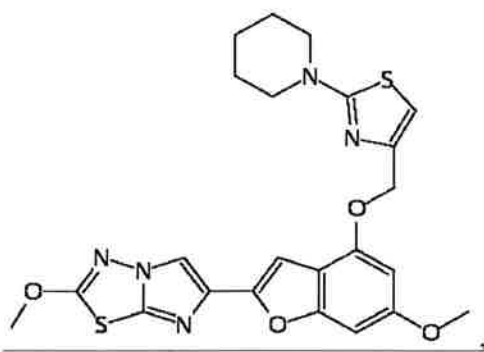
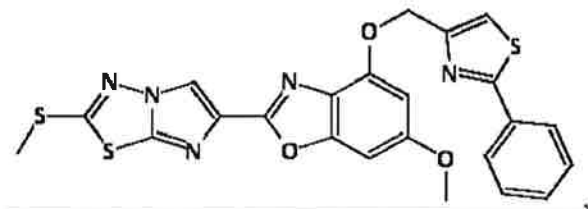
c) piperidinyl, morpholinyl or thiomorpholinyl substituted by 0 to 3 groups independently selected from the group consisting of fluoro, OH, -CH<sub>3</sub> and -NH<sub>2</sub>;

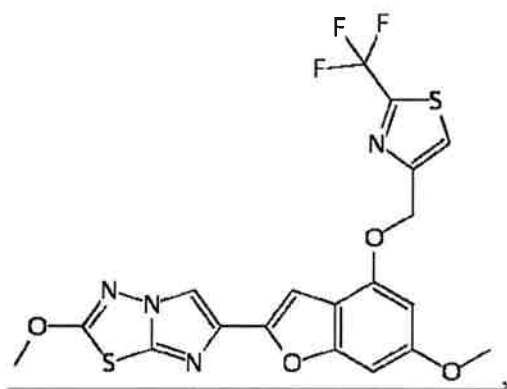
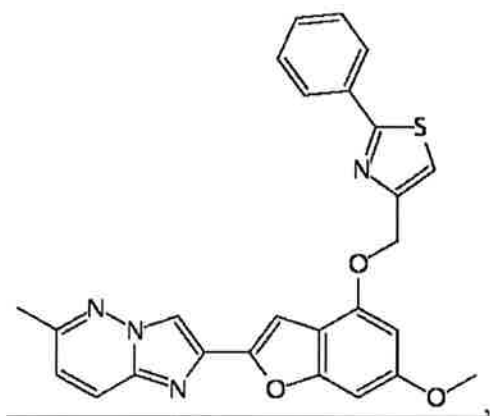
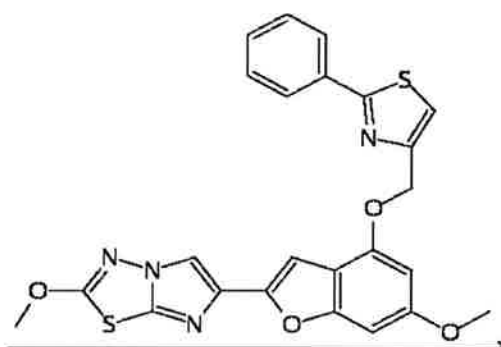
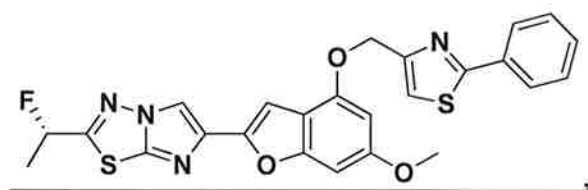
R<sup>7</sup> is selected from the group consisting of H and -CH<sub>3</sub>; and

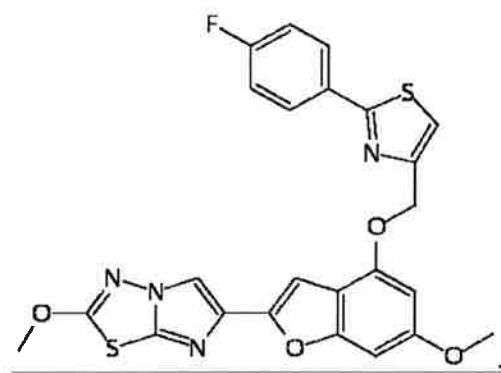
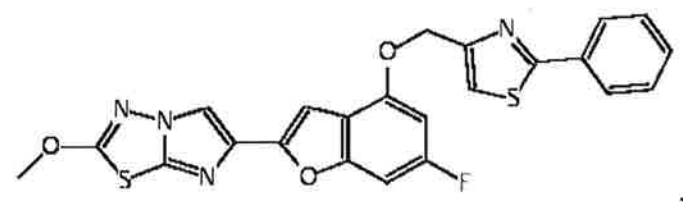
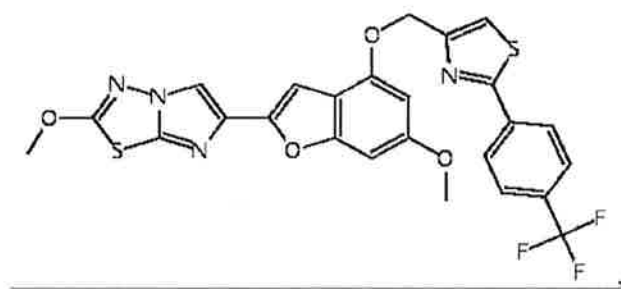
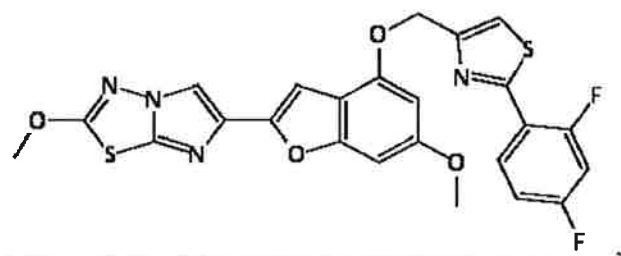
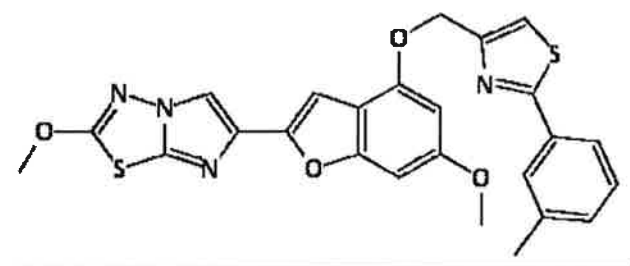
R<sup>8</sup> and R<sup>9</sup> are each H.

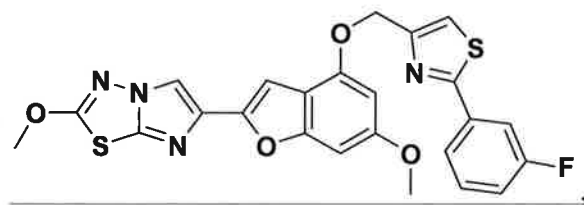
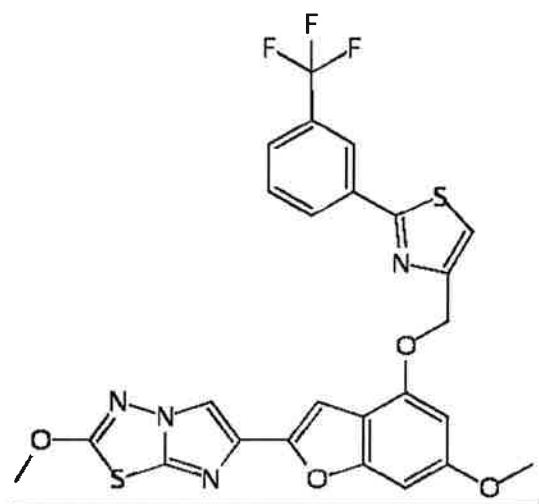
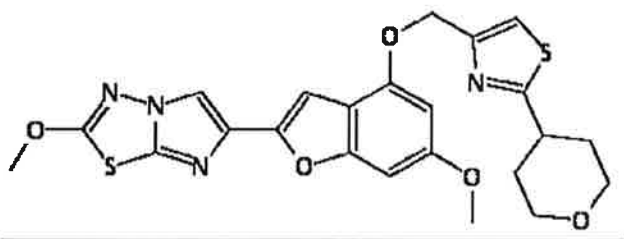
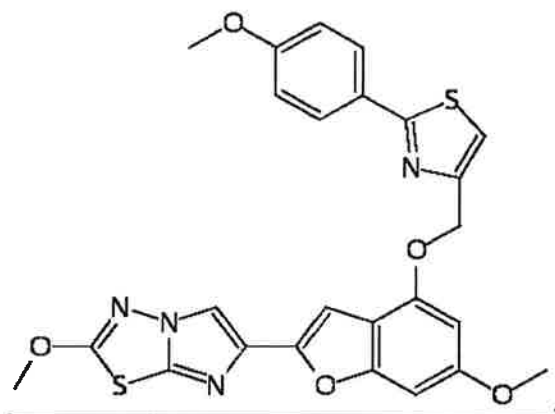
19. A compound of claim 1, wherein the compound is selected from

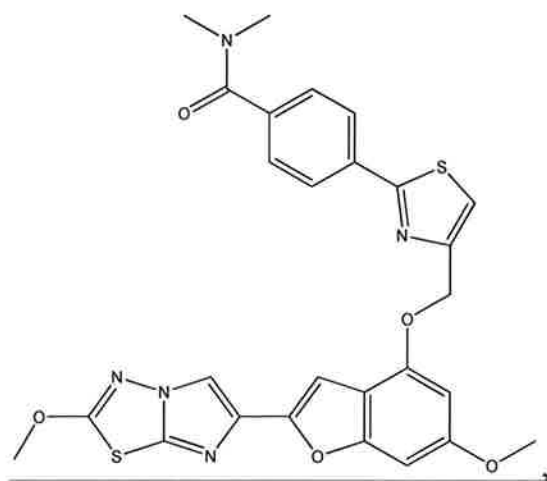
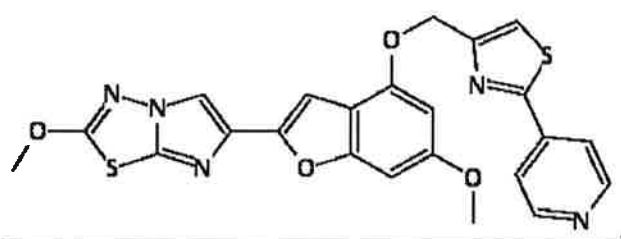
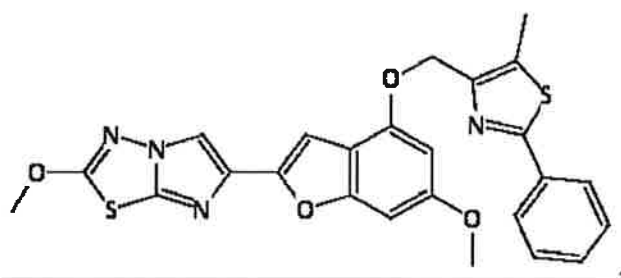
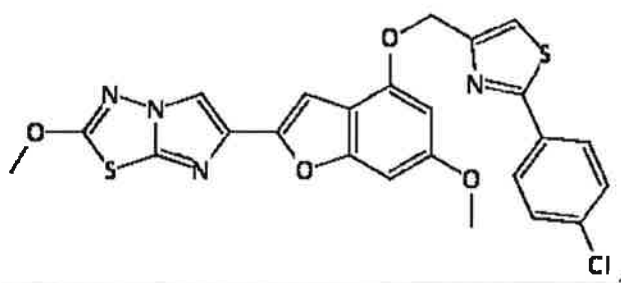


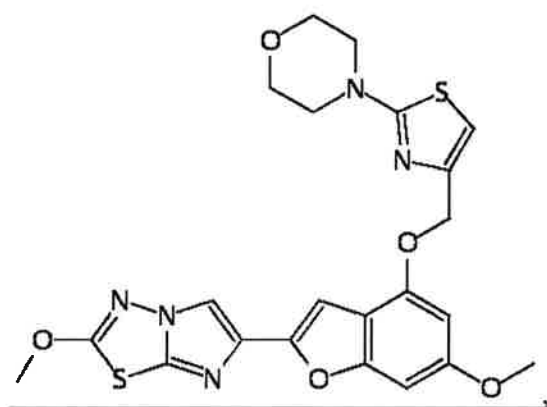
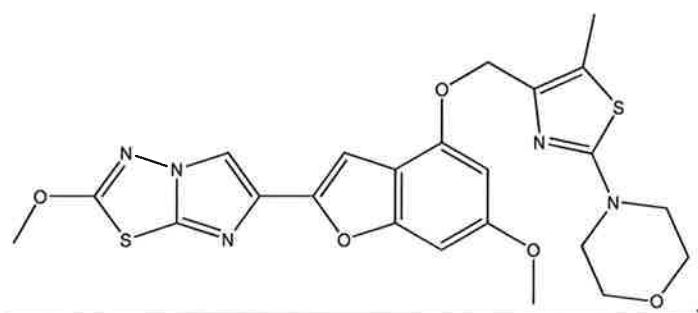
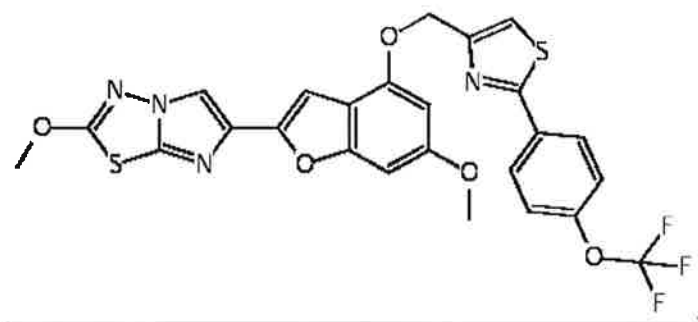
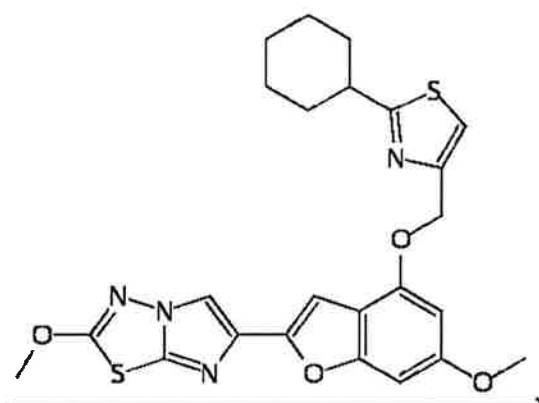




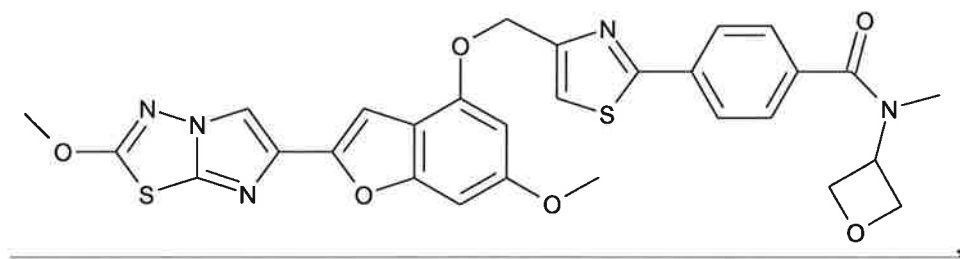
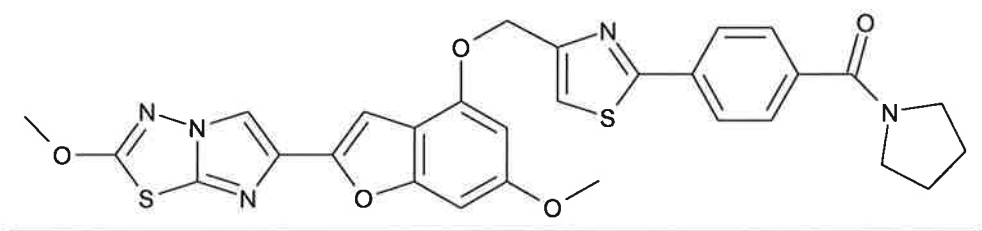
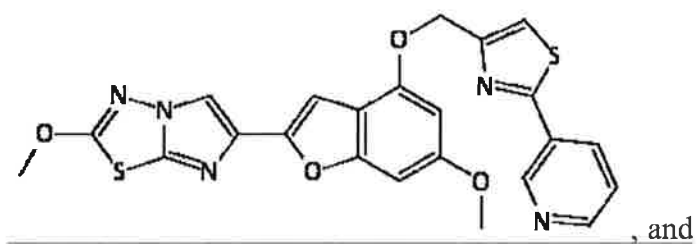
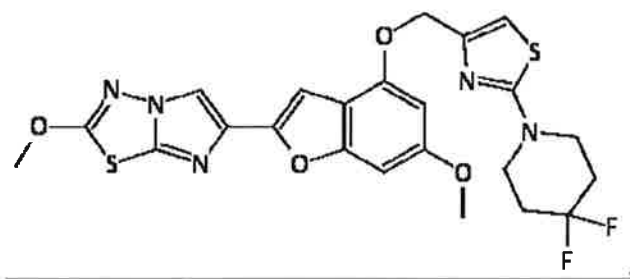






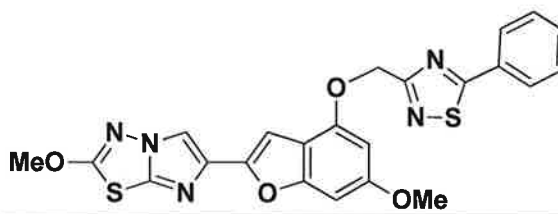






or pharmaceutically acceptable salt thereof.

20. A compound of Claim 19 of the Formula



or pharmaceutically acceptable salt thereof.

21. The use of a therapeutically effective amount of a compound as defined in Claim 20, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

22. The use of a therapeutically effective amount of a PAR4 antagonist as defined in Claim 20, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.

23. A compound of Claim 19 of the Formula:



or pharmaceutically acceptable salt thereof.

24. The use of a therapeutically effective amount of a compound as defined in Claim 23, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous

25. The use of a therapeutically effective amount of a compound as defined in Claim 203, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.

CC(F)=N1N=C2C(=N1)c3cc(OC)c(OC)c(OC3=CC=C2C=C3)C4=CC=C5C(=C4)OC(=C5)C6=CC=CC=C6S6

27. The use of a therapeutically effective amount of a compound as defined in Claim 26, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

28. The use of a therapeutically effective amount of a PAR4 antagonist as defined in Claim 26, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.

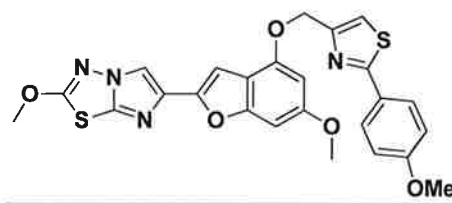
COc1nc2nc(s2n1)-c3cc4oc(OC)c(OC)c4cc3-c5cc6sc(nc5C6)c7cc(F)ccc7

or pharmaceutically acceptable salt thereof.

30. The use of a therapeutically effective amount of a compound as defined in Claim 29, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

31. The use of a therapeutically effective amount of a PAR4 antagonist as defined in Claim 29, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.

32. A compound of Claim 19 of the Formula:

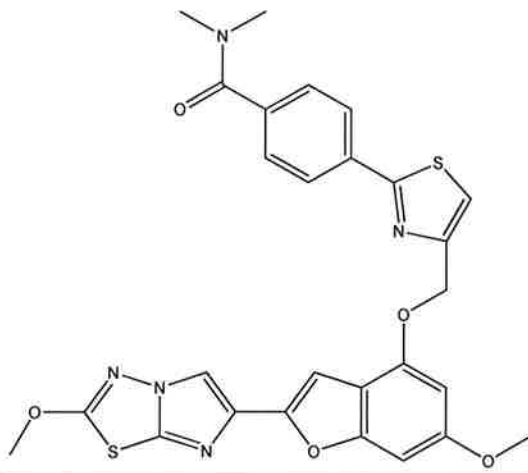


or pharmaceutically acceptable salt thereof.

33. The use of a therapeutically effective amount of a compound as defined in Claim 32, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

34. The use of a therapeutically effective amount of a PAR4 antagonist as defined in Claim 32, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.

35. A compound of Claim 19 of the Formula:

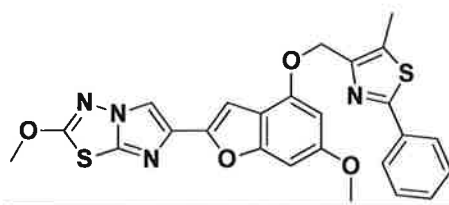


or pharmaceutically acceptable salt thereof.

36. The use of a therapeutically effective amount of a compound as defined in Claim 35, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

37. The use of a therapeutically effective amount of a PAR4 antagonist as defined in Claim 35, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.

38. A compound of claim 19 having the formula

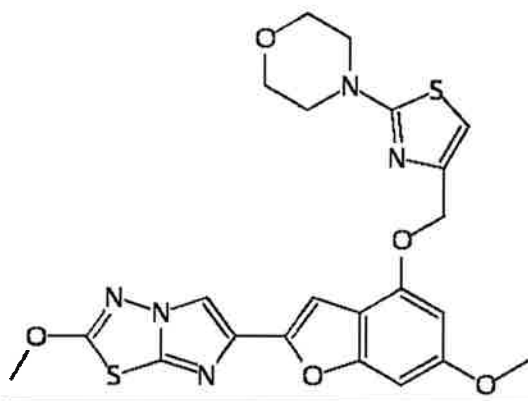


or pharmaceutically acceptable salt thereof.

39. The use of a therapeutically effective amount of a compound as defined in Claim 38, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

40. The use of a therapeutically effective amount of a PAR4 antagonist as defined in Claim 38, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.

41. A compound of Claim 19 of the Formula:

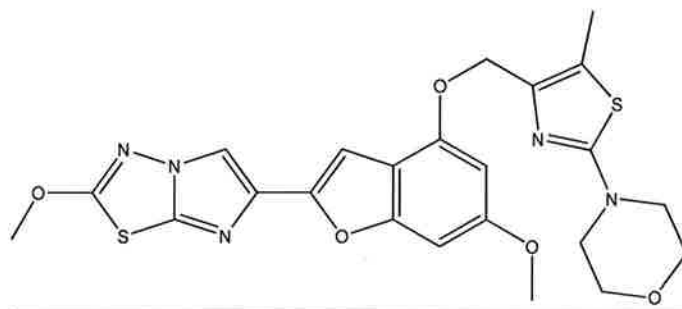


or pharmaceutically acceptable salt thereof.

42. The use of a therapeutically effective amount of a compound as defined in Claim 41, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

43. The use of a therapeutically effective amount of a PAR4 antagonist as defined in Claim 41, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.

44. A compound of Claim 19 of the Formula

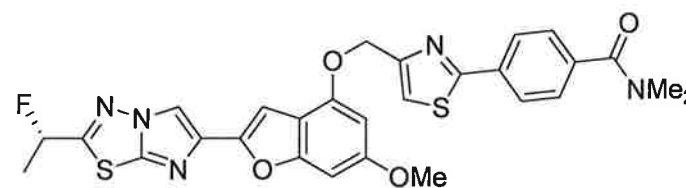


or pharmaceutically acceptable salt thereof.

45. The use of a therapeutically effective amount of a compound as defined in Claim 44, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

46. The use of a therapeutically effective amount of a PAR4 antagonist as defined in Claim 44, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.

47. A compound of Claim 19 of the Formula:

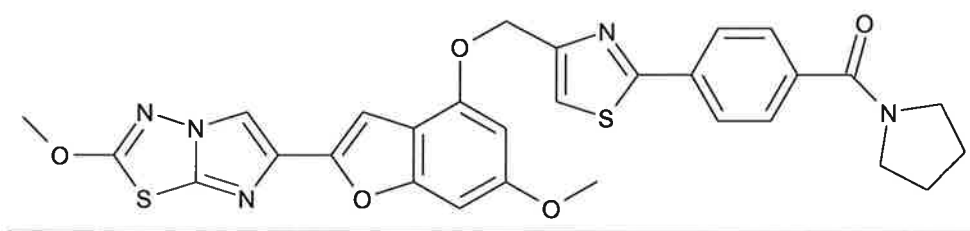


or pharmaceutically acceptable salt thereof.

48. The use of a therapeutically effective amount of a compound as defined in Claim 47, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

49. The use of a therapeutically effective amount of a PAR4 antagonist as defined in Claim 47, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.

50. A compound of Claim 19 of the Formula:

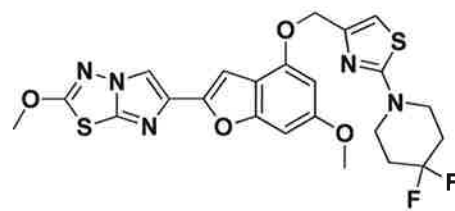


or pharmaceutically acceptable salt thereof.

51. The use of a therapeutically effective amount of a compound as defined in Claim 50, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

52. The use of a therapeutically effective amount of a PAR4 antagonist as defined in Claim 50, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.

53. A compound of Claim 19 of the Formula:



or pharmaceutically acceptable salt thereof.

54. The use of a therapeutically effective amount of a compound as defined in Claim 53, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

55. The use of a therapeutically effective amount of a PAR4 antagonist as defined in Claim 53, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.

56. The use of a therapeutically effective amount of a compound as defined in Claim 19, or pharmaceutically acceptable salts thereof, for the preparation of a medicament to treat a thromboembolic disorder or the primary or secondary prophylaxis of a thromboembolic disorder in a patient in need thereof, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, cerebrovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart or in the peripheral circulation.

57. The use of a therapeutically effective amount of a PAR4 antagonist as defined in Claim 19, or pharmaceutically acceptable salts thereof, for the preparation of a medicament for inhibiting or preventing platelet aggregation in a patient in need thereof.