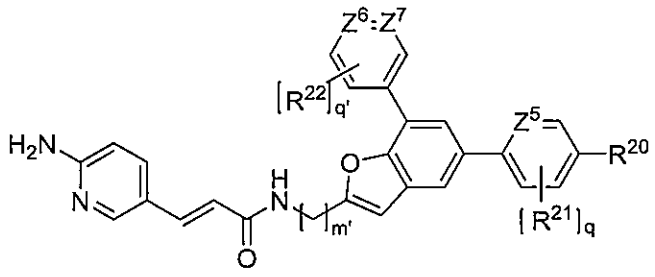
Claims:

1. A compound represented by Structural Formula XII:



(XII),

or a pharmaceutically acceptable salt thereof, wherein:

m′ is 1 or 2;

Z^5 is -N- or -C(H)-;

R^{20} is $(C_1$-$C_4)$alkyl, $(C_1$-$C_4)$haloalkyl, -O-$(C_0$-C_4 alkylene)carbocyclyl, -O-$(C_0$-C_4 alkylene)heterocyclyl, -C(H)(OH)-carbocyclyl, -C(H)(OH)-heterocyclyl, -C(H)(CH_3)-carbocyclyl, -C(H)(CH_3)-heterocyclyl, -C(O)$(C_1$-$C_4)$alkyl, -C(S)$(C_1$-$C_4)$alkyl, -C(O)$(C_0$-C_4 alkylene)$NR^{11}R^{12}$, -C(S)$(C_0$-C_4 alkylene)$NR^{11}R^{12}$, -$S(O)_2(C_1$-$C_4)$alkyl, -$S(O)_2NR^{11}R^{12}$ or -$C(O)NR^{13}NR^{11}R^{12}$, wherein:

R^{11} and R^{12} are each independently hydrogen, optionally substituted $(C_1$-$C_4)$ alkyl, optionally substituted carbocyclyl, or optionally substituted heterocyclyl; or

R^{11} and R^{12} are taken together with the nitrogen atom to which they are commonly attached to form an optionally substituted heterocyclyl; and

R^{13} is hydrogen or optionally substituted $(C_1$-$C_4)$alkyl;

each R^{21}, if present, is independently halo;

q is 0, 1, 2, 3 or 4;

each of Z^6 and Z^7 is independently -N- or -C(H)-, wherein no more than one of Z^6 and Z^7 is nitrogen;

each R^{22}, if present, is independently halo, cyano, $(C_1$-$C_3)$alkyl, halo$(C_1$-$C_3)$alkyl, hydroxy, $(C_1$-$C_3)$alkoxy or halo$(C_1$-$C_3)$alkoxy; and

q′ is 0, 1, 2 or 3.

2. The compound of Claim 1, wherein q is 0, 1 or 2.

3. The compound of Claim 1 or 2, wherein R^{21}, for each occurrence and if present, is fluoro.

4. The compound of any one of Claims 1 to 3, wherein R^{20} is $-C(O)(C_0\text{-}C_4$ alkylene$)NR^{11}R^{12}$ or $-C(S)(C_0\text{-}C_4$ alkylene$)NR^{11}R^{12}$, wherein R^{11} and R^{12} are taken together with the nitrogen atom to which they are commonly attached to form an optionally substituted $(C_3\text{-}C_7)$heterocyclyl having 1 or 2 heteroatoms independently selected from nitrogen, oxygen and sulfur.

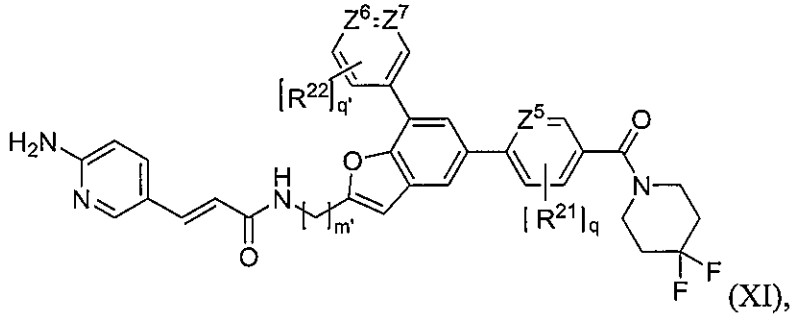
5. The compound of any one of Claims 1 to 4, wherein the heterocyclyl formed by R^{11} and R^{12} taken together with the nitrogen atom to which they are commonly attached is optionally substituted with 1, 2, 3 or 4 substituents independently selected from halo, hydroxyl, halo$(C_1\text{-}C_3)$alkyl, $(C_1\text{-}C_3)$alkyl and $(C_1\text{-}C_3)$alkoxy.

6. The compound of any one of Claims 1 to 5, wherein Z^5 is -C(H)-.

7. The compound of any one of Claims 1 to 5, wherein Z^5 is -N-.

8. The compound of Claim 1, wherein the heterocyclyl formed by R^{11} and R^{12} taken together with the nitrogen atom to which they are commonly attached is optionally substituted with 1 or 2 substituents independently selected from halo, $(C_1\text{-}C_3)$alkyl, halo$(C_1\text{-}C_3)$alkyl, hydroxy, $(C_1\text{-}C_3)$alkoxy and halo$(C_1\text{-}C_3)$alkoxy.

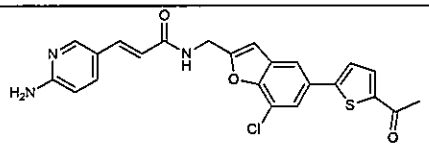
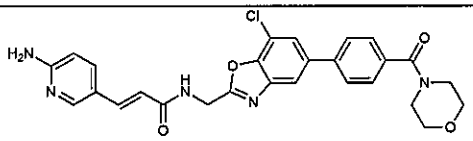
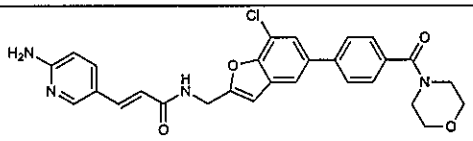
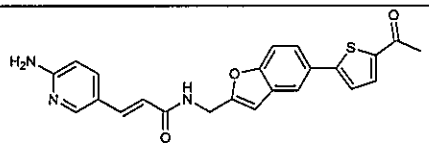
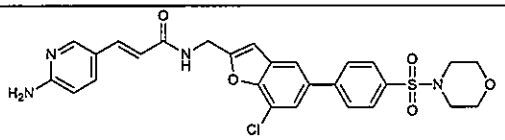
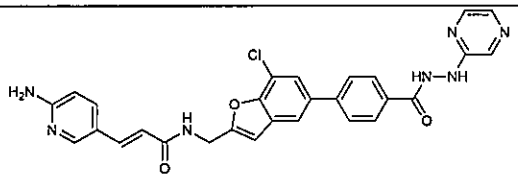
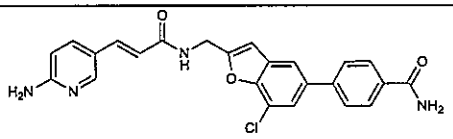
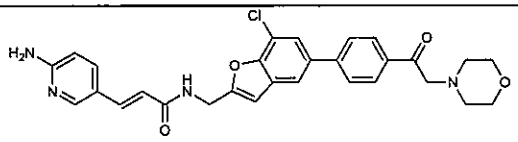
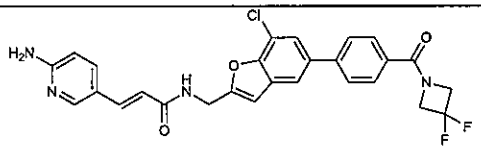
9. The compound of Claim 1, represented by Structural Formula XI:

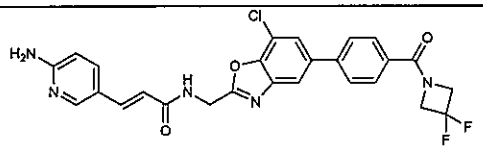
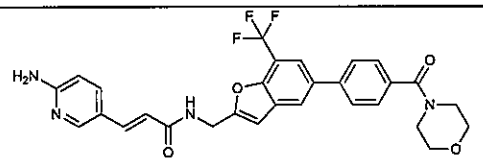
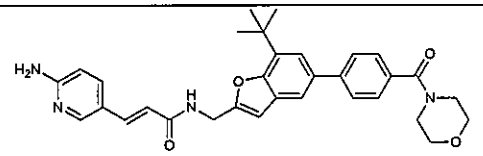
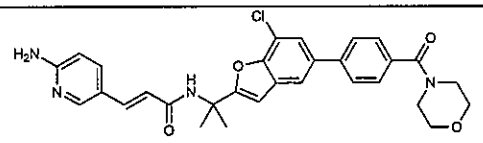
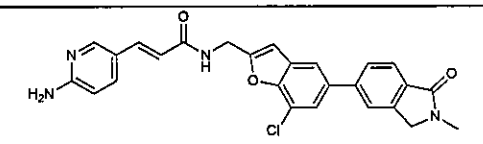
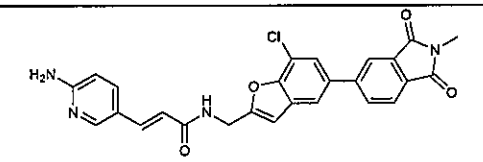
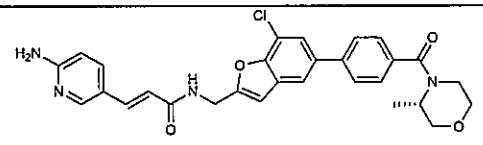
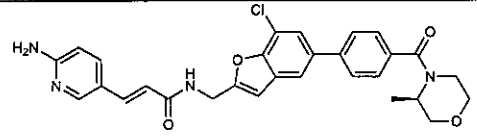
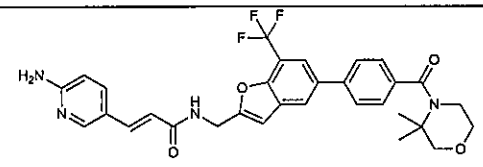
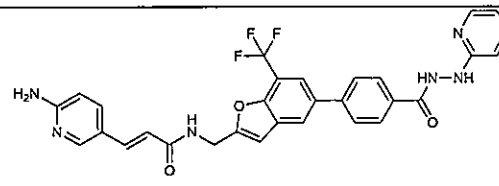


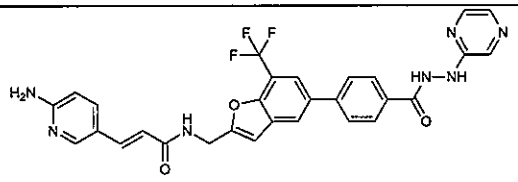
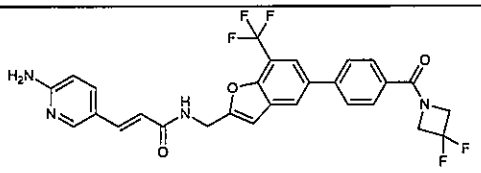
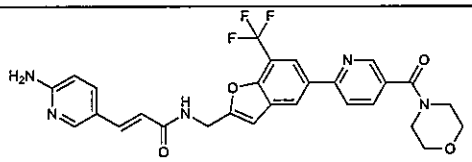
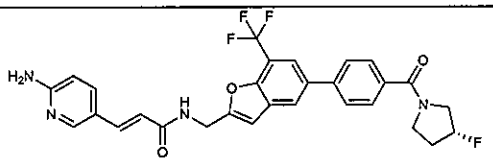
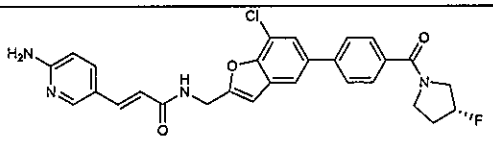
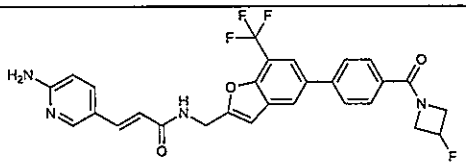
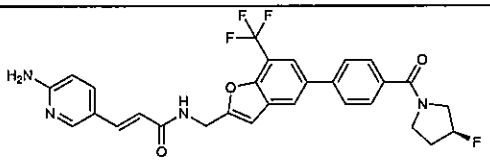
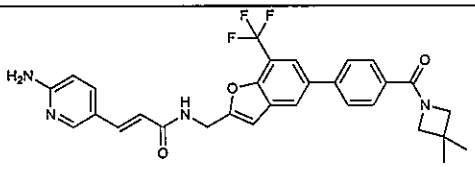
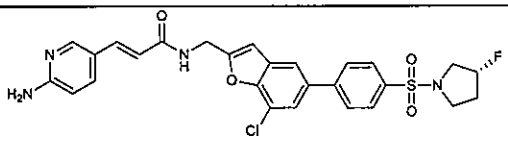
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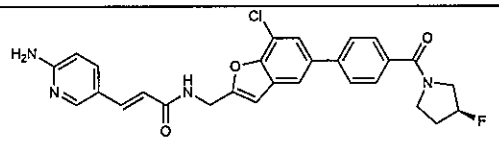
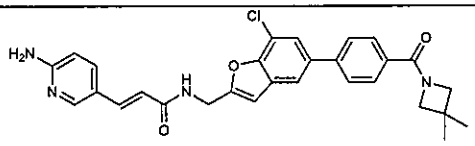
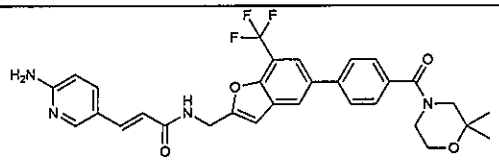
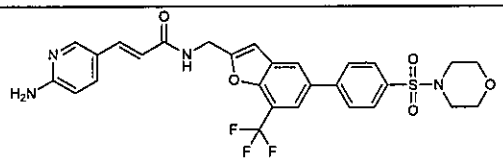
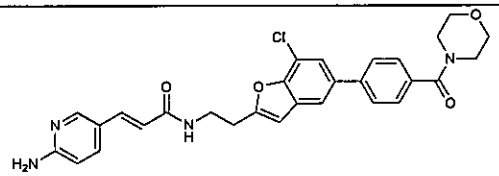
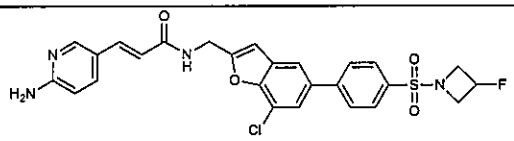
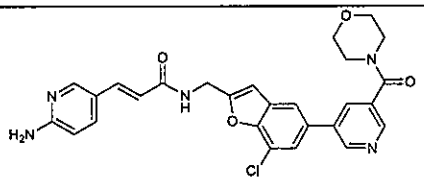
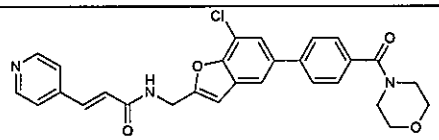
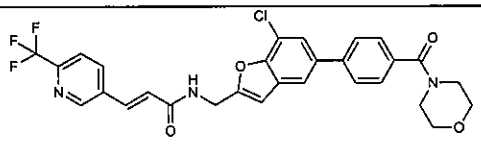
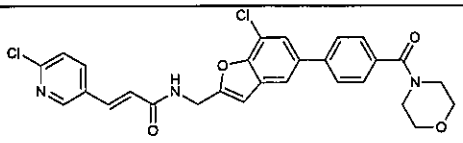
or a pharmaceutically acceptable salt thereof.

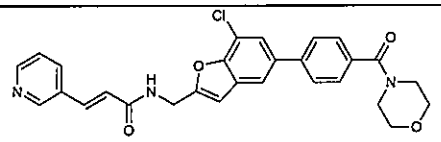
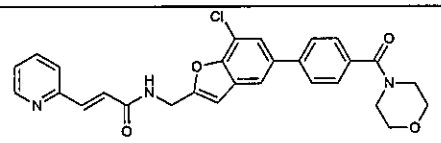
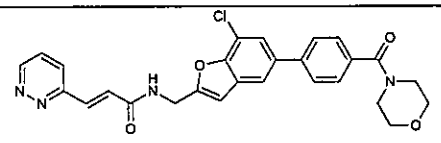
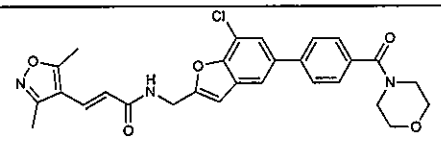
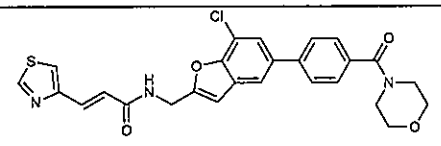
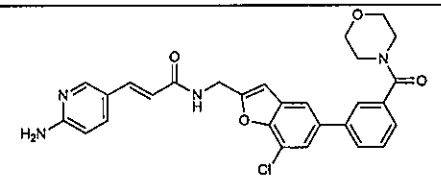
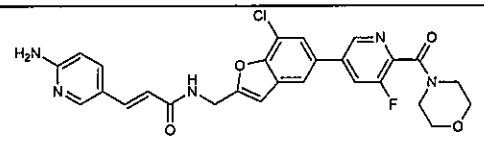
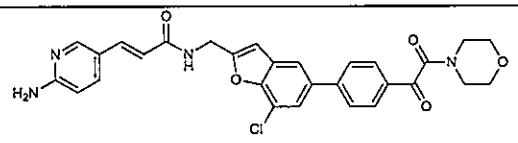
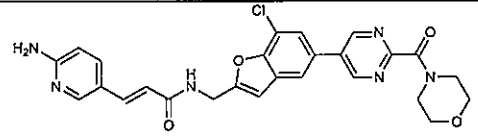
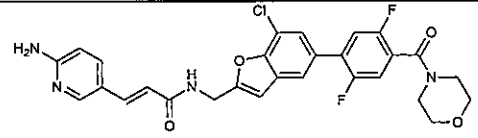
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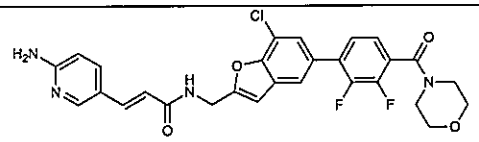
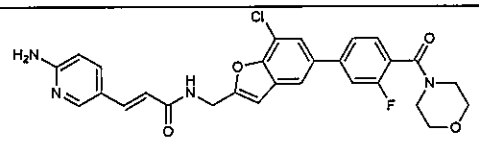
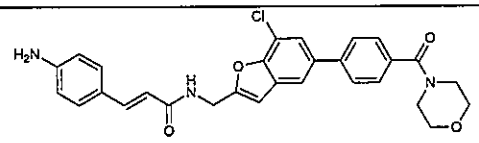
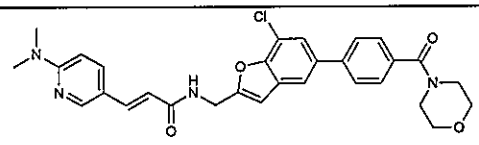
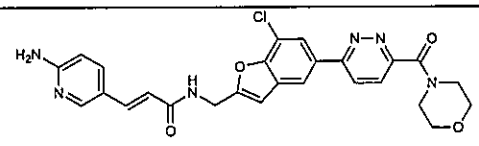
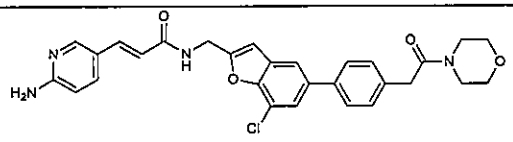
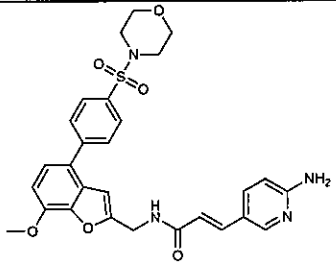
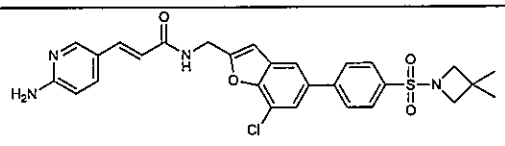
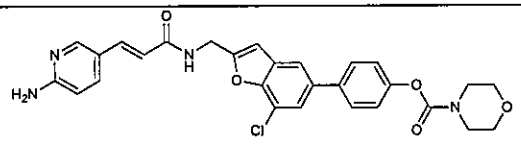
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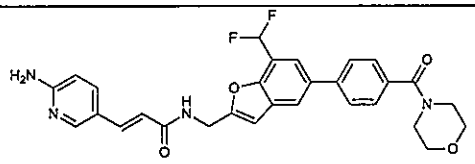
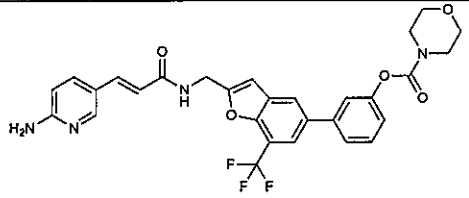
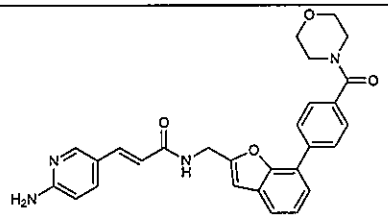
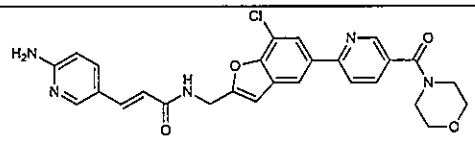
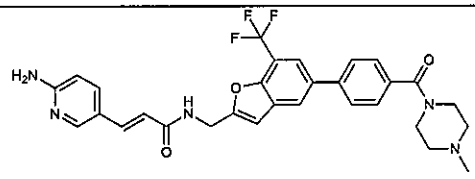
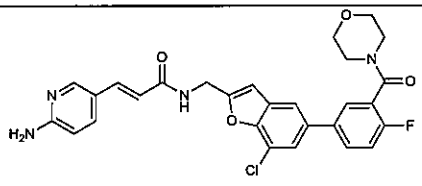
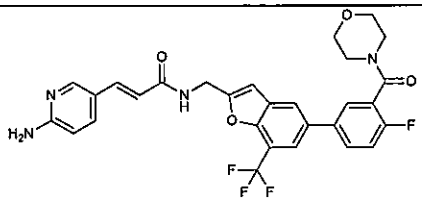
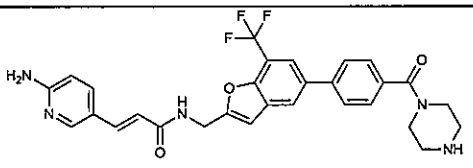
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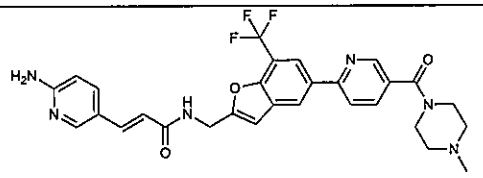
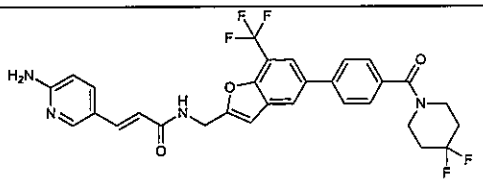
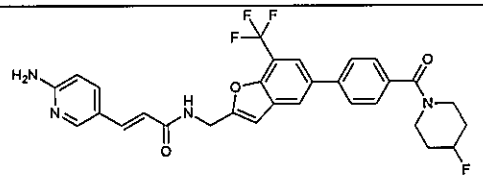
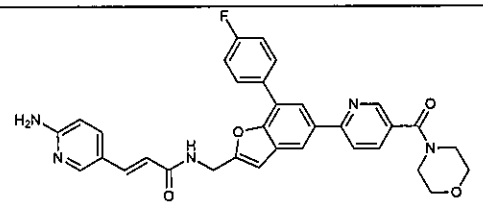
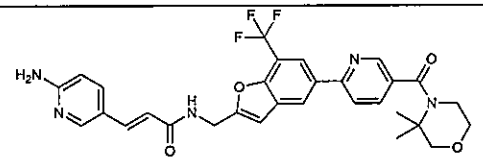
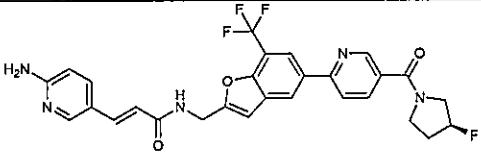
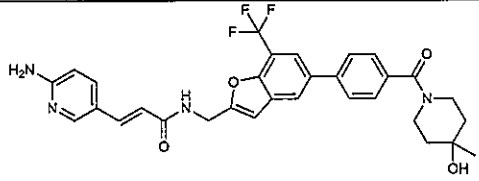
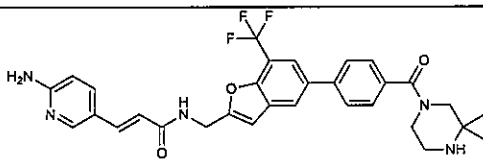
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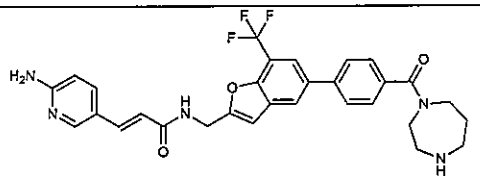
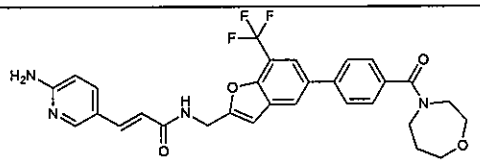
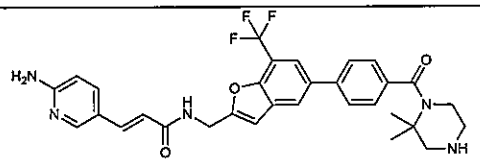
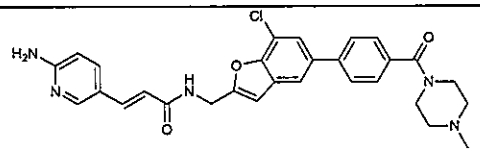
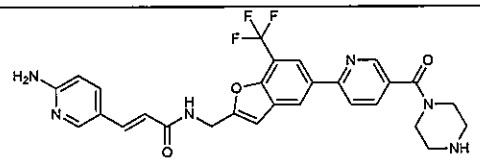
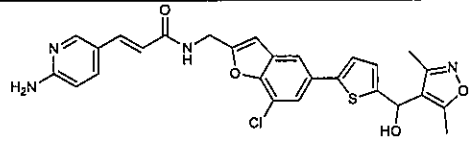
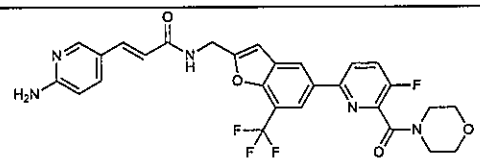
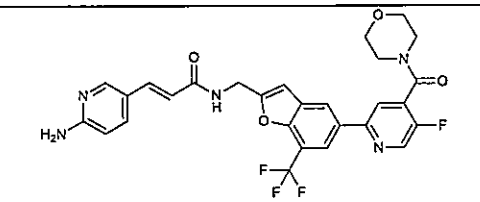
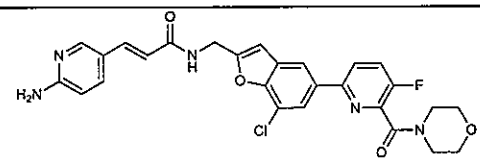
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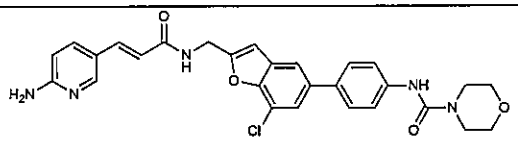
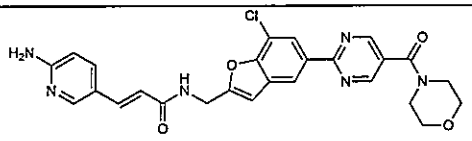
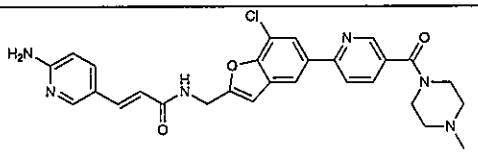
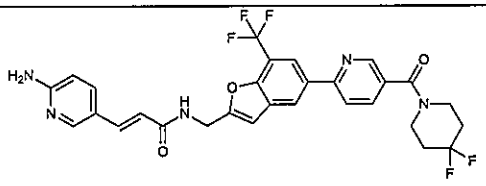
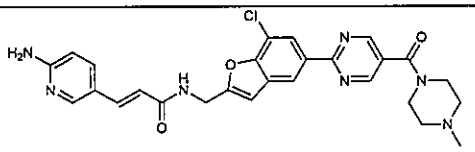
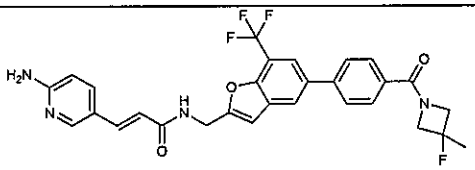
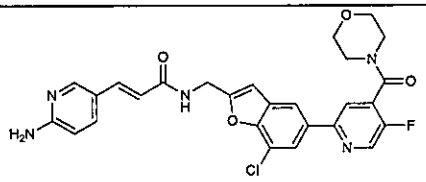
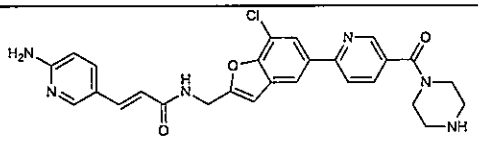
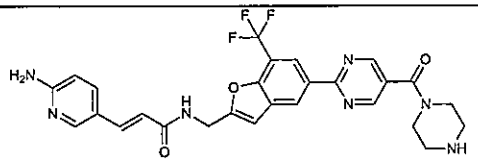
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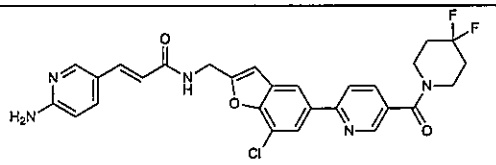
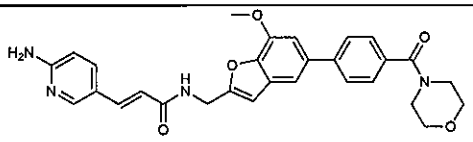
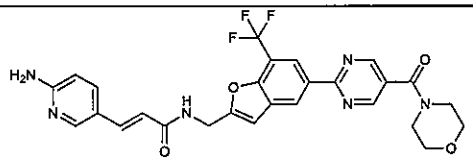
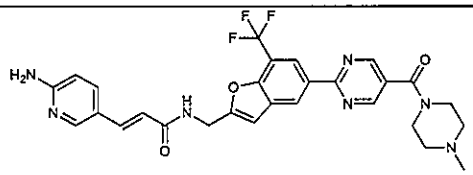
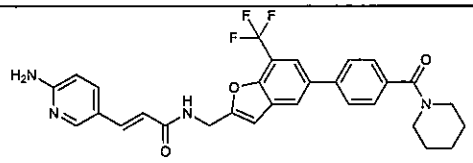
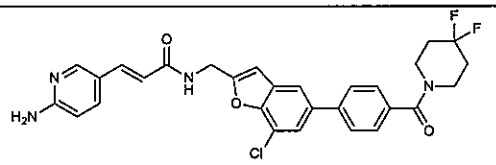
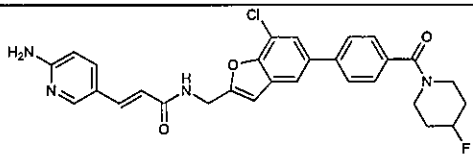
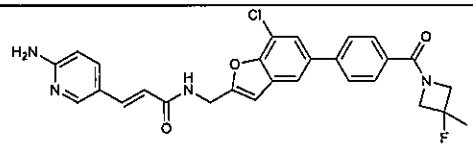
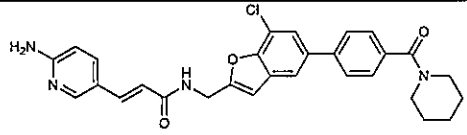
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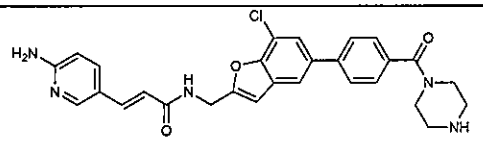
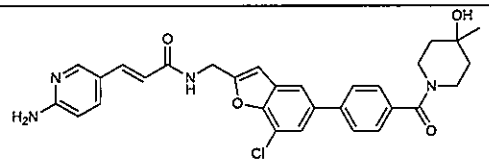
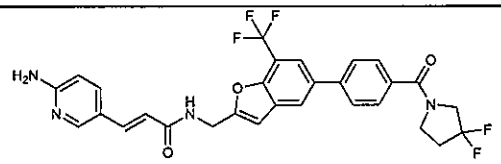
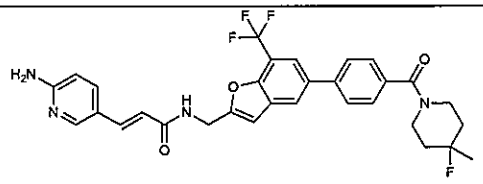
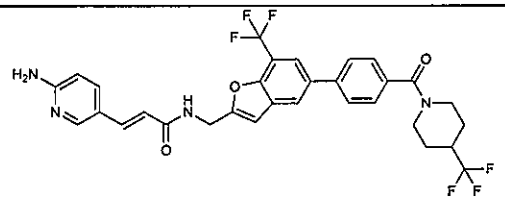
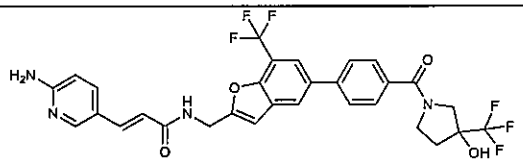
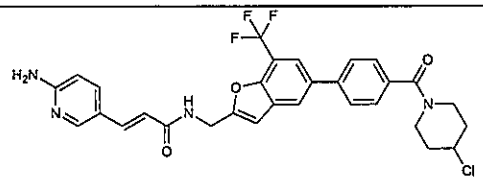
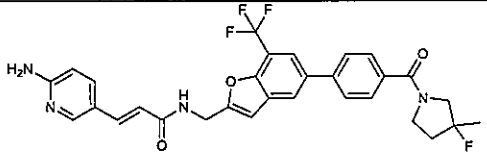
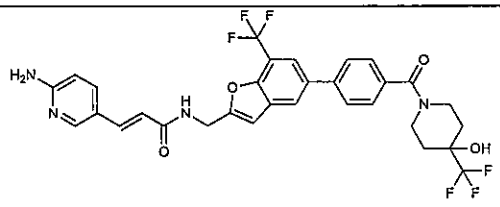
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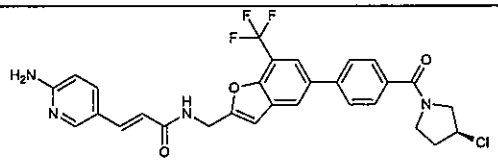
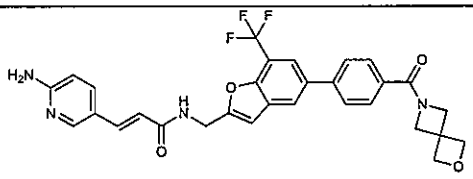
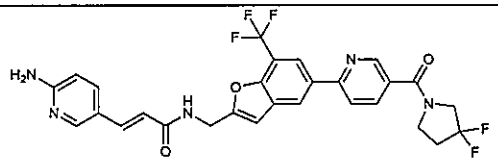
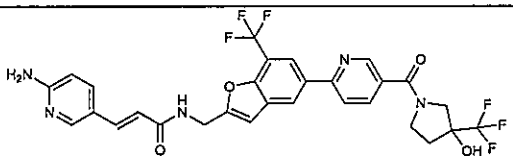
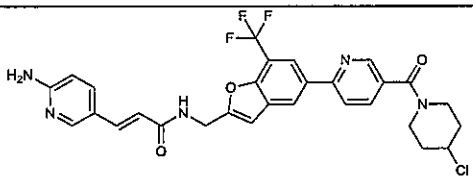
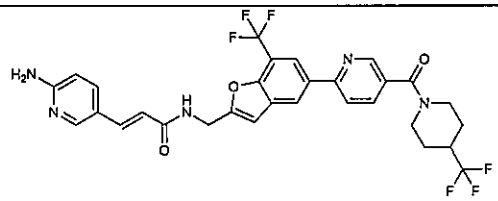
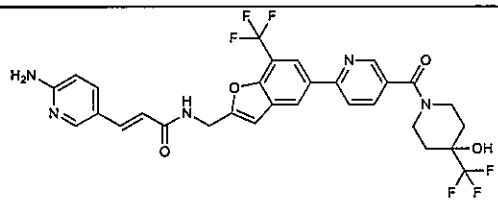
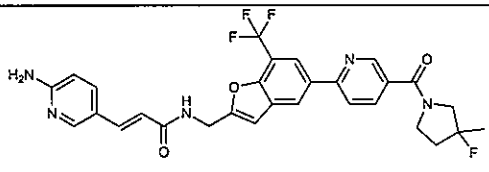
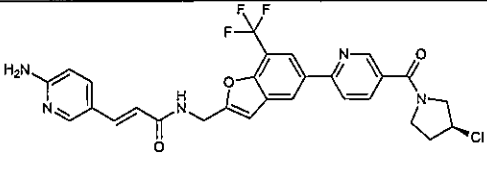
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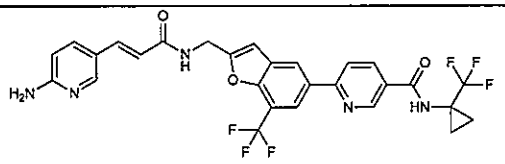
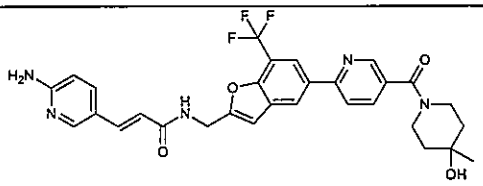
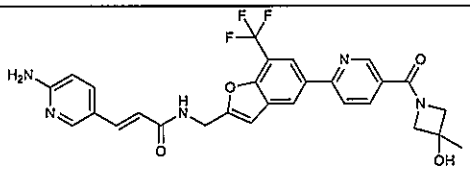
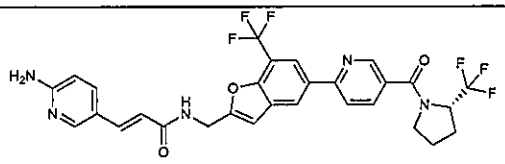
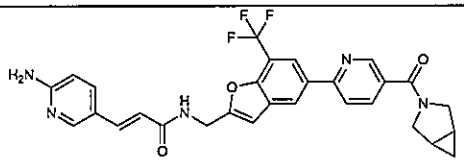
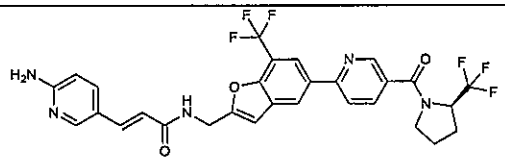
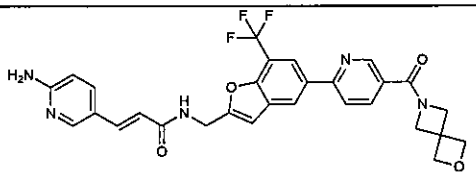
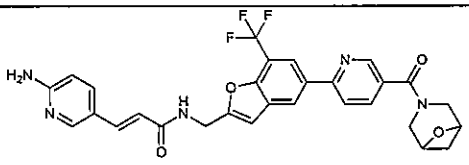
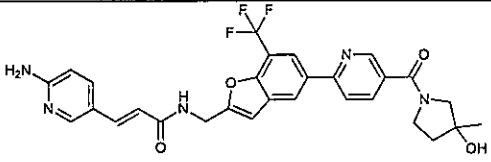
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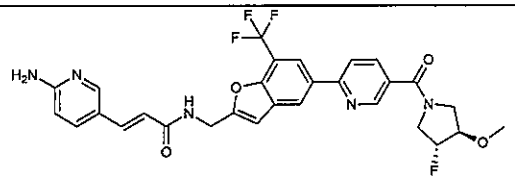
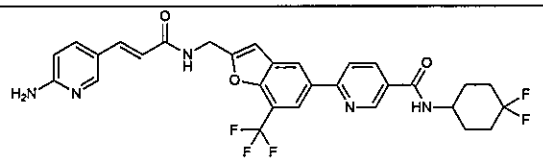
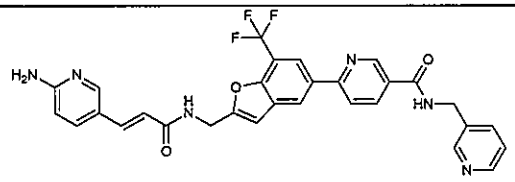
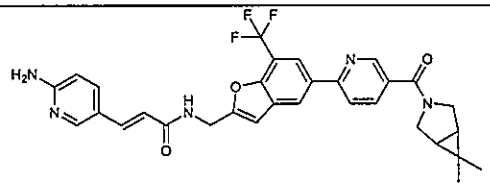
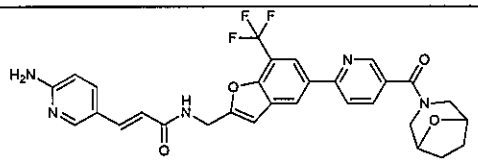
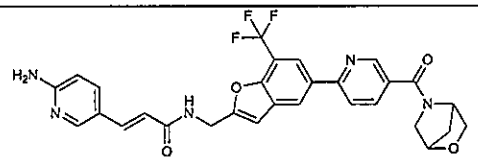
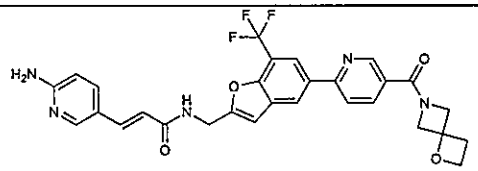
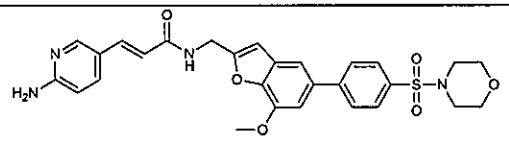
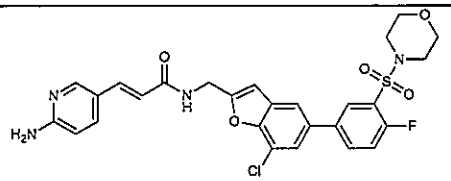
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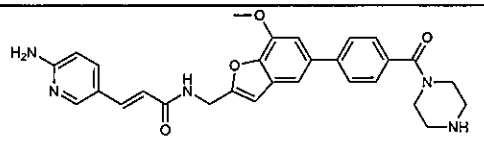
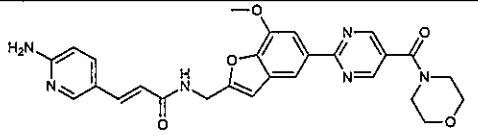
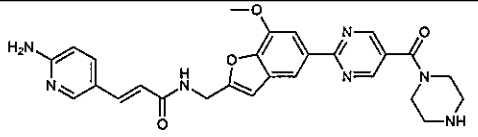
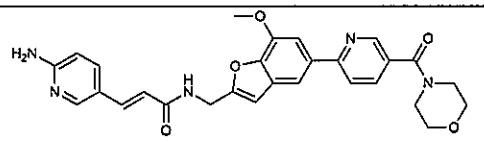
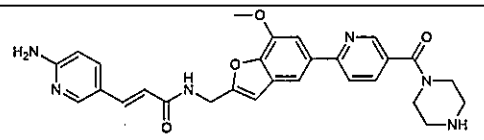
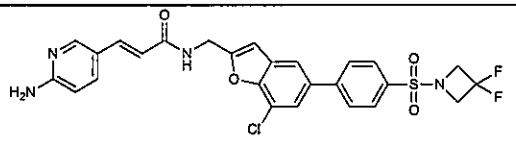
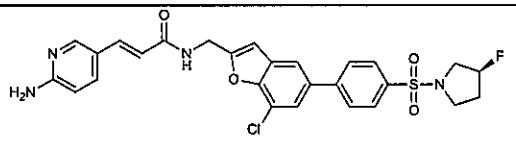
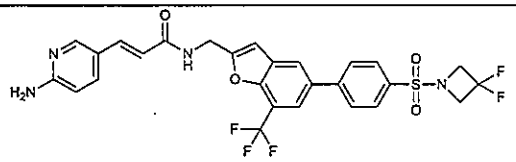
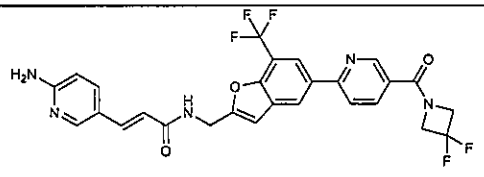
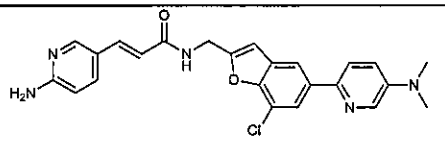
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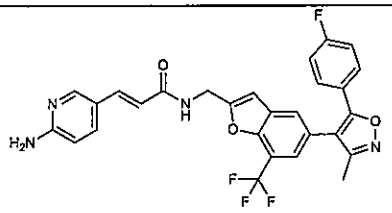
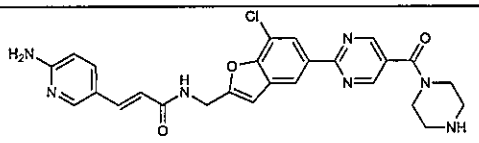
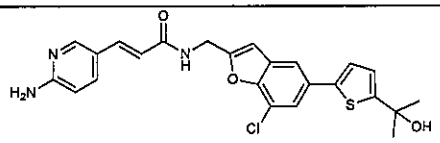
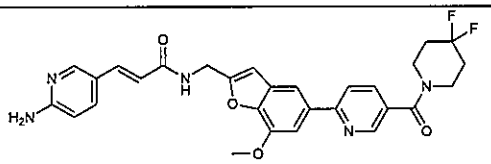
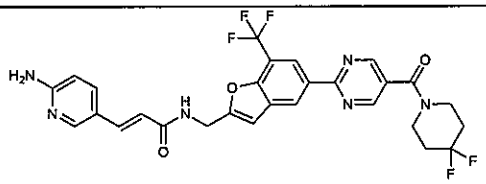
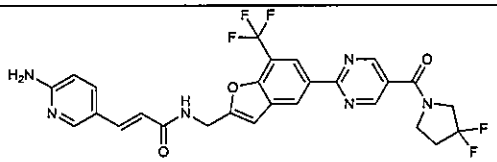
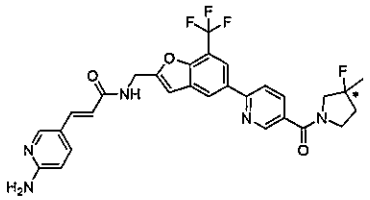
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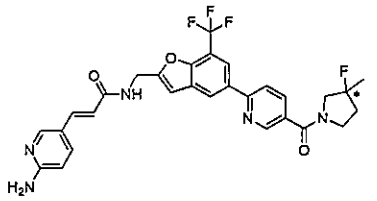
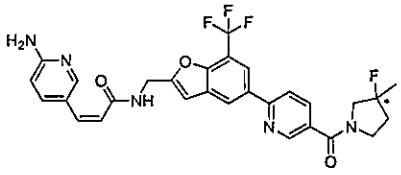
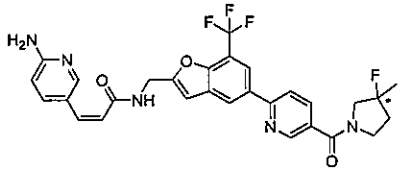
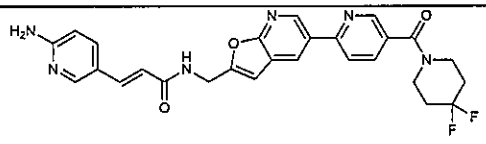
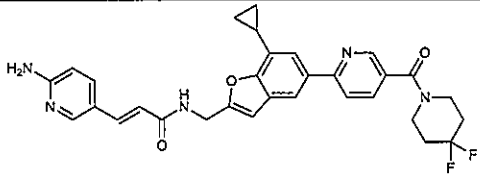
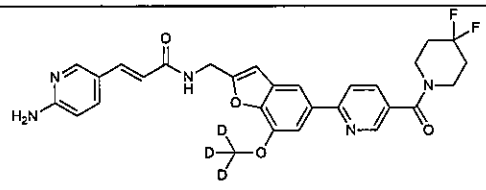
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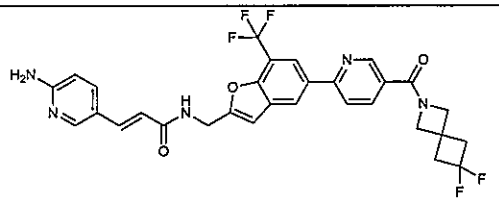
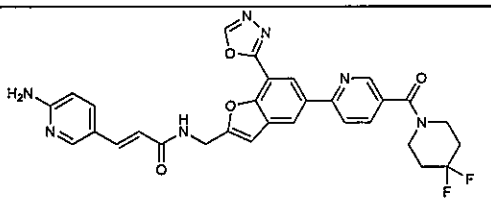
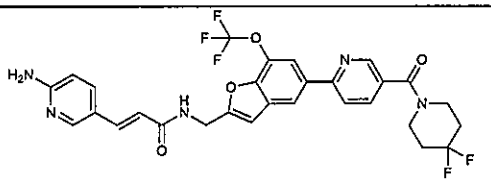
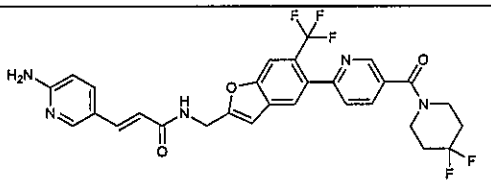
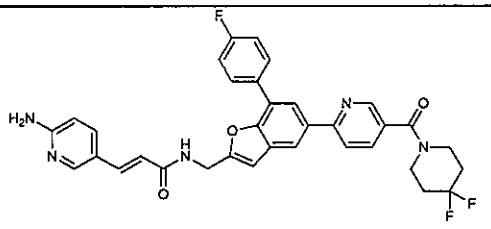
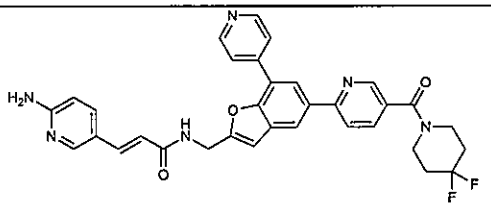
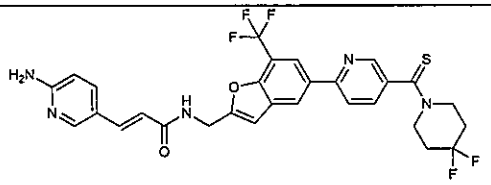
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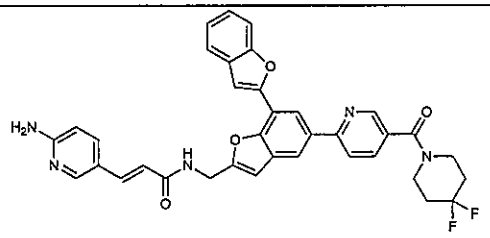
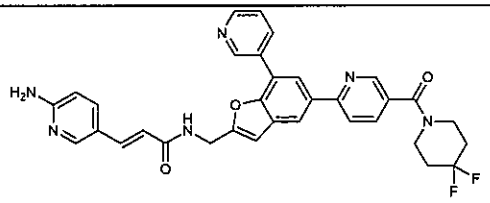
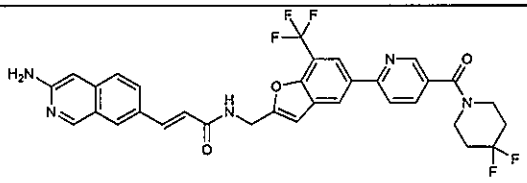
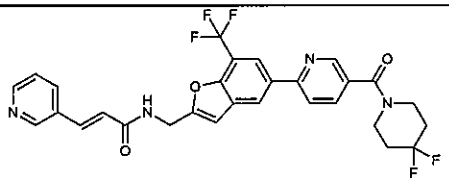
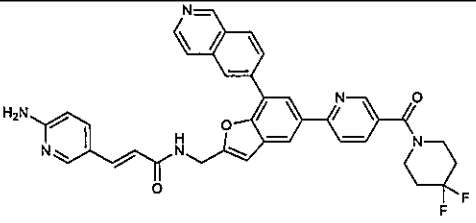
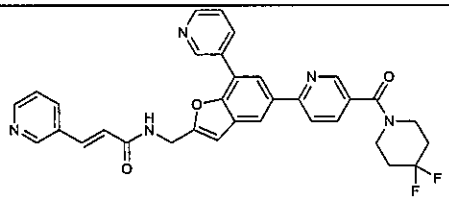
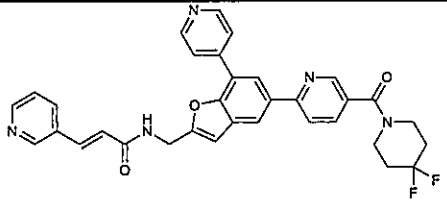
Cpd No.	Compound Structure
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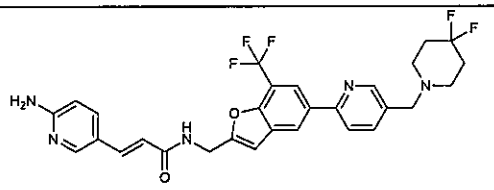
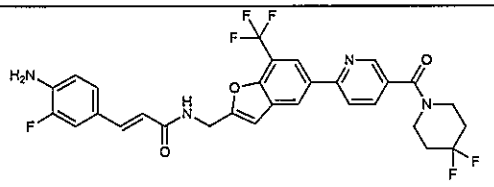
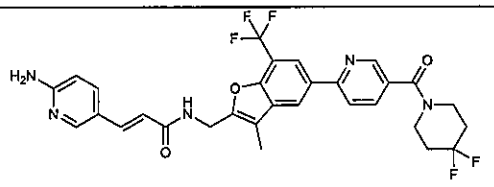
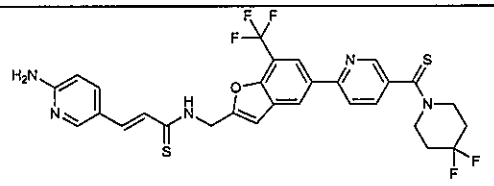
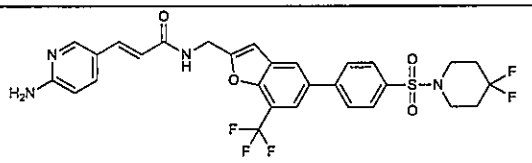
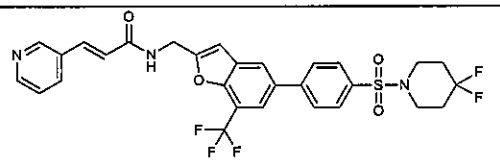
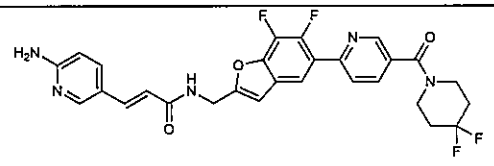
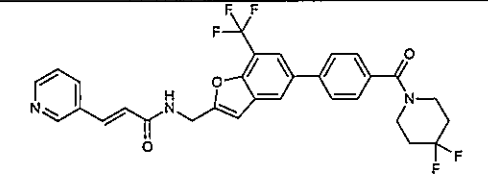
Cpd No.	Compound Structure
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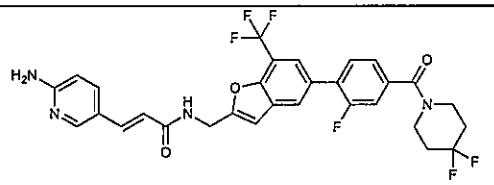
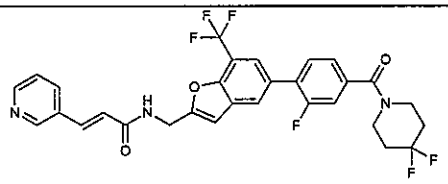
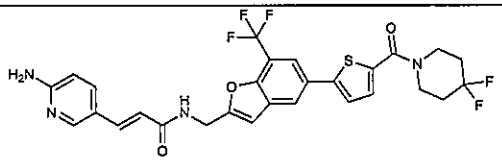
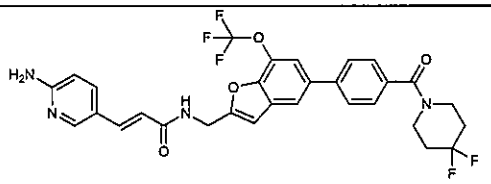
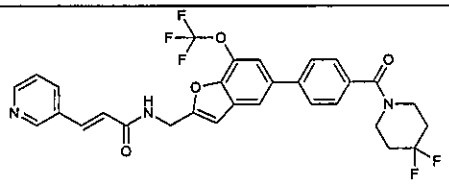
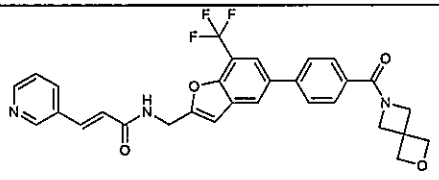
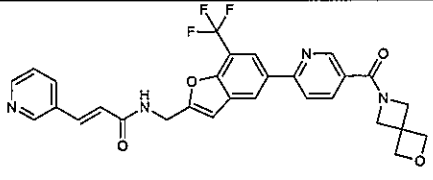
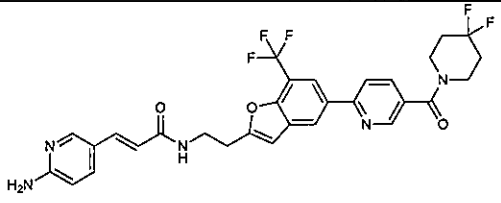
Cpd No.	Compound Structure
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654	 Enantiomer 1 t_R = 19.46 minutes (chiral HPLC)

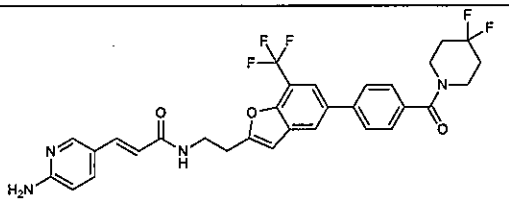
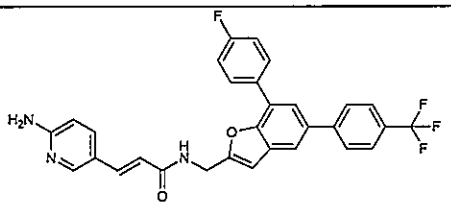
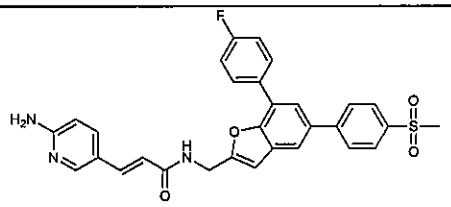
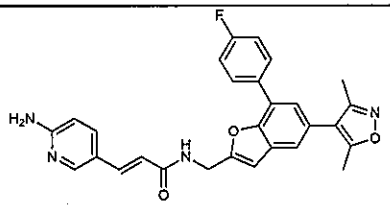
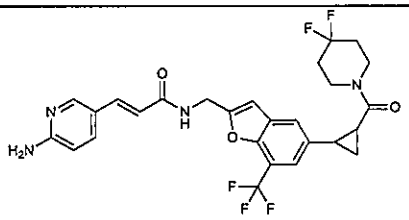
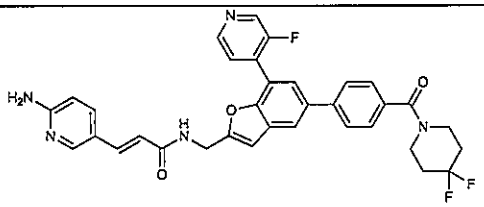
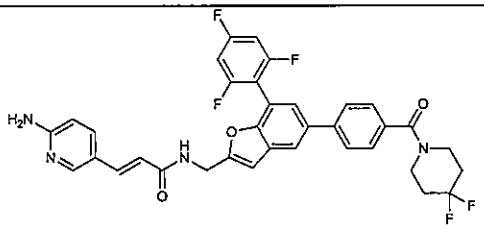
Cpd No.	Compound Structure
655	 Enantiomer 2 t_R = 30.74 minutes (chiral HPLC)
656	 Enantiomer 1 t_R = 8.16 minutes (chiral HPLC)
657	 Enantiomer 2 t_R = 7.51 minutes (chiral HPLC)
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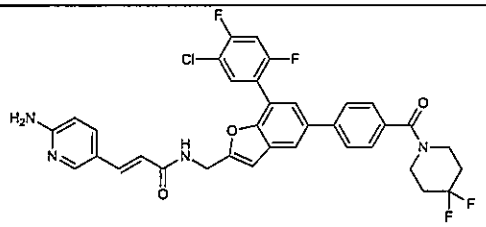
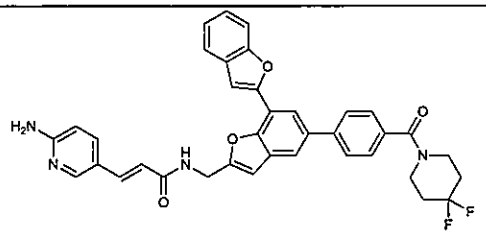
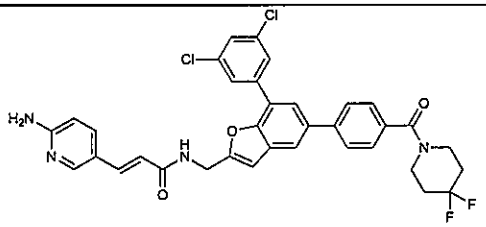
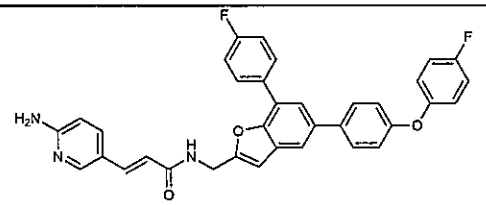
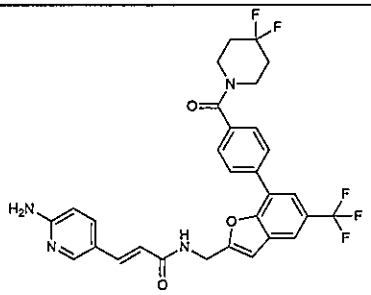
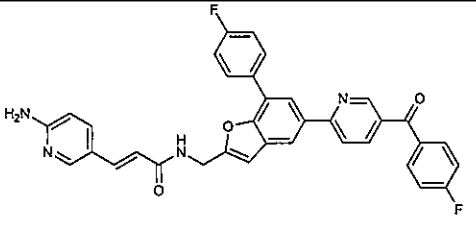
Cpd No.	Compound Structure
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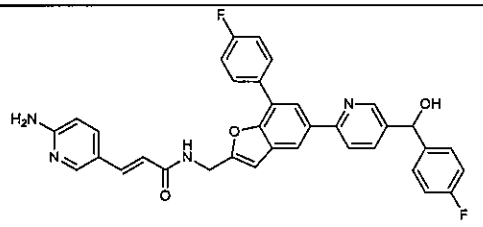
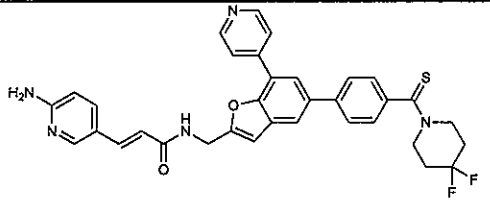
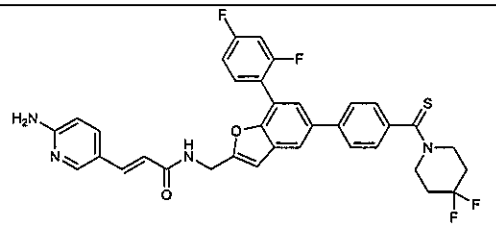
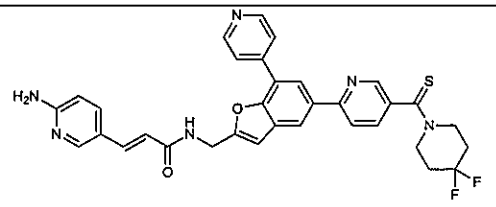
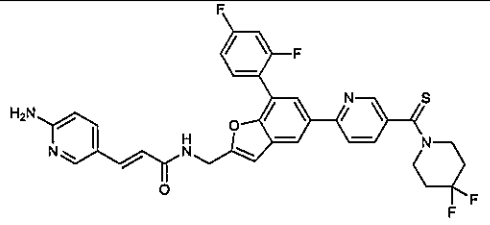
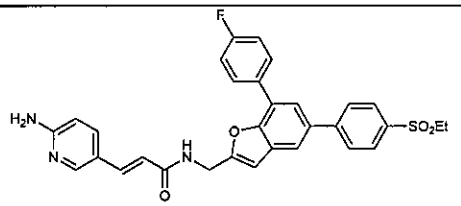
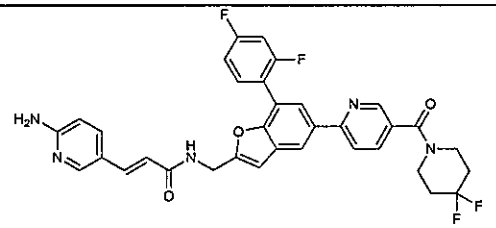
Cpd No.	Compound Structure
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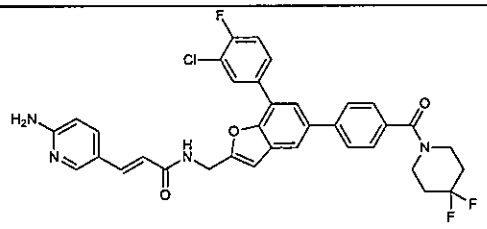
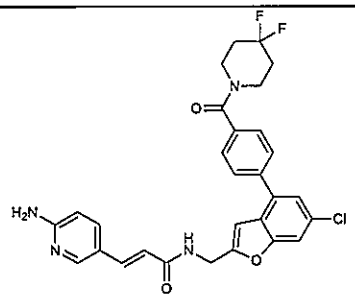
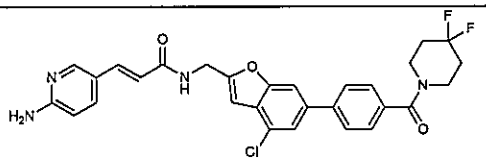
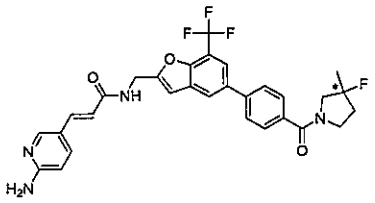
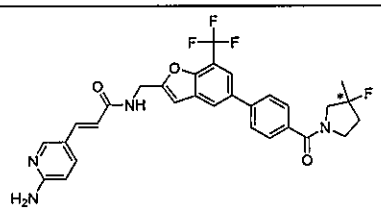
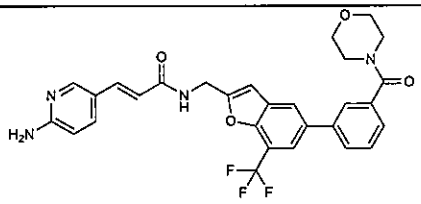
Cpd No.	Compound Structure
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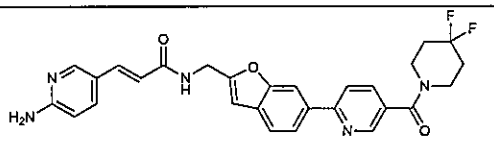
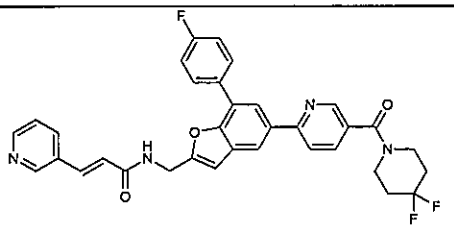
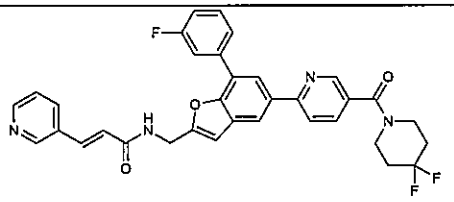
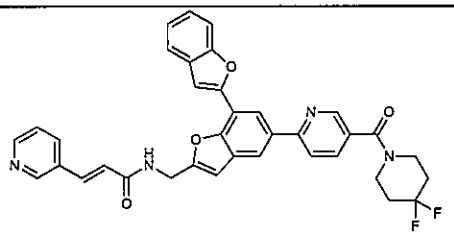
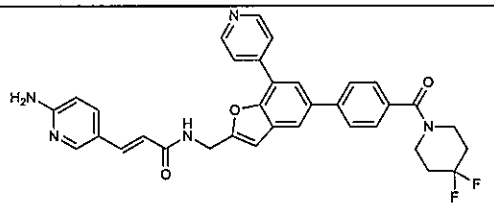
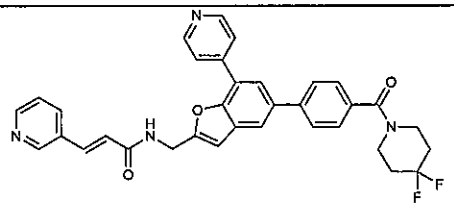
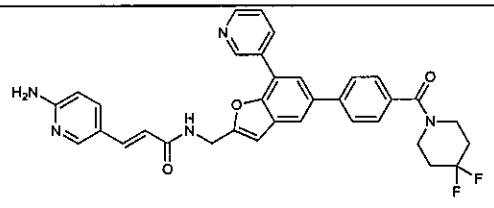
Cpd No.	Compound Structure
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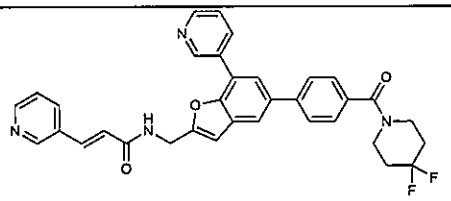
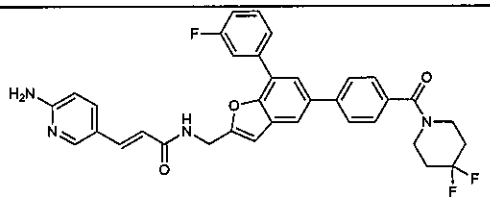
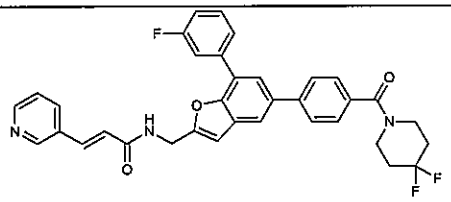
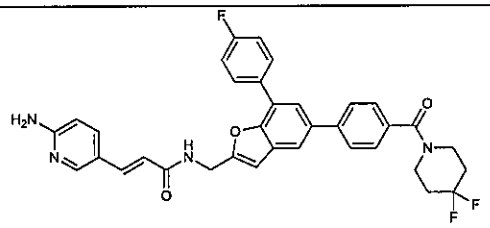
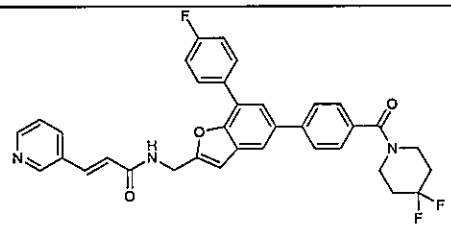
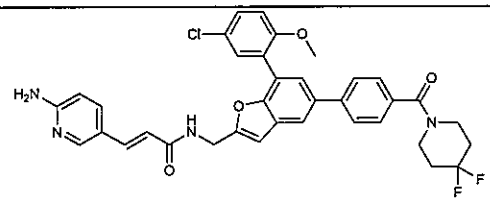
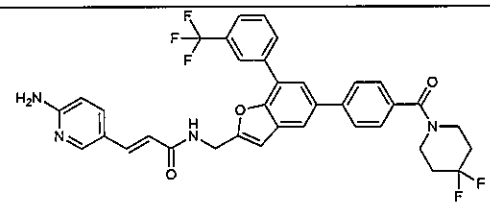
Cpd No.	Compound Structure
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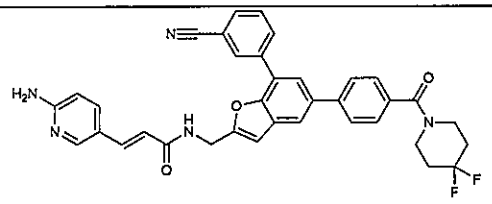
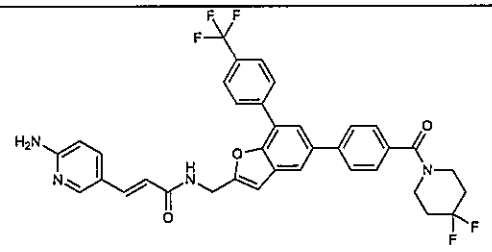
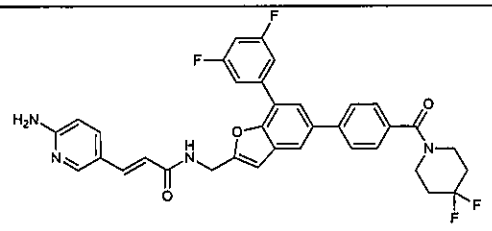
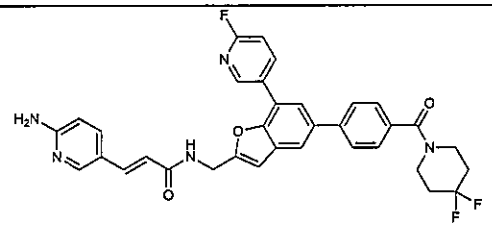
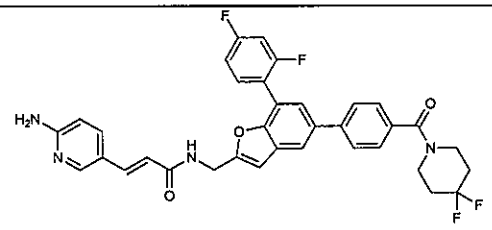
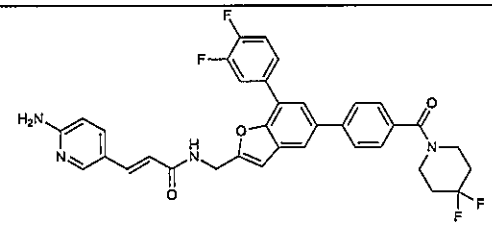
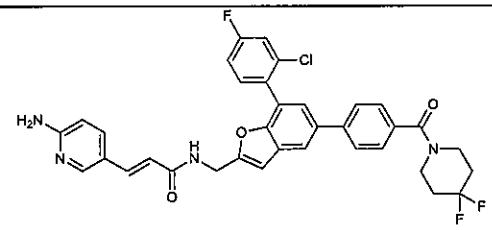
Cpd No.	Compound Structure
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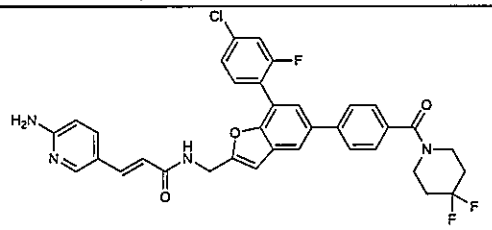
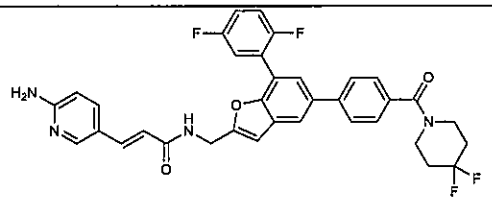
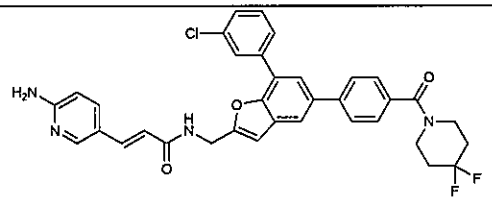
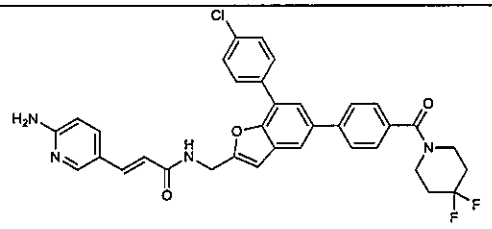
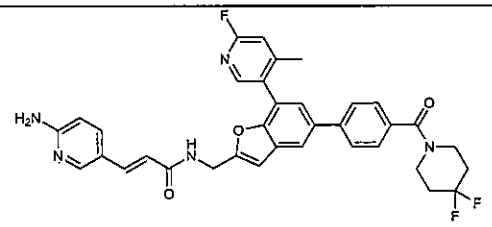
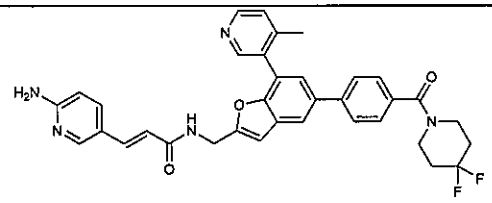
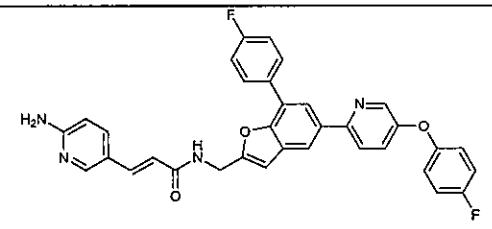
Cpd No.	Compound Structure
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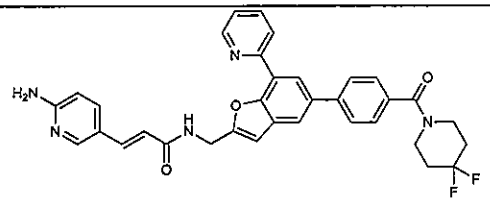
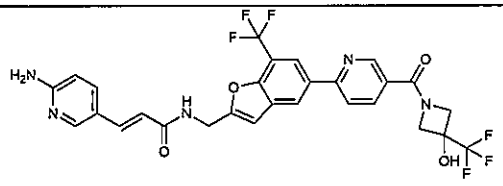
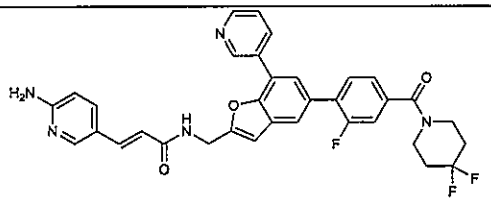
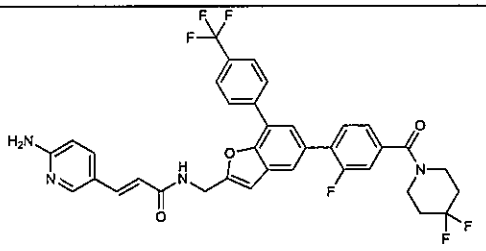
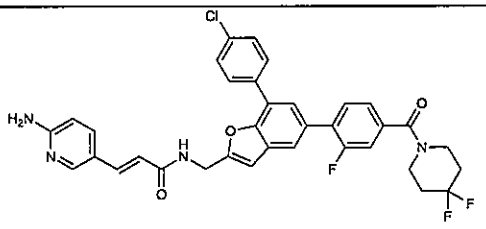
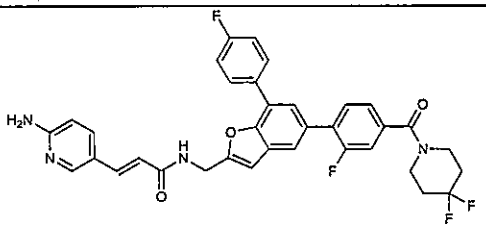
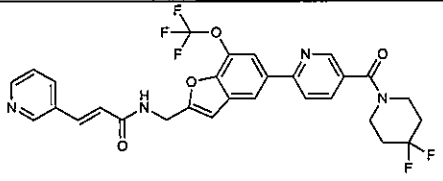
Cpd No.	Compound Structure
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713	
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715	 Enantiomer 1 t_R = 5.09 minutes (chiral HPLC)
716	 Enantiomer 2 t_R = 5.99 minutes (chiral HPLC)
717	

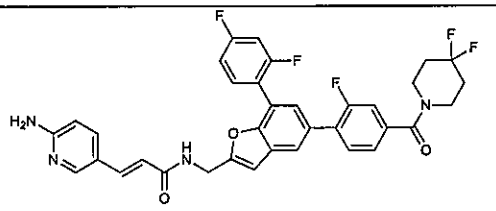
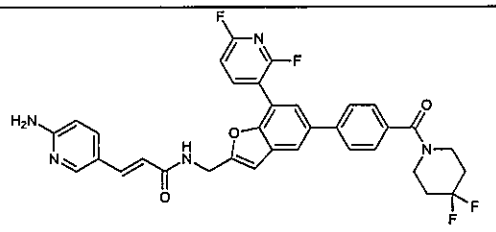
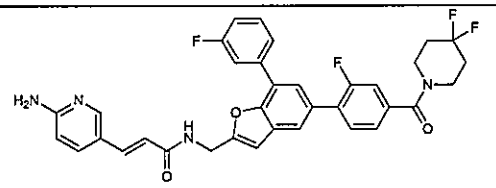
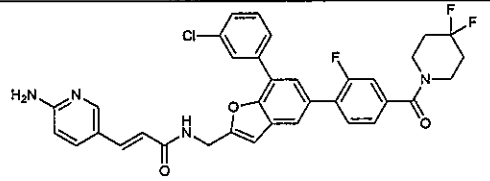
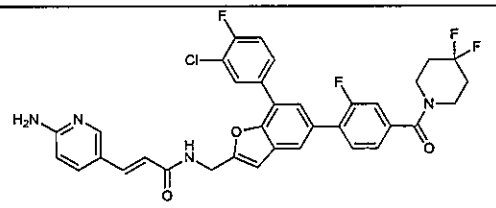
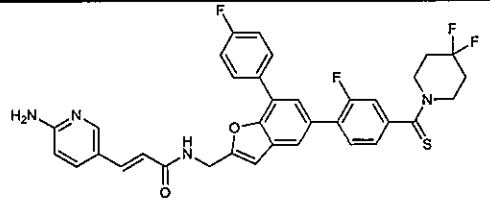
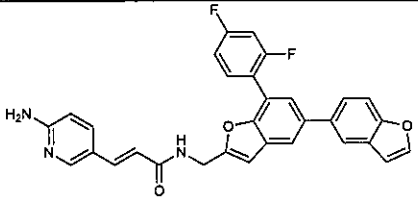
Cpd No.	Compound Structure
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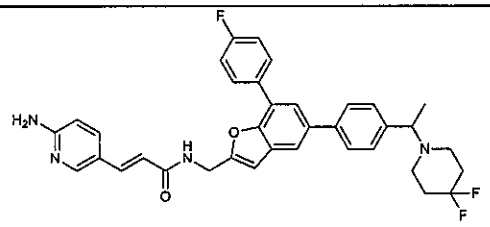
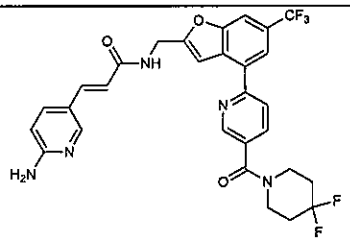
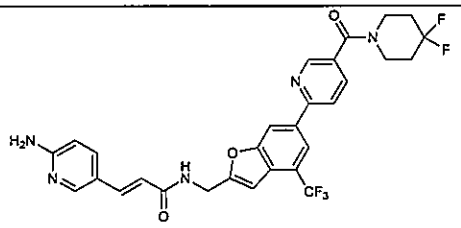
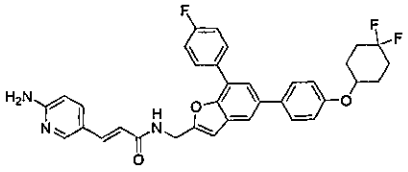
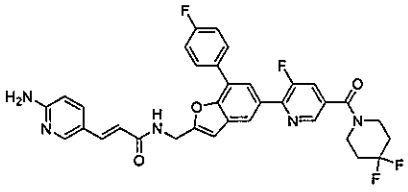
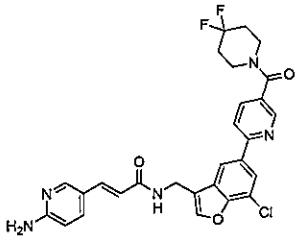
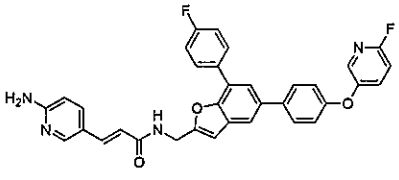
Cpd No.	Compound Structure
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Cpd No.	Compound Structure
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Cpd No.	Compound Structure
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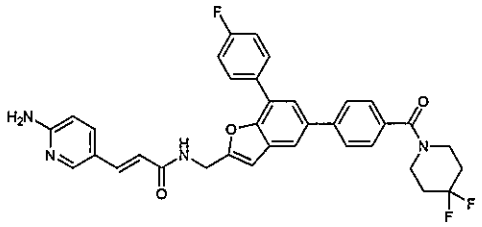
Cpd No.	Compound Structure
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Cpd No.	Compound Structure
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Cpd No.	Compound Structure
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or a pharmaceutically acceptable salt thereof.

11. A compound represented by the following structural formula:



or a pharmaceutically acceptable salt thereof.

12. A pharmaceutical composition comprising:

(a) a compound of any one of Claims 1 to 11, or a pharmaceutically acceptable salt thereof; and

(b) a pharmaceutically acceptable carrier.

13. A compound of any one of Claims 1 to 11, or a pharmaceutically acceptable salt thereof, or a pharmaceutical composition of Claim 12, for use in treating a PAK-mediated disorder.

14. The compound, salt or pharmaceutical composition of Claim 13, wherein the PAK-mediated disorder is a disorder mediated by PAK1, PAK2 or PAK3, or a combination of the foregoing.

15. The compound, salt or pharmaceutical composition of Claim 13, wherein the PAK-mediated disorder is a disorder mediated by PAK4, PAK5 or PAK6, or a combination of the foregoing.

16. The compound, salt or pharmaceutical composition of any one of Claims 13 to 15, wherein the PAK-mediated disorder is cancer, a neurodegenerative disease or an immune system disease.

17. The compound, salt or pharmaceutical composition of any one of Claims 13 to 16, wherein the PAK-mediated disorder is cancer.

18. The compound, salt or pharmaceutical composition of Claim 17, wherein the cancer is selected from non-Hodgkin lymphoma, leukemia, mantle cell lymphoma, multiple myeloma, cervical cancer, ovarian cancer, osteosarcoma, prostate cancer, breast cancer, colorectal cancer, hepatocellular carcinoma, lung cancer, glioma, liver cancer, bile duct cancer, pancreatic cancer, neuroblastoma, testicular cancer, and mesothelioma.

19. The compound, salt or pharmaceutical composition of Claim 18, wherein the non-Hodgkin lymphoma is selected from follicular lymphoma, Burkitt lymphoma and diffuse large B-cell lymphoma.

20. The compound, salt or pharmaceutical composition of Claim 18, wherein the cancer is cervical cancer.

21. The compound, salt or pharmaceutical composition of Claim 18, wherein the cancer is mantle cell lymphoma.

22. The compound, salt or pharmaceutical composition of claim 18, wherein the leukemia is selected from chronic lymphocytic leukemia, acute myeloid leukemia and acute lymphoblastic leukemia.

23. Use of a compound of any one of Claims 1 to 11, or a pharmaceutically acceptable salt thereof, for the manufacture of a medicament for treating a PAK-mediated disorder.

24. The use of claim 23, wherein the PAK-mediated disorder is a cancer selected from the group consisting of non-Hodgkin lymphoma, mantle cell lymphoma, leukemia, multiple myeloma, cervical cancer, ovarian cancer, osteosarcoma, prostate cancer, breast cancer, colorectal cancer, hepatocellular carcinoma, lung cancer, glioma, liver cancer, bile duct cancer, pancreatic cancer, neuroblastoma, testicular cancer and mesothelioma.

25. The use of Claim 24, wherein the non-Hodgkin lymphoma is selected from follicular lymphoma, Burkitt lymphoma and diffuse large B-cell lymphoma.

26. The use of Claim 24, wherein the cancer is cervical cancer.

27. The use of Claim 24, wherein the cancer is mantle cell lymphoma.

28. The use of Claim 24, wherein the leukemia is selected from chronic lymphocytic leukemia, acute myeloid leukemia and acute lymphoblastic leukemia.