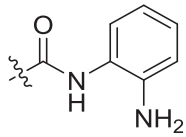
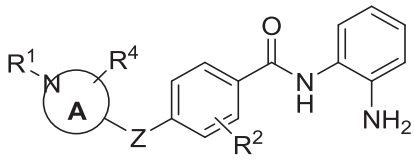
inhibitors comprising a moiety of  , which, under physiological conditions, produce lower amounts, or substantially no amounts, of OPD.

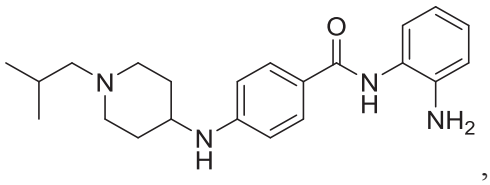
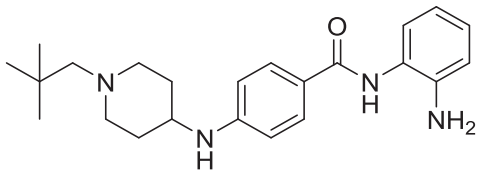
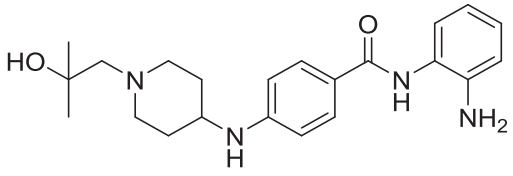
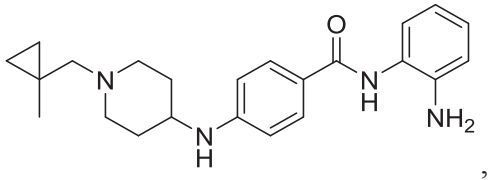
SUMMARY

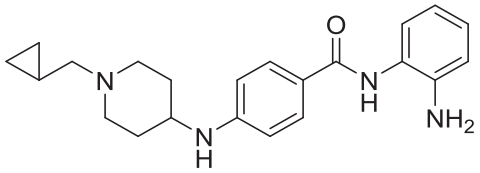
[0012] In one aspect, the present disclosure refers to compounds of formula (I), or a pharmaceutically acceptable salt thereof, and methods of using compounds of formula (I), e.g., for inhibiting HDAC (e.g., one or more of HDAC1, HDAC2, and HDAC3):

 (I),

wherein ring A is a 4-7 membered heterocycloalkyl ring containing one nitrogen ring atom or a 7-9 membered bicyclic heterocycloalkyl ring containing one nitrogen ring atom; Z is O, NR^3, S, SO, or SO_2; R^1 is H, C_{1-6}alkyl, C_{1-6}hydroxyalkyl, $C(O)C_{1-6}$alkyl, C_{0-3}alkylene-C_{3-10}cycloalkyl, or C_{0-3}alkylene-C_{2-5}heterocycloalkyl having 1 or 2 heteroatoms selected from O, S, N, and $N(C_{1-4}alkyl)$; R^2 is H, F, Cl, or CH_3; R^3 is H, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{0-3}alkylene-C_{3-7}cycloalkyl, $C(O)C_{1-6}$alkyl, or $C(O)C_{0-3}$alkylene-C_{3-7}cycloalkyl; and R^4 is H or C_{1-3}alkyl.

[0012a] In another aspect, the present disclosure refers to a compound having a structure selected from the group consisting of

 ,
 ,
 ,
 ,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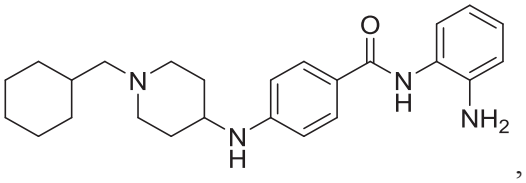
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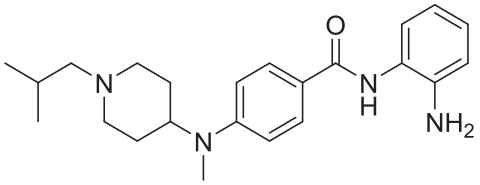
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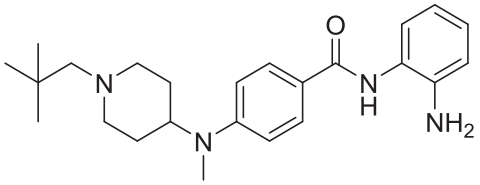
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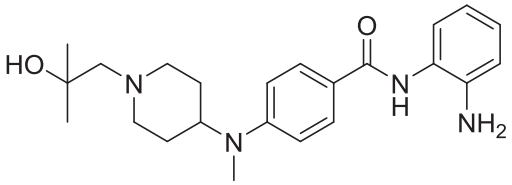
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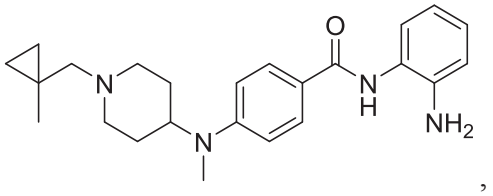
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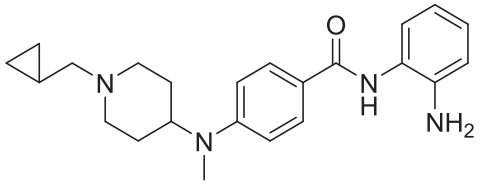
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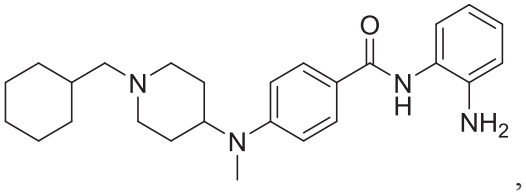
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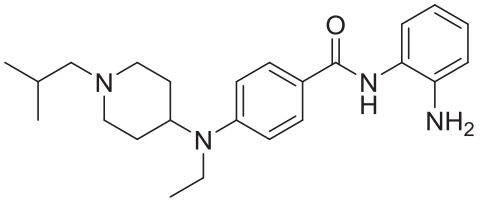
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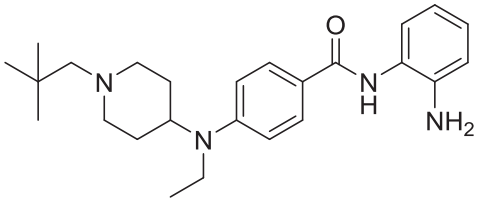
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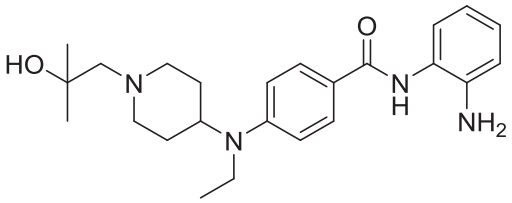
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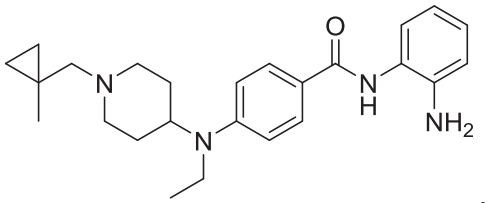
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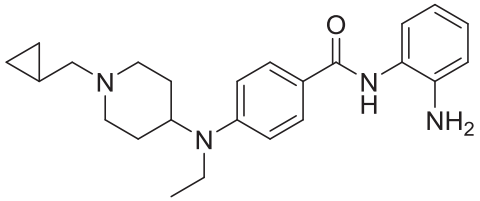
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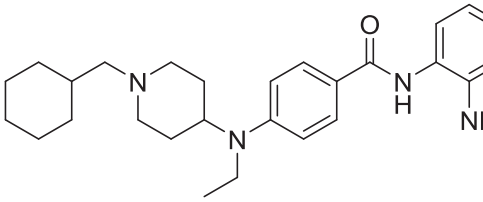
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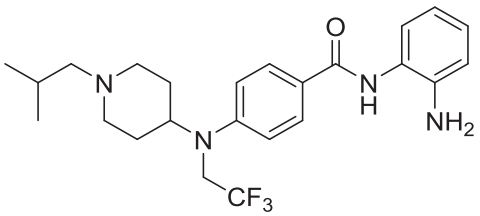
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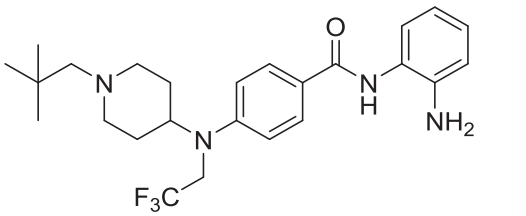
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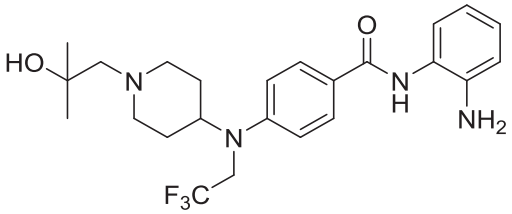
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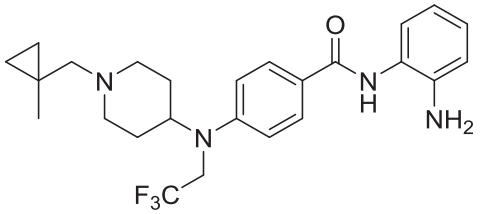
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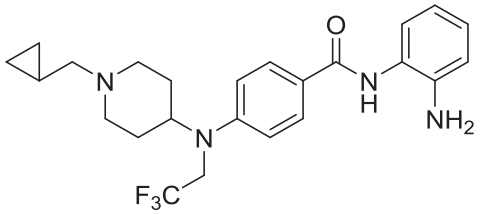
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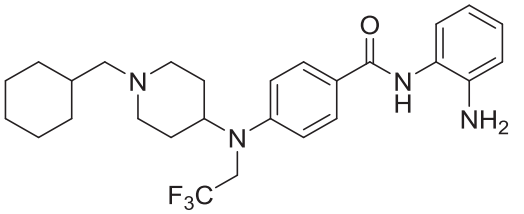
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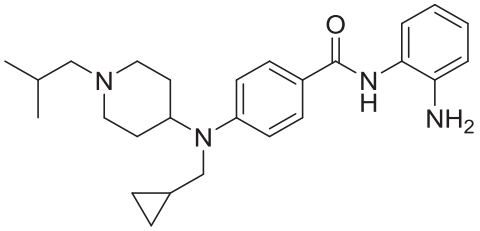
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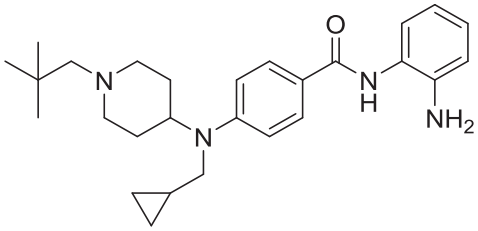
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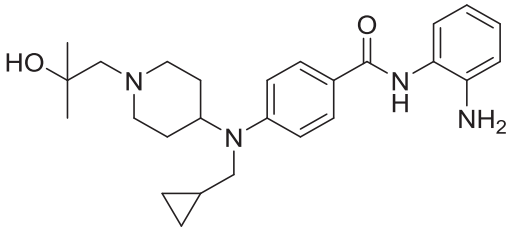
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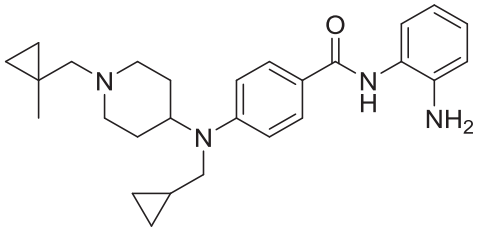
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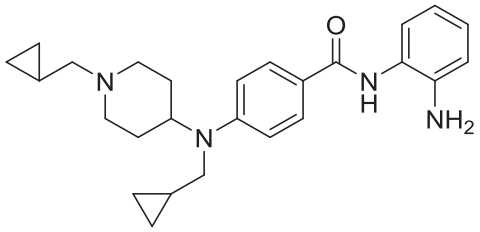
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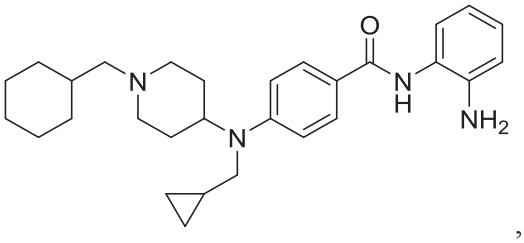
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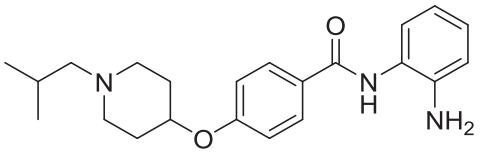
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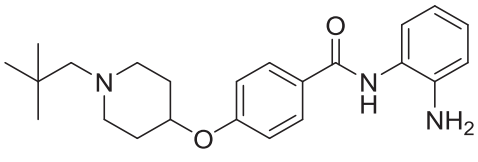
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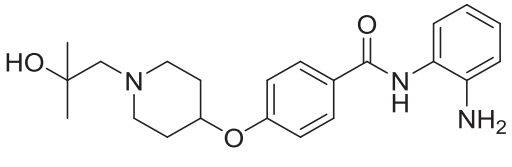
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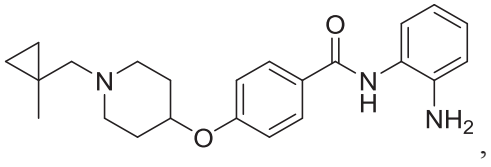
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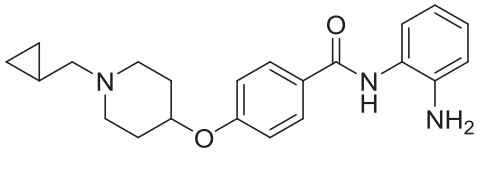
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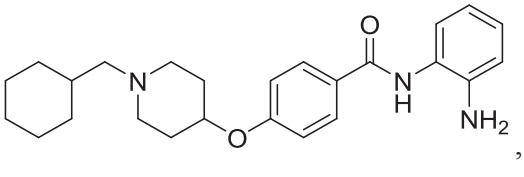
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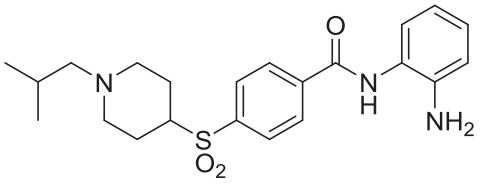
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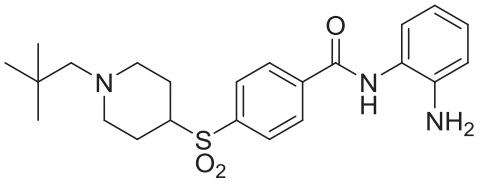
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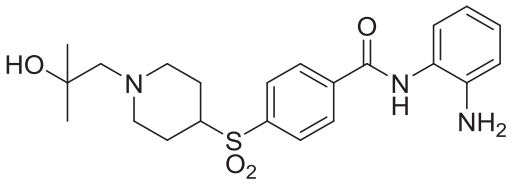
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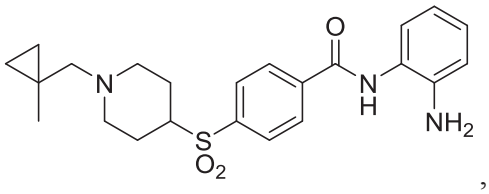
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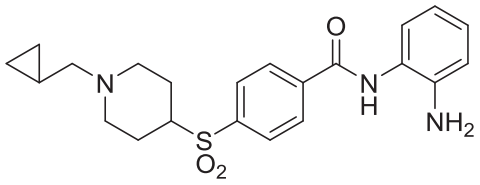
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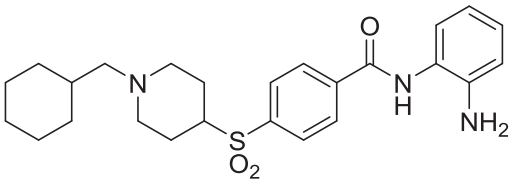
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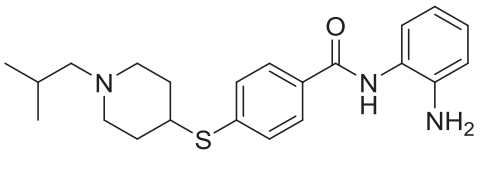
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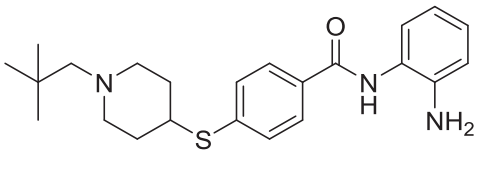
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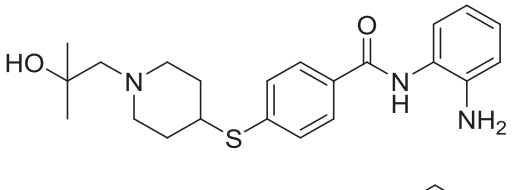
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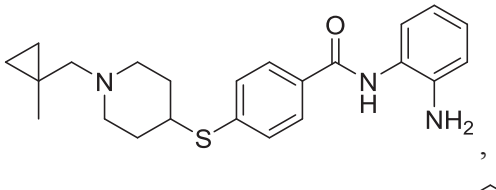
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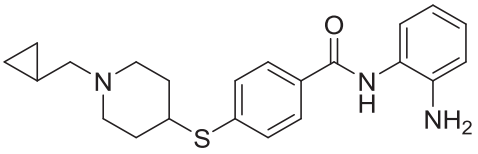
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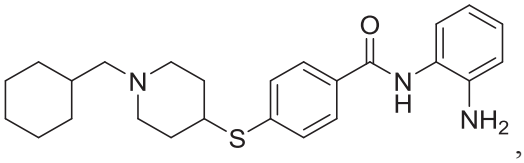
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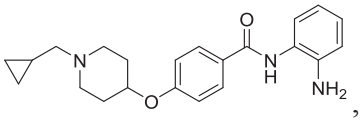
or a pharmaceutically acceptable salt thereof.

[0012b] In another aspect, the present disclosure refers to a compound selected from the group consisting of

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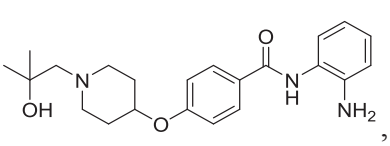
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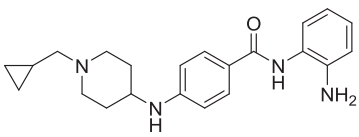
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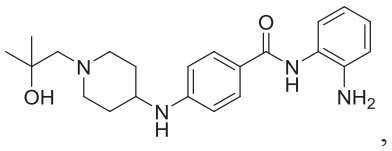
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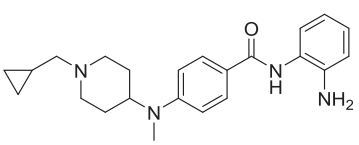
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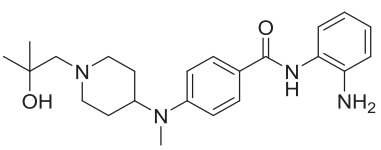
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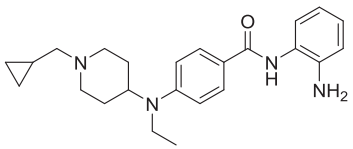
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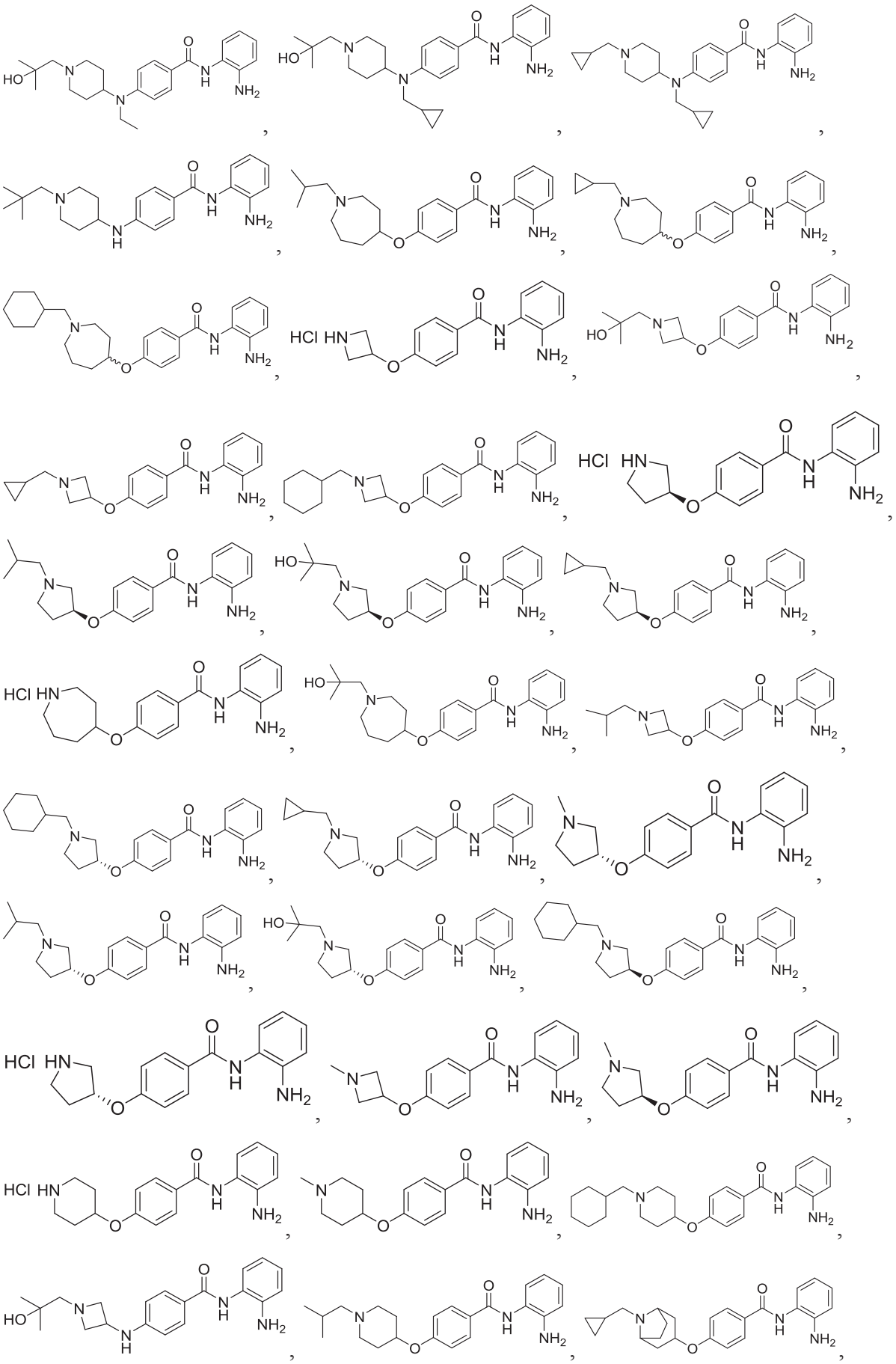

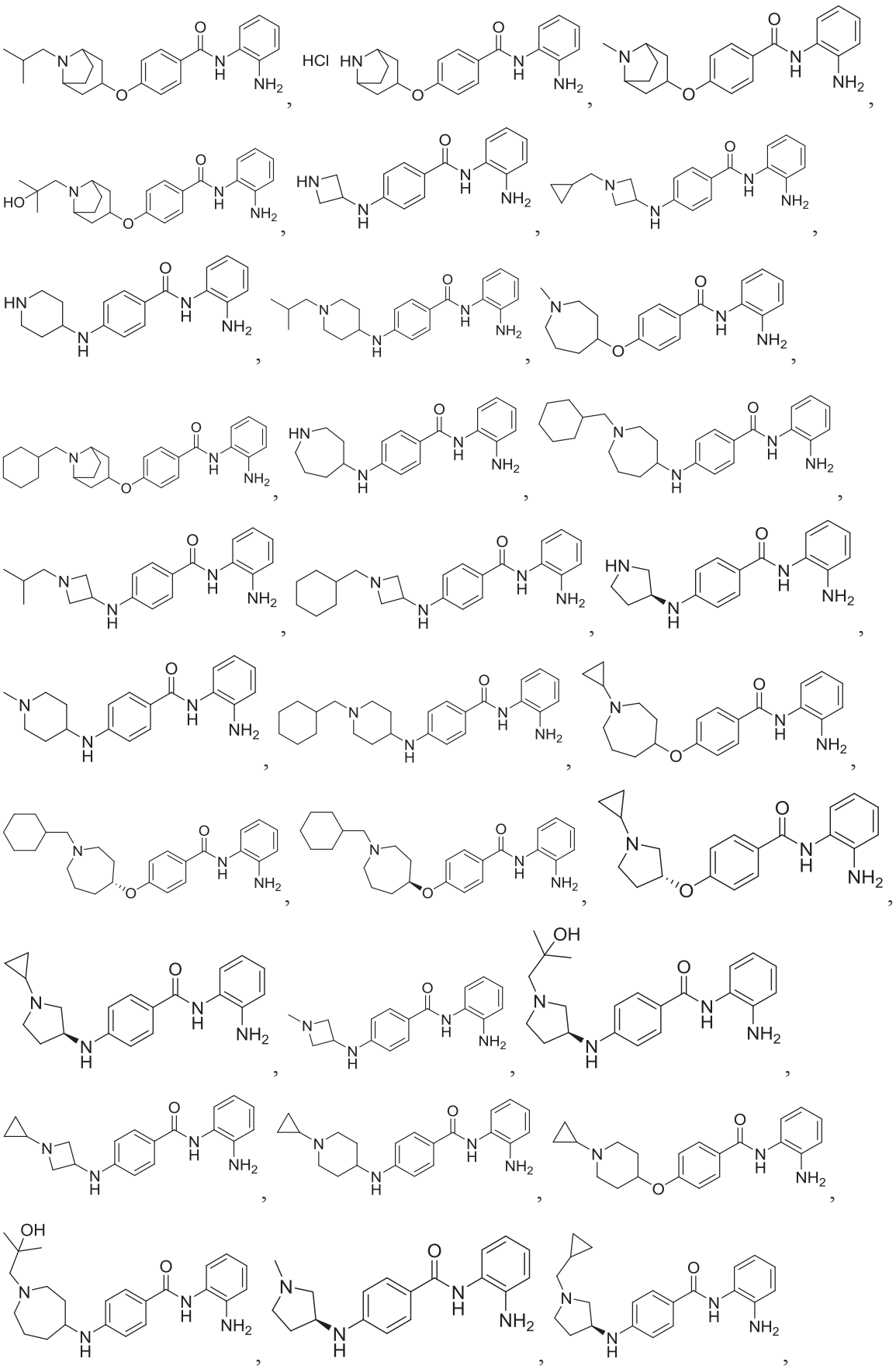

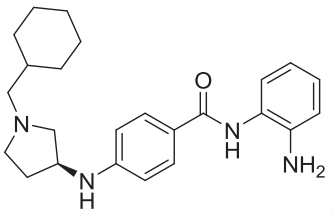
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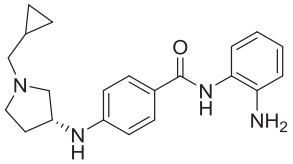
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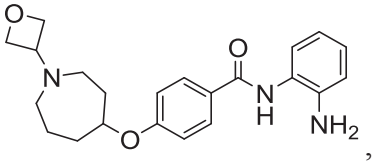
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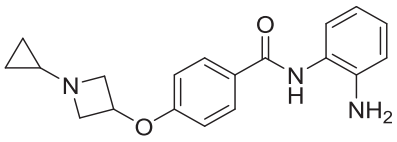
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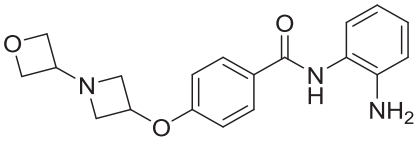
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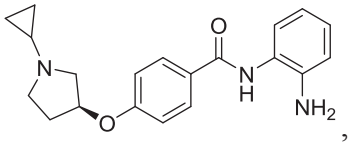
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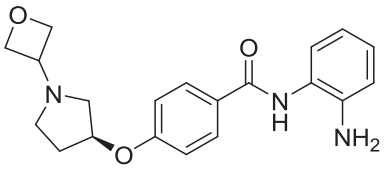
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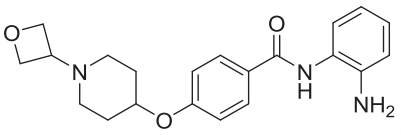
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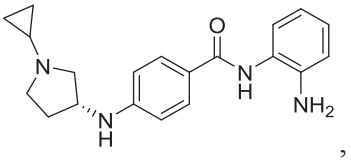
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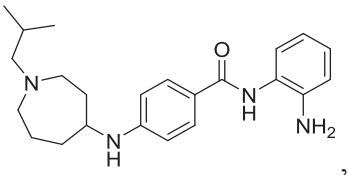
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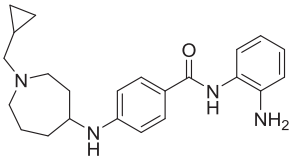
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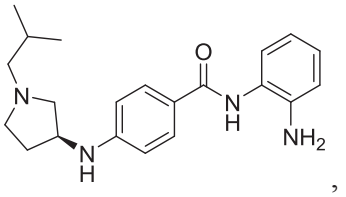
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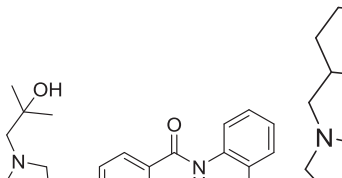
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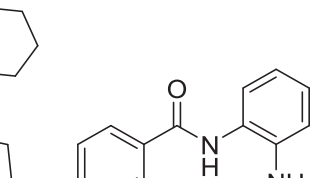
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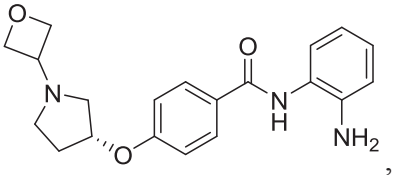
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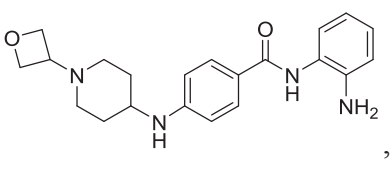
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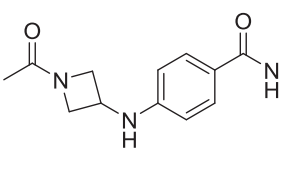
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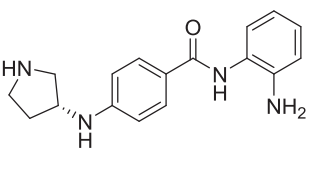
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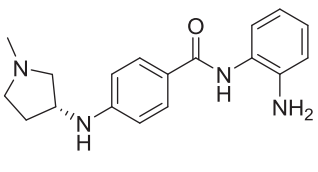
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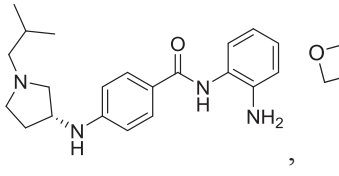
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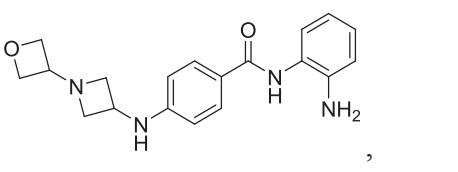
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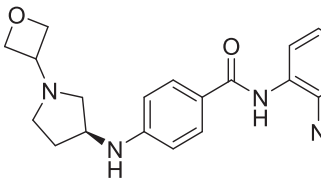
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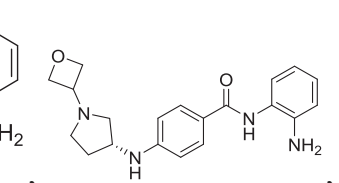
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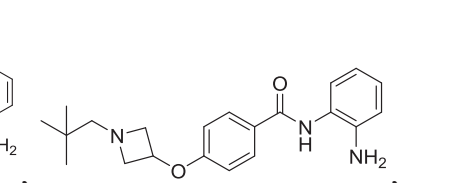
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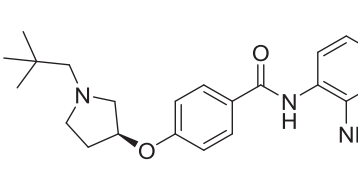
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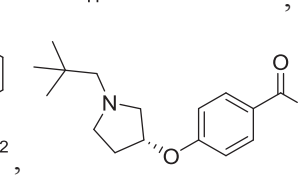
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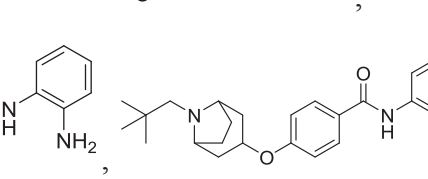
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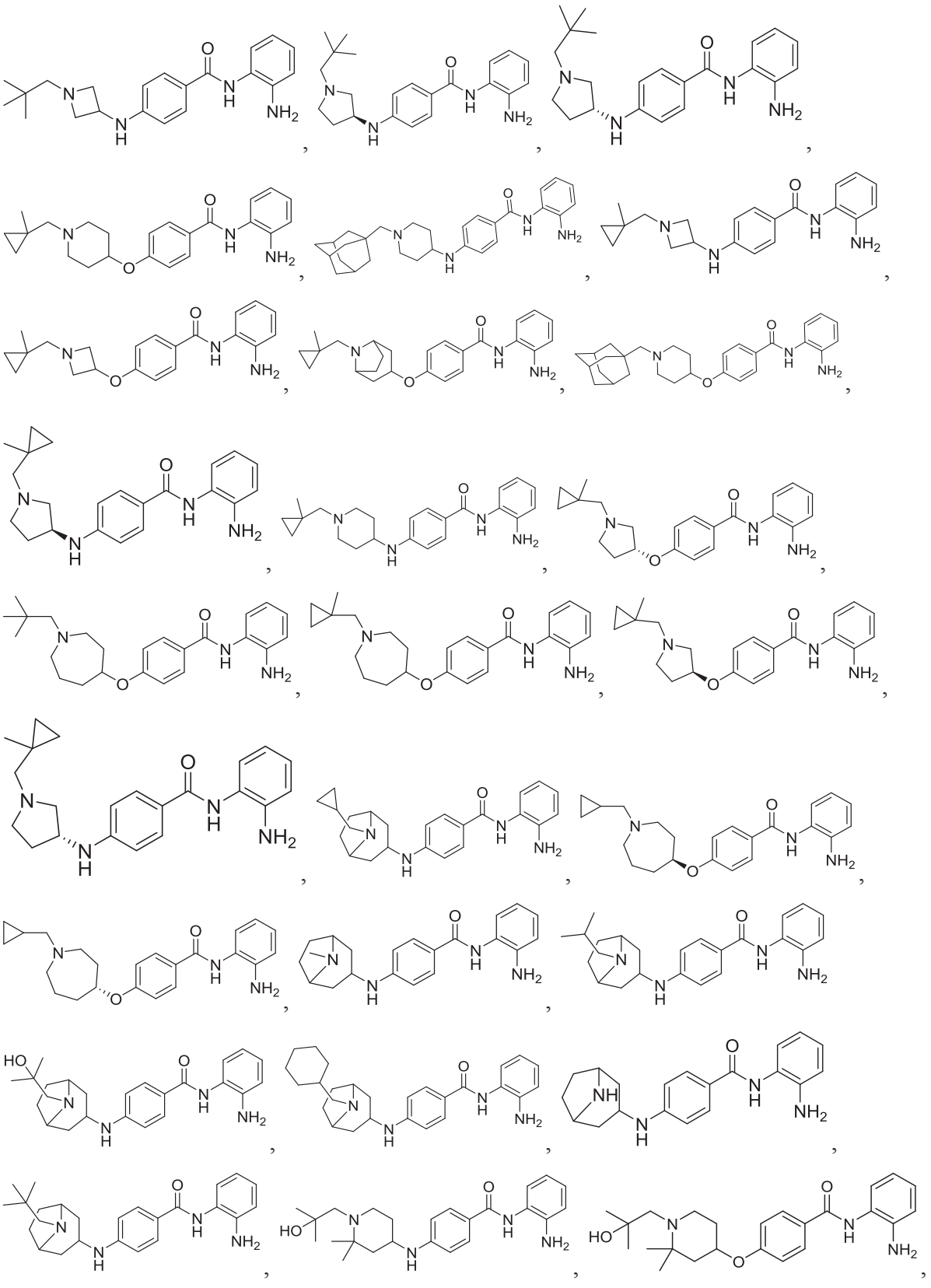

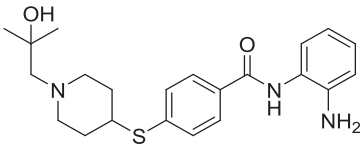
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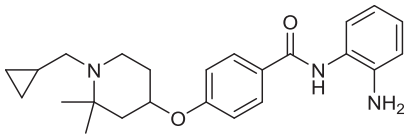
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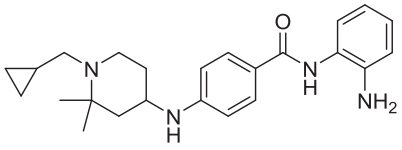

or a pharmaceutically acceptable salt thereof.

[0012c] In yet another aspect, the present disclosure refers to a pharmaceutical composition comprising the compound as described herein, or pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

[0012d] In yet another aspect, the present disclosure refers to an *in vitro* method of selectively inhibiting HDAC3, the method comprising contacting a cell with an effective amount of the compound as described herein or pharmaceutically acceptable salt thereof, or the composition as described herein.

[0012e] In yet another aspect, the present disclosure refers to an *in vitro* method of selectively inhibiting HDAC1 or HDAC2, the method comprising contacting a cell with an effective amount of the compound as described herein, or pharmaceutically acceptable salt thereof, or the composition as described herein.

[0012f] In yet another aspect, the present disclosure refers to an *in vitro* method of selectively inhibiting HDAC1, HDAC2, and HDAC3, the method comprising contacting a cell with an effective amount of the compound as described herein, or pharmaceutically acceptable salt thereof, or the composition as described herein.

[0012g] In yet another aspect, the present disclosure refers to the use of an effective amount of the compound as described herein, or pharmaceutically acceptable salt thereof, or the composition as described herein in the manufacture of a medicament for treating a disease or disorder mediated by HDAC1 or HDAC2 in a subject in need thereof.

[0012h] In yet another aspect, the present disclosure refers to the use of an effective amount of the compound as described herein, or pharmaceutically acceptable salt thereof, or the composition as described herein in the manufacture of a medicament for treating a disease or disorder mediated by HDAC3 in a subject in need thereof.

[0012i] In yet another aspect, the present disclosure refers to the use of an effective amount of the compound as described herein, or pharmaceutically acceptable salt thereof, or the composition as described herein in the manufacture of a medicament for treating a disease or disorder mediated by HDAC1, HDAC2, and HDAC3 in a subject in need thereof.

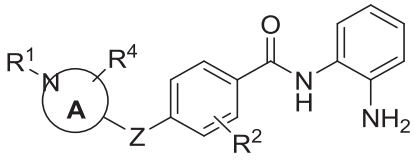
[0012j] In yet another aspect, the present disclosure refers to the use of an effective amount of the compound as described herein, or pharmaceutically acceptable salt thereof, or the composition as described herein in the manufacture of a medicament for treating a neurological disorder such as Friedreich's ataxia, myotonic dystrophy, spinal muscular atrophy, fragile X syndrome, Huntington's disease, spinocerebellar ataxia, Kennedy's disease, amyotrophic lateral sclerosis, Niemann Pick, Pitt Hopkins, spinal and bulbar muscular atrophy, and Alzheimer's disease; a cancer; an inflammatory disease; a memory impairment condition, frontotemporal dementia, or a drug addiction in a subject in need thereof.

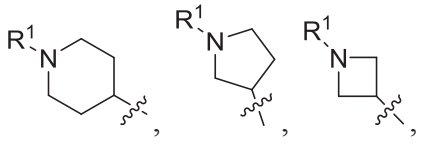
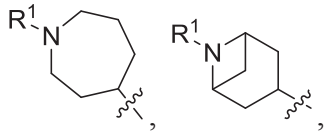
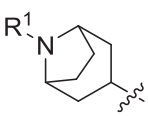
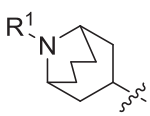
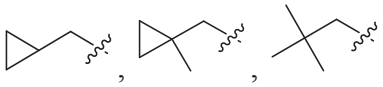
[0012k] In yet another aspect, the present disclosure refers to the use of an effective amount of the compound as described herein, or pharmaceutically acceptable salt thereof, or the composition as described herein in the manufacture of a medicament for treating Friedreich's ataxia in a subject in need thereof.

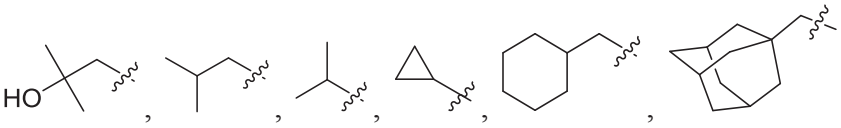
[0012l] In yet another aspect, the present disclosure refers to the use of an effective amount of the compound as described herein, or pharmaceutically acceptable salt thereof, or the composition as described herein in the manufacture of a medicament for treating an infection in a subject in need thereof.

[0012m] In yet another aspect, the present disclosure refers to the compound as described herein, or pharmaceutically acceptable salt thereof, or the composition as described herein for use in therapy.

[0013] Further provided herein are compounds of formula (II), or a pharmaceutically acceptable salt thereof:

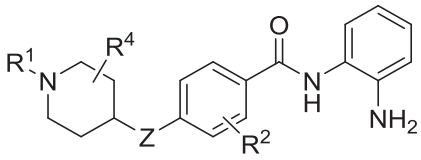

(II)

wherein ring A is selected from the group consisting of:  ,  , ,  , and  ; Z is O, NR^3, S, SO, or SO_2; R^1 is selected from the group consisting of H, CH_3, $C(O)CH_3$,  ,



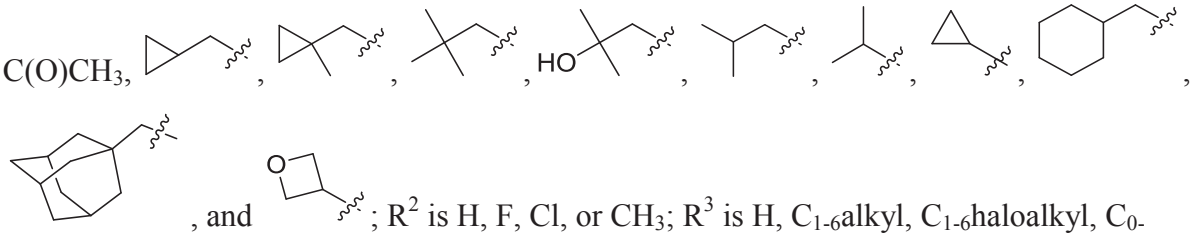
; R^2 is H, F, Cl, or CH_3; R^3 is H, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{0-3}alkylene-C_{3-7}cycloalkyl, $C(O)C_{1-6}$alkyl, or $C(O)C_{0-3}$alkylene-C_{3-7}cycloalkyl; and R^4 is H or C_{1-3}alkyl.

[0014] Also provided herein are compounds of formula (III), or a pharmaceutically acceptable salt thereof:



(III)

wherein Z is O, NR^3, S, SO, or SO_2; R^1 is selected from the group consisting of H, CH_3, $C(O)CH_3$,



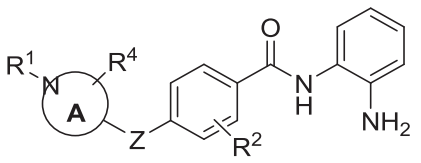
; R^2 is H, F, Cl, or CH_3; R^3 is H, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{0-3}alkylene-C_{3-7}cycloalkyl, $C(O)C_{1-6}$alkyl, or $C(O)C_{0-3}$alkylene-C_{3-7}cycloalkyl; and R^4 is H or C_{1-3}alkyl.

[0015] Also provided herein are pharmaceutical compositions comprising a compound as disclosed herein, or pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

[0016] Further provided are methods of using the compounds as disclosed herein to inhibit HDAC (e.g., one or more of HDAC1, HDAC2, and HDAC3) and methods of treating conditions associated with aberrant HDAC activity by administering a compound disclosed herein to a subject suffering from such a condition.

DETAILED DESCRIPTION

[0017] Provided herein are compounds of formula (I), pharmaceutical compositions thereof, and methods of using compounds of formula (I), e.g., for inhibiting HDAC (e.g., one or more of HDAC1, HDAC2, and HDAC3):



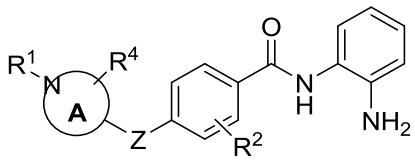
(I),

wherein ring A, Z, R^1, R^2, R^3, and R^4 are defined herein.

[0018] The compounds provided herein are capable of forming low amounts of OPD under physiological conditions (e.g., a pH of about 7.2 and 37 °C). Physiological conditions as

What is Claimed is:

1. A compound having a structure of formula (I), or a pharmaceutically acceptable salt thereof



(I)

wherein

ring A is a 4-7 membered heterocycloalkyl ring containing one nitrogen ring atom or a 7-9 membered bicyclic heterocycloalkyl ring containing one nitrogen ring atom;

Z is O, NR^3, S, SO, or SO_2;

R^1 is H, C_{1-6}alkyl, C_{1-6}hydroxyalkyl, $C(O)C_{1-6}$alkyl, C_{0-3}alkylene-C_{3-10}cycloalkyl, or C_{0-3}alkylene-C_{2-5}cycloheteroalkyl having 1 or 2 heteroatoms selected from O, S, N, and $N(C_{1-4}alkyl)$;

R^2 is H, F, Cl, or CH_3;

R^3 is H, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{0-3}alkylene-C_{3-7}cycloalkyl, $C(O)C_{1-6}$alkyl, or $C(O)C_{0-3}$alkylene-C_{3-7}cycloalkyl; and

R^4 is H or C_{1-3}alkyl.

2. The compound of claim 1, wherein ring A is a 4-7 membered heterocycloalkyl ring containing one nitrogen ring atom or a 7-9 membered bicyclic heterocycloalkyl ring containing one nitrogen ring atom; Z is O, NR^3, S, or SO_2; R^1 is C_{1-6}alkyl, C_{1-6}hydroxyalkyl, or C_{0-3}alkylene-C_{3-7}cycloalkyl; R^2 is H, F, Cl, or CH_3; R^3 is H, C_{1-6}alkyl, C_{1-6}haloalkyl, C_{0-3}alkylene-C_{3-7}cycloalkyl, $C(O)C_{1-6}$alkyl, or $C(O)C_{0-3}$alkylene-C_{3-7}cycloalkyl; and R^4 is H or C_{1-3}alkyl.

3. The compound of claim 1 or 2, wherein ring A is a 7-9 membered bicyclic heterocycloalkyl ring containing one nitrogen ring atom.

4. The compound of claim 1 or 2, wherein ring A is a 4-7 membered heterocycloalkyl ring containing one nitrogen ring atom.

5. The compound of any one of claims 1 to 4, wherein Z is O or NR^3.

6. The compound of any one of claims 1 to 4, wherein R^1 is C_{1-6}alkyl, C_{1-6}hydroxyalkyl, $C(O)C_{1-6}$alkyl, C_{0-3}alkylene-C_{3-10}cycloalkyl, or C_{0-3}alkylene-C_{2-5}heterocycloalkyl having 1 or 2 heteroatoms selected from O, S, N, and $N(C_{1-4}alkyl)$.

7. The compound of any one of claims 1 to 4, wherein R^1 is H, C_{1-6}alkyl, C_{1-6}hydroxyalkyl, C_{0-3}alkylene-C_{3-10}cycloalkyl, or C_{0-3}alkylene-C_{2-5}heterocycloalkyl having 1 or 2 heteroatoms selected from O, S, N, and $N(C_{1-4}alkyl)$.

8. The compound of claim 7, wherein R^1 is C_{1-6}alkyl, C_{1-6}hydroxyalkyl, C_{0-3}alkylene-C_{3-10}cycloalkyl, or C_{0-3}alkylene-C_{2-5}heterocycloalkyl having 1 or 2 heteroatoms selected from O, S, N, and N(C_{1-4}alkyl).

9. The compound of claim 7, wherein R^1 is C_{1-6}alkyl, C_{1-6}hydroxyalkyl, or C_{0-3}alkylene-C_{3-10}cycloalkyl.

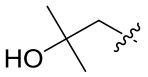
10. The compound of claim 7, wherein R^1 is H.

11. The compound of claim 7, wherein R^1 is a C_{1-6}alkyl.

12. The compound of claim 7, wherein R^1 is methyl, isopropyl, sec-butyl, or $CH_2C(CH_3)_3$.

13. The compound of claim 7, wherein R^1 is isopropyl, sec-butyl, or $CH_2C(CH_3)_3$.

14. The compound of claim 7, wherein R^1 is C_{1-6}hydroxyalkyl.

15. The compound of claim 7, wherein R^1 is 

.

16. The compound of claim 7, wherein R^1 is C_{3-10}cycloalkyl or C_{1-3}alkylene-C_{3-10}cycloalkyl.

17. The compound of claim 7, wherein R^1 is C_{3-10}cycloalkyl or CH_2alkylene-C_{3-10}cycloalkyl.

18. The compound of claim 7, wherein R^1 is C_{3-6}cycloalkyl or C_{1-3}alkylene-C_{3-6}cycloalkyl.

19. The compound of claim 7, wherein R^1 is C_{3-6}cycloalkyl or CH_2C_{3-6}cycloalkyl.

20. The compound of claim 7, wherein R^1 is C_{3-6}cycloalkyl.

21. The compound of claim 7, wherein R^1 is CH_2C_{3-6}cycloalkyl.

22. The compound of any one of claims 16 to 22, wherein the cycloalkyl group is cyclopropyl, cyclobutyl, or cyclohexyl.

23. The compound of claim 22, wherein the cycloalkyl group is cyclopropyl.

24. The compound of claim 7, wherein R^1 is C_{0-3}alkylene-C_{10}cycloalkyl.

25. The compound of claim 24, wherein R^1 is C_{10}cycloalkyl or C_{1-3}alkylene-C_{10}cycloalkyl.

26. The compound of claim 25, wherein R^1 is C_{10}cycloalkyl or CH_2-C_{10}cycloalkyl.

27. The compound of claim 26, wherein R^1 is adamantanyl or CH_2-adamantanyl.

28. The compound of claim 27, wherein R^1 is CH_2-adamantanyl.

29. The compound of claim 7, wherein R^1 is cyclopropyl, cyclobutyl, cyclohexyl, adamantanyl, CH_2cyclopropyl, (1-methylcyclopropyl)methyl, CH_2cyclobutyl, CH_2cyclohexyl or CH_2-adamantanyl.

30. The compound of claim 7, wherein R^1 is cyclopropyl, cyclobutyl, or cyclohexyl.

31. The compound of claim 7, wherein R^1 is cyclopropyl.

32. The compound of claim 7, wherein R^1 is CH_2cyclopropyl, (1-methylcyclopropyl)methyl, CH_2cyclobutyl, CH_2cyclohexyl, or CH_2-adamantanyl.

33. The compound of claim 7, wherein R^1 is cyclopropyl, CH_2cyclopropyl, (1-methylcyclopropyl)methyl, CH_2cyclohexyl or CH_2-adamantanyl.

34. The compound of claim 7, wherein R^1 is C_{0-3}alkylene-C_{2-5}heterocycloalkyl having 1 or 2 heteroatoms selected from O, S, N, and N(C_{1-4}alkyl).

35. The compound of claim 7, wherein R^1 is C_{2-5}heterocycloalkyl or C_{1-3}alkylene-C_{2-5}heterocycloalkyl, with each heterocycloalkyl having 1 or 2 heteroatoms selected from O, S, N, and N(C_{1-4}alkyl).

36. The compound of claim 7, wherein R^1 is C_{2-5}heterocycloalkyl or CH_2-C_{2-5}heterocycloalkyl, with each heterocycloalkyl having 1 or 2 heteroatoms selected from O, S, N, and N(C_{1-4}alkyl).

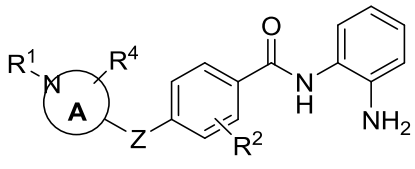
37. The compound of any one of claims 34 to 36, wherein the C_{2-5}heterocycloalkyl is azetidinyl, pyrrolidinyl, piperidinyl, piperazinyl, oxetanyl, tetrahydrofuranyl, tetrahydropyranyl, or morpholinyl.

38. The compound of claim 37, wherein the C_{2-5}heterocycloalkyl is azetidinyl, pyrrolidinyl, piperidinyl, or piperazinyl.

39. The compound of claim 37, wherein the C_{2-5}heterocycloalkyl is oxetanyl, tetrahydrofuranyl, or tetrahydropyranyl.

40. The compound of claim 37, wherein the C_{2-5}heterocycloalkyl is oxetanyl.

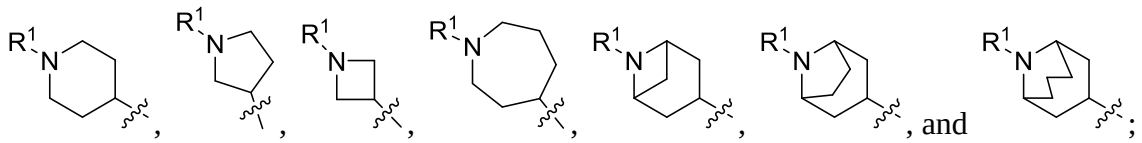
41. The compound of claim 1, wherein the compound of formula (I) is a compound of formula (II), or a pharmaceutically acceptable salt thereof



(II)

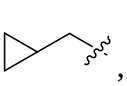
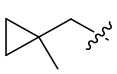
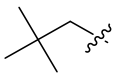
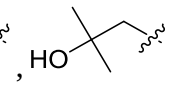
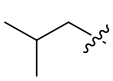
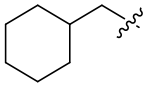
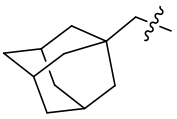
wherein

ring A is selected from the group consisting of:



, and ;

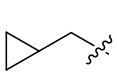
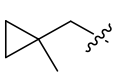
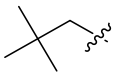
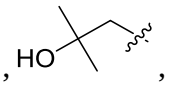
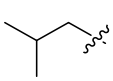
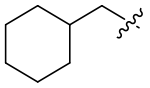
Z is O, NR^3, S, SO, or SO_2;

R^1 is selected from the group consisting of  ,  ,  ,  ,  ,  ,  ,  ,  , and  ;

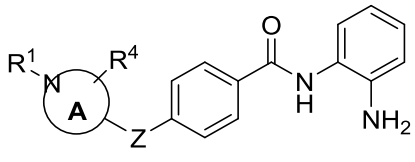
R^2 is H, F, Cl, or CH_3;

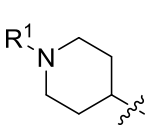
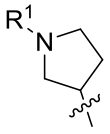
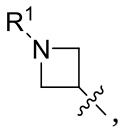
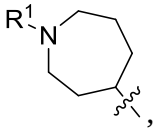
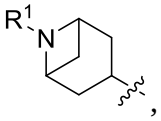
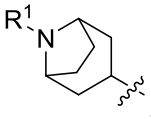
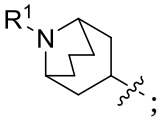
R^3 is H, $C_{1\text{-}6}$alkyl, $C_{1\text{-}6}$haloalkyl, $C_{0\text{-}3}$alkylene-$C_{3\text{-}7}$cycloalkyl, $C(O)C_{1\text{-}6}$alkyl, or $C(O)C_{0\text{-}3}$alkylene-$C_{3\text{-}7}$cycloalkyl; and

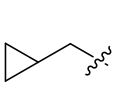
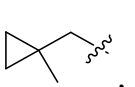
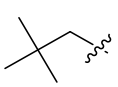
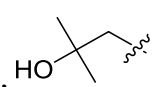
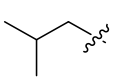
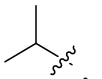
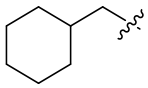
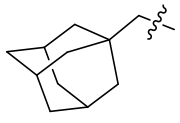
R^4 is H or $C_{1\text{-}3}$alkyl.

42. The compound of claim 41, wherein Z is O, NR^3, S, or SO_2; and R^1 is selected from the group consisting of H, CH_3, $C(O)CH_3$,  ,  ,  ,  ,  ,  ,  , and  .

43. The compound of claim 1, wherein the compound of formula (I) is a compound of formula (IIa), or a pharmaceutically acceptable salt thereof:

 (IIa)

wherein ring A is selected from the group consisting of  ,  ,  ,  ,  ,  , and  ;

Z is O, NR^3, S, SO, or SO_2; R^1 is selected from the group consisting of H, CH_3, $C(O)CH_3$,  ,  ,  ,  ,  ,  ,  ,  ,  , and  ; and R^3 is H, $C_{1\text{-}6}$alkyl, $C_{1\text{-}6}$haloalkyl, $C_{0\text{-}3}$alkylene-$C_{3\text{-}7}$cycloalkyl, $C(O)C_{1\text{-}6}$alkyl, or $C(O)C_{0\text{-}3}$alkylene-$C_{3\text{-}7}$cycloalkyl.

44. The compound of any one of claims 1 to 43, wherein Z is S, SO, or SO_2.

45. The compound of claim 44, wherein Z is S.

46. The compound of claim 44, wherein Z is SO.

47. The compound of claim 44, wherein Z is SO_2.

48. The compound of any one of claims 1 to 43, wherein Z is O or NR^3.

49. The compound of claim 48, wherein Z is O.

50. The compound of claim 48, wherein Z is NR^3.

51. The compound of claim 48 or 50, wherein R^3 is H, C_{1-6}alkyl, or C_{0-3}alkylene-C_{3-7}cycloalkyl.

52. The compound of claim 51, wherein R^3 is H, C_{1-6}alkyl, or C_{3-7}cycloalkyl.

53. The compound of claim 51, wherein R^3 is H, C_{1-6}alkyl, or C_{1-3}alkylene-C_{3-7}cycloalkyl.

54. The compound of claim 51, wherein R^3 is H, C_{1-6}alkyl, or C_{3-6}cycloalkyl.

55. The compound of claim 51, wherein R^3 is H, C_{1-6}alkyl, or C_{1-3}alkylene-C_{3-6}cycloalkyl.

56. The compound of claim 51, wherein R^3 is H.

57. The compound of claim 51, wherein R^3 is C_{1-6}alkyl.

58. The compound of claim 51, wherein R^3 is methyl, ethyl, or propyl.

59. The compound of claim 51, wherein R^3 is methyl or ethyl.

60. The compound of claim 51, wherein R^3 is methyl.

61. The compound of claim 51, wherein R^3 is C_{3-7}cycloalkyl or C_{1-3}alkylene-C_{3-7}cycloalkyl.

62. The compound of claim 51, wherein R^3 is C_{3-6}cycloalkyl or CH_2C_{3-6}cycloalkyl.

63. The compound of claim 61 or 62, wherein the cycloalkyl group is cyclopropyl, cyclobutyl, or cyclohexyl.

64. The compound of claim 63, wherein the cycloalkyl group is cyclopropyl.

65. The compound of claim 51, wherein R^3 is H, methyl, ethyl, or CH_2cyclopropyl.

66. The compound of claim 51, wherein R^3 is H, methyl, or CH_2cyclopropyl.

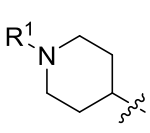
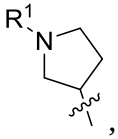
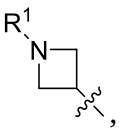
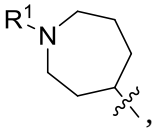
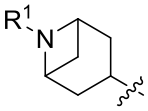
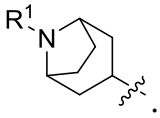
67. The compound of claim 48 or 50, wherein R^3 is $C(O)C_{1-6}$alkyl.

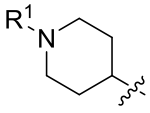
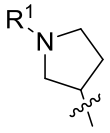
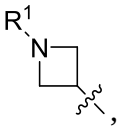
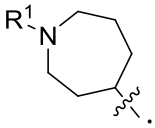
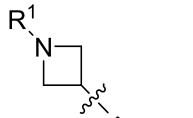
68. The compound of claim 67, wherein R^3 is C(O)methyl, C(O)ethyl, or C(O)propyl.

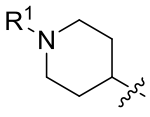
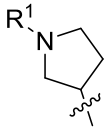
69. The compound of claim 48 or 50, wherein R^3 is $C(O)C_{0-3}$alkylene-C_{3-7}cycloalkyl.

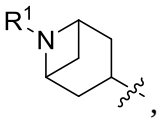
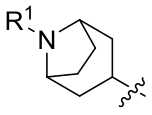
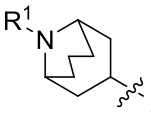
70. The compound of claim 69, wherein R^3 is $C(O)CH_2$-C_{3-7}cycloalkyl or $C(O)C_{3-7}$cycloalkyl.

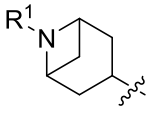
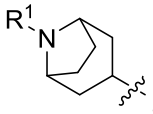
71. The compound of claim 69 or 70, wherein the C_{3-7}cycloalkyl is cyclopropyl.

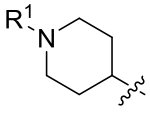
72. The compound of any one of claims 1 to 71, wherein ring A is selected from the group consisting of  ,  ,  ,  ,  , and  .

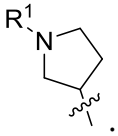
73. The compound of claim 72, wherein ring A is  ,  ,  ,  , or  .

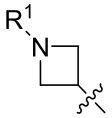
74. The compound of claim 72, wherein ring A is  ,  , or .

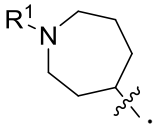
75. The compound of any one of claims 1 to 71, wherein ring A is  ,  , or  .

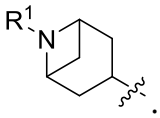
76. The compound of claim 72, wherein ring A is  or  .

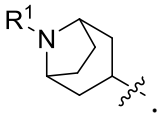
77. The compound of claim 72, wherein ring A is  .

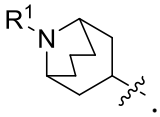
78. The compound of claim 72, wherein ring A is  .

79. The compound of claim 72, wherein ring A is  .

80. The compound of claim 72, wherein ring A is  .

81. The compound of claim 72, wherein ring A is  .

82. The compound of claim 72, wherein ring A is  .

83. The compound of claim 75, wherein ring A is  .

84. The compound of any one of claims 1 to 83, wherein R^2 is H.

85. The compound of any one of claims 1 to 83, wherein R^2 is F.

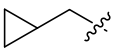
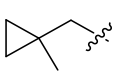
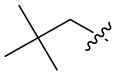
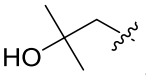
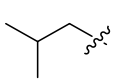
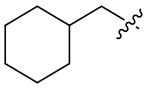
86. The compound of any one of claims 1 to 83, wherein R^2 is Cl.

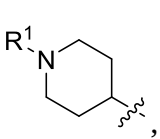
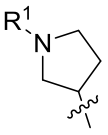
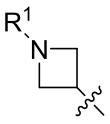
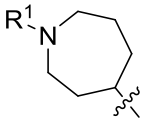
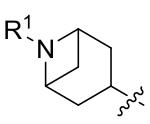
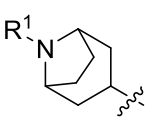
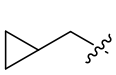
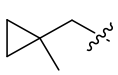
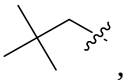
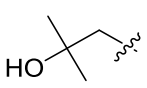
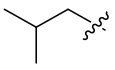
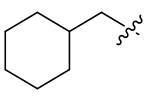
87. The compound of any one of claims 1 to 83, wherein R^2 is CH_3.

88. The compound of any one of claims 1 to 87, wherein R^4 is H.

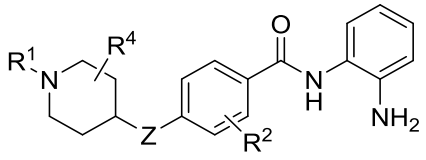
89. The compound of any one of claims 1 to 87, wherein R^4 is $C_{1\text{-}3}$alkyl.

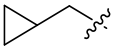
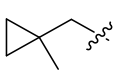
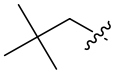
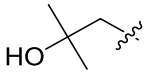
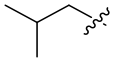
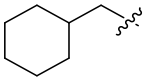
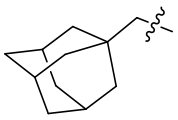
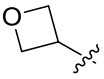
90. The compound of claim 89, wherein R^4 is methyl.

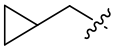
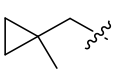
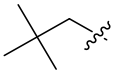
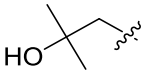
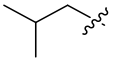
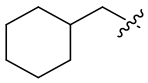
91. The compound of any one of claims 1 to 90, wherein R^1 is selected from the group consisting of  ,  ,  ,  ,  ,  ,  and  .

92. The compound of claim 1, wherein ring A is selected from the group consisting of  ,  ,  ,  ,  , and  ; Z is O or NR^3; and R^1 is selected from the group consisting of  ,  ,  ,  ,  ,  ,  and  .

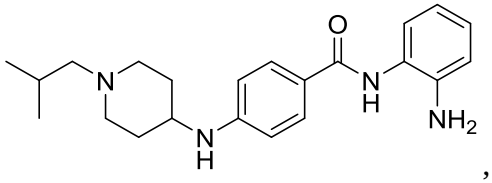
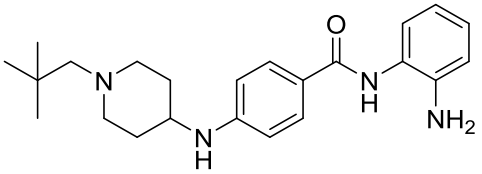
93. The compound of claim 1, wherein the compound of formula (I) is a compound of formula (III), or a pharmaceutically acceptable salt thereof

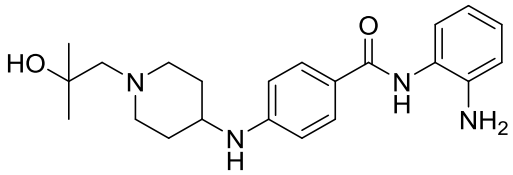
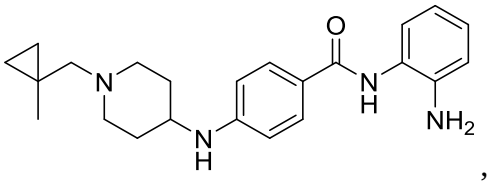

(III)

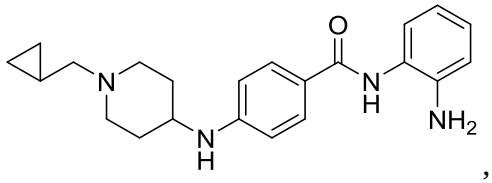
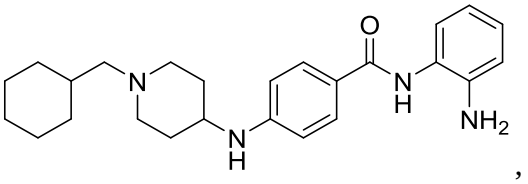
wherein Z is O, NR^3, S, SO, or SO_2; R^1 is selected from the group consisting of  ,  ,  ,  ,  ,  ,  , and  ; R^2 is H, F, Cl, or CH_3; R^3 is H, $C_{1\text{-}6}$alkyl, $C_{1\text{-}6}$haloalkyl, $C_{0\text{-}3}$alkylene-$C_{3\text{-}7}$cycloalkyl, $C(O)C_{1\text{-}6}$alkyl, or $C(O)C_{0\text{-}3}$alkylene-$C_{3\text{-}7}$cycloalkyl; and R^4 is H or $C_{1\text{-}3}$alkyl.

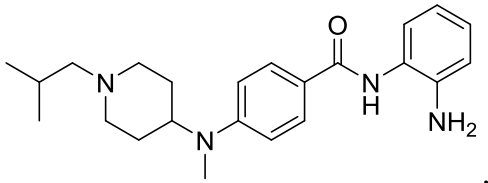
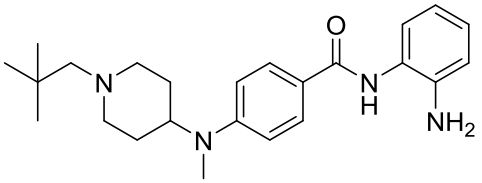
94. The compound of claim 93, wherein Z is O, NR^3, S, or SO_2; and R^1 is selected from the group consisting of  ,  ,  ,  ,  , and  .

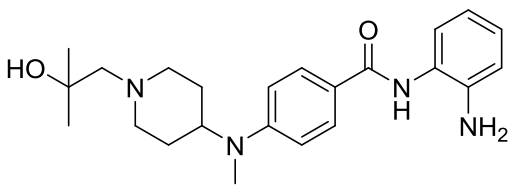
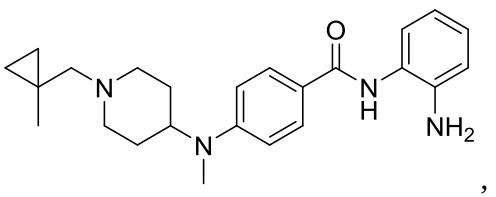
95. A compound having a structure selected from the group consisting of

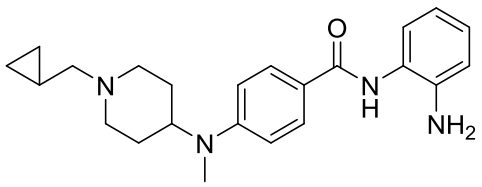
 ,  ,

 ,  ,

 ,  ,

 ,  ,

 ,  ,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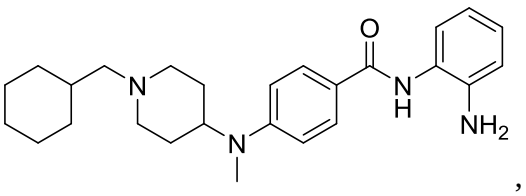
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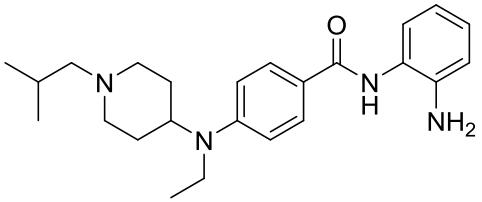
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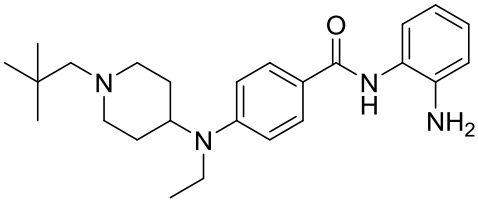
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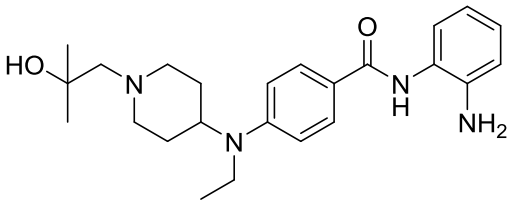
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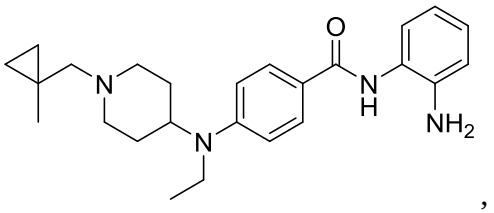
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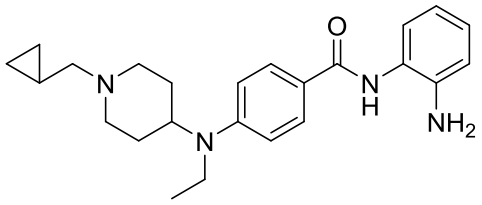
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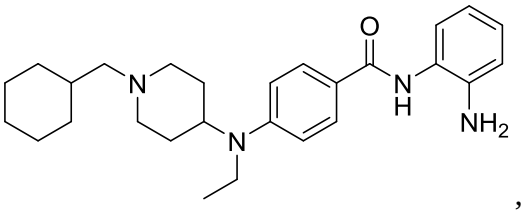
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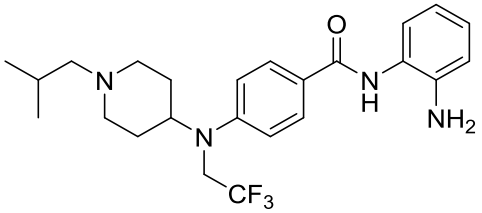
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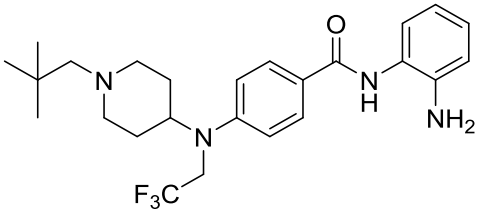
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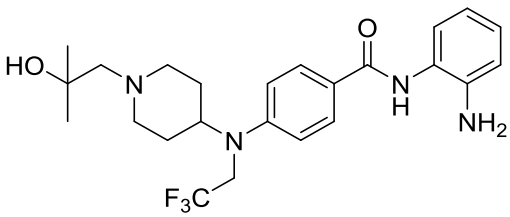
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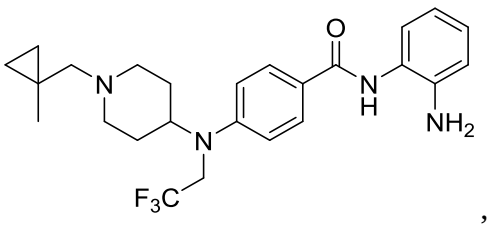
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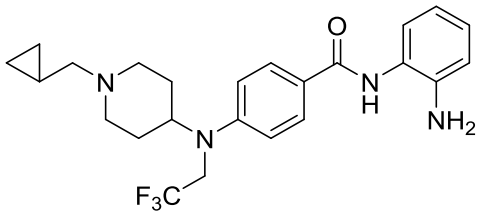
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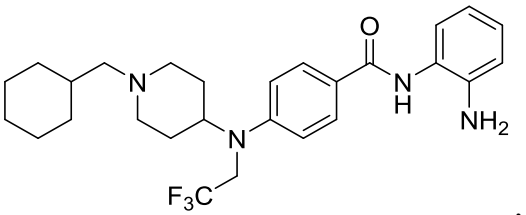
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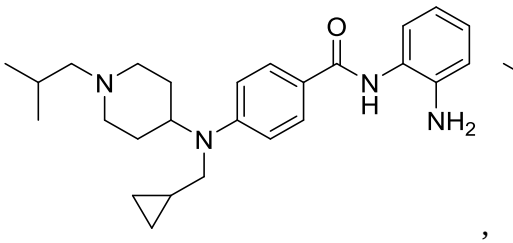
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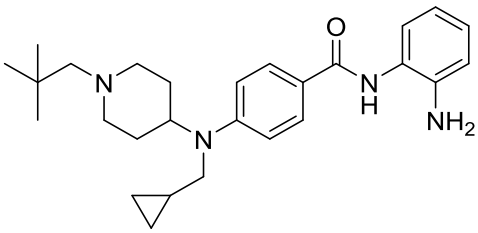
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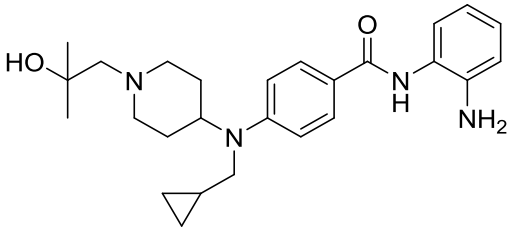
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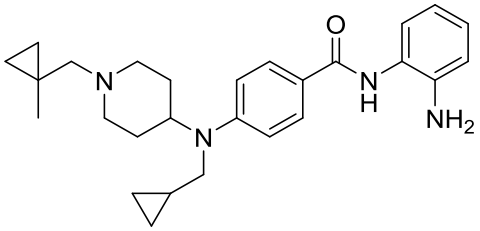
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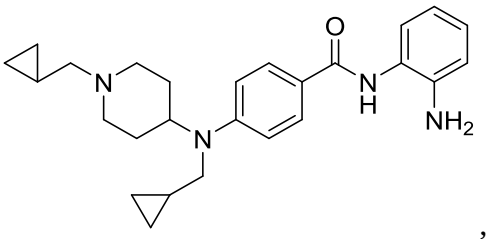
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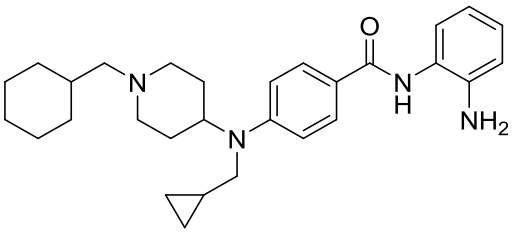
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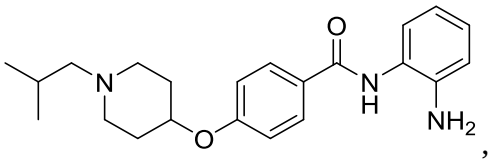
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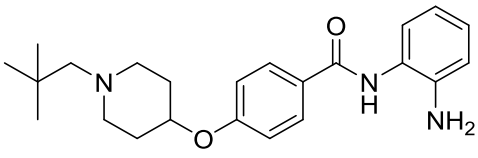
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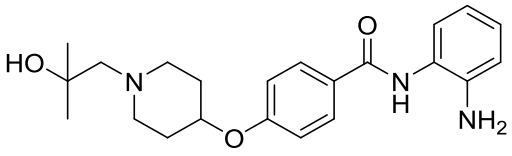
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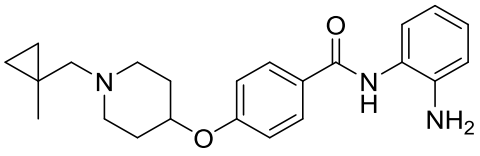
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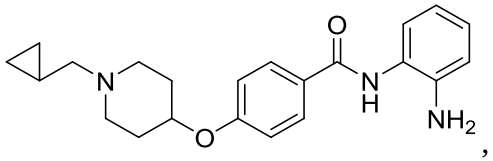
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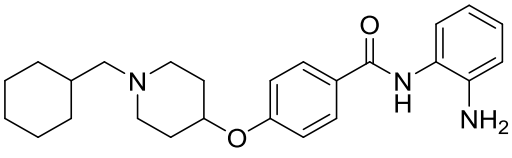
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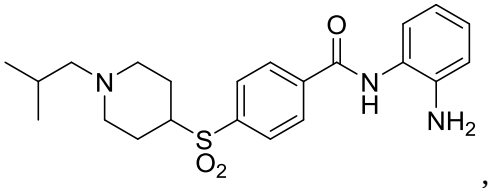
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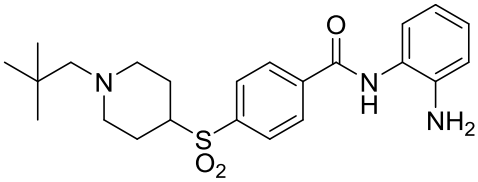
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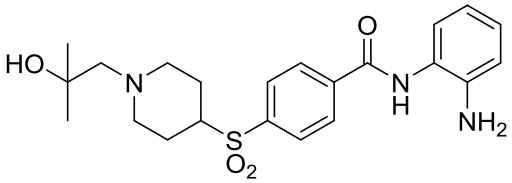
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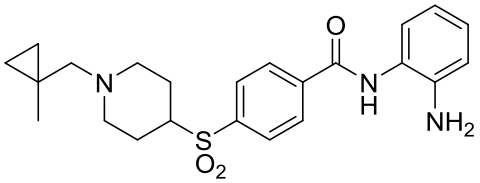
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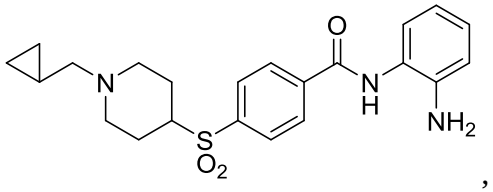
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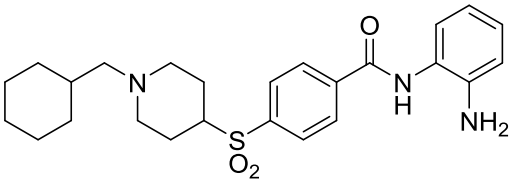
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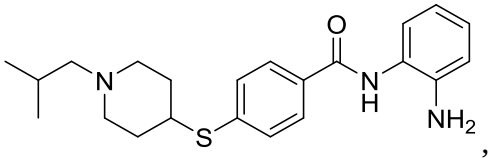
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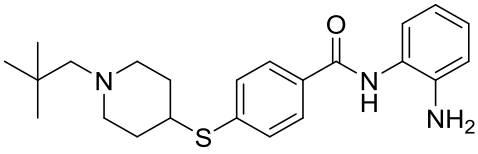
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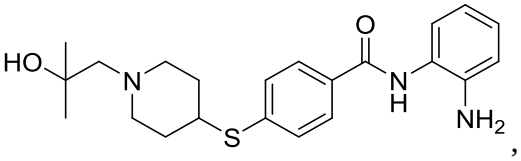
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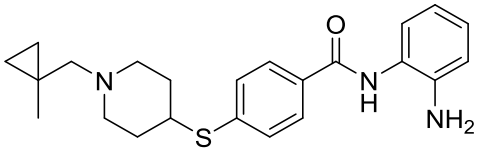
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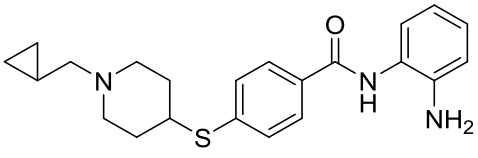
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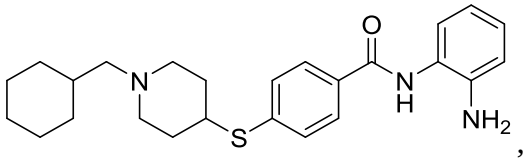
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or a pharmaceutically acceptable salt thereof.

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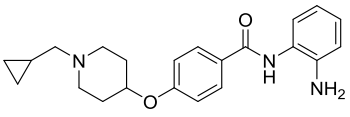
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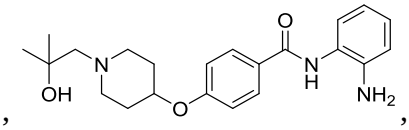
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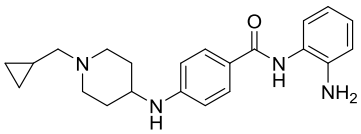
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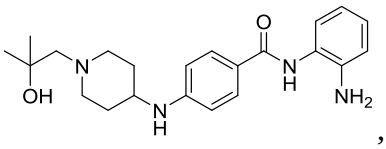
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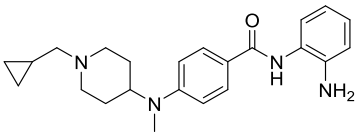
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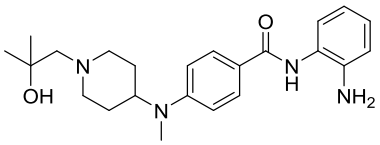
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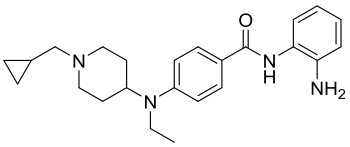
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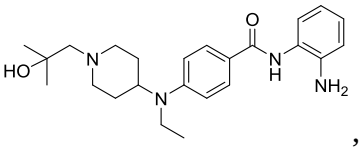
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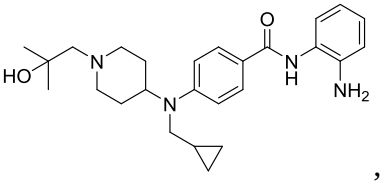
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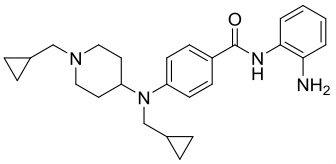
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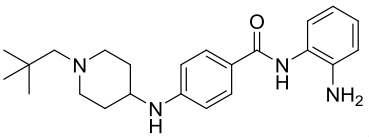
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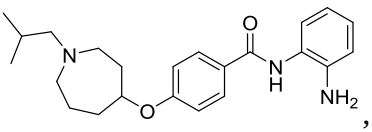
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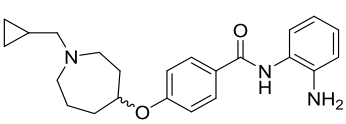
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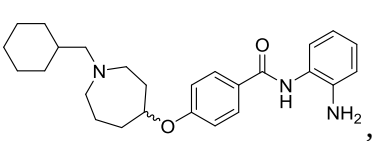
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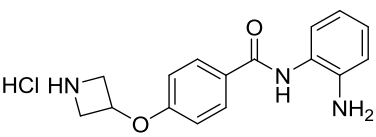
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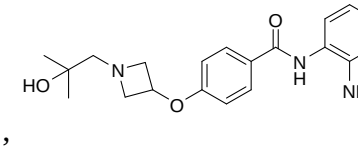
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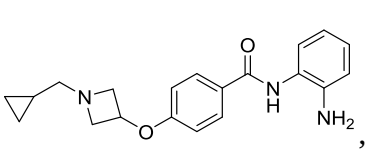
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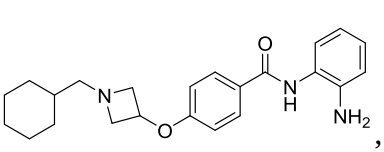
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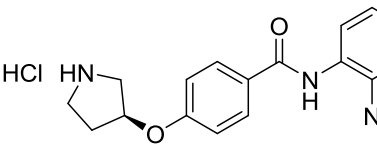
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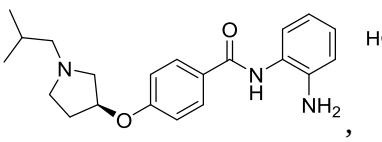
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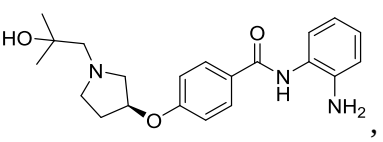
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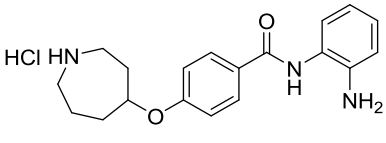
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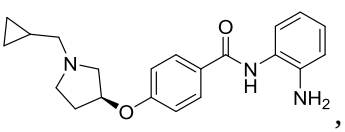
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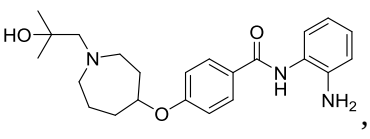
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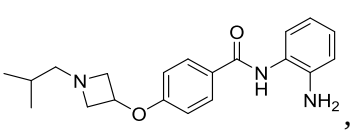
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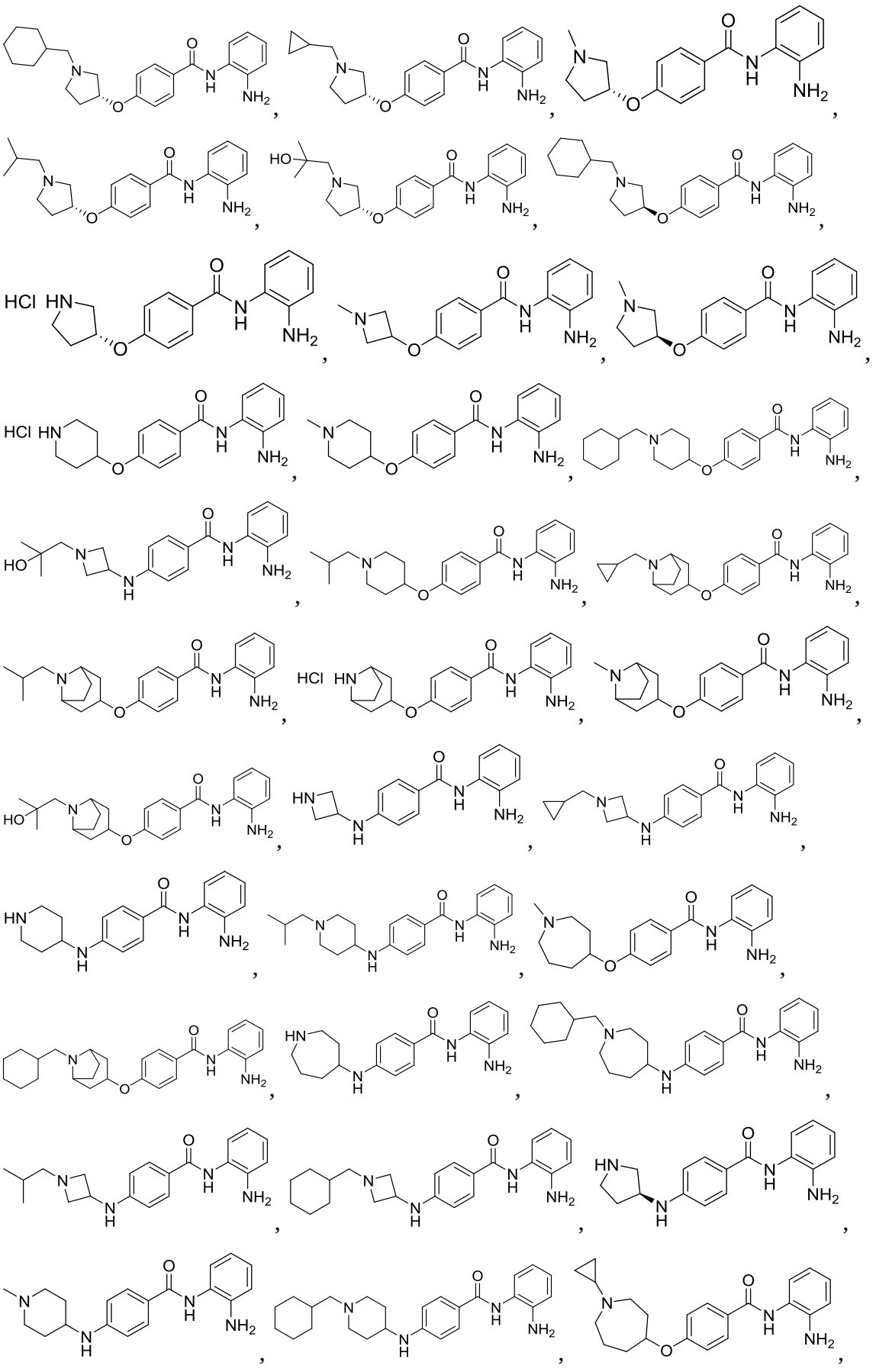

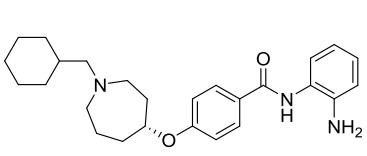
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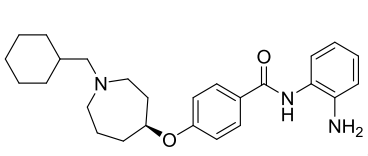
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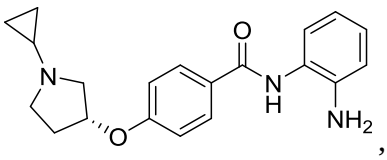
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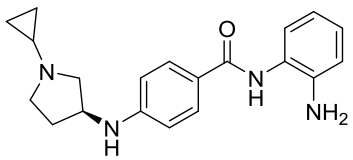
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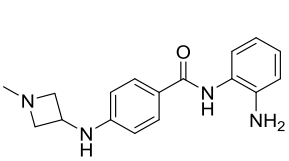
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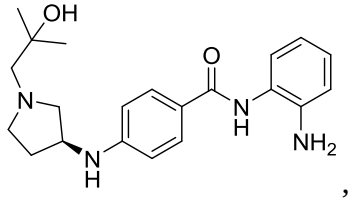
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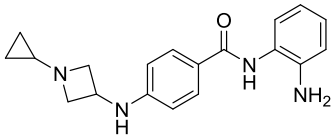
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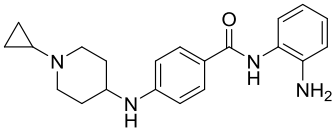
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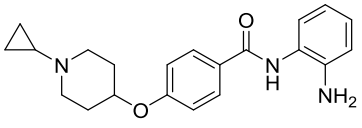
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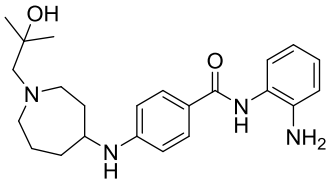
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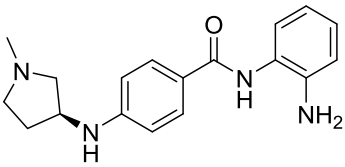
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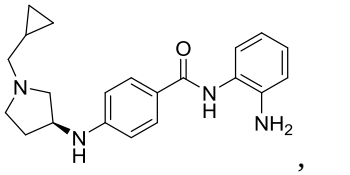
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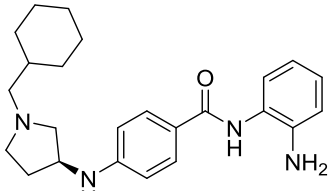
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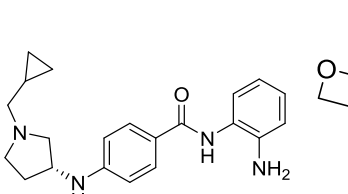
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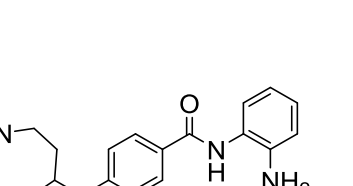
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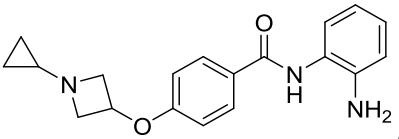
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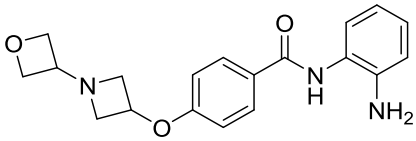
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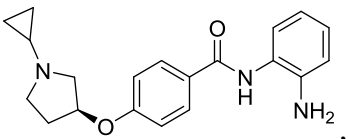
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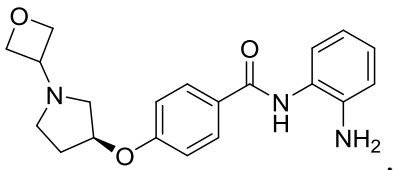
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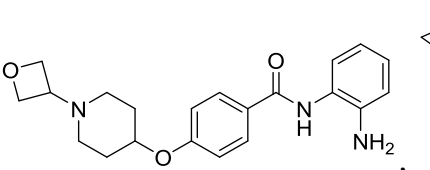
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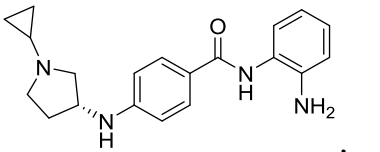
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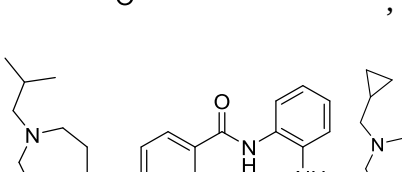
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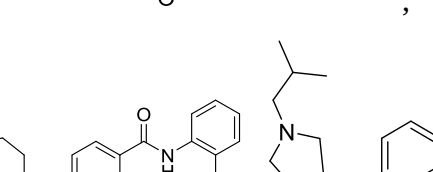
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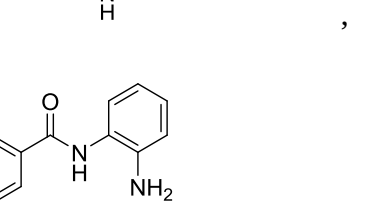
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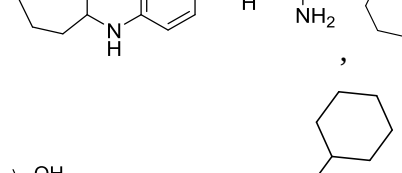
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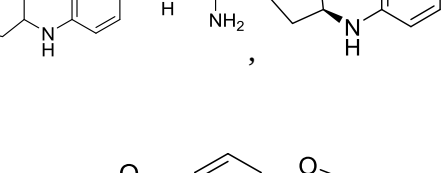
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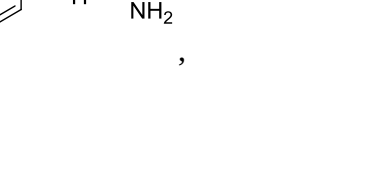
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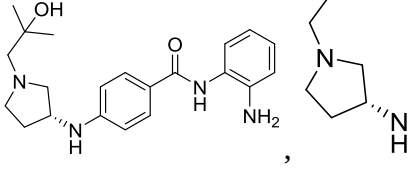
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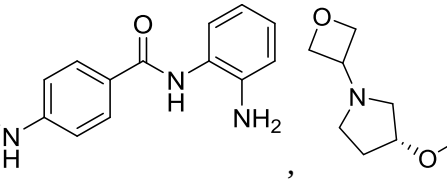
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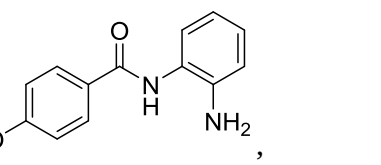
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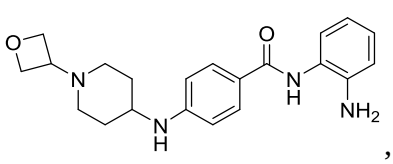
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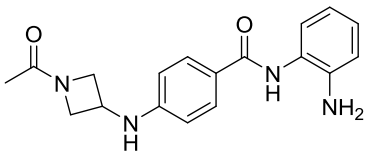
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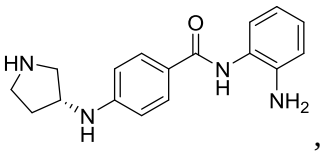
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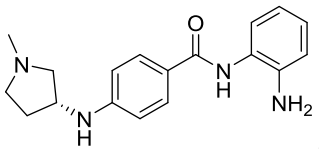
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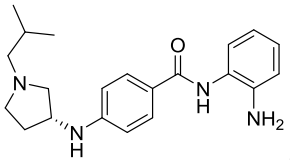
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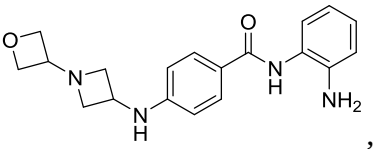
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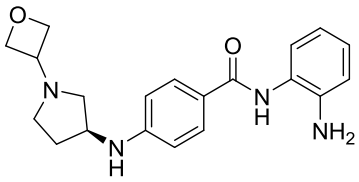
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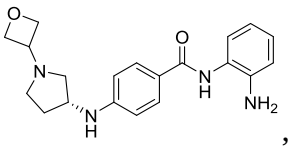
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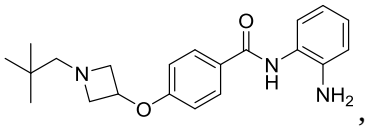
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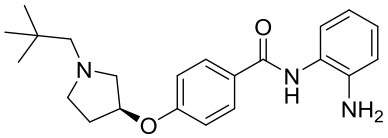
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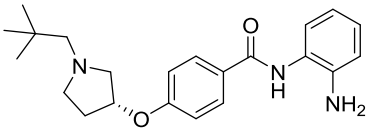
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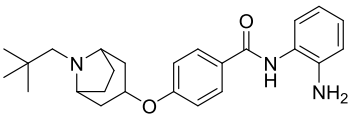
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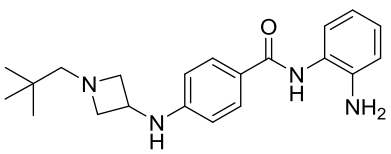
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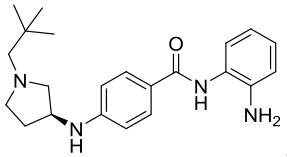
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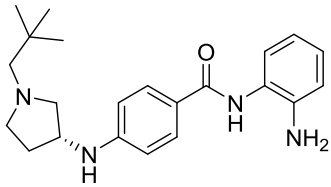
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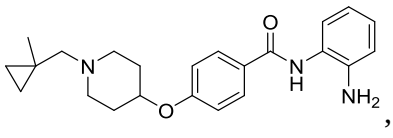
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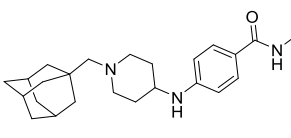
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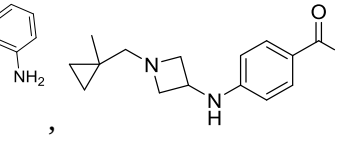
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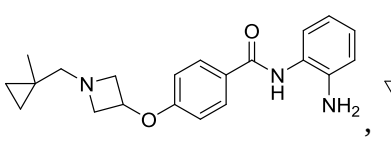
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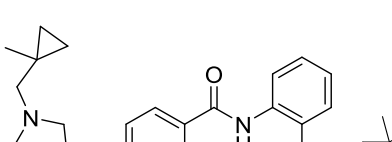
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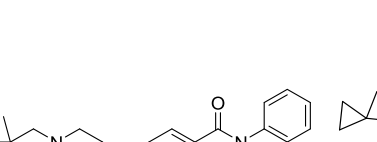
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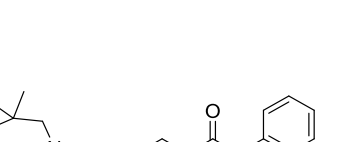
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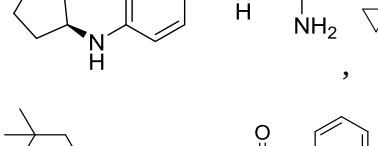
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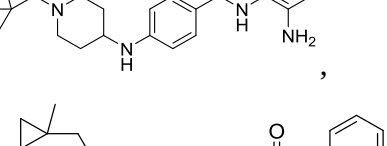
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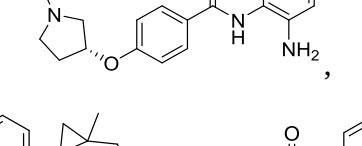
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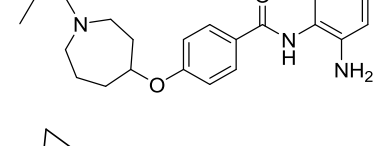
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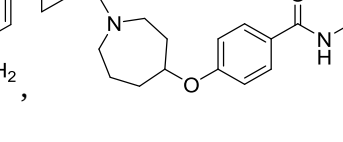
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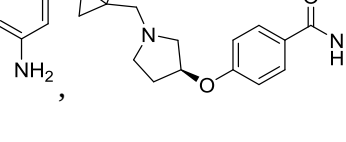
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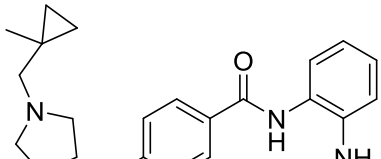
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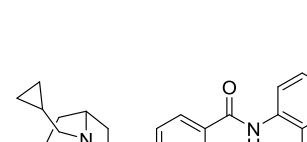
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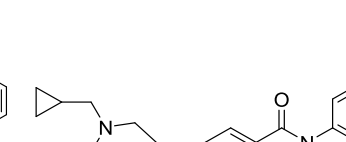
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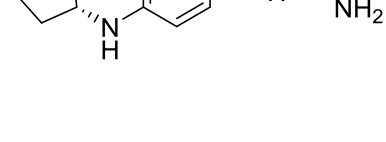
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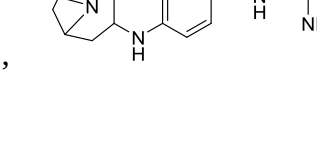
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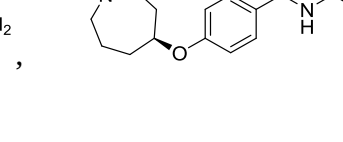
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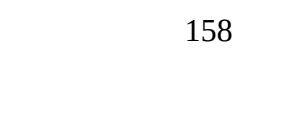
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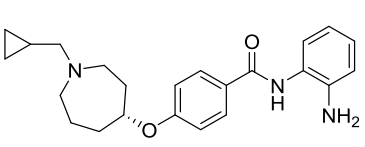
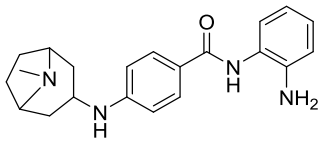
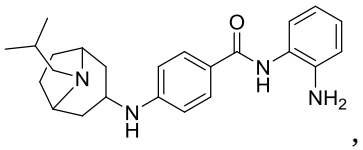
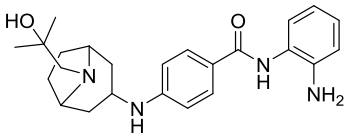
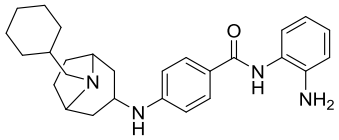
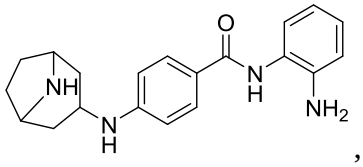
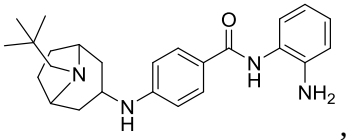
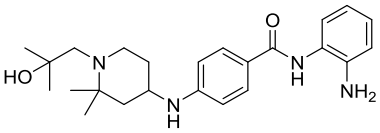
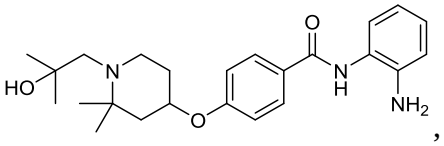
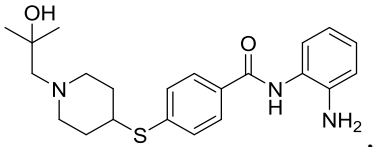
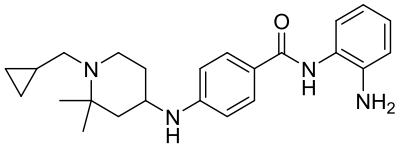
 ,  ,  ,

 ,  ,  ,

 ,  ,  ,

 , , and  or a pharmaceutically acceptable salt thereof.

97. A pharmaceutical composition comprising the compound of any one of claims 1 to 96, or pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

98. An *in vitro* method of selectively inhibiting HDAC3, the method comprising contacting a cell with an effective amount of the compound of any one of claims 1 to 96, or pharmaceutically acceptable salt thereof, or the composition of claim 97.

99. An *in vitro* method of selectively inhibiting HDAC1 or HDAC2, the method comprising contacting a cell with an effective amount of the compound of any one of claims 1 to 96, or pharmaceutically acceptable salt thereof, or the composition of claim 97.

100. An *in vitro* method of selectively inhibiting HDAC1, HDAC2, and HDAC3, the method comprising contacting a cell with an effective amount of the compound of any one of claims 1 to 96, or pharmaceutically acceptable salt thereof, or the composition of claim 97.

101. Use of an effective amount of the compound of any one of claims 1 to 96, or pharmaceutically acceptable salt thereof, or the composition of claim 97 in the manufacture of a medicament for treating a disease or disorder mediated by HDAC1 or HDAC2 in a subject in need thereof.

102. Use of an effective amount of the compound of any one of claims 1 to 96, or pharmaceutically acceptable salt thereof, or the composition of claim 97 in the manufacture

of a medicament for treating a disease or disorder mediated by HDAC3 in a subject in need thereof.

103. Use of an effective amount of the compound of any one of claims 1 to 96, or pharmaceutically acceptable salt thereof, or the composition of claim 97 in the manufacture of a medicament for treating a disease or disorder mediated by HDAC1, HDAC2, and HDAC3 in a subject in need thereof.

104. Use of an effective amount of the compound of any one of claims 1 to 96, or pharmaceutically acceptable salt thereof, or the composition of claim 97 in the manufacture of a medicament for treating a neurological disorder such as Friedreich's ataxia, myotonic dystrophy, spinal muscular atrophy, fragile X syndrome, Huntington's disease, spinocerebellar ataxia, Kennedy's disease, amyotrophic lateral sclerosis, Niemann Pick, Pitt Hopkins, spinal and bulbar muscular atrophy, and Alzheimer's disease; a cancer; an inflammatory disease; a memory impairment condition, frontotemporal dementia, or a drug addiction in a subject in need thereof.

105. Use of an effective amount of the compound of any one of claims 1 to 96, or pharmaceutically acceptable salt thereof, or the composition of claim 97 in the manufacture of a medicament for treating Friedreich's ataxia in a subject in need thereof.

106. Use of an effective amount of the compound of any one of claims 1 to 96, or pharmaceutically acceptable salt thereof, or the composition of claim 97 in the manufacture of a medicament for treating an infection in a subject in need thereof.

107. The compound of any one of claims 1 to 96, or pharmaceutically acceptable salt thereof, or the composition of claim 97 for use in therapy.

108. The method of any one of claims 98 to 100, the use of any one of claims 101 to 106, the compound or the composition of claim 107 wherein the compound is a compound as claimed in claim 95 or 96, or a pharmaceutically acceptable salt thereof.