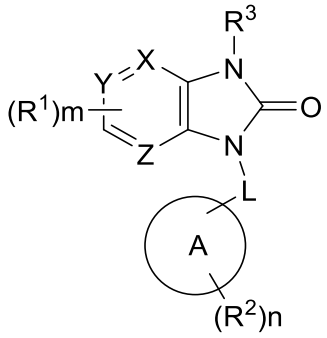
Currently there are no specific inhibitors are available against IL4I1. Some molecules have been shown to inhibit the related LAAOs found in snake venom, but they are generally non-selective and have little activity. Therefore there is a need for specific inhibitors of IL4I1. More specifically there is a need for compounds that specifically inhibit IL4I1 and can be useful for the treatment of indications where IL4I1 is most expressed and/or active, including endometrial, ovarian and triple negative breast cancers.

BRIEF SUMMARY

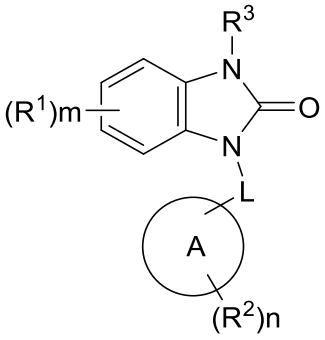
Described herein are compounds of Formula I:



I

and pharmaceutically acceptable salts thereof, wherein X, Y, Z, A, L, R^1, R^2 and R^3 are described below.

In one aspect, there is provided a compound, or a pharmaceutically acceptable salt thereof, having the Formula Ia



Ia,

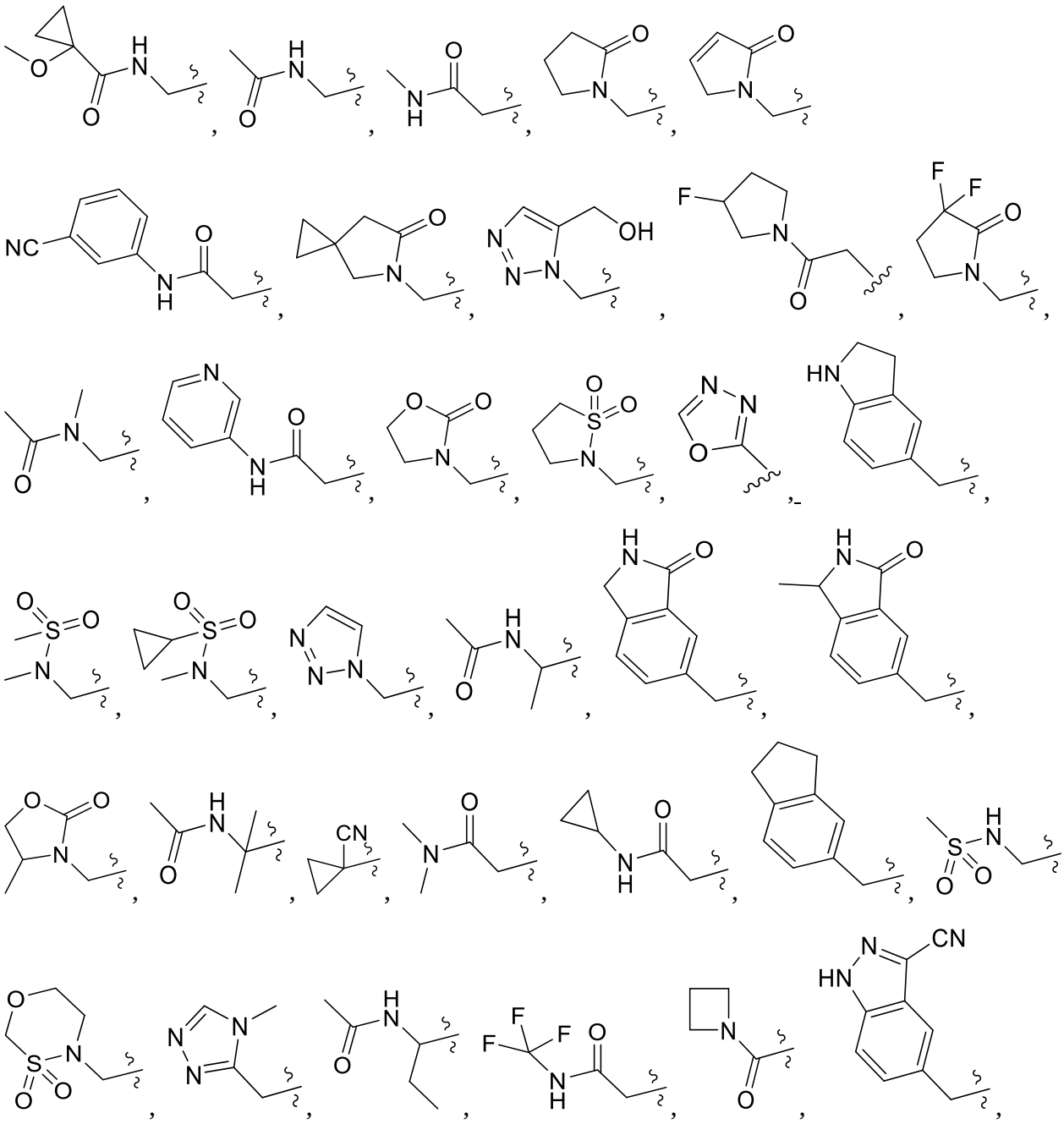
wherein,

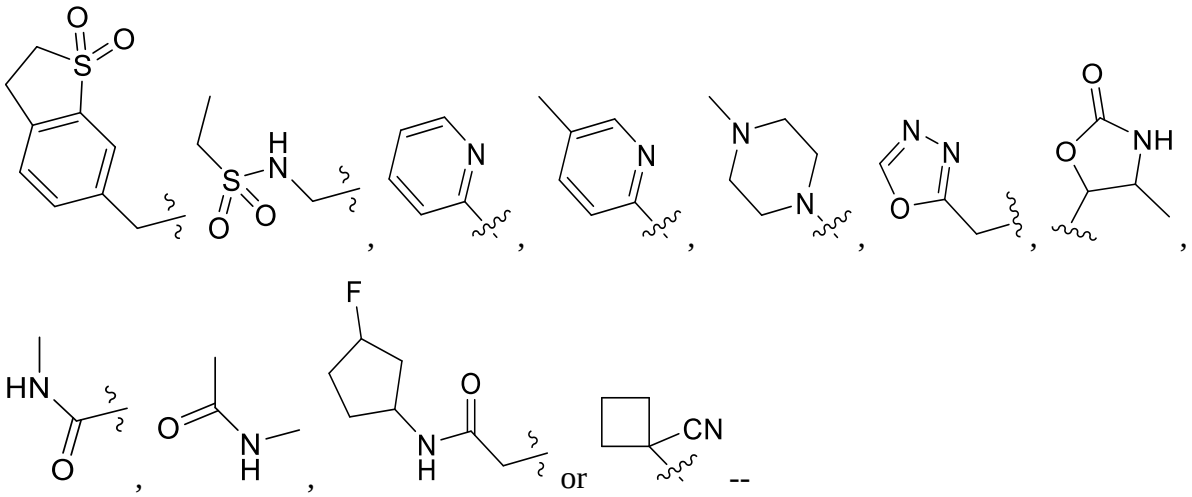
A is aryl;

L is a straight or branched (C_1-C_5)alkylenyl, wherein one or more –CH_2- groups in L are optionally and independently replaced with a moiety selected from the group consisting of O, and NH;

each occurrence of R^1 is independently halogen, C_1-C_6alkyl, or cycloheteroalkyl;

each occurrence of R^2 is independently chlorine, iodine, methoxy, isopropoxy, methyl, difluoromethyl,



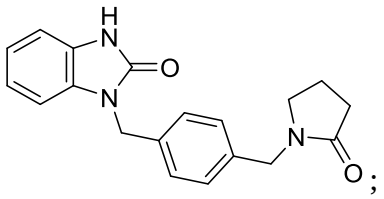
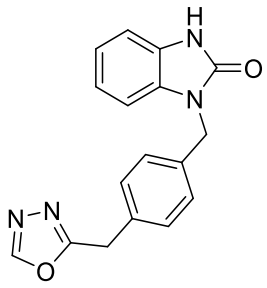
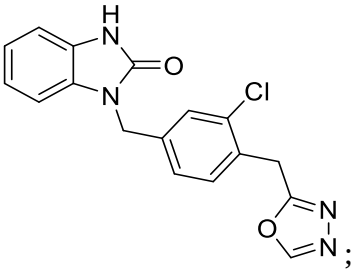
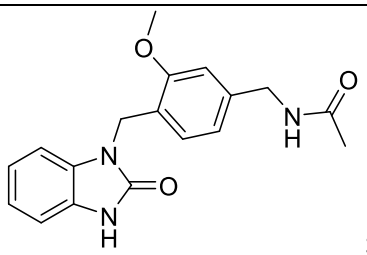
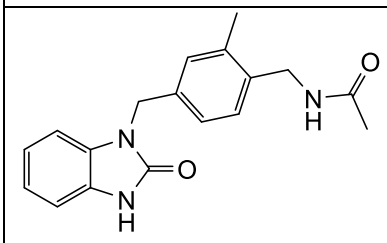
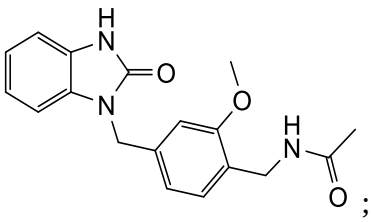


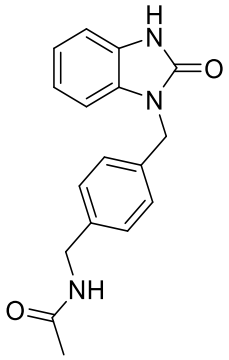
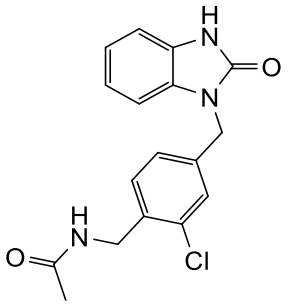
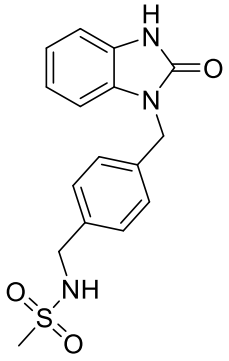
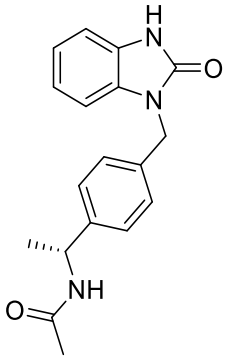
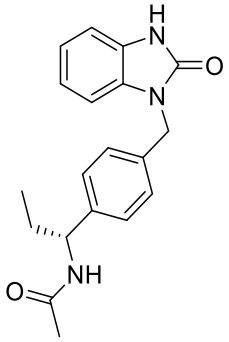
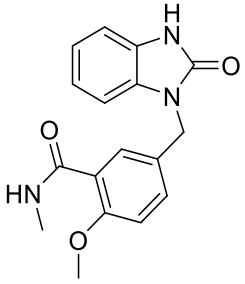
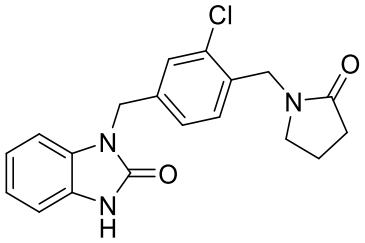
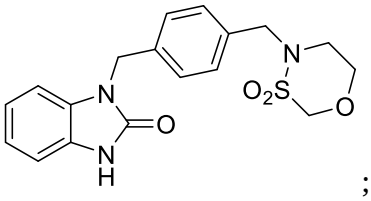
R^3 is hydrogen, C_1-C_6alkyl or haloC_1-C_6alkyl;

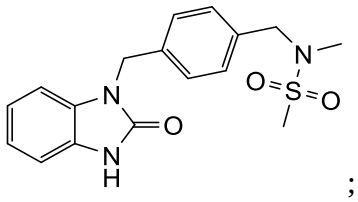
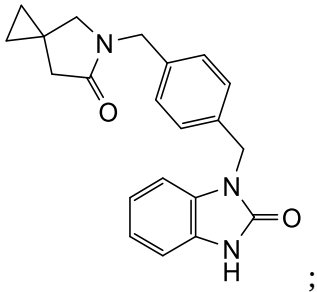
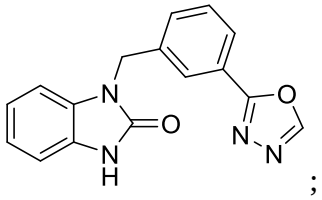
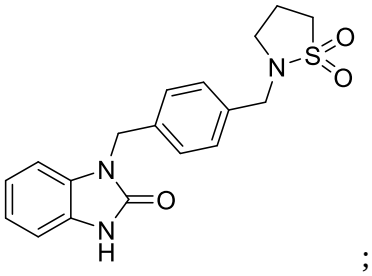
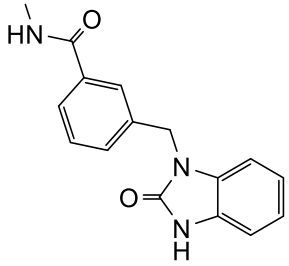
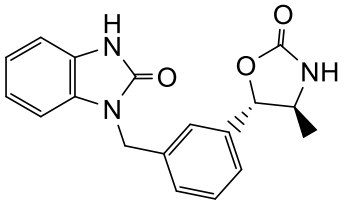
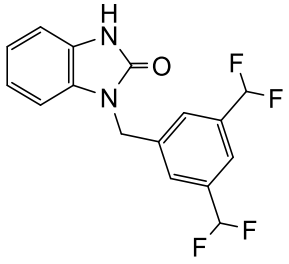
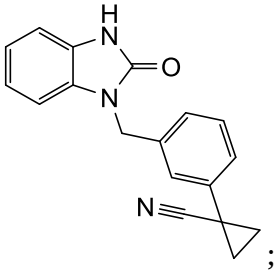
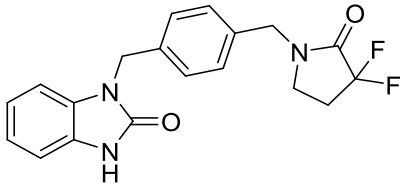
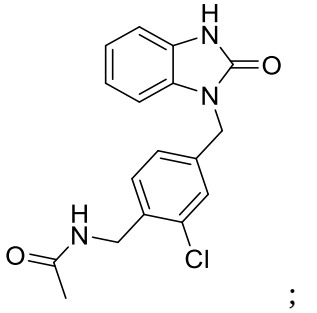
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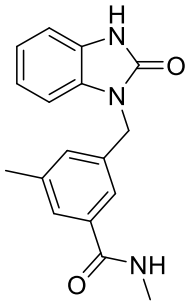
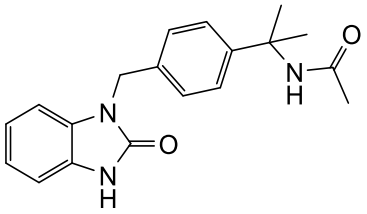
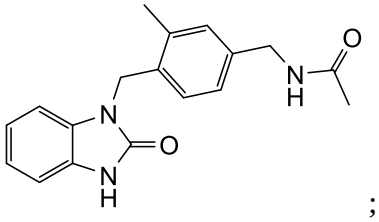
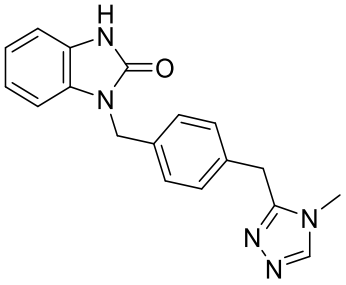
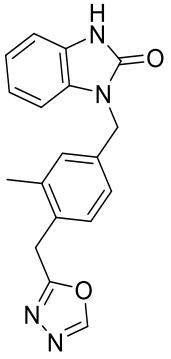
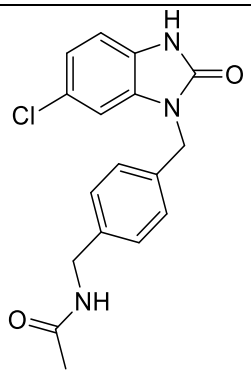
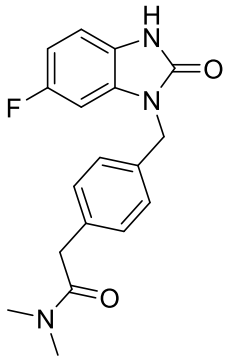
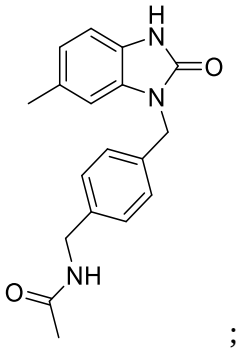
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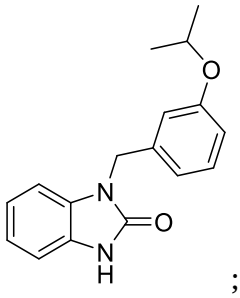
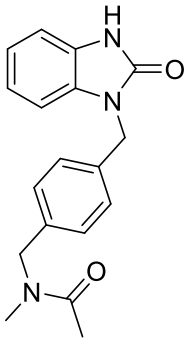
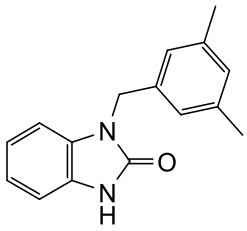
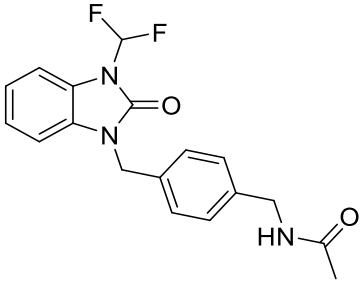
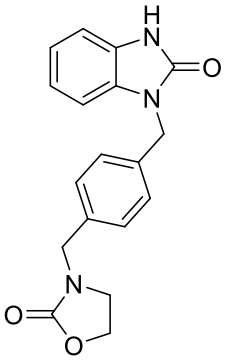
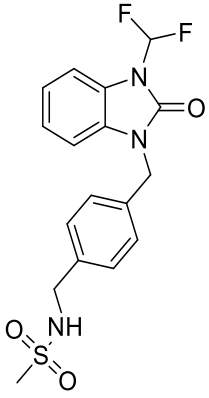
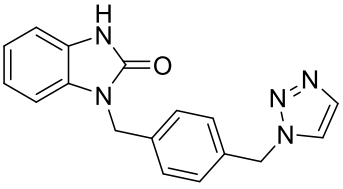
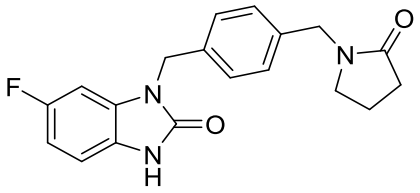
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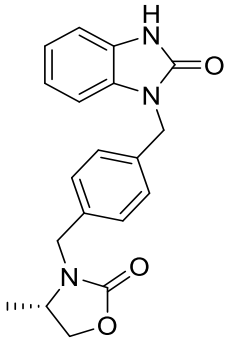
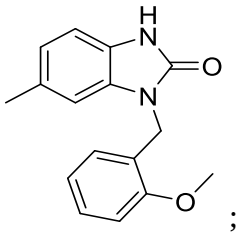
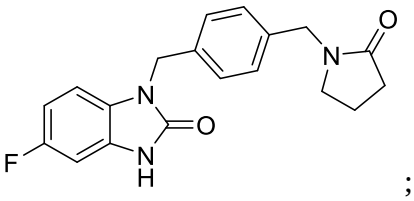
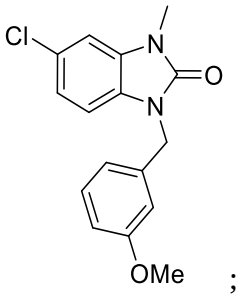
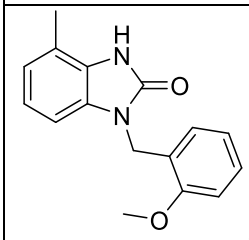
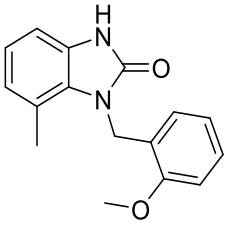
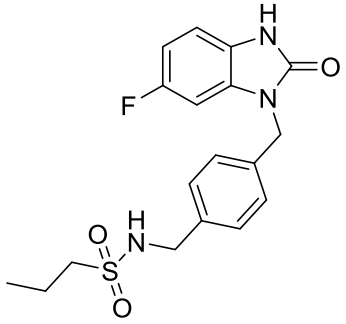
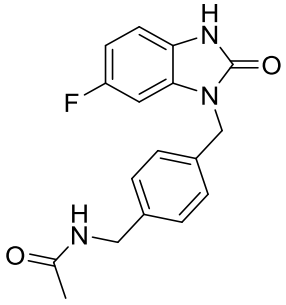
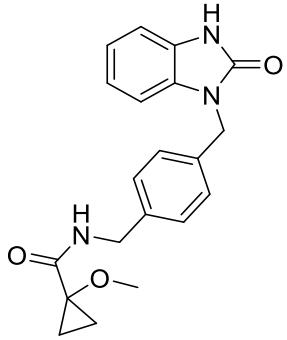
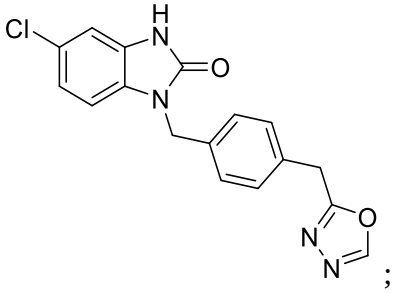
	
	
	

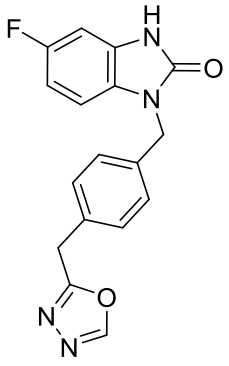
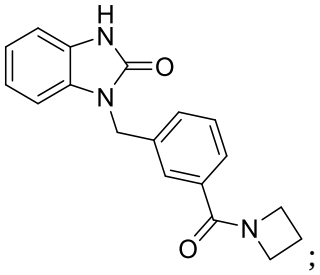
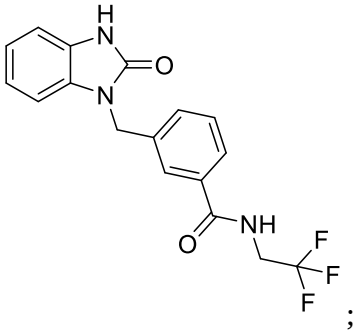
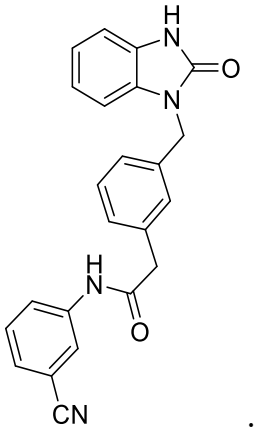
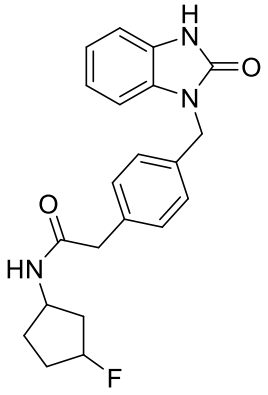
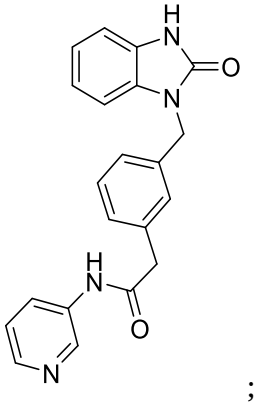
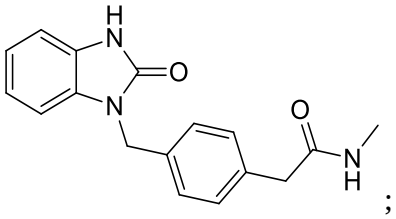
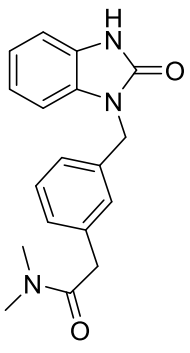
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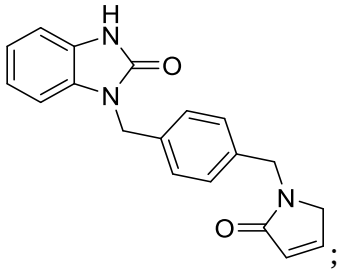
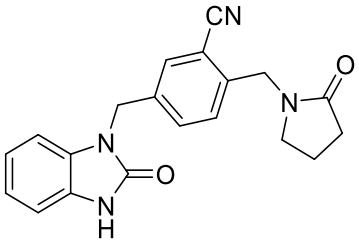
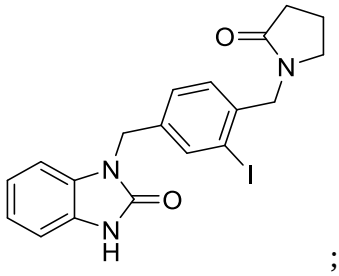
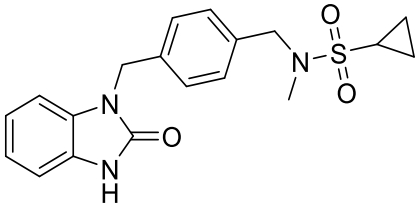
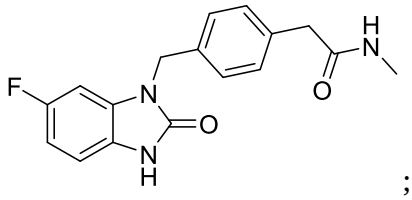
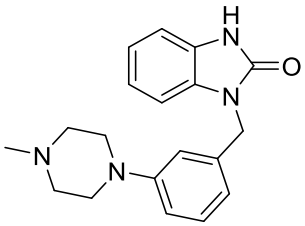
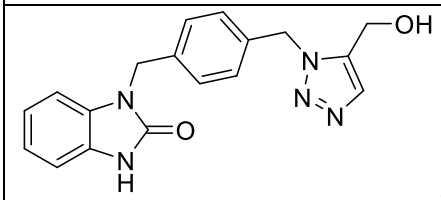
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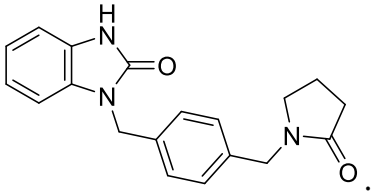
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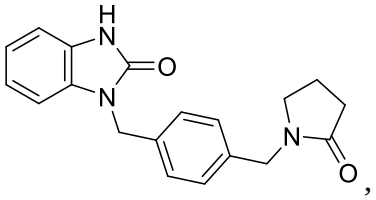
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or a pharmaceutically acceptable salt thereof.

In another aspect, there is provided a compound having the following structure

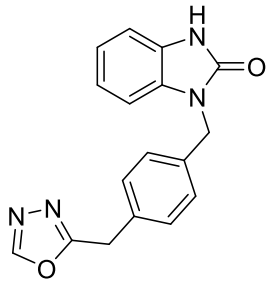
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In another aspect, there is provided a compound having the following structure

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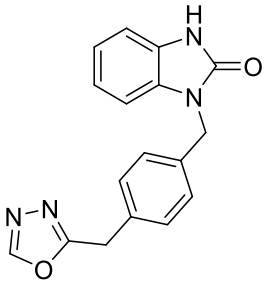
or a pharmaceutically acceptable salt thereof.

In another aspect, there is provided a compound having the following structure



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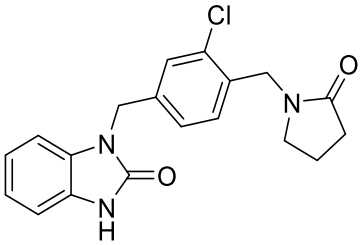
In another aspect, there is provided a compound having the following structure



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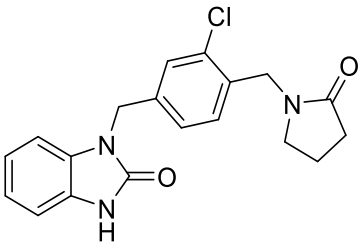
or a pharmaceutically acceptable salt thereof.

In another aspect, there is provided a compound having the following structure



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In another aspect, there is provided a compound having the following structure



,

or a pharmaceutically acceptable salt thereof.

The compounds described herein are IL4I1 inhibitors, which can be useful in the prevention, treatment or amelioration of IL4I1- related diseases.

Also described herein are methods of preventing, treating or ameliorating the symptoms of cancer comprising administering to a patient in need thereof a compound described herein, or a pharmaceutically acceptable salt thereof.

In another aspect, there is provided a compound described herein, or pharmaceutically acceptable salt thereof for use in therapy.

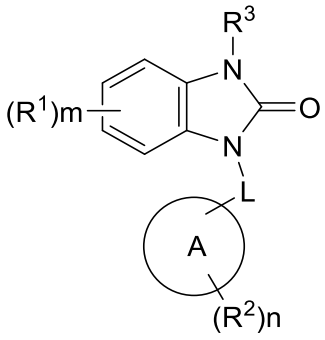
Also described herein are uses of a compound described herein, or a pharmaceutically acceptable salt thereof, to prevent, treat or ameliorate the conditions of cancer in a patient in need thereof. In another aspect, there is provided use of a compound described herein, or pharmaceutically acceptable salt thereof in the manufacture of a medicament for the treatment of cancer.

In another aspect, there is provided a pharmaceutical composition comprising a compound described herein, or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

In another aspect, there is provided a pharmaceutical composition comprising a compound described herein and a pharmaceutically acceptable carrier.

What is claimed is:

1. A compound, or a pharmaceutically acceptable salt thereof, having the Formula Ia



Ia,

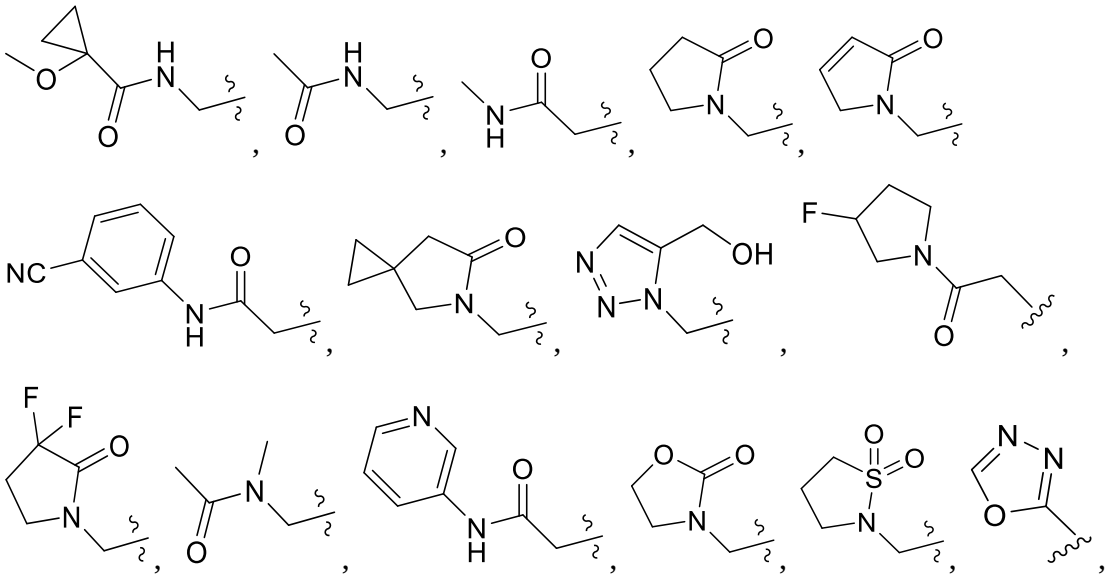
wherein,

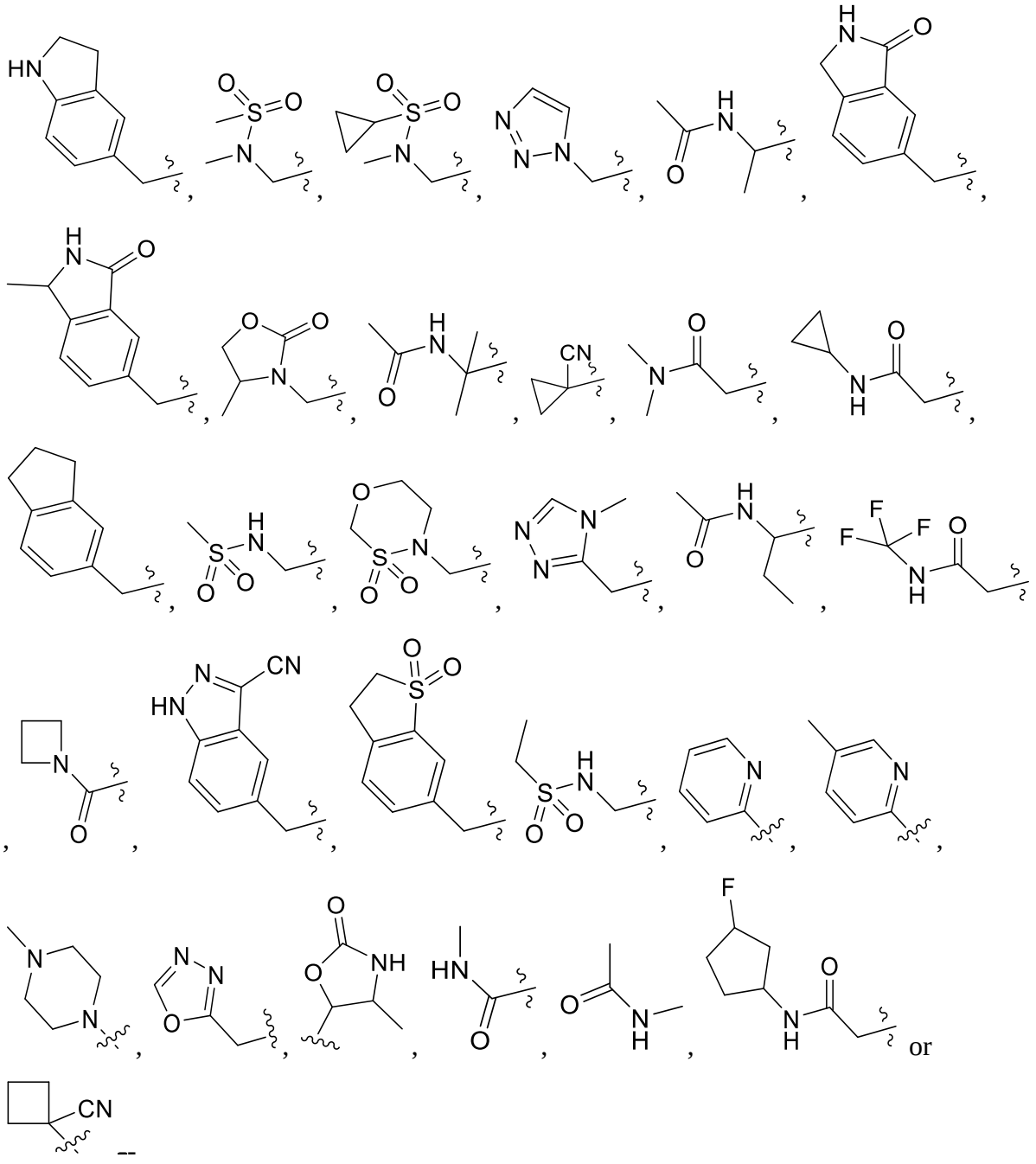
A is aryl;

L is a straight or branched (C_1-C_5)alkylenyl, wherein one or more –CH_2- groups in L are optionally and independently replaced with a moiety selected from the group consisting of O, and NH;

each occurrence of R^1 is independently halogen, C_1-C_6alkyl, or cycloheteroalkyl;

each occurrence of R^2 is independently chlorine, iodine, methoxy, isopropoxy, methyl, difluoromethyl,





R^3 is hydrogen, C_1-C_6alkyl or haloC_1-C_6alkyl;

m is 0, 1 or 2; and

n is 1, 2 or 3.

2. The compound of claim 1, or pharmaceutically acceptable salt thereof, wherein L is -CH_2-, -CH_2CH_2-, -$CH_2CH_2CH_2CH_2$-, -$CH_2CH_2CH_2O$-, or -$CHCH_3$-.

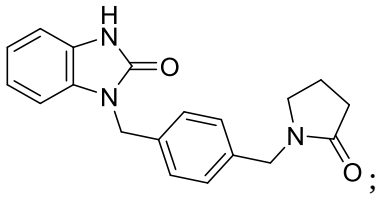
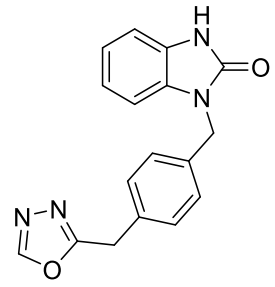
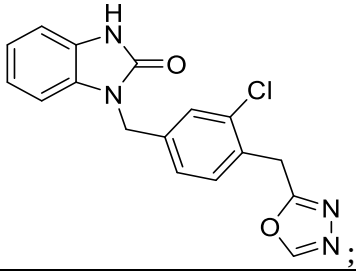
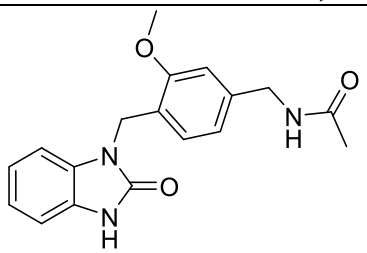
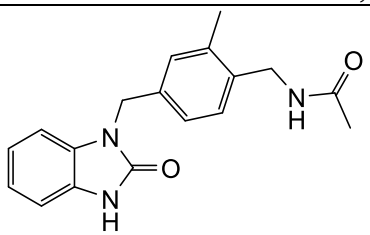
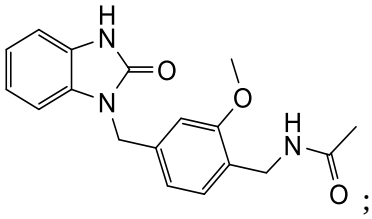
3. The compound of claim 1 or 2, or a pharmaceutically acceptable salt thereof, wherein A is phenyl.

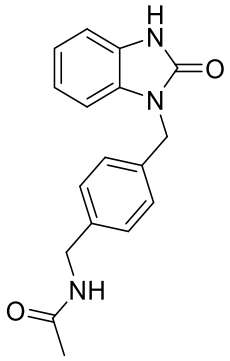
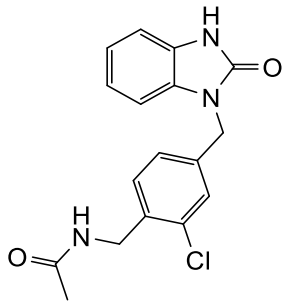
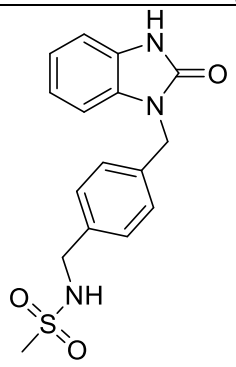
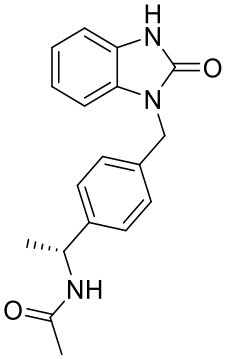
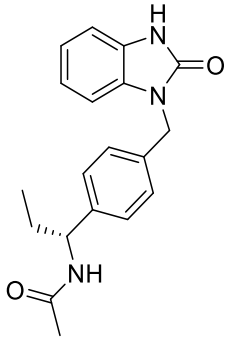
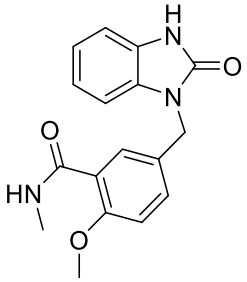
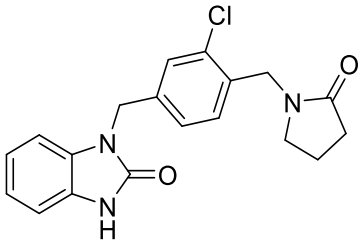
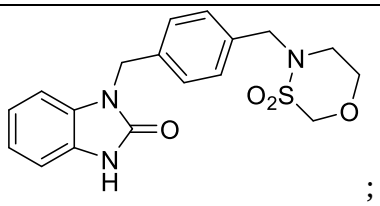
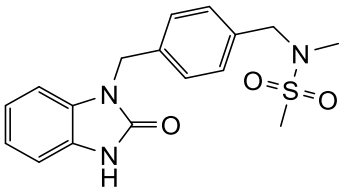
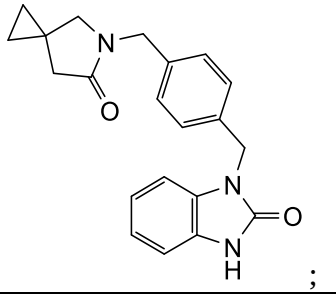
4. The compound of any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, wherein m is 0.

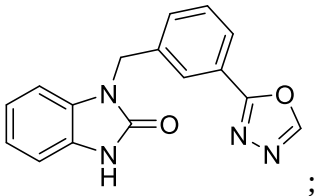
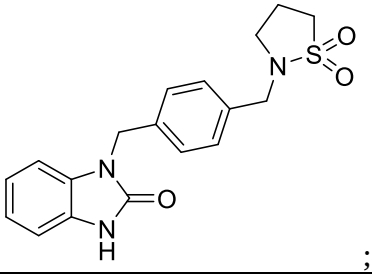
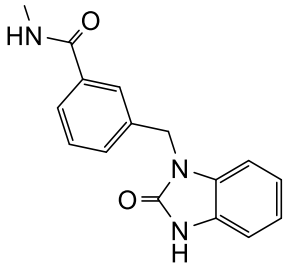
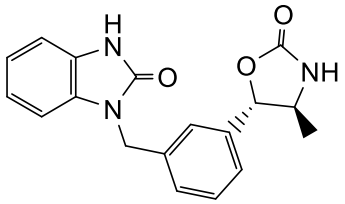
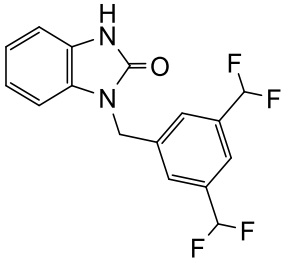
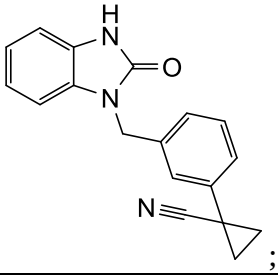
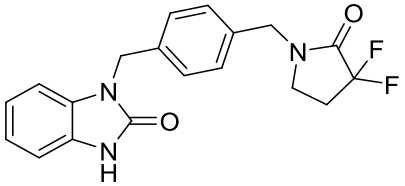
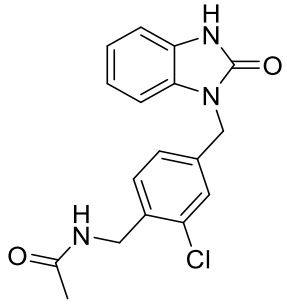
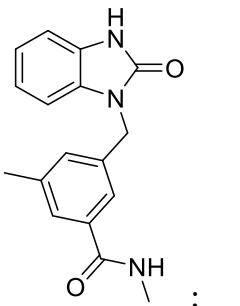
5. The compound of any one of claims 1 to 3, or a pharmaceutically acceptable salt thereof, wherein m is 1 or 2 and R^1 is fluorine, chlorine, pyrrolidine, methyl or ethyl.

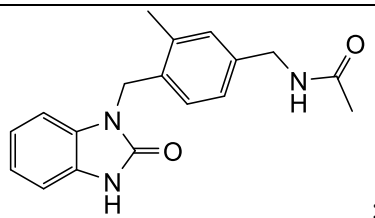
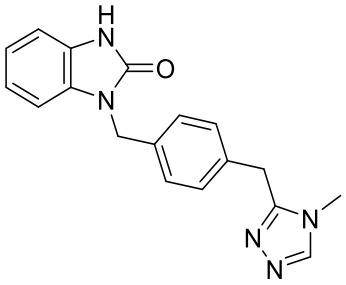
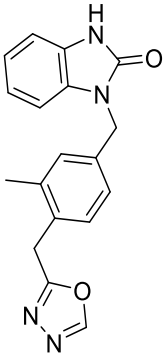
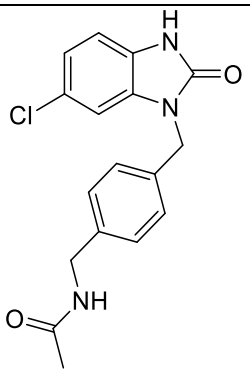
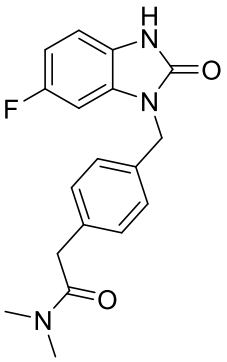
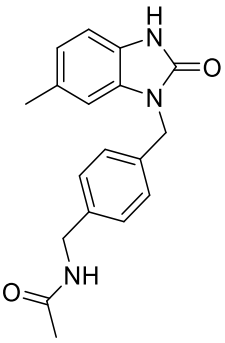
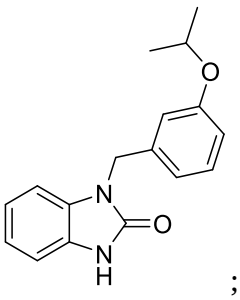
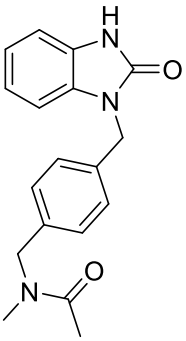
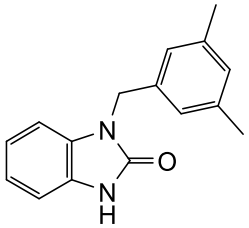
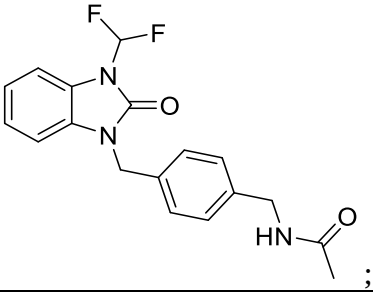
6. The compound of any one of claims 1 to 5, or a pharmaceutically acceptable salt thereof, wherein R^3 is hydrogen, methyl or difluoromethyl.

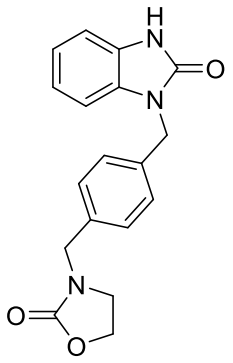
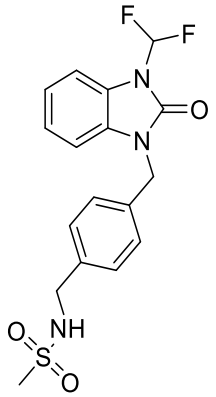
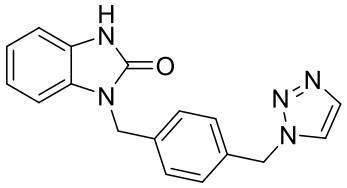
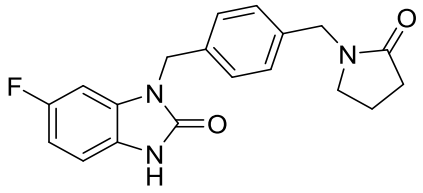
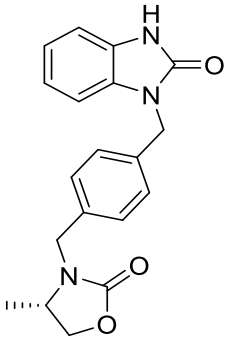
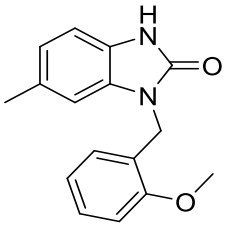
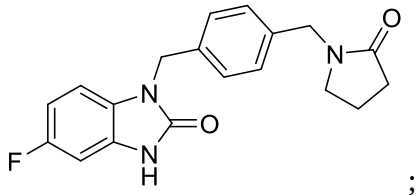
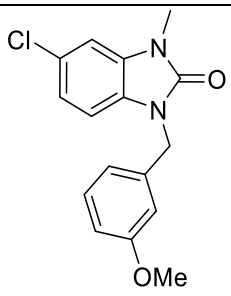
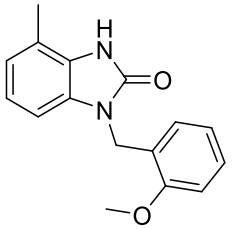
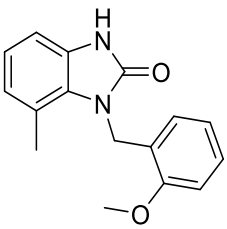
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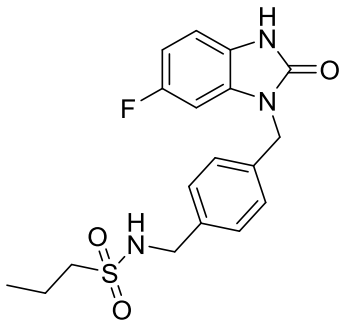
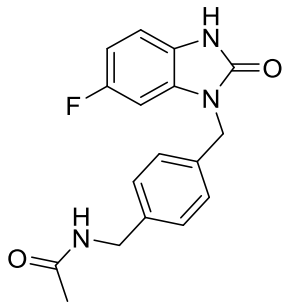
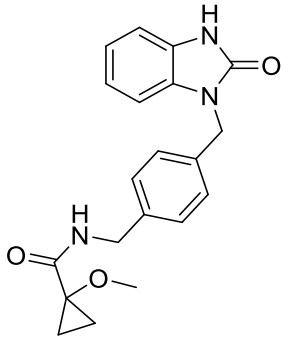
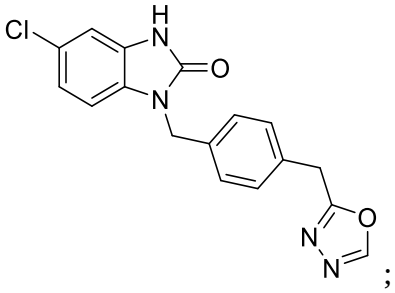
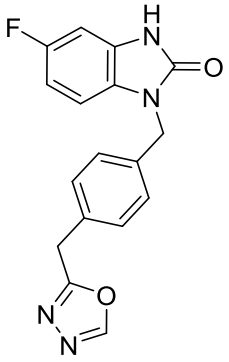
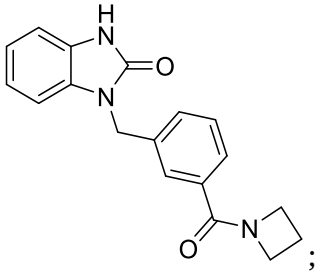
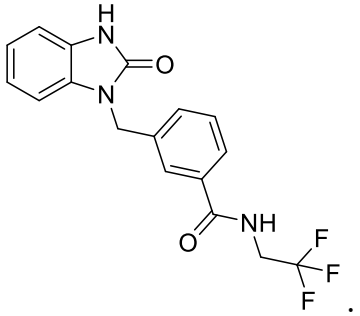
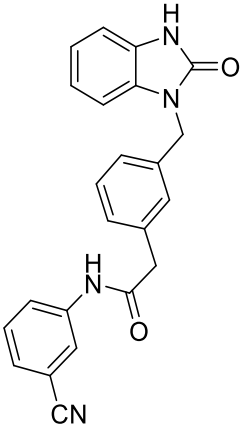
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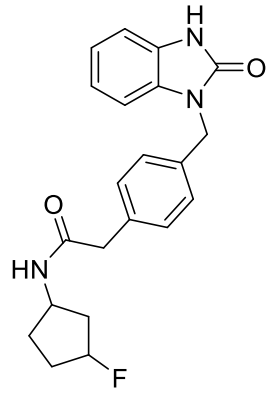
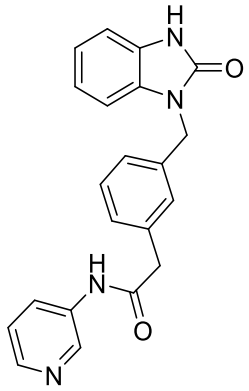
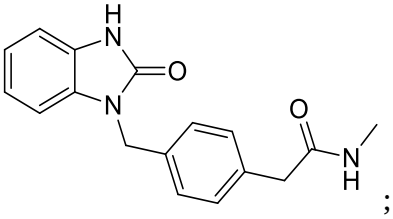
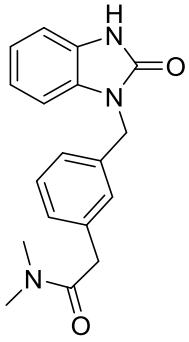
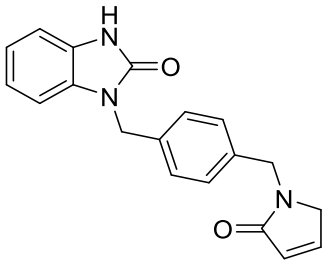
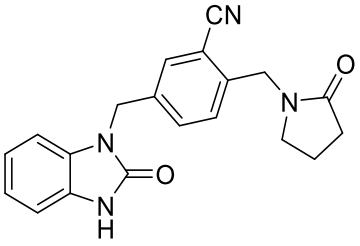
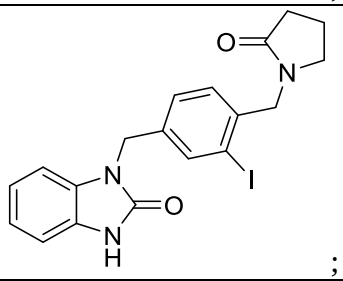
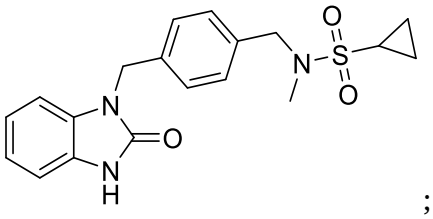
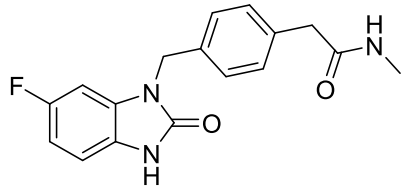
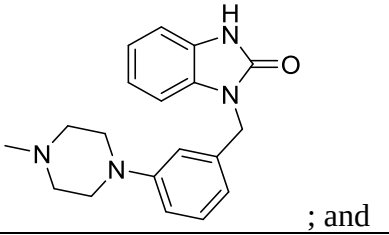
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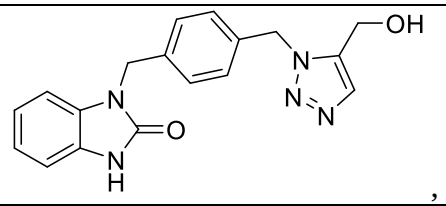
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or a pharmaceutically acceptable salt thereof.

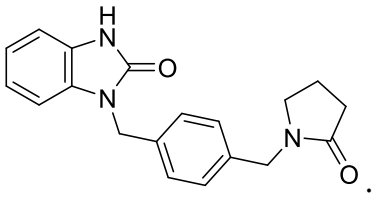
8. Use of a compound of any one of claims 1 to 7 or a pharmaceutically acceptable salt thereof in the manufacture of a medicament for the treatment of cancer.

9. A compound of any one of claims 1 to 7 or a pharmaceutically acceptable salt thereof for use in therapy.

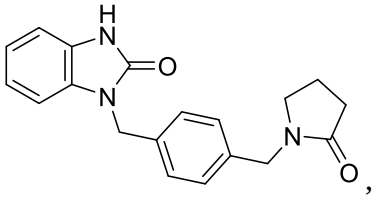
10. A pharmaceutical composition comprising a compound of any one of claims 1 to 7, or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

11. A pharmaceutical composition comprising a compound of any one of claims 1 to 7 and a pharmaceutically acceptable carrier.

12. A compound having the following structure

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13. A compound having the following structure

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or a pharmaceutically acceptable salt thereof.

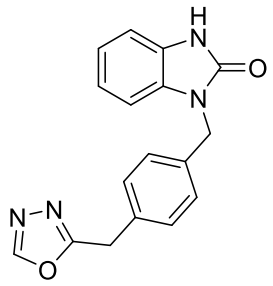
14. Use of a compound of claim 13, or pharmaceutically acceptable salt thereof in the manufacture of a medicament for the treatment of cancer.

15. A compound of claim 13, or pharmaceutically acceptable salt thereof for use in therapy.

16. A pharmaceutical composition comprising a compound of claim 13, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

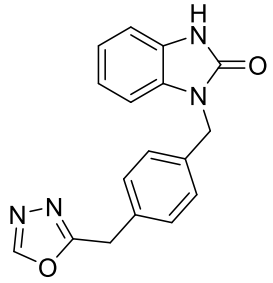
17. A pharmaceutical composition comprising a compound of claim 12 and a pharmaceutically acceptable carrier.

18. A compound having the following structure



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19. A compound having the following structure



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or a pharmaceutically acceptable salt thereof.

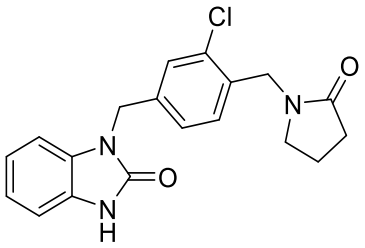
20. Use of a compound of claim 19, or pharmaceutically acceptable salt thereof in the manufacture of a medicament for the treatment of cancer.

21. A compound of claim 19, or pharmaceutically acceptable salt thereof for use in therapy.

22. A pharmaceutical composition comprising a compound of claim 19, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

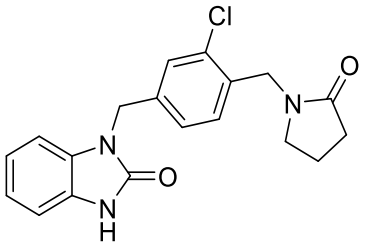
23. A pharmaceutical composition comprising a compound of claim 18 and a pharmaceutically acceptable carrier.

24. A compound having the following structure



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25. A compound having the following structure



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or a pharmaceutically acceptable salt thereof.

26. Use of a compound of claim 25, or pharmaceutically acceptable salt thereof in the manufacture of a medicament for the treatment of cancer.

27. A compound of claim 25, or pharmaceutically acceptable salt thereof for use in therapy.

28. A pharmaceutical composition comprising a compound of claim 25, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

29. A pharmaceutical composition comprising a compound of claim 24 and a pharmaceutically acceptable carrier.