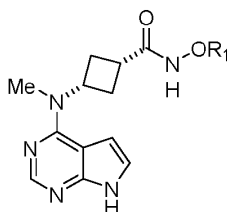


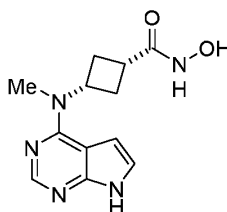
We claim:

1. A compound having the structure:



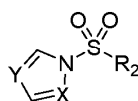
- 5 wherein R_1 is selected from: hydrogen, substituted or unsubstituted phenyl, substituted or unsubstituted pyridyl, substituted or unsubstituted imidazolyl, (C_1-C_6) alkyl, (C_3-C_{10}) cycloalkyl, which may optionally be substituted with 1, 2 or 3 groups independently selected from halo, (C_1-C_3) alkyl, and (C_1-C_3) alkyloxy, or a salt thereof selected from a group consisting of sodium, potassium, lithium, magnesium and calcium.
- 10
2. The compound of claim 1 wherein R_1 is hydrogen, or a salt thereof.

3. The compound (1s,3s)-N-hydroxy-3-(methyl(7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)cyclobutane-1-carboxamide having the structure:



- 15 or a salt thereof.

4. A compound having the structure:

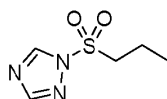


- 20 wherein R_2 is selected from (C_3-C_5) alkyl and (C_3-C_4) cycloalkyl; and, X and Y are independently selected from CR_3 and N, wherein R_3 is selected from: hydrogen, and (C_1-C_6) alkyl.

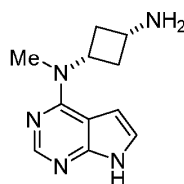
5. The compound of claim 4 wherein X and Y are both N; and, R_2 is (C_3-C_5) alkyl.

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6. The compound of claim 4 wherein R_2 is a linear or branched chain propyl group.
7. The compound of claim 4 wherein R_2 is linear propyl group.
- 5 8. The compound of claim 4 wherein X is CR_3 , wherein R_3 is hydrogen; and, Y is N.
9. The compound of claim 8 wherein R_2 is a linear or branched chain propyl group.
- 10 10. The compound of claim 8 wherein R_2 is linear propyl group.
11. The compound 1-(propylsulfonyl)-1H-1,2,4-triazole having the structure:



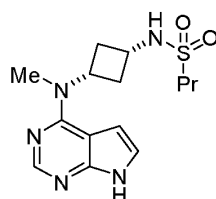
12. A salt of a compound having the structure:



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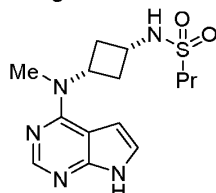
- said salt selected from the group consisting of the hydrochloric acid salt, phosphoric (mono, bis, tris) acid salt, (1S)-(+)-10-camphor sulfonic acid salt, 1,2-ethanedisulfonic acid salt, dibenzoyl-L-tartaric acid salt, dibenzoyl-D-tartaric acid salt, citric acid salt, succinic acid salt, fumaric acid salt, maleic acid salt, oxalic acid salt, p-toluenesulfonic acid salt, L-(+)-tartaric acid salt, D-(-)-tartaric acid salt, hydrobromic acid salt, acid salt, mesylate salt and malonic acid salt.
- 20

13. The phosphoric acid salt of claim 12.
14. An acid salt of a compound having the structure:



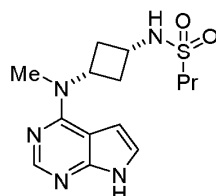
wherein said acid salt is selected from the group consisting of a hydrochloride salt, a phosphate salt, a succinic acid salt, a citric acid salt, a *p*-toluenesulfonic acid salt, a mesylate salt, a hemisulfate salt, a hemifumarate salt and a malonic acid salt.

- 5 15. An acid salt of a compound having the structure:



wherein said acid salt is a hydrochloride salt.

16. A compound having the structure:



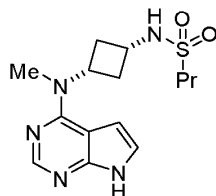
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prepared from an acid salt selected from the group consisting of a hydrochloride salt, a phosphate salt, a succinic acid salt, a citric acid salt, a *p*-toluenesulfonic acid salt, a mesylate salt, a hemisulfate salt, a hemifumarate salt and a malonic acid salt.

- 15 17. The compound of claim 16 prepared from the hydrochloride salt of said compound under suitable basic conditions.

18. The compound of claim 16, having a powder X-ray diffraction pattern comprising peaks, in terms of 2θ , at 13.0° , 14.8° and 23.3° $2\theta \pm 0.2^\circ$.

- 20 19. A process for preparing a compound having the structure:

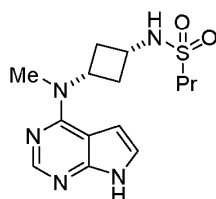


which comprises (a) preparing the hydrochloric acid salt of said compound under suitable conditions, and thereafter (b) reacting said salt with a suitable base under suitable

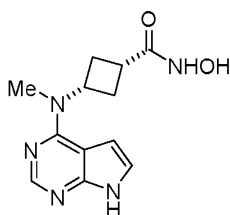
conditions to form the compound, wherein said suitable base is selected from sodium carbonate, potassium carbonate, sodium bicarbonate, potassium bicarbonate, sodium hydroxide, potassium hydroxide, or triethylamine.

20. The process of claim 19, wherein said suitable base is sodium or potassium bicarbonate.

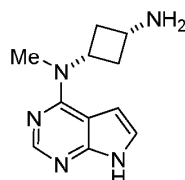
21. A process for preparing a compound having the structure:



which comprises (a) preparing a hydroxylamine compound having the structure:

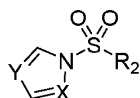


(b) reacting said hydroxylamine compound under suitable conditions to prepare an amino compound having the structure:



and thereafter (c) treating said amino compound with a suitable *n*-propylsulfonation reagent under suitable conditions to form the compound.

22. The process of claim 21, wherein the *n*-propylsulfonation reagent is a compound having the structure:



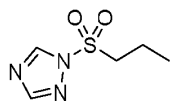
wherein R_2 is *n*-propyl; and,

X and Y are independently selected from CR_3 and N, wherein R_3 is selected from: hydrogen, and (C₁-C₆)alkyl.

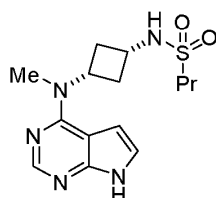
23. The process of claim 21, wherein X and Y are both N.

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24. The process of claim 21, wherein the *n*-propylsulfonation reagent is a compound 1-(propylsulfonyl)-1H-1,2,4-triazole having the structure:



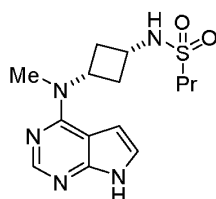
25. The process of claim 21 wherein the compound having the structure:



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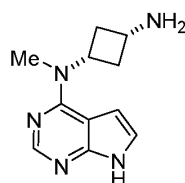
is a crystalline form of N-((1S,3S)-3-(methyl(7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)cyclobutyl)propane-1-sulfonamide, having a powder X-ray diffraction pattern comprising peaks, in terms of 2θ , at 13.0° , 14.8° and 23.3° $2\theta \pm 0.2^\circ$ 2θ .

26. A process for preparing a compound having the structure:



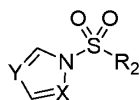
15

which comprises (a) preparing an amino compound having the structure:



and thereafter (b) treating said amino compound with a suitable *n*-propylsulfonation reagent under suitable conditions to form the compound.

27. The process of claim 26, wherein the *n*-propylsulfonation reagent is a compound having the structure:



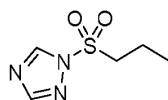
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wherein R₂ is *n*-propyl; and,

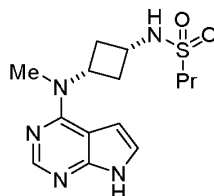
X and Y are independently selected from CR₃ and N, wherein R₃ is selected from hydrogen and (C₁-C₆)alkyl.

28. The process of claim 26, wherein X and Y are both N.

10 29. The process of claim 26, wherein the *n*-propylsulfonation reagent is a compound 1-(propylsulfonyl)-1H-1,2,4-triazole having the structure:

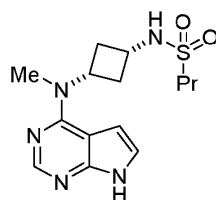


30. The process of claim 29 wherein the compound having the structure:



15 is a crystalline form of N-((1S,3S)-3-(methyl(7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)cyclobutyl)propane-1-sulfonamide, having a powder X-ray diffraction pattern comprising peaks, in terms of 2θ, at 13.0°, 14.8° and 23.3° 2θ ± 0.2° 2θ.

31. A pharmaceutical composition of a compound having the structure:



wherein said composition is prepared from said compound having a crystalline form having a powder X-ray diffraction pattern comprising peaks, in terms of 2θ , at 13.0° , 14.8° and $23.3^\circ \pm 0.2^\circ 2\theta$; and further comprises a pharmaceutically acceptable carrier.

- 5 32. The pharmaceutical composition of claim 31, comprising a topical formulation selected from a cream, transdermal patch, ointment, ophthalmic drops, lotion and gel.
33. The pharmaceutical composition of claim 32 wherein the topical formulation contains from about 0.1% to about 5.0% (w/v) N-((1S,3S)-3-(methyl(7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)cyclobutyl)propane-1-sulfonamide.
- 10 34. A method of treating a disease in a mammal, comprising administering to a mammal in need thereof a therapeutically effective amount of a pharmaceutical composition of claim of any one of claims 31-33, wherein the disease is selected from the group consisting of lupus, rheumatoid arthritis, IBD, ulcerative colitis, Crohn's Disease, vitiligo, alopecia, psoriasis and atopic dermatitis.
- 15 35. A method of topically treating a disease in a mammal, comprising administering by a topical mode of administration to a mammal in need thereof a therapeutically effective amount of a pharmaceutical composition of claim of any one of claims 31-33, wherein the disease is selected from the group consisting of vitiligo, alopecia, psoriasis and atopic dermatitis.
- 20 36. The pharmaceutical composition of any one of claims 31-33 for use as a medicament.
37. The pharmaceutical composition of any one of claims 31-33 for use in the treatment of a disorder selected from the group consisting of lupus, rheumatoid arthritis, IBD, ulcerative colitis, Crohn's Disease, vitiligo, alopecia, psoriasis and atopic dermatitis.
38. Use of the pharmaceutical composition of any one of claims 31-33 for the
- 25 preparation of a medicament for the treatment of a disorder selected from the group consisting of lupus, rheumatoid arthritis, IBD, ulcerative colitis, Crohn's Disease, vitiligo, alopecia, psoriasis and atopic dermatitis.