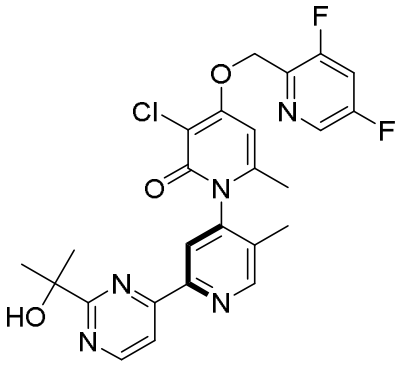
CLAIMS

What is claimed is:

1. A crystalline form of Compound 49a:



(*P*)-3-chloro-4-((3,5-difluoropyridin-2-yl)methoxy)-2'-(2-(2-hydroxypropan-2-yl)pyrimidin-4-yl)-5',6-dimethyl-2*H*-[1,4'-bipyridin]-2-one

Compound 49a

2. The crystalline form of claim 1, wherein Compound 49a is a freebase.
3. The crystalline form of any one of claims 1 and 2, wherein the crystalline form of Compound 49a is Form A.
4. The crystalline form of claim 3, wherein Form A is characterized by an XRPD pattern having a peak expressed in degrees 2θ (±0.2) at about 9.78.
5. The crystalline form of claim 3, wherein Form A is characterized by an XRPD pattern having peaks expressed in degrees 2θ (±0.2) at about 9.78, and about 15.51.
6. The crystalline form of claim 3, wherein Form A is characterized by an XRPD pattern having peaks expressed in degrees 2θ (±0.2) at about 9.78, about 15.51, about 19.6, and about 25.92.
7. The crystalline form of claim 3, wherein Form A is characterized by an XRPD pattern having peaks expressed in degrees 2θ at about 9.78, about 15.34, about 15.51, about 19.6, about 20.57, about 21.01, about 25.92, about 29.05, and about 29.48.
8. The crystalline form of claim 3, wherein Form A is characterized by a DSC plot comprising an initial endothermic melting event with an onset temperature of about 188 °C, followed by an exothermic recrystallization event at about 196 °C, with a final sharp endothermic melting event at about 254 °C.

9. The crystalline form of any one of claims 1-8, wherein the crystalline form further comprises not more than about 20 mol% of Compound 49a's corresponding *M* isomer.

10. The crystalline form of any one of claims 1-8, wherein the crystalline form further comprises not more than about 0.25 mol% of Compound 49a's corresponding *M* isomer.

11. The crystalline form of any one of claims 1-8, wherein the crystalline form is substantially free of Compound 49a's corresponding *M* isomer.

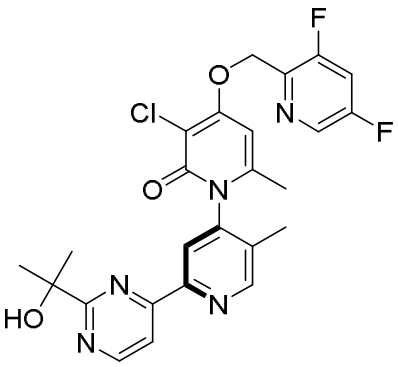
12. The crystalline form of any one of claims 1-11, wherein Compound 49a has a chemical purity of about 95% or greater.

13. The crystalline form of any one of claims 1-12, wherein the crystalline form of Compound 49a contains not more than about 20 mol% of other solid forms.

14. The crystalline form of any one of claims 1-12, wherein the crystalline form of Compound 49a contains not more than about 0.25 mol% of other solid forms.

15. The crystalline form of any one of claims 1-12, wherein the crystalline form of Compound 49a is substantially free of other solid forms.

16. A pharmaceutical composition comprising a crystalline form of Compound 49a:



(*P*)-3-chloro-4-((3,5-difluoropyridin-2-yl)methoxy)-2'-(2-(2-hydroxypropan-2-yl)pyrimidin-4-yl)-5',6-dimethyl-2*H*-[1,4'-bipyridin]-2-one

Compound 49a

and a pharmaceutically acceptable excipient.

17. The pharmaceutical composition of claim 16, wherein Compound 49a is a freebase.

18. The pharmaceutical composition of any one of claims 16 and 17, wherein the crystalline form of Compound 49a is Form A.

19. The pharmaceutical composition of claim 18, wherein Form A is characterized by an XRPD pattern having a peak expressed in degrees 2θ (±0.2) at about 9.78.

20. The pharmaceutical composition of claim 18, wherein Form A is characterized by an XRPD pattern having peaks expressed in degrees 2θ (±0.2) at about 9.78, and about 15.51.

21. The pharmaceutical composition of claim 18, wherein Form A is characterized by an XRPD pattern having peaks expressed in degrees 2θ (±0.2) at about 9.78, about 15.51, about 19.6, and about 25.92.

22. The pharmaceutical composition of claim 18, wherein Form A is characterized by an XRPD pattern having peaks expressed in degrees 2θ at about 9.78, about 15.34, about 15.51, about 19.6, about 20.57, about 21.01, about 25.92, about 29.05, and about 29.48.

23. The pharmaceutical composition of claim 18, wherein Form A is characterized by a DSC plot comprising an initial endothermic melting event with an onset temperature of about 188 °C, followed by an exothermic recrystallization event at about 196 °C, with a final sharp endothermic melting event at about 254 °C.

24. The pharmaceutical composition of any one of claims 16-23, wherein the pharmaceutical composition further comprises not more than about 20 mol% of Compound 49a's corresponding *M* isomer.

25. The pharmaceutical composition of any one of claims 16-23, wherein the pharmaceutical composition further comprises not more than about 0.25 mol% of Compound 49a's corresponding *M* isomer.

26. The pharmaceutical composition of any one of claims 16-23, wherein the pharmaceutical composition is substantially free of Compound 49a's corresponding *M* isomer.

27. The pharmaceutical composition of any one of claims 16-26, wherein Compound 49a has a chemical purity of about 95% or greater.

28. The pharmaceutical composition of any one of claims 16-27, wherein the crystalline form of Compound 49a contains not more than about 20 mol% of other solid forms.

29. The pharmaceutical composition of any one of claims 16-27, wherein the crystalline form of Compound 49a contains not more than about 0.25 mol% of other solid forms.

30. The pharmaceutical composition of any one of claims 16-27, wherein the crystalline form of Compound 49a is substantially free of other solid forms.

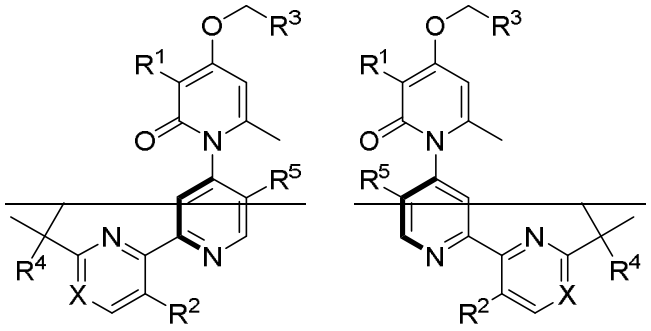
31. The pharmaceutical composition of any one of claims 16-30, wherein the therapeutically effective amount is about 10 mg to about 300 mg.

32. The pharmaceutical composition of claim 31, wherein the therapeutically effective amount is about 50 mg.

33. The pharmaceutical composition of any one of claims 16-32, wherein the pharmaceutical composition is an oral pharmaceutical composition.

34. A tablet comprising the pharmaceutical composition of any one of claims 16-33.

~~35. A method for isolating a compound of Formula (*P*)-Ia by interconverting a compound of Formula (*M*)-Ib:~~



(*P*)-Ia ⟷ (*M*)-Ib

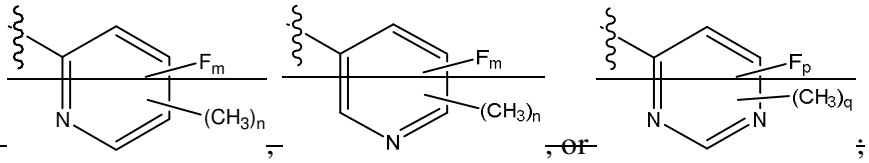
~~wherein:~~

~~X is CH or N;~~

~~R^1 is selected from the group consisting of H, C_1-C_6 alkyl, fluoro, chloro, bromo, cyano, or $-CF_3$;~~

~~R^2 is selected from the group consisting of H, methyl, cyano, or fluoro;~~

~~R^3 is selected from the group consisting of:~~



~~;~~ ~~, or~~ ;

~~R^4 is selected from the group consisting of H, methyl, OH, and $-OCH_3$;~~

~~R^5 is H or C_1-C_3 alkyl;~~

~~m is 1 or 2;~~

~~n is 0 or 1;~~

~~p is 1;~~

~~q is 0 or 1;~~

~~comprising heating a solution comprising the compound of Formula (*M*)-Ib to an interconversion temperature to form a mixture of atropisomers of the compound of Formula (*M*)-Ib and the compound of Formula (*P*)-Ia.~~

~~36. The method of Claim 35 wherein the solution is heated to the interconversion temperature for 1 hour, 2 hours, 3 hours, 4 hours, 5 hours, 6 hours, 7 hours, 8 hours, 9 hours, 10 hours, or a range between any two of these values.~~

~~37. The method of Claim 36 wherein the solution is heated to the interconversion temperature for 3 hours.~~

~~38. The method of Claim 35, wherein the interconversion temperature is 110 °C - 210 °C.~~

~~39. The method of Claim 35, wherein the interconversion temperature is 110 °C - 170 °C.~~

~~40. The method of Claim 35, wherein the interconversion temperature is 110 °C - 150 °C.~~

~~41. The method of Claim 35, wherein the interconversion temperature is 110 °C - 140 °C.~~

~~42. The method of Claim 35, wherein the interconversion temperature is 110 °C - 125 °C.~~

~~43. The method of Claim 35, wherein the interconversion temperature is 145 °C - 150°C.~~

~~44. The method of Claim 35, wherein the solution further comprises a solvent which affords an interconversion temperature of 110 °C -170°C.~~

~~45. The method of Claim 44, wherein the solvent is aprotic.~~

~~46. The method of Claim 44, wherein the solvent is protic.~~

~~47. The method of Claim 45, wherein the solvent is *N* methylpyrrolidone or dimethylacetamide or combinations thereof.~~

~~48. The method of Claim 46, wherein the solvent is an alcohol.~~

~~49. The method of Claim 48, wherein the solvent has a boiling point of about 110 °C to about 150 °C.~~

~~50. The method of Claim 48, wherein the solvent is ethylene glycol.~~

~~51. The method of Claim 49, wherein the solvent is n-butanol.~~

~~52. The method of Claim 35, wherein heating the solution comprising a compound of Formula (*M*)-Ib to the boiling point of the solvent.~~

~~53. The method of Claim 52, wherein the solvent is aprotic.~~

~~54. The method of Claim 52, wherein the solvent is protic.~~

55. The method of Claim 53, wherein the solvent is *N*-methylpyrrolidone or dimethylacetamide or combinations thereof.

56. The method of Claim 54, wherein the solvent is an alcohol.

57. The method of Claim 56, wherein the solvent has a boiling point of 110 °C – 150 °C.

58. The method of Claim 56, wherein the solvent is ethylene glycol.

59. The method of Claim 57, wherein the solvent is n-butanol.

60. The method of Claim 35, wherein the method for isolating a compound of Formula (*P*)-Ia by interconverting a compound of Formula (*M*)-Ib is repeated multiple times.

61. The method of Claim 35, wherein the method for isolating a compound of Formula (*P*)-Ia by interconverting a compound of Formula (*M*)-Ib is repeated once, twice, thrice, or four times.

62. The method of Claim 35, wherein the method for isolating a compound of Formula (*P*)-Ia by interconverting a compound of Formula (*M*)-Ib is repeated twice.

63. The method of Claim 35, wherein the method for isolating a compound of Formula (*P*)-Ia by interconverting a compound of Formula (*M*)-Ib yields a ratio of a compound having the structure of Formula (*P*)-Ia, substantially free of the corresponding *M* isomer, to a compound having the structure of Formula (*M*)-Ib, substantially free of the corresponding *P* isomer, of about 2:1, about 3:1, about 4:1, about 5:1, about 6:1, about 7:1, about 8:1, about 9:1, or about 10:1.

64. The method of Claim 35, wherein the method for isolating a compound of Formula (*P*)-Ia by interconverting a compound of Formula (*M*)-Ib yields a ratio of a compound having the structure of Formula (*P*)-Ia, substantially free of the corresponding *M* isomer, to a compound having the structure of Formula (*M*)-Ib, substantially free of the corresponding *P* isomer, of about 5:1.

65. The method of Claim 35, wherein the compound of Formula (*P*)-Ia is (*P*)-3-chloro-4-((3,5-difluoropyridin-2-yl)methoxy)-2'-(2-(2-hydroxypropan-2-yl)pyrimidin-4-yl)-5',6-dimethyl-2*H*-[1,4'-bipyridin]-2-one and the compound of Formula (*M*)-Ib is (*M*)-3-chloro-4-((3,5-difluoropyridin-2-yl)methoxy)-2'-(2-(2-hydroxypropan-2-yl)pyrimidin-4-yl)-5',6-dimethyl-2*H*-[1,4'-bipyridin]-2-one.