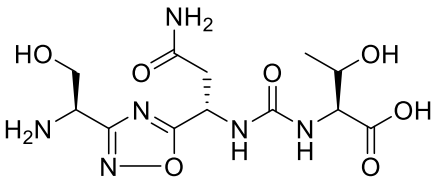
Claims:

1. A crystalline compound having the structure of formula (I),



(I).

2. The crystalline compound of claim 1, wherein the compound is solvated.

3. The crystalline compound of claim 1, wherein the compound is a hydrate.

4. The crystalline compound of any one of claims 1 to 3, wherein the compound is a monohydrate.

5. The crystalline compound of claim 4, having 2θ values 8.4 ± 0.2, 13.6 ± 0.2, 16.5 ± 0.2, 16.8 ± 0.2, 21.4 ± 0.2, and 28.4 ± 0.2.

6. The crystalline compound of any one of claims 4 to 5, having 2θ values 8.4 ± 0.2, 13.6 ± 0.2, 16.5 ± 0.2, 16.8 ± 0.2, 19.3 ± 0.2, 20.4 ± 0.2, 21.4 ± 0.2, and 28.4 ± 0.2.

7. The crystalline compound of any one of claims 4 to 6, having 2θ values 8.4 ± 0.2, 13.6 ± 0.2, 16.5 ± 0.2, 16.8 ± 0.2, 19.3 ± 0.2, 19.9 ± 0.2, 20.4 ± 0.2, 21.4 ± 0.2, 24.5 ± 0.2, 26.5 ± 0.2, and 28.4 ± 0.2.

8. The crystalline compound of any one of claims 4 to 7, having 2θ values 8.4 ± 0.2, 11.5 ± 0.2, 13.6 ± 0.2, 16.5 ± 0.2, 16.8 ± 0.2, 19.3 ± 0.2, 19.9 ± 0.2, 20.4 ± 0.2, 21.4 ± 0.2, 21.8 ± 0.2, 24.5 ± 0.2, 26.5 ± 0.2, 27.5 ± 0.2, 28.0 ± 0.2, 28.4 ± 0.2, 30.0 ± 0.2, and 32.4 ± 0.2.

9. The crystalline compound of any one of claims 4 to 8, having an XRD pattern substantially as shown in FIG. 1.

10. The crystalline compound of any one of claims 1 to 3, wherein the compound is a dihydrate.

11. The crystalline compound of claim 10, having 2θ values 12.9 ± 0.2, 13.5 ± 0.2, 15.7 ± 0.2, 17.0 ± 0.2, 29.7 ± 0.2, and 33.7 ± 0.2.

12. The crystalline compound of any one of claims 10 to 11, having 2θ values 12.9 ± 0.2, 13.5 ± 0.2, 15.7 ± 0.2, 17.0 ± 0.2, 20.3 ± 0.2, 28.9 ± 0.2, 29.7 ± 0.2, and 33.7 ± 0.2.

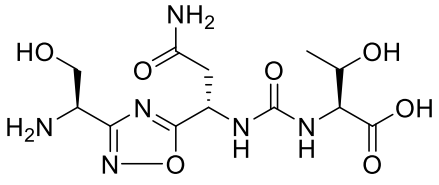
13. The crystalline compound of any one of claims 10 to 12, having 2θ values 12.9 ± 0.2, 13.5 ± 0.2, 15.7 ± 0.2, 17.0 ± 0.2, 19.6 ± 0.2, 20.3 ± 0.2, 26.2 ± 0.2, 28.9 ± 0.2, 29.7 ± 0.2, and 33.7 ± 0.2.

14. The crystalline compound of any one of claims 10 to 13, having 2θ values 12.9 ± 0.2, 13.5 ± 0.2, 15.7 ± 0.2, 17.0 ± 0.2, 19.1 ± 0.2, 19.6 ± 0.2, 20.3 ± 0.2, 21.1 ± 0.2, 21.4 ± 0.2, 26.2 ± 0.2, 27.2 ± 0.2, 28.9 ± 0.2, 29.7 ± 0.2, 32.2 ± 0.2, and 33.7 ± 0.2.

15. The crystalline compound of any one of claims 10 to 14, having an XRD pattern substantially as shown in FIG. 2.

16. A pharmaceutical composition comprising the crystalline compound of any one of claims 1-15 and one or more pharmaceutically acceptable excipients.

17. A method for preparing a crystalline compound having the structure of formula (I):



(I);

comprising:

a) providing a mixture comprising a compound of formula (I) and a solvent; and

b) crystallizing the compound of formula (I) from the mixture comprising the compound of formula (I).

18. The method of claim 17, wherein the crystalline compound is a solvate.

19. The method of claim 18, wherein the solvate is a hydrate.

20. The method of claim 18 or 19, wherein the compound is monohydrate.

21. The method of claim 18 or 19, wherein the compound is dihydrate.

22. The method of claim 17, wherein the solvent is selected from acetonitrile, anisole, dichloromethane, ethanol, isopropyl acetate, methyl tert-butyl ether (MTBE), n-heptane, tetrahydrofuran, water, and mixtures thereof.

23. The method of claim 22, wherein the solvent is selected from acetonitrile, ethanol, methyl tert-butyl ether (MTBE), water, and mixtures thereof.

24. The method of claim 17, wherein the solvent is a mixture comprising water.

25. The method of claim 24, wherein the mixture further comprises a solvent selected from ethanol, isopropanol, methanol, tetrahydrofuran, 1,4-dioxane, acetonitrile, and acetone.

26. The method of claim 24, wherein the mixture further comprises a solvent selected from ethanol, acetonitrile, diethyl ether, tetrahydrofuran, and mixtures thereof.

27. The method of any one of claims 17-26, wherein the mixture comprising the compound of formula (I) and the solvent is a reaction mixture.

28. The method of any one of claims 17-27, wherein the mixture comprising the compound of formula (I) is a solution.

29. The method of claim 28, wherein the solution comprises a crude solid material comprising the compound of formula (I) dissolved in a solvent.

30. The method of claim 28, wherein the solution is a reaction mixture.

31. The method of any one of claims 17-30, wherein the mixture comprising the compound of formula (I) is a solution, and the step of crystallizing the compound of formula (I) from the mixture comprises bringing the solution to supersaturation, thereby causing the compound of formula (I) to precipitate out of solution.

32. The method of claim 31, wherein the step of bringing the solution to supersaturation comprises slowly adding an anti-solvent, allowing the solution to cool, reducing the volume of the solution, or any combination thereof.

33. The method of claim 31, wherein the step of bringing the solution to supersaturation comprises slowly adding an anti-solvent.

34. The method of claim 31, wherein the step of bringing the solution to supersaturation comprises cooling the solution to ambient temperature or lower.

35. The method of any one of claims 17-27, wherein the mixture comprising the compound of formula (I) is a slurry.

36. The method of claim 35, wherein the slurry comprises crude solid material comprising the compound of formula (I).

37. The method of any one of claims 29, 31-34, and 36, wherein the crude solid material comprises about 70% to about 90% compound of formula (I).

38. The method of any one of claims 17-37, further comprising isolating the crystalline compound.

39. The method of claim 38, wherein isolating the crystalline compound comprises filtering the crystallized compound from the mixture.

40. The method of claim 38 or 39, further comprising drying the crystalline compound under reduced pressure.

41. The method of any one of claims 17-40, wherein the crystalline compound is the crystalline compound of any one of claims 1.

42. The method of claim 17, wherein, prior to step a), the compound of formula (I) is in a solution and step a) comprises contacting the solution with vapour of the solvent, thereby forming the mixture of step a).

43. The method of claim 42, wherein the solution is prepared by filtering a suspension comprising compound of formula (I), thereby forming the solution.

44. The method of claim 17, wherein the solvent is selected from acetonitrile, anisole, dichloromethane, ethanol, isopropyl acetate, methyl tert-butyl ether (MTBE), n-heptane, tetrahydrofuran, water, and mixtures thereof.

45. The method of any one of claims 17-44, wherein the purity of the crystalline form of the compound of formula (I) is selected from about 90%, about 91%, about 92%, about 93%, about 94%, about 95%, about 96%, about 97%, about 98%, and about 99%.

46. A method for preparing a crystalline compound having the structure of formula (I), comprising exposing a solid form of the compound of formula (I) to vapour of a solvent and obtaining a crystalline form of the compound having the structure of formula (I).

47. The method of claim 46, wherein the solvent is selected from acetonitrile, anisole, dichloromethane, ethanol, isopropyl acetate, methyl tert-butyl ether (MTBE), n-heptane, tetrahydrofuran, water, and mixtures thereof.