CLAIMS

1. Crystalline Form C of romidepsin, comprising XRPD characteristic peaks at about 8.28 2Θ, 11.45 2Θ, 12.19 2Θ, and 21.13 2Θ.

2. Crystalline Form D of romidepsin, comprising XRPD characteristic peaks at about 7.54 2Θ, 11.86 2Θ, and 16.66 2Θ.

3. Crystalline Form E of romidepsin, comprising XRPD characteristic peaks at about 9.0 2Θ, 10.3 2Θ, 11.7 2Θ, and 20.4 2Θ.

4. Crystalline Form F of romidepsin, comprising XRPD characteristic peaks at about 10.17 2Θ, 17.8 2Θ, 19.34 2Θ, 20.04 2Θ, 20.28 2Θ, and 22.63 2Θ.

5. Crystalline Form H of romidepsin, comprising XRPD characteristic peaks at about 8.94 2Θ, 9.69 2Θ, 10.51 2Θ, 10.67 2Θ, 13.13 2Θ, and 19.43 2Θ.

6. Crystalline Form I of romidepsin, comprising XRPD characteristic peaks at about 10.63 2Θ, 17.97 2Θ, 18.74 2Θ, 19.12 2Θ, 20.96 2Θ, and 23.18 2Θ.

7. Crystalline Form J of romidepsin, comprising XRPD characteristic peaks at about 7.44 2Θ, 11.80 2Θ, 15.24 2Θ, and 16.60 2Θ.

8. Crystalline Form K of romidepsin, comprising XRPD characteristic peaks at about 7.89 2Θ, 11.25 2Θ, 16.81 2Θ, 19.40 2Θ, and 20.96 2Θ.

9. Crystalline Form L of romidepsin, comprising XRPD characteristic peaks at about 8.26 2Θ, 10.05 2Θ, 11.59 2Θ, 12.31 2Θ, and 21.46 2Θ.

10. Crystalline Form N of romidepsin, comprising XRPD characteristic peaks at about 7.07 2Θ, 8.92 2Θ, 9.76 2Θ, 10.75 2Θ, 11.22 2Θ, 15.46 2Θ, 20.37 2Θ, and 21.31 2Θ.

~~11. A process for producing a lyophilized romidepsin/povidone formulation, comprosing a step of final drying, wherein the final drying temperature is from about 50 °C to about 70 °C and wherein the final drying time is from about 12 to 36 hours.~~

~~12. The process of claim 11, wherein the romidepsin/povidone ratio is 1 : 2.~~

~~13. The process of claim 11, wherein the romidepsin/povidone ratio is 1 : 1.~~

~~14. The process of claim 12 or 13, wherein the final drying temperature is 50 °C and the final drying time is 24 hours.~~

~~15. The process of claim 12 or 13, wherein the final drying temperature is 60 °C and the final drying time is 24 hours.~~

~~16. The process of claim 12 or 13, wherein the final drying temperature is 50 °C and the final drying time is 36 hours.~~

~~17. The process of claim 12 or 13, wherein the final drying temperature is 60 °C and the final drying time is 36 hours.~~

~~18. A process for producing a lyophilized romidepsin/povidone formulation, comprising a final drying step,~~

~~wherein the romidepsin/povidone ratio is 1 : 2;~~

~~wherein the final drying temperature is 50 °C;~~

~~wherein the final drying time is 36 hours; and~~

~~wherein the final drying pressure is 666.1 Pa (50 Torr).~~

~~19. A process for producing a lyophilized romidepsin/povidone formulation, comprising a final drying step,~~

~~wherein the romidepsin/povidone ratio is 1 : 1;~~

~~wherein the final drying temperature is 50 °C;~~

~~wherein the final drying time is 36 hours; and~~

~~wherein the final drying pressure is 666.1 Pa (50 Torr).~~

~~20. A process for producing a lyophilized romidepsin/povidone formulation, comprising a final drying step,~~

~~wherein the romidepsin/povidone ratio is 1 : 2;~~

~~wherein the final drying temperature is 60 °C;~~

~~wherein the final drying time is 36 hours; and~~

~~wherein the final drying pressure is 13332.2 Pa (100 Torr).~~

~~21. A process for producing a lyophilized romidepsin/povidone formulation, comprising a final drying step,~~

~~wherein the romidepsin/povidone ratio is 1 : 1;~~

~~wherein the final drying temperature is 60 °C;~~

~~wherein the final drying time is 36 hours; and~~

~~wherein the final drying pressure is 13332.2 Pa (100 Torr).~~

11. A pharmaceutical composition comprising the crystalline form C of romidepsin of claim 1 and a pharmaceutically acceptable excipient.

12. A pharmaceutical composition comprising the crystalline form D of romidepsin of claim 2 and a pharmaceutically acceptable excipient.

13. A pharmaceutical composition comprising the crystalline form E of romidepsin of claim 3 and a pharmaceutically acceptable excipient.

14. A pharmaceutical composition comprising the crystalline form F of romidepsin of claim 4 and a pharmaceutically acceptable excipient.

15. A pharmaceutical composition comprising the crystalline form H of romidepsin of claim 5 and a pharmaceutically acceptable excipient.

16. A pharmaceutical composition comprising the crystalline form I of romidepsin of claim 6 and a pharmaceutically acceptable excipient.

17. A pharmaceutical composition comprising the crystalline form J of romidepsin of claim 7 and a pharmaceutically acceptable excipient.

18. A pharmaceutical composition comprising the crystalline form K of romidepsin of claim 8 and a pharmaceutically acceptable excipient.

19. A pharmaceutical composition comprising the crystalline form L of romidepsin of claim 9 and a pharmaceutically acceptable excipient.

20. A pharmaceutical composition comprising the crystalline form N of romidepsin of claim 10 and a pharmaceutically acceptable excipient.

21. Amorphous romidepsin.

22. The amorphous romidepsin of claim 21, wherein the amorphous romidepin is obtained from a water/dichloromethane mixture.

23. The amorphous romidepsin of claim 21, wherein the amorphous romidepin is obtained from an isopropanol-trifluoroethanol/methanol mixture.

24. The amorphous romidepsin of claim 22 or 23, wherein the amorphous romidepin exhibits a glass transition temperature of -91°C.

25. The amorphous romidepsin of claim 22 or 23, wherein a thermogravimetric analysis (TGA) thermogram exhibits a weight loss of 3.5%.

26. A composition comprising amorphous romidepsin and an excipient, wherein the excipient is selected from the group consisting of a cellulose derivative, gum, dextran, acacia, vinyllactam, cyclodextrin, gelatin, hypromellose phthalate, sugar, sugar alcohol, polyhydric alcohol, polyethylene glycol (PEG) polymer, polyethylene oxide, polyethylene derivative, polyvinyl alcohol, propylene glycol derivative, sodium lauryl sulfate (SLS), Tween, methacrylic acid co-polymer, and an amino acid.

27. The composition of claim 26, wherein the excipient is a cellulose derivative.

28. The composition of claim 27, wherein the cellulose derivative is hydroxypropylmethyl cellulose (HPMC) polymer, hydroxypropyl cellulose, ethyl cellulose, hydroxyethyl cellulose, sodium carboxymethyl cellulose, calcium carboxymethyl cellulose, or sodium carboxymethyl cellulose.

29. The composition of claim 28, wherein the cellulose derivative is HPMC polymer.