What is Claimed is:

1. A crystalline compound or cocrystal comprising fasoracetam and 4-aminobenzoic acid, wherein the cocrystal has an onset melting temperature of about 114 ℃.

2. A crystalline compound or cocrystal comprising fasoracetam and trimesic acid, wherein the cocrystal has an onset melting temperature of about 96 ℃.

3. A crystalline compound or cocrystal comprising fasoracetam and R-ibuprofen, wherein the cocrystal has an onset melting temperature of about 115 ℃.

4. A crystalline compound or cocrystal comprising fasoracetam and ethyl gallate, wherein the stoichiometric ratio of fasoracetam to ethyl gallate is about 1:1, and the cocrystal has an onset melting temperature of about 112 ℃.

5. A crystalline compound or cocrystal comprising fasoracetam and 6-hydroxy-2-napthoic acid, wherein the cocrystal has an onset melting temperature of about 120 ℃.

6. A crystalline compound or cocrystal comprising fasoracetam and 4-nitrobenzoic acid, wherein the cocrystal has an onset melting temperature of about 146 ℃.

7. A crystalline compound or cocrystal comprising fasoracetam and 2-indole-3-acetic acid, wherein the cocrystal has an onset melting temperature of about 69 ℃.

8. A crystalline compound or cocrystal comprising fasoracetam and urea, wherein the cocrystal has an onset melting temperature of about 91 ℃, and wherein the cocrystal has an x-ray powder diffraction pattern comprising a peak at about 12.2°θ or about 16.1°2θ, and one or more peaks chosen from peaks at about 10.4°2θ, about 10.8°2θ, about 12.2°2θ, about 14.1°2θ, about 18.9°2θ, about 22.3°2θ, and about 22.9°2θ.

9. The crystalline compound or cocrystal of claim 1, wherein the cocrystal has an x-ray diffraction powder diffraction comprising one or more peaks chosen from peaks at about 6.5°2θ, about 10.5°2θ, about 11.3°2θ, and about 12.0°2θ.

10. The crystalline compound or cocrystal of claim 2, wherein the cocrystal has an x-ray powder diffraction pattern comprising one or more peaks chosen from peaks at about 9.7°2θ, about 10.9°2θ, about 11.4°2θ, about 14.6°2θ, about 16.5°2θ, about 17.5°2θ, about 18.6°2θ, about 19.4°2θ, about 19.8°2θ, about 21.8°2θ, about 23.5°2θ, about 26.7°2θ, and about 27.3°2θ.

11. The crystalline compound or cocrystal of claim 3, wherein the cocrystal has an x-ray powder diffraction pattern comprising one or more peaks chosen from peaks at about 5.6°2θ, about 10.5°2θ, about 11.2°2θ, about 12.3°2θ, about 17.4°2θ, about 20.1°2θ, and about 20.6°2θ.

12. A crystalline compound or cocrystal comprising fasoracetam and ethyl gallate, wherein the stoichiometric ratio of fasoracetam to ethyl gallate is about 1:2, and the cocrystal has an onset melting temperature of about 106 ℃.

13. The crystalline compound or cocrystal of claim 4, wherein the cocrystal has an x-ray powder diffraction pattern comprising one or more peaks chosen from peaks at about 5.8°2θ, about 11.3°2θ, about 12.4°2θ, about 15.5°2θ, about 15.8°2θ, about 18.2°2θ, about 19.4°2θ, about 22.0°2θ, and about 24.8°2θ.

14. The crystalline compound or cocrystal of claim 12, wherein the cocrystal has an x-ray powder diffraction pattern comprising one or more peaks chosen from peaks at about 5.8°2θ, about 7.2°2θ, about 14.8°2θ, about 20.4°2θ, about 21.9°2θ, and about 23.5°2θ.

15. The crystalline compound or cocrystal of claim 5, wherein the cocrystal has an x-ray powder diffraction pattern comprising one or more peaks chosen from peaks at about 11.2°2θ, about 14.9°2θ, about 15.7°2θ, about 20.1°2θ, about 21.1°2θ, about 23.6°2θ, about 24.1°2θ, about 25.0°2θ, and about 25.5°2θ.

16. The crystalline compound or cocrystal of claim 6, wherein the cocrystal has an x-ray powder diffraction pattern comprising one or more peaks chosen from peaks at about 6.5°2θ, about 6.7°2θ, about 8.9°2θ, about 14.5°2θ, about 15.6°2θ, about 17.9°2θ, about 18.6°2θ, about 19.8°2θ, about 23.4°2θ, and about 26.4°2θ.

17. The crystalline compound or cocrystal of claim 7, wherein the cocrystal has an x-ray powder diffraction pattern comprising one or more peaks chosen from peaks at about 5.3°2θ, about 7.9°2θ, about 10.7°2θ, about 11.8°2θ, about 14.7°2θ, about 15.8°2θ, about 18.0°2θ, about 21.9°2θ, about 23.1°2θ, and about 23.5°2θ.

18. The crystalline compound or cocrystal of claim 8, wherein the cocrystal has an x-ray powder diffraction pattern comprising a peak at about 12.2°θ or about 16.1°2θ, and one or more peaks chosen from peaks at about 10.4°2θ, about 10.8°2θ, about 12.2°2θ, about 14.1°2θ, about 18.9°2θ, about 22.3°2θ, and about 22.9°2θ.

19. A crystalline compound or cocrystal comprising fasoracetam and urea, wherein the cocrystal has an onset melting temperature of about 102 ℃, and wherein the cocrystal has an x-ray powder diffraction pattern comprising a peak at about 11.4°2θ and one or more peaks chosen from the peaks at about 10.4°2θ, about 14.0°2θ, about 14.5°2θ, about 14.9°2θ, about 17.5°2θ, about 18.4°2θ, about 18.7°2θ, about 19.4°2θ, about 20.1°2θ, and about 21.1°2θ.

20. A pharmaceutical composition comprising a crystalline compound or a cocrystal of any one of claims 1-19, and one or more pharmaceutically acceptable excipients.

21. A process for preparing the fasoracetam:urea cocrystal of claim 19 comprising:

combining fasoracetam in a suitable solvent with urea to form a solution wherein the molar amount of urea to fasoracetam ranges from 0.7 to 1.2;

cooling the solution to form cocrystals of the fasoracetam:urea cocrystal,

wherein the fasoracetam is selected from the group consisting of fasoracetam Form I, fasoracetam Form II, the amorphous form of fasoracetam, anhydrate fasoracetam, and the Forms Mixture of fasoracetam.