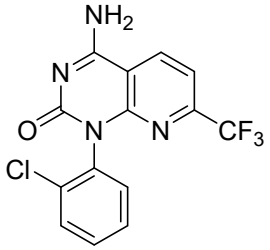
CLAIMS

1. A crystalline form of a compound having Formula (I):



(I),

which is characterized by an X-ray powder diffraction (XRPD) pattern comprising peaks at 6.1, 11.1, and 16.6 degrees 2θ (± 0.2 degrees 2θ).

2. The crystalline form of claim **1**, which is characterized by an XRPD pattern comprising peaks at 6.1, 6.6, 11.1, 12.1, and 16.6 degrees 2θ (± 0.2 degrees 2θ).

3. The crystalline form of claim **1**, which is characterized by an XRPD pattern comprising peaks at 6.1, 6.6, 10.0, 11.1, 12.1, and 16.6 degrees 2θ (± 0.2 degrees 2θ).

4. The crystalline form of claim **1**, which is characterized by an XRPD pattern comprising peaks at 6.1, 6.6, 11.1, 12.1, 15.6, and 16.6 degrees 2θ (± 0.2 degrees 2θ).

5. The crystalline form of claim **1**, which is characterized by an XRPD pattern comprising peaks at 6.1, 6.6, 10.0, 11.1, 12.1, 15.6, and 16.6 degrees 2θ (± 0.2 degrees 2θ).

6. The crystalline form of claim **1**, which is characterized by an XRPD pattern comprising peaks at 6.1, 6.6, 10.0, 11.1, 12.1, 16.6, 18.5, 20.8, 25.3, and 25.7 degrees 2θ (± 0.2 degrees 2θ).

7. The crystalline form of claim **1**, which is characterized by an XRPD pattern comprising peaks at 6.1, 6.6, 7.1, 10.0, 11.1, and 16.6 degrees 2θ (± 0.2 degrees 2θ).

8. The crystalline form of claim **1**, which is characterized by an XRPD pattern comprising peaks at 6.1, 6.6, 7.1, 10.0, 11.1, 12.1, and 16.6 degrees 2θ (± 0.2 degrees 2θ).

9. The crystalline form of claim **1**, which is characterized by an XRPD pattern comprising peaks at 6.1, 6.6, 7.1, 10.0, 11.1, 12.1, 16.6, and 27.7 degrees 2θ (± 0.2 degrees 2θ).

10. The crystalline form of claim **1**, which is characterized by an XRPD pattern comprising peaks at 6.1, 6.6, 7.1, 8.3, 10.0, 11.1, 12.1, 16.6, and 27.7 degrees 2θ (± 0.2 degrees 2θ).

11. The crystalline form of claim **1**, characterized by an XRPD pattern substantially in accordance with **FIG. 6**.

12. The crystalline form of any one of claims **1** to **11**, further characterized by a differential scanning calorimetry (DSC) thermogram comprising an endothermic peak at about 323.5°C,

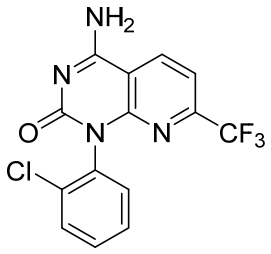
optionally wherein the DSC thermogram is substantially in accordance with **FIG. 7**.

13. The crystalline form of any one of claims **1** to **12**, further characterized by:

a weight percent loss of about 1.0% upon heating to about 220°C, as measured by a thermal gravimetric analysis (TGA), and/or

a thermal gravimetric analysis (TGA) thermogram substantially in accordance with **FIG. 8**.

14. A solid state form of a compound having Formula (I):



(I).

or a pharmaceutically acceptable salt thereof, wherein

the solid state form comprises at least 50 wt.%, at least 60 wt.%, at least 70 wt.%, at least 80 wt.%, at least 90 wt.%, at least 95 wt.%, or at least 99 wt.% of a particular crystalline form, wherein

the particular crystalline form is according to any one of claims **1** to **13**.

15. A pharmaceutical composition comprising a crystalline form of any one of claims **1** to **13**, or the solid state form of claim **14**, and at least one pharmaceutically acceptable excipient.

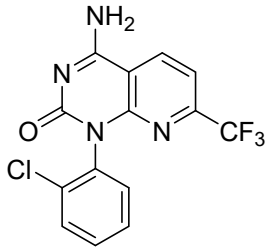
16. Use of a crystalline form of any one of claims **1** to **13**, a solid state form of claim **14**, or a pharmaceutical composition of claim **15** in the manufacture of a medicament for treating a disease treatable by inhibition of MAT2A, wherein the disease is cancer.

17. Use of a crystalline form of any one of claims **1** to **13**, a solid state form of claim **14**, or a pharmaceutical composition of claim **15** in the manufacture of a medicament for treating a MTAP null cancer.

18. Use of a crystalline form of any one of claims **1** to **13**, a solid state form of claim **14**, or a pharmaceutical composition of claim **15** in the manufacture of a medicament for treating a cancer, wherein the cancer is characterized by a reduction or absence of MTAP gene expression, the absence of the MTAP gene, reduced level of MTAP protein, reduced function of MTAP protein, absence of MTAP protein, or a combination thereof.

19. The use of any one of claims **16** to **18**, wherein the cancer is leukemia, glioma, melanoma, pancreatic, non-small cell lung cancer, bladder cancer, astrocytoma, osteosarcoma, head and neck cancer, myxoid chondrosarcoma, ovarian cancer, endometrial cancer, breast cancer, soft tissue sarcoma, gallbladder carcinoma, non-Hodgkin lymphoma, esophagogastric cancer, gastrointestinal (GI) cancer, urothelial cancer, gastric cancer, esophageal cancer, or mesothelioma.

20. A method for preparing the crystalline form of any one of claims **1** to **13** of a compound having Formula (I):



(I),

comprising:

a) forming a first mixture comprising a crude compound of Formula (I), ACN, and water;

b) solvent exchanging with water at a temperature of no more than about 65°C to form a second mixture;

c) cooling the second mixture and stirring to form a third precipitate;

d) isolating the third precipitate;

e) forming a slurry comprising the third precipitate, methyl ethyl ketone (MEK), and water;

f) isolating a fourth precipitate from step e);

g) drying the fourth precipitate to provide the crystalline form of the compound of Formula (I).