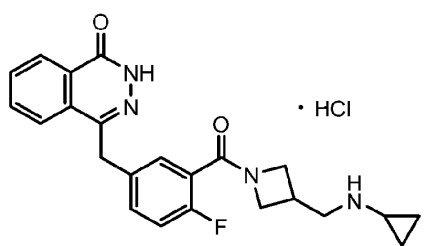


Claims

1. A crystalline form of a compound of Formula 1, characterized in exhibiting an X-ray powder diffraction (XRPD) pattern comprising peaks at $2\theta \pm 0.2^\circ$ values of 13.7° , 15.9° , and 24.1° :

[Formula 1]



2. The crystalline form of claim 1, wherein the XRPD pattern comprises peaks at three or more $2\theta \pm 0.2^\circ$ values selected from the group consisting of 9.1° , 11.9° , 13.2° , 13.7° , 15.9° , 16.8° , 18.1° , 23.2° , 24.1° , 25.5° , and 26.6° .

3. The crystalline form of claim 1, wherein the XRPD pattern comprises peaks at $2\theta \pm 0.2^\circ$ values of 9.1° , 13.2° , 13.7° , 15.9° , 16.8° , 24.1° , and 26.6° .

4. The crystalline form of claim 1, wherein the XRPD pattern comprises peaks at $2\theta \pm 0.2^\circ$ values of 9.1° , 11.9° , 13.2° , 13.7° , 15.9° , 16.8° , 18.1° , 23.2° , 24.1° , 25.5° , and 26.6° .

5. The crystalline form of claim 1, wherein each 2θ value of the peaks has the angle variation $\pm 0.1^\circ$.

6. The crystalline form of claim 1, having a DSC exothermic peak at a temperature of $222 \pm 4^\circ\text{C}$.

7. The crystalline form of claim 1, wherein the crystalline form has, in a

thermogravimetric analysis (TGA), a weight loss of 4% or less up to 100°C, and decomposes at or above 200°C.

8. The crystalline form of claim 1, wherein the crystalline form is substantially
5 pure.

9. The crystalline form of claim 1, wherein the crystalline form is at least 95%
pure.

10. A pharmaceutical composition comprising the crystalline form according
10 to any one of claims 1 to 9 as an active ingredient and at least one pharmaceutically
acceptable carrier or diluent.

11. The pharmaceutical composition of claim 10, wherein the crystalline form
15 makes up 80% or more of a total amount of the compound of Formula 1 in the
pharmaceutical composition.

12. The pharmaceutical composition of claim 10, wherein the pharmaceutical
composition is for the treatment of cancer.

20 13. The pharmaceutical composition of claim 12, wherein the cancer is caused
by a genetic defect in the BRCA1 or BRCA2 genes.

14. The pharmaceutical composition of claim 12, wherein the cancer is
25 selected from the group consisting of breast cancer, ovarian cancer, pancreatic cancer,
gastric cancer, lung cancer, colon cancer, brain tumor, prostate cancer, and Ewing's
sarcoma.

15. A method of preparing the crystalline form according to any one of claims
30 1 to 9, the method comprising steps of:

dissolving 4-[3-(3-[(cyclopropylamino)methyl]azetidine-1-carbonyl)-4-

fluorobenzyl]phthalazin-1(2*H*)-one in one or more solvents selected from a group consisting of a C₁-C₃ alcohol, acetone, ethyl acetate, and methyl t-butyl ether; and adding a hydrochloric acid solution.

5 16. A method of preparing the crystalline form according to any one of claims 1 to 9, the method comprising steps of:

 dissolving 4-[3-(3-[(cyclopropylamino)methyl]azetidine-1-carbonyl)-4-fluorobenzyl]phthalazin-1(2*H*)-one in one or more solvents selected from a group consisting of a C₁-C₃ alcohol, acetone, ethyl acetate, and methyl t-butyl ether to obtain a
10 mixture;

 cooling the mixture;

 adding a hydrochloric acid solution;

 raising the temperature to about room temperature, cooling, and stirring to obtain a solid; and

15 filtering, washing, and drying the solid.

 17. A method of preparing the crystalline form according to any one of claims 1 to 9, the method comprising steps of:

 dissolving 4-[3-(3-[(cyclopropylamino)methyl]azetidine-1-carbonyl)-4-fluorobenzyl]phthalazin-1(2*H*)-one in one or more solvents selected from a group consisting of a C₁-C₃ alcohol, acetone, ethyl acetate, and methyl t-butyl ether to obtain a
20 mixture;

 cooling the mixture formed to about 0°C;

 adding, to the mixture, an aqueous hydrochloric acid solution, or a mixture of a
25 hydrochloric acid solution and one or more solvents selected from a group consisting of a C₁-C₃ alcohol, acetone, ethyl acetate, and methyl t-butyl ether;

 raising the temperature to about room temperature;

 stirring the mixture for about 10 to about 14 hours;

 cooling the mixture to about 10 to about 20°C;

30 stirring the cooled mixture for about 20 to about 60 minutes to obtain a solid; and
 filtering, washing, and drying the solid.

18. A method of preparing the crystalline form according to any one of claims 15-17, wherein the hydrochloric acid solution is added as a solution in water, alkyl acetate, alkyl ether, or alkyl alcohol.

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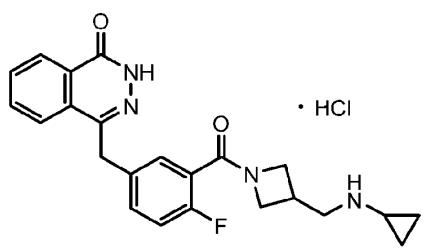
19. A method of preparing the crystalline form according to claim 18, wherein the hydrochloric acid solution is added as a solution in water, ethyl acetate, diethyl ether, isopropyl alcohol, or ethyl alcohol.

20. A method of preparing the crystalline form according to any one of claims 15-19, wherein the method does not comprise a concentration step.

21. A crystalline form of the compound of Formula 1 prepared by the method according to any one of claims 15-19:

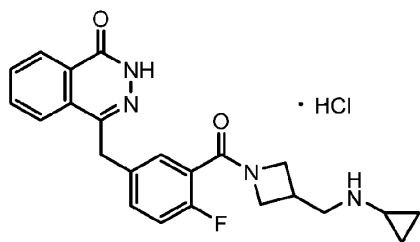
15

[Formula 1]



22. A compound of Formula 1:

[Formula 1]



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prepared by a process that does not include a concentration step.