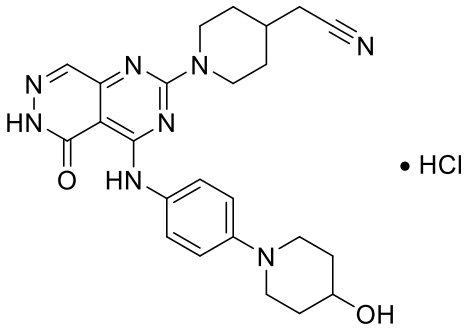
CLAIMS

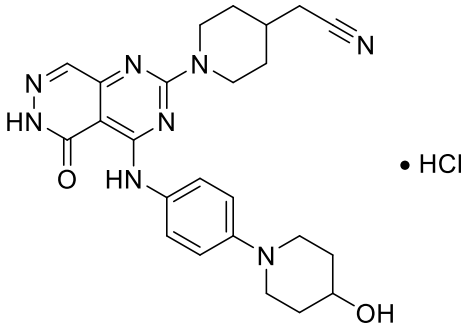
1. A crystalline solid form of Compound 1:



Compound 1,

wherein the crystalline solid form is an anhydrate and is characterized by one or more peaks in its X-ray powder diffraction pattern selected from 6.4, 12.8, 15.6, 17.8, 18.1, 19.3, 20.7, 22.9, 25.1, 25.8, 26.5, 27.6, 30.0, and 39.2 ± 0.2 degrees 2-theta.

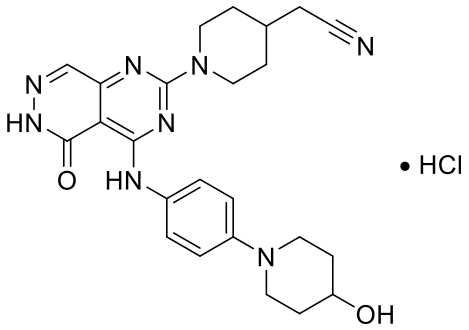
2. A crystalline solid form of Compound 1:



Compound 1,

wherein the crystalline solid form is a hydrate and is characterized by one or more peaks in its X-ray powder diffraction pattern selected from 5.9, 9.5, 13.8, 16.1, and 23.8 ± 0.2 degrees 2-theta.

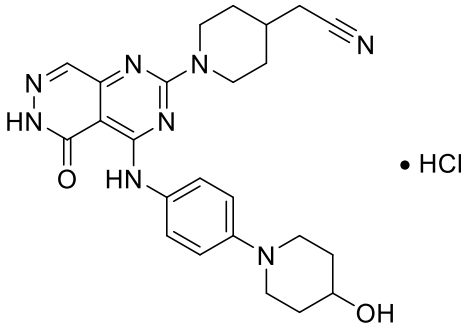
3. A crystalline solid form of Compound 1:



Compound 1,

wherein the crystalline solid form is a hydrate and is characterized by an X-ray powder diffraction pattern substantially similar to FIG. 4A (second spectrum from top).

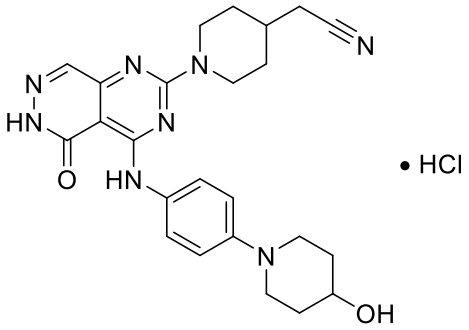
4. A crystalline solid form of Compound 1:



Compound 1,

wherein the crystalline solid form is a hydrate and is characterized by an X-ray powder diffraction pattern substantially similar to FIG. 5A (top spectrum).

5. A crystalline solid form of Compound 1:



Compound 1,

wherein the crystalline solid form is a DMF solvate and is characterized by an X-ray powder diffraction pattern substantially similar to FIG. 6A (second spectrum from top).

6. A crystalline solid form of a compound that is 2-(1-(4-((4-(4-hydroxypiperidin-1-yl)phenyl)amino)-5-oxo-5,6-dihydropyrimido[4,5-d]pyridazin-2-yl)piperidin-4-yl)acetonitrile.

7. A pharmaceutical formulation comprising the crystalline solid form of any one of claims 1-6, and one or more pharmaceutically acceptable excipients.

8. The pharmaceutical formulation of claim 7, wherein the pharmaceutical formulation comprises:

about 10-30% by weight of the crystalline solid form of Compound 1, calculated by free base weight;

about 1-10% by weight of a disintegrant;

about 1-10% by weight of a binder; and

about 0.05-0.5% by weight of an antioxidant.

9. The pharmaceutical formulation of claim 8, wherein the pharmaceutical formulation comprises about 20 mg to about 120 mg of the crystalline solid form of Compound 1, calculated by free base weight.

10. The pharmaceutical formulation of claim 9, wherein the pharmaceutical formulation comprises about 40 mg to about 80 mg of the crystalline solid form of Compound 1, calculated by free base weight.

11. The pharmaceutical formulation of any one of claims 7-10, wherein the pharmaceutical formulation is a unit dosage form.

12. The pharmaceutical formulation of claim 11, wherein the unit dosage form is in the form of a tablet.

13. Use of the crystalline form of any one of claims 1-6 or the pharmaceutical formulation of any one of claims 7-12 in the manufacture of a medicament for treating a disease, disorder, or condition, in a subject in need thereof.

14. The use of claim 13, wherein the disease, disorder, or condition is selected from atopic dermatitis, alopecia areata, hand and foot eczema, chronic hand eczema, hidradenitis suppurativa, pemphigus vulgaris, psoriasis, cutaneous lupus, vitiligo, inflammatory bowel disease, rheumatoid arthritis, asthma, allergic rhinitis, systemic lupus erythematosus, psoriatic arthritis, multiple sclerosis, acute myeloid leukemia, graft versus host disease, myelofibrosis, warm hemolytic anemia, idiopathic thrombocytopenic purpura, immunoglobulin A nephropathy, scleroderma, idiopathic pulmonary fibrosis, uveitis, eosinophilic esophagitis and lupus nephritis.