

CLAIMS

1. Crystalline solid salts of N-{4-[(6,7-dimethoxyquinolin-4-yl)oxy]phenyl}-N'-(4-fluorophenyl) cyclopropane-1,1-dicarboxamide (Compound 1), wherein the salts are selected from the group consisting of:
N-{4-[(6,7-dimethoxyquinolin-4-yl)oxy]phenyl}-N'-(4-fluorophenyl) cyclopropane-1,1-dicarboxamide (Compound 1) • pyruvate;
N-{4-[(6,7-dimethoxyquinolin-4-yl)oxy]phenyl}-N'-(4-fluorophenyl) cyclopropane-1,1-dicarboxamide (Compound 1) • glutarate; and
N-{4-[(6,7-dimethoxyquinolin-4-yl)oxy]phenyl}-N'-(4-fluorophenyl) cyclopropane-1,1-dicarboxamide (Compound 1) • isethionate monohydrate.
2. Crystalline solid N-{4-[(6,7-dimethoxyquinolin-4-yl)oxy]phenyl}-N'-(4-fluorophenyl) cyclopropane-1,1-dicarboxamide (Compound 1) • pyruvate of claim 1, characterized as Form 14, wherein the crystalline solid comprises Compound 1 and pyruvate in a 1:1 molar ratio.
3. Crystalline solid Compound 1 • pyruvate, characterized as Form 14, according to claim 2, wherein the Form 14 is characterized by one or more peaks in an XRPD pattern selected from the group consisting of 7.84, 8.81, 11.58, 15.67, 16.30, 16.55, 17.67, 17.92, 18.00, 18.20, 18.62, 19.66, 20.54, 20.75, 23.84, 26.35, and 26.42 degrees on a 2-theta scale.
4. Crystalline solid Compound 1 • pyruvate, characterized as Form 14, according to claim 2 or claim 3, wherein the Form 14 is characterized by the peaks at 8.81, 11.58, 17.67, 18.00, 23.84, and 26.35 degrees on a 2-theta scale in an X-ray powder diffraction spectrum.
5. Crystalline solid Compound 1 • pyruvate, characterized as Form 14, according to any one of claims 2-4, wherein the Form 14 is characterized by an XRPD pattern according to FIG. 5.
6. Crystalline solid Compound 1 • pyruvate, characterized as Form 14, according to claim 2, wherein the Form 14 is characterized by a thermal event with peak temperature at about 183 °C in a differential scanning calorimetry (DSC) thermogram recorded at 10 °C/min.

7. Crystalline solid Compound 1 • pyruvate, characterized as Form 14, according to claim 2, wherein the Form 14 is characterized by a broad endotherm at an onset temperature of about 157 °C, with an associated weight loss of about 11.4% as measured by thermogravimetric differential Thermal analysis (TG/DTA).
8. Crystalline solid Compound 1 • pyruvate, characterized as Form 14, according to claim 2, wherein the Form 14 is characterized by a total weight gain between 0% relative humidity and 80% relative humidity of about 0.10% w/w, as measured by dynamic vapor sorption (DVS).
9. Crystalline solid N-{4-[(6,7-dimethoxyquinolin-4-yl)oxy]phenyl}-N'-(4-fluorophenyl) cyclopropane-1,1-dicarboxamide (Compound 1) • glutarate of claim 1, characterized as Form 20, wherein the crystalline solid comprises Compound 1 and glutarate in a 1:1 molar ratio.
10. Crystalline solid Compound 1 • glutarate, characterized as Form 20, according to claim 9, wherein the Form 20 is characterized by one or more peaks in an X-ray powder diffraction spectrum selected from the group consisting of 8.06, 11.77, 19.97, 20.21, 22.27, 23.11, 23.17, 25.81, 25.87, 26.00, and 26.06 degrees on a 2-theta scale.
11. Crystalline solid Compound 1 • glutarate, characterized as Form 20, according to claim 9 or claim 10, wherein the Form 20 is characterized by the peaks at 8.06, 11.77, 20.21, 22.27, 23.11, 25.81, 25.87, and 26.00 degrees on a 2-theta scale in an X-ray powder diffraction spectrum.
12. Crystalline solid Compound 1 • glutarate, characterized as Form 20, according to any one of claims 9-11, wherein the Form 20 is characterized by an XRPD pattern according to FIG. 7.
13. Crystalline solid Compound 1 • glutarate, characterized as Form 20, according to claim 9, wherein the Form 20 is characterized by a thermal event with peak temperature at about 176 °C in a differential scanning calorimetry (DSC) thermogram recorded at 10 °C/min

14. Crystalline solid Compound 1 • glutarate, characterized as Form 20, according to claim 9, wherein the Form 20 is characterized by an endotherm at an onset temperature of about 175 °C, with an associated weight loss of about 0.5% as measured by thermogravimetric differential Thermal analysis (TG/DTA).
15. Crystalline solid Compound 1 • glutarate, characterized as Form 20, according to claim 9, wherein the Form 20 is characterized by a total weight gain between 0% relative humidity and 80% relative humidity of about 0.08% w/w, as measured by dynamic vapor sorption (DVS).
16. Crystalline solid N-{4-[(6,7-dimethoxyquinolin-4-yl)oxy]phenyl}-N'-(4-fluorophenyl) cyclopropane-1,1-dicarboxamide (Compound 1) • isethionate monohydrate of claim 1, characterized as Form 27, wherein the crystalline solid comprises Compound 1 and isethionate in a 1:1 molar ratio.
17. Crystalline solid Compound 1 • isethionate monohydrate, characterized as Form 27, according to claim 16, wherein the Form 27 is characterized by one or more peaks in an X-ray powder diffraction spectrum selected from the group consisting of 6.56, 12.39, 12.59, 13.14, 16.57, 17.55, 21.68, 23.66, 24.33, 26.09, 26.53, 26.69, and 27.40 degrees on a 2-theta scale.
18. Crystalline solid Compound 1 • isethionate monohydrate, characterized as Form 27, according to claim 16 or claim 17, wherein the Form 27 is characterized by the peaks at 12.39, 12.59, 17.55, 21.68, 23.66, 24.33, and 26.09 degrees on a 2-theta scale in an X-ray powder diffraction spectrum.
19. Crystalline solid Compound 1 • isethionate monohydrate, characterized as Form 27, according to any one of claims 16-18, wherein the Form 27 is characterized by an XRPD pattern according to FIG. 9.
20. Crystalline solid Compound 1 • isethionate monohydrate, characterized as Form 27, according to claim 16, wherein the Form 27 is characterized by a first thermal event with a peak temperature at about 80 °C and a second thermal event with a peak temperature at about

203 °C in a differential scanning calorimetry (DSC) thermogram recorded at 10 °C/min.

21. Crystalline solid Compound 1 • isethionate monohydrate, characterized as Form 27, according to claim 16, wherein the Form 27 is characterized by a first endotherm at an onset temperature of about 49 °C, with an associated weight loss of about 3%, and a second endotherm at an onset temperature of about 196 °C, with no associated weight loss as measured by thermogravimetric differential Thermal analysis (TG/DTA).

22. Crystalline solid Compound 1 • isethionate monohydrate, characterized as Form 27, according to claim 16, wherein the Form 27 is characterized by a total weight gain between 20% relative humidity and 80% relative humidity of about 2.4% w/w, as measured by dynamic vapor sorption (DVS).

23. A pharmaceutical composition comprising a therapeutically effective amount of a substantially pure crystalline solid form of a salt of Compound 1 as recited by any one of claims 1-22 and a pharmaceutically acceptable carrier.

24. A pharmaceutical composition comprising a therapeutically effective amount of a mixture of crystalline solid forms of a salt of Compound 1 as recited by any one of claims 1-22 and a pharmaceutically acceptable carrier.

25. A method of treating cancer comprising administering to a subject a therapeutically effective amount of a crystalline solid form of a salt of Compound 1 as recited by any one of claims 1-22.

26. A method of treating cancer comprising administering to a subject a pharmaceutical composition as recited by any one of claims 23-24.

27. The method of any one of claims 25-26, wherein the cancer is selected from thyroid cancer, stomach cancer, esophageal carcinoma, kidney cancer, liver cancer, ovarian carcinoma, cervical carcinoma, bladder cancer, large bowel cancer, small bowel cancer, brain cancer, lung cancer, bone cancer, prostate carcinoma, pancreatic carcinoma, skin cancer, bone cancer, lymphoma, solid tumors, Hodgkin's disease, or non-Hodgkin's lymphoma.

28. The method of claim 27, wherein the thyroid cancer is medullary thyroid cancer.
29. The method of claim 27, wherein the kidney cancer is renal cell carcinoma.
30. The method of claim 27, wherein the liver cancer is hepatocellular carcinoma.
31. The method of claim 27, wherein the brain cancer is an astrocytic tumor.
32. The method of claim 31, wherein the astrocytic tumor is selected from a glioblastoma, a giant cell glioblastoma, and a gliosarcoma.
33. The method of claim 32, wherein the glioblastoma possesses oligodendroglial components.
34. The method of claim 27, wherein the lung cancer is non-small cell lung cancer.
35. The method of claim 27, wherein the prostate carcinoma is castration resistant prostate cancer.
36. A method of treating diseases or disorders associated with uncontrolled, abnormal, and/or unwanted cellular activities due to cMET or RET overexpression, comprising administering to a subject in need of such treatment a therapeutically effective amount of at least one solid form of Compound 1 as recited by any one of claims 1-22.
37. A method of treating diseases or disorders associated with uncontrolled, abnormal, and/or unwanted cellular activities due to cMET or RET overexpression, comprising administering to a subject in need of such treatment a therapeutically effective amount of a pharmaceutical composition as recited by any one of claims 1-22.