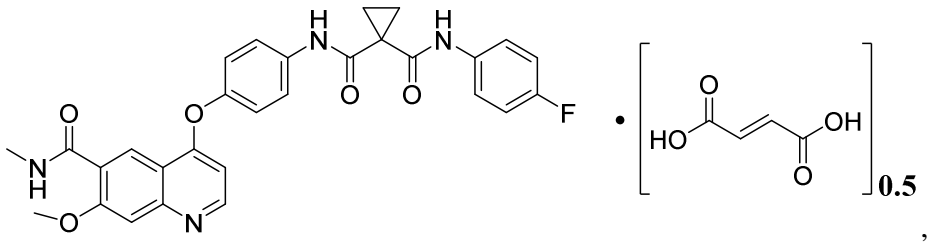
CLAIMS

1. A crystalline fumaric acid salt of Compound 1 having the structure



,

Compound 1 Hemifumarate

or hydrate or solvate thereof, wherein the crystalline fumaric acid salt comprises Compound 1•0.5 Fumaric acid, characterized as Compound 1 hemifumarate Form B, wherein Compound 1 hemifumarate Form B is characterized by one or more peaks in an XRPD pattern on a 2 Theta scale, ± 0.2, wherein the one or more peaks is selected from 7.55, 9.08, 10.81, 13.24, 15.89, 16.95, 17.14, 17.29, 17.44, 18.24, 19.16, 19.91, 20.19, 20.42, 20.70, 21.16, 21.74, 22.29, 22.48, 22.75, 23.82, 24.37, 26.34, 27.05, and 27.88.

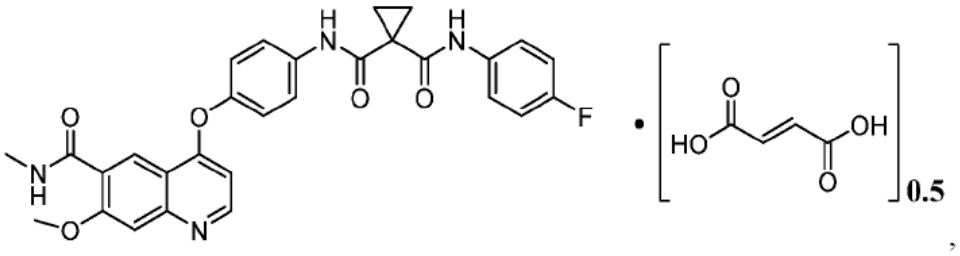
2. The crystalline fumaric acid salt of claim 1, wherein the one or more peaks is selected from 9.08, 10.81, 16.95, 17.44, 22.29, 22.48, 23.82, 24.37, 26.34, and 27.05.

3. Compound 1 Hemifumarate Form B according to claim 1, wherein Compound 1 hemifumarate Form B is characterized by three or more peaks in an XRPD pattern on a 2 Theta scale, ± 0.2, wherein the three or more peaks are selected from 7.55, 9.08, 10.81, 13.24, 15.89, 16.95, 17.14, 17.29, 17.44, 18.24, 19.16, 19.91, 20.19, 20.42, 20.70, 21.16, 21.74, 22.29, 22.48, 22.75, 23.82, 24.37, 26.34, 27.05, and 27.88, or the three or more peaks are selected from 9.08, 10.81, 16.95, 17.44, 22.29, 22.48, 23.82, 24.37, 26.34, and 27.05.

4. Compound 1 Hemifumarate Form B according to any one of claim 1-3, characterized by all of the following peaks in an XRPD pattern on a 2 Theta scale, ± 0.2, wherein the peaks are 9.08, 10.81, 16.95, 17.44, 22.29, 22.48, 23.82, 24.37, 26.34, and 27.05.

5. Compound 1 Hemifumarate Form B according to any one of claims 1-4, characterized by all of the following peaks in an XRPD pattern on a 2 Theta scale, ± 0.2, wherein the peaks are 7.55, 9.08, 10.81, 13.24, 15.89, 16.95, 17.14, 17.29, 17.44, 18.24, 19.16, 19.91, 20.19, 20.42, 20.70, 21.16, 21.74, 22.29, 22.48, 22.75, 23.82, 24.37, 26.34, 27.05, and 27.88.

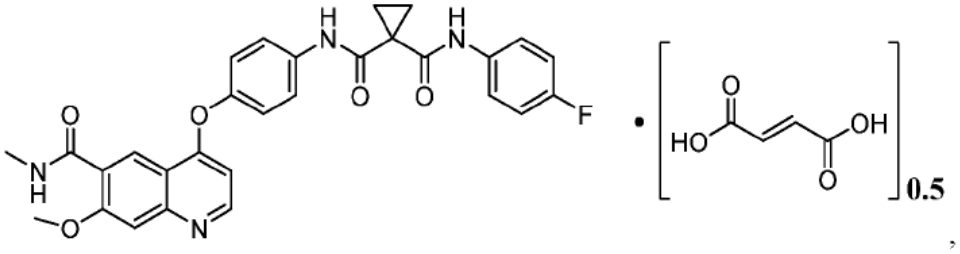
6. A crystalline fumaric acid salt of Compound 1 having the structure



Compound 1 Hemifumarate

characterized as Compound 1 hemifumarate Form B, characterized by an XRPD pattern comprising peaks at 9.08, 16.95, 19.16, and 26.34 degrees 2θ (± 0.2 degrees).

7. A crystalline fumaric acid salt of Compound 1 having the structure



Compound 1 Hemifumarate

characterized as Compound 1 hemifumarate Form B, having an XRPD pattern according to Figure 29.

8. Compound 1 Hemifumarate Form B according to any one of claims 1-7, characterized by an endotherm with an onset temperature of 226 ºC in a DSC thermogram.

9. Compound 1 Hemifumarate Form B according to any one of claims 1-8, characterized by negligible weight loss under a temperature of 220 ºC in a TGA thermogram.

10. Compound 1 Hemifumarate Form B according to any one of claims 1-9, characterized by an increase in weight of 0.2 wt%, as measured by DVS, in an environment that is taken from 5% relative humidity to 95% relative humidity.

11. A pharmaceutical composition comprising a crystalline form or a crystalline salt form of any one of claims 1-10 and a pharmaceutically acceptable excipient.