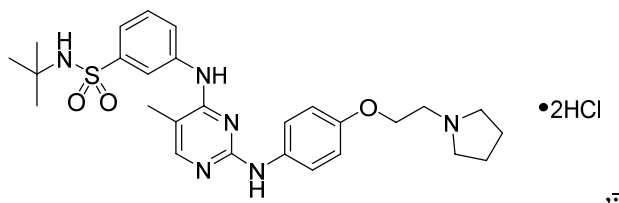


CLAIMS

1. A crystalline form of Compound 1:

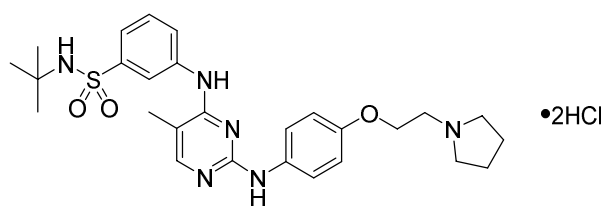


- ~~2. The crystalline form of claim 1, wherein the form is a hydrate.~~
- ~~3. The crystalline form of claim 2, wherein the crystalline form is a monohydrate that -~~
- ~~4. The crystalline form of claim 2, wherein the monohydrate is characterized by one or more the following peaks in its X-ray powder diffraction pattern: selected from 4.3, 9.6, 10.0, 12.4, 12.7, and 17.0 ± 0.2 degrees 2θ.~~
52. The crystalline form of claim 12, wherein the monohydrate is characterized by the following peaks in its X-ray powder diffraction pattern:

Position ° 2θ ± 0.2 degrees	d-spacing [Å]	Height [cts]		Position ° 2θ ± 0.2 degrees	d-spacing [Å]	Height [cts]
4.3	20.776	681		23.6	3.765	2011
9.6	9.220	1040		24.1	3.695	7573
10.0	8.883	692		24.9	3.579	1015
12.4	7.163	825		25.3	3.520	2108
12.7	6.944	1182		25.6	3.484	962
13.5	6.567	2426		26.1	3.410	612
14.2	6.226	1568		26.9	3.317	1246
15.0	5.910	1612		27.2	3.282	1490
16.0	5.531	2875		27.7	3.215	2008
17.0	5.227	7509		30.0	2.979	962
17.6	5.051	2863		30.5	2.934	727
18.0	4.915	5744		31.0	2.888	431
18.6	4.776	1002		31.9	2.803	508

18.9	4.684	472		34.3	2.615	915
21.0	4.229	1594		35.1	2.557	556
21.7	4.089	3006		36.3	2.475	517
22.7	3.912	398				

63. A crystalline form of Compound 1:



1

~~The crystalline form of claim 2, wherein the crystalline form is a trihydrate that is :~~

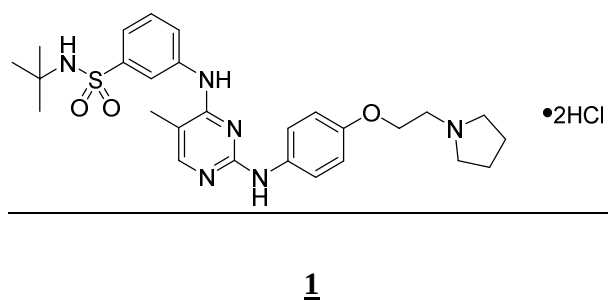
~~7. — The crystalline form of claim 6, wherein the trihydrate is characterized by the following one or more peaks in its X-ray powder diffraction pattern: selected from 5.4, 6.2, 11.6, 13.9, 16.4, and 16.7 ± 0.2 degrees 2θ.~~

48. The crystalline form of claim 63, wherein the trihydrate is characterized by the following peaks in its X-ray powder diffraction pattern:

Position ° 2θ ± 0.2 degrees	d-spacing [Å]	Height [cts]		Position ° 2θ ± 0.2 degrees	d-spacing [Å]	Height [cts]
5.4	16.435	988		20.6	4.311	586
6.2	14.334	494		21.0	4.237	325
6.9	12.755	169		21.5	4.131	119
10.4	8.487	191		22.9	3.890	373
11.6	7.640	607		23.2	3.829	387
13.4	6.631	845		24.0	3.704	394
13.9	6.373	1572		24.9	3.583	568
14.5	6.097	635		25.6	3.483	485
14.8	5.997	518		26.2	3.403	533
15.3	5.792	149		26.7	3.338	652

15.8	5.609	484		27.5	3.249	240
16.4	5.391	1340		28.9	3.091	213
16.7	5.299	1418		30.2	2.959	232
18.0	4.940	115		31.5	2.843	250
18.4	4.810	591		33.2	2.702	69
19.8	4.482	944		34.3	2.618	71
20.2	4.406	852		35.5	2.527	90

95. A crystalline form of Compound 1:



~~The crystalline form of claim 1, wherein the crystalline form is an anhydrous form that -~~

~~10. The crystalline form of claim 9, wherein the anhydrous form is characterized by one or more the following peaks in its X-ray powder diffraction pattern: selected from 4.3, 6.2, 8.6, 9.7, 13.6, and 17.3 ± 0.2 degrees 2θ; or wherein the crystalline form is an anhydrous form that is characterized by the following peaks in its X-ray powder diffraction pattern: 12.8, 13.6, 14.9, 16.1, and 17.2 ± 0.2 degrees 2θ.~~

644. The crystalline form of claim 95, wherein the anhydrous form is characterized by the following peaks in its X-ray powder diffraction pattern:

Position ° 2θ ± 0.2 degrees		Position ° 2θ ± 0.2 degrees
4.3		21.8
6.2		22.0
8.6		22.2
9.7		23.7
10.0		24.3

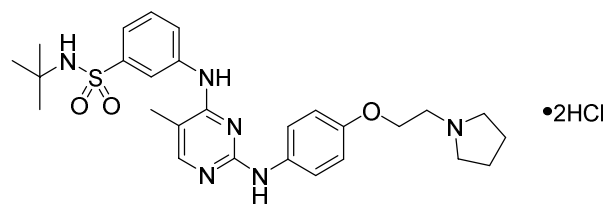
12.3		24.8
13.1		25.4
13.6		25.7
14.0		25.9
15.2		26.1
15.8		26.9
16.4		27.4
17.3		27.7
17.7		28.3
18.0		29.2
18.6		29.5
19.8		35.1
20.7		

~~12.~~ The crystalline form of claim 9, wherein the anhydrous form is characterized by one or more peaks in its X-ray powder diffraction pattern selected from 12.8, 13.6, 14.9, 16.1, and 17.2 ± 0.2 degrees 2θ .

~~13.~~ The crystalline form of claim 95, wherein the anhydrous form is characterized by the following peaks in its X-ray powder diffraction pattern:

Position $^{\circ} 2\theta \pm 0.2$ degrees		Position $^{\circ} 2\theta \pm 0.2$ degrees
4.3		16.1
6.1		17.2
8.5		17.7
9.8		19.6
12.3		21.8
12.8		21.9
13.6		24.2
13.9		25.3
14.1		25.9
14.9		

~~148.~~ A crystalline form of Compound 1:



1

~~The crystalline form of claim 1, wherein the form is a solvate.~~

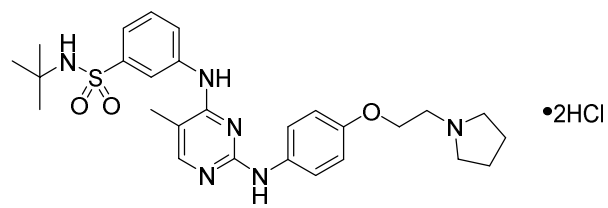
~~15. The crystalline form of claim 14, wherein the form is a monoisopropanol solvate that is:~~

~~16. The crystalline form of claim 15, wherein the monoisopropanol solvate is characterized by one or more peaks in its X-ray powder diffraction pattern: selected from 7.2, 10.4, 10.8, 13.2, and 17.5 ± 0.2 degrees 2θ.~~

~~179.~~ The crystalline form of claim ~~158~~, wherein the monoisopropanol solvate is characterized by the following peaks in its X-ray powder diffraction pattern:

Position ° 2θ ± 0.2 degrees		Position ° 2θ ± 0.2 degrees
7.2		20.1
10.4		24.7
10.8		26.6
13.2		27.4
17.5		

~~1810.~~ A crystalline form of Compound 1:



1

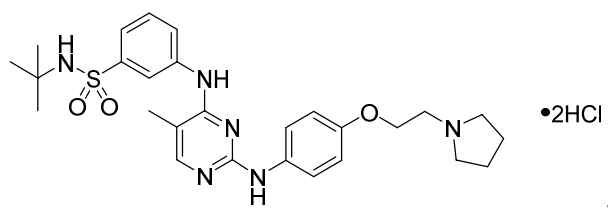
wherein the form is a ~~The crystalline form of claim 14, wherein the form is a tetraisopropanol~~
solvate that is:-

~~19. The crystalline form of claim 18, wherein the tetraisopropanol solvate is characterized by~~
~~one or more the following peaks in its X-ray powder diffraction pattern: selected from 5.3, 6.4,~~
8.2, 10.5, 15.3, and 15.7 ± 0.2 degrees 2θ .

~~2011.~~ The crystalline form of claim ~~18~~10, wherein the tetraisopropanol solvate is characterized
by the following peaks in its X-ray powder diffraction pattern:

Position $^{\circ} 2\theta \pm 0.2$ degrees		Position $^{\circ} 2\theta \pm 0.2$ degrees
5.3		20.4
6.4		21.0
8.2		22.8
10.5		25.6
15.3		25.9
15.7		26.4
17.7		31.0

~~2112.~~ A crystalline form of Compound 1:



1

wherein the form is a ~~The crystalline form of claim 1, wherein the form is a heterosolvate.~~

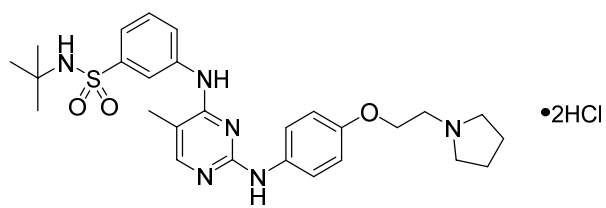
~~22. The crystalline form of claim 21, wherein the form is a water-isopropanol heterosolvate~~
that is:-

~~23. The crystalline form of claim 22, wherein the water-isopropanol heterosolvate is characterized by one or more the following peaks in its X-ray powder diffraction pattern; selected from 7.3, 7.6, 10.4, 10.8, and 17.5 ± 0.2 degrees 2θ.~~

~~2413. The crystalline form of claim 1222, wherein the water-isopropanol heterosolvate is characterized by the following peaks in its X-ray powder diffraction pattern:~~

Position ° 2θ ± 0.2 degrees		Position ° 2θ ± 0.2 degrees
7.3		20.2
7.6		21.3
10.4		24.8
10.8		24.9
13.2		26.6
14.9		27.4
17.5		30.1
18.3		

~~2514. A crystalline form of Compound 1:~~



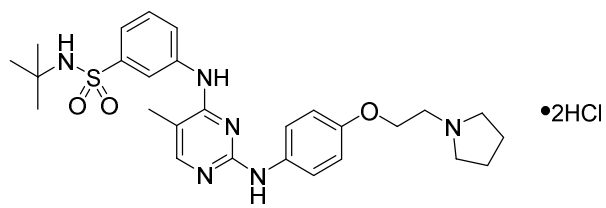
~~wherein the form is a The crystalline form of claim 14, wherein the form is a hexafluoroisopropanol solvate.~~

~~26. The crystalline form of claim 25, wherein the hexafluoroisopropanol solvate that is characterized by the following one or more peaks in its X-ray powder diffraction pattern; selected from 4.3, 6.0, 6.9, 10.9, 11.5, 14.7, and 17.1 ± 0.2 degrees 2θ.~~

~~27~~15. The crystalline form of claim ~~25~~14, wherein the hexafluoroisopropanol solvate is characterized by the following peaks in its X-ray powder diffraction pattern:

Position ° 2θ ± 0.2 degrees		Position ° 2θ ± 0.2 degrees
4.3		17.1
6.0		14.6
6.9		20.6
8.6		21.0
10.9		22.5
11.5		24.2
12.0		26.7
14.2		31.7
14.7		

~~28~~16. A crystalline form of Compound 1:



1

wherein the form is ~~The crystalline form of claim 14, wherein the form is an ethanol solvate that~~

~~29. The crystalline form of claim 28, wherein the ethanol solvate is characterized by one or more the following peaks in its X-ray powder diffraction pattern; selected from 5.3, 10.6, and 15.9 ± 0.2 degrees 2θ.~~

~~1730.~~ The crystalline form of claim ~~28~~16, wherein the ethanol solvate is characterized by the following peaks in its X-ray powder diffraction pattern:

Position ° 2θ ± 0.2 degrees
5.3
10.6
15.9
21.2
26.6

~~3418~~. A sample comprising the crystalline form of any one of claims 1-~~1730~~, wherein the sample is substantially free of impurities.

~~1932~~. The sample of claim ~~3418~~, wherein the sample comprises at least about 90% by weight of Compound **1**.

~~2033~~. The sample of claim ~~1834~~, wherein the sample comprises at least about 95% by weight of Compound **1**.

~~2134~~. The sample of claim ~~1834~~, wherein the sample comprises at least about 99% by weight of Compound **1**.

~~2235~~. The sample of claim ~~1834~~, wherein the sample comprises no more than about 5.0 percent of total organic impurities.

~~2336~~. The sample of claim ~~3418~~, wherein the sample comprises no more than about 3.0 percent of total organic impurities.

~~2437~~. The sample of claim ~~1834~~, wherein the sample comprises no more than about 1.5 percent of total organic impurities.

~~2538~~. The sample of claim ~~1834~~, wherein the sample comprises no more than about 1.0 percent of total organic impurities.

~~2639~~. The sample of claim ~~3418~~, wherein the sample comprises no more than about 0.5 percent of total organic impurities.

2740. A method of inhibiting activity of a JAK2 kinase, or a mutant thereof, in a biological sample comprising the step of contacting said biological sample with a crystalline form of any one of claims 1-~~3018~~, or a composition thereof.

2841. Use of a crystalline form of any one of claims 1-~~1830~~, or a composition thereof in the manufacture of a medicament for inhibiting activity of a JAK2 kinase, or a mutant thereof, in a patient, wherein the crystalline form or a composition thereof is to be administered to said patient, and wherein the patient is suffering from a myeloproliferative disorder; preferably wherein the myeloproliferative disorder is selected from primary myelofibrosis, polycythemia vera, and essential thrombocythemia.

2942. Use of a crystalline form of any one of claims 1-~~3018~~, or pharmaceutically acceptable composition thereof in the manufacture of a medicament for treating a JAK2-mediated disease or disorder, in a patient in need thereof, wherein the crystalline form or a composition thereof is to be administered to the patient, and wherein the patient is suffering from a myeloproliferative disorder; preferably wherein the myeloproliferative disorder is selected from primary myelofibrosis, polycythemia vera, and essential thrombocythemia.

3043. A crystalline form of any one of claims 1-~~1830~~, or a composition thereof for use in therapy.