

WE CLAIM:

1. A di-hydrate of the hemisuccinate salt of 2,4,6-trifluoro-N-[6-(1-methyl-piperidine-4-carbonyl)-pyridin-2-yl]-benzamide (Form D) characterized by an X-ray diffraction pattern is
5 substantially similar to that set forth in Figure 1A.
2. The di-hydrate of claim 1, wherein the X-ray diffraction pattern includes peaks at about 18.7, 26.5, 27.0, 27.5 and 27.8 degrees 2θ using Cu- $K\alpha$ radiation.
- 10 3. The di-hydrate of claim 2, wherein the X-ray diffraction includes one or more additional peaks set forth in Table 2.
4. The di-hydrate of any one of claims 1-3, further characterized by a Differential Scanning Calorimetry (DSC) thermogram having a single maximum value at about X°C. a
15 broad endotherm onset at 53.1°C (-158.2 J/g), a broad exotherm onset at 92.1°C (24.9 J/g), and a sharp endotherm onset at 197.9°C (-119.0 J/g)
5. The di-hydrate of claim 1, further characterized by having unit cell parameters at 100 Kelvin of about $a = 25.08 \text{ \AA}$, $b = 10.08 \text{ \AA}$, $c = 20.84 \text{ \AA}$, $\alpha = 90^\circ$, $\beta = 123.71$, and γ angle = 90°
20
6. The di-hydrate of claim 1, produced by a method comprising wet granulation of amorphous Compound I.
7. A pharmaceutical composition comprising the di-hydrate of claim 1 and a
25 pharmaceutically acceptable carrier.
8. The pharmaceutical composition of claim 7, wherein said di-hydrate is substantially free from impurities.
- 30 9. The pharmaceutical composition of claim 8, wherein said di-hydrate has a chemical purity greater than 98.0% as determined by HPLC.

10. A method of treating migraine in a mammal in need thereof comprising administering to a mammal in need of such treatment an effective amount of the di-hydrate of claim 1.
11. The method of claim 10, wherein the mammal is a human.
- 5 12. A tri-hydrate of the hemisuccinate salt of 2,4,6-trifluoro-N-[6-(1-methyl-piperidine-4-carbonyl)-pyridin-2-yl]-benzamide (Form F) characterized by an X-ray diffraction pattern is substantially similar to that set forth in Figure 1B.
- 10 13. The tri-hydrate according to claim 12, wherein the X-ray diffraction pattern includes peaks as set forth in Table 4.
14. The tri-hydrate of claim 12 or claim 13, further characterized by a DSC thermogram having having a broad endotherm onset at 71.2°C (-198.4 J/g), a shallow endotherm (2 peaks) 15 onset at 95.7°C (-6.4 J/g), a shallow exotherm (2 peaks) at 103.4°C (26.9 J/g), and a sharp endotherm onset at 197.8°C (-114.4 J/g)
15. The tri-hydrate of claim 12, further characterized by a thermogravimetry curve showing 11.4 wt% loss from 25-150°C, reflecting 3.1 mole equivalent water, with 20 degradation beginning about 200°C
16. The tri-hydrate of claim 12, produced by a method comprising slurrying amorphous Compound I or Form A of Compound I in water alone at 5 °C, or by lyophilizing amorphous Compound I from a t-butanol/water (50/50, v/v) mixture.
- 25 17. A pharmaceutical composition comprising the tri-hydrate of claim 12 and a pharmaceutically acceptable carrier.
18. The pharmaceutical composition of claim 17, wherein said tri-hydrate is substantially 30 free from impurities.
19. The pharmaceutical composition of claim 18, wherein said tri-hydrate has a chemical purity greater than 98.0% as determined by HPLC.

20. A method of treating migraine in a mammal in need thereof comprising administering to a mammal in need of such treatment an effective amount of the tri-hydrate of claim 12.
- 5 21. The method of claim 20, wherein the mammal is a human.
22. A dehydrated hydrate of Form D of the hemisuccinate salt of 2,4,6-trifluoro-N-[6-(1-methyl-piperidine-4-carbonyl)-pyridin-2-yl]-benzamide (Form E) characterized by an X-ray diffraction pattern is substantially similar to that set forth in Figure 1C.
- 10 23. The dehydrated hydrate of claim 22, wherein the X-ray diffraction pattern includes peaks as set forth in Table 3.
24. A pharmaceutical composition comprising a mixture of polymorphic forms of
- 15 Compound I selected from the group consisting of a mixture of Forms A and D, a mixture of Forms A and E, a mixture of Forms D and E, and a mixture of Forms A, D, and E.