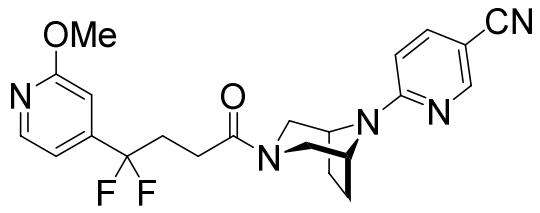
CLAIMS

1. A crystalline compound having the formula:



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characterized by an x-ray powder diffraction pattern with peaks at 13.4 ± 0.15° 2θ, 14.0 ± 0.15° 2θ, 15.2 ± 0.15° 2θ, 19.3 ± 0.15° 2θ, 20.0 ± 0.15° 2θ and 21.2 ± 0.15° 2θ.

2. The crystalline compound of claim 1, wherein the compound is characterized by an x-ray powder diffraction pattern with peaks at 6.7 ± 0.15° 2θ, at 13.4 ± 0.15° 2θ, 14.0 ± 0.15° 2θ, 15.2 ± 0.15° 2θ, 17.7 ± 0.15° 2θ, 18.1 ± 0.15° 2θ, 18.8 ± 0.15° 2θ, 19.3 ± 0.15° 2θ, 19.8 ± 0.15° 2θ, 20.0 ± 0.15° 2θ, 21.0 ± 0.15° 2θ, 21.2 ± 0.15° 2θ, and 24.1 ± 0.15° 2θ.

3. The crystalline compound of claim 1, wherein the compound is characterized by an x-ray powder diffraction pattern with peaks at 6.7 ± 0.15° 2θ, 10.7 ± 0.15° 2θ, 13.4 ± 0.15° 2θ, 14.0 ± 0.15° 2θ, 15.2 ± 0.15° 2θ, 17.7 ± 0.15° 2θ, 18.1 ± 0.15° 2θ, 18.8 ± 0.15° 2θ, 19.3 ± 0.15° 2θ, 19.8 ± 0.15° 2θ, 20.0 ± 0.15° 2θ, 20.7 ± 0.15° 2θ, 21.0 ± 0.15° 2θ, 21.2 ± 0.15° 2θ, 24.1 ± 0.15° 2θ, 25.9 ± 0.15° 2θ, 27.8 ± 0.15° 2θ, and 30.6 ± 0.15° 2θ.

4. The crystalline compound of claim 1, wherein the compound is characterized by an x-ray powder diffraction pattern with peaks at 6.7 ± 0.15° 2θ, 10.7 ± 0.15° 2θ, 13.4 ± 0.15° 2θ, 14.0 ± 0.15° 2θ, 15.2 ± 0.15° 2θ, 16.6 ± 0.15° 2θ, 17.7 ± 0.15° 2θ, 18.1 ± 0.15° 2θ, 18.4 ± 0.15° 2θ, 18.8 ± 0.15° 2θ, 19.3 ± 0.15° 2θ, 19.8 ± 0.15° 2θ, 20.0 ± 0.15° 2θ, 20.7 ± 0.15° 2θ, 21.0 ± 0.15° 2θ, 21.2 ± 0.15° 2θ, 24.1 ± 0.15° 2θ, 25.9 ± 0.15° 2θ, 26.3 ± 0.15° 2θ, 26.6 ± 0.15° 2θ, 27.0 ± 0.15° 2θ, 27.8 ± 0.15° 2θ, and 30.6 ± 0.15° 2θ.

5. The crystalline compound of claim 1, wherein the compound is further characterized as having a differential scanning calorimetry endotherm onset at about 117 °C.

6. A pharmaceutical composition comprising a crystalline compound of claim 1 and at least one pharmaceutically acceptable excipient.

7. Use of the crystalline compound of claim 1 in the manufacture of a medicament for the treatment of a neurodegenerative disorder in a subject in need thereof, wherein a therapeutically effective amount of the medicament is to be administered to the subject.

8. The use of claim 7, further comprising one or more immunomodulatory agents to be administered.

9. The use of claim 8, wherein the one or more immunomodulatory agents are selected from: an IFN-β 1 molecule; a corticosteroid; a polymer of glutamic acid, lysine, alanine and tyrosine or glatiramer; an antibody or fragment thereof against alpha-4 integrin or natalizumab; an anthracenedione molecule or mitoxantrone; a fingolimod or FTY720 or other S1P1 functional modulator; a dimethyl fumarate or other NRF2 functional modulator; an antibody to the alpha subunit of the IL-2 receptor of T cells (CD25) or daclizumab; an antibody against CD52 or alemtuzumab; an antibody against CD20 or ocrelizumab; and an inhibitor of a dihydroorotate dehydrogenase or teriflunomide.

10. Use of the crystalline compound of claim 1 in the manufacture of a medicament for the treatment of a demyelinating disease in a subject in need thereof, wherein a therapeutically effective amount of the medicament is to be administered to the subject.

11. The use of claim 10, wherein the demyelinating disease is a demyelinating disease of the central nervous system.

12. The use of claim 11, wherein the demyelinating disease is multiple sclerosis.

13. The use of claim 10, wherein the demyelinating disease is a demyelinating disease of the peripheral nervous system.

14. The use of claim 10, further comprising one or more immunomodulatory agents to be administered.

15. The use of claim 14, wherein the one or more immunomodulatory agents are selected from: an IFN-β 1 molecule; a corticosteroid; a polymer of glutamic acid, lysine, alanine and

tyrosine or glatiramer; an antibody or fragment thereof against alpha-4 integrin or natalizumab; an anthracenedione molecule or mitoxantrone; a fingolimod or FTY720 or other S1P1 functional modulator; a dimethyl fumarate or other NRF2 functional modulator; an antibody to the alpha subunit of the IL-2 receptor of T cells (CD25) or daclizumab; an antibody against CD52 or alemtuzumab; an antibody against CD20 or ocrelizumab; and an inhibitor of a dihydroorotate dehydrogenase or teriflunomide.

16. Use of the crystalline compound of claim 1 in the manufacture of a medicament for the treatment of a neuropathic disease, optionally a peripheral neuropathy, in a subject in need thereof, wherein a therapeutically effective amount of the medicament is to be administered to the subject.

17. The use of claim 16, wherein the neuropathic disease is diabetic neuropathy.

18. The use of claim 16, further comprising one or more immunomodulatory agents to be administered.

19. The use of claim 18, wherein the one or more immunomodulatory agents are selected from: an IFN-β 1 molecule; a corticosteroid; a polymer of glutamic acid, lysine, alanine and tyrosine or glatiramer; an antibody or fragment thereof against alpha-4 integrin or natalizumab; an anthracenedione molecule or mitoxantrone; a fingolimod or FTY720 or other S1P1 functional modulator; a dimethyl fumarate or other NRF2 functional modulator; an antibody to the alpha subunit of the IL-2 receptor of T cells (CD25) or daclizumab; an antibody against CD52 or alemtuzumab; an antibody against CD20 or ocrelizumab; and an inhibitor of a dihydroorotate dehydrogenase or teriflunomide.

20. Use of the crystalline compound of claim 1 in the manufacture of a medicament for use in a method of modulating muscarinic acetylcholine receptor M_1 activity in a subject, wherein the medicament is to be administered to the subject.

21. The use of claim 20, wherein the compound acts as a selective M_1 antagonist.

22. The crystalline compound of claim 1 for use in therapy.