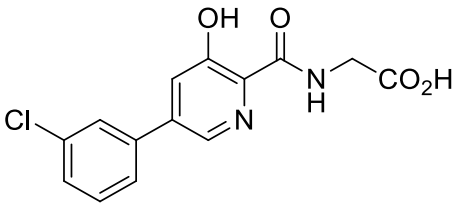
CLAIMS

1. A pharmaceutical composition comprising a Compound 1 which is {[5-(3-chlorophenyl)-3-hydroxypyridine-2-carbonyl]amino}acetic acid, having the structure:



Compound **1**

or a pharmaceutically acceptable salt thereof, for use in treating anemia,

wherein the pharmaceutical composition is used such that a dose of 100 mg to 800 mgof Compound 1 is to be orally administered once daily to a subject.

2. The pharmaceutical composition of claim 1, wherein the once daily dose to be orally administered is 150 mg to 300 mg or 300 mg to 600 mg.

3. The pharmaceutical composition of claim 1, wherein the dose is suitable to increase overall levels of erythropoietin in a diurnal pattern.

4. The pharmaceutical composition of any one of claims 1 to 3, wherein trough levels of erythropoietin are elevated compared to trough levels of erythropoietin in the subject immediately prior to the administration by at most 1%, 2%, 3%, 4%, 5%, 6%, 7%, 8%, 9%, 10%, 11%, 12%, 13%, 14%, 15%, 16%, 17%, 18%, 19%, or 20%.

5. The pharmaceutical composition of any one of claims 1 to 4, wherein the anemia is anemia secondary to chronic kidney disease.

6. The pharmaceutical composition of claim 5, wherein the chronic kidney disease is stage 3, 4, or 5 chronic kidney disease.

7. The pharmaceutical composition of claim 5 or 6, wherein the chronic kidney disease is pre-dialysis chronic kidney disease.

8. The pharmaceutical composition of any one of claims 1 to 7, wherein the subject has not been previously treated for anemia.

9. The pharmaceutical composition of any one of claims 1 to 8, wherein the subject is refractory to treatment with recombinant erythropoietin.

10. The pharmaceutical composition of any one of claims 1 to 7 and 9, wherein the subject has been previously treated for anemia.

11. The pharmaceutical composition of any one of claims 1 to 10, wherein hemoglobin levels of the subject:

a. are maintained at a level of at least about 9.0 g/dL and at or below about 13.0 g/dL; or

b. are maintained at a level of at least about 10.0 g/dL and at or below about 13.0 g/dL; or

c. are maintained at a level of at least about 11.0 g/dL and at or below about 13.0 g/dL; or

d. are increased by at least about 1.2 g/dL relative to a baseline hemoglobin level.

12. The pharmaceutical composition of claim 11 wherein the hemoglobin levels are tested at least about 1 day, 2 days, 3 days, 4 days, 5 days, 6 days, 7 days, 8 days, 9 days, 10 days, 11 days, 12 days, 13 days, 14 days, 3 weeks, 4 weeks, 5 weeks, 6 weeks, 7 weeks, or about 8 weeks after the initial administering of the Compound 1.

13. The pharmaceutical composition of any one of claims 1 to 12, wherein the composition to be administered does not comprise an iron supplement.

14. The pharmaceutical composition of any one of claims 1 to 12, wherein the Compound 1 is optionally to be administered in combination with another medicament.

15. The pharmaceutical composition of claim 14, wherein the other medicament is an iron supplement.

16. The pharmaceutical composition of claim 14, wherein the iron supplement is to be administered at least two hours following administration of the Compound 1.

17. The pharmaceutical composition of claim 15 or 16, wherein the iron supplement is to be administered in an amount such that ferritin is maintained at a level of between about 50 ng/mL and about 300 ng/mL.

18. The pharmaceutical composition of claim 15 or 16, wherein the iron supplement is to be administered orally at a daily dose about 50 mg of elemental iron.

19. The pharmaceutical composition of any one of claims 15 to 16, wherein the iron supplement is to be administered (i) on an as needed basis; (ii) continuously; and/or (iii) indefinitely.

20. The pharmaceutical composition of claim 14, wherein the other medicament is an erythropoiesis stimulating agent (ESA) that is an erythropoietin mimetic.

21. The pharmaceutical composition of claim 20, wherein the other medicament is an rhEPO product.

22. The pharmaceutical composition of claim 21, wherein the rhEPO product is selected from epoetin alfa, epoetin beta, darbepoetin, and peginesatide.

23. The pharmaceutical composition of any one of claims 20 to 22, wherein the ESA is to be administered (i) as a rescue therapy; (ii) continuously; and/or (iii) indefinitely.

24. The pharmaceutical composition of any one of claims 1 to 23, wherein the Compound 1 is to be administered once a day at the same time of the day.

25. The pharmaceutical composition of claim 24, wherein the Compound 1 is to be administered at 8 a.m., 9 a.m., 10 a.m., 11 a.m., 12 p.m., 1 p.m., or 2 p.m.

26. The pharmaceutical composition of any one claims 1 to 25, wherein the compound is to be administered at a sufficient number of successive doses of Compound 1, so as to raise a total iron binding capacity (TIBC) relative to a baseline TIBC in a subject is raised, without significantly increasing a serum iron level relative to a baseline serum iron level, preferably wherein cardiovascular side-effects and risk of thromboembolic events associated with increased serum iron levels are minimized.

27. The pharmaceutical composition of claim 26, wherein transferrin saturation (TSAT) decreases relative to a baseline TSAT, and/or wherein the serum iron level decreases relative to a baseline serum iron level, preferably wherein the serum iron level increases by less than 20 µg/dL, less than 15 µg/dL, less than 10 µg/dL, or less than 5 µg/dL relative to a baseline serum iron level; and/or wherein the TIBC increases by at least 10 µg/dL, 20 µg/dL, 30 µg/dL, 40 µg/dL, 50 µg/dL, or at least 60 µg/dL relative to a baseline TIBC, preferably wherein the TIBC increase occurs over 1 week, 2 weeks, 3 weeks, 4 weeks, 5 weeks, or 6 weeks relative to a baseline TIBC.

28. The pharmaceutical composition of any one of claims 1 to 27, wherein the Compound 1 is to be administered as a unit dosage form comprising about 150 mg to about 450 mg of Compound 1, or a pharmaceutically acceptable salt thereof.

29. The pharmaceutical composition of claim 28, wherein the unit dosage form further comprises one or more excipients.

30. The pharmaceutical composition of claim 28 or 29, wherein the unit dosage form is in the form of a tablet.

31. The pharmaceutical composition of any one of claims 28 to 30, wherein the unit dosage form is formulated as a lactose-free composition.

32. The pharmaceutical composition of any one of claims 28 to 31, wherein the unit dosage form is formulated as an anhydrous pharmaceutical composition.

33. The pharmaceutical composition of any one of claims 28 to 32, wherein the unit dosage form further comprises a stabilizer.

34. The pharmaceutical composition of any one of claims 28 to 33, further comprising a binder, a filler, a disintegrant, a lubricant, or a combination thereof.