~~The Claims Defining the Invention are as follows:~~

## WHAT IS CLAIMED IS:

~~1. Use of a JAK1 selective inhibitor, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for the treatment of a myelodysplastic syndrome.~~

~~2. The use of claim 1, wherein the JAK1 selective inhibitor is selective for JAK1 over JAK2, JAK3, and TYK2.~~

~~1.~~3. ~~The u~~Use of ~~claim 1, wherein the~~ a JAK1 selective inhibitor ~~is~~ in the manufacture of a medicament for the treatment of a myelodysplastic syndrome in a patient in need thereof, wherein said medicament comprises a therapeutically effective amount of a JAK1 selective inhibitor selected from:

- 3-[1-(6-chloropyridin-2-yl)pyrrolidin-3-yl]-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]propanenitrile;
- 3-(1-[1,3]oxazolo[5,4-b]pyridin-2-ylpyrrolidin-3-yl)-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]propanenitrile;
- 4-[(4-{3-cyano-2-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]propyl}piperazin-1-yl)carbonyl]-3-fluorobenzonitrile;
- 4-[(4-{3-cyano-2-[3-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrrol-1-yl]propyl}piperazin-1-yl)carbonyl]-3-fluorobenzonitrile;
- {1-{1-[3-Fluoro-2-(trifluoromethyl)isonicotinoyl]piperidin-4-yl}-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]azetidin-3-yl}acetonitrile;
- 4-{3-(cyanomethyl)-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]azetidin-1-yl}-N-[4-fluoro-2-(trifluoromethyl)phenyl]piperidine-1-carboxamide;
- [3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]-1-(1-{[2-(trifluoromethyl)pyrimidin-4-yl]carbonyl}piperidin-4-yl)azetidin-3-yl]acetonitrile;
- [*trans*-1-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]-3-(4-{[2-(trifluoromethyl)pyrimidin-4-yl]carbonyl}piperazin-1-yl)cyclobutyl]acetonitrile;

—{*trans*-3-(4-{[4-[(3-hydroxyazetidin-1-yl)methyl]-6-(trifluoromethyl)pyridin-2-yl]oxy}piperidin-1-yl)-1-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]cyclobutyl}acetonitrile;

- {*trans*-3-(4-{[4-{[(2S)-2-(hydroxymethyl)pyrrolidin-1-yl]methyl}-6-(trifluoromethyl)pyridin-2-yl]oxy}piperidin-1-yl)-1-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]cyclobutyl}acetonitrile;
- {*trans*-3-(4-{[4-{[(2R)-2-(hydroxymethyl)pyrrolidin-1-yl]methyl}-6-(trifluoromethyl)pyridin-2-yl]oxy}piperidin-1-yl)-1-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]cyclobutyl}acetonitrile;
- 4-(4-{3-[(dimethylamino)methyl]-5-fluorophenoxy}piperidin-1-yl)-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]butanenitrile;
- 5-{3-(cyanomethyl)-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]azetidin-1-yl}-N-isopropylpyrazine-2-carboxamide;
- 4-{3-(cyanomethyl)-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]azetidin-1-yl}-2,5-difluoro-N-[(1S)-2,2,2-trifluoro-1-methylethyl]benzamide;
- 5-{3-(cyanomethyl)-3-[4-(1H-pyrrolo[2,3-b]pyridin-4-yl)-1H-pyrazol-1-yl]azetidin-1-yl}-N-isopropylpyrazine-2-carboxamide;
- {1-(*cis*-4-{[6-(2-hydroxyethyl)-2-(trifluoromethyl)pyrimidin-4-yl]oxy}cyclohexyl)-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]azetidin-3-yl}acetonitrile;
- {1-(*cis*-4-{[4-[(ethylamino)methyl]-6-(trifluoromethyl)pyridin-2-yl]oxy}cyclohexyl)-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]azetidin-3-yl}acetonitrile;
- {1-(*cis*-4-{[4-(1-hydroxy-1-methylethyl)-6-(trifluoromethyl)pyridin-2-yl]oxy}cyclohexyl)-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]azetidin-3-yl}acetonitrile;
- {1-(*cis*-4-{[4-{[(3R)-3-hydroxypyrrolidin-1-yl]methyl}-6-(trifluoromethyl)pyridin-2-yl]oxy}cyclohexyl)-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]azetidin-3-yl}acetonitrile;
- {1-(*cis*-4-{[4-{[(3S)-3-hydroxypyrrolidin-1-yl]methyl}-6-(trifluoromethyl)pyridin-2-yl]oxy}cyclohexyl)-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]azetidin-3-yl}acetonitrile;

—{*trans*-3-(4-{[4-({[(1S)-2-hydroxy-1-methylethyl]amino}methyl)-6-(trifluoromethyl)pyridin-2-yl]oxy}piperidin-1-yl)-1-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]cyclobutyl}acetonitrile;

—{*trans*-3-(4-{[4-({[(2R)-2-hydroxypropyl]amino}methyl)-6-(trifluoromethyl)pyridin-2-yl]oxy}piperidin-1-yl)-1-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]cyclobutyl}acetonitrile;

—{*trans*-3-(4-{[4-({[(2S)-2-hydroxypropyl]amino}methyl)-6-(trifluoromethyl)pyridin-2-yl]oxy}piperidin-1-yl)-1-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]cyclobutyl}acetonitrile; and

—{*trans*-3-(4-{[4-(2-hydroxyethyl)-6-(trifluoromethyl)pyridin-2-yl]oxy}piperidin-1-yl)-1-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]cyclobutyl}acetonitrile;

———or a pharmaceutically acceptable salt thereof.

2. The use of claim 1, wherein the JAK1 selective inhibitor is selective for JAK1 over JAK2, JAK3, and TYK2.

3.~~4.~~ The use of ~~any one of claims~~claim 1 ~~to~~ or 2~~3~~, wherein said myelodysplastic syndrome is refractory cytopenia with unilineage dysplasia (RCUD).

~~5.~~ 4. The use of ~~any one of claims~~claim 1 ~~to 3~~or 2, wherein said myelodysplastic syndrome is refractory anemia with ring sideroblasts (RARS).

~~6.~~ 5. The use of ~~any one of claims~~claim 1 ~~to 3~~or 2, wherein said myelodysplastic syndrome is refractory cytopenia with multilineage dysplasia.

~~7.~~ 6. The use of ~~any one of claims~~claim 1 ~~to 3~~or 2, wherein said myelodysplastic syndrome is refractory anemia with excess blasts-1 (RAEB-1).

~~8.~~ 7. The use of ~~any one of claims~~claim 1 ~~to 3~~or 2, wherein said myelodysplastic syndrome is refractory anemia with excess blasts-2 (RAEB-2).

9. 8. The use of any one of claimsclaim 1 to 3or 2, wherein said myelodysplastic syndrome is myelodysplastic syndrome, unclassified (MDS-U).

~~10.~~ 9. The use of ~~any one of claims~~claim 1 ~~to 3~~or 2, wherein said myelodysplastic syndrome is myelodysplastic syndrome associated with isolated del(5q).

~~11.~~ 10. The use of any one of claims 1 to ~~10~~9, wherein said myelodysplastic syndrome is refractory to erythropoiesis-stimulating agents.

11. The use of any one of claims 1 to 10, wherein said patient is red blood cell transfusion dependent.

~~12. The use of any one of claims 1 to 11, wherein said patient is red blood cell transfusion dependent.~~

~~13.~~12. The use of any one of claims 1 to ~~12~~11,~~ further comprising administering~~ wherein said medicament is formulated for co-administration with an additional therapeutic agent selected from an IMiD, an anti-IL-6 agent, an anti–TNF-α agent, a hypomethylating agent, or a biologic response modifier (BRM).

~~14.~~ 13. The use of claim ~~13~~12, wherein said anti–TNF-α agent is selected from infliximab and etanercept.

~~15.~~ 14. The use of claim ~~13~~12, wherein said hypomethylating agent is a DNA methyltransferase inhibitor.

~~16.~~ 15. The use of claim ~~15~~14, wherein said DNA methyl transferase inhibitor is selected from 5 azacytidine and decitabine.

~~17.~~ 16. The use of claim ~~13~~12, wherein said IMiD is selected from thalidomide, lenalidomide, pomalidomide, CC-11006, and CC-10015.

~~18.~~ 17. The use of any one of claims 1 to ~~12, further comprising administering~~11, wherein said medicament is formulated for co-administration with an additional therapeutic agent selected from anti-thymocyte globulin, recombinant human

granulocyte colony-stimulating factor (G CSF), granulocyte-monocyte CSF (GM-CSF), a erythropoiesis-stimulating agent (ESA), and cyclosporine.

18. Use of a JAK1 selective inhibitor in the manufacture of a medicament for the treatment of a myelodysplastic syndrome in a patient in need thereof, the medicament comprising a JAK1 selective inhibitor which is {1-{1-[3-Fluoro-2-(trifluoromethyl)isonicotinoyl]piperidin-4-yl}-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]azetidin-3-yl}acetonitrile, or a pharmaceutically acceptable salt thereof.

19. The use of claim 18, wherein said myelodysplastic syndrome is refractory cytopenia with unilineage dysplasia (RCUD).

20. The use of claim 18, wherein said myelodysplastic syndrome is refractory anemia with ring sideroblasts (RARS).

21. The use of claim 18, wherein said myelodysplastic syndrome is refractory cytopenia with multilineage dysplasia.

22. The use of claim 18, wherein said myelodysplastic syndrome is refractory anemia with excess blasts-1 (RAEB-1).

23. The use of claim 18, wherein said myelodysplastic syndrome is refractory anemia with excess blasts-2 (RAEB-2).

24. The use of claim 18, wherein said myelodysplastic syndrome is myelodysplastic syndrome, unclassified (MDS-U).

25. The use of claim 18, wherein said myelodysplastic syndrome is myelodysplastic syndrome associated with isolated del(5q).

26. The use of claim 18, wherein said myelodysplastic syndrome is refractory to erythropoiesis-stimulating agents.

27. The use of any one of claims 18 to 26, wherein said patient is red blood cell transfusion dependent.

28. The use of any one of claims 18 to 27, wherein said medicament is formulated for co-administration with an additional therapeutic agent selected from an IMiD, an anti-IL-6 agent, an anti–TNF-α agent, a hypomethylating agent, or a biologic response modifier (BRM).

29. The use of claim 28, wherein said anti–TNF-α agent is selected from infliximab and etanercept.

30. The use of claim 28, wherein said hypomethylating agent is a DNA methyltransferase inhibitor.

31. The use of claim 30, wherein said DNA methyl transferase inhibitor is selected from 5 azacytidine and decitabine.

32. The use of claim 28, wherein said IMiD is selected from thalidomide, lenalidomide, pomalidomide, CC-11006, and CC-10015.

33. The use of any one of claims 18 to 27, wherein said medicament is formulated for co-administration with an additional therapeutic agent selected from anti-thymocyte globulin, recombinant human granulocyte colony-stimulating factor (G CSF), granulocyte-monocyte CSF (GM-CSF), a erythropoiesis-stimulating agent (ESA), and cyclosporine.