

CLAIMS

1. An isolated antibody that binds to human hemojuvelin (HJV), wherein the isolated antibody comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 117, and a light chain comprising the amino acid sequence of SEQ ID NO: 62.
2. An isolated antibody that binds to human hemojuvelin (HJV), wherein the isolated antibody comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 61, and a light chain comprising the amino acid sequence of SEQ ID NO: 62.
3. The isolated antibody of claim 1 or 2, wherein the isolated antibody is a glycosylated antibody.
4. The isolated antibody of claim 3, wherein the glycosylated antibodies are glycosylated at an N-linked glycosylation site.
5. A composition comprising the isolated antibodies of any one of claims 1-4.
6. A composition comprising anti-human hemojuvelin (HJV) antibodies comprising a heavy chain that comprises the amino acid sequence of SEQ ID NO: 117, and a light chain that comprises the amino acid sequence of SEQ ID NO: 62.
7. The composition of claim 6, wherein the heavy chain of one or more of the anti-human HJV antibodies comprises the amino acid sequence of SEQ ID NO: 61.
8. The composition of claim 6 or 7, wherein the composition further comprises an anti-human HJV antibody comprising a heavy chain that comprises the amino acid sequence of SEQ ID NO: 131, and a light chain that comprises the amino acid sequence of SEQ ID NO: 62.

9. The composition of any one of claims 6-8, wherein the composition further comprises an anti-human HJV antibody comprising a heavy chain that comprises the amino acid sequence of SEQ ID NO: 130, and a light chain that comprises the amino acid sequence of SEQ ID NO: 62.
10. The composition of any one of claims 6-9, wherein one or more of the anti-human HJV antibodies are glycosylated antibodies.
11. The composition of claim 10, wherein the one or more of the glycosylated antibodies is glycosylated at an N-linked glycosylation site.
12. The composition of any one of claims 6-11, further comprising a pharmaceutically acceptable carrier.
13. The composition of claim 12, wherein the anti-human HJV antibodies are in aqueous solution.
14. The composition of claim 12, wherein the composition is lyophilized.
15. Use of the composition of any one of claims 6-14 in the manufacture of a medicament for treating myelofibrosis-associated anemia in a subject.
16. The use of claim 15, wherein the anemia results from hepcidin expression that is induced by at least one pro-inflammatory cytokine.
17. The use of claim 15 or 16, wherein the composition is formulated for administration reduces the anemia.
18. The use of claim 17, wherein the pro-inflammatory cytokines comprise interleukin-6 (IL-6).

19. The use of any one of claims 15-18, wherein the subject has myelofibrosis initiating mutations in JAK2, MPL, ASXL1, TET2, NFE2, SH2B3, SF3B1, CALR, or a combination thereof.
20. The use of any one of claims 15-19, wherein the subject has primary myelofibrosis, post-essential thrombocythemia (ET) myelofibrosis, or post-polycythemia vera (PV) myelofibrosis.
21. The use of claims any one of claims 15-20, wherein the subject has a DIPSS score of more than 1.
22. The use of any one of claims 15-21, wherein the subject has a DIPSS score of 3 or 4.
23. The use of any one of claims 15-21, wherein the subject has a DIPSS score of at least 5.
24. The use of any one of claims 15-23, wherein the subject presents with a serum hemoglobin level of less than 10 g/dL.
25. The use of any one of claims 15-24, wherein the subject presents with a serum hemoglobin level of less than 8 g/dL.
26. The use any one of claims 15-25, wherein the subject is erythrocyte-transfusion dependent.
27. The use of any one of claims 15-26, wherein the subject has previously received or is receiving a selective JAK-STAT inhibitor.
28. The use of claim 27, wherein the selective JAK-STAT inhibitor is selected from the group consisting of ruxolitinib, fedratinib, pacritinib, INCB039110, AG490, PpYLKTK, and momelotinib.

29. The use of any one of claims 15-28, wherein the administration reduces hepcidin-25 in the subject within 24 hours of the administration.
30. The use of any one of claims 15-29, wherein the administration reduces hepcidin-25 by at least 50% compared to the hepcidin-25 level in the subject prior to the administration.
31. The use of any one of claims 15-30, wherein the administration is via subcutaneous injection.
32. The use of any one of claims 15-31, wherein the administration to the subject once monthly.