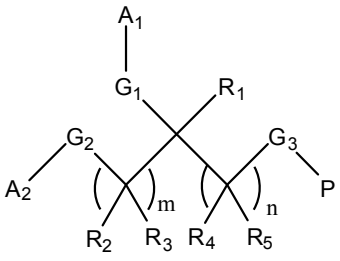
WHAT IS CLAIMED IS:

1. Use of a pegylated type I interferon in the manufacture of a medicament for the treatment of an infectious disease, cancer, or myeloproliferative disease in a subject, wherein the pegylated type I interferon is provided as a dose of from 50 to 540 μg that is administrable to a subject at a regular interval of 3 to 8 weeks for a treatment period.

2. The use of claim 1, wherein the pegylated type I interferon is a conjugate of formula I:

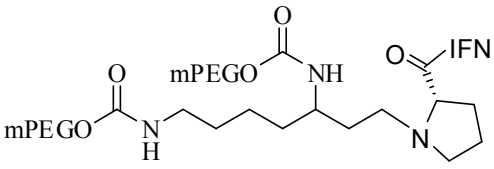


, in which

formula I

each of R_1, R_2, R_3, R_4, and R_5, independently, is H, C_{1-5} alkyl, C_{2-5} alkenyl, C_{2-5} alkynyl, aryl, heteraryl, C_{3-8} cycloalkyl, or C_{3-8} heterocycloalkyl;
each of A_1 and A_2, independently, is a polymer moiety;
each of G_1, G_2, and G_3, independently, is a bond or a linking functional group;
P is an interferon-α moiety;
m is 0 or an integer of 1-10; and
n is an integer of 1-10.

3. The use of claim 2, wherein the conjugate is



, in which mPEG has a molecular weight of 20 kD and IFN is an interferon-α_{2b}.

4. The use of any of claims 1-3, wherein the myeloproliferative disease is myeloproliferative neoplasms (MPN), myeloid or lymphoid neoplasms associated with eosinophilia and abnormalities of PDGFRA, PDGFRB or FGFR1, myelodysplastic or myeloproliferative neoplasms (MDS/MPN), myelodysplastic syndrome (MDS), acute myeloid leukemia and related neoplasms, acute leukemias of ambiguous lineage, or B lymphoblastic leukemia/lymphoma.

5. The use of claim 4, wherein the myeloproliferative disease is myelofibrosis, polycythemia vera, or essential thromobocythemia.

6. The use of claim 5, wherein the interval is 4 to 8 weeks, such as 4 weeks.

7. The use of any of claims 5-6, wherein the treatment period is at least 2 to 12 months, such as 12 months.

8. The use of any of claims 1-9, wherein:

(a) a constant dose of the pegylated type I interferon is administered; and/or

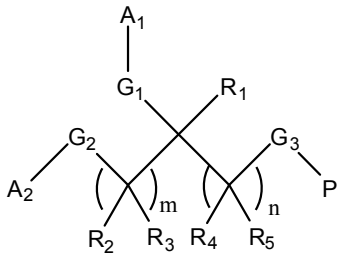
(b) the subject had previously been administered a type I interferon once per week for at least 2 to 12 months, optionally wherein the subject had previously been administered a 12.5 to 25 μg dose of a type I interferon once per week for at least 2 to 12 months.

9. Use of a pegylated type I interferon in the manufacture of a medicament for the treatment of an infectious disease, cancer, or myeloproliferative disease in a subject, wherein:

the pegylated type I interferon is provided as a dose of from 50 to 540 μg that is administrable to a subject at a first regular interval for a first treatment period, the first interval being 1 to 4 weeks; and

the pegylated type I interferon is provided as a dose of from 50 to 540 μg that is administrable to a subject at a second regular interval for a second treatment period, the second interval being 3 to 8 weeks.

10. The use of claim 9, wherein the pegylated type I interferon is a conjugate of formula I:



formula I , in which

each of R_1, R_2, R_3, R_4, and R_5, independently, is H, C_{1-5} alkyl, C_{2-5} alkenyl, C_{2-5} alkynyl, aryl, heteraryl, C_{3-8} cycloalkyl, or C_{3-8} heterocycloalkyl;

each of A_1 and A_2, independently, is a polymer moiety;

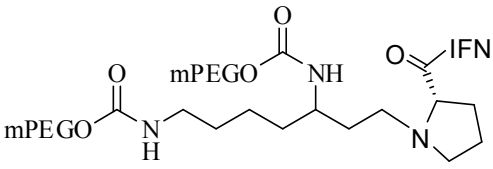
each of G_1, G_2, and G_3, independently, is a bond or a linking functional group;

P is an interferon-α moiety;

m is 0 or an integer of 1-10; and

n is an integer of 1-10.

11. The use of claim 10, wherein the conjugate is



, in which mPEG has a molecular weight of 20 kD and IFN is an interferon-α_{2b}.

12. The use of claim 11, wherein the myeloproliferative disease is myelofibrosis, polycythemia vera, or essentia thromobocythaemia.

13. The use of claims 9-12, wherein the total amount of the pegylated type I interferon administered to the subject per a given period during the second treatment period is lower than the total amount administered per the given period during the first treatment period.

14. The use of claim 13, wherein the first treatment period continues until the subject exhibits (i) normalization of at least one hematological parameter and/or (ii) at least 50% reduction of JAK2V617F allelic burden.

15. The use of claim 14, wherein the at least one hematological parameter is hematocrit, white blood cell count (WBC), or platelet count.

16. The use of claim 15, wherein the hematocrit is less than 45%, the WBC is less than or equal to 10 x 10^9/L, and the platelet count is less than or equal to 400 x 10^9/L.

17. The use of claim 16, wherein:

(a) the first interval is 1 to 2 weeks; and optionally

(b) the second interval is 4 weeks.

18. The use of any of claims 9-17, wherein:

(a) the second treatment period is at least 2 to 12 months; and/or

(b) the first treatment period is at least 2 to 12 months.

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19. The pegylated type I interferon for use of any of claims 9-18, wherein a constant dose of the pegylated type I interferon is administered during the first treatment period and/or a constant dose of the pegylated type I interferon is administered during the second treatment period.

20. The method of claim 19, wherein the constant dose administered during the second treatment period is lower than the constant dose administered during the second treatment period, or the same constant dose is administered during the first treatment period and the second treatment period.

21. A pegylated type I interferon for use in treating an infectious disease, cancer, or myeloproliferative disease in a subject in need thereof, wherein a 50 to 540 µg dose of the pegylated type I interferon is administered to the subject at a regular interval for a treatment period, the interval being 3 to 8 weeks.

22. A pegylated type I interferon for use in treating a myeloproliferative disease in a subject, wherein a 50 to 540 µg dose of the pegylated type I interferon is administered to a

subject in need thereof at a first regular interval for a first treatment period, the first interval being 1 to 4 weeks, and subsequently, a 50 to 540 μg dose of the pegylated type I interferon is administered to the subject at a second regular interval for a second treatment period, the second interval being 3 to 8 weeks.