[0005a] In one aspect, the present disclosure provides use of 15-hydroxyeicosapentaenoic acid (15-HEPE) in free acid form, esterified form, or salt form in the manufacture of a medicament for treating and/or preventing hemolytic anemia in a subject in need thereof, wherein the 15-HEPE represents at least 90%, by weight, of all fatty acids in the medicament and the medicament is to be administered to the subject to provide up to 8 g of the 15-HEPE.

a composition comprising 15-HEPE, wherein the 15-HEPE represents at least about 90% by weight, of all fatty acids in the composition, and the subject exhibits one or more of: (a) an increase in red blood cell count; (b) a decrease in red cell distribution width; and/or (c) a decrease in reticulocyte count.

[0013] In various examples, the hematologic disorder, the hemoglobin disorder, and/or the red blood cell disorder are selected from the group consisting of inherited hemolytic anemia, acquired hemolytic anemia, Fanconi anemia, iron deficiency anemia, folate deficiency, B12 deficiency, and myelodysplastic syndrome.

[0014] The present disclosure also provides methods of treating and/or preventing hemolytic anemia in a subject in need thereof, the method comprising administering to the subject up to about 8g of a composition comprising 15-HEPE, wherein the 15-HEPE represents at least about 90% by weight, of all fatty acids in the composition.

[0015] In some examples, the hemolytic anemia is inherited hemolytic anemia or acquired hemolytic anemia. In another example, the acquired hemolytic anemia is acquired as secondary to infection, from a medication, from a hematological malignancy, from autoimmune disease, from hypersplenism, following placement of a mechanical heart valve, a blood transfusion, or a combination thereof. In yet another example, the sickle cell disease and sickle cell anemia are associated with sickle cell crisis, a vaso-occlusive crisis, a splenic sequestration, or a combination thereof.

[0016] In some examples, the subject exhibits an increase in red blood cell count, a decrease in red blood cell distribution width, and a decrease in reticulocyte count. In some examples, the present disclosure provides methods of treating and/or preventing thrombophilia disorders in a subject in need thereof, the method comprising administering to the subject 15-HEPE or a composition comprising 15-HEPE.

[0016a] In another aspect, the present disclosure provides use of 15-hydroxyeicosapentaenoic acid (15-HEPE) in free acid form, esterified form, or salt form in the manufacture of a medicament for treating and/or preventing a thrombophilia disorder, thrombophilia, a venous thromboembolism, an arterial

thrombosis, and/or an embolism in a subject in need thereof, wherein the 15-HEPE represents at least 90%, by weight, of all fatty acids in the medicament and the medicament is to be administered to the subject to provide up to 8 g of the 15-HEPE.

[0017] The present disclosure also provides methods of treating and/or preventing thrombophilia in a subject in need thereof, the method comprising administering to the subject up to about 8g of a composition comprising 15-HEPE, wherein the 15-HEPE represents at least about 90% by weight, of all fatty acids in the composition.

[0018] The present disclosure also provides method of treating and/or preventing thrombophilia in a subject in need thereof, the method comprising

CLAIMS

We claim:

1. Use of 15-hydroxyeicosapentaenoic acid (15-HEPE) in free acid form, esterified form, or salt form in the manufacture of a medicament for treating and/or preventing hemolytic anemia in a subject in need thereof, wherein the 15-HEPE represents at least 90%, by weight, of all fatty acids in the medicament and the medicament is to be administered to the subject to provide up to 8 g of the 15-HEPE.

2. The use of claim 1, wherein the hemolytic anemia is a nutritional anemia, a non-nutritional anemia, or a combination thereof.

3. The use of claim 1 or 2, wherein the subject has an increase in red blood cell count, a decrease in red blood cell distribution width, and/or a decrease in reticulocyte count compared to a control subject not receiving the medicament.

4. The use of any one of the preceding claims, wherein the subject has an increase in red blood cell count of at least 10%, at least 15%, at least 20%, at least 25%, or at least 30% compared to a control subject not receiving the medicament.

5. The use of any one of the preceding claims, wherein the subject has a decrease in red blood cell distribution width of from 15% to 20%, from 20% to 25%, from 25% to 30%, from 30% to 35%, or from 35% to 40% compared to a control subject not receiving the medicament.

6. The use of any one of claims 3 to 5, wherein the control subject has a red blood cell distribution width greater than 15%.

7. The use of any one of the preceding claims, wherein the subject has a decrease in reticulocyte count of at least 5%, at least 10%, at least 15%, or at least 20% compared to a control subject not receiving the medicament.

8. The use of any one of claims 3 to 7, where the control subject has a reticulocyte count greater than 5% of the total number of red blood cells.

9. The use of any one of the preceding claims, wherein the hemolytic anemia is selected from the group consisting of inherited hemolytic anemia and acquired hemolytic anemia.

10. The use of claim 9, wherein the inherited hemolytic anemia is selected from the group consisting of sickle cell disease, sickle cell anemia, β-thalassemia, and hereditary spherocytosis.

11. The use of claim 9, wherein the acquired hemolytic anemia is acquired from a disorder or condition selected from the group consisting of a condition secondary to a primary infection, a medication, a hematological malignancy, an autoimmune disease, hypersplenism, positioning of a mechanical heart valve, and a blood transfusion.

12. The use of claim 10, wherein the sickle cell disease and sickle cell anemia are associated with sickle cell crisis, a vaso-occlusive crisis, and/or splenic sequestration.

13. Use of 15-hydroxyeicosapentaenoic acid (15-HEPE) in free acid form, esterified form, or salt form in the manufacture of a medicament for treating and/or preventing a thrombophilia disorder, thrombophilia, a venous thromboembolism, an arterial thrombosis, and/or an embolism in a subject in need thereof, wherein the 15-HEPE represents at least 90%, by weight, of all fatty acids in the medicament and the medicament is to be administered to the subject to provide up to 8 g of the 15-HEPE.

14. The use of claim 13, wherein the subject has an increase in prothrombin time, an increase in activated partial thromboplastin time, and/or a decrease in fibrinogen concentration compared to a control subject not receiving the medicament.

15. The use of any one of the preceding claims, wherein the medicament comprises up to 2 g of the 15-HEPE.

16. The use of any one of the preceding claims, wherein the medicament is to be administered in 1 to 8 capsules per day.

17. The use of any one of the preceding claims, wherein the medicament is formulated for oral administration.

18. The use as in any one of the preceding claims, wherein the esterified form of 15-HEPE is a methyl ester, an ethyl ester, or a combination thereof.