COMPOSITIONS COMPRISING 15-HEPE AND METHODS OF USING THE SAME

PRIORITY CLAIM

This application claims priority to U.S. Provisional Application No. 62/269,280, filed December 18, 2015, which is incorporated herein by reference in its entirety.

TECHNICAL FIELD

[0001] The present disclosure provides compositions, formulations and methods of treating or preventing a disease by administering a pharmaceutical composition comprising 15-hydroxyeicosapentaenoic acid (also referred to as 15-HEPE or 15-OHEPA) to a subject in need thereof.

SUMMARY

[0002] In one aspect, the present invention refers to use of an effective amount of 15-HEPE in the manufacture of a medicament for increasing absorption of 15-HEPE in a subject in need thereof that is in a fed state. In various examples, there are disclosed compositions and formulations comprising 15-hydroxy eicosapentaenoic acid (hereinafter "15-HEPE") and methods of treating diseases and disorders using the same. The compositions and formulations disclosed herein may be used in the treatment of liver disease, arthritis, fibrosis, idiopathic pulmonary fibrosis, impaired insulin sensitivity, psoriasis, cancer (e.g. melanoma), neurodegenerative disorders (e.g. Huntington's disease), inflammatory diseases, adipocyte differentiation, fertility or reproduction issues, pain, obesity, and their sequelae, among other diseases and disorders.

BRIEF DESCRIPTION OF THE DRAWINGS

[0003] Many aspects of the present technology can be better understood with reference to the following drawings. The components in the drawings are not necessarily to scale. Instead, emphasis is placed on illustrating clearly the principles of the present technology.

[0004] Figure 1 graphically illustrates mean plasma concentrations of 15–Hydroxy-Eicosapentaenoic Acid Ethyl Ester [15(S)-HEPE] following a single oral dose of 100 mg, 500 mg, 1000 mg, and 2000 mg DS102, under fasted conditions.

What is claimed is:

1. Use of an effective amount of 15-HEPE in the manufacture of a medicament for increasing absorption of 15-HEPE in a subject in need thereof that is in a fed state.

2. The use of claim 1, wherein the 15-HEPE is in the form of an ester, a conjugate, a salt, or a combination thereof.

3. The use of claim 1, wherein the medicament comprises 100 mg to 1000 mg of 15-HEPE.

4. The use of claim 1, wherein the 15-HEPE is in free acid form.

5. The use of claim 1, wherein the 15-HEPE is in esterified form.

6. The use of claim 5, wherein the esterified form is a methyl ester form, an ethyl ester form, or a combination thereof.

7. The use of claim 5, wherein the esterified form is a triglyceride form.

8. The use of claim 1, wherein the 15-HEPE is in salt form.

9. The use of claim 1, wherein the 15-HEPE comprises 15(S)-HEPE and/or 15(R)-HEPE.

10. The use of claim 1, wherein the 15-HEPE consists of 15(S)-HEPE.

11. The use of claim 1, wherein the 15-HEPE consists of 15(R)-HEPE.

12. The use of claim 1, wherein increasing absorption of 15-HEPE in the subject treats a disease selected from the group consisting of impaired insulin sensitivity,

psoriasis, fibrosis, cancer, neurodegenerative disorders, inflammatory diseases, adipocyte differentiation, fertility or reproduction issues, pain, and obesity.