inflammatory state is a topic of recent debate. Regardless of the etiology, hypoxemia induced by bronchoconstriction and inflammation associated with asthma exacerbations will contribute to a cycle of sickling and subsequent complications of SCD. Recent studies confirm that asthma predisposes to complications of SCD such as pain crises, acute chest syndrome, and stroke, and is associated with increased mortality.

[0015] Chronic obstructive pulmonary disease (COPD) is the fourth leading cause of death in the United States, accounting for more than 110,000 deaths per year. COPD encompasses both chronic bronchitis and emphysema and is characterized by airway narrowing, air trapping, alveolar destruction, and excessive airway inflammation and oxidative stress. Cigarette smoke (CS) is the most common cause of COPD. In COPD there are marked increases in both inflammation and oxidative stress, which can be replicated in mice by exposing them to tobacco smoke.

[0016] Presently, there exist numerous regimens for the treatment of lung diseases and disorders, including short-acting bronchodilators (i.e. short-acting beta agonists), long-acting bronchodilators (i.e. long-acting beta agonists), phosphodiesterase-4 ("PDE4") inhibitors, corticosteroids, leukotriene receptor antagonists, expectorants and methylxanthines. However, such drugs are not always effective at reducing the symptoms, slowing the progression, or reversing the course of the clinical manifestation of the condition. Additionally, current regimens are limited in dose strength due to side effects and by inefficient delivery to a subject's lungs.

SUMMARY

[0017] In one aspect, the present invention refers to use of a dosage unit comprising 100 mg to about 1000 mg of 15-HEPE free acid in the manufacture of a medicament for treating chronic obstructive pulmonary disease (COPD) by daily administration, wherein the dosage unit comprises a capsule, wherein the 15-HEPE comprises at least 60%, by weight, of all fatty acids of the medicament. The present disclosure describes compositions comprising fatty acid agents including, for example, 15-HEPE (also referred to as "15-OHEPA") used singly, in combination and/or in combination with a second active agent for treatment of lung diseases or disorders, such as asthma or COPD.

[0018] The present disclosure also describes methods for treating a lung disease or disorder mediated by 15-HEPE in a subject in need thereof comprising administering to subject a pharmaceutical composition comprising a therapeutically effective amount of 15-HEPE or combinations thereof. In some examples, the pharmaceutical composition

CLAIMS

1. Use of a dosage unit comprising 100 mg to 1000 mg of 15-HEPE free acid in the manufacture of a medicament for treating chronic obstructive pulmonary disease (COPD) by daily administration, wherein the dosage unit comprises a capsule, wherein the 15-HEPE comprises at least 60%, by weight, of all fatty acids of the medicament.

2. The use of claim 1, wherein the 15-HEPE free acid comprises at least 90% by weight, of all fatty acids of the medicament.

3. The use of claim 1, wherein the 15-HEPE free acid comprises at least 95% by weight, of all fatty acids of the medicament.

4. The use of claim 1, wherein the medicament comprises 400 mg to 700 mg of 15-HEPE free acid.

5. The use of claim 4, wherein the 400 mg to 700 mg of 15-HEPE free acid is present in a dosage unit of the medicament.

6. The use of claim 4, wherein the 15-HEPE free acid comprises at least 90% by weight, of all fatty acids of the medicament.

7. The use of claim 4, wherein the 15-HEPE free acid comprises at least 95% by weight, of all fatty acids of the medicament.