methacrylate and/or ethyl methacrylate with copolymers of acrylic and methacrylic acid esters. The composition can be administered orally or parenterally. In another embodiment, the method results in improvement in liver fibrosis compared to levels before administration of the cysteamine composition. In yet another embodiment, the method results in a reduction in fat content of liver, a reduction in the incidence of or progression of cirrhosis, or a reduction in the incidence of hepatocellular carcinoma. In one embodiment, the method results in a decrease in hepatic aminotransferase levels compared to levels before administration of the cysteamine composition. In a further embodiment, the administering results in a reduction in hepatic transaminase of between approximately 10% to 40% compared to levels before treatment. In yet another embodiment, the administering results in a reduction in alanine or aspartate aminotransferase levels in a treated patient to approximately 30%, 20% or 10% above normal ALT levels, or at normal ALT levels. In yet other embodiment, the administering results in a reduction in serum ferritin levels compared to levels before treatment with the cysteamine composition. The methods and composition of the disclosure can also include administering a second agent in combination with a cysteamine composition to treat fatty liver disease. The subject can be an adult, adolescent or child.

[0006] In one embodiment~~aspect~~, the disclosure provides a method of treating a patient suffering from fatty liver disease, including NAFLD or NASH, comprising administering a therapeutically effective amount of a composition comprising a cysteamine product. In one aspect, there is provided the use of a therapeutically effective amount of a cysteamine or cystamine including pharmaceutically acceptable salts in the manufacture of a medicament for treatment of non-alcoholic steatohepatitis (NASH). In another aspect, there is provided the use of a therapeutically effective amount of a composition comprising cysteamine or cystamine, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for treating non-alcoholic fatty liver disease (NAFLD) or non-alcoholic steatohepatitis (NASH). The methods of the disclosure also include use of a cysteamine product in preparation of a medicament for treatment of fatty liver disease, and use of a cysteamine product in preparation of a medicament for

WHAT IS CLAIMED :

1. Use of a therapeutically effective amount of a cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ in the manufacture of a medicament for treatment of non-alcoholic steatohepatitis (NASH).

2. Use of a therapeutically effective amount of a composition comprising cysteamine or cystamine, or a pharmaceutically acceptable salt ~~or ester~~ thereof, in the manufacture of a medicament for treating non-alcoholic fatty liver disease (NAFLD)or non-alcoholic steatohepatitis (NASH).

3. The use of claim 1, wherein the total daily dose of cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ is 0.5-2.0 g/m^2.

4. The use of claim 1, wherein the total daily dose of cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ is 0.5-1.0 g/m^2.

5. The use of any of claims 1, 3 or 4, wherein the medicament is to be administered at a frequency of 4 or less times per day.

6. The use of claim 5, wherein the medicament is to be administered two times per day.

7. The use of any of claims 1, or 3-6, wherein the medicament is a delayed or controlled release dosage form that provides increased delivery of the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ to the small intestine.

8. The use of claim 7, wherein the delayed or controlled release dosage form comprises an enteric coating that releases the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ when the

medicament reaches the small intestine or a region of the gastrointestinal tract of a subject in which the pH is greater than pH 4.5.

9. The use of claim 8, wherein the medicament comprises a coating selected from the group consisting of polymerized gelatin, shellac, methacrylic acid copolymer type C NF, cellulose butyrate phthalate, cellulose hydrogen phthalate, cellulose proprionate phthalate, polyvinyl acetate phthalate (PVAP), cellulose acetate phthalate (CAP), cellulose acetate trimellitate (CAT), hydroxypropyl methylcellulose phthalate, hydroxypropyl methylcellulose acetate, dioxypropyl methylcellulose succinate, carboxymethyl ethylcellulose (CMEC), hydroxypropyl methylcellulose acetate succinate (HPMCAS), and acrylic acid polymers and copolymers, typically formed from methyl acrylate, ethyl acrylate, methyl methacrylate and/or ethyl methacrylate with copolymers of acrylic and methacrylic acid esters.

10. The use of any of claims 1 or 4-8 or 12-13, wherein the medicament is to be administered orally.

11. The use of claim 1, wherein the medicament is to be administered parenterally.

12. The use of claim 1, wherein administration of the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ results in improvement in liver fibrosis compared to levels before administration of the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~.

13. The use of claim 1, wherein administration of the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ results in a reduction in fat content of liver.

14. The use of claim 1, wherein administration of the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ results in a reduction in the incidence of, or progression of, cirrhosis.

15. The use of claim 1, wherein administration of the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ results in a reduction in the incidence of hepatocellular carcinoma.

16. The use of claim 1, wherein administration of the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ results in a decrease in hepatic aminotransferase levels compared to levels before administration of the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~.

17. The use of claim 1, wherein administration of the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ results in a reduction in hepatic transaminase of between approximately 10% to 40% compared to levels before treatment.

18. The use of claim 1, wherein administration of the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ results in a reduction in alanine aminotransferase levels in a treated patient to approximately 30%, 20% or 10% above normal ALT levels, or at normal ALT levels ($\geq$ 40 iu/L).

19. The use of claim 1, wherein administration of the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ results in a reduction in aspartate aminotransferase levels in a treated patient to approximately 30%, 20% or 10% above normal AST levels or to normal AST levels.

20. The use of claim 1, wherein administration of the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ results in a reduction in serum ferritin levels compared to levels before treatment with the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~.

21. The use of any one of the foregoing claims, wherein the cysteamine or cystamine including pharmaceutically acceptable salts ~~or esters~~ is to be administered with a second agent useful to treat NASH.

22. The use of any one of the foregoing claims, wherein the patient is a child or adolescent.