Claims

1. Use of medium chain triglycerides (MCT) in the manufacture of a medicament for the treatment of a disease or disorder associated with reduced cognitive function in a subject in need thereof, wherein 20 g of MCT is to be administered in a pharmaceutical composition, wherein the MCT comprises at least 95% caprylic triglyceride, and wherein the MCT composition provides a maximum serum concentration (Cmax) of total ketones within at least 3 hours after administration, when administered 30 minutes after a standard meal and in the absence of proteins, wherein the Cmax of total ketones is at least 400 μmol/L, at least 450 μmol/L, or at least 500 μmol/L.

2. The use of claim 1, wherein the MCT composition provides a maximum serum concentration (Cmax) of total ketones within at least 2.5 hours after administration, at least 2 hours after administration, at least 1.5 hours after administration, or at least 1 hour after administration.

3. Use of medium chain triglycerides (MCT) in the manufacture of a medicament for the treatment of a disease or disorder associated with reduced cognitive function in a subject in need thereof, wherein 20 g of MCT is to be administered in a pharmaceutical composition, wherein the MCT comprises at least 95% caprylic triglyceride, and wherein the MCT composition provides a maximum serum concentration (Cmax) of b-hydroxybutyrate (BHB) within at least 3 hours after administration, when administered 30 minutes after a standard meal and in the absence of proteins, wherein the Cmax of BHB is at least 400 μmol/L, at least 450 μmol/L, or at least 500 μmol/L.

4. The use of claim 3, wherein the MCT composition provides a maximum serum concentration (Cmax) of BHB within at least 2.5 hours after administration, at least 2 hours after administration, at least 1.5 hours after administration, or at least 1 hour after administration.

5. Use of medium chain triglycerides (MCT) in the manufacture of a medicament for the treatment of a disease or disorder associated with reduced cognitive function in a subject in need thereof, wherein 20 g of MCT is to be administered in a pharmaceutical composition, wherein the MCT comprises at least 95% caprylic triglyceride, and wherein the MCT composition provides a

maximum serum concentration (Cmax) of acetoacetate (AcAc) within at least 2.5 hours after administration, when administered 30 minutes after a standard meal and in the absence of proteins, wherein the Cmax of AcAc is at least 50 umol/L, at least 60 umol/L, at least 70 umol/L, at least 80 umol/L, at least 90 umol/L, or at least 100 umol/L.

6. The use of claim 5, wherein the MCT composition provides a maximum serum concentration (Cmax) of AcAc within at least 2 hours after administration, at least 1.5 hours after administration, or at least 1 hour after administration.

7. The use of any one of claims 1, 3, 5, and 6, wherein the MCT pharmaceutical composition is stable at a pH of about 1 to about 3.

8. Use of medium chain triglycerides (MCT) in the manufacture of a medicament for the treatment of a disease or disorder associated with reduced cognitive function in a subject in need thereof, wherein 20 g of MCT is to be administered in a pharmaceutical composition, wherein the MCT comprises at least 95% caprylic triglyceride, and wherein the MCT composition provides a maximum serum concentration (Cmax) of total ketones after at least 2.5 hours after administration, when administered 30 minutes after a standard meal and in the presence of proteins, wherein the therapeutically effective amount of MCT is 20 g and wherein the Cmax of total ketones is at least 200 μmol/L, at least 250 μmol/L, at least 300 μmol/L, or at least 350 μmol/L.

9. The use of claim 8, wherein the MCT composition provides a maximum serum concentration (Cmax) of total ketones after at least 3.0 hours after administration, after at least 3.5 hours after administration, after at least 4.0 hours after administration, or after at least 5 hours after administration.

10. Use of medium chain triglycerides (MCT) in the manufacture of a medicament for the treatment of a disease or disorder associated with reduced cognitive function in a subject in need thereof, wherein 20 g of MCT is to be administered in a pharmaceutical composition, wherein the MCT comprises at least 95% caprylic triglyceride, and wherein the MCT composition provides a

maximum serum concentration (Cmax) of b-hydroxybutyrate (BHB) after at least 2.5 hours after administration, when administered 30 minutes after a standard meal and in the presence of proteins, wherein the Cmax of BHB is at least 200 μmol/L, at least 250 μmol/L, at least 300 μmol/L, or at least 350 μmol/L.

11. The use of claim 10, wherein the MCT composition provides a maximum serum concentration (Cmax) of BHB after at least 3.0 hours after administration, after at least 3.5 hours after administration, after at least 4.0 hours after administration, or after at least 5 hours after administration.

12. The use of any one of claims 8, 9, 10, and 11, wherein the MCT pharmaceutical composition is stable at a pH of about 5 to about 7.

13. The use of any one of claims 1, 3, 5, 8 and 10 , wherein the disease or disorder associated with reduced cognitive function is selected from Alzheimer's Disease and Age-Associated memory impairment.

14. The use of any one of claims 1, 3, 5, 8, and 10 , wherein the subject lacks the ApoE4 genotype.

15. The use of any one of claims 1, 2, 3, 4, 5, 6, 10, and 11, wherein the amount of total ketones, BHB, and/or AcAc is determined using enzymatic methods.

16. The , the use of any one of claims 1-15wherein the MCT pharmaceutical composition is an emulsion.

17. The use of claim 16, wherein the emulsion has a mean droplet diameter of between about 100 nm and about 1000 nm, about 100 nm and about 500 nm, or about 200 nm and about 300 nm.

18. The use of any one of claims 1-17, wherein the MCT pharmaceutical composition comprises at least 98% caprylic triglyceride.

19. The use of any one of claims 1-18, wherein the subject in need thereof is a human.