Claims

What is claimed is:

1. Use of a nutritional composition comprising an exosome-enriched product comprising intact bovine milk-derived exosomes in the manufacture of a medicament to promote healthy catch-up growth in a pediatric individual, wherein the nutritional composition comprising the exosome-enriched product comprising intact bovine milk-derived exosomes is to be administered to the pediatric individual during a period of weight gain.

2. The use of claim 1, wherein the healthy catch-up growth enhances development of lean body mass during the period of weight gain.

3. The use of claim 1 or 2, wherein the healthy catch-up growth reduces development of catch-up fat during the period of weight gain.

4. The use of any one of claims 1-3, wherein the healthy catch-up growth increases a growth rate during the period of weight gain.

5. The use of any one of the preceding claims, wherein the pediatric individual is a child at or under the age of about 15 years old, or at or under the age of about 10 years old, or at or under the age of about 5 years old, or at or under the age of about 1 year old, or at or under the age of about 6 months old, or at or under the age of about 3 months old.

6. The use of any one of the preceding claims, wherein the pediatric individual is a child at the age of about 5 years old to about 19 years old.

7. The use of any one of the preceding claims, wherein the pediatric individual is suffering from a condition comprising at least one of malnourishment, severe weight loss, wasting, under nutrition weight loss, underweight, growth stunt, or any combination thereof.

8. The use of any one of the preceding claims, wherein the pediatric individual is suffering from malnutrition.

9. The use of any one of the preceding claims, wherein the medicament further comprises one or more of a carbohydrate, a protein and/or a fat.

10. The use of claim 9, wherein the medicament comprises one or more carbohydrates comprising fiber, human milk oligosaccharides (HMOs), maltodextrin, corn maltodextrin, organic corn, corn syrup, sucralose, cellulose gel, cellulose gum, gellan gum, inositol, carrageenan, fructooligosaccharides, hydrolyzed starch, glucose polymers, corn syrup solids, rice-derived carbohydrates, sucrose, glucose, lactose, honey, sugar alcohols, isomaltulose, sucromalt, pullulan, potato starch, galactooligosaccharides, oat fiber, soy fiber, corn fiber, gum arable, sodium carboxymethylcellulose, methylcellulose, guar gum, locust bean gum, konjac flour, hydroxypropyl methylcellulose, tragacanth gum, karaya gum, gum acacia, chitosan, arabinoglactins, glucomannan, xanthan gum, alginate, pectin, low methoxy pectin, high methoxy pectin, cereal beta-glucans, psyllium, inulin, cornstarch, or combinations of two or more thereof.

11. The use of claim 9 or 10, wherein the medicament comprises one or more carbohydrates comprising sucrose, maltodextrin, cornstarch, fructooligosaccharides, cellulose, or combinations of two or more thereof.

12. The use of any one of claims 9-11, wherein the medicament comprises one or more proteins comprising whey protein concentrate, whey protein isolate, whey protein hydrolysate, acid casein, sodium caseinate, calcium caseinate, potassium caseinate, casein hydrolysate, milk protein concentrate, organic milk protein concentrate, milk protein isolate, milk protein hydrolysate, nonfat dry milk, condensed skim milk, soy protein concentrate, isolated soy protein, soy protein hydrolysate, pea protein concentrate, pea protein isolate, pea protein hydrolysate, collagen protein, collagen protein isolate, L-Carnitine, taurine, lutein, rice protein concentrate, rice protein isolate, rice protein hydrolysate, fava bean protein concentrate, fava bean protein isolate, fava bean protein hydrolysate, meat proteins, potato proteins, chickpea proteins, canola proteins, mung proteins, guinea proteins, amaranth proteins, chia proteins, hemp proteins, flax seed proteins, earthworm protein, insect protein, one or more amino acids and/or metabolites thereof, or combinations of two or more thereof.

13. The use any one of claims 9-12, wherein the medicament comprises one or more proteins comprising milk protein concentrate, isolated soy protein, calcium caseinate, or combinations of two or more thereof.

14. The use of any one of claims 9-13, wherein the medicament comprises milk protein and/or soy protein.

15. The use of any one of claims 9-14, wherein the medicament comprises one or more fats comprising coconut oil, fractionated coconut oil, soy oil, soy lecithin, corn oil, safflower oil, high oleic sunflower oil, palm olein, canola oil monoglycerides, lecithin, medium chain triglycerides, linoleic acid, alpha-linolenic acid, arachidonic acid, eicosapentaenoic acid,

docosahexaenoic acid, olive oil, medium chain triglyceride oil (MCT oil), high gamma linolenic (GLA) safflower oil, palm oil, palm kernel oil, canola oil, marine oils, fish oils, algal oils, borage oil, cottonseed oil, fungal oils, interesterified oils, transesterified oils, structured lipids, or combinations of two or more thereof.

16. The use of any one of claims 9-15, wherein the medicament comprises one or more fats comprising canola oil, soy oil, medium chain triglyceride oil, and high oleic sunflower oil, or combinations of two or more thereof.

17. The use of any one of the preceding claims, wherein the medicament is to be administered to the pediatric individual orally.

18. The use of any one of the preceding claims, wherein the medicament is to be administered as part of a catch-up diet.

19. Use of an exosome-enriched product comprising intact bovine milk-derived exosomes in the manufacture of a medicament to promote healthy catch-up growth in an underweight individual, wherein the exosome-enriched product comprising intact bovine milk-derived exosomes is to be administered to the individual.

20. The use of claim 19, wherein the individual comprises an individual experiencing a period of severe weight loss.

21. The use of claim 19 or 20, wherein the individual is a moderately malnourished pediatric individual.

22. The use of claim 21, wherein the moderately malnourished pediatric individual suffers from one or more of stunting and wasting.

23. The use of any one of the preceding claims, wherein promoting healthy catch-up growth is achieved by at least one of increasing lean body mass, increasing weight, reducing fat mass accumulation, increasing growth rate, or any combinations thereof during a period of weight gain.

24. The use of any one of the preceding claims, wherein the medicament is to be administered chronically during the period of weight gain.