CLAIMS

~~What is claimed is:~~

1. A fiber blend comprising

at least 15 wt% of one or more pea fiber preparation or a glycan equivalent thereof; and

at least one additional fiber preparation chosen from

- at least 28 wt% of one or more high molecular weight inulin preparation or a glycan equivalent thereof,
- between 0 wt% and 10 wt%, inclusive, of one or more citrus pectin preparation or a glycan equivalent thereof,
- between 0 wt% and 25 wt%, inclusive, of one or more citrus fiber preparation or a glycan equivalent thereof, or
- between 0 wt% and 45 wt%, inclusive, of one or more barley fiber preparation or a glycan equivalent thereof.

2. The fiber blend of claim 1, which comprises at least 28 wt% of one or more pea fiber preparation, or a glycan equivalent thereof.

3. The fiber blend of claim 2, which comprises at least 30 wt% of one or more pea fiber preparation, or a glycan equivalent thereof; and there is at least 30 wt% of one or more high molecular weight inulin preparation, or a glycan equivalent thereof.

4. The fiber blend of any one of claims 1-3, which comprises less than 1 wt% of one or more citrus pectin preparation~~,~~ or a glycan equivalent thereof, or comprises no citrus pectin preparation or a glycan equivalent thereof.

~~5. The fiber blend of any of claims 1-4, which comprises no citrus pectin preparation, or a glycan equivalent thereof.~~

~~6~~5. The fiber blend of any one of claims 1-~~4~~5, which comprises 15 wt% or less of one or more citrus fiber preparation or a glycan equivalent thereof, or 12 wt% or less of one or more citrus fiber preparation or a glycan equivalent thereof.

~~7. The fiber blend of claim 1, 5, or 6, wherein the citrus fiber preparation is an orange fiber preparation.~~

~~8~~6. The fiber blend of any one of claims 1-~~5~~7, which comprises is 25 wt% or less of one or more barley fiber preparation or glycan equivalent thereof, or 20 wt% or less of one or more barley fiber preparation, or glycan equivalent thereof.

~~9~~7. The fiber blend of any one of claims 1 to 6 ~~the preceding claims~~, wherein

the pea fiber preparation has a composition substantially similar to the pea fiber preparation of Table A or Table G, and/or a monosaccharide content substantially similar to the pea fiber preparation of Table B or Table G, and optionally glycosyl linkages substantially similar to the pea fiber preparation of Table C1 or Table C2;

the high molecular weight inulin preparation has a composition substantially similar to the high molecular weight inulin preparation of Table A or Table G;

the barley fiber preparation has a composition substantially similar to the barley fiber preparation of Table A or Table G, and/or a monosaccharide content substantially similar to the barley fiber preparation of Table B or Table G, and optionally glycosyl linkages substantially similar to the barley fiber preparation of Table E;

the citrus fiber preparation has a composition substantially similar to the citrus fiber preparation of Table A or Table G, and/or a monosaccharide content substantially similar to the citrus fiber preparation of Table B or Table G, and optionally glycosyl linkages substantially similar to the citrus fiber preparation of Table F1 or Table F2.

~~10~~8. The fiber blend of claim 1, which comprises

about 25 wt% to about 40 wt% of one or more pea fiber preparation or a glycan equivalent thereof, about 5 wt% to about 15 wt% of one or more citrus fiber preparation or a glycan equivalent thereof, about 30 wt% to about 40 wt% of a high molecular

weight inulin preparation or glycan equivalent thereof, about 10 wt % to about 30 wt% of a barley fiber preparation or glycan equivalent thereof; or

about 30 wt% to about 40 wt% of one or more pea fiber preparation or a glycan equivalent thereof, about 10 wt% to about 20 wt% of one or more citrus fiber preparation or a glycan equivalent thereof, about 30 wt% to about 40 wt% of a high molecular weight inulin preparation or glycan equivalent thereof, about 15 wt % to about 25 wt% of a barley fiber preparation or glycan equivalent thereof; or

about 55 wt% to about 65 wt% of one or more pea fiber preparation or a glycan equivalent thereof and about 30 wt% to about 40 wt% of a high molecular weight inulin preparation or glycan equivalent thereof; or

about 60 wt% to about 70 wt% of one or more pea fiber preparation or a glycan equivalent thereof and about 30 wt% to about 40 wt% of a high molecular weight inulin preparation or glycan equivalent thereof; or

about 60 wt% to about 65 wt% of one or more pea fiber preparation or a glycan equivalent thereof and about 35 wt% to about 40 wt% of a high molecular weight inulin preparation or glycan equivalent thereof.

~~11~~9. The fiber blend of claim 10, which comprises less than 1 wt% of one or more citrus pectin preparation, or a glycan equivalent thereof.

~~12~~10. The fiber blend of any one of claims 1, 5, 8 or 9~~10 or 11~~, wherein the citrus fiber preparation is an orange fiber preparation.

~~13~~11. The fiber blend of any one of claims 8 to 10~~, 11 or 12~~, wherein

the pea fiber preparation has a composition substantially similar to the pea fiber preparation of Table A or Table G, and/or a monosaccharide content substantially similar to the pea fiber preparation of Table B or Table G, and optionally glycosyl linkages substantially similar to the pea fiber preparation of Table C1 or Table C2;

the high molecular weight inulin preparation has a composition substantially similar to the high molecular weight inulin preparation of Table A or Table G;

the barley fiber preparation has a composition substantially similar to the barley fiber preparation of Table A or Table G, and/or a monosaccharide content substantially similar to the barley fiber preparation of Table B or Table G, and optionally glycosyl linkages substantially similar to the barley fiber preparation of Table E;

the citrus fiber preparation has a composition substantially similar to the citrus fiber preparation of Table A or Table G, and/or a monosaccharide content substantially similar to the citrus fiber preparation of Table B or Table G, and optionally glycosyl linkages substantially similar to the citrus fiber preparation of Table F1 or Table F2.

~~14~~12. A food composition comprising a fiber blend of any one of claims 1 to 11 ~~the preceding claims~~.

~~15~~13. A baked, pressed or extruded food composition comprising a fiber blend of any one claims 1 to 11~~3~~.

~~16~~14. The food composition of any one of claims 12 to 13 ~~14 or 15~~, wherein the fiber blend is about 30 wt% to about 50 wt% of the food composition.

~~17. The food composition of any one of claims 14, 15, or 16, wherein the fiber blend provides about 30% or more of the total dietary fiber in the food composition or about 50% or more of the total dietary fiber in the food composition.~~

~~18~~15. The food composition of any one of claims 12 to 14 ~~to 17~~, wherein the fiber blend is in an amount that provides about 3 g to about 10 g of total dietary fiber.

~~19~~16. The food composition of any one of claims 12 to 15~~4 to 18~~, wherein the food composition further comprises flour(s), meal(s), oil(s), fat(s), inclusions, sweetener(s), starch(es), salt(s), emulsifier(s), leavening agent(s), preservative(s), a color additive, a flavor, a flavor enhancer, a stabilizer, a humectant, a firming agent, an enzyme, a probiotic, a spice, a binder, fruit, vegetables, grains, vitamins, minerals or combinations thereof.

~~20. The food composition of claim 19, wherein the food composition comprises one or more flour and/or meal in an amount that is about 10 wt% of the food composition to about 60 wt% of the food composition.~~

~~21. The food composition of claim 20, wherein the one or more flour is chosen from wheat four, rice flour, corn flour, or any combination thereof.~~

~~22. The food composition of any one of claims 19 to 21, wherein the food composition comprises one or more sweetener in an amount that is about 0.005 wt% of the food composition to about 40 wt% of the food composition.~~

~~23. The food composition of claim 22, wherein the one or more sweetener is sugar.~~

~~24. The food composition of any one of claims 19 to 23, wherein the food composition comprises one or more salt in an amount that is about 0.5 wt% of the food composition to about 5 wt% of the food composition.~~

~~25. The food composition of claim 24, wherein the one or more salt is a sodium salt.~~

~~26. The food composition of any one of claims 19 to 25, wherein the food composition comprises one or more emulsifier in an amount that is about 0.1 wt% of the food composition to about 2 wt% of the food composition.~~

~~27. The food composition of claim 26, wherein the one or more emulsifier is chosen from glycerol monostearate, lecithin, polysorbate, or other mono or diglycerides.~~

~~28. The food composition of any one of claim 19 to 27, wherein the food composition comprises one or more leavening agent in an amount that is about 0.1 wt% of the food composition to about 5 wt% of the food composition.~~

~~29. The food composition of claim 28, wherein the one or more leavening agent is chosen from sodium bicarbonate, monocalcium phosphate, or calcium carbonate, ammonium bicarbonate, mono calcium phosphate monohydrate, sodium acid pyrophosphate, sodium aluminum phosphate, organic acids, and yeast.~~

~~30. The food composition of any one of claims 19 to 27, wherein the food composition further comprises a color additive, a flavor, a flavor enhancer, a stabilizer, a humectant, a firming agent, an enzyme, a probiotic, a spice, a binder, fruit, vegetables, grains, vitamins, minerals or combinations thereof.~~

~~31. The food composition of any one of claims 19 to 30, wherein food composition is a baked food composition that has about 3 g to about 10 g of total dietary fiber in a 30 g serving.~~

~~32. The baked food composition of claim 31, wherein the baked food composition has about 3 g, about 6 g, or about 10 g of total dietary fiber in a 30 g serving.~~

~~33. The baked food composition of claim 31 or 32, wherein the baked food composition is a cracker, a cookie, a cake, a bar, a bread, or a muffin.~~

~~34. The food composition of any one of claims 19 to 30, wherein food composition is an extruded food composition that has about 3 g to about 10 g of total dietary fiber in a 30 g serving.~~

~~35. The extruded food composition of claim 34, wherein the extruded food composition has about 3 g, about 6 g, or about 10 g of total dietary fiber in a 30 g serving~~.

~~36. The extruded food composition of claim 35, wherein the extruded food composition has about 10 g of total dietary fiber in a 30 g serving.~~

~~37. The extruded food composition of claim 35 or 36, wherein the extruded food composition is an extruded pillow or any other extruded shape.~~

3817. A food composition of any one of claims 12 to 16~~-37~~, wherein administration of the food composition at least once daily for a minimum of five days to a subject increases the abundance of one or more member of at least one CAZyme family measured in a fecal sample obtained from the subject wherein the one or more member of at least one CAZyme family include α-L-arabinofuranosidase (GH43_33), β-galactosidase (GH147), N-acetylmuramidase (GH108), endo-1,2,-α-mannanase (GH99), and β-glucosidase (GH116).

~~39. A food composition of claim 38, wherein the one or more member of at least one CAZyme family is selected from the group consisting of α-L-arabinofuranosidase (GH43_33), β-galactosidase (GH147), N-acetylmuramidase (GH108), endo-1,2,-α-mannanase (GH99), and β-glucosidase (GH116).~~

~~40~~18. A food composition of any one of claims 12 to 16~~-37~~, wherein administration of the food composition at least once daily for a minimum of five days to a subject changes the abundance of one or more proteins measured in a blood sample obtained from the subject toward a healthier state.

~~41~~19. A food composition of claim 18~~-40~~, wherein administration of the food composition at least once daily for a minimum of five days to a subject decreases the abundance of one or more proteins selected from the group consisting of CCL3, CRP, SPP1, F2, F3, VEGFA, PDGFRB, EFNA5, EPHA1, EPHA2, and IL1R1, or administration of the food composition at least once daily for a minimum of five days to a subject decreases the abundance of one or more proteins selected from the group consisting of C3, C1R, C4A/C4B, SERPINE1, MASP1, and PDGFRA.

~~42. A food composition of claim 40, wherein administration of the food composition at least once daily for a minimum of five days to a subject decreases the abundance of~~

~~one or more proteins selected from the group consisting of C3, C1R, C4A/C4B, SERPINE1, MASP1, and PDGFRA.~~

~~43~~20. A food composition of claim 18~~-40~~, wherein administration of the food composition at least once daily for a minimum of five days to a subject decreases the abundance of AGRP, and/or decreases fasting blood glucose, fasting insulin, and HOMA-IR.

~~44. A food composition of any one of claims 1-37, wherein administration of the food composition at least once daily for a minimum of five days to a subject decreases fasting blood glucose, fasting insulin, and HOMA-IR.~~

~~45. The food composition of any one of claims 38 to 44, wherein the subject is on a Western diet.~~

~~46. A food composition of any one of claims 1-37, wherein administration of the food composition at least once daily for a minimum of five days to a subject consuming a Western diet reduces weight gain in the subject, as measured against a population of similar subjects consuming a Western diet without administration of the food composition.~~