~~**What is claimed is:**~~

CLAIMS

1. ~~A~~ A non-therapeutic method for reducing ~~at least one of~~ the bioavailability ~~and absorption of at least one~~ of ingested fat~~, carbohydrates, and unwanted substances~~ from foodstuff in a subject, the method comprising:

administering an amount of a nanobiopolymer, or combinations of nanobiopolymers, sufficient to reduce ~~at least one of~~ the bioavailability ~~and absorption~~ of ingested fat~~, carbohydrates, and unwanted substances~~ to a subject~~.~~

~~2. The method of claim 1, wherein the unwanted substances are at least one of glucose, heavy metals,and pesticides.~~

~~3. The method of claim 1, wherein the nanobiopolymer is a chemically unmodified nanobiopolymer.~~

~~4. The method of claim 1, ~~ , wherein the nanobiopolymer is selected from the group consisting of cellulose nanofibers, cellulose nanocrystals~~, chitosan, kefiran,~~ and ~~okara.~~combinations thereof,

~~5. The method of claim 1,~~ wherein, when the nanobiopolymer is cellulose nanofibers ~~or~~, the nanobiopolymer comprises fibrillar nanocellulose made by mechanical milling and having an aspect ratio of length to diameter greater than one and having a diameter ranging from 1 nm up to 100 nm; and

wherein, when the nanobiopolymer is cellulose nanocrystals~~.~~

~~6. The method of claim 5, wherein,~~ the cellulose ~~nanofibers or cellulose~~ nanocrystals comprise ~~at least one of alkyl, carboxy, carboxyalkyl, and hydroxyalkylated~~nanocrystalline cellulose made by chemical means and the nanocrystalline cellulose~~.~~ ranges in diameter from 1 nm to 250 nm, and

~~7. The method of claim 6, wherein the cellulose nanofibers or cellulose nanocrystals comprise at least one of methylcellulose, carboxymethyl cellulose, ethylcellulose, cellulose acetate, hydroxypropyl cellulose, hydroxypropyl methy cellulose, and ethyl methyl cellulose.~~

further wherein the bioavailability of the ingested fat is reduced by at least 30%.

~~8.~~ 2. The method of claim 1, wherein the nanobiopolymer is incorporated into the foodstuff; is administered separately from the foodstuff; or is incorporated into the foodstuff and is administered separately from the foodstuff.

~~9.~~ 3. The method of claim 1, wherein the amount of ~~a~~the nanobiopolymer sufficient to reduce ~~at least one of~~ the bioavailability ~~and absorption of at least one~~ of ingested fat~~, carbohydrates, and unwanted substances~~ from foodstuff is from ~~about~~ 0.75% to ~~about~~ 1.5% by weight of the foodstuff.

~~10.~~ 4. The method of claim 1, wherein the ~~at least one of the~~ bioavailability ~~and absorption of at least one~~ of ingested fat~~, carbohydrates, and unwanted substances~~ is reduced by at least ~~30%.~~ 50%.

~~11.~~ 5. The method of claim 1, wherein the fat comprises triglycerides.

~~12.~~ 6. The method of claim 1, wherein the ~~at least one of the~~ bioavailability ~~and absorption~~ of ingested fat is reduced by a reduction in translocation, in the subject's intestinal epithelium, of free fatty acids from triglycerides.

~~13.~~ 7. The method of claim 1, wherein the ~~at least one of the~~ bioavailability ~~and absorption~~ of ingested fat is reduced by modulating pancreatic lipase activity.

~~14.~~ 8. The method of claim 1, wherein the ~~at least one of the~~ bioavailability ~~and absorption~~ of ingested fat is reduced by inhibiting the hydrolysis of triglycerides.

~~15. A method for reducing serum levels of triglycerides, the method comprising:~~

~~administering an amount of nanobiopolymer sufficient to reduce serum levels of triglycerides to a subject.~~

~~16.~~ 9. The method of claim ~~15, wherein the amount of a nanobiopolymer sufficient to reduce serum levels of triglycerides is from about 0.75% to about~~ 1.5% by weight of the ~~foodstuff.~~

~~17. The method of any preceding claim, wherein the nanobiopolymer comprises fibrillar nanocellulose made by mechanical milling, nanocrystalline cellulose made by chemical means or combinations thereof.~~

~~18. The method of claim 17~~, wherein the fibrillar nanocellulose ranges in fiber diameter from ~~about~~ 15 nm to ~~about 500~~100 nm.

~~19. The method of claim 17, wherein the nanocrystalline cellulose ranges in diameter from about 1 nm to about 250 nm.~~

~~20.~~ 10. The method of claim 1, wherein the subject is a human subject.