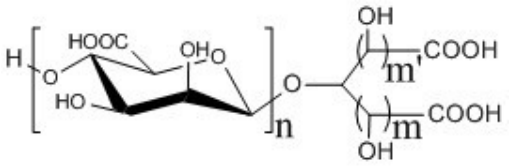
CLAIMS

1. A mannuronic diacid oligosaccharide composition, comprising a mixture of mannuronic diacid of Formula (III) or a pharmaceutically acceptable salt thereof:



Formula (III)

wherein n is an integer from 1 to 9, m is 0, 1 or 2, and m' is 0 or 1,

and wherein,

the total weight of mannuronic diacids wherein n = 1-5 is 80-95% of the total weight of the composition; ~~and~~

the ratio of the total weight of mannuronic diacids wherein n = 1-3 to the total weight of mannuronic diacids wherein n = 4-7 is between 1.0 and 3.5; and

the total weight of mannuronic diacids wherein m + m' = 1 and 2 is not less than 50% of the total weight of the composition.

2. The mannuronic diacid oligosaccharide composition according to claim 1, wherein the total weight of mannuronic diacids wherein m + m' = 1 ~~or~~ and 2 is not less than ~~50% or more, preferably~~ 60-90%, ~~more~~ preferably 70-90% of the total weight of the composition.

3. The mannuronic diacid oligosaccharide composition according to claim ~~2~~1, wherein the total weight of mannuronic diacids wherein m + m' = 1 is not less than 10%, preferably 30-40% of the total weight of the composition.

4. The mannuronic diacid oligosaccharide composition according to claim 1, wherein the total weight of mannuronic diacids wherein m + m' = 2 is not less than 10%, preferably 30-50% of the total weight of the composition.

~~5. The mannuronic diacid oligosaccharide composition according to claim 1, wherein the total weight of the mannuronic diacids wherein n = 1-5 is 80-95% of the total weight of the composition.~~

~~6~~5. The mannuronic diacid oligosaccharide composition according to claim 1, wherein the total weight of the mannuronic diacids wherein n = 1-3 is 20-70% of the total weight of the composition.

~~7~~6. The mannuronic diacid oligosaccharide composition according to claim 1, wherein the ratio of the total weight of the mannuronic diacids wherein n = 1-3 to the total weight of the mannuronic diacids wherein n = 4-7 is between 1.0 and 3.5.

~~8~~7. The mannuronic diacid oligosaccharide composition according to claim ~~7~~6, wherein the ratio of the total weight of the mannuronic diacids wherein n = 1-3 to the total weight of the mannuronic diacids wherein n = 4-7 is between 1.0 and 3.0.

~~9~~8. The mannuronic diacid oligosaccharide composition of any one of claims 1 to ~~8~~7, wherein the weight percentages of mannosonic diacids with difference polymerization degrees in the composition are: 5-25% disaccharide, 15-30% trisaccharide, 15-25% tetrasaccharide, 10-25% pentasaccharide, 5-15% hexasaccharide, 3-10% heptasaccharide, 2-5% octasaccharide, 1-5% nonasaccharide, and 1-5% decasaccharide.

~~10~~9. The mannuronic diacid oligosaccharide composition according to claim ~~9~~8, wherein the weight percentages of mannosonic diacids with difference polymerization degrees in the composition are: 10-20% disaccharide, 18-30% trisaccharide, 15-25% tetrasaccharide, 15-20% pentasaccharide, 5-10% hexasaccharide, 3-5% heptasaccharide, 2-3% octasaccharide, 1-3% nonasaccharide, and 1-3% decasaccharide.

~~11~~10. The mannuronic diacid oligosaccharide composition of any one of claims 1 to ~~10~~9, wherein the pharmaceutically acceptable salt is a sodium salt or a potassium salt.

~~12~~11. A pharmaceutical composition or health care product, comprising an effective amount of the mannuronic diacid oligosaccharide composition of any one of claims 1 to ~~11~~10, and, if necessary, a suitable carrier.

~~13~~12. Use of the mannuronic diacid oligosaccharide composition of any one of claims 1 to ~~11~~ 10 in the manufacture of an anti-senile dementia medicament.

~~14~~13. The mannuronic diacid oligosaccharide composition of any one of claims 1 to ~~11~~ 10 for use as an anti-senile dementia medicament.

~~15~~14. A method for preparing a mannuronic diacid oligosaccharide and a composition thereof by ozone oxidative degradation, by which the components or composition as defined in any one of claims 1 to ~~11~~ 10 is prepared.

~~16~~15. The method for preparing an oligosaccharide and a composition thereof by ozone oxidative degradation according to claim ~~15~~14, wherein: the oxidation reaction is carried out at a temperature of 0-70 °C, preferably 10-45 °C; the oxidative degradation step is carried out at a pH of 3-13, preferably 4-10, more preferably 6-8.