【CLAIMS】

~~1. An ophthalmic nanoemulsion composition comprising:~~

~~cyclosporine~~

~~one or more nonaqueous solvents selected from a group consisting of vegetable oils, C_{14}-C_{20} fatty acid esters and C_6-C_{12} fatty acid esters of glycerol;~~

~~one or more hydrophilic emulsifiers;~~

~~one or more hydrophobic emulsifiers; and~~

~~an aqueous solvent.~~

~~2. An ophthalmic nanoemulsion composition having an average particle size range of 1 nm to 100 nm comprising:~~

~~cyclosporine in the amount of 0.02 to 0.3 w/v% based on the total amount of the composition;~~

~~one or more nonaqueous solvents in the amount of 0.1 to 2.5 w/v% based on the total amount of the composition selected from the group consisting of vegetable oils, C_{14}-C_{20} fatty acid esters and C_6-C_{12} fatty acid esters of glycerol;~~

~~one or more hydrophilic emulsifiers in the amount of 0.1 to 5.0 w/v% based on the total amount of the composition selected from a group consisting of polyoxyethylene hydrogenated castor oils, polyoxyethylene sorbitan fatty acid esters and polyoxyethylene fatty acid esters;~~

~~one or more hydrophobic emulsifiers in the amount of 0.1 to 5.0 w/v% based on the total amount of the composition selected from a group consisting of sorbitan fatty acid esters, glycerin fatty acid esters, diethylene glycol monoethyl ether, polyethylene glycols, propylene glycol and propylene glycol esters of fatty acids; and~~

~~an aqueous solvent.~~

~~3. The ophthalmic nanoemulsion composition according to claim 2, wherein the nonaqueous solvent is at least one selected from a group consisting of castor oil, labrafac, miglyol 812, ethyl oleate and isopropyl myristate.~~

~~4. The ophthalmic nanoemulsion composition according to claim 3, wherein the nonaqueous solvent is the castor oil.~~

~~5. The ophthalmic nanoemulsion composition according to claim 2, wherein the hydrophilic emulsifier is the polyoxyethylene hydrogenated castor oil or the polyoxyethylene sorbitan fatty acid ester.~~

~~6. The ophthalmic nanoemulsion composition according to claim 2, wherein the hydrophobic emulsifier is at least one selected from a group consisting of the polyethylene glycol, the propylene glycol and the diethylene glycol monoethyl ether.~~

~~7. The ophthalmic nanoemulsion composition according to claim 2, wherein the ophthalmic nanoemulsion composition further comprises one or more stabilizers selected from a group consisting of carboxymethyl cellulose(CMC), hydroxypropyl methylcellulse(HPMC), hydroxyethylcellulose(HEC), polyvinyl alcohol(PVA), polyvinylpyrrolidone(PVP), carbomer, gellan gum, xanthan gum, hyaluronic acid(HA), sodium hyaluronate, sodium alginate and dextran.~~

~~8. The ophthalmic nanoemulsion composition according to claim 7, wherein the amount of the stabilizer is 0.01 - 2.0 w/v% based on the total amount of the composition.~~

~~9. The ophthalmic nanoemulsion composition according to any one of claims 2-8, wherein a maximum particle size of the ophthalmic nanoemulsion composition is equal to or less than 220 nm.~~

~~10.~~1. An ophthalmic nanoemulsion composition having an average particle size range of 1 nm to 100 nm comprising:

cyclosporine in ~~the~~an amount of 0.02 - 0.3 w/v% based on the total amount of the composition;

castor oil in the amount of 8 times or more of the amount of the cyclosporine to 2.5 w/v% or less based on the total amount of the composition;

a hydrophilic emulsifier that is polyoxyl 35 castor oil in the amount of 1.6 times or more of the amount of the castor oil to 5.0 w/v% or less based on the total amount of the composition;

one or more hydrophobic emulsifiers selected from a group consisting of polyethylene glycols, propylene glycol and diethylene glycol monoethyl ether, and the amount of the hydrophobic emulsifiers is 0.1 w/v% or more based on the total amount of the composition to 3 times or less based on the amount of the hydrophilic emulsifier; and

an aqueous solvent.

~~one or more hydrophilic emulsifiers selected from the group consisting of polyoxyethylene hydrogenated castor oils, polyoxyethylene sorbitan fatty acid esters and polyoxyethylene fatty acid esters;~~

~~one or more hydrophobic emulsifiers selected from the group consisting of sorbitan fatty acid esters, glycerin fatty acid esters, diethylene glycol monoethyl ether, polyethylene glycols, propylene glycol and propylene glycol esters of fatty acids; and~~

~~an aqueous solvent.~~

2. The ophthalmic nanoemulsion composition according to claim 1, wherein the ophthalmic nanoemulsion composition further comprises one or more stabilizers selected from a group consisting of carboxymethyl cellulose(CMC), hydroxypropyl methylcellulose(HPMC), hydroxyethylcellulose(HEC), polyvinyl alcohol(PVA), polyvinylpyrrolidone(PVP), carbomer, gellan gum, xanthan gum, hyaluronic acid(HA), sodium hyaluronate, sodium alginate and dextran.

3. The ophthalmic nanoemulsion composition according to claim 2, wherein the stabilizer is at least one selected from a group consisting of carboxymethyl cellulose(CMC), xanthan gum, hyaluronic acid(HA) and sodium hyaluronate, and
the amount of the stabilizers is 0.01 - 2.0 w/v% based on the total amount of the composition.

4. The ophthalmic nanoemulsion composition according to claim 3, wherein the stabilizer is at least one selected from a group consisting of carboxymethyl cellulose(CMC) and xanthan gum.

5. The ophthalmic nanoemulsion composition according to claim 1, wherein the hydrophobic emulsifier is at least one selected from a group consisting of the polyethylene glycols and the propylene glycol.

6. The ophthalmic nanoemulsion composition according to claim 1, wherein the hydrophobic emulsifier is the polyethylene glycols and the propylene glycol.

~~11. The ophthalmic nanoemulsion composition according to claim 10, wherein the hydrophilic emulsifier is the polyoxyethylene hydrogenated castor oil and~~
~~the amount of hydrophilic emulsifier is 1.6 times or more of the amount of the castor oil to 5.0 w/v% or less based on the total amount of the composition.~~

~~12. The ophthalmic nanoemulsion composition according to claim 11, wherein the hydrophobic emulsifier is at least one selected from the group consisting of the polyethylene glycol, the propylene glycol or the diethylene glycol monoethyl ether, and~~
~~the amount of the hydrophobic emulsifier is 0.1 w/v% or more based on the total amount of the composition to 3 times or less based on the amount of the hydrophilic emulsifier.~~

13. The ophthalmic nanoemulsion composition according to claim 10, wherein:

the hydrophilic emulsifier is the polyoxyethylene hydrogenated castor oil and the amount of the hydrophilic emulsifier is 12.8 times of the amount of the cyclosporine to 5.0 w/v% based on the total amount of the composition; and

the hydrophobic emulsifier is at least one selected from the group consisting of the polyethylene glycol, the propylene glycol and the diethylene glycol monoethyl ether, and the amount of the hydrophobic emulsifier is 0.1 w/v% to 5.0 w/v% based on the total amount of the composition.

14. A method of preparing the ophthalmic nanoemulsion composition having average particle size of 1 nm to 100 nm comprising:

preparation of a mixture composition by stirring cyclosporine in the amount of 0.02 to 0.3 w/v% based on the total amount of the composition; one or more nonaqueous solvents in the amount of 0.1 to 2.5 w/v% based on the total amount of the composition selected from the group consisting of vegetable oils, C_{14}-C_{20} fatty acid esters and C_6-C_{12} fatty acid esters of glycerol; one or more hydrophilic emulsifiers in the amount of 0.1 to 5.0 w/v% based on the total amount of the composition selected from the group consisting of polyoxyethylene hydrogenated castor oils, polyoxyethylene sorbitan fatty acid esters and polyoxyethylene fatty acid esters; one or more hydrophobic emulsifiers selected from the group consisting of sorbitan fatty acid esters, glycerin fatty acid esters, diethylene glycol monoethyl ether, polyethylene glycols, propylene glycol and propylene glycol esters of fatty acids; and an aqueous solvent.

15. The method of preparing the ophthalmic nanoemulsion composition according to claim 14, wherein the method further

~~comprises additional mixing of the stabilizer to the mixture composition.~~

~~16. A method of preventing or treating ophthalmic diseases comprising an administration into eye of the ophthalmic nanoemulsion composition according to any one of claims 10-13 to a patient.~~

~~17. The method of preventing or treating the ophthalmic diseases according to claim 16, wherein the ophthalmic diseases are Sjogren syndrome or dry eye syndrome.~~