Claims

1. Use of a ω-3 polyunsaturated fatty acid , an SREBP-1c inhibitor and/or a carnitine palmitoyltransferase-2 agonist in the manufacture of a drug, a preparation or a device for regulating eye scleral lipid metabolism in an individual.

2. The use according to claim 1, wherein the device is an instrument, equipment, a consumable, system, a medical device, a health care product or an eye appearance-altering product that can release a drug or has a drug delivery function or has a potential of delivering drugs, such as a corneal contact lens, eyeglasses, an intraocular lens, a suture, an OK mirror cleaning (maintenance) system, an eye patch, an eyesight improving patch, a cosmetic contact lens, a microneedle, an eye spray system, an eye massager, an eye fumigator, an eye surface drug delivery device, an intraocular drug delivery device, a fundus drug delivery device, an implant pump and a wearable device; or

the device is various glasses, corneal contact lenses (OK mirror, etc.) and frame glasses that can delay the progression of myopia, as well as instruments, equipment, consumables, medical instruments or health care products that have a vision protecting function or a myopia treatment (correction) effect, such as eye patches, (myopia) acupoint massagers, eye relaxation equipment and myopia therapeutic equipment.

3. The use according to claim 1 or 2, wherein the preparation is an oral product such as, a health care product, food, a dietary supplement, a nutritional product, and drink, or a cosmetic; wherein, the cosmetic is a combination of one or more of a free solution, an oil-water mixture, a suspension (agent), a liniment, a lotion, a spray, a cream, a drop, an electuary, an ointment, a paste, a pill, a suppository, an emulsion and a patch.

4. The use according to claim 1 or 2, wherein the drug or the preparation is a liquid (such as an injection), a tablet, a lyophilized powder injection, a capsule, an effervescent tablet, a chewable tablet, a buccal tablet, a granule, an ointment, a syrup, an oral liquid, an aerosol, a nasal drop, an external preparation, or an oral preparation, etc; preferably, the drug or the preparation is an ophthalmic dosage form,.

5. The use according to claim 4, wherein ophthalmic dosage form including but not limited to an eye drop (an eye solution), an eye ointment, an eye spray, an implant, an ophthalmic gel, an eye patch, an ophthalmic microsphere, an ophthalmic sustained-release preparation, a periocular injection, or an intraocular injection; further, the drug or the preparation is a free solution, an

~~oil-water mixture, a suspension (agent), a liniment, a lotion, a cream, a drop, an electuary, a spray, an ointment, a patch, a paste, a pill, a suppository, a powder, an emulsion, and a formulated composition containing cellulose (such as methylcellulose), a dendrimer, a nanomaterial, a sustained-release material, a liposome or a combination thereof~~.

~~5. The use according to one of claims 1-4, wherein the drug or the preparation is administered systemically (e.g., orally, and intravenously), and/or topically (by dropping into eyes, intravitreal injection, skin ointment/emulsion periocular application or eye ointment application), and/or parenterally (such as mucosal administration and transdermal administration).~~

~~6. The use according to claim 5, wherein the systemic administration dosage form (e.g., an oral capsule) and the topical administration dosage form (e.g., an eye drop) are used simultaneously, or in combination, or alternately, or at intervals, or alone.~~

~~7. The use according to one of claims 1-6, wherein the drug, the preparation or the device is administered in combination with other drugs, and the other drugs are drugs for preventing and controlling and/or treating myopia (M receptor blockers such as dibazole, polyunsaturated fatty acids, docosahexaenoic acid (DHA), fish oil, prazosin, salidroside and atropine, 7-methyl xanthine, and nicotinic acid), vasodilators, smooth muscle relaxers, drugs for preventing vasospasm, drugs for regulating collagen metabolism, Piracetam, antiallergic drugs, liver-protecting drugs, or combinations thereof.~~

~~8. The use according to claim 7, wherein the drug, the preparation or the device is administered in combination with other drugs in the same period, such as simultaneously or successively administered in a specific administration (treatment) process, administered on the same day, administered in the same week, administered in the same month and administered in the same year; or is alternately administered at intervals, such as at an interval of 4 hours, or at an interval of 12 hours, or alternately administered every other day, alternately administered every other week, alternately administered every other month, alternately administered every other year.~~

~~9~~6. The use according to ~~one of~~ claims 1 or 2~~-8~~, wherein the drug, the preparation or the device also comprises other ophthalmic preparations or drugs, including but not limited to drugs for treating myopia, M receptor blockers ~~(such as M3 receptor blockers or antagonists or inhibitors, and atropine)~~, dibazole, polyunsaturated fatty acids ~~(such as DHA, and eicosapentaenoic acid (EPA))~~, salidroside, prazosin, homatropine, anisodamine (racemic), topicamide, 7-methyl xanthine, nicotinic acid, Piracetam, a red sage root extract, a safflower extract, fish oil, a bear bile extract, vitamins, ~~adenosine triphosphate (~~ATP~~)~~, ~~and therapeutic~~

~~components~~ and adjuvants for ophthalmic diseases.

~~10. The use according to one of claims 1 to 9, wherein the drug or the preparation is adopted in combination with a device and/or a surgery (such as an orthokeratology, a refractive correction surgery, a myopia corneal laser surgery, and a crystalline lens surgery).~~

~~11~~7. The use according to claims 1 or 2~~one of claims 1-10~~, wherein the ω-3 polyunsaturated fatty acid is DHA alone or a composition of DHA and EPA.

~~12. The use according to claim 11, wherein the daily dose of DHA is in a range of 1 ng-30 g, preferably1 μg-650 mg.~~

~~13. The use according to claim 11, wherein a mass ratio of DHA to EPA in the composition of DHA and EPA (DHA: EPA or EPA: DHA) is 2000:1-1:2000, preferably, 500:1-1:500, more preferably, 50:1-1:3; or~~

~~in the composition of DHA and EPA, EPA is a predominant component, i.e., EPA: DHA > 1: 1, such as EPA:DHA = 5:1 to EPA:DHA = 99:1; preferably, EPA accounts for: 50% < EPA < 100%; preferably, EPA:DHA = 5:1 to EPA:DHA = 19:1; more preferably, EPA: DHA = 5:1 to EPA:DHA = 9:1; further preferably, EPA:DHA = 9:1, or EPA: DHA=5:1.~~

~~14. Use of a scleral lipid metabolism regulating substance as a drug, a preparation or a device for inhibiting negative refraction, ocular axis elongation and/or vitreous chamber elongation of eyes.~~

~~15. The use according to claim 14, wherein an individual with ocular axis elongation and/or vitreous chamber elongation refers to an individual with myopia or with a tendency to develop myopia; preferably, the individual with myopia or with a tendency to develop myopia refers to a child and/or an adolescent preferably aged 3-30 years old.~~

~~16. The use according to claim 14 or 15, wherein the scleral lipid metabolism regulating substance is an ω-3 polyunsaturated fatty acid, an SREBP-1c inhibitor, and/or a carnitine palmitoyltransferase 2 agonist.~~

~~17. The use according to one of claims 14-16, wherein the device is an instrument, equipment, a consumable, a system, a medical device, a health care product or an eye appearance-altering product that can release a drug or has a drug delivery function or has a potential of delivering drugs, such as a corneal contact lens, eyeglasses, an intraocular lense, a suture, an OK mirror cleaning (maintenance) system, an eye patch, an eyesight improving patch, a cosmetic contact lens, a microneedle, an eye spray system, an eye massager, an eye fumigator, an eye surface drug delivery device, an intraocular drug delivery device, a fundus drug delivery device, an implant~~

~~pump and a wearable device; or~~

~~the device is various glasses, corneal contact lenses (OK mirror, etc.) and frame glasses that can delay the progression of myopia, as well as instruments, equipment, consumables, medical instruments or health care products that have a vision protecting function or a myopia treatment (correction) effect, such as eye patches, (myopia) acupoint massagers, eye relaxation equipment and myopia therapeutic equipment.~~

~~18. The use according to one of claims 14-17, wherein the preparation is an oral product such as a health care product, food, a dietary supplement, a nutritional product and drink, or a cosmetic; wherein, the cosmetic is a combination of one or more of a free solution, an oil-water mixture, a suspension (agent), a liniment, a lotion, a spray, a cream, a drop, an electuary, an ointment, a paste, a pill, a suppository, an emulsion and a patch.~~

~~19. The use according to one of claims 14 to 17, wherein the drug or the preparation is a liquid (such as an injection), a tablet, a lyophilized powder injection, a capsule, an effervescent tablet, a chewable tablet, a buccal tablet, a granule, an ointment, a syrup, an oral liquid, an aerosol, a nasal drop, an external preparation, an oral preparation, etc; preferably, the drug or the preparation is an ophthalmic dosage form, including but not limited to an eye drop (an eye solution), an eye ointment, an eye spray, an implant, an ophthalmic gel, an eye patch, an ophthalmic microsphere, an ophthalmic sustained-release preparation, a periocular injection, an intraocular injection; further, the drug or the preparation is a free solution, an oil-water mixture, a suspension (agent), a liniment, a lotion, a cream, a drop, an electuary, a spray, an ointment, a patch, a paste, a pill, a suppository, a powder, an emulsion, and a formulated composition containing cellulose (such as methylcellulose), a dendrimer, a nanomaterial, a sustained-release material, a liposome or a combination thereof.~~

~~20. The use according to one of claims 14-19, wherein the drug or the preparation is administered systemically (e.g. orally, and intravenously), and/or topically (by eye drop, intravitreal injection, skin ointment/emulsion periocular application or eye ointment application), and/or parenterally (such as mucosal administration and transdermal administration).~~

~~21. The use according to claim 20, wherein the systemic administration dosage form (e.g. an oral tablet) and the topical administration dosage form (e.g. an eye drop) are used simultaneously, or in combination, or alternately, or at intervals, or alone.~~

~~22. The use according to one of claims 14 to 21, wherein the drug, the preparation or the device is administered in combination with other drugs, and the other drugs are drugs for~~

preventing or treating myopia (M receptor blockers such as dibazole, polyunsaturated fatty acids, DHA, fish oil, prazosin, salidroside and atropine, 7-methyl xanthine, and a nicotinic acid), vasodilators, smooth muscle relaxers, drugs for preventing vasospasm, drugs for regulating collagen metabolism, Piracetam, antiallergic drugs, liver-protecting drugs, or a combination thereof.

23. The use according to one of claims 14-22, wherein the drug, the preparation or the device is administered in combination with other drugs in the same period, such as simultaneously or successively administered in a specific administration (treatment) process, administered on the same day, administered in the same week, administered in the same month and administered in the same year; or is alternately administered at intervals, such as at an interval of 4 hours, or at an interval of 12 hours, or alternately administered every other day, alternately administered every other week, alternately administered every other month, alternately administered every other year.

24. The use according to one of claims 14-23, wherein the drug, the preparation or the device also comprises other ophthalmic preparations or drugs, including but not limited to drugs for treating myopia, M receptor blockers (such as M3 receptor blockers or antagonists or inhibitors, atropine), dibazole, polyunsaturated fatty acids (such as DHA and EPA), salidroside, prazosin, homatropine, anisodamine (racemic), topicamide, 7-methyl xanthine, a nicotinic acid, Piracetam, a red sage root extract, a safflower extract, fish oil, a bear bile extract, vitamins, adenosine triphosphate (ATP), and therapeutic components and adjuvants for ophthalmic diseases.

25. The use according to one of claims 14-24, wherein the drug or the preparation is adopted in combination with a device and/or a surgery, such as an orthokeratology, a refractive correction surgery, a myopia corneal laser surgery, and a crystalline lens surgery.

26. The use according to one of claims 14-25, wherein the ω-3 polyunsaturated fatty acid is DHA or a composition of DHA and EPA.

27. The use according to claim 26, wherein the daily dose of DHA is in a range of 1 ng-30 g, preferably1 μg-650 mg.

28. The use according to claim 26, wherein a mass ratio of DHA to EPA in the composition of DHA and EPA (DHA: EPA or EPA: DHA) is 2000:1-1:2000, preferably, 500:1-1:500, more preferably, 50:1-1:3; or

in the composition of DHA and EPA, EPA is a predominant component, i.e., EPA:DHA > 1:1, such as EPA:DHA = 5:1 to EPA:DHA = 99:1; preferably, EPA accounts for: 50% < EPA < 100%; preferably, EPA:DHA = 5:1 to EPA:DHA = 19:1; more preferably, EPA:DHA = 5:1 to

~~EPA:DHA = 9:1; further preferably, EPA:DHA = 9:1, or EPA:DHA=5:1.~~

~~29~~8. Use of a substance for regulating eye scleral lipid metabolism in the manufacture of a drug, a preparation or a device for preventing, delaying, inhibiting and/or treating myopia and myopia-related diseases, wherein the substance for regulating eye scleral lipid metabolism is a ω-3 polyunsaturated fatty acid,~~;~~ wherein the ω-3 polyunsaturated fatty acid is a composition of DHA and EPA, in the composition of DHA and EPA, EPA is a predominant component, EPA:DHA > 1: 1~~preferably, the regulation refers to restoring the eye scleral lipid metabolism to be normal, or partially or basically restoring the level of the scleral lipid metabolism to be normal~~.

~~30. The use according to claim 29, wherein the eye scleral lipid metabolism regulating substance is a ω-3 polyunsaturated fatty acid, an SREBP-1c inhibitor and/or a carnitine palmitoyltransferase 2 agonist.~~

~~31~~9. The use according to claim ~~29 or 30~~8, wherein the device is an instrument, equipment, a consumable, a system, a medical device, a health care product or an eye appearance-altering product that can release a drug or has a drug delivery function or has a potential of delivering drugs,~~ such as a corneal contact lens, eyeglasses, an intraocular lense, a suture, an OK mirror cleaning (maintenance) system, an eye patch, an eyesight improving patch, a cosmetic contact lens, a microneedle, an eye spray system, an eye massager, an eye fumigator, an eye surface drug delivery device, an intraocular drug delivery device, a fundus drug delivery device, an implant pump and wearable device;~~ or

the device is various glasses,~~ corneal contact lenses (OK mirror, etc.) and frame glasses that can delay the progression of myopia,~~ as well as instruments, equipment, consumables, medical instruments or health care products that have a vision protecting function or a myopia treatment (correction) effect~~, such as eye patches, (myopia) acupoint massagers, eye relaxation equipment and myopia therapeutic equipment~~.

~~32~~10. The use according to ~~one of~~ claims ~~29~~8 or 9~~-31~~, wherein the preparation is an oral product~~, such as~~ a health care product, food, a dietary supplement, a nutritional product~~, and drink,~~ or a cosmetic~~; wherein, the cosmetic is a combination of one or more of a free solution, an oil-water mixture, a suspension (agent), a liniment, a lotion, a spray, a cream, a drop, an electuary, an ointment, a paste, a pill, a suppository, an emulsion and a patch~~.

~~33~~11. The use according to ~~one of~~ claims 8 or 9~~-29-31~~, wherein the drug or the preparation is ~~a liquid (such as~~ an injection~~)~~, a tablet, a lyophilized powder injection, a capsule, an effervescent tablet, a chewable tablet, a buccal tablet, a granule, an ointment, a syrup, an oral liquid, an aerosol,

a nasal drop, an external preparation, or ~~an oral preparation, etc; preferably, the drug or the preparation is~~ an ophthalmic dosage form.

12.~~,~~ The use according to claims 11, wherein ophthalmic dosage form including but not limited to an eye drop ~~(an eye solution)~~, an eye ointment, an eye spray, an implant, an ophthalmic gel, an eye patch, an ophthalmic microsphere, an ophthalmic sustained-release preparation, a periocular injection, or an intraocular injection~~; further, the drug or the preparation is a free solution, an oil-water mixture, a suspension (agent), a liniment, a lotion, a cream, a drop, an electuary, a spray, an ointment, a patch, a paste, a pill, a suppository, a powder, an emulsion, and a formulated composition containing cellulose (such as methylcellulose), a dendrimer, a nanomaterial, a sustained-release material, a liposome or a combination thereof~~.

~~34. The use according to one of claims 29-33, wherein the drug or the preparation is administered systemically (e.g., orally and intravenously), and/or topically (by dropping into eyes, intravitreal injection, skin ointment/emulsion periocular application or eye ointment application), and/or parenterally (such as mucosal administration and transdermal administration).~~

~~35. The use according to claim 34, wherein the systemic administration dosage form (e.g. an oral tablet) and the topical administration dosage form (e.g. an eye drop) are used simultaneously, or in combination, or alternately, or at intervals, or alone.~~

~~36. The use according to one of claims 29-35, wherein the drug, preparation or device is administered in combination with other drugs, and the other drugs are drugs for preventing or treating myopia (M receptor blockers such as dibazole, polyunsaturated fatty acids, DHA, fish oil, prazosin, salidroside and atropine, 7-methyl xanthine, and a nicotinic acid), vasodilators, smooth muscle relaxers, drugs for preventing vasospasm, drugs for regulating collagen metabolism, Piracetam, antiallergic drugs, liver-protecting drugs, or combinations thereof.~~

~~37. The use according to claim 36, wherein the drug, preparation or device is administered in combination with other drugs in the same period, such as simultaneously or successively administered in a specific administration (treatment) process, administered on the same day, administered in the same week, administered in the same month and administered in the same year; or is alternately administered at intervals, such as at an interval of 4 hours, or at an interval of 12 hours, or alternately administered every other day, alternately administered every other week, alternately administered every other month, alternately administered every other year.~~

~~38~~13. The use according to ~~one of~~ claims 8 or 9~~29-37~~, wherein the drug, preparation or device also comprises other ophthalmic preparations or drugs, including but not limited to drugs

for treating myopia, M receptor blockers ~~(such as M3 receptor blockers or antagonists or inhibitors, atropine)~~, dibazole, polyunsaturated fatty acids ~~(such as DHA and EPA)~~, salidroside, prazosin, homatropine, anisodamine (racemic), topicamide, 7-methyl xanthine, a nicotinic acid, Piracetam, a red sage root extract, a safflower extract, fish oil, a bear bile extract, vitamins, ~~adenosine triphosphate (~~ATP~~), and therapeutic components~~ and adjuvants for ophthalmic diseases.

~~39. The use according to one of claims 29-38, wherein the drug or the preparation is adopted in combination with a device and/or a surgery, such as an orthokeratology, a refractive correction surgery, a myopia corneal laser surgery, and a crystalline lens surgery.~~

~~40. The use according to one of claims 29-39, wherein the ω-3 polyunsaturated fatty acid is DHA or a composition of DHA and EPA.~~

~~41. The use according to claim 40, wherein the daily dose of DHA in a range of 1 ng-30 g, preferably1 μg-650 mg.~~

~~42. The use according to claim 40, wherein a mass ratio of DHA to EPA in the composition of DHA and EPA (DHA: EPA or EPA: DHA) is 2000:1-1:2000, preferably, 500:1-1:500, more preferably, 50:1-1:3; or~~

~~in the composition of DHA and EPA, EPA is a predominant component, i.e., EPA:DHA > 1:1, such as EPA:DHA = 5:1 to EPA:DHA = 99:1; preferably, EPA accounts for: 50% < EPA < 100%; preferably, EPA:DHA = 5:1 to EPA:DHA = 19:1; more preferably, EPA: DHA = 5:1 to EPA:DHA = 9:1; further preferably, EPA:DHA = 9:1, or EPA: DHA=5:1.~~

~~43~~14. The use according to ~~one of~~ claims 8 or ~~9 29-42~~, wherein the myopia is refractive myopia and/or axial myopia; congenital myopia ~~(myopia at birth or before school age)~~, early-onset myopia ~~(under 14 years old)~~, delayed myopia ~~(16-18 years old)~~, late-onset myopia ~~(after adulthood)~~; low myopia ~~(mild myopia)~~, moderate myopia, high myopia ~~(severe myopia)~~; pseudomyopia, true myopia~~; childhood and/or adolescent myopia (preferably 3-26 years old, more preferably 6-18 years old)~~, myopia in minors, myopia in adults, and myopia in the elderly; simple myopia, and pathological myopia;~~ axial simple myopia, and simple axial myopia; axial myopia in children and/or adolescents (preferably 3-26 years old, more preferably 6-18 years old); axial myopia in school-aged and preschool-aged populations;~~ primary myopia, ~~and~~ secondary myopia~~; primary myopia in children and/or adolescents (preferably 3-26 years old, more preferably 6-18 years old);~~ or progressive myopia ~~in children and/or adolescents (preferably 3-26 years old, more preferably 6-18 years old)~~.

~~44~~15. The use according to ~~one of~~ claims 8 or ~~14 29-43~~, wherein people involved in the

myopia refer to ~~children and/or adolescents, preferably people aged 3-26 years, more preferably people aged 6-18 years; or refer to minors, preferably~~ people whose eyes ~~(eyeballs)~~ are still in the stage of growth and development.

~~45. The use according to one of claims 29-44, wherein the myopia-related diseases comprise: vitreous opacity, retinal hemorrhage and detachment caused by myopia, complications of high myopia such as floaters, glaucoma, posterior staphylomas, retinal detachment, retinal tear, amblyopia, choroidal neovascularization, macular hemorrhage, choroidal atrophy, macular degeneration or denaturation, visual field defect, progressive or sudden decline of vision (especially near vision), eye soreness and/or pain, and night blindness.~~

~~46. The use according to one of claims 29-45, wherein the eye scleral lipid metabolism regulating substance comprises a derivative of ω-3 polyunsaturated fatty acid.~~

~~47. The use according to claim 46, wherein the derivative of ω-3 polyunsaturated fatty acid comprises an ester of ω-3 polyunsaturated fatty acid.~~

~~48. The use according to one of claims 29-47, wherein the drug further contains a pharmaceutically acceptable adjuvant.~~

~~49. The use according to one of claims 29-48, the lipid in wherein eye scleral lipid metabolism comprises simple lipids, compound lipids and derivatives thereof, such as DHA and/or EPA.~~

~~50. An eye drop, an ophthalmic gel or an ocular injection for prevention, inhibition, alleviation or treatment of myopia, wherein the active ingredient in the eye drop, the ophthalmic gel or the ocular injection is an eye scleral lipid metabolism regulator.~~

~~51. The eye drop, the ophthalmic gel or the ocular injection according to claim 50, wherein the regulator for the eye scleral lipid metabolism is an SREBP-1c inhibitor, a carnitine palmitoyltransferase 2 agonist and/or a ω-3 polyunsaturated fatty acid.~~

~~52. The eye drop, the ophthalmic gel or the ocular injection according to claim 51, wherein the ω-3 polyunsaturated fatty acid is DHA, or a composition of DHA and EPA.~~

~~53. The eye drop, ophthalmic gel or ocular injection according to claim 52, wherein the daily dose of DHA is 1 ng-30 g, preferably1 μg-650 mg.~~

~~54. The eye drop, the ophthalmic gel or the ocular injection according to claim 52, wherein a mass ratio of DHA to EPA in the composition of DHA and EPA (DHA:EPA or EPA:DHA) is 2000:1-1:2000, preferably, 500:1-1:500, more preferably, 50:1-1:3; or~~

~~in the composition of DHA and EPA, EPA is a predominant component, i.e., EPA: DHA > 1:~~

~~1, such as EPA:DHA = 5:1 to EPA:DHA = 99:1; preferably, EPA accounts for: 50% < EPA < 100%; preferably, EPA:DHA = 5:1 to EPA:DHA = 19:1; more preferably, EPA: DHA = 5:1 to EPA: DHA = 9:1; further preferably, EPA:DHA = 9:1, or EPA:DHA=5:1.~~

~~55. The eye drop, the ophthalmic gel or the ocular injection according to one of claims 50-54, wherein the eye drop, the ophthalmic gel or the ocular injection further contains a pharmaceutically acceptable adjuvant.~~

~~56. The eye drop, ophthalmic gel or ocular injection according to claim 55, wherein the pharmaceutically acceptable adjuvant is selected from an excipient, a disintegrant, an osmotic pressure regulator, a PH modifier, a viscosity modifier, a solubilizer, a stabilizer, a bacteriostatic agent and/or an antioxidant.~~

~~57. The eye drop, the ophthalmic gel or the ocular injection according to claim 56, wherein the pH modifier is selected from a boric acid buffer and a phosphate buffer; or the osmotic pressure regulator is sodium chloride, boric acid or borax; or the bacteriostatic agent is selected from phenylmercuric nitrate and phenylmercuric acetate; or, the viscosity modifier is selected from methyl cellulose, polyethylene glycol (PEG), polyethylene, and povidone; or the antioxidant is vitamin E.~~

16~~58~~. A drug, preparation or device for regulating eye scleral lipid metabolism, comprising ~~an SREBP-1c inhibitor, a carnitine palmitoyltransferase 2 agonist and/or~~ a ω-3 polyunsaturated fatty acid, wherein the ω-3 polyunsaturated fatty acid is a composition of DHA and EPA, in the composition of DHA and EPA, EPA is a predominant component, EPA:DHA > 1: 1.

~~59. The drug, the preparation or the device according to claim 58, wherein the device is an instrument, equipment, consumable, system, medical device, health care product or eye appearance-altering product that can release a drug or has a drug delivery function or has a potential of delivering drugs, such as a corneal contact lens, eyeglasses, an intraocular lens, a suture, an OK mirror cleaning (maintenance) system, an eye patch, an eyesight improving patch, a cosmetic contact lens, a microneedle, an eye spray system, an eye massager, an eye fumigator, an eye surface drug delivery device, an intraocular drug delivery device, a fundus drug delivery device, an implant pump and a wearable device; or~~

~~the device is various glasses, corneal contact lenses (OK mirror, etc.) and frame glasses that can delay the progression of myopia, as well as instruments, equipment, consumables, medical instruments or health care products that have a vision protecting function or a myopia treatment (correction) effect, such as eye patches, (myopia) acupoint massagers, eye relaxation equipment~~

and myopia therapeutic equipment.

60. The drug, preparation or device according to claim 58 or 59, wherein the preparation is an oral product such as a health care product, food, a dietary supplement, a nutritional product and drink, or a cosmetic; wherein, the cosmetic is a combination of one or more of a free solution, an oil-water mixture, a suspension (agent), a liniment, a lotion, a spray, a cream, a drop, an electuary, an ointment, a paste, a pill, a suppository, an emulsion and a patch.

6117. The drug, preparation or device according to claim 58 or 5916, wherein the drug or the preparation is a liquid (such as an injection), a tablet, a lyophilized powder injection, a capsule, an effervescent tablet, a chewable tablet, a buccal tablet, a granule, an ointment, a syrup, an oral liquid, an aerosol, a nasal drop, an external preparation, or an oral preparation, etc; preferably, the drug or the preparation is an ophthalmic dosage form.

,18. The drug, preparation or device according to claim 17, wherein ophthalmic dosage form including but not limited to an eye drop (an eye solution), an eye ointment, an eye spray, an implant, an ophthalmic gel, an eye patch, an ophthalmic a microsphere, an ophthalmic sustained-release preparation, a periocular injection, and or an intraocular injection; further, the drug or the preparation is a free solution, an oil-water mixture, a suspension (agent), a liniment, a lotion, a cream, a drop, an electuary, a spray, an ointment, a patch, a paste, a pill, a suppository, a powder, an emulsion, and a formulated composition containing cellulose (such as methylcellulose), a dendrimer, a nanomaterial, a sustained-release material, a liposome or a combination thereof.

62. The drug, preparation or device according to one of claims 58-61, wherein the drug, the preparation or the device also comprises other ophthalmic preparations or drugs, including but not limited to drugs for treating myopia, M receptor blockers (such as M3 receptor blockers or antagonists or inhibitors, atropine), dibazole, polyunsaturated fatty acids (such as DHA, and EPA), salidroside, prazosin, homatropine, anisodamine (racemic), topicamide, 7-methyl xanthine, a nicotinic acid, Piracetam, a red sage root extract, a safflower extract, fish oil, a bear bile extract, vitamins, adenosine triphosphate (ATP), and therapeutic components and adjuvants for ophthalmic diseases.

63. The drug, preparation or device according to one of claims 58-62, wherein the ω-3 polyunsaturated fatty acid is DHA, or a composition of DHA and EPA.

64. The drug, preparation or device according to claim 63, wherein the daily dose of DHA is in a range of 1 ng-30 g, preferably1 μg-650 mg.

65. The drug, preparation or device according to claim 63, wherein a mass ratio of DHA to

~~EPA in the composition of DHA and EPA (DHA:EPA or EPA:DHA) is 2000:1-1:2000, preferably, 500:1-1:500, more preferably, 50:1-1:3; or~~

~~in the composition of DHA and EPA, EPA is a predominant component, i.e., EPA: DHA > 1: 1, such as EPA:DHA = 5:1 to EPA:DHA = 99:1; preferably, EPA accounts for: 50% < EPA < 100%; preferably, EPA:DHA = 5:1 to EPA:DHA = 19:1; more preferably, EPA:DHA = 5:1 to EPA:DHA = 9: 1; further preferably, EPA:DHA = 9:1, or EPA:DHA=5:1.~~

~~66. The drug, preparation or device according to one of claims 58 to 65, wherein the drug, the preparation or the device further contains a pharmaceutically acceptable adjuvant.~~

~~67. A method for improving the blood perfusion (blood flow) of ocular choroid in an individual, or a method for increasing the thickness of ocular choroid in an individual, or a method for inhibiting the increase of HIF-1 α protein level of eyes in an individual, or a method for increasing the expression of carnitine palmitoyltransferase 2 (Cpt2) of eyes in an individual, wherein, an ω-3 polyunsaturated fatty acid is administered to the individual.~~

~~68. The method according to claim 67, wherein the individual is a person with myopia or with a tendency to develop myopia, preferably a person whose eyes are in growth and development, more preferably a school-aged person.~~

~~69. The method according to claim 67 or 68, wherein the ω-3 polyunsaturated fatty acid is DHA or a composition of DHA and EPA.~~

~~70. The method according to claim 69, wherein the daily dose of DHA is in a range of 1 ng-30 g, preferably1 μg-650 mg.~~

~~71. The method according to claim 69, wherein a mass ratio of DHA to EPA in the composition of DHA and EPA (DHA:EPA or EPA:DHA) is 2000:1-1:2000, preferably, 500:1-1:500, more preferably, 50:1-1:3; or in the composition of DHA and EPA, EPA is a predominant component, i.e., EPA:DHA > 1: 1, such as EPA:DHA = 5:1 to EPA:DHA = 99:1; preferably, EPA accounts for: 50% < EPA < 100%; preferably, EPA:DHA = 5:1 to EPA: DHA = 19:1; more preferably, EPA:DHA = 5:1 to EPA:DHA = 9:1; further preferably, EPA:DHA = 9:1, or EPA:DHA=5:1.~~

~~72. A new target or new mechanism for prevention and control of myopia in an individual, wherein an individual who is prone to myopia, has myopia or has a tendency to be myopia , has scleral lipid metabolism disorder, and the purpose of preventing and controlling myopia is achieved by regulating the level of the scleral lipid metabolism.~~