[019] In certain other embodiments, the present invention is directed to an ophthalmological composition for the treatment of presbyopia comprising aceclidine, a cycloplegic agent and a selective α-2 adrenergic receptor agonist.

[020] In certain other embodiments, the present invention is directed to an ophthalmological composition for the treatment of presbyopia comprising a general miotic agent and a cycloplegic agent.

[021] In certain other embodiments, the present invention is directed to an ophthalmological composition of the present invention comprising:

a general miotic agent, a compound of Formula I or II, a muscarinic agonist or aceclidine;

optionally a cycloplegic agent;

optionally a selective α-2 adrenergic receptor agonist;

a viscosity enhancer; and

a surfactant selected from the group consisting of an anionic surfactant, a nonionic surfactant, and a combination thereof.

[022] In certain other embodiments, the viscosity enhancer is carboxymethyl cellulose;

the anionic surfactant is selected from the group consisting of a gamma cyclodextrin, Captisol® (sulfobutylether β–cyclodextrin, Captisol is a registered trademark of Cydex Pharmaceuticals), sodium lauryl sulfate and sodium ester lauryl sulfate; and the nonionic surfactant is selected from the group consisting of a poloxamer, a polysorbate, Span® 20-80 (sorbitan monolaurate, sorbitan monopalmitate, sorbitan monostearate, and sorbitan monooleate, Span is a registered trademark of Uniqema Americas Inc.), a polyoxyl alkyl, a cyclodextrin and derivatives thereof.

[023] In certain other embodiments, the present invention is directed to an ophthalmological composition of the present invention comprising:

a general miotic agent, a compound of Formula I or II, a muscarinic agonist or aceclidine;

optionally a cycloplegic agent;

optionally a selective α-2 adrenergic receptor agonist; and

a surfactant selected from the group consisting of Captisol® (sulfobutylether β–cyclodextrin), polyoxyl 40 stearate and 2-hydroxypropyl beta-cyclodextrin.

[024] In certain other embodiments, the present invention is directed to an ophthalmological composition of the present invention comprising:

a general miotic agent, a compound of Formula I or II, a muscarinic agonist or aceclidine;

optionally a cycloplegic agent;

optionally a selective α-2 adrenergic receptor agonist;

a surfactant selected from the group consisting of Captisol®(sulfobutylether β–cyclodextrin), polyoxyl 40 stearate and 2-hydroxypropyl beta-cyclodextrin; and

one or more additional non-ionic surfactants.

[025] In certain other embodiments, the one or more additional non-ionic surfactants is selected from the group consisting of poloxamer 188, polyoxyl 40 stearate, polyoxyl 35 castor oil, polysorbate, Span® 20-80 (sorbitan monolaurate, sorbitan monopalmitate, sorbitan monostearate, and sorbitan monooleate), tyloxapol and combinations thereof.

[026] In certain other embodiments the present invention is directed to an ophthalmological composition of the present invention comprising:

a general miotic agent, a compound of Formula I or II, a muscarinic agonist or aceclidine;

optionally a cycloplegic agent; and

optionally a selective α-2 adrenergic receptor agonist,

wherein the selective α-2 adrenergic receptor agonist is selected from the group consisting of brimonidine, dexmedetomidine, fadolmidine and guanfacine.

[027] In certain other embodiments, the present invention is directed to an ophthalmological composition of the present invention comprising:

a general miotic agent, a compound of Formula I or II, a muscarinic agonist or aceclidine;

optionally a cycloplegic agent; and

optionally a selective α-2 adrenergic receptor agonist,

wherein the cycloplegic agent is selected from the group consisting of pirenzepine, tropicamide, Cyclogyl® (cyclopentolate hydrochloride, Cyclogyl is a registered trademark of Alcon Research, LTD), 4-diphenylacetoxy-N-methylpiperidine methiodide (4-DAMP), xanomeline, otenzepad and a combination thereof; in preferred embodiments the cycloplegic agent is tropicamide.

[028] In preferred embodiments, a composition of the present invention has a pH greater than or equal to about 5.5, preferably greater than or equal to 6.0, more preferably greater than or equal to 6.5 and most preferably greater than or equal to 7.0.

[029] In certain other embodiments, the present invention is directed to an ophthalmological composition of the present invention comprising:

a general miotic agent, a compound of Formula I or II, a muscarinic agonist or aceclidine;

optionally a cycloplegic agent;

optionally a selective α-2 adrenergic receptor agonist; and

an *in situ* gel.

In preferred embodiments the *in situ* gel is selected from the group consisting of Carbopol® (Carbopol (a cross-linked polyacrylate polymer) is a registered trademark of Lubrizol Advanced Materials, Inc.) at a

WHAT IS CLAIMED IS:

1. An ophthalmological composition for the treatment of presbyopia comprising from about 0.25% to about 2.0% w/v aceclidine and a cycloplegic agent.

~~2. The ophthalmological composition according to claim 1 further comprising a cycloplegic agent.~~

2.~~3.~~ The ophthalmological composition according to claim 1 further comprising a selective α-2 adrenergic receptor agonist.

3.~~4.~~ The ophthalmological composition according to claim ~~2~~1, wherein the cycloplegic agent is tropicamide.

4.~~5.~~ The ophthalmological composition according to claim 2~~3~~, wherein the selective α-2 adrenergic receptor agonist is brimonidine.

5.~~6.~~ An ophthalmological composition for the treatment of presbyopia comprising from about 0.25% to about 2.0% w/v of a general miotic agent and a cycloplegic agent.

6.~~7.~~ The ophthalmological composition according to claim 5~~6~~ further comprising a viscosity enhancer and a surfactant selected from the group consisting of an anionic surfactant, a nonionic surfactant, and a combination thereof.

7.~~8.~~ The ophthalmological composition according to claim 6~~7~~ wherein:

the viscosity enhancer is carboxymethyl cellulose or hydroxypropylmethyl cellulose;

the anionic surfactant is selected from the group consisting of a gamma cyclodextrin, ~~Captisol®~~sulfobutylether β-cyclodextrin, sodium lauryl sulfate and sodium ester lauryl sulfate; and

the nonionic surfactant is selected from the group consisting of a poloxamer, a polysorbate, ~~Span® 20-80~~sorbitan monolaurate, sorbitan monopalmitate, sorbitan monostearate, sorbitan monooleate, polyoxyl stearate, a polyoxyl alkyl, a cyclodextrin and derivatives thereof.

8.~~9.~~ The ophthalmological composition according to claim 6~~7~~ wherein the surfactant is selected from the group consisting of ~~Captisol®~~ sulfobutylether β-cyclodextrin, polyoxyl 40 stearate and 2-hydroxypropyl beta-cyclodextrin.

9.~~10.~~ The ophthalmological composition according to claim 6~~7~~, further comprising one or more additional non-ionic surfactants selected from the group consisting of poloxamer 188, polyoxyl 40 stearate, polyoxyl 35 castor oil, polysorbate, ~~Span® 20-80~~sorbitan monolaurate, sorbitan monopalmitate, sorbitan monostearate, sorbitan monooleate, polyoxyl stearate, tyloxapol and combinations thereof.

10.~~11.~~ The ophthalmological composition according to claim 5~~6~~, wherein the cycloplegic agent is selected from the group consisting of pirenzepine, tropicamide, ~~Cyclogyl®~~cyclopentolate hydrochloride, 4-diphenylacetoxy-N-methylpiperidine methiodide (4-DAMP), AF-DX 384, methoctramine, tripitramine, darifenacin, solifenacin, tolterodine, oxybutynin, ipratropium, oxitropium, tiotropium, otenzepad and a combination thereof.

11.~~12.~~ The ophthalmological composition according to claim 10~~11~~, wherein the cycloplegic agent is tropicamide.

12.~~13.~~ The ophthalmological composition according to claim 5~~6~~, wherein the general miotic agent is selected from the group consisting of pilocarpine, carbachol, and phospholine iodide.

13.~~14.~~ An ophthalmological composition for the treatment of presbyopia comprising:

aceclidine at a concentration from about 0.25% to about 2.0% w/v; and

tropicamide at a concentration from about 0.025% to about 0.1% w/v,

wherein w/v denotes weight by volume.

14.~~15.~~ The ophthalmological composition according to claim 13~~14~~ further comprising

carboxymethyl cellulose (1% = 2,500 cps) at a concentration from about 0.1% to about 1.2% w/v; and

sodium chloride at a concentration from about 0.01% to about 1.0% w/v;

wherein w/v denotes weight by volume.

15.~~16.~~ The ophthalmological composition according to claim 14~~15~~, wherein:

aceclidine is at a concentration of about 1.40-1.45% w/v;

tropicamide is at a concentration of about 0.044% w/v;

carboxymethyl cellulose is at a concentration of about 0.85% w/v;

sodium chloride is at a concentration of about 0.05% to 0.90% w/v;

wherein said composition further comprises

borate buffer at a concentration of about 10 millimolar;

benzalkonium chloride at a concentration of about 0.01% w/v,

polyoxyl 40 stearate at a concentration of about 5.5% w/v;

citrate at a concentration of about 0.2% w/v;

wherein the composition is at pH of about 7.0, and

wherein w/v denotes weight by volume.

16.~~17~~. The ophthalmological composition according to claim 14~~15~~, wherein:

aceclidine is at a concentration of about 1.40 w/v;

tropicamide is at a concentration of about 0.044% w/v;

carboxymethyl cellulose is at a concentration of about 0.80% to about 0.85% w/v;

sodium chloride is at a concentration of about 0.05% w/v;

wherein said composition further comprises

borate buffer at a concentration of about 10 millimolar;

benzalkonium chloride at a concentration of about 0.01% w/v,

polyoxyl 40 stearate at a concentration of about 5.5% w/v;

dicalcium diethylenetriamine pentaacetic acid ("Ca2DTPA") at a concentration from about 0.01% w/v;

wherein the composition is at pH of about 7.0, and

wherein w/v denotes weight by volume.

17.~~18.~~ The ophthalmological composition according to claim 1, wherein:

aceclidine is at a concentration of about 0.5% w/v; and

wherein said composition further comprises

poloxamer 188 at about 0.1% w/v;

poloxamer 407 at about 0.2% w/v;

polyoxyl stearate at about 5% w/v;

polyoxyl 35 castor oil at about 0.25% w/v;

carboxymethyl cellulose is at a concentration of about 0.80% to about 0.85% w/v;

sodium chloride is at a concentration of about 0.25% w/v;

optionally, perborate at a concentration of about 0.02% w/v;

optionally, citrate buffer at a concentration of about 4 to about 75 mM;

optionally, guanfacine at a concentration of about 0.03% w/v; and

wherein said composition has a pH of about 5.0 to about 8.0; and

wherein w/v denotes weight by volume.

18.~~19.~~ The ophthalmological composition according to claim 14~~15~~, wherein:

aceclidine is at a concentration of about 1.35% w/v;

tropicamide is at a concentration of about 0.044% w/v;

carboxymethyl cellulose is at a concentration of about 0.80% w/v;

sodium chloride is at a concentration from about 0.025% to about 0.50% w/v;

and wherein said composition further comprises

polyoxyl 40 stearate at a concentration from about 5.0% to about 6.0% w/v; and

a buffer, selected from the group consisting of phosphate buffer and borate buffer, wherein said buffer is at a concentration from about 4.0 millimolar to about 5.0 millimolar,

wherein w/v denotes weight by volume.