

Intraocular Device for Correction of Aphakia and Restoration of Accommodation

Product

Intraocular prosthetic with foot plates

Indication

Glaucoma, Cataract surgery, Presbyopia

Value Propositions

- ▶ A three-in-one injectable prosthetic that restores accommodative ability, treats glaucoma, and aids intraocular lens placement
- ▶ Decreases operating time

Market

- ▶ \$2.14 million— Global Glaucoma Surgery Devices market (29.3% CAGR 2017-2023)
- ▶ \$12.2 billion – Global Cataract Surgery Devices market (3.9% CAGR 2021-2030)

Intellectual Property

- ▶ US Issued*
- ▶ Available for licensing

Key Documents

- ▶ N/A

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Background on CU3886H

Over 2 million cataract surgeries are performed each year in the U.S. Currently, there are 3 million patients with glaucoma in the U.S. Everyone over the age of 50 will eventually lose their accommodative ability, requiring the use of reading glasses in most individuals. There is no singular device that addresses all three conditions; rather, multiple procedures are performed to correct for these. Typically, a cataract and glaucoma surgery can be performed on the same day but increases the operating time and time under anesthesia. A single minute of operating room time can cost \$150 or more. Accommodative intraocular lens are undergoing clinical trials but none treats glaucoma simultaneously.

Technical Innovation

Dr. Jeffrey Olson has created a small, injectable prosthetic which is placed in the eye at the time of or following cataract surgery. The device has a central ring, which is used to hold an intraocular lens, and a plurality of arms that radiate outward from the central ring. A foot plate on the end of each arm allows the device to push out laterally against the ciliary body. This device allows for stable and precise placement of the intraocular lens, restores the accommodative ability to the eye (as the ciliary body relaxes and contracts with accommodative effort, the footplates are pushed, causing the intraocular lens to move forward and backward), and decreases aqueous productions and subsequently decreases intraocular pressure via counter-pressure on the ciliary body. This has been tested *ex vivo* in porcine eyes. The inventor believes this can be the first on the market to address multiple conditions with a sophisticated yet easy-to-use device.

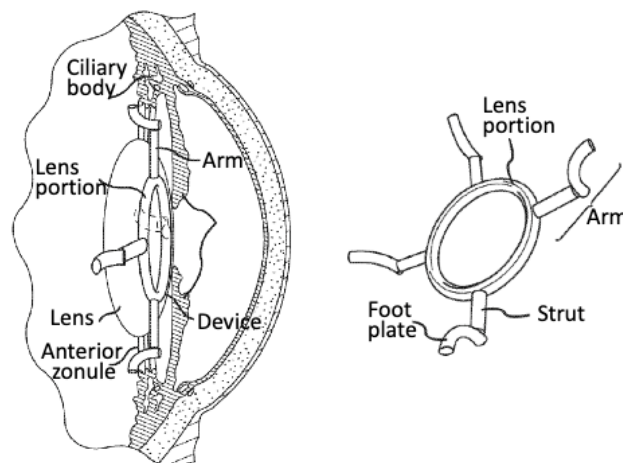


Figure: The device contains a lens portion which is secured to the lens. Several arms support the lens portion which can move when the ciliary bod contracts or relaxes. The amount of pressure applied to the ciliary body can be titrated by sizing the foot-plate to foot-plate length of the device.

*Patent US 2018/0311032 A1. Intraocular devices and methods for correction of aphakia, restoration of accommodation, and treatment of glaucoma