



COMPARATIVE BIOSCIENCES, INC.  
A TRANSLATIONAL APPROACH TO PRECLINICAL RESEARCH



## Technical Bulletin: INTRAOCULAR LENS IMPLANTATION



An Intraocular Lens (IOL) is an advanced lens implant used during cataract surgery that provides vision correction and eliminates the need for glasses.

### WHAT IS: Intraocular Lens Implantation

An intraocular lens (IOL) implantation is an artificial lens placed within the eye when the natural lens is removed, most often for the treatment of cataract. It is termed an implant, as it is an artificial substitute for the natural lens and takes over its image-focusing function.

Intraocular Lens Removal by Phacoemulsion followed by Implantation of an artificial lens.

One of the unique and customized surgical services offered by **Comparative Biosciences, Inc.**

### Some Common Facts about Cataract Surgery:

- Cataract removal and replacement with an IOL is one of the most common operations performed in the United States. It also is one of the safest and most effective types of surgery.
- In about 90 percent of cases, people who have cataract surgery have better vision afterward.

Comparative Biosciences, Inc and GD3 have joined together to providing expert scientific resources and high quality contract research services to all sectors within the biomedical and pharmaceutical community.



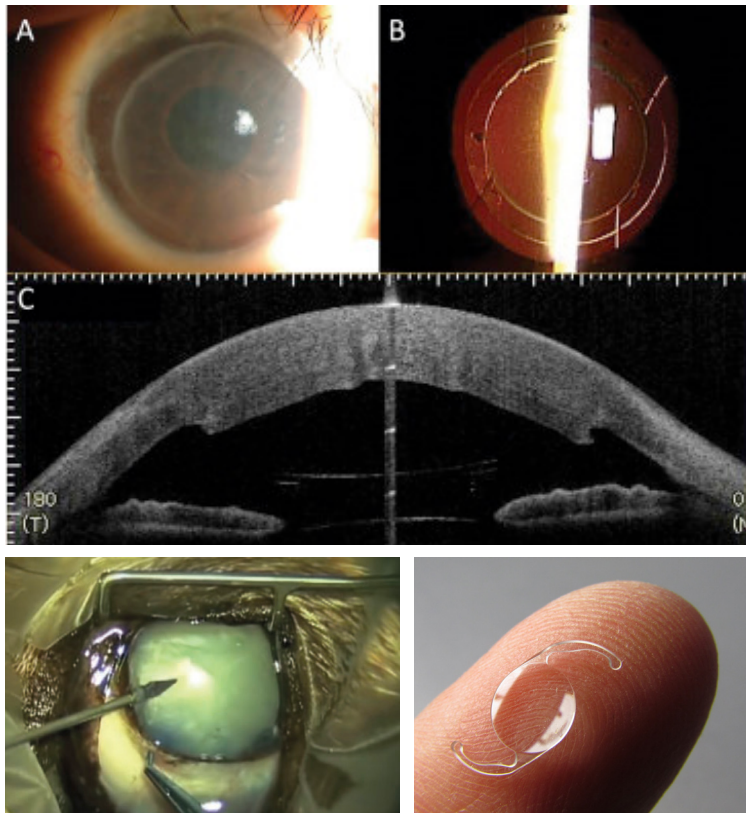
## Intraocular Lens Implantation Preclinical Models at CBI

### INTRODUCTION:

Cataracts are a common cause of blindness world wide. Treatment generally consists of removal of the defective lens and surgical replacement with an artificial lens. An intraocular lens implant is a synthetic, artificial lens placed inside the eye that replaces the focusing power of a natural lens that is surgically removed, usually as part of cataract surgery.

**Comparative Biosciences, Inc.** provides a range of sophisticated and customized intraocular implant models. We are offering intraocular lens implantation surgery for cataract treatment particularly in both pigmented and albino rabbits. Our DACVO board-certified ocular surgeons are skilled in IOL surgery which includes lens extraction (phako-emulsion) and then insertion of the artificial lens into the lens capsular bag. Some of our studies require the insertion of other or second devices, for example, devices that elaborate intraocular drugs such as beta blockers, anti-hypertensives, antibiotics, or anti-inflammatories. Specialized ocular surgical equipment at CBI include motor-driven surgical microscope, phakoemulsion device, microinstruments and operating micro-camera.

We provide state-of-the-art post-surgical care and sophisticated in life assessments including slit lamp examination, funduscopy, IOP determinations, pachymetry, fluorescent cornea and retinal examination, photography, as well as ocular histopathology and immunohistochemistry.



## How is Intraocular Lens Implantation used in preclinical research?

### STATE-OF-THE-ART PRE AND POST-SURGICAL CARE:

Dr. Cynthia Cook has performed many of our sophisticated cataract surgery on rabbits, the optimal species for assessment of artificial lens development.

This surgical method includes general anesthesia and sterile technique. The old lens is removed using Phacoemulsification which is the same technique employed in patients. Using a mechanized surgical microscope to visualize the anterior part of the eye, the new IOL is introduced into the lens bag and then deployed, allowing it to pop into place and restore vision.

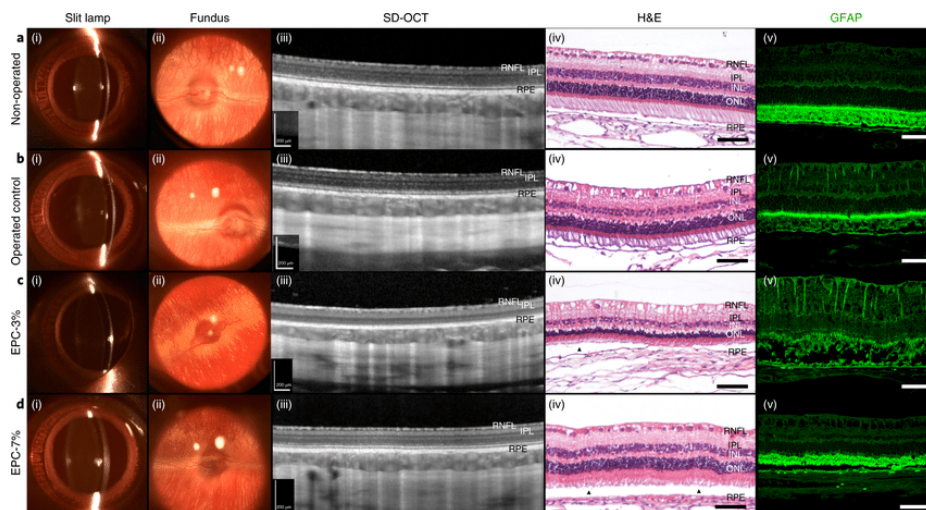
### WHAT IS AN INTRAOCULAR LENS?

An intraocular lens is a synthetic, artificial lens placed inside the eye that replaces the focusing power of a natural lens that is surgically removed, this is part of our intraocular lens implant for cataract surgery.

### HERE ARE FIVE SURPRISING FACTS YOU MAY NOT KNOW ABOUT CATARACTS:

- 1. Cataracts don't just affect the elderly.** People of all ages can develop cataracts.
- 2. Cataracts are the biggest cause of vision loss in the world.**
- 3. Sun exposure can increase your risk of cataracts.**
- 4. You can reduce your risk for cataracts.** Wearing sunglasses, eating a healthy diet, getting exercise, and avoiding tobacco products.
- 5. Cataracts develop painlessly-people don't realize they have cataracts?**

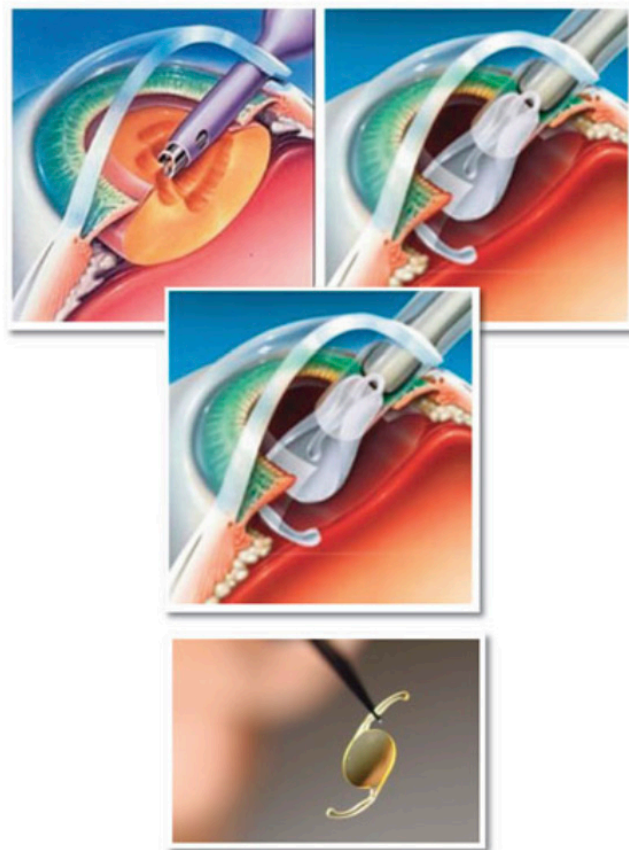




## SUMMARY: INTRAOCULAR LENS IMPLANTATION



In summary, CBI provides research studies with intraocular implants and artificial lens replacement in rabbits and other species. We have highly trained ACVO ophthalmologists and surgeons, a specialized ophthalmology board certified veterinary pathologist, and skilled researchers. We have state of the art equipment and high quality detailed reports to support your research activities and FDA regulatory submissions.



STEPS IN CATARACT SURGERY



"We are looking forward to meeting you and helping you be successful."

- Carol Meschter, DVM, PhD, DACVP, CEO