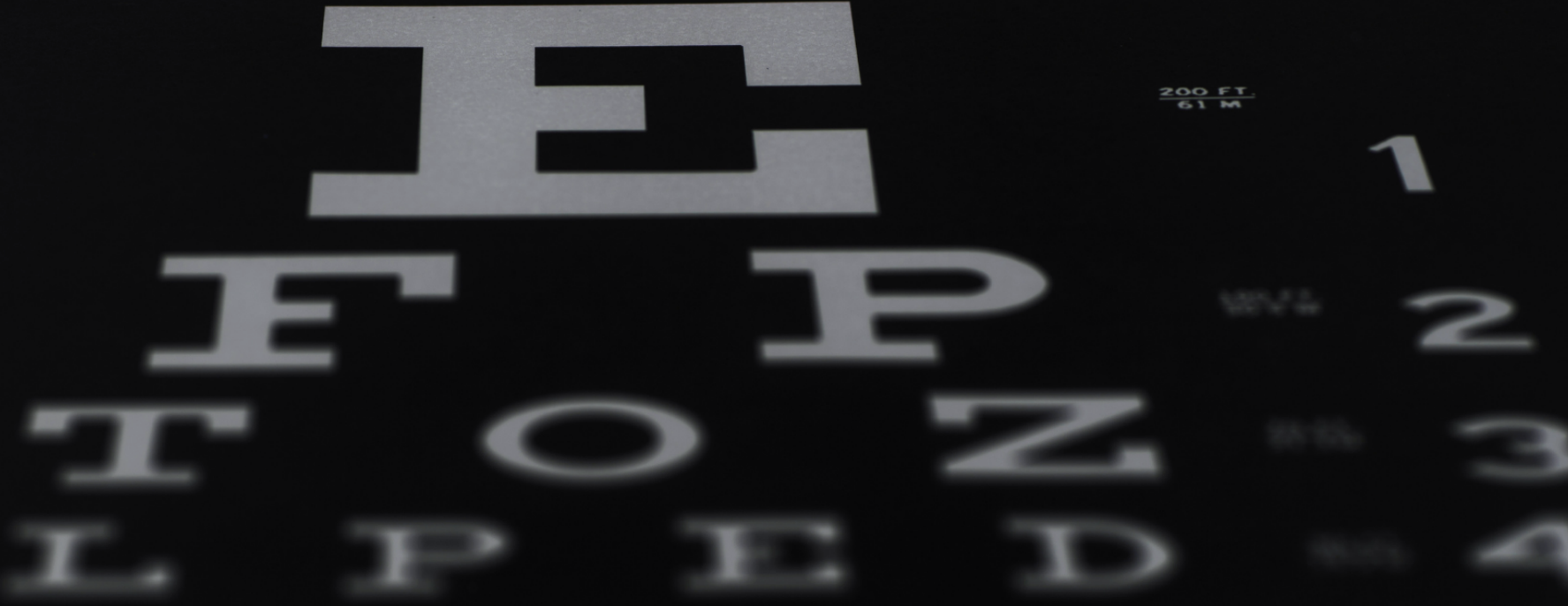


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CONNEXIN THERAPEUTICS LTD.

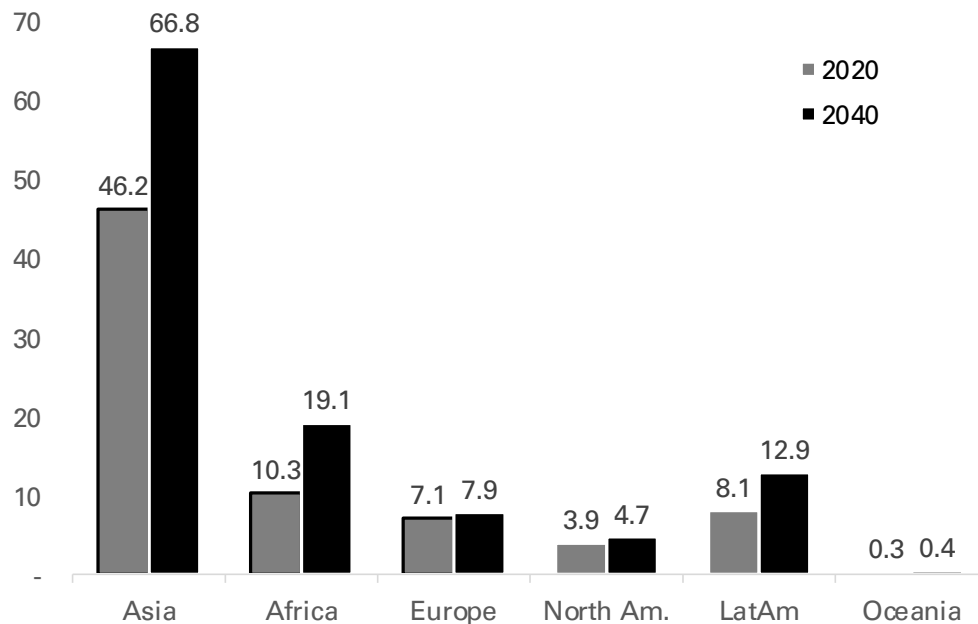
DEVELOPING DRUGS THAT PRESERVE VISION AND PREVENT BLINDNESS



GLAUCOMA

GROWING PREVALENCE DUE TO AGING

Glaucoma Prevalence
>100 MM by 2040

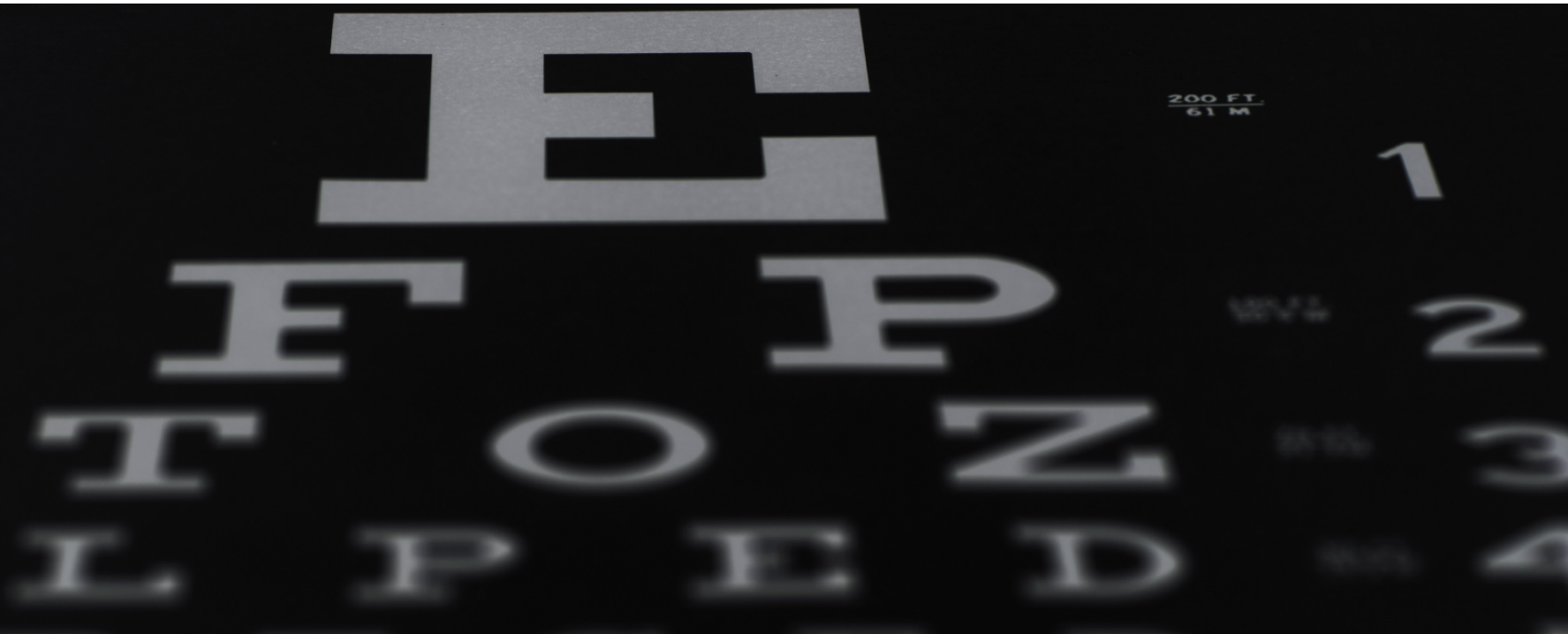


- Glaucoma prevalence growing rapidly, especially in Asia & Africa
- Driven by aging population, smoking, and genetic factors

GLAUCOMA TREATMENTS & OPPORTUNITY

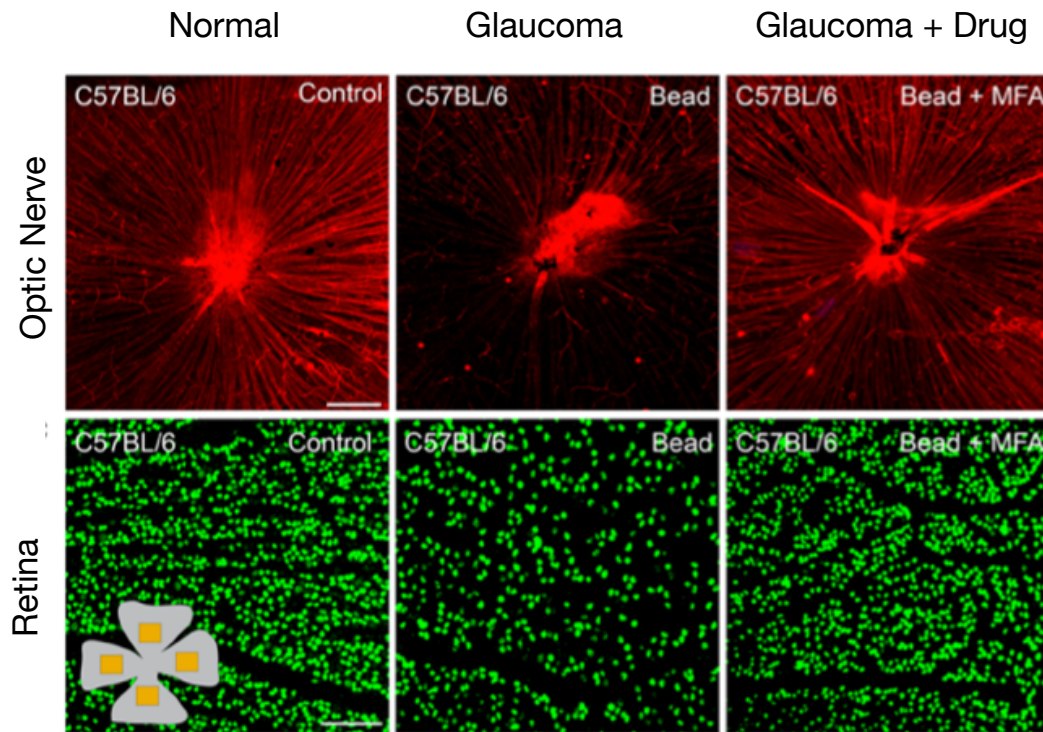
Modality	Examples	Pros	Cons
Drugs	Prostaglandins CA inhibitors Beta blockers	Easy to administer	Disease can still progress
Implants	Stents to prop canal open	Immediate reduction in pressure	Transient efficacy
Surgery	Laser	Same	Same

- Current global market ~\$7 billion
- Existing therapies can slow progression, but none protect **remaining** vision
- **Product Concept:** Drug co-administered with current glaucoma drugs to preserve remaining vision



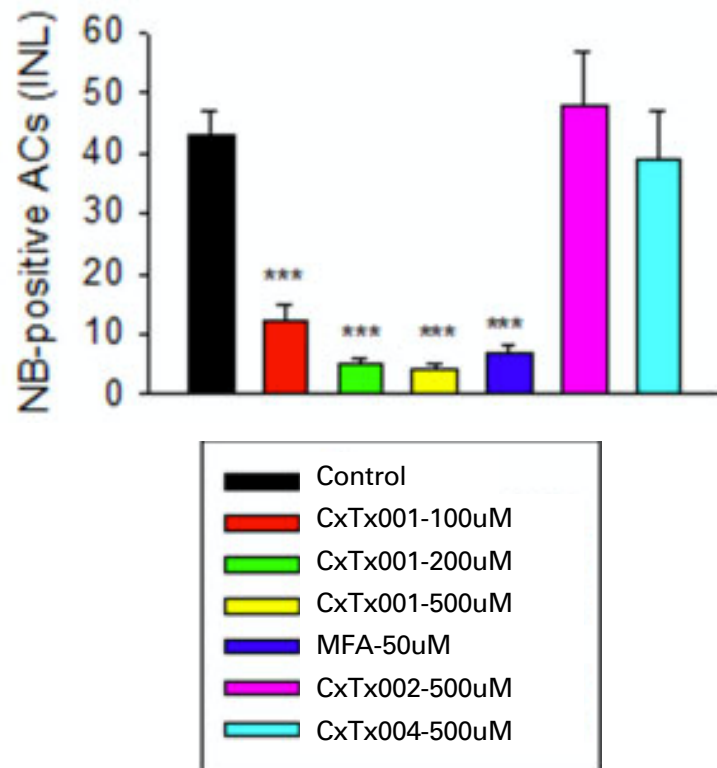
RESULTS TO DATE

SOLUTION: VISION PROTECTION

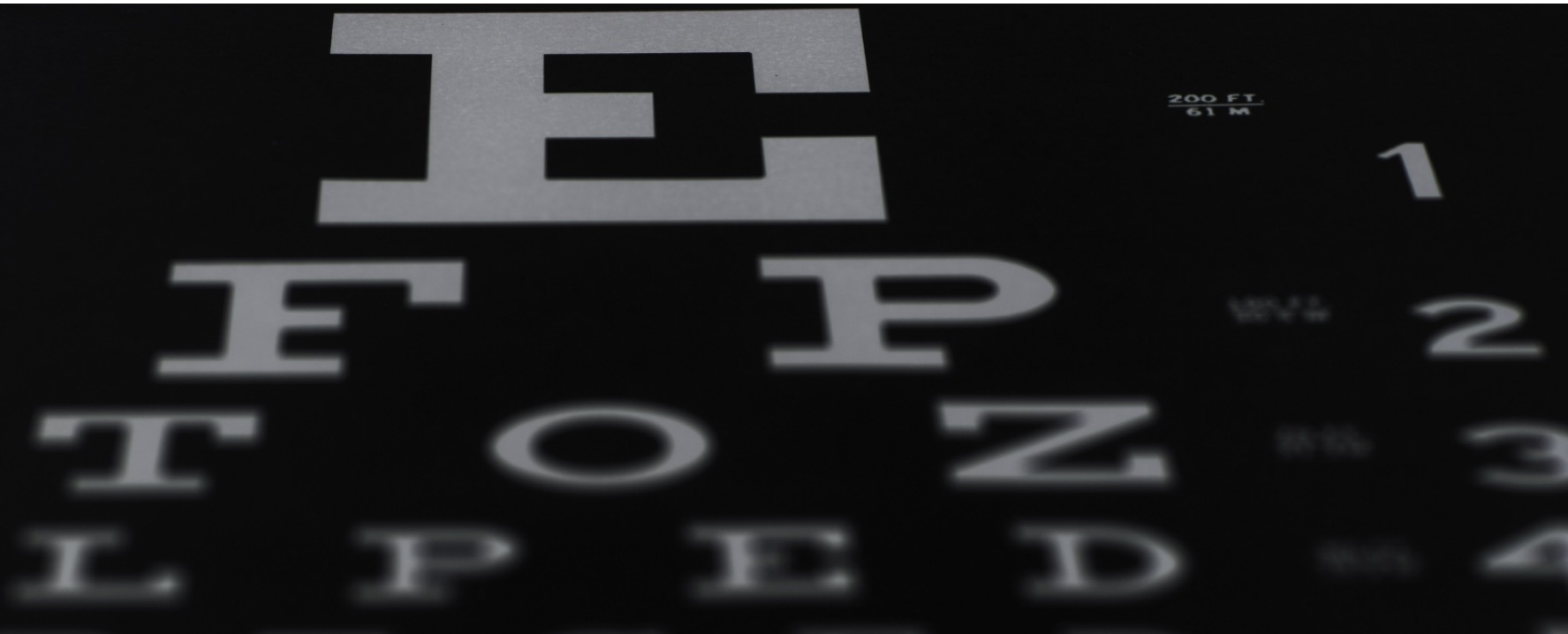


- Demonstrated vision protection in **mice and primates** with glaucoma with small molecule drugs
- We are blocking a protein called “connexin 36”
- Biology well understood and published

NOVEL COMPOUNDS SHOW PROMISE



- Novel compounds being synthesized and tested in a low throughput retinal assay
- **CxTx001** shows dose-response effect and will protect vision
- Further optimization will improve potency



HISTORY, FINANCING, AND RESEARCH PLAN

HISTORY


US 20170106047A1

(19) **United States**
(12) **Patent Application Publication** (10) **Pub. No.: US 2017/0106047 A1**
BLOOMFIELD (43) **Pub. Date: Apr. 20, 2017**

(54) **METHODS OF USING GAP JUNCTIONS AS THERAPEUTIC TARGETS FOR THE TREATMENT OF DEGENERATIVE DISORDERS OF THE RETINA** Publication Classification

(71) Applicant: **THE RESEARCH FOUNDATION FOR THE STATE UNIVERSITY OF NEW YORK, Albany, NY (US)**

(72) Inventor: **Stewart BLOOMFIELD, New York, NY (US)**

(73) Assignee: **THE RESEARCH FOUNDATION FOR THE STATE UNIVERSITY OF NEW YORK, Albany, NY (US)**

(21) Appl. No.: **15/017,171**

(22) PCT Filed: **Jun. 11, 2015**

(86) PCT No.: **PCT/US2015/035226**

§ 371 (c)(1),
(2) Date: **Dec. 8, 2016**

Related U.S. Application Data

(60) Provisional application No. 62/011,354, filed on Jun. 12, 2014.

(51) **Int. Cl.**
A61K 38/17 (2006.01)
A61K 45/06 (2006.01)
A61K 9/00 (2006.01)
A61K 31/7105 (2006.01)
C12N 15/113 (2006.01)

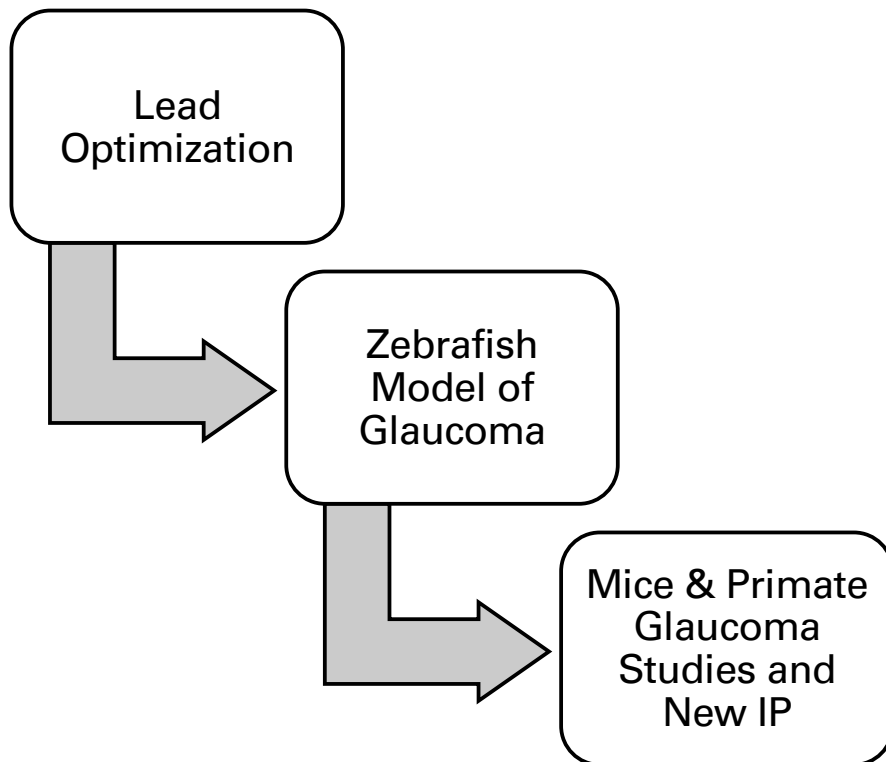
(52) **U.S. Cl.**
CPC ——— *A61K 38/177* (2013.01); *A61K 31/7105* (2013.01); *C12N 15/113* (2013.01); *A61K 9/0048* (2013.01); *A61K 45/06* (2013.01); *C12N 2320/31* (2013.01); *C12N 2310/11* (2013.01)

(57) **ABSTRACT**

The disclosure provides methods of treating a condition of the retina by administering an inhibitor of connexin 36 and/or an inhibitor of connexin 45 to a subject with a retinal condition. This disclosure further provides compositions for the treatment of a retinal condition which include an inhibitor of connexin 36 and/or an inhibitor of connexin 45.

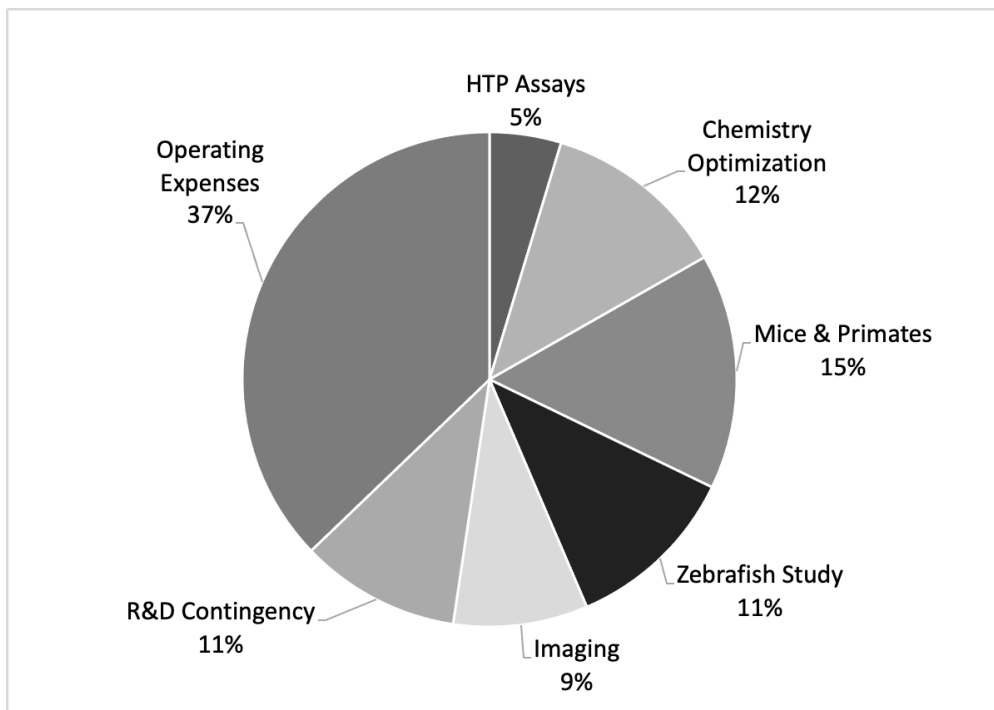
- Founded Oct, 2018
- Exclusive license to IP and know how from Dr. Bloomfield's Lab
- Raised £150,000 May, 2019
- Synthesizing and testing novel connexin 36 inhibitors

RAISING £2.5 MILLION “SEED B”

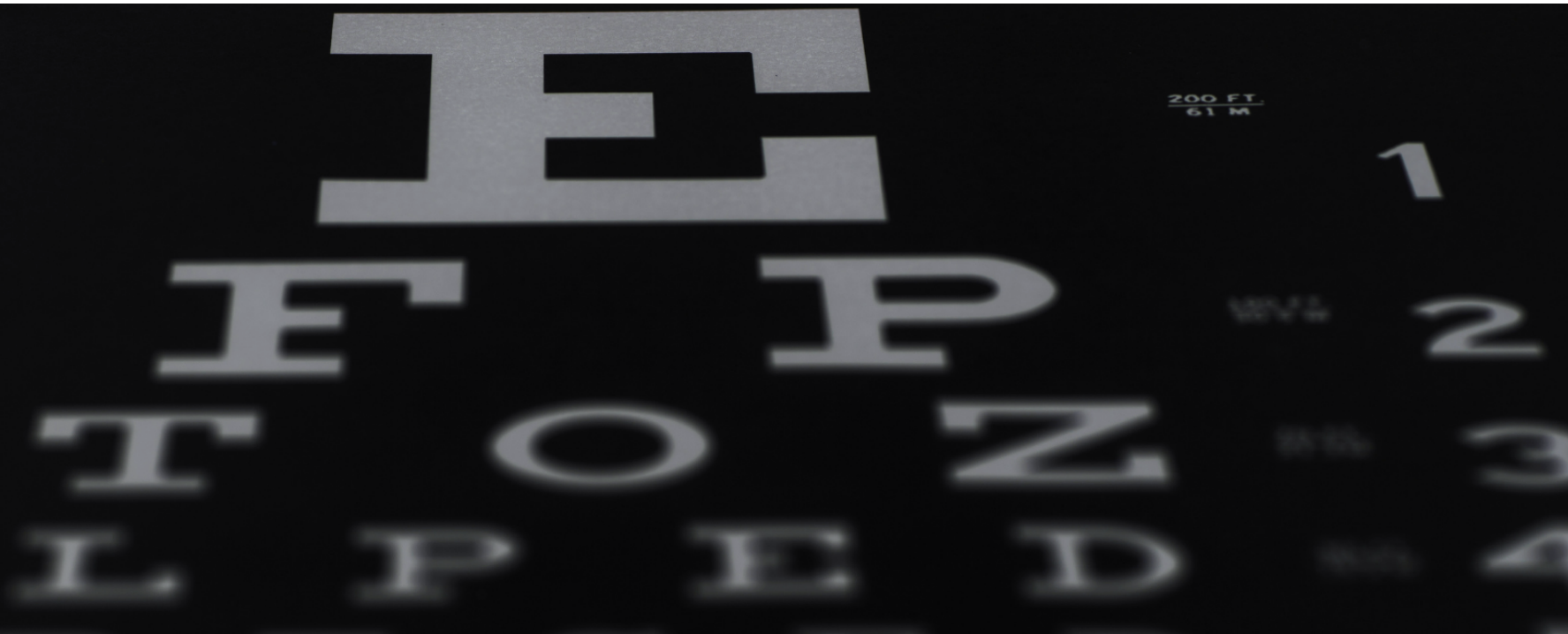


- **Deliverable:** Optimized connexin 36 inhibitors backed by efficacy data in three animal models of glaucoma
- **Timeline:** 24-36 months with well-defined milestones
- **Pipeline:** Will also identify a Cx45 inhibitor for retinopathies

BUDGET DETAILS AVAILABLE BY REQUEST

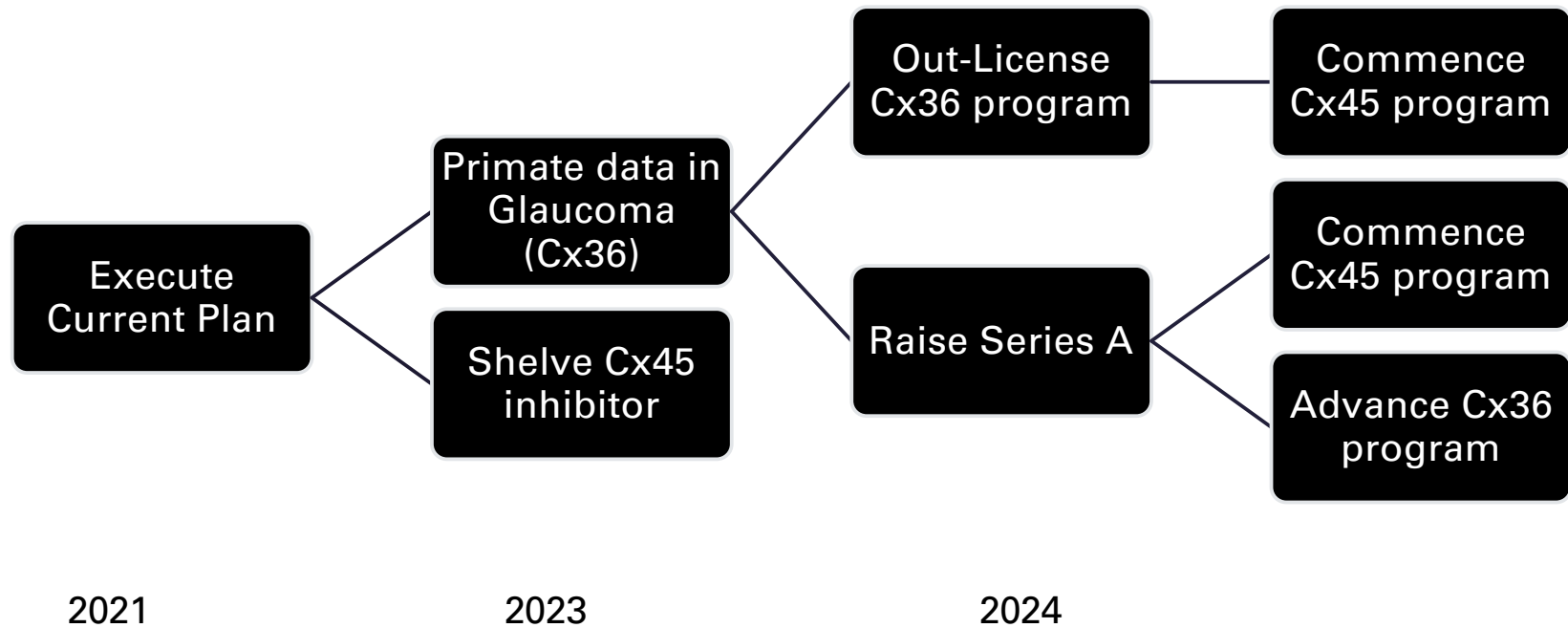


- Over 60% of budget directed towards R&D...and includes contingencies
- Budget constructed from service provider proposals
- Projected UK R&D Tax credits exceeding £400k
- Grants not included in budget



COMMERCIAL PLAN


COMPANY EVOLUTION



DON'T TAKE OUR WORD FOR IT....

Menu Search Research & Development Partnering What we are looking for

Ophthalmology



Our strategy in ophthalmology focuses on sight robbing "back of the eye" diseases. They include: Age-Related Macular Degeneration (AMD), Diabetic Retinopathy (DR), and Diabetic Macular Edema (DME)

Dry AMD and related Geographic Atrophy (GA) make up over 90% of AMD cases but have no currently approved therapy. The scientists at Roche are committed to the development of therapy for these retinal diseases and seek drug candidates with neuro-protective and retinal epithelial preserving properties. In addition, we also actively seek novel therapies for the wet form AMD, Diabetic Macular Edema, and other related diabetic retinal complications that would complement our [Lucentis](#) (ranibizumab) franchise.

Other diseases where we have a more opportunistic approach include Retinitis of Prematurity, Retinitis Pigmentosa, Uveitis, and Dry Eye. In Glaucoma we are particularly interested in therapies that have demonstrated the ability to protect retinal neurons compared to intraocular pressure lowering therapies.

If you have a promising drug candidate in the area of neuroscience, why not [submit your idea](#), meet us at a [conference](#) or contact virani.shafique@gene.com, Head of Neuroscience, Ophthalmology and Rare Diseases (NORD).

[Ophthalmology pipeline](#)

“In Glaucoma we are particularly interested in therapies that have demonstrated the ability to protect retinal neurons compared to intraocular pressure lowering therapies.”

- Numerous multi-national pharma companies (Roche, Bayer, J&J, etc.) are seeking drugs which protect vision...recognizing the unmet medical need
- Provides an early opportunity for licensing or trade sale

NO COMPETITION IN CONNEXIN INHIBITION

Name	Company	Indication	Target	Phase	Molecule	Route
HCBT019	OcuNexus	Dry & Wet AMD, GA, DME, Retinopathy	Cx43	II	Small	Oral
Peptagon	OcuNexus	Dry & Wet AMD, GA, DME, Retinopathy	Cx43	Preclinical	Peptide	Intraocular
Nexagon	Eyevance	Diabetic Foot & Chronic Venous Ulcers	Cx43	Suspended	Antisense	Topical
Nexagon	Eyevance	Persistent Corneal Epithelial Defects	Cx43	II	Antisense	Topical

- Extensive competitive analysis available in full business plan
- **Summary:** Nobody else targeting connexin 36 for glaucoma

FOUNDERS



Carlos N. Velez, Ph.D., Co-Founder & CEO

- Managing Partner, Lacerta Bio – Business development consultancy
- Formerly Genencor, Penwest Pharma, Huron Consulting
- Split time between Cambridge, UK and New York, USA



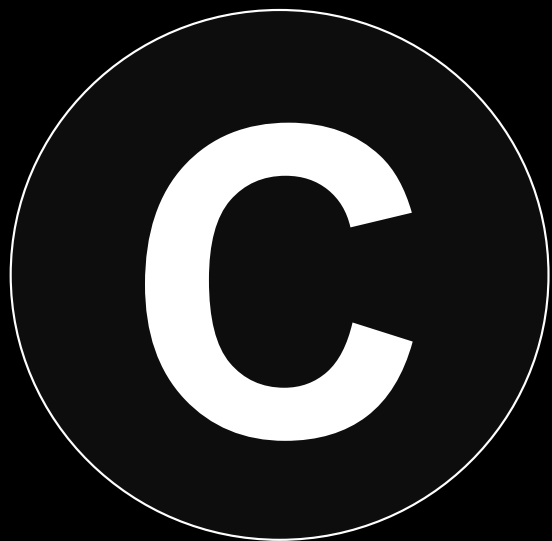
Stewart Bloomfield, Ph.D., Co-Founder and CSO

- Professor, SUNY Optometry – Molecular & cellular processes in glaucoma
- Former Professor of Neuroscience & Ophthalmology, NYU
- Based in New York, USA



Christopher Hill, Co-Founder and CFO

- Independent CFO/Economist for Private & Listed biotech companies
- Former ORA Capital, Oxford Pharmascience, Others
- Based in York, UK



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