OPUS GENETICS®

Transformative Gene Therapies for the Treatment of Rare Inherited Retinal Diseases

Sally Tucker, PhD
Senior Vice President, Clinical Development

Eyecelerator @ AAO 2025 | October 16, 2025

Leveraging an Efficient Platform for Clinical and Commercial Success

Company Snapshot

- **Founded:** 2018
- **HQ:** Research Triangle Park, NC
- **Focus:** Developing gene therapies for the treatment of IRDs and small-molecule therapies for other ophthalmic disorders

Financials (as of 6/30/25)

- **Ticker:** IRD
- **Cash & equivalents:** ~$32.4 million
- **Runway:** Funded into 2H 2026
- **R&D spend:** $6.0 million in Q2 2025
- **Common shares outstanding:** 59,908,055

Market Opportunity

- No approved therapies for most IRD subtypes
- First mover advantage in ultra-rare IRDs
- Strong KOL and advocacy network ties
- Opus gene therapy programs target a potential $15 billion opportunity in the U.S.

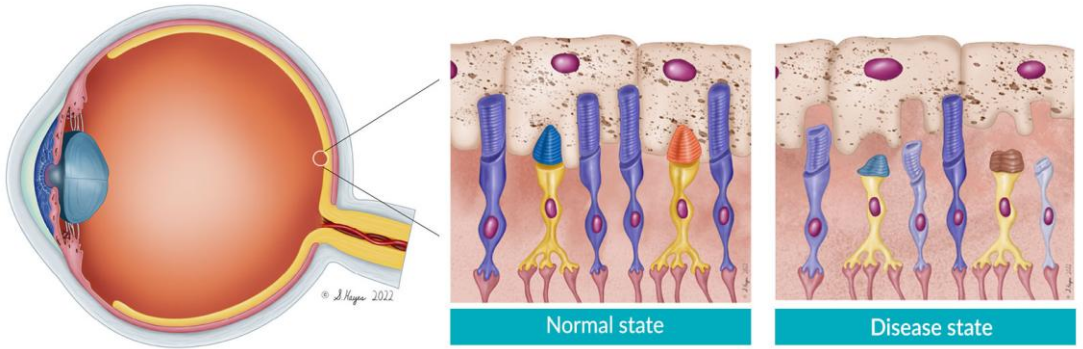
Upcoming Catalysts

- ✓OPGx-LCA5 pediatric data Q3 2025
- OPGx-BEST1 trial initiation Q4 2025
- OPGx-BEST1 initial data Q1 2026
- Phentolamine Ophthalmic Solution 0.75% presbyopia sNDA submission H2 2025; potential approval Q4 2026

KOL, key opinion leader; IRD, inherited retinal disease; sNDA, supplemental New Drug Application

OPGx-LCA5: Designed to Restore Structure and Function in Photoreceptors

- Lebercilin is a ciliary protein critical for the function of photoreceptor inner and outer segments[1]
- In *LCA5* patients, photoreceptor function is severely impaired due to a lack of functioning lebercilin[1]
  - However, photoreceptors can survive through the third decade of life, suggestive of a broad window for therapeutic intervention[2]



- **OPGx-LCA5 is designed to address mutations in the *LCA5* gene, which encodes for the lebercilin protein**
  - Clinically derisked AAV8 vector delivers a functional *LCA5* gene directly to photoreceptor cells
  - Same promoter technology as Luxturna
  - Validated surgical delivery method via subretinal injection

AAV, adeno-associated virus; LCA5, Leber congenital amaurosis 5.

1. Uyhazi KE, et al. *Invest Ophthalmol Vis Sci.* 2020;61:30. **2.** Song JY, et al. *Mol Ther.* 2018;26:1581-1593.

Ongoing Phase 1/2 Study of OPGx-LCA5 in Participants with *LCA5*

	Adult Participants			Pediatric Participants		
Participant #	**01-01**	**01-03**	**01-04**	**01-05**	**01-06**	**01-07**
Age	34	26	19	17	16	17
Gender	Female	Male	Female	Female	Male	Female
Study eye treated	Left (OS)	Left (OS)	Right (OD)	Right (OD)	Right (OD)	Right (OD)
Baseline visual acuity logMAR	1.38	2.90	0.96	2.2	0.96	2.3
Follow-up duration	18 mo.	18 mo.	18 mo.	3 mo.	3 mo.	3 mo.

The participant's eye with the worst vision was treated in all cases.

OD, right eye; OS, left eye.

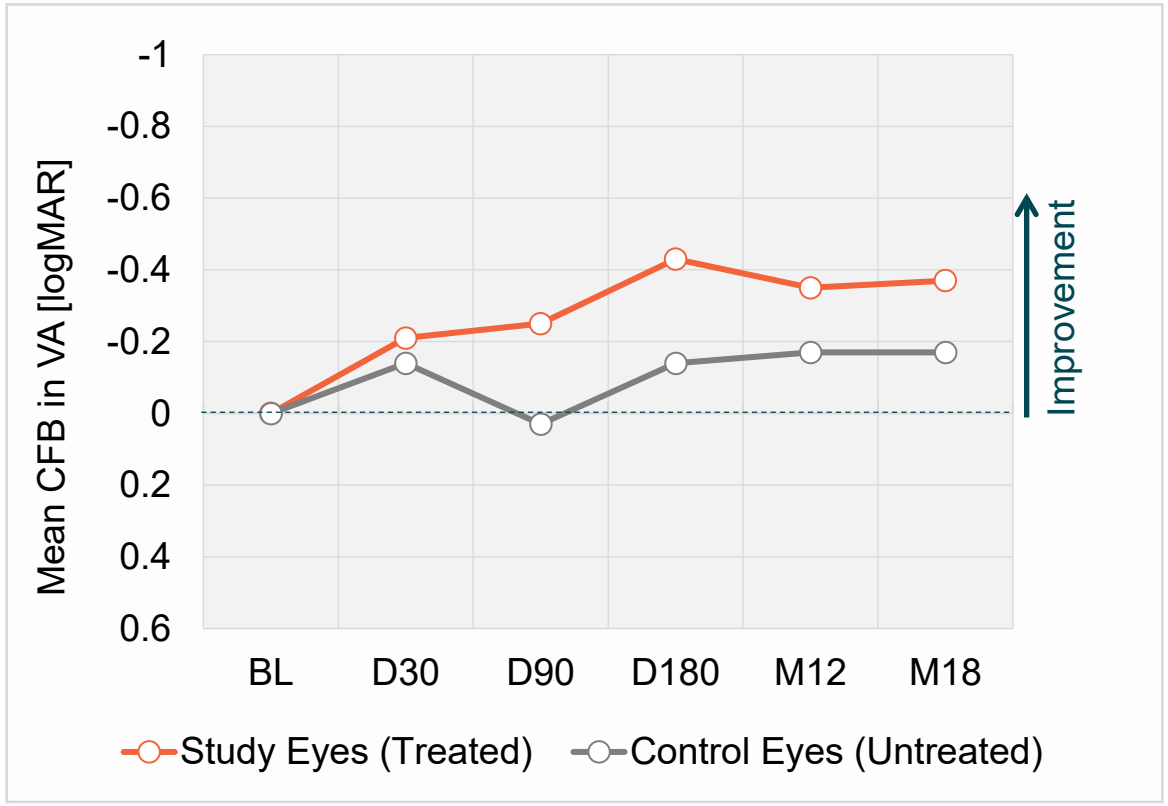
OPGx-LCA5 Well-Tolerated in All 6 Treated Participants

- Safety evaluated in 3 adult participants through 18 months and 3 pediatric participants through 3 months
- No ocular serious adverse events
- No observed dose-limiting toxicities
- All ocular AEs were mild, anticipated, and unrelated to study drug
  - One AE associated with surgical procedure
    - Pediatric participant (01-05) had cataract at screening that worsened at 3 months (unrelated to study drug)

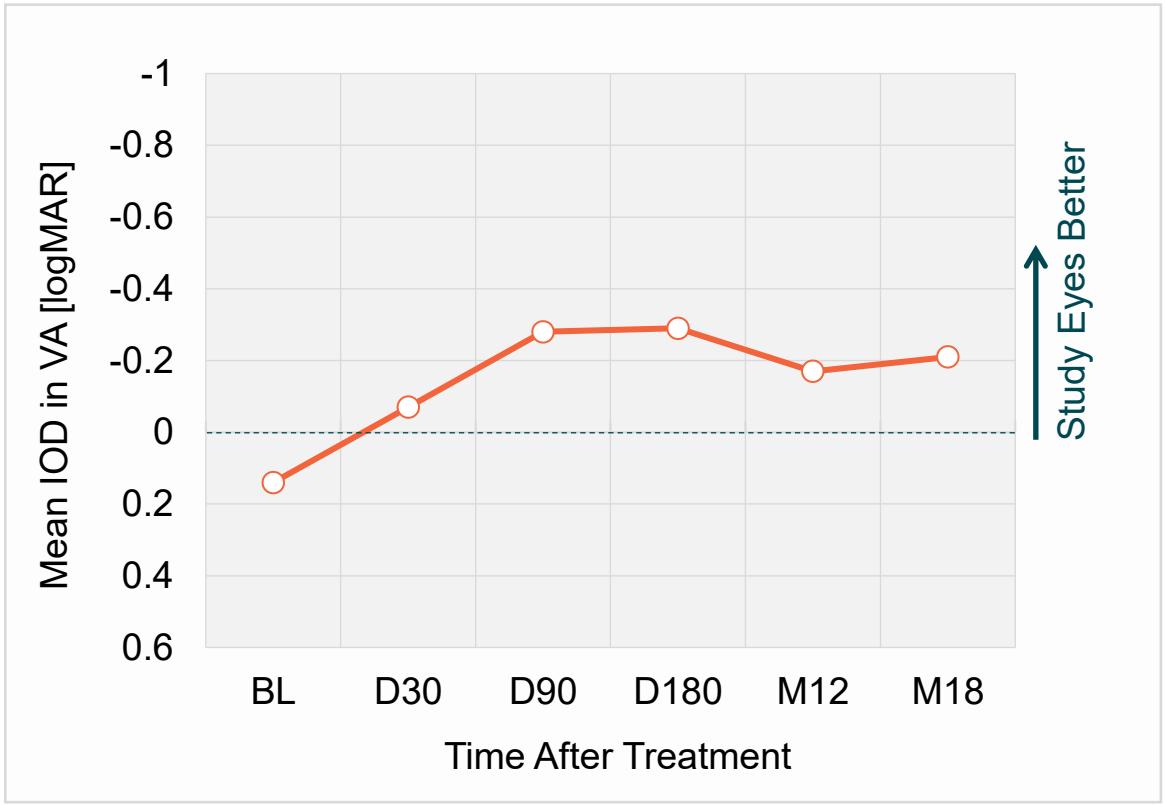
AE, adverse event.

Visual Acuity Maintained Over 18 Months in Adult Cohort

Mean Change from Baseline in Visual Acuity



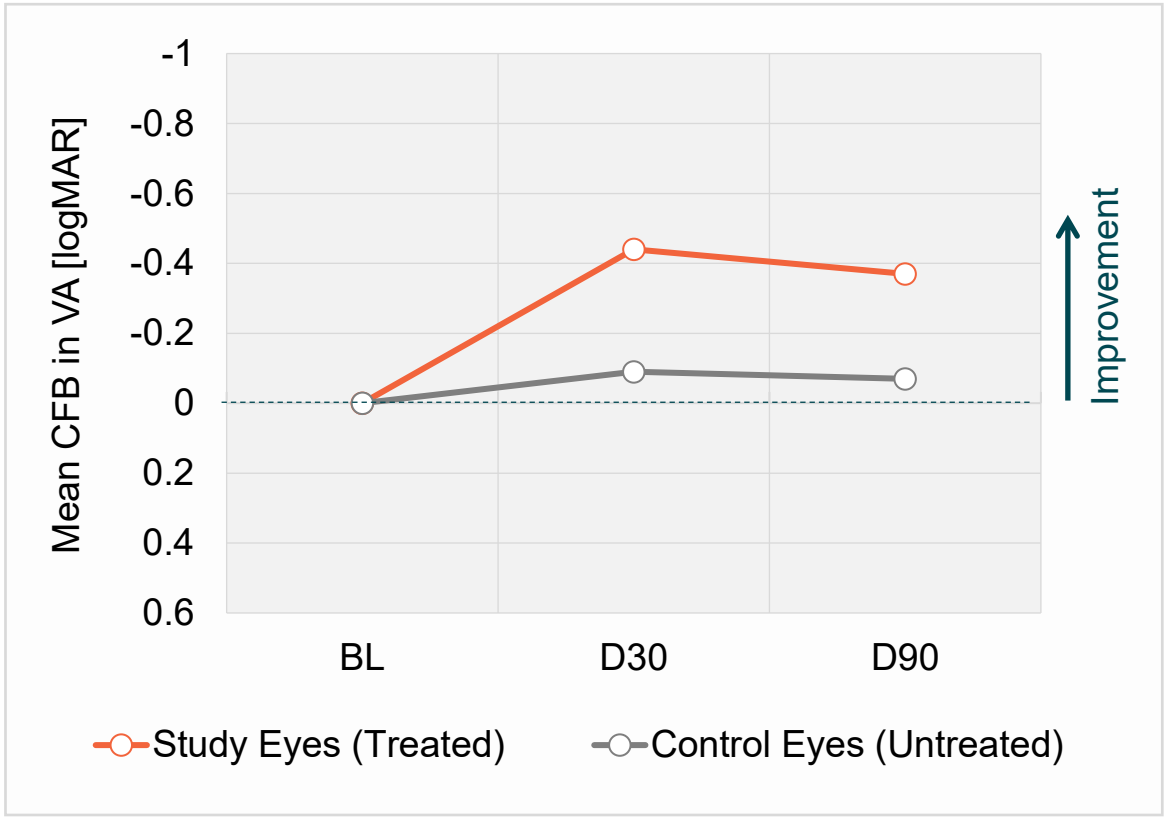
Mean Interocular Difference in Visual Acuity



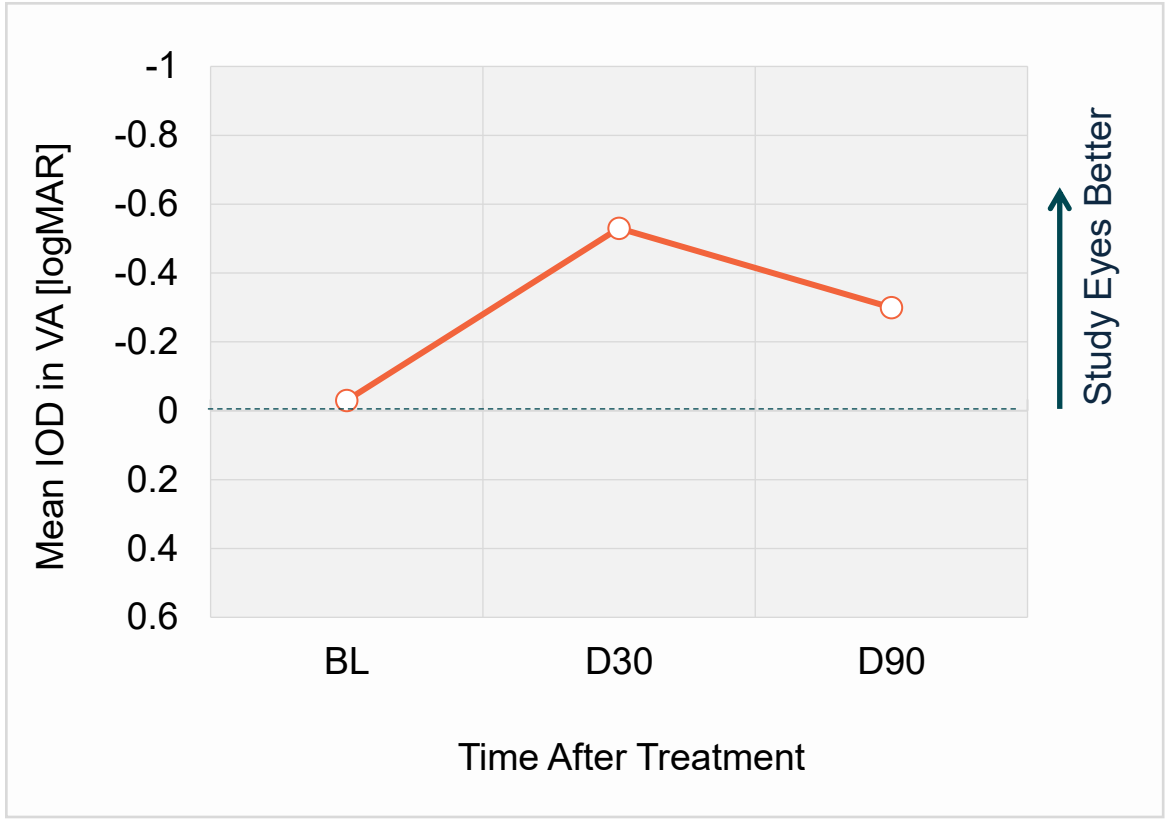
BL, baseline; CFB, change from baseline; IOD, interocular difference; logMAR, logarithm of the minimum angle of resolution; VA, visual acuity.

Visual Acuity Improved Over 3 Months in Pediatric Cohort

Mean Change from Baseline in Visual Acuity



Mean Interocular Difference in Visual Acuity



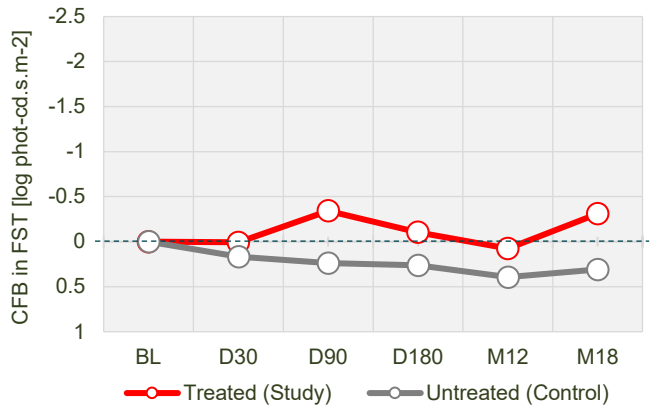
BL, baseline; CFB, change from baseline; IOD, interocular difference; logMAR, logarithm of the minimum angle of resolution; VA, visual acuity.

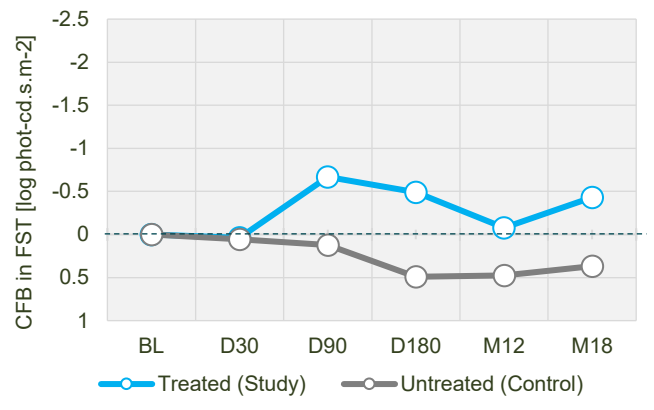
FST: Vision Improvement Durable to 18 Months in Adult Cohort

FST CFB – Red

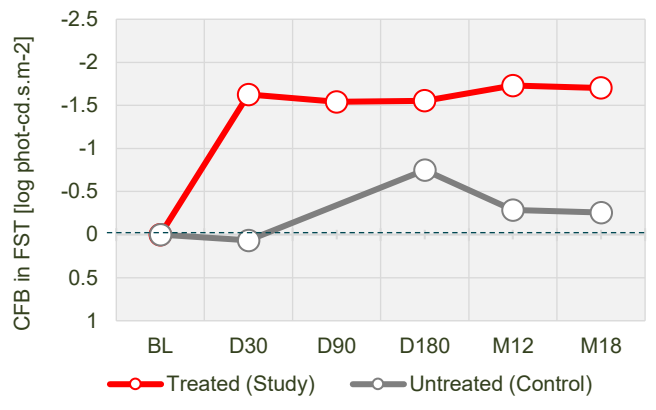
FST CFB – Blue

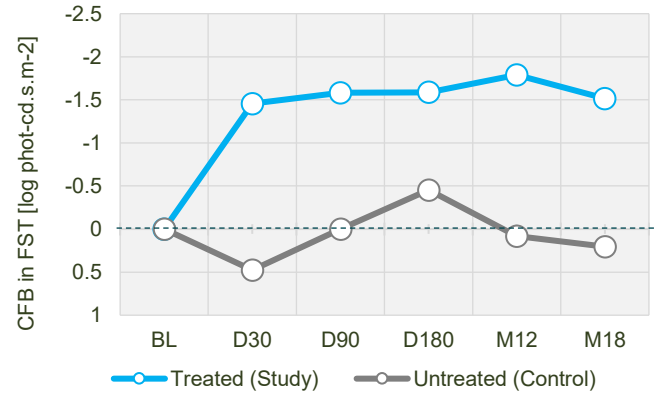
Participant 01-01



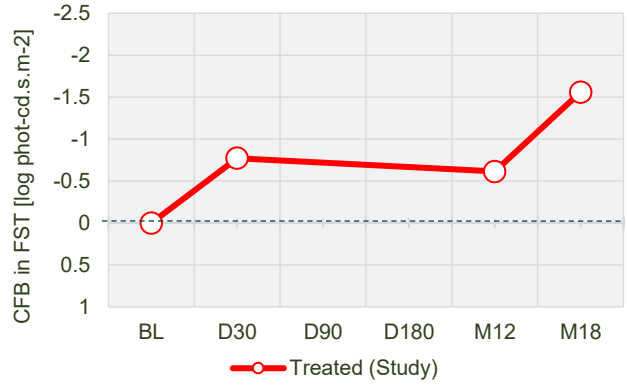


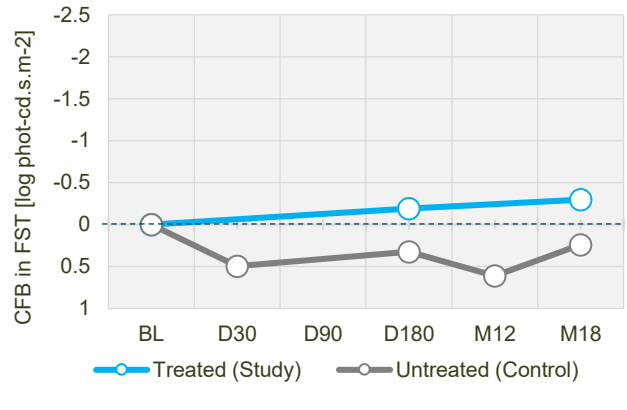
Participant 01-03





Participant 01-04





NOTE: Red FST values unavailable for the untreated eye of Participant 01-04.

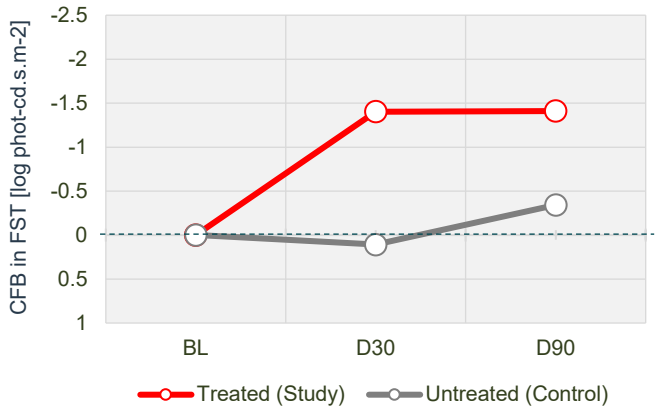
BL, baseline; CFB, change from baseline; FST, full-field stimulus test.

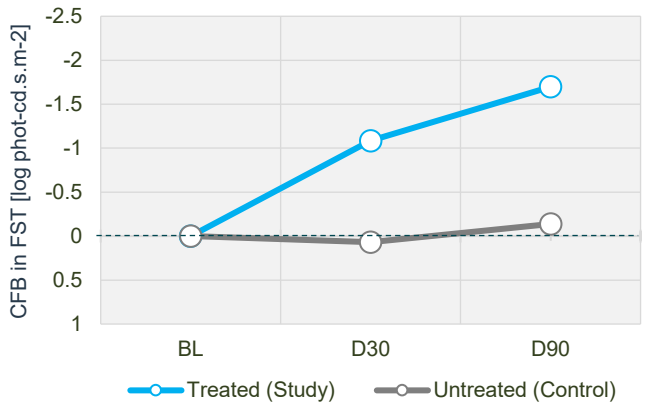
FST: Vision Improvement Observed to 3 Months in Pediatric Cohort

FST CFB – Red

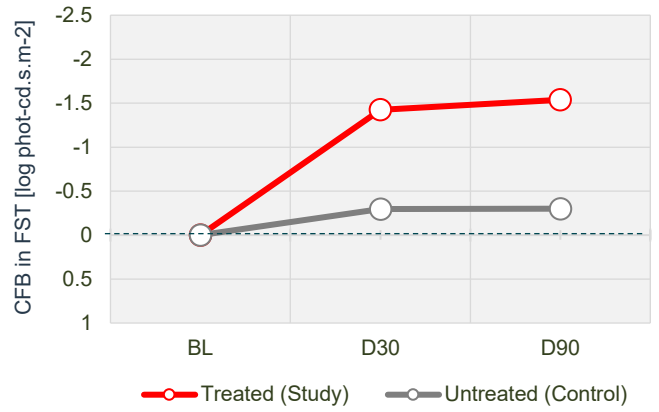
FST CFB – Blue

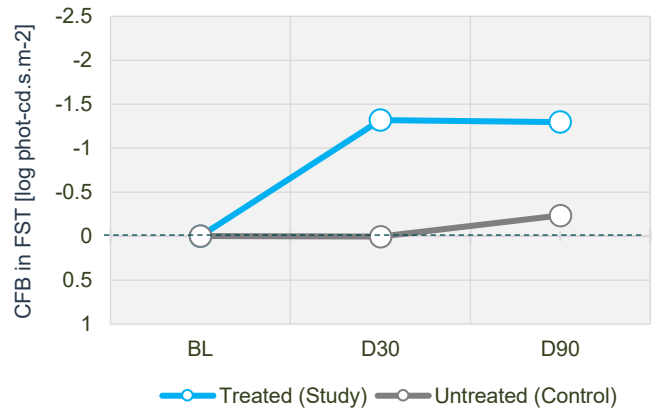
Participant 01-05



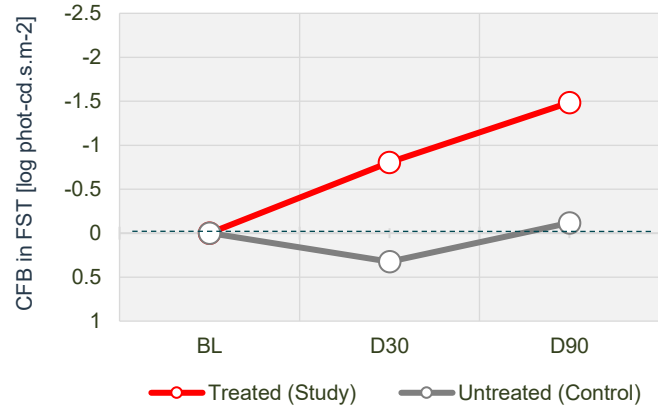


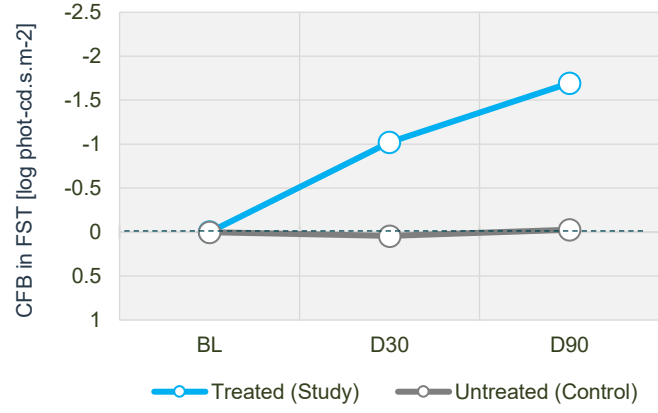
Participant 01-06





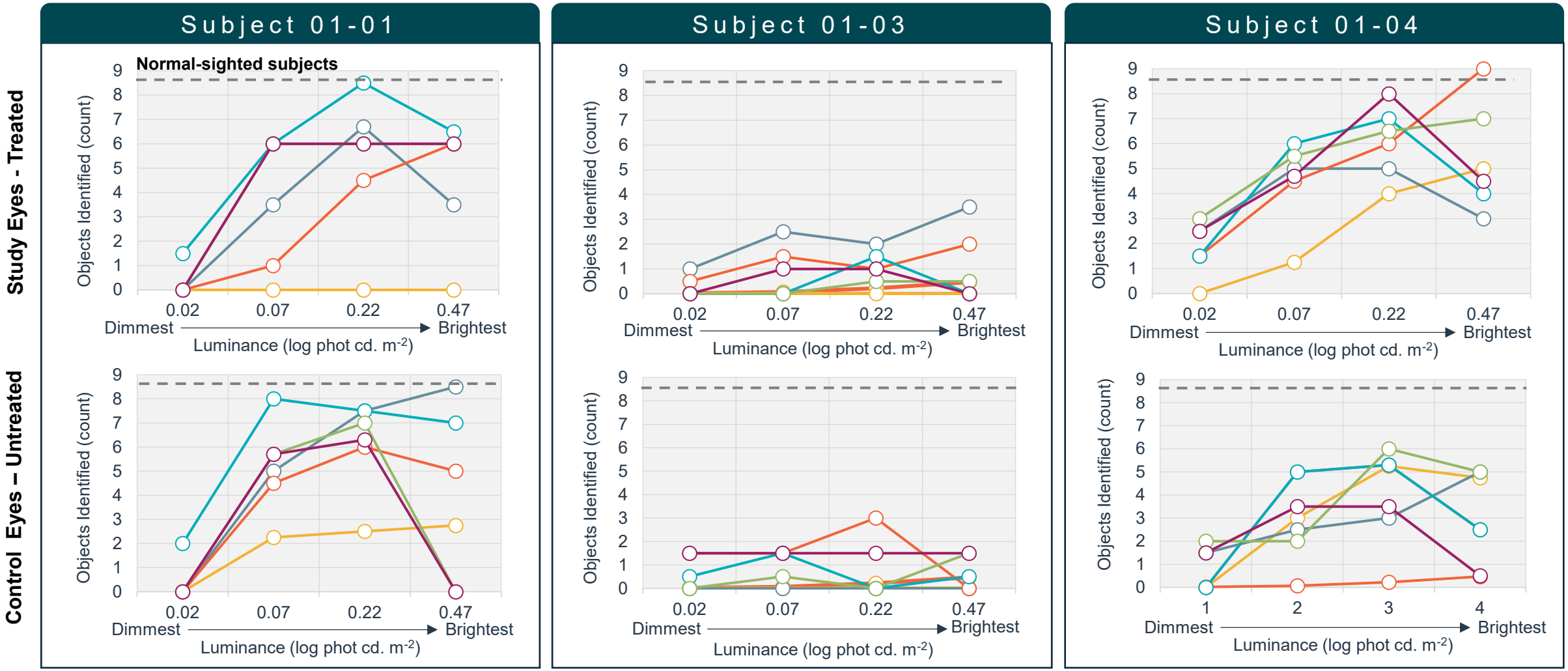
Participant 01-07





BL, baseline; CFB, change from baseline; FST, full-field stimulus test.

MLoMT: All Adult Participants Identified More Objects Through 18 Months Compared to Baseline



X axis designates dim to bright conditions.

 MLoMT, Multi-Luminance orientation and Mobility Test.

MLoMT: All Pediatric Participants Identified More Objects Through 3 Months Compared to Baseline

X axis designates dim to bright conditions.

 MLoMT, Multi-Luminance orientation and Mobility Test.

OPGx-LCA5 Program Positioned for Rapid Advancement

- **Excellent safety data** in all participants with follow-up out to 18 months in adult cohort
- **Robust biologic efficacy** corroborated through multiple functional outcomes:
  - VA and FST improvements suggest enhanced visual perception and clarity
  - Improvement in MLoMT translates to improved ability to navigate the environment and perform daily activities
- **Rare Pediatric Disease, Orphan Drug and Regenerative Medicine Advanced Therapy designations** received from the FDA; potential eligibility for Priority Review Voucher upon BLA approval*

BLA, Biologics License Application; FDA, Food and Drug Administration; LCA5, Leber congenital amaurosis 5.
*Potential PRV opportunities contingent on timing of FDA approval and/or congressional reauthorization of PRV program

Powerful Participant-Reported Outcomes After OPGx-LCA5 Treatment

Adult Participants

01-01:

Reported being able to **identify her children within a larger group** of children 1 month after surgery which she previously could not have done.

01-04:

Reported that since treatment, she **no longer requires a cane** and can now **navigate urban environments independently.**

01-03:

Had no formative vision prior to treatment. Reported being able to **see his newborn niece for the first time and watch his sister get married.**

Described his newfound independence, including his **ability to pour a glass of wine and drink it unassisted** for the first time in his life.

Has been able to **travel independently and, as a result, he acquired a new job,** which requires a greater level of independence than he previously had.

Pediatric Participants

01-05:

Reported being able to **walk and cook without the assistance** of others, and how treatment has helped her in her **writing capabilities.**

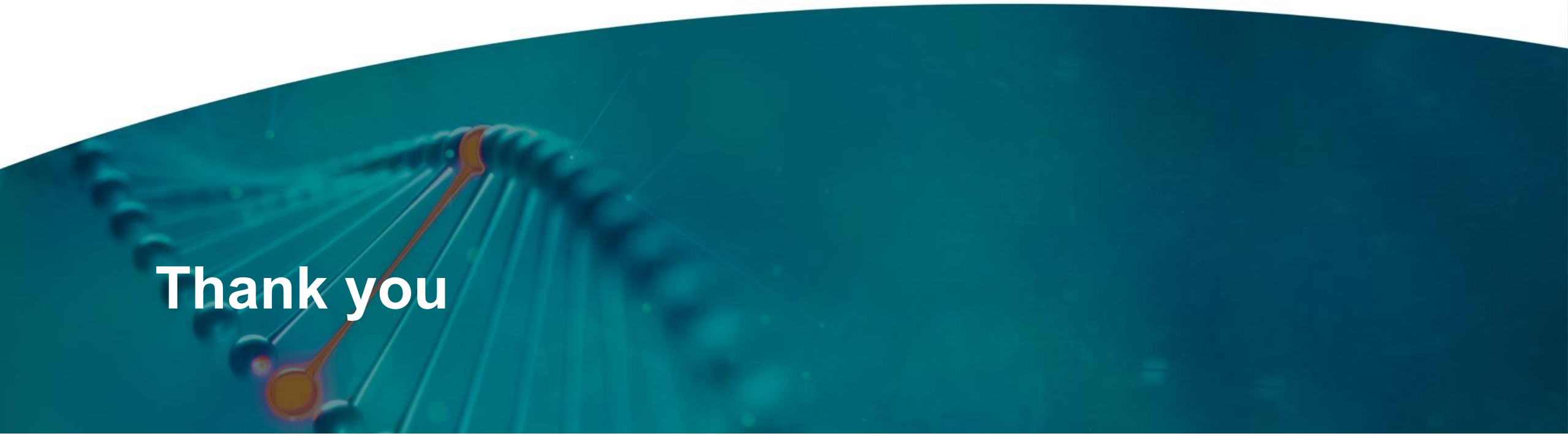
Her mother described how her daughter's eyes moved and rotated independently of one another prior to surgery, but that now they seem to be **more coordinated in their movements.**

01-06:

Reported a noticeable **difference in the visual brightness** between his treated and untreated eyes.

01-07:

Mostly nonvisual prior to treatment. Reported taking a visit to a local zoo, where she was **able to visualize an owl for the first time.**



Thank you