Regenera

HELPING PATIENTS REGAIN
WHAT HAS BEEN LOST

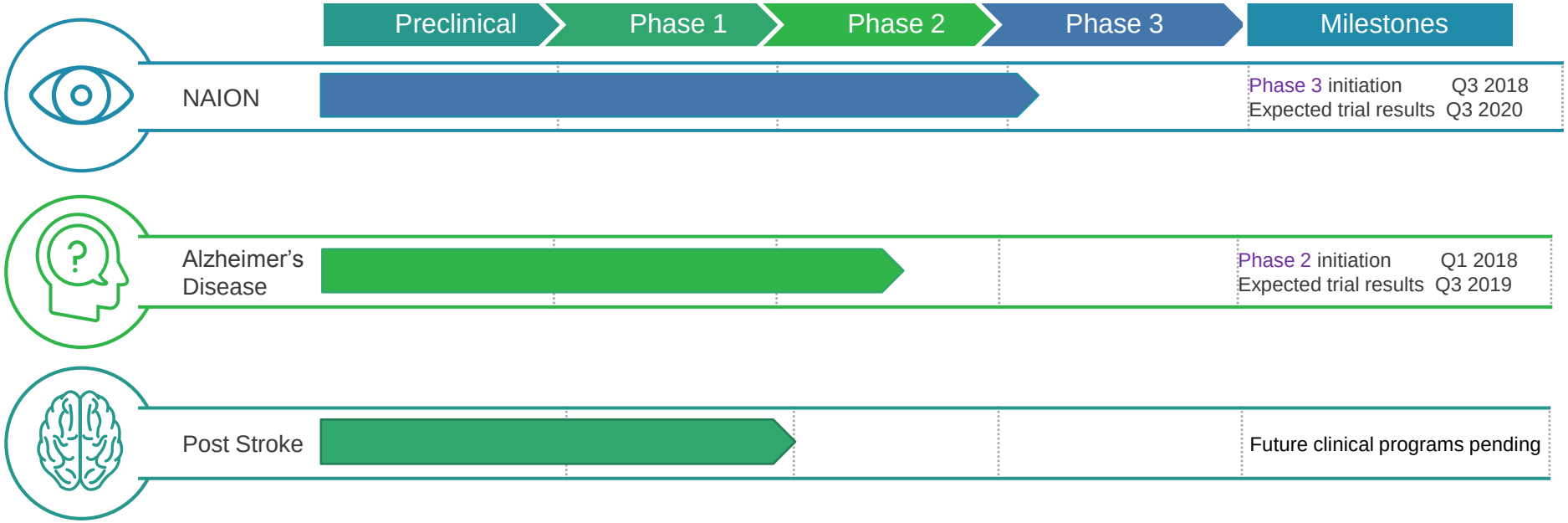
JULY 2019

OIS @ASRS | OPHTHALMOLOGY INNOVATION SUMMIT

Regenera Highlights

- Clinical-stage company located in Tel Aviv, Israel
- A new drug substance extracted from a natural source
- Works through synaptic activation and is supported by many animal stroke studies
- RPh201 is in Phase 3 (NAION) study with fast track designation
- To date, the Company has raised $39.5M and is currently raising $30M

RPh201 Development Plan



RPh201: The Potential to Improve NAION Patient Outcomes

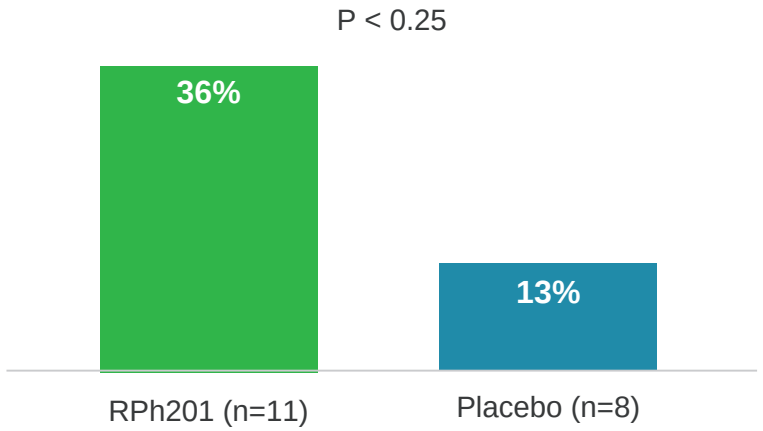
- Nonarteritic Anterior Ischemic Optic Neuropathy (NAION), a stroke of the optic nerve
- Most patients suffer from permanent visual impairment including reduced visual acuity and visual field
- There are currently no approved treatments

Studying RPh201 in NAION will provides a definitive measure of functional recovery

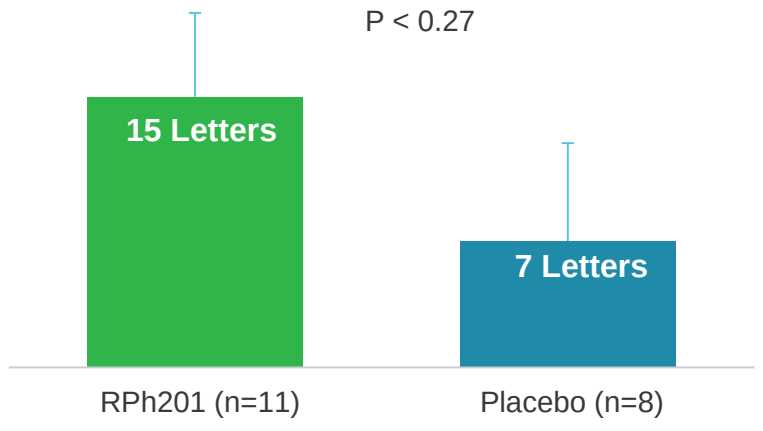
Trend Toward Improvement in Visual Acuity

Post hoc analysis to correct for documented training effects during vision tests and lack of baseline patient visits

Proportion of subjects with an improvement of ≥15 letters after 26 weeks of treatment



Change in mean number of ETDRS letters in NAION eyes after 26 weeks of treatment

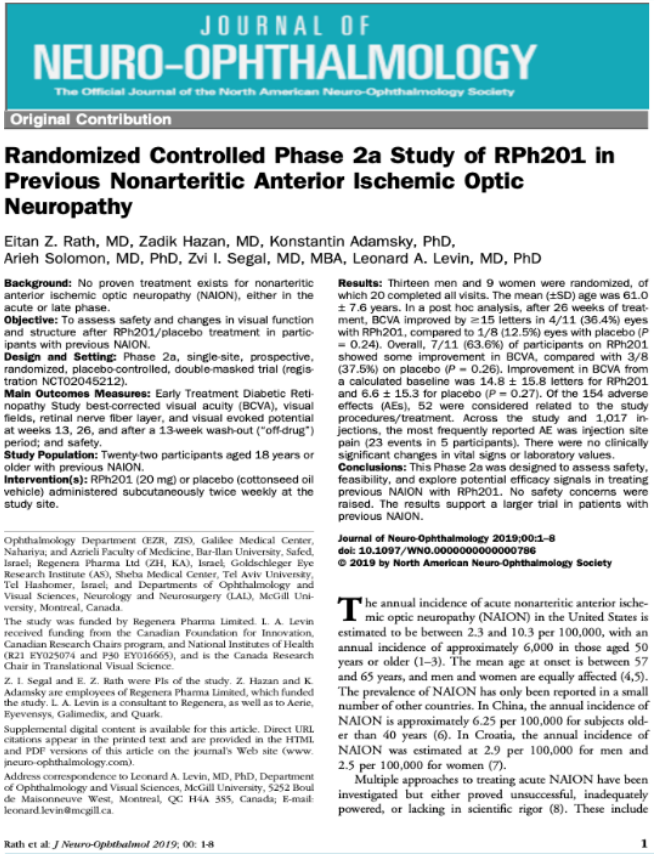


In RPh201 one patient dropped out after 3 months of treatment

NAION Program Highlights

- Clear and fast path forward with FDA Fast Track Designation
- All 12 clinical sites are active
  - 60/240 subjects have been randomized
  - 50 subjects in screening
- Peer reviewed publication of full Phase 2 trial results in Journal of Neuro-Ophthalmology

Data expected 2020



JOURNAL OF
NEURO-OPHTHALMOLOGY
The Official Journal of the North American Neuro-Ophthalmology Society

Original Contribution

Randomized Controlled Phase 2a Study of RPh201 in Previous Nonarteritic Anterior Ischemic Optic Neuropathy

Eitan Z. Rath, MD, Zadik Hazan, MD, Konstantin Adamsky, PhD, Arieh Solomon, MD, PhD, Zvi I. Segal, MD, MBA, Leonard A. Levin, MD, PhD

Background: No proven treatment exists for nonarteritic anterior ischemic optic neuropathy (NAION), either in the acute or late phase.
Objective: To assess safety and changes in visual function and structure after RPh201/placebo treatment in participants with previous NAION.
Design and Setting: Phase 2a, single-site, prospective, randomized, placebo-controlled, double-masked trial (registration NCT02045212).
Main Outcomes Measures: Early Treatment Diabetic Retinopathy Study best-corrected visual acuity (BCVA), visual fields, retinal nerve fiber layer, and visual evoked potential at weeks 13, 26, and after a 13-week wash-out ("off-drug") period; and safety.
Study Population: Twenty-two participants aged 18 years or older with previous NAION.
Intervention(s): RPh201 (20 mg) or placebo (cottonseed oil vehicle) administered subcutaneously twice weekly at the study site.
Results: Thirteen men and 9 women were randomized, of which 20 completed all visits. The mean (±SD) age was 61.0 ± 7.6 years. In a post hoc analysis, after 26 weeks of treatment, BCVA improved by ≥15 letters in 4/11 (36.4%) eyes with RPh201, compared to 1/8 (12.5%) eyes with placebo (P = 0.24). Overall, 7/11 (63.6%) of participants on RPh201 showed some improvement in BCVA, compared with 3/8 (37.5%) on placebo (P = 0.26). Improvement in BCVA from a calculated baseline was 14.8 ± 15.8 letters for RPh201 and 6.6 ± 15.3 for placebo (P = 0.27). Of the 154 adverse effects (AEs), 52 were considered related to the study procedures/treatment. Across the study and 1,017 injections, the most frequently reported AE was injection site pain (23 events in 5 participants). There were no clinically significant changes in vital signs or laboratory values.
Conclusions: This Phase 2a was designed to assess safety, feasibility, and explore potential efficacy signals in treating previous NAION with RPh201. No safety concerns were raised. The results support a larger trial in patients with previous NAION.

Ophthalmology Department (EZR, ZIS), Galilee Medical Center, Nahariya; and Azrieli Faculty of Medicine, Bar-Ilan University, Safed, Israel; Regenera Pharma Ltd (ZH, KA), Israel; Goldschleger Eye Research Institute (AS), Sheba Medical Center, Tel Aviv University, Tel Hashomer, Israel; and Departments of Ophthalmology and Visual Sciences, Neurology and Neurosurgery (LAL), McGill University, Montreal, Canada.

The study was funded by Regenera Pharma Limited. L. A. Levin received funding from the Canadian Foundation for Innovation, Canadian Research Chairs program, and National Institutes of Health (R21 EY025074 and P30 EY016665), and is the Canada Research Chair in Translational Visual Science.

Z. I. Segal and E. Z. Rath were PIs of the study. Z. Hazan and K. Adamsky are employees of Regenera Pharma Limited, which funded the study. L. A. Levin is a consultant to Regenera, as well as to Aerie, Eyevensys, Galimedix, and Quark.

Supplemental digital content is available for this article. Direct URL citations appear in the printed text and are provided in the HTML and PDF versions of this article on the journal's Web site (www.jneuro-ophthalmology.com).

Address correspondence to Leonard A. Levin, MD, PhD, Department of Ophthalmology and Visual Sciences, McGill University, 5252 Boul de Maisonneuve West, Montreal, QC H4A 3S5, Canada; E-mail: leonard.levin@mcgill.ca.

Journal of Neuro-Ophthalmology 2019;00:1–8
doi: 10.1097/WNO.0000000000000786

The annual incidence of acute nonarteritic anterior ischemic optic neuropathy (NAION) in the United States is estimated to be between 2.3 and 10.3 per 100,000, with an annual incidence of approximately 6,000 in those aged 50 years or older (1–3). The mean age at onset is between 57 and 65 years, and men and women are equally affected (4,5). The prevalence of NAION has only been reported in a small number of other countries. In China, the annual incidence of NAION is approximately 6.25 per 100,000 for subjects older than 40 years (6). In Croatia, the annual incidence of NAION was estimated at 2.9 per 100,000 for men and 2.5 per 100,000 for women (7).

Multiple approaches to treating acute NAION have been investigated but either proved unsuccessful, inadequately powered, or lacking in scientific rigor (8). These include

Join our journey to help patients regain what has been lost

Thank you!

Jordan Rubinson, MS, MBA
CEO, Regenera Pharma
jordan@regenerapharma.com
www.regenerapharma.com