ANNUAL REPORT 2021

Research to
Prevent Blindness

Research to
Prevent Blindness

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ON THE COVER:

(top) Yuhua Zhang, PhD, of the David Geffen School of Medicine, UCLA, is building an adaptive optics fluorescence lifetime imaging ophthalmoscope to monitor age-related macular degeneration progression. See his award details on page 14.

(bottom) Preethi Ganapathy, MD, PhD, RPB Career Development Awardee, is creating a 3D model to study cell death that is related to glaucoma at the State University of New York Upstate Medical University.

Working On The Cutting Edge

Dear Friends of Research to Prevent Blindness,

We are so excited to share with you our latest Annual Report. What a year of discovery it's been! In 2021, RPB-supported researchers published study after study (more than 1,800 to be exact) that are pushing the boundaries of scientific innovation using high-tech scientific techniques.

From the creation of brain implants that allowed a previously blind woman to see color vision; to the implementation of gene editing that restored vision for patients with an inherited retinal disease; to the development of super-speed imaging devices that enabled researchers to see what is going on in the tiniest structures of the living eye, RPB-supported vision researchers were at the cutting-edge of science in 2021.

The eye is a natural site for scientific innovation. The front of the eye is uniquely observable, while the retina (the back of the eye that is directly connected to the brain via the optic nerve) provides a remarkable opportunity to access the central nervous system with non-invasive techniques. As a result, researchers are making incredible strides—at a pace that leaves us both amazed and hopeful—in diagnosing disease; tracking disease progression; creating and delivering novel treatments; and assessing the effectiveness of treatments (not only for eye diseases, but also for cognitive impairment, Alzheimer's disease and more).

The eye's status as a "window" into the human body has gone a step further—the eye is the new frontier of scientific and medical innovation.

We are so grateful to our supporters for allowing Research to Prevent Blindness to continue its 62-year mission of funding the very best research directed at the prevention, treatment or eradication of all diseases that threaten vision. By strategically directing our research funding, we show time and time again that RPB support jump-starts the innovations that improve sight.

We invite you to help us keep vision at the forefront of medical research—by directing the brilliance and commitment of RPB-supported researchers to the questions that most need to be answered. And most importantly, we thank you for helping all of those suffering from sight-stealing conditions to see the future more clearly.

With gratitude,

Diane S. Swift
Chairman

Brian F. Hofland, PhD
President

Jumpstarting Innovation

At Research to Prevent Blindness, we strategically direct our research funding to jump-start the innovations that improve sight. We support the brightest researchers, in the most effective labs, asking the most important questions.

In 2021, we provided approximately

$10 million

in funding to researchers and departments of ophthalmology.

As a result, more than

1,800

new scientific publications cited RPB support in one year.

Each of these peer-reviewed publications represent

new knowledge

that will move the field forward and move us closer to our reason for being: saving sight.

How do we do this?

We use a unique, two-pronged grantmaking model that allows us to be both directive (allocating funding to the areas of highest need) and flexible (responding to timely scientific opportunities).

Individual Grants

RPB offers a variety of individual grants— from those based on career stage to those focused on specific eye diseases. These restricted grants allow scientists to pursue cutting-edge research proposals, which are rigorously reviewed by RPB's esteemed grant review committees, that will move the field of vision science forward.

See pages 10 – 15 for our 2021 individual grantees.

Departmental Grants

RPB provides exceptional departments of ophthalmology with $75,000 – $115,000 a year in unrestricted funding. As one of the few sources of unrestricted funds—which can be used for pilot studies, starting new lines of research, the purchase of a piece of high-tech research equipment—RPB grants provide the flexibility that enable new scientific approaches to eye diseases.

See page 18 for a list of the departments we funded in 2021.

RPB is unique in that we fund research across all sight-threatening conditions. After all, the function of different parts of the eye—down to its tiniest structures—are interconnected. A discovery in one area can enable a breakthrough in another.

Around the country, hundreds of RPB-supported researchers are pushing the boundaries of scientific knowledge in areas such as

age-related macular degeneration, glaucoma, diabetic retinopathy, retinal degeneration, low vision, amblyopia, ocular cancers and many more.

(from top to bottom): Paul Anne Newman-Casey, MD, MS, University of Michigan School of Medicine; Matthew Van Hook, PhD, University of Nebraska Medical Center College of Medicine; Jeffrey Mumm, PhD, Johns Hopkins University School of Medicine; Tasneem P. Sharma, PhD, Indiana University School of Medicine; Oleg Alekseev, MD, PhD, Duke University School of Medicine

Getting Creative with Community Outreach

During the ongoing COVID-19 pandemic, opportunities for in-person events (and even doctor's visits!) were limited. RPB saw a need to bring essential information on common eye diseases, as well as news about emerging research, directly to the homes of people affected by these diseases.

In 2021, RPB launched a series of virtual "Lunch & Learn" events—one-hour, free virtual sessions featuring current or former RPB-grantees who are experts in their areas of research and clinical care. The events were open to everyone. RPB grantees provided attendees with insight into disease pathology and treatment, as well as "sneak peeks" of cutting-edge research going on in RPB-supported labs around the country.

We thank our fantastic **Lunch & Learn** speakers for their time and dedication to sharing high-quality scientific information with the RPB community. Our speakers included:

RPB Lunch & Learn: Eye on Glaucoma

- Moderator **Cynthia L. Grosskreutz, MD, PhD**, Novartis Institutes for BioMedical Research
- Presenter **Paula Anne Newman-Casey, MD, MS**, University of Michigan School of Medicine/ Kellogg Eye Center
- Presenter **Milica Margeta, MD, PhD**, Harvard Medical School/Massachusetts Eye and Ear Infirmary

RPB Lunch & Learn: Eye on AMD

- Moderator **Carl Romano, PhD**, Regeneron
- Presenter **Aparna Lakkaraju, PhD**, University of California, San Francisco, School of Medicine
- Presenter **Jordan Green, PhD**, Johns Hopkins University School of Medicine

RPB Lunch & Learn: Eye on Diabetic Retinopathy

- Moderator **Sanjoy Dutta, PhD**, JDRF
- Presenter **Jennifer Sun, MD, MPH**, Harvard Medical School and Beetham Eye Institute, Joslin Diabetes Center
- Presenter **Jesse Schallek, PhD**, Flaum Eye Institute at the University of Rochester

RPB Lunch & Learn: Eye on Low Vision

- Moderator **Dimitri Azar, MD, MBA**, Twenty/Twenty Therapeutics and University of Illinois College of Medicine
- Presenter **MiYoung Kwon, PhD**, Northeastern University
- Presenter **Gang Luo, PhD**, Harvard Medical School and Schepens Eye Research Institute

RPB Lunch & Learn: Eye on Dry AMD

sponsored by Apellis Pharmaceuticals

- Moderator **Federico Grossi, MD, PhD**, Apellis Pharmaceuticals
- Presenter **Janet S. Sunness, MD**, Greater Baltimore Medical Center
- Presenter **Christine A. Curcio, PhD**, University of Alabama at Birmingham School of Medicine

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The Lunch & Learn series is ongoing, with new topics being added on a regular basis. We invite you to view the sessions mentioned above, as well as new sessions from 2022, at any time on RPB's YouTube channel: **https://bit.ly/RPBYouTube**.

Strategic Alliances

In 2021, RPB provided grants to select organizations to help advance the field of U.S. vision research. We work with organizations whose missions align closely with ours, in order to provide strategic support that will make the vision research field stronger for all participants and its beneficiaries.

Increasing Diversity with the Heed Ophthalmic Foundation

RPB provided funding to the Heed Ophthalmic Foundation of up to $60,000 (up to $20,000 a year from 2021 – 2023) for well-qualified under-represented minority (URM) candidates to be part of upcoming classes of The Heed Fellows program, which provides funding for postgraduate studies in ophthalmology and the ophthalmic sciences.

The funding will cover two Heed Fellows per year for three years (for a total of 6 Fellows over the course of the grant). If no URM candidates are selected as Fellows (URM information will be blinded during the selection process) by the Heed Fellows selection committee, RPB funds will not be used in that grant year.

Educating Key Stakeholders with the Alliance for Eye and Vision Research

RPB supported the Alliance for Eye and Vision Research (AEVR) in its efforts to educate the public about the value of federally-funded vision research with a 2021 grant of $50,000.

With RPB support, AEVR held its Seventh Annual Emerging Vision Scientists (EVS) Day on Capitol Hill, which enables early-career researchers to engage with Members of Congress and their staffs to discuss their research and the importance of funding for their work. AEVR worked with 28 early-stage investigators from Departments of Ophthalmology or Schools/Colleges of Optometry to create brief videos describing their research, its promise to save sight or restore vision in patients, and the potential to reduce the cost of vision impairment and eye disease, currently estimated at $177 billion annually but projected to grow to an inflation-adjusted annual cost of $717 billion by year 2050.

The participants in AEVR's Seventh Annual Emerging Vision Scientists Day shared their research and its promise to save sight or restore vision.

AEVR also utilized RPB support to hold events for legislators called Congressional Briefings on specific eye diseases, including age-related macular degeneration (AMD), glaucoma, myopia, keratoconus and thyroid eye diseases. These briefings educate Members of Congress and their staff members about the human impact of these conditions and the need for federal research funding to develop treatments and cures.

Studying a Myopia Pandemic with the National Academy of Sciences

RPB provided a grant of $100,000 to the National Academy of Sciences (NAS) in support of the creation of a consensus study on reducing the rising global incidence of myopia, also called nearsightedness, which is when faraway objects appear blurry. NAS is undertaking this study (with the support of RPB and additional funders) to address the myopia pandemic. A working group of experts will generate a report that includes a coordinated plan for the research effort required to address this problem.

Supporting Academic Departments with the Association of University Professors of Ophthalmology

RPB provided a $175,000 grant to support the activities of the Association of University Professors of Ophthalmology (AUPO), which supports academic departments of ophthalmology and their leadership, as well as promotes excellence in ophthalmic education, fosters vision research and promotes ethical practice in eye care. The grant included $50,000 to support the RPB David F. Weeks Award for Outstanding Vision Research, which is administered by AUPO (see page 17 for more information).

New Grants

We're pleased to present the 2021 RPB individual award recipients on the following pages.

Studying a wide variety of sight-threatening diseases, these talented scientists were selected by RPB's esteemed review panels (see page 19) for their field-changing research proposals and commitment to scientific excellence.

We are proud to identify and support the researchers who are making the sight-saving breakthroughs of tomorrow.

Philip Ruzycki, PhD

RPB Career Development Awards

This award provides $350,000 over 4 years to early-career MDs, PhDs and MD/PhDs to support their investigations, with mentorship from senior scientists. Their primary appointments must be in ophthalmology, and they must show potential for independent research.

Cindy X. Cai, MD
The Johns Hopkins University School of Medicine
Using statistical modeling to predict lapses in diabetic retinopathy care based on social determinants of health (including both patient and healthcare system factors).

Tyson N. Kim, MD, PhD
University of California, San Francisco, School of Medicine
Exploring the developmental and molecular mechanisms of chorioretinal anastomoses (abnormal connections between retinal and choroidal circulation) in neovascular age-related macular degeneration, which is a disease that responds poorly to gold-standard anti-VEGF treatments and is a leading cause of blindness.

RPB/Dr. H. James and Carole Free Career Development Award

Tin Yan Alvin Liu, MD
The Johns Hopkins University School of Medicine
Using deep learning techniques, a form of artificial intelligence, to drive analysis of optical coherence tomography (a high-tech imaging technique) to improve management of patients with age-related macular degeneration.

Yi-Rong Peng, PhD
The Regents of the University of California, Los Angeles
Deciphering how cells become specialized in an area of the human retina called the fovea, which enables highly detailed, "high-acuity," vision that is essential for reading, driving and recognizing faces.

Rinki Ratnapriya, PhD
Baylor College of Medicine
Applying genomic approaches to characterize age-related macular degeneration risk variants that were identified via previous genome-wide association studies.

Philip Ruzycki, PhD
Washington University in St. Louis School of Medicine
Furthering previous research on specific retinal cells (which have neurons that cannot be regenerated and the loss of which is associated with major eye diseases like age-related macular degeneration), which showed that these cells utilize a novel feedback loop to link cell metabolism with gene expression.

Nazlee Zebardast, MD, MSc
Harvard Medical School/MEEI
Using cutting-edge statistical genetics and machine learning approaches to assess the influence of background genetic risk on glaucoma progression.

RPB Career Advancement Awards

This award supports early- to mid-career researchers with a grant of $150,000 as they seek new knowledge related to eye diseases. The award is aimed at vision researchers who have already received their first independent federal grant—the National Institutes of Health R01—and are collecting new data to apply for a second R01.

Rajesh C. Rao, MD
The Regents of the University of Michigan School of Medicine
Investigating the role of specific gene-driven pathways in retinal development by investigating their ability to modify ribonucleic acid (RNA) as well as control gene expression during pluripotent stem cell retinal differentiation.

Jesse Schallek, PhD
University of Rochester School of Medicine and Dentistry
Imaging and identifying specific kinds of immune cells inside the living eye for the first time using a state-of-the-art eye camera developed in the researcher's lab, combined with time-lapse imaging.

RPB/The Glaucoma Foundation Career Advancement Award
Matthew Van Hook, PhD
University of Nebraska Medical Center College of Medicine
Testing the hypothesis that microglia, the immune cells of the central nervous system, are responsible for degeneration of retinal ganglion cell outputs to the brain in glaucoma.

Rajesh C. Rao, MD

RPB Physician-Scientist Awards

This 3-year, $300,000 award strengthens and promotes clinical and/or basic research conducted by MDs or MD/PhDs who are actively engaged in clinical research. Physician-scientists bring a unique perspective and commitment to patient care to their research activities, enhancing the vision science field.

Thuy Doan, MD, PhD
University of California, San Francisco, School of Medicine
Determining if metagenomic deep sequencing, a previously developed technology for correctly diagnosing eye infection and inflammation, improves clinical outcomes for patients with eye infections.

Paula Anne Newman-Casey, MD, MS
The Regents of the University of Michigan School of Medicine
Aiming to lessen the rate of prescription eye drop non-compliance for glaucoma patients (currently affecting 40% of glaucoma patients) by quantitatively measuring whether drops are successfully instilled, monitoring medication use, communicating usage data to the patient's health care team, and coaching patients on improving their eye drop medication success.

Fatemeh Rajaii, MD, PhD
The Johns Hopkins University School of Medicine
Developing an injectable therapy for thyroid eye disease (TED) to inhibit the development of fat and muscle cells in orbital fibroblasts, which plays a role in TED development according to prior research.

Thuy Doan, MD, PhD

Richard Daneman, PhD

RPB Stein Innovation Awards

Named after RPB's founder, Dr. Jules Stein, this award was developed to uncover and encourage high-risk/high-gain vision research that is innovative and cutting-edge. It provides $300,000 over 3 years to researchers whose goal is understanding the visual system and the diseases that compromise its function. The proposed research cannot be funded— previously or currently—by others.

Shiming Chen, PhD
Washington University in St. Louis School of Medicine
Creating a mechanism to track Caspases-3/7 cells, which are involved in the cellular death cycle that gets activated during retinal degeneration, a leading cause of blindness with no cure.

Richard Daneman, PhD
University of California, San Diego, School of Medicine
Utilizing a novel model of retinal fibrosis (a condition that can develop after retinal neovascular disorders are treated with VEGF therapies) to understand the cellular and molecular origin of retinal fibrosis.

Alex L. Kolodkin, PhD
The Johns Hopkins University School of Medicine
Conducting research to understand how the visual system perceives motion, and how certain genetic mutations in people may affect this function.

Ian A. Sigal, PhD
University of Pittsburgh School of Medicine
Developing a novel therapeutic approach to glaucoma based on altering the mechanical properties of the lamina cribrosa, a structure of the eye where retinal ganglion cell axons, which carry visual information to the brain, exit the eye.

Gabriel H. Travis, MD
The Regents of the University of California, Los Angeles
Creating a new zebrafish model for Stargardt disease, the most commonly inherited single-gene retinal disease, in order to assess the role of the gene's encoded protein on photoreceptor function, which is essential for sight.

Russell L. Woods, PhD, BOptom

RPB/Lions Clubs International Foundation Low Vision Research Award

Low vision is a substantial and chronic loss of visual ability, not correctable by eyeglasses, contact lenses, medicines, or surgery and includes degradation of central vision, peripheral vision and sometimes both. This $300,000 award seeks greater understanding of how the visual system and brain respond to severe and chronic visual loss.

Russell L. Woods, PhD, BOptom
Harvard Medical School
Studying the ability of some people with central visual impairments to use other areas of their retina for visual analysis.

RPB Catalyst Award for Innovative Research Approaches for Age-Related Macular Degeneration

This $300,000 award is designed to support novel, ground-breaking research into age-related macular degeneration (or AMD), with the ultimate goal of creating effective treatments for this increasingly common and debilitating condition.

RPB/Dr. H. James and Carole Free Catalyst Award

Yuhua Zhang, PhD
The Regents of the University of California, Los Angeles
Developing advanced retinal imaging technology and objective functional biomarkers for assessing risk for age-related macular degeneration progression.

RPB Walt & Lilly Disney Awards for Amblyopia Research

This $100,000 award is available to MDs, PhDs or MD/PhDs conducting research of unusual significance into the diagnosis and treatment of amblyopia (commonly referred to as lazy eye), which develops in up to 4% of children, causing decreased vision without detectable anatomic damage.

Mark F. Bear, PhD
Massachusetts Institute of Technology
Undertaking a pilot animal trial to assess the safety and efficacy of injecting tedrodotoxin into the "normal" eye to block activity and thereby allow development of the amblyopic eye through increased usage.

Tawna Roberts, OD, PhD
Stanford University School of Medicine
Studying the development of amblyopia in children, probing both early, lower processing (edge detection) and higher-level cortical processing (motion discrimination), to examine how defects in higher-level vision depend on lower-level defects.

RPB International Research Collaborators Award

This $75,000 award promotes international collaborations through which researchers in the U.S. and outside the U.S. gain new knowledge and skills. Under a reciprocal arrangement, a U.S.-based researcher—MD, PhD, or MD/PhD with a primary appointment in a department of ophthalmology or other relevant department— will be funded to develop a new or deeper collaboration with a research lab outside the U.S.

Steven H. DeVries, MD, PhD
Northwestern University Feinberg School of Medicine
Collaborator: Chieko Koike, MD, Professor, Ritsumeikan University, Shiga, Japan
Establishing a rubric for evaluating cone photoreceptors in 3D retinal organoids with respect to the maturity and/or deficits in their synaptic connections and potentially identifying ways to improve those connections.

Srinidhi Singuri

RPB Medical Student Eye Research Fellowships

This $30,000 grant allows outstanding medical students to take a year off from medical school to devote time to a research project in an RPB-supported department of ophthalmology while working closely with a mentor. The fellowship is designed to encourage talented medical students to consider careers as physician-scientists working in eye research.

Arash Delavar, MPH, conducting research at the University of California, San Diego, School of Medicine
Mentor: Sally L. Baxter, MD, MSc

Christopher Kaler, conducting research at the University of Miami Miller School of Medicine
Mentors: J. William Harbour, MD & Stefan Kurtenbach, PhD

Praruj Pant, conducting research at Duke University School of Medicine
Mentor: Sharon Fekrat, MD

Quintin Richardson, conducting research at the University of California, San Francisco, School of Medicine
Mentor: Jeremy Keenan, MD, MPH

Meher Saleem, conducting research at the University of Miami Miller School of Medicine
Mentor: Sanjoy Bhattacharya, MTech, PhD

Srinidhi Singuri, conducting research at Cleveland Clinic Lerner College of Medicine of Case Western Reserve University
Mentor: Bela Anand-Apte, MD, PhD

Meher Saleem

Partnership Research Grants

In 2021, RPB worked with several well-respected partner organizations to support grants made by those organizations to highly qualified scientists in areas of strategic interest.

Joah F. Aliancy, MD, of The Regents of the University of Michigan School of Medicine, is a recipient of the TGF (sponsored by Patricia Hill) – RPB Fellowships in Glaucoma.

RPB/AAO Awards for IRIS Registry Research

RPB was pleased to again partner with the American Academy of Ophthalmology (AAO) on the RPB/AAO Awards for IRIS Registry Research, a joint award administered by AAO. The award enables researchers to use AAO's IRIS® Registry—the nation's largest specialty clinical database—to conduct population-based studies in ophthalmology and blindness prevention.

Congratulations to the 2021 awardees:

Ta Chang, MD, University of Miami Miller School of Medicine

Jennifer Patnaik, PhD, University of Colorado School of Medicine

Nakul Shekhawat, MD, MPH, The Johns Hopkins University School of Medicine

Andrew Williams, MD, University of Pittsburgh School of Medicine

RPB David F. Weeks Award for Outstanding Vision Research

RPB provided support to the Association of University Professors of Ophthalmology (AUPO) for the RPB David F. Weeks Award for Outstanding Vision Research, which is administered by AUPO. The award is named after David F. Weeks, former President and Chairman of RPB, who passed away in 2021. We are grateful for his many accomplishments on behalf of the field of vision research.

The award annually recognizes and celebrates an outstanding ophthalmic vision scientist whose research has made meaningful contributions to the understanding and/or treatment of potentially blinding eye disease.

Congratulations to the 2021 awardee:

David Williams, PhD, University of Rochester School of Medicine & Dentistry

TGF (sponsored by Patricia Hill) – RPB Fellowships in Glaucoma

RPB partnered with The Glaucoma Foundation (TGF) to fund the TGF (sponsored by Patricia Hill) – RPB Fellowships in Glaucoma, which support under-represented minority researchers who are pursing glaucoma research. The award is administered by The Glaucoma Foundation.

Congratulations to the 2021 fellows:

Joah F. Aliancy, MD, The Regents of the University of Michigan School of Medicine

Ndidi-Amaka Onyekaba, MD, Duke University School of Medicine

Carlos Parra, PhD, New York University Grossman School of Medicine

EyeFind Research Grants

RPB provided funding to the Association for Research in Vision and Ophthalmology (ARVO) to support the EyeFind Research Grant Program, which provides researchers with supplemental grant funding of up to $5,000 per project to procure human eye tissue samples from eye banks, which are non-profit organizations that obtain, evaluate and distribute ocular tissue donated by organ donors, for use in meaningful research projects.

Congratulations to the 2021 grant recipients:

Frauke Coppieters, PhD, Ghent University in Belgium

Steffi Daniel, PhD, University of Texas Southwestern Medical Center at Dallas

Luisa Holguin Colorado, PhD, OD, Queensland University of Technology in Australia

Eileen Hwang, MD, PhD, University of Utah Health Sciences Center

Martina Kropp, PhD, University of Geneva in Switzerland

Jun Liu, PhD, The Ohio State University College of Medicine and Public Health

Binapani Mahaling, PhD, Medical College of Wisconsin

Heather Moss, MD, PhD, Stanford University School of Medicine

Karen Peynshaert, PhD, Ghent University in Belgium

Wenlin Zhang, MD, PhD, The Regents of the University of California, Los Angeles

2021 RPB APPROVED GRANTS TOTAL: $10,955,000*

U.S. medical schools receiving new 2021 departmental and/or individual investigator awards

STATE	RPB GRANTEE INSTITUTIONS	TOTAL GRANTS 2021	TOTAL SUPPORT INCLUDING 2021
ALABAMA	University of Alabama at Birmingham School of Medicine	$ 115,000	$ 5,475,000
CALIFORNIA	University of California, Irvine, School of Medicine	115,000	1,700,000
	University of California, San Diego, School of Medicine	445,000	4,910,000
	University of California, San Francisco, School of Medicine	795,000	12,929,256
	Keck School of Medicine of the University of Southern California	115,000	6,504,795
	Stanford University School of Medicine	215,000	2,226,450
	The Regents of the University of California, Los Angeles	1,065,000	10,990,750
COLORADO	University of Colorado School of Medicine	115,000	1,078,000
FLORIDA	University of Miami Miller School of Medicine	175,000	5,772,700
ILLINOIS	University of Illinois at Chicago College of Medicine	115,000	5,726,712
	Northwestern University Feinberg School of Medicine	75,000	4,150,000
INDIANA	Indiana University School of Medicine	300,000	3,299,000
IOWA	University of Iowa Carver College of Medicine	115,000	5,697,425
MARYLAND	The Johns Hopkins University School of Medicine	1,415,000	13,945,140
MASSACHUSETTS	Harvard Medical School	765,000	13,455,315
	Massachusetts Institute of Technology	100,000	100,000
MICHIGAN	The Regents of the University of Michigan School of Medicine	565,000	11,163,050
	Wayne State University School of Medicine	115,000	4,863,000
MISSOURI	Washington University in Saint Louis School of Medicine	765,000	10,814,981
NEBRASKA	University of Nebraska Medical Center	150,000	2,505,000
NEW YORK	Columbia University College of Physicians and Surgeons	115,000	7,148,167
	Weill Cornell Medical College	115,000	6,113,700
	New York University Langone Eye Center	115,000	2,697,250
	University of Rochester School of Medicine & Dentistry	265,000	5,400,250
	SUNY Upstate Medical University	115,000	4,455,000
NORTH CAROLINA	Duke University School of Medicine	145,000	9,880,150
OHIO	Cleveland Clinic Lerner College of Medicine of CWRU	145,000	5,025,000
OKLAHOMA	University of Oklahoma Health Sciences Center	115,000	6,231,600
OREGON	Oregon Health & Science University School of Medicine	115,000	7,342,150
PENNSYLVANIA	University of Pennsylvania School of Medicine	115,000	7,548,500
	University of Pittsburgh School of Medicine	415,000	6,973,372
TENNESSEE	Vanderbilt University School of Medicine	115,000	4,865,500
TEXAS	Baylor College of Medicine	465,000	6,574,060
UTAH	University of Utah Health Sciences Center	115,000	7,030,300
WASHINGTON	University of Washington School of Medicine	115,000	5,777,638
WISCONSIN	University of Wisconsin–Madison School of Medicine & Public Health	115,000	6,948,750

*Includes commitments for special grants to the Alliance for Eye and Vision Research, the American Academy of Ophthalmology, the Association for Research in Vision and Ophthalmology, the Association of University Professors of Ophthalmology, the Heed Ophthalmic Foundation, the National Academy of Sciences and The Glaucoma Foundation.

Schools that received earlier RPB support but no new grant in 2021: Icahn School of Medicine at Mount Sinai and the University of Tennessee Health Science Center.

The RPB grant approval process is highly competitive. A standing Scientific Advisory Panel (SAP) and rotating Ad Hoc Committees convene each spring and fall to review all grant applications. Ad Hoc Committees are comprised of selected ophthalmology department chairs and researchers whose recommendations are forwarded to the SAP for further evaluation. The SAP includes distinguished scientists representing a broad range of scientific disciplines and interests. Their recommendations are presented to the RPB Board of Trustees for final approval.

2021 RPB SCIENTIFIC ADVISORY PANEL

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Professor Human Molecular Genetics
King's College London
Dir., KCL Centre for Gene Therapy and Regenerative Medicine
Dir., NIHR Guy's and St. Thomas' Biomedical Research Centre
Visiting Prof., Kellogg Eye Center, University of Michigan

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Prof., Dept. of Pharmacology and Cancer Biology
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The Fran and Ray Stark Foundation Prof. of Ophthalmology
(as of 2022, Chair of Dept.)
David Geffen School of Medicine

Professor in Dept. of Epidemiology
Jonathan and Karin Fielding School of Public Health
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Dir., Ocular Oncology Service
Medical Dir., Echography Service
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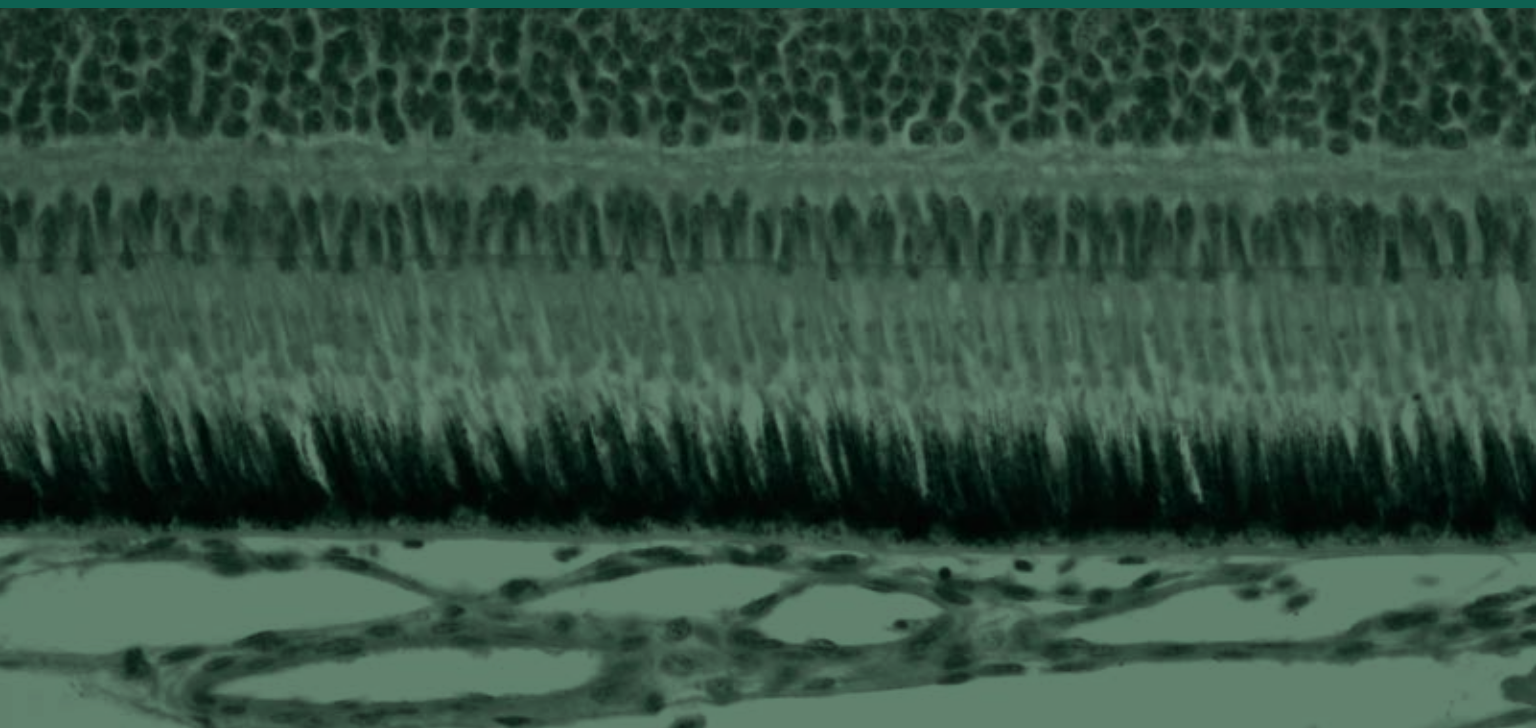
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