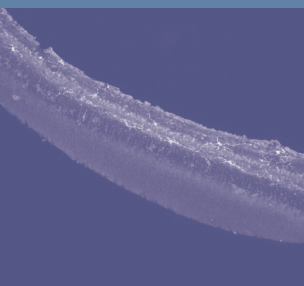
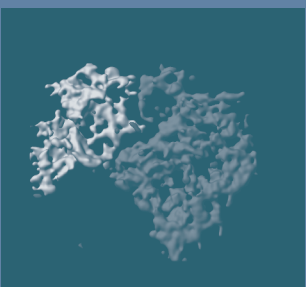
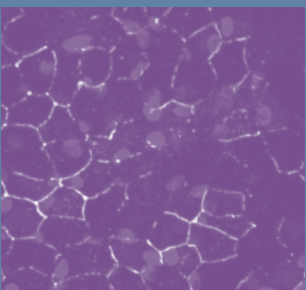
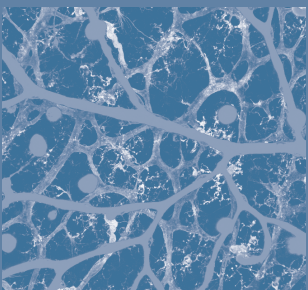




Research to  
Prevent Blindness

# Annual Report 2016





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(1896-1981)

David F. Weeks  
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\*\* RPB expresses its sincere sorrow over the 2017 death of Mr. Bloomberg and extends gratitude for his many years of service to the organization.

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## Precise Findings, Wide-Spread Impact

Diane S. Swift  
Chairman



Brian F. Hofland, PhD  
President



### Dear Friends of Research to Prevent Blindness,

Much of the work Research to Prevent Blindness (RPB) funds happens at the microscopic level—dealing with cells, genes, proteins and other small-scale biological structures. When those of us who are not researchers get an occasional peek into the eye (as on the page to the left), we often marvel at its amazing detail and complexity.

So it's no wonder that research on the eye, a key interface between our brains and the outside world, must be both painstakingly precise and boldly innovative.

When RPB deploys financial resources in support of eye research, we know that it's big-picture thinking, combined with meticulous work, that will lead to profound treatments and cures for problems like glaucoma, diabetic retinopathy, macular degeneration, retinitis pigmentosa, amblyopia, low vision, dry eye and more.

At RPB, we work hard to seek out the very best research environments and individual researchers, aided by a superstar cast of experts on our Scientific Advisory Panel and Review Committees (see the inside back cover of this

report for a list of those experts), so that our funding has the best possible chance of turning into a discovery that will ultimately change your life, or the life of someone you love.

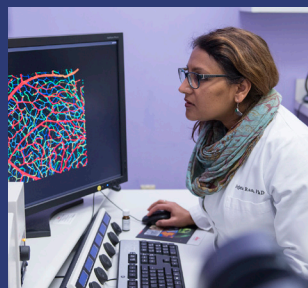
We're pleased to report that 2016 was a year of tremendous discovery—with more than 1,700 new scientific studies being published by RPB-supported researchers and institutions, spanning a wide range of eye diseases and conditions. We're also excited about the new grants we awarded and the fresh ways in which we supported the field of vision research. We know these activities are setting the stage for future discoveries, future studies and future cures.

Diane S. Swift, *Chairman*

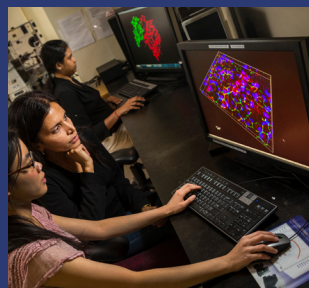
Brian F. Hofland, PhD, *President*

### Scientific images on the cover come from the work of the following RPB grantees (as seen here viewing the full images):

(top left) **Sujata Rao, PhD**, Assistant Professor of Ophthalmology at the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, views a depth coded 3D confocal stack image of the developing mouse retinal vasculature stained with isolectin to visualize the vasculature and the microglial cells.

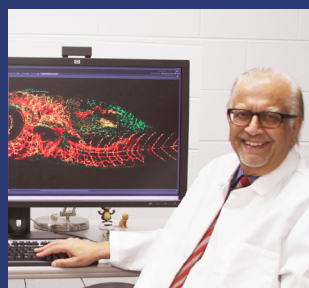


(middle left) **Asrar B. Malik, PhD**, Schweppe Family Distinguished Professor, Department Head of Pharmacology at the University of Illinois College of Medicine at Chicago, analyzes the organization of the vasculature in a zebrafish (a model commonly used in Dr. Malik's lab). Zebrafish image created by Dr. Ke Ma at the Research Resources Center.

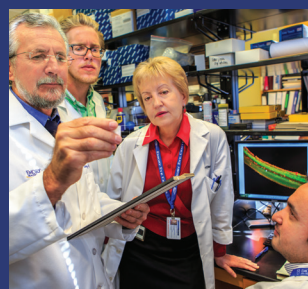
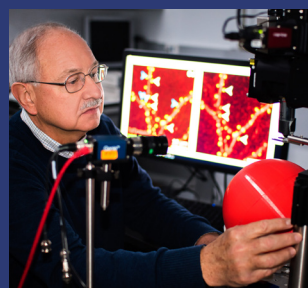


(top right) **Aparna Lakkaraju, PhD** (center), Assistant Professor, Department of Ophthalmology & Visual Sciences at the University of Wisconsin-Madison School of Medicine, works with a lab colleague on immunofluorescence staining for tight junction proteins in human retinal pigment epithelium cells.

(middle right) **Michael P. Stryker, PhD**, Professor of Physiology at the University of California, San Francisco, School of Medicine, reviews images of the dendrites of a layer 3 cell in mouse visual cortex showing the loss of components of synapses on spines over 3 days of monocular vision. Colleague J. Sebastian Espinosa created the image.



(bottom) **P. Michael Iuvone, PhD** (left), Sylvia Montag Ferst and Frank W. Ferst Professor of Ophthalmology and Director, Research, Emory University School of Medicine, and colleagues review a retinal section from an eye following blast injury stained for activated microglia, astrocytes, and Müller cells. Photo courtesy of Emory Eye Center.



The duration of RPB grants range from 1 year to 5 years, meaning that at any given time, many researchers at many institutions are working on advancing the field of vision research using RPB support!

In 2016, RPB-funded researchers worked hard to uncover breakthroughs across all types of research:



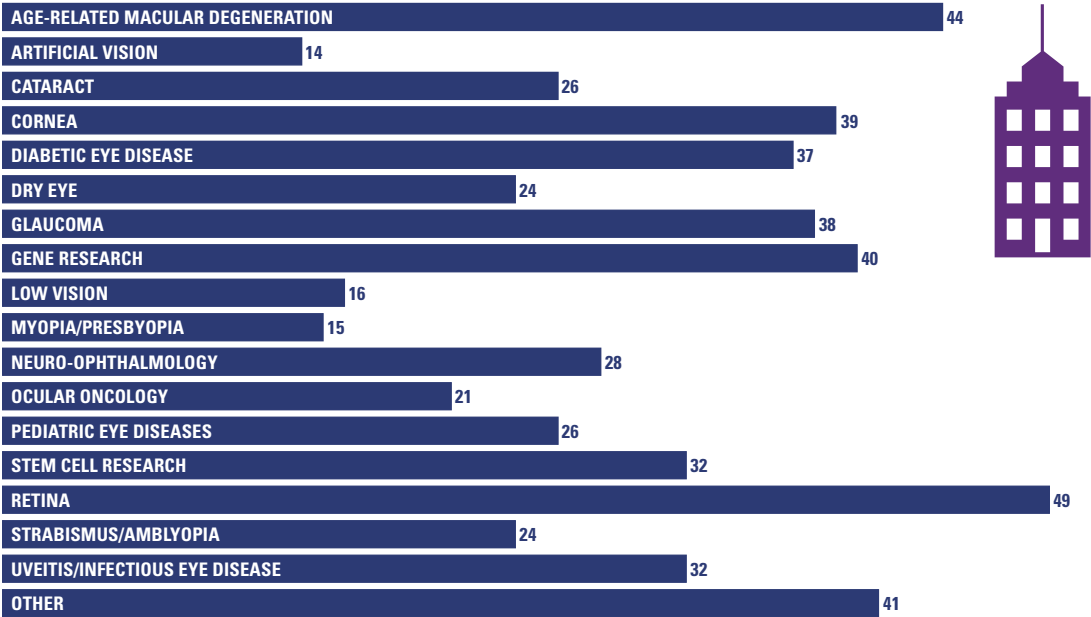
\*Infographic denotes number of active investigations as reported by RPB investigators. Investigators could choose more than one category if appropriate.

RPB utilizes a unique model: funding both the premier institutions for vision research, as well as the most promising individual researchers. In this way, we support the research infrastructure that is necessary to carry out productive, sight-saving research, as well as the people who make the discoveries.

Additionally, every RPB departmental grant is unrestricted, providing the flexibility institutions and their investigators require to respond to discoveries in a timely and thorough manner. The results, as seen on pages 6 and 7, are incredible.

*In 2016, RPB provided \$4.6 million in unrestricted departmental support.*

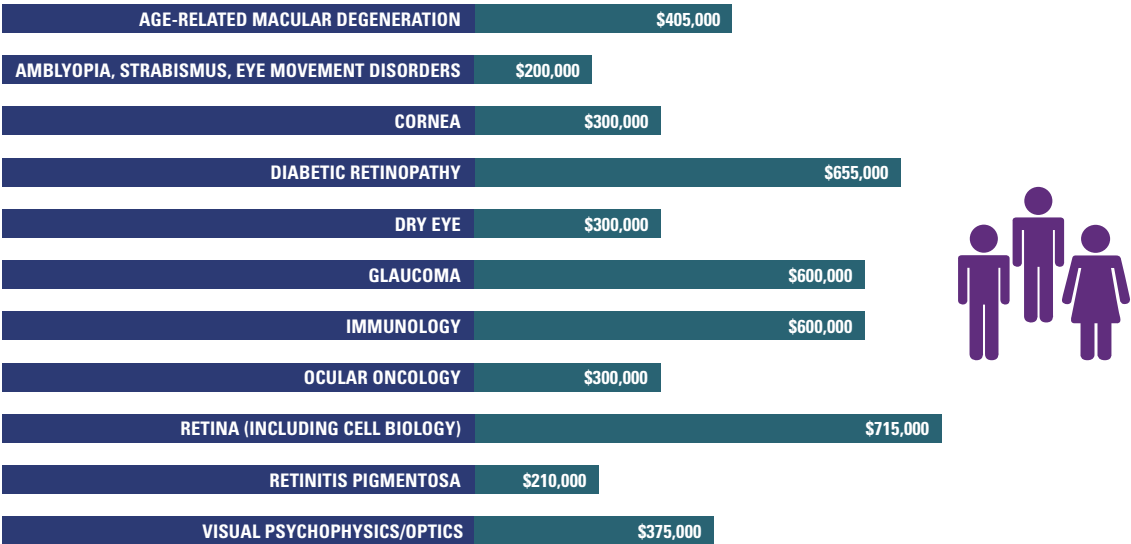
Areas of research in which RPB unrestricted grants were applied by schools in 2016:



\*Number of schools reporting RPB-funded research in this area.

*In 2016, RPB provided \$5 million in grants to individual researchers.*

Areas of research (and corresponding dollar amounts) in which RPB allocated grants to individuals in 2016:



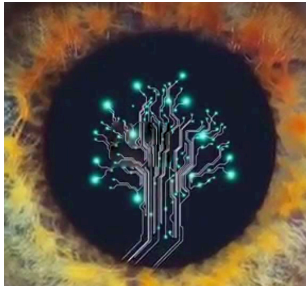
For a full list of active institutional and individual grantees, visit [www.rpbusa.org](http://www.rpbusa.org).



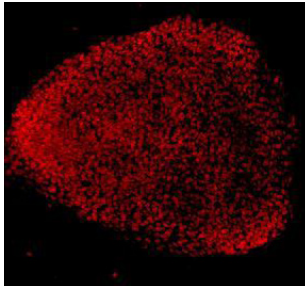
Each year, thousands of discoveries are supported by RPB. For example, in 2016, RPB funds were used to:



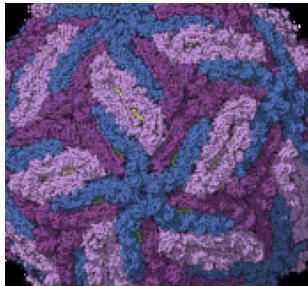
Foster the regeneration of a human lens by leaving local stem cells intact during surgery for congenital cataracts in infants



Measure connectivity and function in retinal neural circuits through the creation of detailed circuit models



Generate stem cells from patient skin cells and use them to repair a damaged gene responsible for the inherited blinding disease, X-linked retinitis pigmentosa



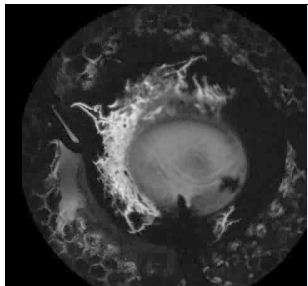
Discover that genetic material from the Zika virus is present in tears, leading to critical considerations regarding the virus' transmission



Determine that adults whose eyes are slow to adjust to dark environments have a greater risk of developing age-related macular degeneration (AMD)



Identify a potential treatment target for blinding diseases such as retinitis pigmentosa and advanced dry AMD by uncovering a pathway involved in the death of retinal photoreceptors



Detect patterns of fluid flow in the eye using aqueous angiography, which could lead to more effective glaucoma surgery



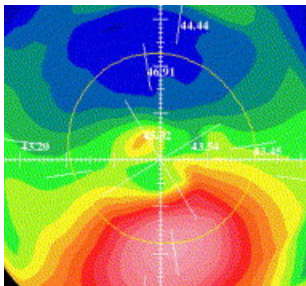
Find evidence that in people with the dry form of AMD, treatment with statins (high-dose atorvastatin) is associated with regression of lipid deposits and improvement in visual acuity



Collect patient samples and sequence more than 1,600 genomes of patients with eye disease, in order to enable the study of various eye conditions



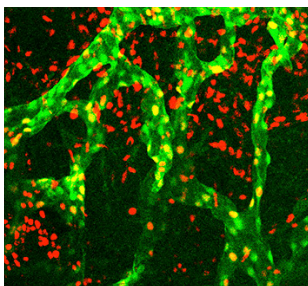
Identify a natural compound—NMN—that reduces key signs of aging, including eye dryness



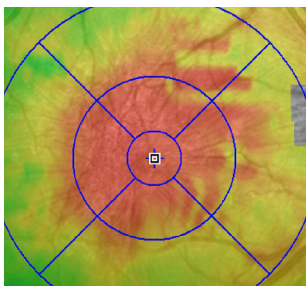
Develop a more effective device for inducing collagen crosslinking for the treatment of keratoconus



Save eyes infected with aggressive pseudomonas keratitis through the use of continuous infusion of topical antibiotics via an intravenous pump



Prevent corneal inflammation, a condition that contributes to corneal tissue transplantation rejection, by inhibiting the overgrowth of lymphatic vessels



Take a real-time snapshot of a patient's protein profile, using proteomics, to enhance disease diagnosis and initiate personalized treatment recommendations for conditions such as uveitis



Determine that ninety percent of the population lives within a 13.66- and 25.21-minute drive, respectively, to the nearest optometrist and ophthalmologist

Did You Know?



1,700+ new scientific studies cited RPB support in 2016.

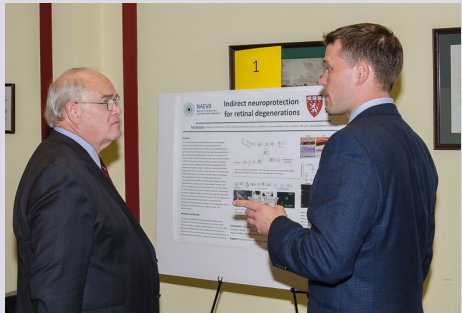


Throughout its history, RPB funding has been tied to nearly every major vision research breakthrough.

Discoveries



Throughout 2016, RPB engaged in activities to support the field of vision research—from assisting researchers as they learned to communicate the value of research funding to policymakers, to bringing together funding organizations to find new ways to increase impact. RPB is proud to support a robust vision research community in order to increase both the quality and quantity of vision research occurring in the U.S.



NEI Director Paul Sieving, MD, PhD (left), spent time with each of the emerging vision scientists, including Petr Baranov, MD, PhD (Harvard University/ Mass Eye & Ear), who described his research into neuroprotective growth factors in the eye.

The Alliance for Eye and Vision Research (AEVR) hosted its second annual Emerging Vision Scientists (EVS) Day on Capitol Hill, funded by a grant from RPB.

Twenty-two young investigators—reflecting the breadth of basic and clinical vision research from across the nation—attended AEVR’s annual AMD Congressional briefing, provided on-camera interviews about their research for a summary video, and displayed posters of their research in an evening reception. AEVR Board President Peter McDonnell, MD, also hosted a short program at which National Eye Institute (NEI) Director Paul Sieving, MD, PhD, offered a welcome and discussed the National Institutes of Health/NEI commitment to early-stage investigators.

Said RPB President Brian Hofland, PhD, of the event, “We are not only bringing emerging vision scientists to Capitol Hill for a day, we are creating policy-savvy researchers and lifelong advocates. The interactions with members of Congress underscore the importance of explaining their work to non-scientists. For something to be a funding priority, the people enacting policy decisions must be educated on what it is and why it matters.”



RPB's Brian Hofland (right) and emerging vision scientists met with staff from Senator Kirsten Gillibrand's office.

The day after the Emerging Vision Scientists event, RPB supported the National Alliance for Eye and Vision Research’s fall Advocacy Day, in which 22 emerging vision scientists conducted 50 Capitol Hill visits to discuss their work and champion the need for continued federal funding for critical vision research. The message that “research does not have a pause button” was well received by congressional staff and the eight members of Congress who met directly with the vision scientists.

RPB’s Brian Hofland accompanied several of the vision scientists on their visits with congressional staff, and stressed the need to fund young researchers through both foundations/non-profits and federal grants.



Ophthalmology residents mingled with their peers and with academic ophthalmologists at the Heed Foundation Residents Retreat.

RPB co-sponsored The Heed Ophthalmic Foundation’s 11th annual Heed Foundation Residents Retreat, which brought ophthalmology residents from across the country together to discuss careers in academic ophthalmology. Residents were able to mingle with academic ophthalmologists just a few years their senior to learn about how young faculty members made the transition from trainee to academician, as well as how to successfully combine patient care with research activities.



Vision impairment leads to major challenges, such as social isolation, depression and injuries in adults and developmental, academic and social issues in children. And yet vision impairment is often left out of population health agendas or community programs. In 2016, the National Academies of Sciences, Engineering, and Medicine released a report, “Making Eye Health a Population Health Imperative: Vision for Tomorrow,” that issues nine concrete recommendations for improving eye and vision health and increasing health equity. RPB and nine other organizations provided sponsorship for the study, which proposes a much-needed framework to improve eye and vision health for all in the United States.



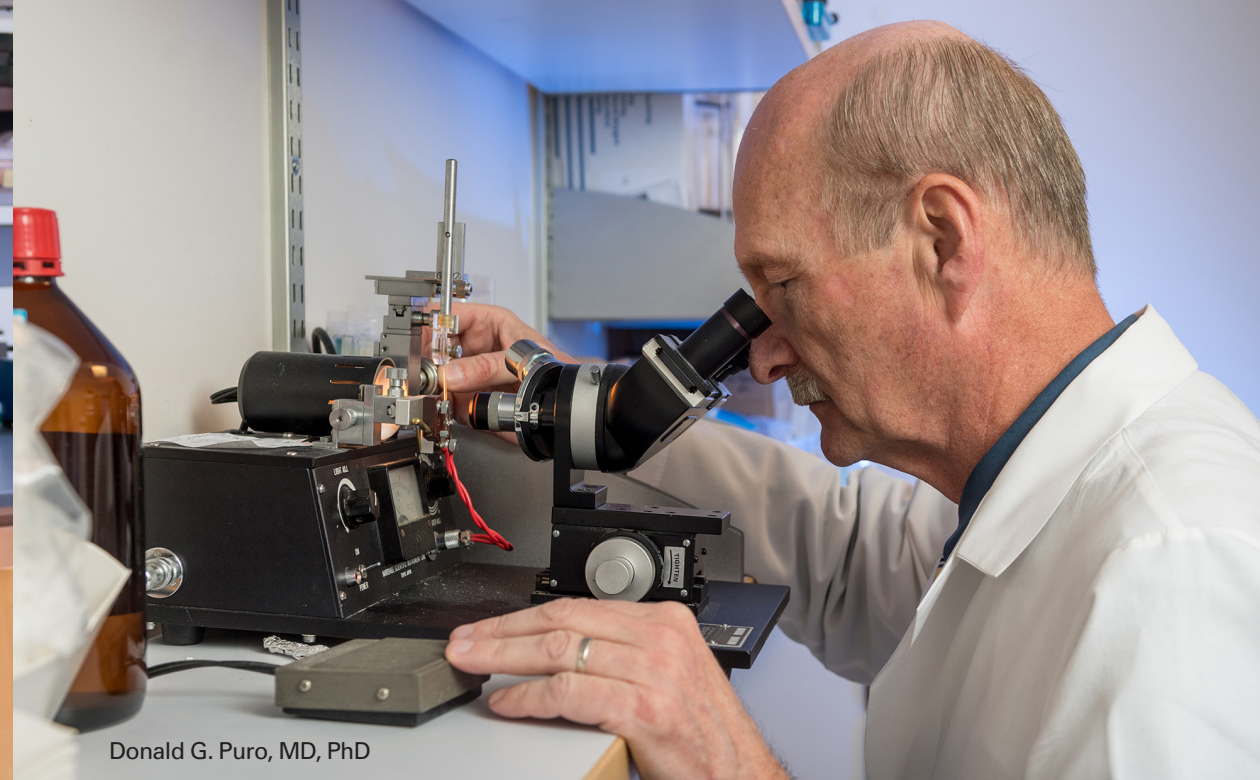
The Vision Research Funding Partnership III convening drew representatives from 25 private and public vision research funding organizations.

For the third time in as many years, leaders from vision research funding organizations convened in Washington, DC, at the RPB-hosted event, “Vision Research Funding Partnership III: Bigger Strides, Better Outcomes.” Here, funders continued their work to identify new collaborative opportunities for advancing vision research and blindness prevention. The 2016 convening highlighted collaborations already formed through previous convenings, featured an all-group collaborative product and supported knowledge-sharing through presentations in research areas that could affect the direction of vision research funding.





Thuy A. Doan, MD, PhD



Donald G. Puro, MD, PhD

## RPB Career Development Awards

This award provides \$300,000 over four years to attract promising young MDs, PhDs and MD/PhDs to eye research and to support their early investigations, which helps them qualify for larger NEI/ NIH grants. Their primary appointments must be in ophthalmology, and they must show potential for independent research.

**Anthony Brent Daniels, MD, MSc**, Vanderbilt University School of Medicine  
*Seeking less toxic chemotherapeutic alternatives to currently-used regimens in the treatment of retinoblastoma (an eye cancer that develops in babies).*

**Thuy A. Doan, MD, PhD**, University of California, San Francisco, School of Medicine  
*Using next-generation sequencing to comprehensively assess bacteria and viruses on and in the eye in normal health and disease and during treatment with antibiotics.*

**Paula Anne Newman-Casey, MD**, University of Michigan School of Medicine  
*Optimizing the implementation of behavioral interventions into current clinical operations in the treatment of glaucoma, with the goal of increasing medication adherence.*

**Rithwick Rajagopal, MD, PhD**, Washington University in Saint Louis School of Medicine  
*Using models of diabetic eye disease to learn how fenofibrate, a drug clinically approved to lower cholesterol, protects the eye from diabetes-related damage, as well as identify alternative therapeutic pathways that have fewer serious side effects.*

**Ramkumar Sabesan, PhD**, University of Washington School of Medicine  
*Developing a specialized camera to capture how the retina's rods and cones (responsible for turning light energy into electrical signals) work in health and how they fail in disease.*

## RPB Stein Innovation Awards

This award was developed to uncover and encourage high-risk/high-gain vision research that demonstrates cutting-edge thinking. It provides \$300,000 over three 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.

**Robert Britton, PhD**, Baylor College of Medicine  
*Exploring the mechanisms by which intestinal tract bacteria impact the health of the eye, as well as identifying specific bacteria that can be used therapeutically for dry eye and/or uveitis.*

**Hongrui Jiang, PhD, MS**, University of Wisconsin-Madison School of Medicine  
*Developing micro-scale devices to measure real-time pressure at the optic nerve head and choroidal tension during accommodation—two processes thought to be potentially responsible for damage related to glaucoma.*

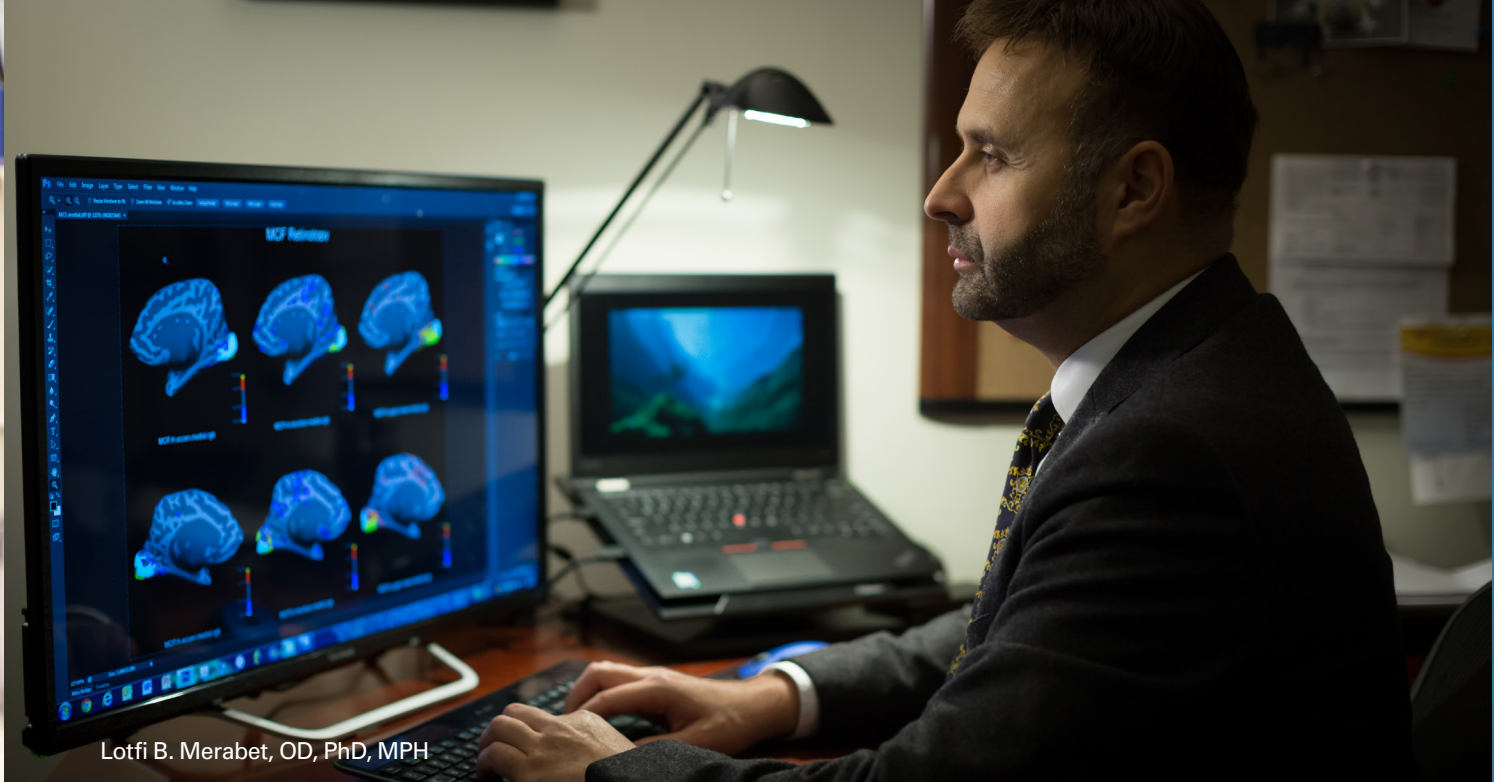
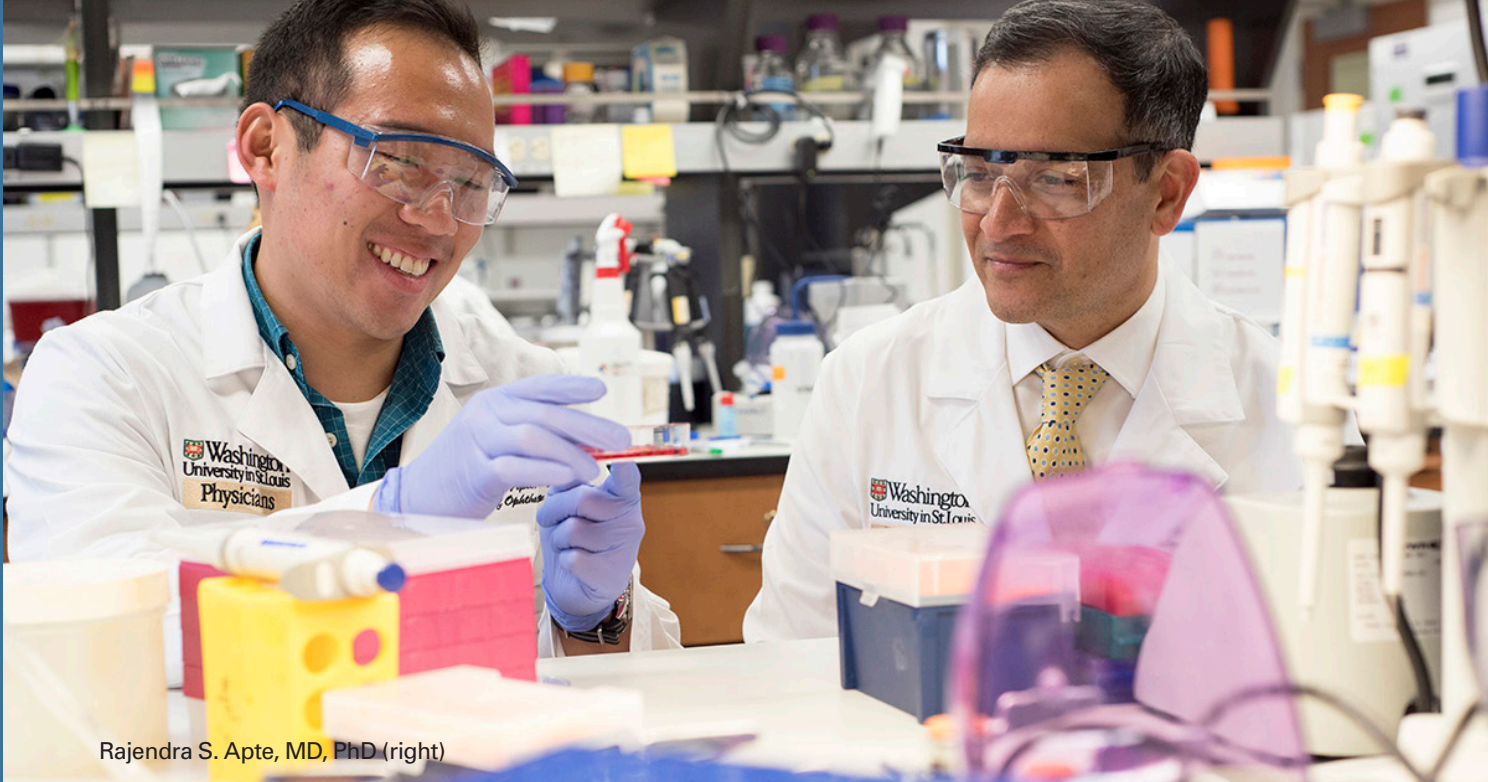
**Asrar B. Malik, PhD**, University of Illinois at Chicago College of Medicine  
*Addressing mechanisms regulating the overgrowth of retinal blood vessels in age-related macular degeneration (AMD) using eye drops instead of injections.*

**Donald G. Puro, MD, PhD**, University of Michigan School of Medicine  
*Exploring the role of ion channels in the response of tear-film-stabilizing goblet cells to changes in the salt content of tears as a potentially new avenue to develop more effective therapeutic strategies to combat dry eye.*

**Daniel M. Schwartz, MD**, University of California, San Francisco, School of Medicine  
*Developing and testing a novel light-activated drug to arrest progressive ocular growth and macular stretching that occurs in degenerative myopia.*

**Ching-Hwa Sung, PhD**, Weill Cornell Medical College  
*Testing the hypothesis that manipulating signals to structures on the surface of cultured retinal progenitor cells can generate specific types of retinal neurons essential to cell replacement therapy for damaged retinas.*





Rajendra S. Apte, MD, PhD (right)

Lotfi B. Merabet, OD, PhD, MPH

## RPB Nelson Trust Awards for Retinitis Pigmentosa

This \$50,000–\$100,000 award is designed to stimulate, strengthen and promote exceptional research to improve the diagnosis and treatment of retinitis pigmentosa (RP).

**Rajendra S. Apte, MD, PhD**, Washington University in Saint Louis School of Medicine  
*Investigating whether a specific cause of metabolic dysfunction plays a role in photoreceptor and vision loss across types of retinitis pigmentosa.*

**Luk H. Vandenberghe, PhD**, Harvard Medical School / SERI  
*Creating a method for safe and efficient gene transfer (a proven treatment for retinitis pigmentosa) to the retina via an intravitreal route of injection, thereby avoiding the issues associated with the current and more invasive standard, subretinal injection.*

## RPB Physician-Scientist Awards

The purpose of these three-year \$300,000 awards is to help strengthen and promote clinical and/or basic research conducted by MDs or MD/PhDs who are nationally recognized in a subspecialty and actively engaged in clinical research.

**Matilda F. Chan, MD, PhD**, University of California, San Francisco, School of Medicine  
*Investigating the hypothesis that a specific form of DNA modification—DNA methylation—plays a significant role in the development of Fuchs Endothelial Corneal Dystrophy; testing an FDA-approved drug that is able to reverse DNA methylation in cancer cells to reverse it in the cornea as well.*

**Jennifer K. Sun, MD, MPH**, Harvard Medical School  
*Using noninvasive optical coherence tomography angiography to establish changes in the retinal capillary network as biomarkers that predict retinal neural damage leading to vision loss or the worsening of diabetic retinopathy over time.*

## Low Vision Research Awards

Low vision refers to chronic visual impairment that is not correctable by eyeglasses, medicines or surgery. It can significantly and negatively impact a person’s activities of daily living and quality of life. In 2010, the National Eye Institute estimated that 3 million people in the U.S. suffered from low vision, with projections that this number would increase to nearly 5 million in 2030 and 9 million in 2050. Low vision is a woefully under-researched topic and RPB’s funding partnerships with two other foundations are designed to shine a spotlight on the topic and launch useful research.

### RPB/Lions Clubs International Foundation *Low Vision Research Award (LVRA)*

The LVRA focuses on the visual system that is damaged and seeks to answer such questions as: What happens with degraded visual input and how is it processed? What are the adaptive strategies in the visual pathway in response to visual impairment? How does the brain re-organize itself with visual damage? One grant of \$300,000 over 3 years was awarded in 2016. The RPB/LCIF partnership will fund two additional 3-year, \$300,000 awards in subsequent years.

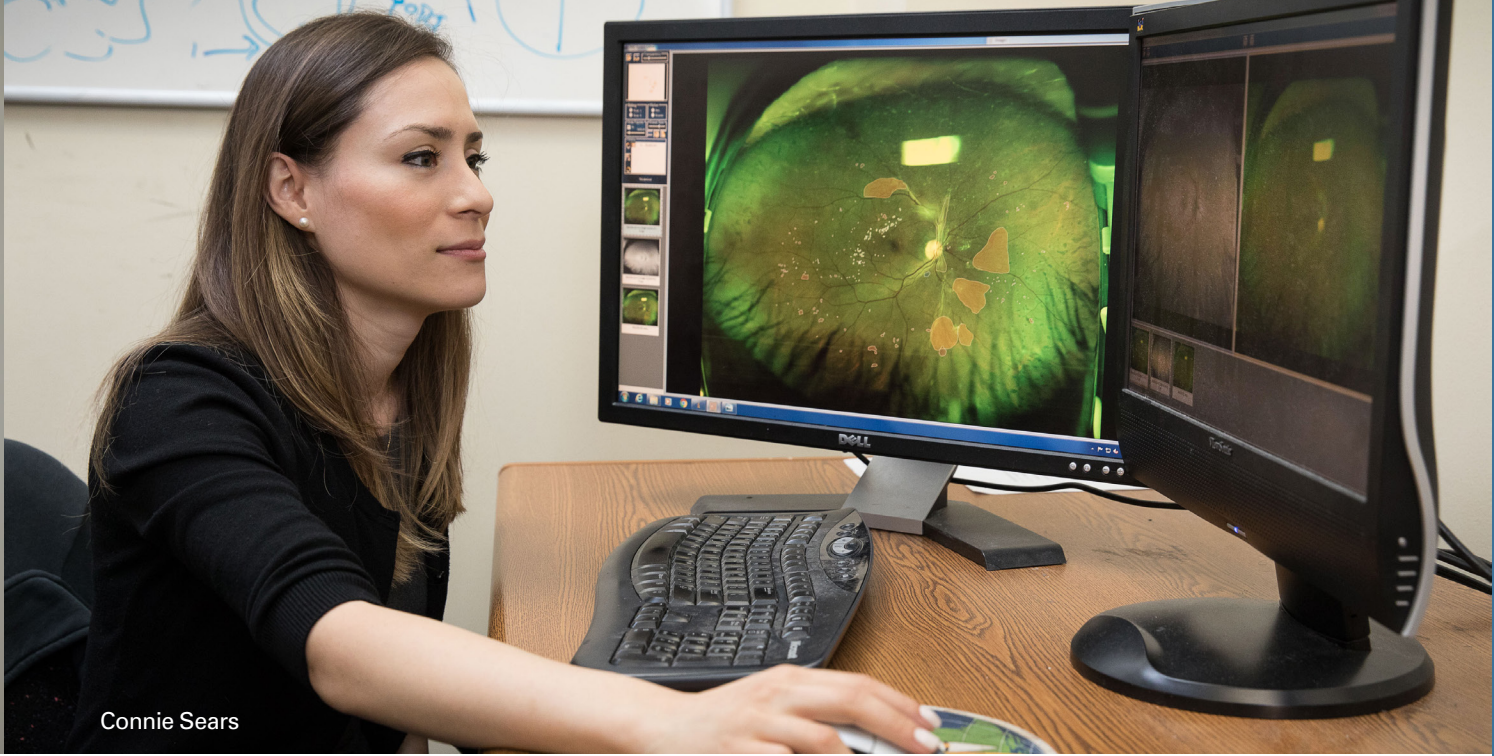
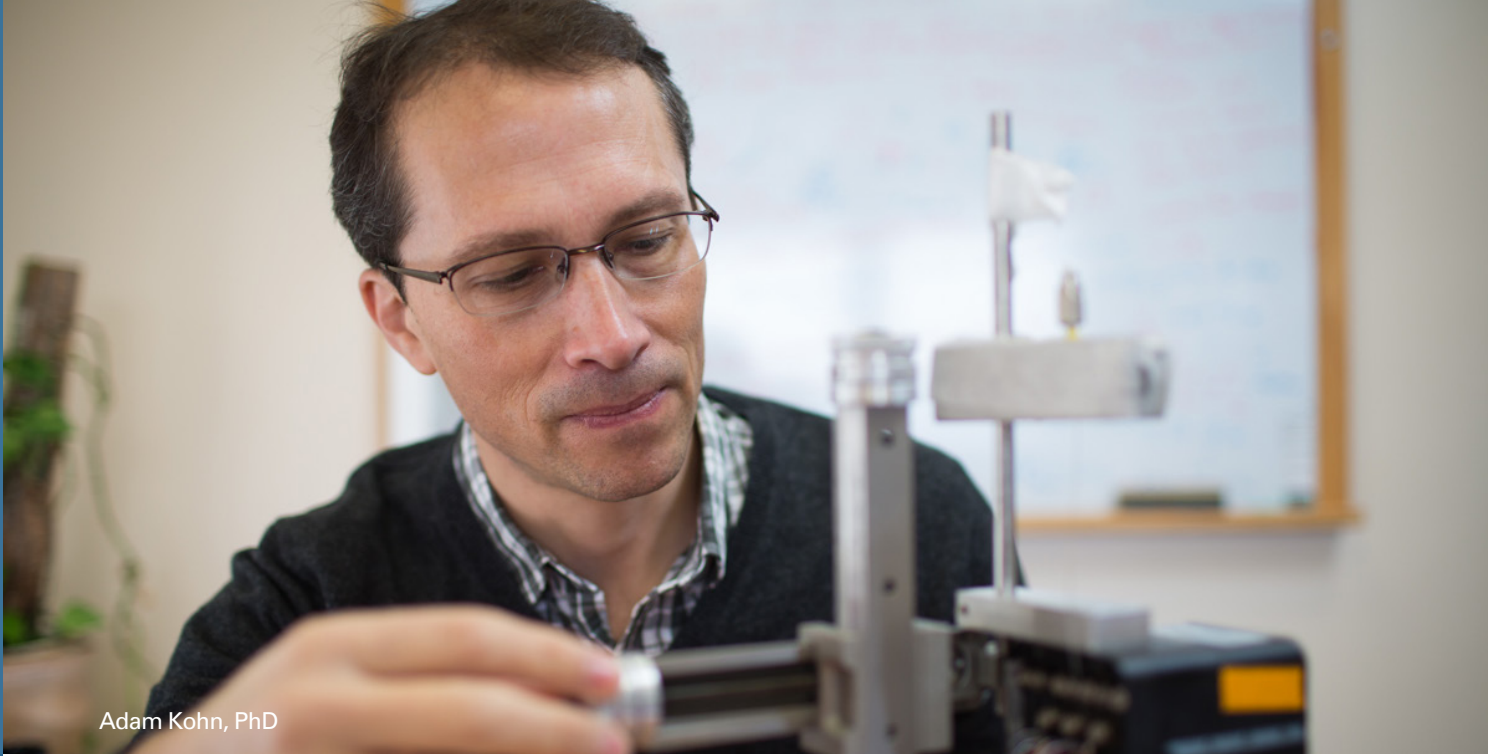
**Lotfi B. Merabet, OD, PhD, MPH**, Harvard Medical School / MEEI  
*Seeking to establish linkages between observed perceptual deficits and the underlying neurophysiology in cortical visual impairment, a leading cause of pediatric low vision.*

### RPB/Reader’s Digest Partners for Sight Foundation *Innovations in Technology Low Vision Research Award (ITLVRA)*

This award promotes development of assistive devices for persons with low vision, with a focus on mobile and/or device innovations that can be implemented on multiple platforms, such as electronic tablets or mobile phones. One grant of \$100,000 was awarded in 2016. RPB/RDPFS will fund one such award in each of 3 years.

**Roberto Manduchi, PhD**, University of California, Santa Cruz, School of Engineering  
*Developing an economical and easy-to-use low vision screen magnifier that will enable scrolling control by means of the viewer’s own gaze, rather than a mouse or trackpad.*





Adam Kohn, PhD

Connie Sears

## RPB/SNF International Research Collaborators Award

The RPB/Stavros Niarchos Foundation International Research Collaborators 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 the department of ophthalmology or a relevant department at an RPB-supported institution—will be funded to go to an institution outside the U.S. to work with a collaborator. In turn, the institution outside the U.S. will send a researcher to the U.S. institution. An award of up to \$75,000 is available.

**Adam Kohn, PhD, Albert Einstein College of Medicine** Collaborator: Samuel Solomon, PhD, University College London  
*Discovering how feedback signals change the activity of nerve cells in the visual cortex, and how they might influence our capacity to see.*

## RPB Harold F. Spalter International Research Scholar Award

This \$1,295 grant, covering transportation costs only, encourages established foreign scientists to engage in collaborative research activities in American eye research labs.

**Katja Schenke-Layland, PhD, MSc**, from Eberhard Karls University, Germany, collaborating with Sarah Hamm-Alvarez, PhD, Professor, Ophthalmology, Keck School of Medicine of the University of Southern California  
*Developing a novel stem cell-based tissue engineering strategy to regenerate lacrimal glands that are damaged by the autoimmune inflammation associated with Sjögren's syndrome.*

## RPB Walt & Lilly Disney Awards for Amblyopia Research

The award is available to MD or PhD scientists 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. RPB is supporting two investigators at \$100,000 each.

**Lynne Kiorpes, PhD**, New York University School of Medicine  
*Using psychophysical paradigms (stimulus-perception techniques) to explore attentional deficits in amblyopic children and developing strategies that will improve not only visual acuity but also non-visual acuity perceptual deficits in amblyopia treatment.*

**Aaron W. McGee, PhD**, University of Louisville School of Medicine  
*Establishing optimal, gene-inhibiting, drug intervention targets in the development of the visual pathway in order to prolong the period of visual plasticity in the visual system – a sensitive period which is related to amblyopia.*

## RPB Medical Student Eye Research Fellowships

This \$30,000 grant allows outstanding medical students to take a year off from medical school and devote time to a research project in an RPB grantee department while working closely with a mentor. The fellowship is designed to stimulate students to consider careers in eye research.

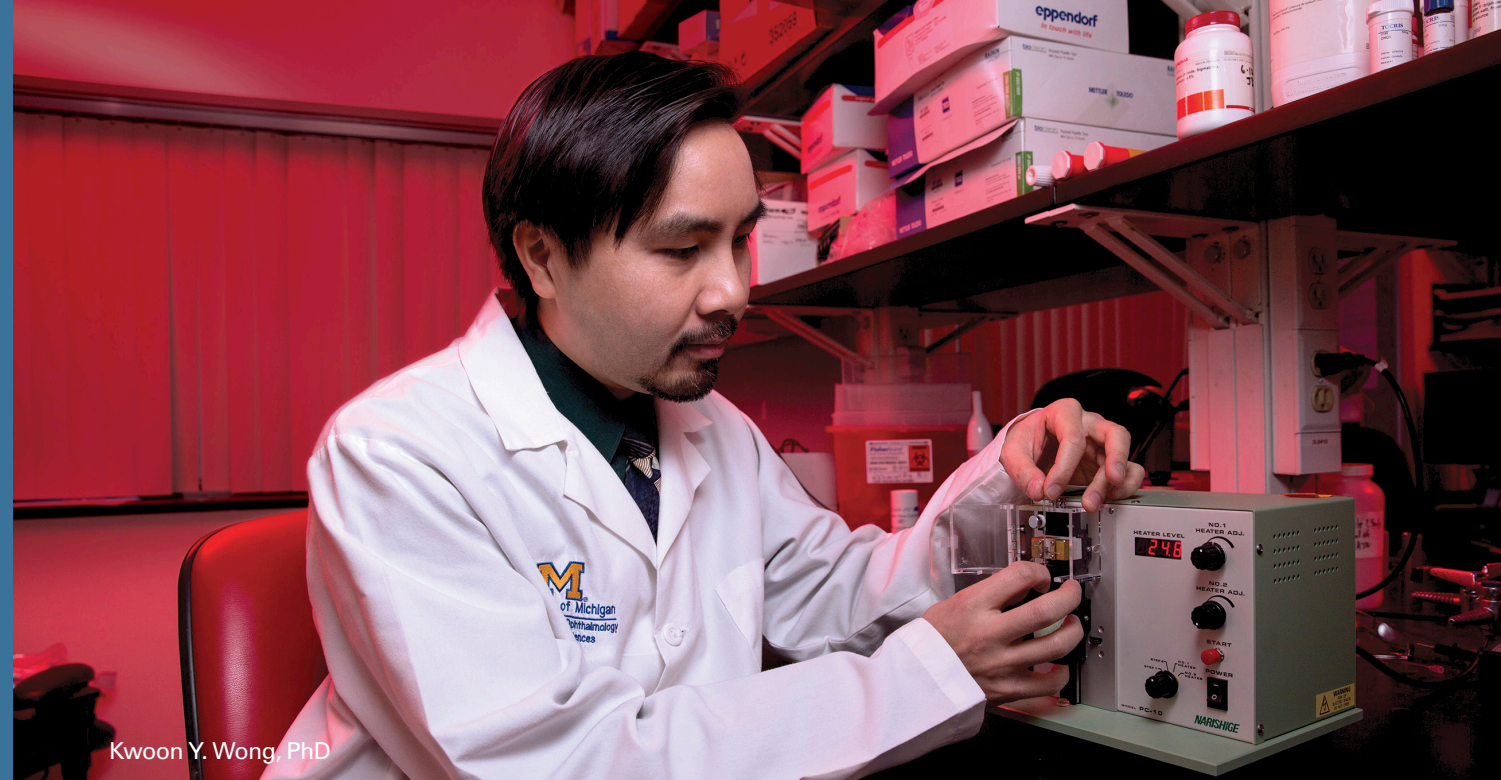
**Priya R. Gupta**, conducting research at Harvard Medical School  
Mentor: Eric Pierce, MD, PhD

**Connie M. Sears**, conducting research at David Geffen School of Medicine, University of California, Los Angeles  
Mentor: SriniVas Sadda, MD

**Jesse D. Sengillo**, conducting research at Columbia University College of Physicians & Surgeons  
Mentor: Stephen Tsang, MD, PhD

**Thomas Vo**, conducting research at University of California, Irvine, School of Medicine  
Mentor: M. Cristina Kenney, MD, PhD





Kwoon Y. Wong, PhD



Emerging Vision Scientists Day hosted by AEVR

## RPB Special Scholar Awards

These \$25,000 to \$75,000 awards are named in tribute to individuals who established funds at RPB and are meant to encourage promising young, independent researchers who are Assistant Professors with primary appointments in ophthalmology.

**Eleonora Lad, MD, PhD**, Duke University School of Medicine, Ernest & Elizabeth Althouse Scholar Award  
*Understanding the role of monocytes (type of white blood cell) in dry age-related macular degeneration (AMD) in order to support the concept that monocytes should be investigated as therapeutic targets for treatment of dry AMD.*

**J. Jason McAnany, PhD**, University of Illinois at Chicago College of Medicine, Dolly Green Scholar Award  
*Developing a "multi-modal functional assay" for complete characterization of early neural changes in patients with diabetic retinopathy, with the goal of early detection and diagnosis in at-risk populations.*

**Trevor McGill, PhD**, Oregon Health & Science University School of Medicine, Sybil B. Harrington Scholar Macular Degeneration Award  
*Developing a novel contrast agent and cell viability marker for use with optical coherence tomography to document the survival, migration and integration of transplanted, therapeutic stem cells in the treatment of retinal degenerative diseases.*

**Kwoon Y. Wong, PhD**, University of Michigan School of Medicine, William & Mary Greve Scholar Award  
*Learning how intrinsically photosensitive retinal ganglion cells respond to light and interact with other retinal cells in order to potentially improve the visual capability of blind and low-vision patients.*

## Special Grants for Partnerships and Collaboration

RPB supports strategic alliances through selected special grants to help advance the entire field of U.S. vision research.

### Alliance for Eye and Vision Research (AEVR): \$50,000

To enhance AEVR's public education efforts about the value of federally funded vision research. In 2016, activities conducted under the auspices of AEVR's Decade of Vision 2010 – 2020 Initiative included the Second Annual Emerging Vision Scientists Day on Capitol Hill and accompanying ten-minute documentary video; Congressional Briefings highlighting NEI-funded vision research and documented in written summaries; and educational brochures on the value of emerging vision research funded by the NEI and Department of Defense. In August 2016, *JAMA Ophthalmology* published results of the 2014 RPB-funded AEVR study, "Attitudinal Survey of Americans on Eye and Vision Health," which was a 50-year update of RPB's first-ever public opinion survey conducted in 1965.

### Association of University Professors of Ophthalmology (AUPO): \$165,000

To fund AUPO's mission: to serve, strengthen and represent academic departments of ophthalmology; to provide support, information and leadership opportunities to departmental chairs, program directors and other faculty members; to promote excellence in ophthalmic education; to foster vision research and to promote ethical practice and excellence in eye care in order to ensure the best possible vision for the public. The grant also included funds to establish a new award for outstanding research.



2016 RPB APPROVED GRANTS TOTAL: \$9,951,295\*
U.S. medical schools receiving new 2016 departmental and/or individual investigator awards

STATE	RPB GRANTEE INSTITUTIONS	TOTAL GRANTS 2016	TOTAL SUPPORT INCLUDING 2016
ALABAMA	University of Alabama at Birmingham School of Medicine	\$ 115,000	\$ 4,300,000
CALIFORNIA	David Geffen School of Medicine at UCLA	145,000	9,435,750
	University of California, Irvine, School of Medicine	145,000	825,000
	University of California, Santa Cruz	100,000	100,000
	University of California, San Diego,School of Medicine	115,000	3,630,000
	University of California, San Francisco, School of Medicine	1,015,000**#	10,074,256
	Stanford University School of Medicine	300,000	586,450
	Keck School of Medicine of the University of Southern California	116,295	5,504,795
FLORIDA	University of Florida College of Medicine	115,000	4,650,600
	University of Miami Miller School of Medicine	115,000	5,077,700
GEORGIA	Emory University School of Medicine	115,000	4,052,100
ILLINOIS	Northwestern University Feinberg School of Medicine	115,000	3,425,000
	University of Illinois at Chicago College of Medicine	440,000#	4,851,712
INDIANA	Indiana University School of Medicine	115,000	2,884,000
IOWA	University of Iowa Carver College of Medicine	115,000	5,122,425
KENTUCKY	University of Louisville School of Medicine	215,000	4,589,800
LOUISIANA	Louisiana State University Health Sciences Center in New Orleans	115,000	2,947,100
MARYLAND	The Johns Hopkins University School of Medicine	115,000	9,705,140
MASSACHUSETTS	Harvard Medical School	845,000	10,455,315
MICHIGAN	The Regents of the University of Michigan School of Medicine	775,000**#	8,908,050
	Wayne State University School of Medicine	115,000	4,258,000
MINNESOTA	Mayo Medical School	115,000	3,339,600
MISSOURI	Washington University in Saint Louis School of Medicine	465,000**	7,789,981
NEBRASKA	University of Nebraska Medical Center	115,000	2,355,000
NEW YORK	Albert Einstein College of Medicine of Yeshiva University	75,000	2,282,500
	Columbia University College of Physicians & Surgeons	145,000	6,293,167
	Weill Cornell Medical College	415,000#	5,538,700
	New York University	100,000	2,277,250
	University of Rochester School of Medicine & Dentistry	115,000	4,000,250
NORTH CAROLINA	Duke University School of Medicine	190,000	7,590,150
OHIO	Case Western Reserve University School of Medicine	115,000	4,107,500
	Cleveland Clinic Lerner College of Medicine	115,000	3,380,000
OKLAHOMA	University of Oklahoma Health Sciences Center	115,000	5,356,600
OREGON	Oregon Health & Science University School of Medicine	170,000	5,597,150
PENNSYLVANIA	University of Pennsylvania School of Medicine	115,000	6,613,500
	University of Pittsburgh School of Medicine	115,000	4,773,372
TENNESSEE	Vanderbilt University School of Medicine	415,000**	3,390,500
TEXAS	Baylor College of Medicine	415,000#	4,999,060
	University of Texas Southwestern Medical Center at Dallas	115,000	4,791,000
UTAH	University of Utah Health Sciences Center	115,000	5,780,300
WASHINGTON	University of Washington School of Medicine	415,000**	4,202,638
WISCONSIN	University of Wisconsin-Madison School of Medicine	415,000#	5,923,750

\*Includes commitments for special grants to the Alliance for Eye and Vision Research, the Association of University Professors of Ophthalmology, and the University of Oklahoma Health Sciences Center.

\*\*Includes a four-year \$300,000 Research to Prevent Blindness Career Development Award, payable at the rate of \$75,000 per year.

#Includes a \$300,000 Research to Prevent Blindness Stein Innovation Award payable in two equal installments of \$150,000.

School that received RPB support but no new grant in 2016: University of Colorado School of Medicine.

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 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.

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\*RPB thanks Dr. Goldberg for his service through Spring 2016.

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## Research to Prevent Blindness

RPB's mission is to preserve and restore vision by supporting research to develop treatments, preventives and cures for all conditions that damage and destroy sight.