



Career Development Award

Celebrating 30 years of
stimulating world-class research &
creating the vision science leaders of tomorrow



Research to
Prevent Blindness



Research to Prevent Blindness

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The Career Development Award Turns 30: Celebrating a Generation of Support for Early-Career Scientists

In 1996, Tim Stout was the self-described “most junior faculty member” at Doheny Eye Institute in Los Angeles. Energized to set up his own lab and grow both his clinical practice and research agenda, Stout, MD, PhD now Director of the Cullen Eye Institute at Baylor College of Medicine, was soon confronted with the stark realities of time management and limited resources. While he had some startup funding from the Doheny Eye Institute, Stout’s mentors urged him to seek additional funds to jump-start his research efforts. “I was a faculty member for less than a year when I first learned about and applied for the Career Development Award,” Stout recalled. His application was successful. “It was nothing short of transformative—for an assistant professor in those days, that amount of money was like hitting the jackpot,” he said. Over the next four years, Stout honed his expertise identifying and developing viral vectors that would ultimately be used in gene therapy techniques to treat proliferative ocular disease as well as a host of other diseases.

Stout is one of 203 recipients of the Research to Prevent Blindness (RPB) Career Development Award (CDA), founded 30 years ago as one of the few private sources of funding aimed specifically at early-career vision researchers. What began in 1989 as a \$120,000, 4-year grant has grown into a \$300,000 award that, as Stout and other awardees describe, often serves as a critical “accelerant” for other grant-seeking efforts. CDA grantees are a diverse group of clinicians, researchers and clinician-scientists, which encompasses every field of vision research, from age-related diseases of the eye to regenerative medicine, visual neuroscience, genetics and gene therapy, infectious disease, ocular oncology and dozens of others. CDA awardees have gone on to make

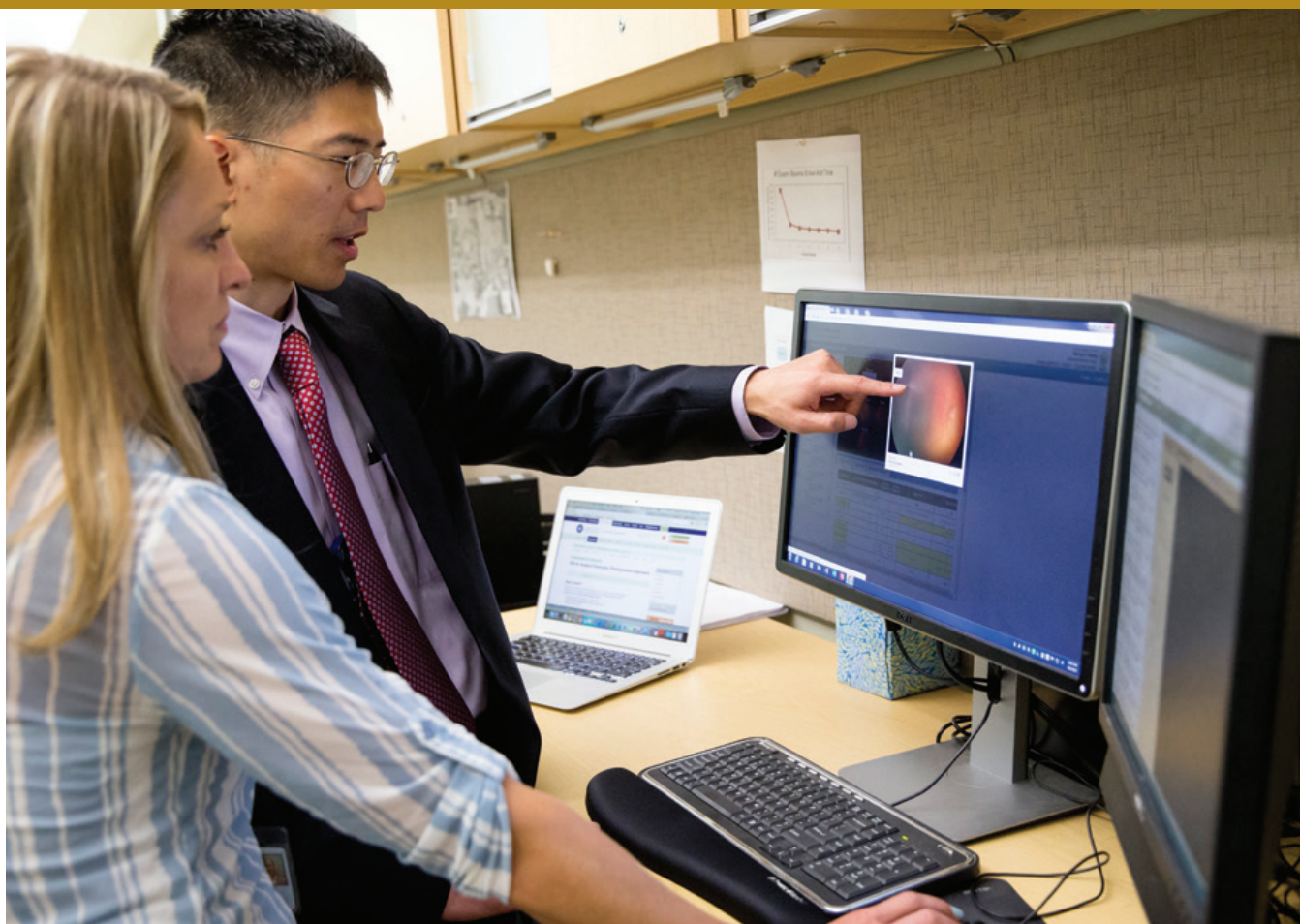


J. Timothy Stout, MD, PhD, of Baylor College of Medicine, received his RPB CDA in 1997 at the Keck School of Medicine of the University of Southern California.

breakthrough discoveries, chair many of the top ophthalmology departments in the nation, serve as editors of leading ophthalmology research journals and lead some of the field’s premier research organizations. In the years following their CDA grants, the group has collectively obtained more than \$1 billion in government and private research funding, an astounding return on a \$40 million investment from RPB.

Launched, But Not Yet Landed

Newly launched from the world of medical and research fellowships, early-career researchers and physician scientists often have no choice but to hit the ground running,



Michael F. Chiang, MD, of Oregon Health & Science University and OHSU Casey Eye Institute, received his RPB CDA in 2005 at Columbia University College of Physicians & Surgeons.



learning how to build a lab, care for patients and apply for funding as they go along. They become caught in a catch-22: struggling to juggle the tasks of grant applications with producing the kinds of research data that make those applications successful. The consequences of failure are significant both individually and on a societal level: “If you don’t get enough funds to get going, hire people and then get more funds, great ideas will never make it to patients,” Stout said.

Present-day graduate students and postdoctoral researchers may be surprised to learn that the importance of supporting the work of early-career scientists was not always widely recognized. Even a cursory search for funding opportunities for “young” scientists

today will reveal hundreds of results in dozens of scientific disciplines, ranging from prizes aimed at the best and brightest high school science students to awards for researchers under age 40. While overall competition for funding is more intense today than it was when RPB first introduced the Career Development Award, new faculty researchers in prior decades had far fewer places to turn for early-career support.

According to Michael F. Chiang, MD, the Knowles Professor of Ophthalmology and Medical Informatics and Clinical Epidemiology at Oregon Health & Science University and Associate Director of the OHSU Casey Eye Institute, “One key reason that clinician scientists don’t get off the ground is because

of lack of time and lack of resources to focus and start to build a niche of expertise.”

Chiang, who received the Career Development Award in 2005 while at Columbia University, recalls the pressure of attempting to build a clinical practice while pursuing research that could form the basis of a coveted R01 grant from the National Institutes of Health. “It’s a very difficult time,” he said. “We all want to make a difference in the field, but getting started in a department with all the other academic and service tasks makes it tough to protect your time and get work done.” For Chiang, the CDA provided vital resources to begin a data and image collection process that would not only shape his career path but would impact the lives of infants and influence the entire field of ophthalmology.

Thanks to RPB support, Chiang was able to enlist the help of a research coordinator who assisted in compiling a database of retinal images from infants affected by the most common cause of childhood blindness, retinopathy of prematurity (ROP). At that time, the popularity of telemedicine was on the rise, and Chiang was interested in developing methods for using the technology to diagnose ROP—an already complex task that proved even more challenging due to a high degree of subjectivity in image interpretation. His timing was fortuitous, however, for those years were also marked by a surge of interest and innovation in areas of artificial intelligence that are particularly well-suited to medical image analysis.

Chiang’s repository of images proved the perfect training ground for him, along with collaborators, to develop some of the first deep learning algorithms for medical image analysis in ophthalmology. After more than a decade of evolution, the present-day iteration of those algorithms can outperform physicians in correctly identifying ROP, making top-notch diagnostics available in areas where this level of expertise is not always available.

Creating a Cycle of Excellence

The trailblazing clinicians and researchers that comprise the community of CDA awardees are not only shaping their research fields and transforming patient care, they are also influencing the next generation of researchers. Recipients of the Career Development Award are nominated by senior faculty members who mentor and supervise their progress over the course of the grant period. Over the course of 30 years, RPB has received many applications on which the mentors are CDA recipients themselves. Fifty-three of these applications have been successful in securing CDA funding. “It’s the award that keeps on giving,” said RPB President Brian F. Hofland, PhD, noting that some awardees have subsequently nominated and mentored as many as five CDA awardees over the course of their careers.

Mentorship is so essential in the early years of a clinical or research career that, as Hofland explained, CDA applicants are evaluated both on their own merit and potential as well as the quality of the senior faculty that guide them. “We’re betting almost as much on the institution and on the mentors as we are on the researchers themselves,” he said. “We make sure there are people on the faculty who have the expertise to help them get through the difficult spots and grow intellectually, while at the same time encouraging them to become independent,” he explained. “During the four years, our awardees step out of the shadow of their mentors and emerge as very distinguished researchers in their own right.”

Terri Young, MD, MBA, the Peter A. Duehr Professor of Ophthalmology and Chair of the Department of Ophthalmology and Visual Sciences at the University of Wisconsin-Madison, says that success for early-career clinician-researchers often rides on a full spectrum of support department-wide. “It has to be a wholehearted, full-force commitment by the department chair and senior faculty members to truly support that person’s ambitions,” she said.



In the years following their CDA grants, the group has collectively obtained more than \$1 billion in government and private research funding, an astounding return on a \$40 million investment

In addition to the funding, the award validated my research direction, and it gave me the courage to pursue my ideas as a young faculty member

Letting Science Lead the Way

In an environment where a lab's sustainability is directly tied to both resources and results, the Career Development Award provides a core of funding that affords recipients one benefit that transcends any dollar value: time to focus on their passions. "The CDA buys early-career researchers some time to truly explore a particular topic," said Hofland. "They don't have to chase every other funding opportunity that presents itself." CDA awardees provide annual research progress updates to



Terri L. Young, MD, MBA, of the University of Wisconsin-Madison, received her RPB CDA in 1996 at the University of Minnesota Medical School.

RPB, and as Hofland said, the organization both expects and values the unpredictability inherent in the process of scientific discovery. "There are twists and turns along the way, and there are often unexpected and exciting findings," he said. "When these things come up, we're very flexible—we want our awardees to pursue them."

Terri Young believes this flexibility played a role in the choice to award her a Career Development Award in 1996—her first grant in vision research, and one that she describes as a "leap of faith" on the part of the RPB Scientific Advisory Panel, a committee of renowned scientists from a variety of disciplines that review all RPB grants. In the first years of her clinical career at the University of Minnesota, Young was particularly struck by a cohort of clinic patients who presented with high-grade myopia, a severe form of nearsightedness associated with serious comorbidities such as retinal detachment, glaucoma and cataracts. Many patients also had relatives with the same condition. "I thought to myself, 'there has to be more to this,' and at that time, there was enough information in the literature to suggest that there might be a heritable basis for myopia," she said.

Inspired by the Human Genome Project and the promise of someday being able to identify genes associated with specific conditions, Young sought additional training in laboratory molecular genetics—a field in which she had no previous experience. She applied for a Career Development Award to pursue a line of research that she characterized as somewhat risky and ahead of the curve at the time: discovery of gene variants associated with a complex disorder rather than those that are Mendelian (a type of biological inheritance). The grant

proved foundational to the rest of Young's research career and started her on a path that has subsequently yielded insights into multiple gene mutations involved with non-syndromic myopia and other ocular conditions (childhood glaucoma, corneal and retinal dystrophies, as examples), in various populations.

"The Career Development Award provided the necessary start-up funds to establish a comprehensive database and repository of multiple ascertained pedigrees along with their DNA, which I still use to this day," Young said. "In addition to the funding, the award validated my research direction, and it gave me the courage to pursue my ideas as a young faculty member who had to balance lab time with clinical responsibilities."

With federal funding for scientific research trending downward over the past decade, support for researchers and clinician scientists is more important now than ever. As Michael Chiang said, "I remember being told during the first day of medical school that half of what I learned would be outdated by the time I started practicing. I know now that it's true, and the reason it's true is because of discoveries and advances that push the field forward. The process requires time and support, and it's ultimately how we take the best care of patients."

Seeding the Future

Looking ahead to the future of the award program, Hofland would like to expand the number of young researchers accepted into the CDA community. Each year, RPB's Scientific Advisory Panel selects six CDA grantees from among the applicants. Hofland aims to increase that number to eight in the years to



Rithwick Rajagopal, MD, PhD, of Washington University in St. Louis, received his CDA in 2016 at the university's medical school. He is studying the mechanisms that cause diabetic retinopathy.

come and hopes to raise the annual award amount from \$75,000 to \$100,000 (for a total of \$400,000 per researcher over the course of the 4-year grant) for even greater impact.

As he reflects upon the monumental achievements of the hundreds of CDA recipients on the cusp of the program's 30th anniversary, Hofland draws on a parallel from his own personal history growing up on a farm in the Midwest. "I think of the Career Development Awardees as being almost like our seed corn," he said, referencing the top-quality seeds that corn farmers save and replant each year to guarantee future crops. "They've put down roots in this field and have provided a huge crop of research findings, expertise and leadership in so many ways. They are such a precious group that assures the future bounty of the vision science field."

I think of the Career Development Awardees as being almost like our seed corn. They've put down roots in this field and have provided a huge crop of research findings, expertise and leadership

RPB Career Development Awards Deliver Billion Dollar Promise



\$40 million
investment in
203 RPB CDAs



\$1 BILLION
in follow-on
NIH funding



ROI of
25:1

87%
of
RPB CDAs
have
gone on to
receive NIH funding

Unlocking CDA Potential

1989



Early-career
researchers



World-renowned
researchers



Chairs of departments
of ophthalmology



Leaders in vision
science and medicine

2019



38
former
CDAs

mentoring

53
recent
CDAs



RPB Career Development Awardees

Nisha Acharya, MD, MS (2007)

Professor of Ophthalmology and Epidemiology; Director of the Uveitis and Ocular Inflammatory Disease Service at the F.I. Proctor Foundation, University of California, San Francisco

Armin Afshar, MD, MBA, MAS (2017)

Assistant Professor, Ophthalmology, University of California, San Francisco

Natalie A. Afshari, MD, FACS (2003)

Professor, Ophthalmology, Shiley Eye Institute, University of California, San Diego

Zubair M. Ahmed, PhD (2010)

Professor, Otorhinolaryngology-Head & Neck Surgery, University of Maryland

Rando L. Allikmets, PhD (1999)

William and Donna Acquavella Professor of Ophthalmic Sciences and Research Director, Edward S. Harkness Eye Institute, Columbia University

Rajendra S. Apte, MD, PhD (2004)

Paul A. Cibis Distinguished Professor of Ophthalmology and Visual Sciences, Washington University in St. Louis

Sanjay Asrani, MD (2004)

Professor of Ophthalmology, Duke University

Gaetano R. Barile, MD (1998)

Professor of Ophthalmology, Zucker School of Medicine at Hofstra/Northwell

Edward M. Barnett, MD, PhD (2001)

Professor of Ophthalmology and Visual Sciences, Medical College of Wisconsin

Steven Bassnett, PhD (1997)

Professor, Ophthalmology and Visual Sciences, Washington University in St. Louis

Hilary E. Beggs, PhD (2005)

Project Team Leader, Calico (California Life Company, an R&D company)

Jean Bennett, MD, PhD (1992)

F.M. Kirby Professor of Ophthalmology, University of Pennsylvania

Jeffrey W. Berger, MD, PhD* (1997)

Formerly, Assistant Professor of Ophthalmology (Retina Service), University of Pennsylvania and Director of the Computer Vision Laboratory, Pennsylvania Scheie Eye Institute

Bruce A. Berkowitz, PhD (1991)

Professor, Ophthalmology, Visual and Anatomical Sciences, and Director of Small Animal MRI Facility, Wayne State University

Paul S. Bernstein, MD, PhD (1995)

Val A. and Edith D. Green Presidential Professor of Ophthalmology and Visual Sciences, Moran Eye Center, University of Utah School of Medicine

Steven L. Bernstein, MD, PhD (1998)

Professor and Vice-Chair, Ophthalmology and Visual Sciences, University of Maryland

Cagri G. Besirli, MD, PhD (2013)

Skillman Career Development Professor of Pediatric Ophthalmology and Assistant Professor, Ophthalmology and Visual Sciences, University of Michigan

Sanjoy K. Bhattacharya, PhD (2007)

Professor of Ophthalmology and Director, Ophthalmology Mass Spectrometry Facility, University of Miami

Brenda L. Bohnsack, MD, PhD (2012)

Helmut F. Stern Career Development Professor of Ophthalmology and Visual Sciences and Assistant Professor, Ophthalmology and Visual Sciences, University of Michigan

Catherine Bowes Rickman, PhD (2000)

Professor of Ophthalmology and Associate Professor in Cell Biology, Duke University

Claude F. Burgoyne, MD (1994)

Senior Scientist and Van Buskirk Chair for Ophthalmic Research and Director, Optic Nerve Head Research Laboratory, Devers Eye Institute, Discoveries in Sight Research Laboratories

Leah Byrne, PhD (2017)

Assistant Professor of Ophthalmology, University of Pittsburgh

Michelle C. Callegan, PhD (2000)

Professor, Microbiology and Immunology, University of Oklahoma

Peter D. Calvert, PhD (2007)

Associate Professor of Ophthalmology, State University of New York Upstate

J. Peter Campbell, MD, MPH (2018)

Assistant Professor of Ophthalmology, Oregon Health & Science University

Joseph J. Carroll, PhD (2007)

Richard O. Schultz, MD / Ruth Works Professor of Ophthalmology; Professor of Ophthalmology & Visual Sciences, Biophysics, and Cell Biology, Neurobiology and Anatomy; and Director, Advanced Ocular Imaging Program, Medical College of Wisconsin

Sai H. Chavala, MD (2012)

Professor of Ophthalmology; Director, Laboratory for Retinal Rehabilitation; Director, Translational Research, University of North Texas

Ching-Kang Chen, PhD (2002)

Professor of Ophthalmology and Alice R. McPherson Retina Research Foundation Endowed Chair; Professor of Biochemistry and Molecular Biology; Professor of Neuroscience, Baylor College of Medicine

Jeannie Chen, PhD (1995)

Professor of Physiology & Neuroscience, Zilkha Neurogenetic Institute, University of Southern California

Shiming Chen, PhD (1998)

Professor of Ophthalmology and Visual Sciences and Professor of Developmental Biology, Washington University in St. Louis

Xi Chen, MD, PhD (2017)

Assistant Professor of Ophthalmology, Duke University

Michael F. Chiang, MD (2005)

Knowles Professor of Ophthalmology & Medical Informatics and Clinical Epidemiology, Oregon Health & Science University; Associate Director, OHSU Casey Eye Institute

James Chodosh, MD, MPH (1995)

David Glendenning Cogan Professor of Ophthalmology, Harvard Medical School

Joseph B. Ciolino, MD (2012)

Associate Professor of Ophthalmology, Harvard Medical School

Thomas A. Ciulla, MD, MBA (1998)

Chief Medical Officer, Clearside Biomedical, Inc.; Volunteer Clinical Professor of Ophthalmology, Indiana University School of Medicine; Board of Directors, Midwest Eye Institute

Jason I. Comander, MD, PhD (2013)

Assistant Professor of Ophthalmology, Harvard Medical School, and Associate Director, Inherited Retinal Disorders Service, Mass. Eye and Ear

Nathan G. Congdon, MD (1999)

Professor, School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast (UK)

Tiffany A. Cook, PhD (2004)

Associate Professor of Molecular Medicine & Genetics and Ophthalmology, Wayne State University

Emmett T. Cunningham, MD, PhD, MPH (1998)

Senior Managing Director, Blackstone Life Sciences

Christine A. Curcio, PhD (1989)

White-McKee Endowed Professor in Ophthalmology and Director of the AMD Histopathology Lab, University of Alabama at Birmingham

Ales Cvekl, PhD (1998)

Professor and Vice Chair for Research, Ophthalmology and Visual Sciences; The Max Berger Chair in Ophthalmology; and Professor of Genetics, Albert Einstein College of Medicine

Anthony Daniels, MD, MSc (2016)

Assistant Professor of Ophthalmology and Visual Sciences; Assistant Professor of Cancer Biology; and Assistant Professor of Radiation Oncology, Vanderbilt University

Monica De La Paz, MD (1996)

Jonathan Demb, PhD (2003)

Associate Professor of Ophthalmology and Visual Science, of Cellular and Molecular Physiology and of Neuroscience, Yale University

Anna Maria Demetriades, MD, PhD (2013)

Assistant Professor of Ophthalmology, Weill Cornell Medical College

Dusanka Deretic, PhD (1998)

Research Professor, Ophthalmology Division, University of New Mexico

Steven H. DeVries, MD, PhD (1997)

Professor of Ophthalmology and Physiology, Northwestern University

Alexander M. Dizhoor, PhD (1997)

Hafta Chair Professor of Pharmacology, Pennsylvania College of Optometry, Salus University

Ali R. Djalilian, MD (2007)

Associate Professor of Ophthalmology and Cornea Service Director, Stem Cell Therapy and Corneal Tissue Engineering Laboratory, University of Illinois at Chicago

Thuy A. Doan, MD, PhD (2016)

Assistant Professor of Ophthalmology and Assistant Professor, F. I. Proctor Foundation, University of California, San Francisco

Sean P. Donahue, MD, PhD (1998)

Dane Chetkovich, MD, PhD, Professor and Chairman of Neurology, Vanderbilt University

Raymond S. Douglas, MD, PhD (2007)

Director of the Orbital and Thyroid Eye Disease Program, Cedars-Sinai Medical Center

Laura E. Dreer, PhD (2008)

Associate Professor, Ophthalmology and Visual Sciences, and Director, Psychological & Neuropsychology Clinical Research Services, University of Alabama at Birmingham

Xin Duan, PhD (2017)

Assistant Professor, Ophthalmology, University of California, San Francisco

Alfredo Dubra, PhD (2011)

Associate Professor, Ophthalmology, Stanford University

Elia Duh, MD (2001)

Professor, Ophthalmology, John Hopkins University Medical Center

Joshua L. Dunaief, MD, PhD (2000)

Professor, Ophthalmology, University of Pennsylvania

Jacque L. Duncan, MD (2001)

Professor, Ophthalmology, University of California, San Francisco

Felice A. Dunn, PhD (2014)

Assistant Professor, Ophthalmology, University of California, San Francisco



William J. Dupps, MD, PhD (2007)
Professor, Ophthalmology, Cleveland Clinic Lerner College of Medicine

Robert M. Duvoisin, PhD (1991)
Professor, Physiology & Pharmacology, Oregon Health & Science University

Michael A. Dyer, PhD (2004)
Chair, Developmental Neurobiology, St. Jude's Children's Research Hospital

Albert O. Edwards, MD, PhD (1998)
Oregon Retina LLP

Ione Fine, PhD (2005)
Professor, Psychology, and Affiliate Professor, Radiology and Ophthalmology, University of Washington

John H. Fingert, MD, PhD (2006)
Professor, Ophthalmology and Visual Sciences, University of Iowa

Silvia C. Finnemann, PhD (1999)
Professor, Biological Sciences, Fordham University

John G. Flannery, PhD (1992)
Professor, Vision Science and Optometry, University of California, Berkeley

Peter J. Francis, MD, PhD (2006)
Chief Medical Officer and Program Leader, Retina Therapeutic Area, 4D Molecular Therapeutics

Benjamin J. Frankfort, MD, PhD (2010)
Associate Professor, Departments of Ophthalmology and Neuroscience, Baylor College of Medicine

Yingbin Fu, PhD (2008)
Associate Professor, Ophthalmology, Baylor College of Medicine

Peter L. Gehlbach, MD, PhD (2003)
Professor, Ophthalmology, Johns Hopkins University

Douglas Gould, PhD (2009)
Professor & Research Director, Ophthalmology, University of California, San Francisco

Cynthia L. Grosskreutz, MD, PhD (1999)
Global Head of Ophthalmology, Novartis Institutes for BioMedical Research; Associate Professor of Ophthalmology, Harvard Medical School

Abigail S. Hackam, PhD (2004)
Associate Professor, Ophthalmology, University of Miami

Pedram Hamrah, MD (2011)
Professor, Ophthalmology, Tufts University School of Medicine

J. William Harbour, MD (1996)
Professor, Ophthalmology, University of Miami

Erin M. Harvey, PhD (2005)
Associate Professor, Ophthalmology, University of Arizona

J. Martin Heur, MD, PhD (2012)
Professor and Vice Chair, Department of Ophthalmology; Medical Director, USC Roski Eye Institute

Quan V. (Donny) Hoang, MD, PhD (2014)
Assistant Professor, Ophthalmology, Duke-NUS; Adjunct Assistant Professor, Ophthalmology, Columbia University

Alex Huang, MD, PhD (2015)
Assistant Professor, Ophthalmology, University of California, Los Angeles

Bo Huang, MD, PhD (1994)
Professor, Ophthalmology, University of Mississippi

Bret A. Hughes, PhD (1989)

Thomas E. Hughes, PhD (1993)
Professor, Cell Biology & Neuroscience, Montana State University

John D. Hulleman, PhD (2015)
Assistant Professor, Ophthalmology, University of Texas Southwestern Medical Center

Alessandro Iannaccone, MD, MS (2002)
Professor, Ophthalmology, and Director of Center for Retinal Degenerations & Ophthalmic Genetic Diseases, Duke University

Raymond Iezzi, MD (2000)
Associate Professor, Ophthalmology, Mayo Clinic

Bryan Jones, PhD (2006)
Research Associate Professor, Ophthalmology and Visual Sciences, University of Utah

Albert Jun, MD, PhD (2004)
Professor, Ophthalmology, Johns Hopkins University Medical Center

Alon Kahana, MD, PhD (2009)
Associate Professor, Ophthalmology and Visual Sciences, University of Michigan

Adam H. Kaufman, MD (1993)
Vice-Chair and Associate Professor, Ophthalmology, University of Cincinnati

Shalesh Kaushal, MD, PhD (2001)
Comprehensive Retina Consultants

Jeremy Keenan, MD, MPH (2011)
Professor, Ophthalmology, University of California, San Francisco

Vladimir Kefalov, PhD (2005)
Professor, Ophthalmology, Washington University in St. Louis

Daniel Kerschensteiner, MD (2011)
Associate Professor, Ophthalmology and Visual Sciences, Washington University in St. Louis

Amy Kiernan, PhD (2008)
Associate Professor, Ophthalmology, University of Rochester

Robert Y. Kim, MD (1993)
Chief Medical Officer, Apellis Pharmaceuticals, Inc.

Mark E. Kleinman, MD (2012)
Assistant Professor, Ophthalmology, University of Kentucky

Rachel Kuchtey, MD, PhD (2008)
Associate Professor, Ophthalmology, Vanderbilt University

Rajendra Kumar-Singh, PhD (2000)
Professor, Developmental, Molecular & Chemical Biology, Tufts University

Aparna Lakkaraju, PhD (2009)
Associate Professor, Ophthalmology and Visual Sciences, University of California, San Francisco

Aaron Lee, MD, MSCI (2018)
Assistant Professor, Ophthalmology, University of Washington School of Medicine

Janis Lem, PhD (1994)

Marc H. Levin, MD, PhD (2015)
Neuro-ophthalmologist, Palo Alto Medical Foundation

Edward M. Levine, PhD (2001)
William A. Black Professor of Ophthalmology, Vanderbilt Eye Institute, Vanderbilt University Medical Center

Tiansen Li, PhD (1997)
Senior Investigator, Retinal Cell Biology and Degeneration Section, National Eye Institute

Wei Li, PhD (2002)
Associate Professor of Ophthalmology, Bascom Palmer Eye Institute, University of Miami School of Medicine

Richard T. Libby, PhD (2006)
Professor, Ophthalmology, University of Rochester

Thomas M. Lietman, MD (2000)
Professor, Ophthalmology, University of California, San Francisco

Phoebe Lin, MD, PhD (2013)
Associate Professor of Ophthalmology, Casey Eye Institute, Oregon Health & Science University

Andrew Lotery, MD, FRCOphth (1999)
Professor, Ophthalmology, University of Southampton (UK)

Douglas G. Mack, PhD (1996)
Research Associate, University of Colorado Denver, Anschutz Medical Campus

Vinit Mahajan, MD, PhD (2011)
Associate Professor, Ophthalmology, Stanford University

Clint L. Makino, PhD (1994)
Associate Professor, Physiology & Biophysics, Boston University

Jarema Malicki, PhD* (1996)
Formerly, Reader, Developmental Genetics, Biomedical Science Dept, University of Sheffield (UK)

Robert K. Maloney, MD (1991)
Maloney-Shamie Vision Institute

Shobana S. Mani, PhD (2001)

Todd P. Margolis, MD, PhD (1991)
Alan A. and Edith L. Wolff Distinguished Professor and Chairman, Ophthalmology and Visual Sciences, Washington University in St. Louis

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Paula Anne Newman-Casey, MD (2016)
Assistant Professor, Ophthalmology, University of Michigan

Robert W. Nickells, PhD (1994)
Professor, Ophthalmology, University of Wisconsin

John O'Brien, PhD (1998)
Louisa Stude Sarofim Distinguished Chair and Professor, Ophthalmology & Visual Science, University of Texas Health Science Center, Houston

Catherine Oldenburg, ScD, MPH (2018)
Assistant Professor, Ophthalmology, University of California, San Francisco

Yvonne Ou, MD (2012)
Associate Professor, Ophthalmology, University of California, San Francisco

Paul Shin-Hyun Park, PhD (2008)
Assistant Professor, Ophthalmology and Visual Sciences, Case Western Reserve University

Susanna Soon-Chun Park, MD, PhD (1994)
Professor, Ophthalmology, University of California, Davis

Jillian Pearing, PhD (2018)
Assistant Professor, Ophthalmology, University of Michigan

Mark E. Pennesi, MD, PhD (2012)
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