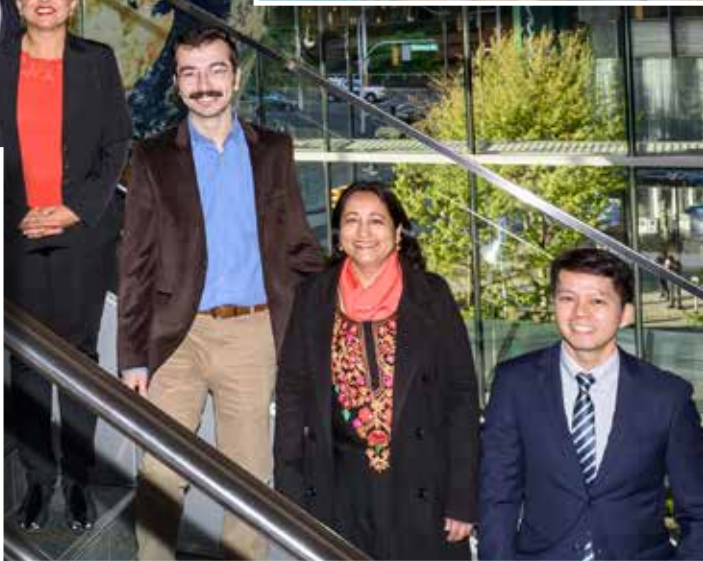


# Annual Report



ARVO Foundation  
for Eye Research®



# 2019



# Our purpose

The ARVO Foundation raises funds through partnerships, grants and sponsorships to support ARVO's world-class education and career development resources for eye and vision researchers.

# 2019 by the numbers



**183**

Travel grants awarded to young researchers



**\$23,000**

Given to career development programs to support junior scientists



**13**

International Chapter Affiliates



**\$220,000**

Invested in research grants & fellowships



**7**

Grants given to help authors with financial need publish in ARVO journals



**620**

ARVO members and friends who supported the ARVO Foundation with a gift



**\$32,800**

Awarded to recognize and encourage innovative research

# A message from the Chair



This annual report celebrates the ARVO Foundation's successes in 2019, but we cannot celebrate without acknowledging the tremendous challenges facing our global community. In just a few short months, the covid-19 pandemic response has upended our lives and our work, including the temporary closure of many of our labs.

Though these challenges are great and the future is uncertain, I know our collective passion and commitment to vision research is not extinguished. Our sight-saving work will go forward. So too continues the work of the ARVO Foundation to create and fund opportunities that support bright minds in ophthalmology and vision research.

Our community is vibrant and we remain committed to supporting each other. Last year's ARVO meeting was a tremendous example of this support. With a matching gift from Steve Charles, MD, the ARVO community raised over \$42,000 in Vancouver. With the cancellation of ARVO 2020, those funds will be deferred to ARVO 2021 in San Francisco where they will support travel grants for 22 young members to attend and present their research.

“

We will rely on each other even more in the coming year and I look forward to your continued partnership on this journey of discovery and cure.

”

The ARVO Foundation also continues its expansion of programs to better serve ARVO members. We partnered with other vision research organizations to introduce the EyeFind Research Grants Program which will provide supplementary grants for the procurement of human eye tissue. We also launched a new award funded by Genentech that will provide a two-year grant to an early-career vision scientist from an underrepresented minority group. Both will accept their first applications in 2020.

While covid-19 has overtaken our collective consciousness, our community should not forget that 2020 is the year of the eye. We have made remarkable progress in our understanding of the eye and visual system: our accomplishments are enormous and should engender great pride. Nonetheless, we still face many scientific hurdles.

We will rely on each other even more in the coming year and I look forward to your continued partnership on this journey of discovery and cure. Thank you for your support.

A handwritten signature in black ink that reads "Paul Sternberg, Jr. M.D." The signature is fluid and cursive, with the initials "P.S." being particularly prominent.

Paul Sternberg, Jr., MD, FARVO  
Chair, ARVO Foundation Board of Governors





Top: ARVO 2019 attendees enjoy the Student-Trainee Social for trainees, students and travel grant recipients

Right: ARVO President Steven J. Fliesler, PhD, FARVO, at the ARVO/Alcon Opening Keynote

Below: 2018 – 2019 ARVO Foundation award winners



# Travel grants

The ARVO Foundation awarded 183 travel grants through 36 named funds in 2019, benefitting trainees from 20 countries. These travel grants underwrite the cost of attendance for the ARVO Annual Meeting, allowing young scientists to present their research and network with other eye and vision researchers from around the world.

American Macular Degeneration Foundation Travel Grants

ARVO Staff Travel Grant

ARVO Foundation Travel Grants

Elizabeth Anderson Travel Grants

Joanne G. Angle Travel Grants

Grant Wood Balkema Memorial Travel Grant

Robert B. Barlow, Jr. Travel Grant

IRCCS-Fondazione G. B. Bietti per lo Studio e la Ricerca in Oftalmologia-ONLUS Travel Grants

BrightFocus Foundation Travel Grants

Ramon F. Dacheux II Memorial Travel Grant

Marij and Paulus de Jong Travel Grant

M. Velma Dobson Memorial Travel Grant

C. Stephen and Frances B. Foster Foundation Travel Grant

Qais Farjo, MD Memorial Travel Grants

Foster Ocular Immunology Society Travel Grants

G. M. Jager Travel Grant

Murray and Jeanie Johnstone Travel Grant

Karamichos/Utheim Keratoconus Travel Grant

Knights Templar Eye Foundation Travel Grants

Sarla P. Kothary Memorial Travel Grant

Kowa Travel Grant

Kreissig Travel Grant

Lens and Cataract Travel Grant

Lions Eye Institute for Transplant and Research Travel Grants

Richard Newton Lolley Travel Grant

Friederike Mackensen Travel Grant

NIHR Moorfields Biomedical Research Centre Travel Grants

Ocular Immunology and Uveitis Foundation Travel Grant

Overseas Chinese Association for Vision and Eye Research (OCAVER) Travel Grant

David R. Pepperberg Travel Grant

Reader's Digest Partners for Sight Foundation Travel Grants

Retina Research Foundation/ Joseph M. and Eula C. Lawrence Travel Grants

Bosco Tjan Memorial Travel Grant

Josh Wallman Travel Grant

Women in Eye and Vision Research (WEAVR) Travel Grants

Gerhard Zinser Memorial Travel Grant



## **Denis Plotnikov, MD**

Cardiff University

*Josh Wallman Travel Grant*

I attended the ARVO 2019 meeting at the pivotal part of my PhD study and it was very helpful to me in terms of career perspective (now I know what I want to achieve, how I want to do it and whom I need to ask for advice). I will be attending annual ARVO meetings, as I feel my experience this year gave me a stimulus for both professional and personal growth.



## **Kaitryn Ronning**

University of California Davis

*Ocular Immunology and Uveitis*

*Foundation Travel Grant*

When I attend the ARVO Annual Meeting, I know I have my finger on the pulse of the community. Interacting with other investigators and clinicians at ARVO meetings helps me attach names and stories to the published science. I think this human side can make the science more impactful and memorable and allows us to engage with the latest work far more intimately than is possible in the standard publication pipeline.



## **Rumi Kawashima, MD, PhD**

Osaka University Graduate School of Medicine

*Robert B. Barlow Travel Grant*

I was thrilled to talk with many researchers about new medical science and future projects. I am inspired to develop my research. Communication with so many reputable doctors from many countries was an amazing experience. Receiving this grant has given me the opportunity to take part in this prestigious conference and develop possible future collaborations with international scholars.



## **Ken Kitayama, BA, MPH**

UCLA Stein Eye Institute

*Knights Templar Eye Foundation Travel Grant*

This was my first experience giving a paper presentation at a research conference. I was able to develop valuable public speaking skills that will definitely benefit me in my professional development. I was also able to have interesting and productive discussions with others in my field of research that will help to improve my research efforts.





# Developing Country Eye Researcher Travel Fellowships



# 2019 Travel Fellows

The Developing Country Eye Researcher Travel Fellowships program brings aspiring scientists from developing nations to the ARVO Annual Meeting. Each recipient is paired with a volunteer mentor who guides them through ARVO's large scientific meeting. Below are the 2019 recipients:

**Meenu Chaudhary, MD**  
Institute of Medicine,  
Tribhuvan University  
Nepal

**Emerson M. Cruz, MD**  
Asian Eye Institute  
Philippines

**Christine Darko, OD**  
Kwame Nkrumah  
University of Science  
and Technology  
Ghana

**Shima Dehghani, MD**  
Zahedan University of  
Medical Sciences  
Iran

**Masoud Fard, MD**  
Farabi Eye Hospital  
Iran

**Ranju Kharel (Sitaula), MD, FAICO**  
B P Koirala Lions Centre  
For Ophthalmic Studies,  
Institute of Medicine,  
Tribhuvan University  
Nepal

**Leila Satarian, MD**  
Royan Institute  
Iran

**Renu Venugopal, MSc**  
Dr. R.P. Centre for  
Ophthalmic Sciences,  
All India Institute of  
Medical Sciences  
India

**Erdost Yildiz, MD**  
Koc University  
Turkey



“ This experience changed me in the most positive way, allowing me to stay motivated and try harder in the face of all limitations I have. This award was more proof that hard work, grit and perseverance will prevail no matter how daunting the challenges are. My experience at ARVO solidified my desire to work harder to mitigate blindness and to fight vision diseases in my country and other countries around the world. ”

— *Shima Dehghani, MD*

## Program supporters

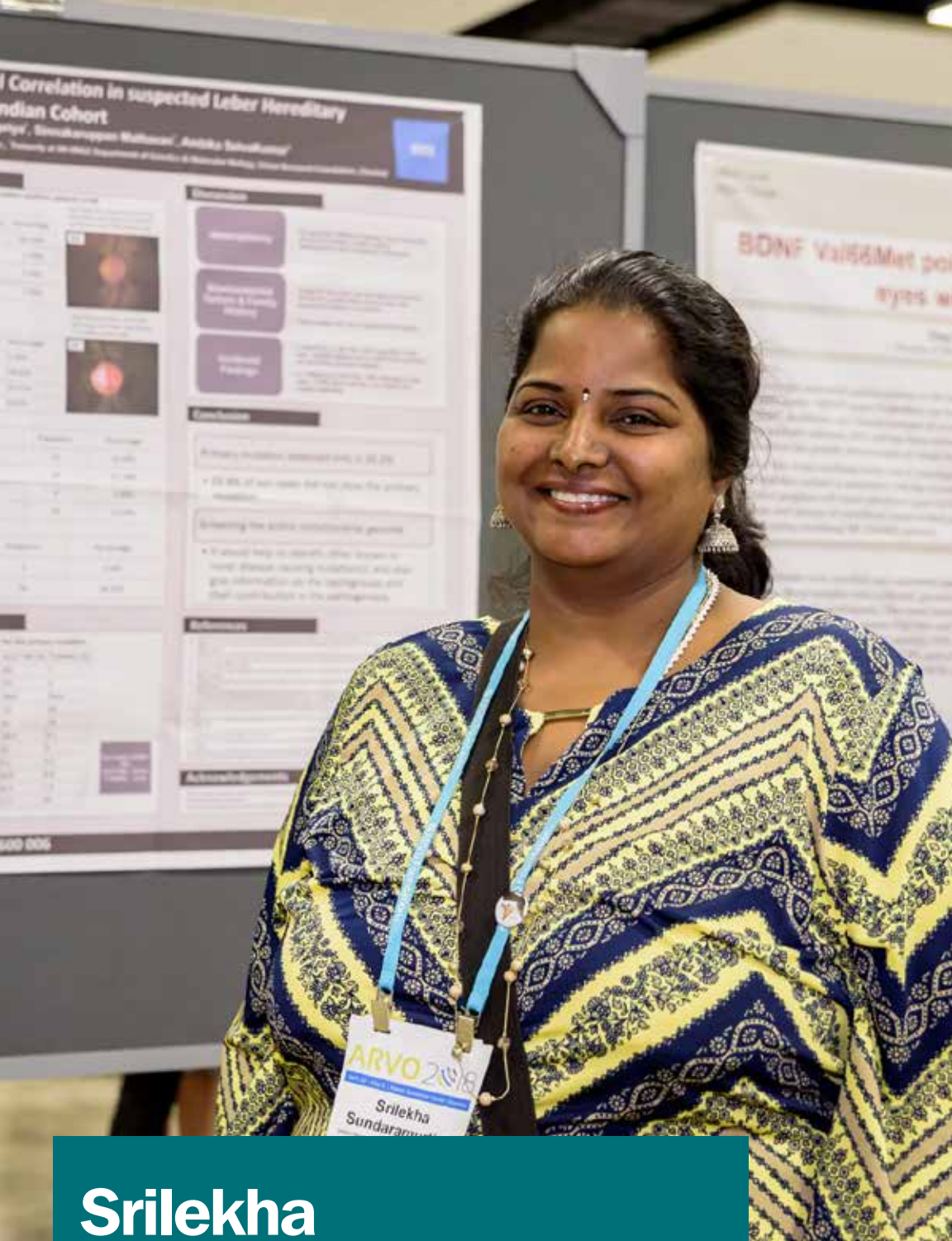
The Alcon  
Foundation

ARVO 2018  
Annual Meeting  
donors

ARVO Foundation  
donors

University of  
Wisconsin—  
Madison

Women in Eye and  
Vision Research  
(WEAVR)



**Srilekha  
Sundaramurthy, PhD**

# Finding opportunity through the ARVO Foundation

Srilekha Sundaramurthy, PhD of the Vision Research Foundation in India is a two-fold beneficiary of the ARVO Foundation’s career-building financial support. In 2018, she received the Developing Country Eye Researcher Travel Fellowship (DCERF) which allowed her to attend the ARVO Annual Meeting in Honolulu. There, she presented her research during a poster session, and with the help of her ARVO-assigned mentor, worked on building her professional network.

“The DCERF program is really a golden opportunity for young researchers in developing country like India, especially at the start of their research career,” Sundaramurthy says. “It gave me an opportunity to get updated on ophthalmic research and develop my network with colleagues and mentors with similar research interests.”

With her new connections, she applied for and won a 2019 Roche Collaborative Research Fellowship with Patrick Yu-Wai-Man, BMedSci (Hons), MBBS (Hons), PhD, FRCPath, FRCOphth of the University of Cambridge and Moorfields Eye Hospital. The year-long award provides a \$10,000 research grant to help recipients build their research skills with the support of a collaborator. Sundaramurthy’s research project is focused on understanding the mitochondrial mutations of Leber Hereditary Optic Neuropathy, a mitochondrial genetic disease.

“The ARVO Foundation supports young minds and talented individuals by giving them a start which every scientist needs early in their career,” she says. “I am sure that I will be able to use the opportunities and the networks that I am developing through these fellowships to successfully apply for more collaborative grants in the future. I am thankful to the ARVO Foundation.”



The ARVO Foundation supports young minds and talented individuals by giving them a start which every scientist needs early in their career,





# 2018 – 2019 Award Recipients

## ARVO/Alcon Early Career Clinician-Scientist Research Awards

These support researchers who are committed to careers as clinician-scientists. The \$3,000 award recognizes significant research being presented at the ARVO Annual Meeting.

### Cecilia Lee, MD

University of Washington  
Seattle, Wash.

*Genomic and gene expression analyses of pathogens in post-surgical endophthalmitis*

### Lev Prasov, MD, PhD

National Eye Institute  
Bethesda, Md.

*Variants in myelin regulatory factor (MYRF) cause autosomal dominant nanophthalmos*

### Mary Whitman, MD, PhD

Boston Children's Hospital, Harvard Medical School  
Boston, Mass.

*Rare copy number variants increase risk for esotropia*

### Patrick Yu-Wai-Man, BMedSci, MBBS, PhD, FRCPath, FRCOphth

University of Cambridge  
Cambridge, U.K.

*rAAV2/2-ND4 for the treatment of Leber Hereditary Optic Neuropathy (LHON): 72-week data from the REVERSE phase III clinical trial*

## Dr. David L. Epstein Award

This \$100,000 award is given in memory of David L. Epstein, MD to a well-established, senior level investigator with a documented history of conducting eye and vision research in glaucoma and a record of accomplishment in successfully mentoring clinician-scientists to independent research in academic careers.

### Mentor:

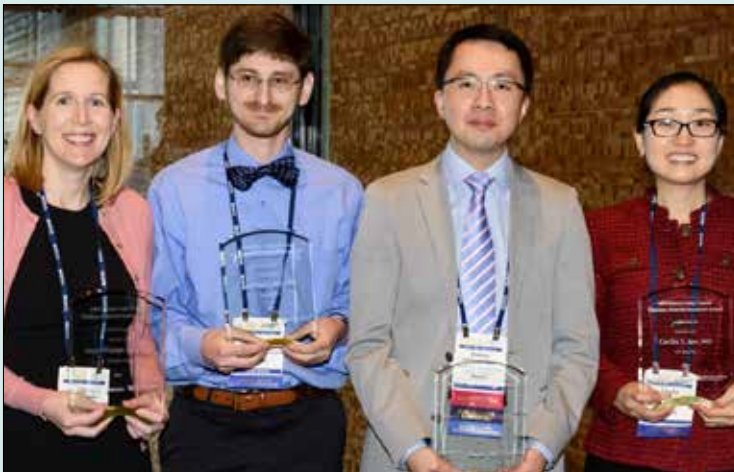
**Harry A. Quigley, MD, FARVO**

### Mentee:

**Thomas V. Johnson, MD, PhD**

Wilmer Eye Institute, Johns Hopkins University School of Medicine  
Baltimore, Md.

*Stem cell transplantation for RGC replacement and optic nerve regeneration*



From left: ARVO/Alcon Early Career Clinician-Scientist Research Award recipients Mary Whitman, MD, PhD; Lev Prasov, MD, PhD; Patrick Yu-Wai-Man, BMedSci, MBBS, PhD, FRCPath, FRCOphth; and Cecilia Lee, MD

# 2018 – 2019 Award Recipients

## **Bert M. Glaser, MD Award for Innovative Research in Retina**

Given in memory of Bert M. Glaser, MD, this \$10,000 award recognizes an early-career investigator who has made a novel discovery of a drug, technique or disease mechanism that impacted the understanding and/or treatment of a retinal disease or condition.

### **Mandeep S. Singh, MD, PhD**

Wilmer Eye Institute, Johns Hopkins University School of Medicine  
Baltimore, Md.

## **Pfizer Ophthalmics Carl Camras Translational Research Award**

This research award gives \$12,000 to early-career researchers who exhibit excellence in research. Their discovery or observation must have led to, or have the promise of leading to, clinical applications.

### **Yali Jia, PhD**

Oregon Health & Science University  
Portland, Ore.



ARVO Foundation Chair Paul Sternberg, Jr., MD, FARVO and Pfizer Carl Camras Translational Research Award recipient Yali Jia, PhD

## **Oberdorfer Award in Low Vision Research**

Named in honor of Michael D. Oberdorfer, PhD and supported by the Lighthouse Guild, this \$1,250 award is given to an invited speaker at the ARVO Annual Meeting whose presentation is on a topic related to low vision.

### **Cynthia Owsley, PhD, FARVO**

University of Alabama at Birmingham  
Birmingham, Ala.

*The effects of mesopic light levels on vision and functional activities*

## **Ludwig von Sallmann Clinician-Scientist Award**

This \$1,250 award for young clinician-scientists remembers Ludwig von Sallmann, MD, a distinguished international ophthalmologist and ophthalmic investigator, by recognizing an outstanding invited speaker at the ARVO Annual Meeting.

### **Pearse A. Keane, MD**

Moorfields Eye Hospital NHS  
Foundation Trust  
London, U.K.

*Artificial intelligence: the algorithmic solution to retinal healthcare*

# 2018 – 2019 Fellowship Recipients

## Roche Collaborative Research Fellowships

This \$10,000 fellowship supported by Roche promotes international scientific interactions and innovative research by pairing researchers from developing countries with well-established research scientists for a one-year collaborative project.

### Researcher

#### **Vicente Bermúdez, PhD**

Instituto de Investigaciones  
Bioquímicas Bahía Blanca  
Bahía Blanca, Argentina

*The Phospholipase D (PLD) pathway modulates retinal pigment epithelium (RPE) cells phagocytosis: an insight into signaling at the onset of retinal inflammatory diseases*

### Collaborating researcher:

#### **Nicolas G. Bazan, MD, PhD, FARVO**

LSU Health School of Medicine  
New Orleans, La.

### Researcher

#### **Daniela Alejandra Quinteros, PhD**

Unidad de Investigación y Desarrollo  
en Tecnología Farmacéutica -  
CONICET  
Cordoba, Argentina

*Potential neuroprotective effect of antioxidants included in innovative pharmaceutical formulations*

### Collaborating researcher:

#### **Rocío Herrero Vanrell, PhD**

Universidad Complutense de Madrid  
Madrid, Spain

### Researcher

#### **Swaminathan Sethu, BDS, MSc, PhD**

Narayana Nethralaya Foundation  
Bangalore, India

*Intraocular immune cell profiling in dry age-related macular degeneration*

### Collaborating researcher:

#### **Debasish Sinha, PhD**

University of Pittsburgh School of  
Medicine  
Pittsburgh, Pa.

## Genentech AMD Research Fellowships

Supported by Genentech, these \$40,000 research fellowships offer two grants annually for age-related macular degeneration: one for basic research and one for translational research.

### Basic AMD Research Fellowship:

#### **Susana da Silva, PhD**

University of Pittsburgh  
Pittsburgh, Pa.

*Establishment of a foveated human 3D retinal organoid system to model AMD*

### Translational AMD Research Fellowship:

#### **Dimitra Skondra, MD, PhD**

University of Chicago  
Chicago, Ill.

*Common antidiabetic drug metformin prevents AMD by reshaping the gut microbiome*



# 2018 – 2019 Grant Recipients

## Publications Grants

These grants provide no-cost publication to several individuals per year who need funding assistance to publish in any of ARVO's three journals.

### **Investigative Ophthalmology and Visual Sciences**

Nov. 2018; Volume 59, Issue 13

*Scanning Acoustic Microscopy Comparison of Descemet's Membrane Normal Tissue and Tissue With Fuchs' Endothelial Dystrophy*

Esam T. Ahmed Mohamed; Jean-Marc Perone; Sebastian Brand; Michael Koegel; Nico F. Declercq

### **Investigative Ophthalmology and Visual Sciences**

Nov. 2018; Volume 59, Issue 13

*Macular Inner Retinal Layer Thickness in Relation to Photopic and Mesopic Contrast Sensitivity in Healthy Young and Older Subjects*

María Cinta Puell; Catalina Palomo-Álvarez; María Jesús Pérez-Carrasco

### **Investigative Ophthalmology and Visual Sciences**

May 2019; Volume 60, Issue 6

*Electrophysiological and Psychophysical Studies of Meridional Anisotropies in Children With and Without Astigmatism*

Tiong Peng Yap; Chi D. Luu; Catherine M. Suttle; Audrey Chia; Mei Ying Boon

### **Investigative Ophthalmology and Visual Sciences**

June 2019; Volume 60, Issue 7

*Effects of Monocular Atropinization on Refractive Error and Eye Growth in Infant New World Monkeys*

Andrew R. Whatham; Daniel Lunn; Stuart J. Judge

### **Investigative Ophthalmology and Visual Sciences**

Nov. 2019; Volume 60, Issue 14

*Lowered Decorin With Aberrant Extracellular Matrix Remodeling in Aqueous Humor and Tenon's Tissue From Primary Glaucoma Patients*

Sampath Nikhalashree; Gayathree Karthikkeyan; Ronnie George; Balekudaru Shantha; Lingam Vijaya; Vineet Ratra; Konerirajapuram Natarajan Sulochana; Karunakaran Coral

### **Journal of Vision**

May 2019; Volume 19, Issue 5

*Short-Term Global Motion Adaptation Induces a Compression in the Subjective Duration of Dynamic Visual Events*

Doga Gulhan; Inci Ayhan

### **Translational Vision Science and Technology**

Jan. 2019; Volume 8, Issue 1

*Characterization of Corneal Epithelial Cells in Keratoconus*

Rohit Shetty; Krishna Poojita Vunnava; Kamesh Dhamodaran; Himanshu Matalia; Subramani Murali; Chaitra Jayadev; Ponnulagu Murugeswari; Arkasubhra Ghosh; Debashish Das



**Mandeep S.  
Singh, MD, PhD**

# Special connections for the inaugural Glaser Award

Mandeep S. Singh, MD, PhD, assistant professor of ophthalmology at the Wilmer Eye Institute, Johns Hopkins Medicine, received the inaugural Bert M. Glaser, MD Award for Innovative Research in Retina in 2019. The award, funded by Glaser's family in his memory, recognizes young researchers whose work has led to a novel discovery that could revolutionize retina care.

Singh earned the award through his work studying the relationship and interactions between host and transplanted photoreceptor cells. He and his team seek to understand how photoreceptor cells behave after transplantation, including how they integrate and exchange materials, like proteins, with the recipient tissue cells. A better understanding of the material transfer between photoreceptor cells, also known as cell fusion, can lead to the development of novel therapies that work to restore vision capabilities of the eye.

"The Glaser award has become so incredibly useful for my team," said Singh. "Most of the work we do is resource-heavy, especially the materials that are key to our transplantation experiments, which are particularly expensive," said Singh. "Having this award has allowed us to move forward on, and even accelerate, much of our work on stem cell transplantation."

Glaser was a long-time retina researcher, surgeon, innovator and teacher who spent some of his early career years at Johns Hopkins University before moving to private practice in the Baltimore area. Ronnie Glaser, Bert Glaser's widow, was delighted that another clinician-scientist from Wilmer Eye Institute was the inaugural recipient of the award. Mrs. Glaser, who still lives in the Baltimore area, had the opportunity to see Singh's work up-close with a visit to his lab.

"Meeting Mrs. Glaser was absolutely wonderful," said Singh. "I was struck by how deeply she cared about our work and its impact. It is a special feeling when you find other people who value your goals and the work you want to do. It was an incredibly motivating experience for my team and I."

“

Having this award has allowed us to move forward on, and even accelerate, much of our work on stem cell transplantation.

”



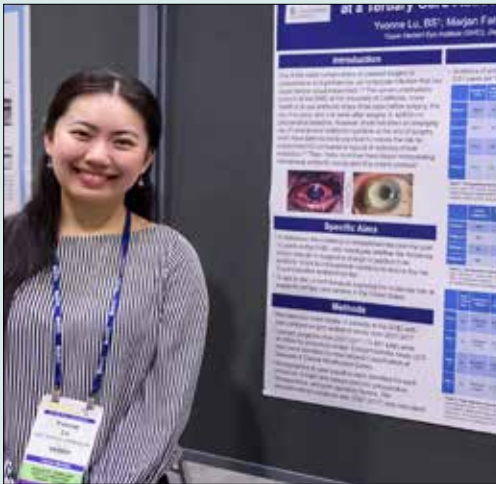
# ARVO 2019 Highlights



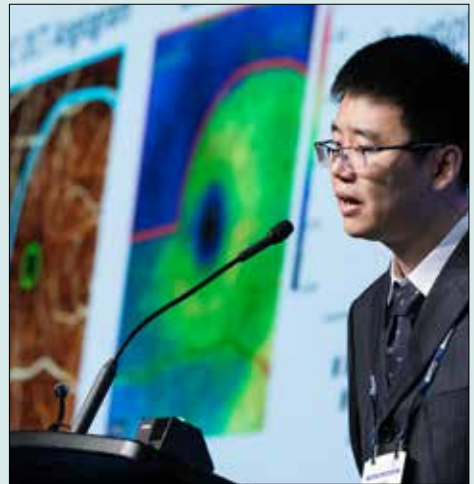
Breakfast with the Expert, a program underwritten by the ARVO Foundation's Ramesh and Brenda Tripathi Vision Research Fund



Meeting the matching gift campaign goal



Knights Templar Eye Foundation Travel Grant recipient Yvonne Lu presents her research



Liang Liu, MD, mentee recipient of the 2017 Dr. David L. Epstein Award, presents at the Epstein Award Session

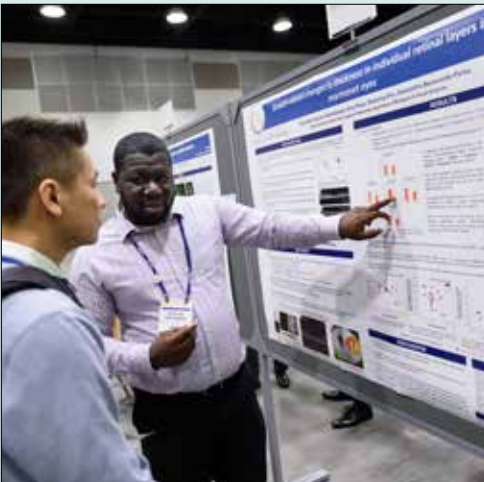


Travel grant recipients and colleagues celebrating at the Student-Trainee Reception

# ARVO 2019 Highlights



Welcome to Vancouver



MIT Poster Award winner Reynolds Ablordeppey presenting his research



It's very complicated



Recipients of the 2019 ARVO Foundation Travel Grants funded by donations made at the ARVO 2018 Annual Meeting



# Women in Eye and Vision Research

More than 520 colleagues attended the 12th Annual WEAVR Luncheon, raising \$30,000 to support women in the visual sciences



Outgoing WEAVR Leadership Committee Chair Terri L. Young, MD, MBA, FARVO



Attendees from the Casey Eye Institute at Oregon Health and Science University enjoy the 11th Annual WEAVR Luncheon



# Women in Eye and Vision Research



WEAVR Luncheon speaker Gail C. Murphy, PhD (University of British Columbia)



WEAVR volunteers support their young colleagues with the Drop-In Mentoring Program

# Dowling Society Reception



The ARVO Foundation welcomed 21 new members of the Dowling Society in Vancouver, including M.E. Hartnett, MD, FARVO (second from right)



Carole Miner Schuman (center) joins the Dowling Society



Steve Charles, MD poses with a cardboard cutout of John E. Dowling, PhD, FARVO who was unable to attend his namesake event



# ARVO Foundation Gala

550 friends and colleagues kicked off the week of ARVO 2019 at the ARVO Foundation Gala, raising over \$90,000 to support eye and vision researchers



2019 ARVO Foundation Honoree J. Mark Petrash, PhD, FARVO (right) celebrates with his family



2019 ARVO Foundation Honoree Sir Peng Khaw, MD, PhD, FARVO



The team from Genentech, a 2019 ARVO Foundation Honoree, celebrates their recognition

# The Dowling Society

Dowling Society members have made a commitment to the ARVO Foundation of \$10,000 or more. The ARVO Foundation welcomed 21 new members to the Dowling Society at the 2019 ARVO Foundation Gala.

## 2019 Dowling Society members

Jayakrishna Ambati, MD, FARVO

Catherine Bowes Rickman, PhD, FARVO

Melinda K. Duncan, PhD, FARVO

Malinda E. C. Fitzgerald, PhD, FARVO

Ronnie Glaser and Bert M. Glaser, MD\*

Hans E. Grossniklaus, MD, FARVO

Julia A. Haller, MD, FARVO, and John D. Gottsch, MD, FARVO

Mary Elizabeth Hartnett, MD, FARVO

John R. Heckenlively, MD, FARVO

John A. Hoepner, MD

John L. Keltner, MD, and Nancy Keltner

Marmor Foundation/  
Michael F. Marmor, MD, FARVO

Carole Miner Schuman

Gregory L. Skuta, MD

Vicki Smith

Alfred Sommer, MD, MHS

Richard F. Spaide, MD, FARVO

Terri L. Young, MD, MBA, FARVO

## Dowling Society members

Gary W. Abrams, MD, FARVO, and Jane C. Werner, MD

Anthony P. Adamis, MD, FARVO

Jayakrishna Ambati, MD, FARVO

Robert E. Anderson, MD, PhD, FARVO

Joanne Angle\*, MLS, MPA

Sally S. Atherton, PhD, FARVO and Robert Atherton

Robert B. Barlow\*, PhD, FARVO and Patricia Barlow

Haydee E. P. Bazan, PhD, FARVO, and Nicolas G. Bazan, MD, PhD, FARVO

Bernard Becker\*, MD, FARVO

David C. Beebe\*, PhD, FARVO, and Mrs. Betsy Beebe, PA-C

Paul S. Bernstein, MD, PhD, FARVO, and Ann Bernstein

Eliot L. Berson\*, MD, FARVO, and Kyra Kaplan-Berson

Roger W. Beuerman, PhD, FARVO

Laszlo Z. Bito, PhD

Janet C. Blanks, PhD, FARVO

Jeffrey H. Boatright, PhD, FARVO

William J. Brunken, PhD, FARVO, and Dale D. Hunter, PhD, JD

Claude F. Burgoyne, MD, FARVO and Vicki Smith

Patrick Burke, MD, PhD

R. V. Paul Chan, MD, and Ann-Marie Lobo-Chan, MD

Stanley Chang, MD, FARVO

Steve T. Charles, MD, FACS, FICS

Emily Y. Chew, MD, FARVO, and Robert P. Murphy, MD

Michael F. Chiang, MD

Bruce E. Cohan, MD

Lancey B. Cowan, JD, CAE

Cheryl M. Craft, PhD, FARVO

Patricia A. D'Amore, MBA, PhD, FARVO

Reza Dana, MD, FARVO

Paulus T. V. M. de Jong, MD, PhD, FARVO, FEBOphth, FRCOphth, and Marij de Jong

John E. Dowling, PhD, FARVO, and Judith F. Dowling



Joseph L. Dowling, MD	John L. Keltner, MD, and Nancy Keltner	Stephen J. Ryan*, Jr., MD, FARVO
Melinda K. Duncan, PhD, FARVO	Shigeru Kinoshita MD, PhD, FARVO	David E. Saffer
David L. Epstein*, MD, FARVO, and Susan M. Epstein, RN, JD	Renu A. Kowluru, PhD, FARVO, and Anjan Kowluru, PhD	Jose Alain Sahel, Jr., MD, FARVO
Rafal Farjo, PhD and Krysten M. Farjo, PhD	Ingrid Kreissig, MD	Joel S. Schuman, MD, FARVO, and Carole Miner Schuman
Malinda E. C. Fitzgerald, PhD, FARVO	Paul P. Lee, MD, JD, FARVO, and Jennifer Lee	Lawrence J. Singerman, MD, FACS
Steven J. Fliesler, PhD, FARVO	Marmor Foundation/ Michael F. Marmor, MD, FARVO	Gregory L. Skuta, MD
Robert N. Frank, MD, FARVO	Alice R. McPherson, MD	Alfred Sommer, MD, MHS
Ronald E. P. Frenkel, MD	Jennifer J. Kang-Mieler, PhD, FARVO, and William F. Mieler, MD, FARVO	Richard F. Spaide, MD, FARVO
Juan E. Gallo, MD, PhD, FARVO	Ann H. Milam, PhD, FARVO	William Eric Sponsel, MD, FARVO
Ronnie Glaser and Bert M. Glaser*, MD, FARVO	Joan W. Miller, MD, FARVO	W. Daniel Stamer, PhD, FARVO, and Catherine Bowes Rickman, PhD, FARVO
Israel A. Goldberg, PhD, and Diane Goldberg	Robert F. Miller, MD, FARVO	Michael E. Stern, PhD, FARVO
Evangelos S. Gragoudas, MD, FARVO	Alan R. Morse, PhD	Paul Sternberg, Jr., MD, FARVO, and Gloria Sternberg
Hans E. Grossniklaus, MD, FARVO	Janice Oliva	Joyce Tombran-Tink, PhD, FARVO, and Colin J. Barnstable, DPhil, FARVO
Julia A. Haller, MD, FARVO, and John D. Gottsch, MD, FARVO	Samir C. Patel, MD	Carol B. Toris, PhD, FARVO
Mary Elizabeth Hartnett, MD, FARVO	Christopher A. Paterson*, PhD, DSc, FARVO	Michael T. Trese, MD, FARVO
Linda D. Hazlett, PhD, FARVO	David R. Pepperberg*, PhD, FARVO, and Audrey Eisenmann	Erik J. van Kuijk, MD, PhD, and Virginia Brooke, RN, PhD
John R. Heckenlively, MD, FARVO	J. Mark Petrash, PhD, FARVO, and Kelly Cope Petrash	Sheila K. West, PhD, FARVO
John A. Hoepner, MD	Stephen C. Pflugfelder, MD, FARVO	Janey L. Wiggs, MD, PhD, FARVO
David Huang, MD, PhD, FARVO	Robert Ritch, MD, FARVO	David R. Williams, PhD, FARVO, and Inger M. Williams, PhD
Martine J. Jager, MD, PhD, FARVO	Stella M. Robertson, PhD, and James D. Robertson, PhD	Terri L. Young, MD, MBA, FARVO
Murray A. Johnstone, MD, and Jeanie Johnstone	Frances J. Rucker, PhD, MCOptom, FARVO	Thomas Yorio, PhD, FARVO and Elena Yorio
Dimitrios Karamichos, PhD	Iris M. Rush, CAE	
Paul L. Kaufman, MD, FARVO, and Margaret Kaufman		

*\*deceased*



**Joyce  
Tombran-Tink,  
PhD, FARVO**

# Paying it forward

Giving back to the ARVO community has become a central tenant of the career of Joyce Tombran-Tink, PhD, FARVO. Tombran-Tink, a professor of Neural and Behavioral Sciences at Penn State, was recognized as a 2019 ARVO Foundation Honoree for her leadership, volunteer service and philanthropy to the ARVO community. Tombran-Tink was an early member of the ARVO Foundation's Women in Eye and Vision Research (WEAVR) Leadership Committee and served on the ARVO Foundation Board of Governors. She and her husband Colin J. Barnstable, DPhil, FARVO have also been generous financial supporters of the ARVO Foundation.

“As an international student, I received great support from the ARVO community in terms of validating my work, funding my research and providing travel grants,” says Tombran-Tink, who is originally from Guyana. Her family's giving has centered on travel grants and awards to bring early-career scientists to the ARVO Annual Meeting. “We want to encourage young bright minds globally to bring their innovations and ideas to a place where we can listen critically and network with people interested in collaborating with them. It really is investing in the next generation.”

Tombran-Tink benefited early in her career from a travel grant to attend a scientific meeting, which was followed by a Fight for Sight award. These two awards jump-started her career and helped to narrow her research focus. Her work ultimately led to the discovery of the Pigment Epithelial Derived protein (PEDF), a neurotrophic factor that reduces ocular cell death rates. This research has culminated in the creation of Skyran Biologics, a company co-founded by Tombran-Tink and Barnstable, that aims to develop PEDF therapy to treat diabetic retinopathy and other retinal diseases.

Being named a 2019 ARVO Foundation Honoree was a meaningful milestone for Tombran-Tink in helping her realize the significance of her contributions to the eye and vision research community over the span of her career. “It hits you that you made this impact. It made me step back and say, ‘Wow, I'm glad I've made a difference,’” she says. “I give because I was given to. I want to pay it forward. Whatever you give, it gives back.”

“

I give because I was given to. I want to pay it forward. Whatever you give, it gives back.

”

# Corporate donors

## \$100,000 and above

- Genentech
- Knights Templar Eye Foundation

## \$75,000 – \$99,999

- Alcon Laboratories

## \$50,000 – \$74,999

- Alcon Foundation
- Mallinckrodt Pharmaceuticals

## \$25,000 – \$49,999

- Roche
- May and Samuel Rudin Family Foundation

## \$10,000 – \$24,999

- BrightFocus Foundation
- Eye Bank Association of America
- Harvard Department of Ophthalmology
- Lowy Medical Research Institute
- NIH Biomedical Research Centre
- Research to Prevent Blindness
- Retina Research Foundation

## \$5,000 – \$9,999

- Boston University School of Medicine, Department of Ophthalmology
- Byers Eye Institute at Stanford
- Duke University
- EyeCRO
- Fondazione G B Bietti per Studio e Ricerca
- Foster Ocular Immunology Society
- Shiley Eye Institute
- University of Rochester Center for Visual Science; University of Rochester School of Medicine & Dentistry, Flaum Eye Institute; and LV Prasad Eye Institute
- University of Wisconsin Department of Ophthalmology and Visual Sciences
- Vanderbilt Eye Institute

## \$2,500 – \$4,999

- American Macular Degeneration Foundation
- Sue Anschutz-Rodgers Eye Center, University of Colorado School of Medicine
- Belite Bio, Inc.
- Casey Eye Institute
- Emory Eye Center
- James & Jean Culver Vision Discovery Institute
- Indiana University Department of Ophthalmology
- John A. Moran Eye Center
- Medical College of Wisconsin
- New York Eye & Ear Infirmary of Mt. Sinai
- NYU Langone Health, Department of Ophthalmology
- The Ohio State University Wexner Medical Center Department of Ophthalmology and Visual Science
- University of Alabama at Birmingham
- University of California, Los Angeles
- University of California, San Francisco
- University of Illinois at Chicago
- University of Iowa
- University of Michigan W.K. Kellogg Eye Center
- University of Minnesota Department of Ophthalmology & Visual Sciences
- Upstate Medical University — Department of Ophthalmology and Center for Vision Research
- USC Roski Eye Institute
- Washington University School of Medicine
- Wills Eye Hospital

## \$1,000 – \$2,499

- The C. Stephen & Frances B. Foster Foundation Inc.
- Hamilton Eye Institute, University of Tennessee Health Science Center
- North Texas Eye Research Institute
- Ocular Immunology and Uveitis Foundation
- #promotewomeninscience
- Reader's Digest Partners for Sight Foundation



# Individual donors

## \$100,000 and above

Susan M. Epstein, RN, JD

## \$50,000 – \$74,999

Ronnie Glaser

## \$15,000 – \$24,999

Steve T. Charles, MD

John L. Keltner, MD and  
Nancy Keltner

## \$10,000 – \$14,999

Audrey Eisenmann

Renu A Kowluru, PhD, FARVO  
and Anju Kowluru, PhD

Stephen C. Pflugfelder, MD,  
FARVO

Michael E. Stern, PhD, FARVO

Michael T. Trese, MD, FARVO

Janey L. Wiggs, MD, PhD, FARVO

## \$5,000 – \$9,999

Nicolas G. Bazan, MD, PhD,  
FARVO and Haydee E. P.  
Bazan, PhD, FARVO

R.V. Paul Chan, MD and  
Ann-Marie Lobo-Chan, MD

Rafal Farjo, PhD, and  
Krysten M. Farjo, PhD

Todd P. Margolis, MD, PhD,  
FARVO

J. Mark Petrash, PhD, FARVO  
and Kelly Cope Petrash

Richard F. Spaide, MD

Paul Sternberg, Jr., MD, FARVO  
and Gloria Sternberg

Sheila K. West, PhD, FARVO

## \$2,500 – \$4,999

Janet C. Blanks, PhD, FARVO  
and Robert Blanks, PhD

William J. Brunken, PhD and  
Dale D. Hunter, PhD, JD

Emily Y. Chew, MD, FARVO and  
Robert P. Murphy, MD

Michael F. Chiang, MD

Malinda E.C. Fitzgerald, PhD,  
FARVO

Jennifer J. Kang-Mieler, PhD,  
FARVO and William F. Mieler,  
MD, FARVO

Maureen G. Maguire, PhD,  
FARVO

Alan R. Morse, PhD

Stella M. Robertson, PhD and  
James D. Robertson, PhD

W. Daniel Stamer, PhD,  
FARVO and Catherine Bowes  
Rickman, PhD, FARVO

Thomas Yorio, PhD, FARVO and  
Elana Yorio

Terri L. Young, MD, MBA, FARVO

## \$1,000 – \$2,499

Jayakrishna Ambati, MD, FARVO

Jeffrey H. Boatright, PhD, FARVO

Claude F. Burgoyne, MD, FARVO  
and Vicki Smith

Shukti Chakravarti, PhD

Abbot F. Clark, PhD, FARVO

Lancey Cowan, JD, CAE

John E. Dowling, PhD, FARVO

Steven J. Fliesler, PhD, FARVO  
and Madalyn Fliesler

Israel A. Goldberg, PhD and  
Diane Goldberg

Hans E. Grossniklaus, MBA, MD,  
FARVO

Mary Elizabeth Hartnett, MD,  
FACS, FARVO

Donald C. Hood, PhD, FARVO

David Huang, MD, PhD, FARVO

Dimitrios Karamichos, PhD

Piyush C. Kothary, PhD

Marmor Foundation/  
Michael F. Marmor, MD, FARVO

Joan W. Miller, MD, FARVO

Robert F. Miller, MD, FARVO

Muna I. Naash, PhD, FARVO

Iris M. Rush, CAE

Joel S. Schuman, MD, FARVO  
and Carole Miner Schuman

Lawrence J. Singerman, MD,  
FACS

Gregory L. Skuta, MD

William Eric Sponsel, MD, FARVO

Mary Ann Stepp, PhD, FARVO

Zhiqun Tan, MD, PhD

Joyce Tombran-Tink, PhD,  
FARVO and Colin J. Barnstable,  
DPhil, FARVO

Cynthia A. Toth, MD, FARVO

Erik J. Van Kuijk, MD, PhD and  
Virginia Brooke, RN, PhD

David R. Williams, PhD, FARVO  
and Inger M. Williams, PhD

George A. Williams, MD, FARVO

## \$500 – \$999

Eric C. Carlson, PhD and  
Becky Carlson

Jane W. Chan

Robert David, MD

Shaban Demirel, PhD,  
BScOptom

Frederick L. Ferris, III, MD,  
FARVO and Miriam Ferris

Mae O. Gordon, PhD

Michael B. Gorin, MD, PhD,  
FARVO

Murray A. Johnstone, MD

Jeffrey W. Kalenak, MD

Maureen A. McCall, PhD and  
Ronald Gregg, PhD

Ernest J. Millman

Ram H. Nagaraj, PhD, FARVO

Louis R. Pasquale, MD, FARVO

T. Michael Redmond, PhD, FARVO

Justine R. Smith, FRANZCO,  
PhD, FARVO

## \$250 – \$499

Ata A. Abdel-Latif, PhD, FARVO

Cagri G. Besirli, MD, PhD

Milam Brantley, Jr., MD, PhD

Colleen M. Cebulla, MD, PhD

Darlene A. Dartt, PhD, FARVO

Andrew D. Dick, MD

Daniela Ferrara, MD, PhD

Brad Fortune, OD, PhD

Sabine Fuhrmann, PhD

Irene Gottlob, MD, FARVO

P. Michael Iuvone, PhD, FARVO

Martine J. Jager, MD, PhD, FARVO

Kirsten J. Lampi, MS, PhD

Goldis Malek, PhD

Janet B. Serle, MD

Jason Spessard, MBA, CAE

David Troilo, PhD, FARVO

Larry A. Wheeler, PhD

Mary Whitman, MD, PhD

## \$100 – \$249

Gary W. Abrams, MD, FARVO  
and Jane C. Werner, MD

Thomas Ach, MD

Gregory M. Acland, BVSc

Penelope J. Allen, FRANZCO

Bela Anand-Apte, MD, PhD

Raymond A. Applegate, OD,  
PhD, FARVO

# Individual donors

J. Fernando Arevalo, MD, PhD  
Ashley Behrens, MD  
Michael V. W. Bergamini, PhD  
Norman P. Blair, MD  
Thomas M. Brunner, MBA  
Stephen A. Burns, PhD, FARVO  
Julia V. Busik, PhD and  
Denis Proshlyakov, PhD  
Kun-Che Chang, PhD  
Devinder Chauhan, MD,  
FRCOphth, FRANZCO  
Shiming Chen, PhD  
Yan Chen, PhD  
Zai-Long Chi, MD, PhD  
Thomas A. Ciulla, MD, MBA  
Gayle Claman, CAE  
Ben Clark, MBBS, FRANZCO  
John I. Clark, PhD, FARVO  
Elisabeth J. Cohen, MD  
Timothy William Corson, PhD  
Cheryl Mae Craft, PhD, FARVO  
Christine A. Curcio, PhD, FARVO  
Gislin Dagnelie, PhD, FARVO  
Arlene V. Drack, MD  
Daniel Ian Flitcroft, DPhil, MBBS  
Yamina Fodil-Cherif  
Velia M. Fowler, PhD  
Laura J. Frishman, PhD, FARVO  
Paul D. Gamlin, PhD  
Karen M. Gehrs, MD  
Andrew F. X. Goldberg, PhD  
Jennifer J. Hunter, PhD  
Natalie Hutchings, PhD  
Aiko Iwase, MD, PhD  
Kangwei Jiao, MD, PhD  
Karen M. Joos, MD, PhD, FARVO  
Julene Joy  
Kate E. Keller, PhD  
Vikas Khetan, DO, DNB, FMRF  
Mark J. Kupersmith, MD  
Andreas K. Lauer, MD  
Luis A. Lesmes, PhD  
Brian Levy, OD, MSc  
Alfred S. Lewin, PhD, FARVO  
Jennifer I. Lim, MD, FARVO  
Alexander V. Ljubimov, PhD,  
FARVO  
John M. Maggiano, BS, MD  
Arthur Makar, MEd  
Robert Paul Malchow, PhD  
Jon Mallett, PhD  
Nawajes A. Mandal, PhD  
Dieter Manstein, MD  
Robert W. Massof, PhD, FARVO

Tim Maxey  
Gillian J. McLellan, BVMS, PhD  
Keiko Momose, PhD  
Sayoko Eileen Moroi, MD, PhD  
Anthony B. Nesburn, MD, FARVO  
T. Michael Nork, MD, MS, FARVO  
Kouros Nouri-Mahdavi, MD, MS  
Michael D. Oberdorfer, PhD  
Mineo Ozaki, MD, PhD  
Christopher L. Passaglia, PhD  
Emily J. Patterson, PhD  
Neal S. Peachey, FARVO  
Jacob Pe'er, MD, FARVO  
Jason Porter, PhD, FARVO  
Matthew Potter  
Mark H. B. Radford, MD, PhD  
Philip Rizzuto, MD  
Joseph W. Sassani, MD  
Fumio Shiraga, MD  
Kent W. Small, MD  
Mark W. Swanson, OD, MSPH  
Hirotaka Tanabe, MD, PhD  
Andrew W. Taylor, PhD, FARVO  
Hiroko Terasaki, MD, PhD  
Julio A. Urrets-Zavalía, MD, PhD  
Susan Vitale, PhD MHS FARVO  
Prembuda Vrubliauskas  
Alan L. Weiner, PhD  
John A. Wells, III, MD  
Christine Frances  
Wildsoet, OD, PhD  
Barry S. Winkler, PhD, FARVO  
Dongsheng Yan, PhD  
Hsin-Hao Yu

## \$50 – \$99

Makoto Aihara, MD, PhD  
Winfried M. K. Amoaku, FRCS  
MD, PhD  
Elizabeth Austin  
J. Bronwyn Bateman, MD,  
FARVO  
David G. Birch, PhD, FARVO  
Richard J. Braun, PhD  
Robert Canas  
Louis B. Cantor, MD  
Francis Carbonaro, MD, PhD,  
FRCOphth  
Ling-Ping Cen, MD, PhD  
Debbie Chin  
Cathy Conley  
Heather R. M. Connor, PhD  
Kathy Cox  
Kathryn S. Crawford, PhD

Julie Crider, PhD  
Kimberly Williams Crowder, MD  
Felicio A. Da Silva, MD  
Irina De la Huerta, MD, PhD  
C. Kathleen Dorey, PhD, FARVO  
Ralph C. Eagle, Jr., MD  
Paul A. Edwards, MD  
Daniel Ferguson, MS  
John G. Flanagan, PhD, DSc,  
FCOptom  
K. Bailey Freund, MD  
Sapna Gangaputra  
Randolph D. Glickman, PhD  
Glen A. Gole, MD FRANZCO  
Luz J. Gordillo, MD  
Lynn K. Gordon, MD, PhD  
Jeffery K. Hovis, OD, PhD  
James Hurley, PhD  
Thomas S. Hwang, MD  
Tatjana C. Jakobs, MD  
Yali Jia, PhD  
Haihan Jiao, PhD  
Amanda Johnson  
Robert A. Johnson  
Iris S. Kassem, MD, PhD  
Rumi Kawashima, MD, PhD  
David J. Keegan, FRCOphth  
Kenichi Kimoto, MD, PhD  
Marisa Lavine  
Ji Eun E Lee, MD, PhD  
Dennis M. Levi, OD, PhD  
Monique J. Leys, MD  
Birgit Lorenz, MD, PhD FEBO  
FARVO  
Alice T. Lyon, MD  
Michele C. Madigan, PhD  
Stuart C. Mangel, PhD  
Julie A. Mares, PhD  
Roberta McKean-Cowdin, PhD  
Regine Lotte Muehlfriedel  
Takeshi Naito, MD, PhD  
Emeline F. Nandrot, PhD  
Michael R. Niesman, PhD  
Mario J. Nobrega  
Yoko Ogawa, MD  
Lisa A. Ostrin, OD, PhD, FARVO  
Jan S. Peterson, MS RAC ACRP-CP  
Nancy J. Philp, PhD, FARVO  
Lyne Racette, PhD  
Saaeha Rauz, PhD FRCOphth  
Lindsay Anne Rhodes, MD, MSPH  
Charles E. Riva, DSc  
Francisco J. Rodriguez, MD  
John Saville

# Individual donors

Abdullo Sayfidinov  
Juergen Schmitt  
Susan Schneider, MD  
Luis A Serrano, MD  
Patrick Simard, OD, BA  
Robert G. Smith, PhD  
Ye Sun, MD, PhD  
Luiz Fernando Teixeira  
James Thompson  
Robert L. Tomsak, MD, PhD  
Md Imam Uddin, PhD  
Michael P. Varenhorst, MD  
Clemens Vass, MD  
Fuensanta A. Vera-Diaz, PhD, OD  
Renate Voegler  
Stephanie L. Watson, MBBS  
FRANZCO PhD  
Burkhard Wiechens, MD, PhD  
Barbara M. Wirostko, MD  
Sheryl S. Wizov, COA  
Chris Young, OD  
Yan Zhang, PhD  
Martin Sebastian Zinkernagel,  
MD, PhD

## \$25 – \$49

Keith H. Baratz, MD  
Andreas Berlin  
Steven L. Bernstein, MD, PhD  
Suraj P. Bhat, PhD, FARVO  
Isabel Regina Borkoski, BS  
Krati Chauhan, MD, MPH  
Kiah Culver  
Mitchell A. deLong, PhD  
Mariaelena Filippelli  
Ermete Giancipoli  
Kazuki Hashimoto  
Rossen M. Hazarbassanov,  
MD, PhD  
Mark Hendrix, MD  
Christoph K. Hitzzenberger, PhD  
Masahira Kaneda, MD  
Naoko Kato, MD  
Fabio Lavinsky  
Antonio Longo, MD, PhD  
Rupalatha Maddala, PhD  
Loren Malaney  
Kenji Matsushita, MD, PhD  
Kenneth P. Mitton, PhD  
Marlene Woodruff Modi, PhD  
Ashik Mohamed  
John C. Morrison, MD, FARVO  
Maciej K. Oseka

Steven J. Pittler, PhD,  
FARVO, FAAO  
Clarissa Portillo  
Mason Posner, PhD  
Shi Song Rong, MD, PhD  
Riccardo Sacco, PhD  
Juliana M. F. Sallum, MD, PhD  
Tetsuju Sekiryu, MD  
Julia P. Shulman, MD  
Gabor Mark Somfai, MD, PhD  
Tomo Suzuki, MD, PhD  
Shimpei Takita, PhD  
Stanislav I. Tomarev, PhD, FARVO  
Rafael Ufret-Vincenty, MD  
Emily Ware  
Stephen Willie  
Ahmet Ali Yucel, MD

## \$1 – \$24

Toshiaki Abe, MD  
Suchismita Acharya, PhD  
Hideo Akiyama  
Kunihiko Akiyama  
Mohamed Alketbi, MBBS  
Stephen Aller, PhD  
Wael Alsakran  
Laura Andaluz-Scher  
Jorge Santiago Andrade  
Romo, MD  
Samuel Arba Mosquera, PhD  
Filippo Arcadu, PhD  
David A. Atchison, MScOptom  
PhD DSc  
Reza A. Badian, MD MPA  
Mark Taegon Baik, PhD  
Steven T. Bailey, MD  
Madhusudhanan  
Balasubramanian, MS PhD  
Michael Keith Ballard  
Caroline R. Baumal, FRCSC MD  
Jacob Beaver, BSc  
Sean Berkowitz  
Maria H. Berrocal, MD  
Kenichiro Bessho, MD  
Roger W. Beuerman, PhD  
Anna Rita Blanco  
Ulisse Bocchero  
Oliver Borsch  
Alejandra Bosco, PhD  
Francoise Brignole-Baudouin,  
MD, PhD  
Mark Buckley, PhD  
Mihai Busuioc, OD MD  
David Callanan, MD

Valeria Canto Soler, PhD  
Dongfeng Cao  
Jingtai Cao, MD, PhD  
Andrew Carkeet, MS, PhD  
Leanne Carnes  
Pamela Cepeda, Sr., MD  
Matteo Giuseppe Cereda, MD  
Paul Chamberlain  
Chih-Chiang Chang  
Sylvain Chemtob, MD, PhD,  
FARVO  
Dongfeng Chen, MD, PhD  
Si Chen  
Xiaoniao Chen, MD  
Frederic Chiambaretta, MD, PhD  
Mark Chiang  
Joshua Aaron Chu-Tan,  
BMedSci (Hons)  
Helena Cilliers  
Daniel R. Coates, PhD  
Constance A. Cox, MD  
Dennis M. Dacey, PhD  
Alessandro J.R. Dare, MD  
Aline L. de Araujo, MD, MSc  
Dawn K. DeCarlo, OD MS MSPH  
Heidrun L. Deissler, PhD  
Nadine S. Dejneka, PhD  
Alejandra De-La-Torre, MD, PhD  
Roberto Dell’Omo, MD  
Dusanka Deretic, PhD, FARVO  
Catherine A. Egan  
Victor Eng  
Alistair R. Fielder, FRCOphth  
Francisco C. Figueiredo, MD, PhD  
Andrew Carter Freedman, BS  
Elfriede Friedmann, PD  
Steve Frisken  
Heiko Ralph Fuchs, PhD  
Taisaku Funakoshi, MD, PhD  
Rajendra K. Gangalum, PhD  
Renata del Carmen Garcia, MD  
Alexander Gebauer, MD, PhD  
Arkasubhra Ghosh, PhD  
Luz A. Giorgi-Sandoval, MD  
Susan Gold, MD  
Michael Henry Goldbaum, MD  
MS MedInfo FARVO  
Maud Gorbet  
Norimoto Gotoh, MD, PhD  
Adrienne Graves, PhD  
Yukinori Harada, MD  
Lynn Marisa Hassman, MD, PhD  
Maurice P. Headon, FRCS MA  
DPhil

# Individual donors

Peter Heiduschka, PhD  
Erin Hering  
John R. Hetling, PhD  
Kazunari Higa, PhD  
Rika Hirota, DVM, PhD  
Jill Hopkins, MD FRCS  
Deniz Hos, MD, PhD  
Daniel Hunziker, PhD  
Leslie Hyman, PhD  
Tomomi Ichinose, MD, PhD  
Naoya Imanaga  
Kazuho Isamu  
Jonathan B. Jacobs, PhD  
Diya Jagadeesh, Bopt, MPhil Opt  
Mateusz Tomasz Jaskulski, PhD  
Alexandra Jaworski,  
BOptomBSc(Hons)GCUT  
Hyun Sun Jeon  
Chen-Jin Jin, MD, PhD  
Shin Kadomoto, MD  
Karl Erich Kador, MS PhD  
Rebecca Kammer, OD, PhD  
James W. Karesh, MD  
Ron Kaufman, MD  
Ayman Khaier  
Christine A. Kiire, MRCP, DM,  
FRCOphth  
Elliot M. Kirstein, OD  
Altaf Kondkar, PhD  
Jun Kong, MD, PhD  
Andrei A. Kramerov, MD, PhD  
Ashley Kras  
Eri Kubo, MD  
Takuji Kurimoto, MD, PhD  
Kristen Kwan, PhD  
Guna Laganovska, MD, PhD  
Stewart R. Lake, MB ChB (Hons)  
Yuqing Lan  
Eun-Jin Lee, PhD  
Vivian Lee, MD  
Hans G. Lemij, MD, PhD  
Benedicte Lescauwaet, MSc  
Shiyang Li, MD, PhD  
Myrna Lichter, MD, FRCS  
Tianlan Lin, PhD  
Xiao Lin  
Isabel Linares  
Alyssa Lypson  
Ana Paula da Silva Maganhoto  
Arie Marcovich, MD, PhD  
Marcos João Mariz, PhD, MSc  
Jean Jacques Masella  
Arisu Masuda  
Will R. McCarthy, MBA  
Daphne L. McCulloch, OD, PhD

Lisa Metzger  
Shawkat S. Michel, FRCS  
Ed, MD  
Kerin Miller  
Austin K. Mircheff, PhD, FARVO  
Claire H. Mitchell, PhD  
Yoko Miura, MD, PhD  
Vahid Mohammadzadeh  
Cheolwon Moon  
Shin Mukai, PhD  
Manbir Nagra, MCOptom PhD  
Keshav Narain, MD  
Siddharth Nath, BSc (Hons)  
Alejandro Navas, MD, PhD,  
FACS FICO  
Anthony Norcia, PhD  
Guillaume Normand, PhD  
Leslie E. O'Dell, OD  
Akira Okubo  
Catherine A. Opere, PhD  
Dennis A. Orlock  
Susan C. Orr, OD  
Seppo Orsila  
Fernanda Pacella, MD  
Jose A Paczka, MD  
Luz America Paczka-Giorgi  
Tom D Padrick, PhD  
Katarzyna Palka, Dipl-Med  
Chandana Papudesu, MD  
Nimesh Bhikhu Patel, PhD  
Rodrigo Pegado  
Claudia Elena Perez Straziota, MD  
Jorge Alberto Perez-Leon, PhD  
Anton Petrov, PhD  
Sonia Phene  
Shaohua Pi, PhD  
Chiara B. M. Platania, PhD  
Valencia Potter  
Philipp M. Prahs, MD  
Howard M. Prentice, PhD  
Edward N. Pugh, Jr., PhD, FARVO  
Carmen A. Puliafito, MD, MBA  
Behnam Rabiee  
Ana Leticia Ramirez  
Thomas Reeves  
Markus Ritter  
Johane M. Robitaille, MD  
Paul Rockley  
Derri Roman Pognuz  
Kevin Ross, MS, MPH  
Cheryl L. Rowe-Rendleman,  
BA PhD  
Aziem Safarpour, BSc, MSc, MD  
Steven J. Samuelsson, PhD  
Magdalene J Seiler, PhD

Yasuo Sekine, MD, PhD  
Anastasios Sepetis, MD, MSc  
Chunyi Shao, MD, PhD  
Tueng T. Shen, MD, PhD  
Koichiro Shinji  
Ari Shinojima, MD, PhD  
Maria Shurygina  
Giuliana Silvestri, MD  
Christopher Sinz  
Dimitra Skondra, MD, PhD  
Maxim Skulachev, PhD  
Enitan Sogbesan, MD, FRCS  
Carlos Eduardo Solarte, MD, MPH  
Luigina Sorbara, OD MSc  
Boris V. Stanzel  
Steven F Stasheff, MD, PhD  
Manju L. Subramanian, MD  
Jack M. Sullivan, MD, PhD  
Cholappadi V. Sundar-Raj,  
OD, PhD  
Naoto Suzuki, Ph.D.  
Hogara Taguchi, MD  
E. Valas Teuma, PhD  
Adrian M. Timmers  
Ellen Townes-Anderson, PhD  
Patrick Tresserras  
Vickery E. Trinkaus-Randall,  
PhD, FARVO  
Aysegul Tura, PhD  
Kannan Umadevi Venkataraju, MS  
Dylan Van Gaalen  
Brian L. VanderBeek, MD, MPH  
MSCE  
Caroline Fajoles Vasseneix  
Gisela Velez, MD MPH MA  
Kallene Summer Moreira  
Vidal, MD, PhD  
Edoardo Villani, MD  
Graham R Wallace, PhD  
Linda Walz, BS, MS  
Cheng Weijing, PhD  
Mark C. Westcott, MBBS, MD,  
FRCOphth  
Mia Williams  
David Wirta, MD  
Li Wu, MD MSc  
Takefumi Yamaguchi  
Justin Yamanuha, MD  
Qian Yang  
Nayuta Yoshioka  
Donald J. Zack, MD, PhD, FARVO  
Bisrat Zerihun, MSc  
Juan Zhang  
Yue Zhou, OD, MD  
Patricia Zilliox



# 2019 – 2020 Board of Governors

## Chair

Paul Sternberg, Jr., MD, FARVO  
Vanderbilt Eye Institute  
Nashville, Tenn.

## Vice Chair

Cheryl Mae Craft, PhD, FARVO  
University of Southern  
California  
Los Angeles, Calif.

## Treasurer

David R. Williams, PhD, FARVO  
University of Rochester  
Rochester, N.Y.

## Governors

Janet C. Blanks, PhD, FARVO  
Florida Atlantic University  
Boca Raton, Fla.

Jeffrey H. Boatright, PhD,  
FARVO  
Emory University School of  
Medicine  
Atlanta, Ga.

William J. Brunken, PhD,  
FARVO  
Upstate Medical University  
Syracuse, N.Y.

Eric C. Carlson, PhD  
Akorn Pharmaceuticals  
Lake Forest, Ill.

Rafal Farjo, PhD  
EyeCRO  
Oklahoma City, Okla.

Mark H. B. Radford, MD, PhD  
Queensland Eye Institute  
Brisbane, QLD, Australia

Stella M. Robertson, PhD  
Arrochar Consulting  
Fort Worth, Texas

Joel S. Schuman, MD, FARVO  
New York University Langone  
Eye Center  
New York, N.Y.

Erik van Kuijk, MD, PhD, FARVO  
University of Minnesota  
Minneapolis, Minn.

Janey L. Wiggs, MD, PhD,  
FARVO  
Massachusetts Eye and Ear  
Infirmary  
Boston, Mass.

Thomas Yorio, PhD, FARVO  
University of North Texas  
Health Science Center  
Fort Worth, Texas

Terri L. Young, MD, MBA, FARVO  
University of Madison-Wisconsin  
Madison, Wis.

## Ex Officio to the Governors

Justine Smith, FRANZCO,  
PhD, FARVO  
(Executive Vice President of  
ARVO)  
Flinders University  
Adelaide, SA, Australia

Gary W. Abrams, MD, FARVO  
(Governor Emeritus)  
Wayne State University,  
Kresge Eye Institute  
Detroit, Mich.

Nicolas G. Bazan, MD, PhD,  
FARVO  
(Governor Emeritus)  
LSU Health Sciences Center  
New Orleans, La.

John E. Dowling, PhD, FARVO  
(Governor Emeritus)  
Harvard University  
Cambridge, Mass.

## ARVO Foundation Staff

Iris M. Rush, CAE  
Executive Director, ARVO and  
ARVO Foundation

Amanda Johnson  
Director of Development,  
ARVO Foundation



2018 – 2019 ARVO Foundation Board of Governors

# Committees and Volunteers

## Foundation Awards Committee

### Standing members

J. Mark Petrash, PhD, FARVO (Chair)  
Rajendra S. Apte, MD, PhD, FARVO  
Colleen M. Cebulla, MD, PhD  
Juana Gallar, MD, PhD, FARVO  
Takeshi Iwata, PhD  
Philip J. Luthert, BSc, FRCP  
Shannath L. Merbs, MD, PhD  
Janos Nemeth, DSc, MD, PhD  
Lois E. H. Smith, MD, PhD, FARVO  
Terri L. Young, MD, FARVO  
Oliver Zeitz, MD

### Ad hoc members

Paul Bernstein, MD, PhD, FARVO  
Holly Chinnery, PhD  
Thomas A. Ferguson, PhD, FARVO  
Sapna Gangaputra, MD, MPH  
Meredith Gregory-Ksander, PhD  
Lyndell Lim, PhD  
Manubu Mochizuki, MD, FARVO  
Baerbel Rohrer, PhD  
Andrew Taylor, PhD, FARVO  
Graham Wallace, PhD, FARVO

### Epstein Award Ad Hoc Committee

Joel Schuman, MD, FARVO (Chair)  
Louis R. Pasquale, MD, FARVO  
J. Mark Petrash, PhD, FARVO  
Paul Sternberg, Jr., MD, FARVO  
Ernst R. Tamm, MD, FARVO  
Janey L. Wiggs, MD, PhD, FARVO

## Women in Eye and Vision Research (WEAVR) Leadership Committee

Stella M. Robertson, PhD (Chair)  
Terri L. Young, MD, MBA, FARVO  
(Immediate Past Chair)  
Kathryn S. Crawford, PhD  
Margaret M. DeAngelis, PhD  
Adriana Di Polo, PhD  
Malia Edwards, PhD  
Kayla Gray  
Neena B. Haider, PhD  
Amy Lo, PhD

## Developing Country Eye Researcher Travel Fellowship Mentors

Acner Camino, PhD  
Murthy Chavali, PhD  
Luisa H. Colorado, PhD  
Pinakin Davey OD, PhD  
Malinda E. C. Fitzgerald, PhD, FARVO  
Heinrich Gerding, MD, PhD  
Haiyan Gong, MD, PhD, FARVO  
Emily Gower, PhD  
Yaping Jin, MD, PhD  
Mary J. Kelley, PhD, FARVO  
Renu A. Kowluru, PhD, FARVO  
Sayoko Moroi, MD, PhD  
Poonam Mudgil, PhD, FARVO  
Miller J. Ogidigben, PhD, FARVO  
J. Carlos Pastor, MD, PhD  
Andrew Fraser Smith, PhD  
Andrew T. C. Tsin, PhD, FARVO  
Terri L. Young, MD, MBA, FARVO

# Financials

## Assets

Cash and equivalents	\$874,477
Investments	\$3,736,922
Receivable, net	\$195,288
<b>Total assets</b>	<b>\$4,806,687</b>

## Liabilities and Net Assets

### Liabilities

Accounts payable and accrued expenses	\$216,096
Deferred revenue	\$119,776
<b>Total liabilities</b>	<b>\$335,872</b>

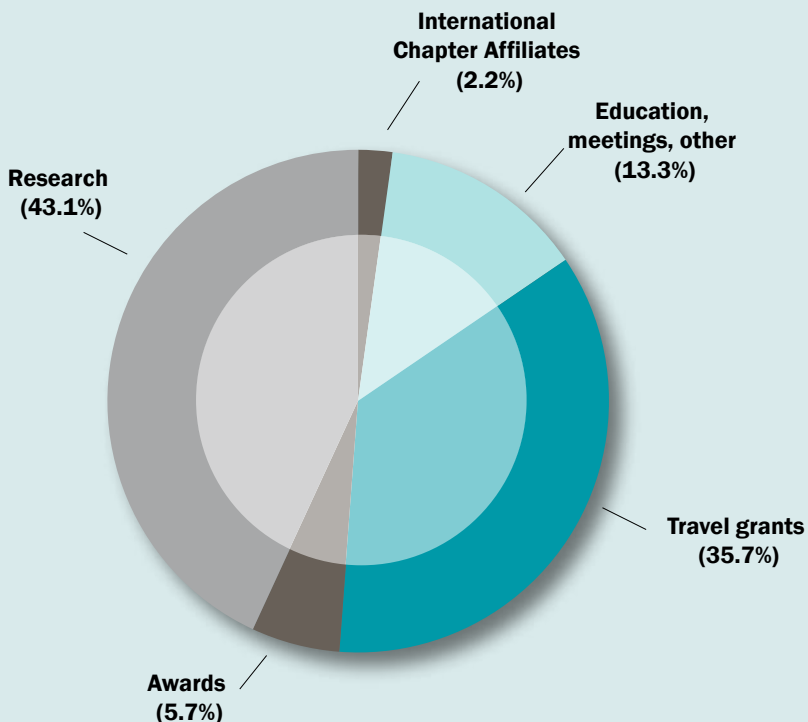
### Net Assets

Without donor restrictions	\$2,592,632
With donor restrictions	\$1,878,183
<b>Total net assets</b>	<b>\$4,470,815</b>

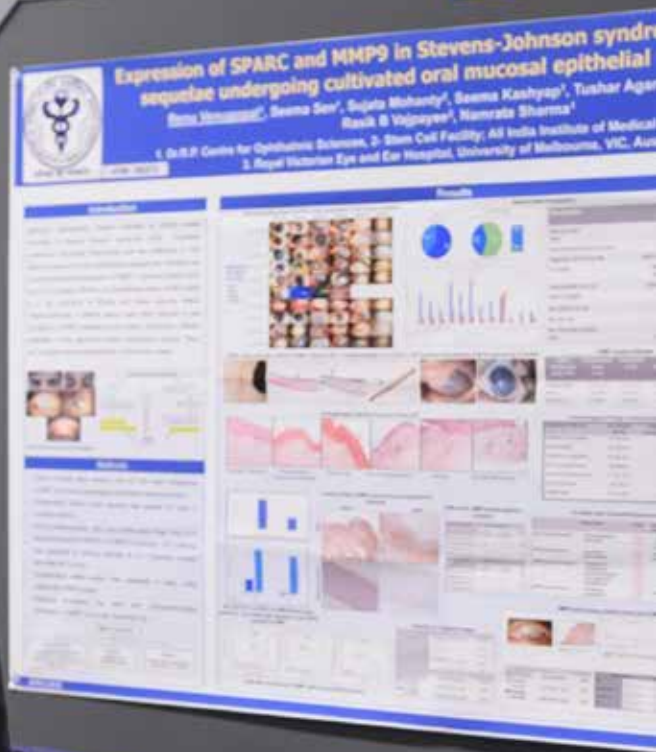
**Total Liabilities and Net Assets**      **\$4,806,687**

As of December 31, 2019

## Program expenses







**ARVO Foundation**  
for Eye Research®

**ARVOFoundation.org**