

# Annual Report **Building connections, confidence and leadership**





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.

> Page 11 Meet the first recipient of the Friederike Mackensen Travel Grant

Page 14 Generous donors challenge ARVO 2017 attendees to raise funds for travel awards

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A young researcher from Tunisia shares her experience at the ARVO 2017 meeting

#### Page 7

The 2016 Dr. David L. Epstein Award recipients reflect on the significance of the award

### Foundation Chair's message

As my three-year term as the Chair of the ARVO Foundation comes to a close, I am both amazed and humbled by how many people have contributed to the Foundation's growth and progress.

Across the ARVO membership — from every corner of the world and from the most senior scientists to the youngest trainees — hundreds of people have contributed to the ARVO Foundation's mission of providing opportunities for the next generation of vision scientists.

Volunteers on ARVO Foundation committees pore over award applications to ensure the most promising researchers receive worthy recognition, while others lend their talents to our fundraising events, ensuring excellent programs and strong attendance.

Senior researchers contribute by recommending others for awards and grants or by volunteering as mentors to guide first-time attendees through ARVO's large Annual Meeting.

Our award recipients give back to the research community by eagerly sharing how the ARVO Foundation has impacted their careers. These stories inspire others to give so that similar opportunities may be possible for even more scientists.

The ARVO Foundation Gala and WEAVR Luncheon are important events for our fundraising efforts. Attendees of these two events benefit from networking opportunities and time to honor those who have made special contributions to our work.

Hundreds of members have given their financial support. From individual members to large companies, every financial contribution makes a difference.

I am grateful to everyone who has supported the ARVO Foundation during my tenure as chair. I hope you enjoy reading about what these gifts make possible.



J. Mark Petrash, PhD, FARVO Chair, ARVO Foundation Board of Governors

# 2017 in review



Top: ARVO President Emily Y. Chew, MD, FARVO (second from left) stands with award winners. Bottom: ARVO Foundation Chair J. Mark Petrash, PhD, FARVO presents an award to Marina Mesquida, MD, MSc, PhD

## 2017 Awards, grants

#### Genentech Age-Related Macular Degeneration 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: Sonali Nashine, PhD

University of California, Irvine Irvine, Calif.

Protecting AMD cybrid cells using mitochondrialderived peptides and FDA-approved mitochondria stabilizing drugs: Implications for macular degeneration therapeutics

#### Translational AMD Research Fellowship: Eiko de Jong, Msc, PhD

Radboud University Nijmegen, Netherlands Proteomic profiling of high-density lipoprotein particles in AMD patients

#### Pfizer Ophthalmics Carl Camras Translational Research Awards

These awards of \$12,000 each are given 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.

#### Sina Farsiu, MD, PhD

Duke University Durham, N.C.

#### Ula V. Jurkunas, MD

Massachusetts Eye and Ear Boston, Mass.

#### Stephen Jae Kim, MD

Vanderbilt University Medical Center Nashville, Tenn.

### and fellowships

ARVO Foundation Vice-Chair Cheryl M. Craft, PhD, FARVO presents the Oberdorfer Award to Gary S. Rubin, PhD, FARVO

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

These awards support researchers who are committed to careers as clinician-scientists. The awards, which include a prize of \$3,000 each, recognize significant research being presented at the ARVO Annual Meeting.

#### Aaron Y. Lee, MD, MSCI

University of Washington Seattle, Wash. Deep learning is effective in classifying normal versus age-related macular degeneration using OCT images

#### Junyeop Lee, MD, PhD

Yeungnam University Gyeongsan, South Korea Retinal ischemia limits visual recovery in rhegmatogenous retinal detachment

#### Marina Mesquida, MD, MSc, PhD

Hospital Clinic Barcelona Barcelona, Spain In vitro effects of IL-6 and IL-6R blockade on the blood-retinal barrier

#### Bilal Haj Najeeb, MD, FEBO

Medical University of Vienna Vienna, Austria The regional distribution of retinal angiomatous proliferation

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### Oberdorfer Award in Low Vision Research

The Oberdorfer Award in Low Vision Research, named in honor of Michael D. Oberdorfer, PhD, and supported by the Lighthouse Guild, is given to one recipient based on his or her Annual Meeting abstract. The recipient presents a lowvision related topic in a lecture at the ARVO Annual Meeting and receives a \$1,250 prize.

#### Gary S. Rubin, PhD, FARVO

UCL Institute of Ophthalmology London, England Future directions for low vision reading research: Building the evidence base



Junyeop Lee, MD, PhD (right) receives the ARVO/ Alcon Early Career Clinician-Scientist Research Award



Top: David Huang, MD, PhD, FARVO (left) accepts the Dr. David L. Epstein Award. Bottom: Ashim Mitra, PhD (left) receives the Dr. Roger Vogel Award for Pharmaceutical Resarch

### Awards, grants and fellowships continued

#### Dr. David L. Epstein Award

This \$100,000 award is given in memory of Dr. David L. Epstein 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: David Huang, MD, PhD, FARVO Mentee: Liang Liu, MD

Oregon Health & Science University Portland, Ore. Structural OCT and OCT angiography to diagnose and

monitor glaucoma progression

#### Dr. Roger Vogel Award for Pharmaceutical Research

Established to honor the memory of Dr. Roger Vogel, this \$10,000 award is given to an ARVO member whose research furthers the development of pharmaceutical treatments for ophthalmic diseases. The award is supported by Point Guard Partners.

#### Ashim Mitra, PhD

University of Missouri – Kansas City Kansas City, Mo.

#### **Collaborative Research Fellowships**

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

#### Emiliano Terán-Bobadilla, PhD

Universidad Autónoma de Sinaloa Sinaloa, Mexico Information acquisition as a biomarker to evaluate the vision impairment due to glaucoma

**Collaborating researcher: Russell L. Woods, PhD, BOptom** Schepens Eye Research Institute

#### Magali Ridano, PhD

Centro de Investigaciones en Bioquímica Clínica e Inmunología Córdoba, Argentina Role of Galectin-1 in pathological neovascularization mediated by retinal and choroidal endothelial cells

Collaborating researcher: Enrique J. Rodriguez-Boulan, MD Weill Cornell Medicine

### Linking mentor, mentee and good science

#### Meet the 2016 Dr. David L. Epstein Award recipients

Jonathan Crowston, MBBS, PhD, and Peter van Wijngaarden, MBBS, PhD from the Centre for Eye Research Australia in Melbourne are the first recipients of the Dr. David L. Epstein Award, which they received in 2016.

Crowston is a keen mentor across his roles as professor, managing director and practicing glaucoma specialist. When he met van Wijngaarden as a resident, he knew he had obvious potential as a clinician-scientist. With funding provided by the award, the mentor and mentee pair are working together on their project titled, "Energy supply in glaucoma: the role of oligodendrocyte-mediated lactate transport in maintaining the integrity of ganglion cell axons in the optic nerve."

The project seeks to understand how cells in the optic nerve derive their energy and if aging in those cells could play a role in glaucoma. The collaboration allows van Wijngaarden to test his hypothesis while capitalizing on Crowston's work that provides a way to challenge the optic nerve. More tangibly, the award has supported a postdoc they share to link their work.

"The Epstein award is the only award that supports both the mentor and the mentee, and good science," says Crowston. "While of course the funding is important, it's about more than that. The structure of the award is cementing links between mentor and mentee to do bigger and better projects through collaboration."



Peter van Wijngaarden, MBBS, PhD (left) and Jonathan Crowston, MBBS, PhD (right) received the first Dr. David L. Epstein Award in 2016

# About the program

The Developing Country Eye Researcher Travel Fellowships (DCERF) program brings aspiring scientists from developing nations to the ARVO Annual Meeting.

The goal of the program is to provide young researchers with access to the latest in vision science while offering the opportunity to network with colleagues, mentors and thought leaders to develop an effective vision research program in their home countries.

Each recipient is paired with a volunteer mentor who guides them through ARVO's large scientific meeting.

## 2017 Developing Country Eye

Nine researchers attended the ARVO 2017 Annual Meeting in Baltimore, Md. as recipients of the ARVO Foundation's Developing Country Eye Researcher Travel Fellowship program.

Koffi D. Ayena, MD Faculty of Health Sciences University of Lome Lome, Togo

Basma Baccouche, MRes Higher Institute of Biotechnology of Sidi Thabet Sidi Thabet, Tunisia

Kasturi Bhattacharjee, MS, FRCS Sri Sankaradeva Nethralaya Guwahati, India

Moira Gandiwa, MBBS College of Medicine, University of Malawi Blantyre, Malawi

#### Meha Kabra, MSc

L.V. Prasad Eye Institute, Prof. Brien Holden Eye Research Center Hyderabad, India Hashim Ali Khan, OD, FAAO SEHHAT Foundation Danyor, Pakistan

**Simanga Msutwana, MBChB** Witbank Hospital Emalahleni, South Africa

Nikhil Sahajpal, BPharm, MPharm Guru Nanak Dev University Punjab, India

Angelane Santos, MD Jose R. Reyes Memorial Medical Center Manila, Philippines





### **Researcher Travel Fellowships**

#### **Recipient profile: Basma Baccouche, MRes (Tunisia)**

Basma Baccouche, MRes, had never been to an international scientific meeting before attending the ARVO 2017 Annual Meeting in Baltimore. Not only did Baccouche receive a travel fellowship, but her abstract based on her work in retinal neurodegeneration was accepted as a poster presentation.

"It was inconceivable to me that I could discuss my research with leading scientists whose work I've been reading for years," she says as she recounts with disbelief that two of the researchers she respects the most stopped by to offer feedback on her work.

With renewed energy following her fellowship experience, Baccouche is eager to find the opportunities to propel her career forward toward her goal of a faculty research and teaching position in Tunisia. But first, she's hoping to secure a postdoctoral fellowship in Europe or the U.S. first to broaden her perspective and build her network.

"During the ARVO meeting, I learned to not overlook the value of networking. I realized the importance of taking initiative and having the courage to seize opportunity when it comes," she says.



Above: Basma Baccouche, MRes presents her poster at ARVO 2017.

Left: Nikhil Sahajpal, BPharm, MPharm presents his poster; mentor Sayoko Moroi, MD, PhD demonstrates the ARVO mobile app to recipient Koffi Ayena, MD

# **Program** sponsors

The Alcon Foundation Alcon South Africa ARVO 2016 Annual Meeting donors Ophthotech University of Wisconsin-Madison Women in Eye and Vision Research (WEAVR)

### **Travel grants**

**ARVO Staff Travel Grant** 

ARVO Foundation Travel Grants

Elizabeth Anderson Travel Grants

Joanne G. Angle Travel Grant

Grant Wood Balkema Memorial Travel Grant

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

Ramon F. Dacheux II Memorial Travel Grant

Marij and Paulus de Jong Travel Grant

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C. Stephen and Frances B. Foster Foundation Travel Grant

G. M. Jager Travel Grant

Murray and Jeanie Johnstone Travel Grant

Knights Templar Eye Foundation Travel Grants

Kowa Travel Grant

## 2017 Travel grants

The ARVO Foundation awarded 137 travel grants through 26 named funds in 2017, benefitting trainees from 14 countries.

These travel grants underwrite the cost of attendance for the ARVO Annual Meeting, allowing young scientists to present their research and network with others from around the world.



#### 2017 M. Velma Dobson Memorial Travel Grant recipient Isabelle Dortonne

Tulane University School of Medicine

As an ophthalmologist only at the beginning of my journey, I left ARVO even more enthusiastic about the field of visual science and confident that I had made the right career choice. I can't imagine any other place where I would have exposure to such a wealth of information in one location. **77** 

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## Honoring a legacy: Friederike Mackensen Travel Grant



Friederike Mackensen, MD was an ARVO member who specialized in uveitis and ocular immunology. Her bright career was cut short when she died of breast cancer in April 2016 at the age of 41.

Before her death, she directed an ARVO Foundation travel grant to be established in her name. Following her passing, her friends and family rallied together to ensure her scientific legacy would live on. They established the Friederike Mackensen Travel Grant in her memory to support a female scientist under age 40 who is working in ocular immunology to attend the ARVO Annual Meeting each year.



Karoline Walscheid of St. Franziskus-Hospital in Münster, Germany, the first recipient of the new travel grant, presents her poster at ARVO 2017

### **Travel grants**

Kreissig 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
- Reader's Digest Partners for Sight Foundation Travel Grants
- Retina Research Foundation/ Joseph M. and Eula C. Lawrence Travel Grants
- Santen, Inc. Travel Grants
- Josh Wallman Travel Grant
- Women in Eye and Vision Research (WEAVR) Travel Grants

## 2017 International Chapter Matching Grants

The ARVO International Chapter Affiliate Program fosters the growth of eye and vision research worldwide by supporting 13 affiliate chapters. Each chapter receives \$2,000 in financial support annually: \$1,000 from ARVO and \$1,000 in matching funds through the ARVO Foundation's International Chapter Matching Grants program. These matching funds are made possible through the support of the Alcon Foundation.

In 2017, the ARVO International Chapter Affiliates used funds for a variety of capacity-building and educational initiatives:

#### **AARVO** (Austria)

A guest lecturer at the AARVO annual meeting and one travel grant

#### **AIVO** (Argentina)

A guest lecturer at the AIVO annual meeting and two travel grants

#### **ARVO-EGYPT** (Egypt)

Logistics support for three workshops focused on basic research and one travel grant

#### **ARVO-INDIA** (India)

Logistics support for a new research basics course for young researchers and clinicians and one travel grant

#### **ARVO-NED** (Netherlands)

Logistics support for an educational meeting and two travel grants

#### **BRAVO (Brazil)**

A guest lecturer at the BRAVO annual meeting and one travel grant

#### **CARVO** (Columbia)

Logistics support for an educational research program and one travel grant

#### **CCRVO** (China)

An international guest lecturer at the CCRVO annual meeting and four travel grants

#### HARVO (Hungary)

Logistics support for a symposium and four travel grants

#### **ISVER** (Israel)

Publication of program books for ISVER annual meeting and establishing a committee for young members

#### **IT-ARVO** (Italy)

A guest lecturer at the IT-ARVO annual meeting and one travel grant

#### **MARVO (Mexico)**

Paper presentations at the MARVO annual meeting and one travel grant

#### **SEE-ARVO (South East Europe)**

Logistics support for a symposium and one travel grant

### Meetings around the world



**ARVO/Alcon Keynote Series** 

The opening and closing keynote presentations at the ARVO Annual Meeting are supported generously by Alcon through the ARVO Foundation.

ARVO 2017 welcomed the first-ever female keynote speaker: Mary-Claire King, PhD, who discovered the breast cancer gene.

The closing keynote focused on the genetics of age-related macular degeneration and included panelists Aravinda Chakravarti, PhD; Nancy J. Cox, PhD and Teri Manolio, MD, PhD.

HARVO

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### **16 trainees** benefit from 2016 match

David R. Williams, PhD, FARVO and his wife Ingrid supported the first matching gift challenge at ARVO 2016 in Seattle, Wash.

The Williams' match, along with the generosity of ARVO 2016 attendees, supported 16 travel grants for trainees to attend the ARVO 2017 meeting in Baltimore, Md.



### ARVO 2017 Matching Challenge

ARVO members Nicolas G. Bazan, MD, PhD, FARVO and Haydee E. P. Bazan, PhD, FARVO continued the Annual Meeting tradition for a second year by issuing a matching gift challenge to ARVO 2017 attendees. The Bazans, who both work at Louisiana State University, are long-time ARVO Foundation supporters.

With a generous \$15,000 matching offer on the table, ARVO 2017 attendees met the challenge by giving more than \$15,000 during the meeting. In total, attendees and the Bazans gave over \$32,000 to support travel grants and fellowships for the ARVO 2018 Annual Meeting.

Right: The generous challengers Nicolas G. Bazan, MD, PhD, FARVO and Haydee E. P. Bazan, PhD, FARVO; ARVO 2017 attendees make donations to the ARVO Foundation in honor of their colleagues

Left: David R. Williams, PhD, FARVO meets some of the trainees who benefited from the ARVO 2016 matching gift challenge at the ARVO 2017 Student/Trainee Social



### Ninth Annual WEAVR Luncheon

Since 2008, the Women in Eye and Vision Research (WEAVR) initiative has supported women pursuing careers in the visual sciences. WEAVR fosters opportunities for networking, leadership and career development.

The Ninth Annual WEAVR Luncheon, held at the ARVO 2017 Annual Meeting, raised over \$11,000 to support travel awards and career development opportunities for female scientists thanks to ticket sales, generous table sponsors and a raffle. The event welcomed over 350 guests to network over lunch on the Tuesday of the ARVO meeting.

Featured speaker Janine Austin Clayton, MD, FARVO, director for the NIH Office of Research on Women's Health, spoke on the topic of sex as a biological variable in research.

Top right: Janine Austin Clayton, MD, FARVO presents her talk

Bottom: Attendees bid on raffle prizes and network during the WEAVR Luncheon



### 2017 ARVO Foundation Gala

The ARVO Foundation and Dowling Society Gala Awards Ceremony and Dinner is the largest fundraising event hosted by the ARVO Foundation. The 2017 ARVO Foundation Gala in Baltimore, Md. was the most well-attended in the event's history. Thanks to table sponsors and guests, the ARVO Foundation raised more than \$64,000 to support its sight-saving programs while honoring individuals for their dedication and commitment to ARVO and the ARVO Foundation.

#### **2017 ARVO Foundation Honorees**

#### Sally S. Atherton, PhD, FARVO

For three decades of dedicated service to ARVO and the ARVO Foundation, including the Board of Governors, WEAVR Leadership Committee and numerous other ARVO committees; and for her generous financial support of the ARVO Foundation

#### William J. Brunken, PhD, FARVO

For two decades of dedicated service to ARVO and for his generous financial support, including founding the Grant Wood Balkema Memorial Travel Grant

#### **The Alcon Foundation**

For generous support of the ARVO Foundation for more than a decade, including the Alcon Early Career Clinician-Scientist Awards, the International Chapter Affiliate Matching Grants and the Developing Country Eye Researcher Travel Fellowships



Above: Sally S. Atherton, PhD, FARVO (third from left) celebrates her honor with colleagues

Below: Rick Weisbarth and Mike Ball (center) accept the Alcon Foundation's award

### 2017 Dowling Society inductees

The Dowling Society, named for John E. Dowling, PhD, FARVO, the first chair of the ARVO Foundation, is comprised of the ARVO Foundation's most dedicated donors. Dowling Society members have made a commitment to the ARVO Foundation of \$10,000 or more.

The ARVO Foundation welcomed seven new members to the Dowling Society in 2017. Those members who were recognized at the 2017 ARVO Foundation Gala include:

Lancey B. Cowan, JD, CAE	David R. Williams, PhD, FARVO
Dale D. Hunter, PhD, JD	Inger M. Williams, PhD
Joan W. Miller, MD, FARVO	Thomas Yorio, PhD, FARVO
Joel S. Schuman, MD, FARVO	

Above: Thomas Yorio, PhD, FARVO (left) accepts his Dowling Society medallion from John E. Dowling, PhD, FARVO

Middle (from left): Sarah E. Coupland, MBBD, PhD, FARVO; Joan W. Miller, MD, FARVO; and Cheryl M. Craft, PhD, FARVO enjoy the Dowling Society reception

Below: William J. Brunken, PhD, FARVO and J. Mark Petrash, PhD, FARVO (left) welcome Dale D. Hunter, PhD, JD (right) to the Dowling Society

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### **Dowling Society** members

Garv W. Abrams, MD, FARVO and Jane C. Werner, MD 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 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 Patrick Burke, MD, PhD Stanley Chang, MD, FARVO Steve T. Charles, MD. FACS, FICS Emily Y. Chew, MD, FARVO and Robert P. Murphy, MD Bruce E. Cohan, MD Lancey B. Cowan, JD, CAE Cheryl M. Craft, PhD, FARVO

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**\$50,000 to \$74,999** Knights Templar Eye Foundation

#### \$25,000 to \$49,999

Alcon Foundation, Inc.

#### \$10,000 to \$24,999

ARVO-Asia 2017 Brisbane The Lowy Medical Research Institute Mass Eye and Ear Retina Research Foundation

#### \$5,000 to \$9,999

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#### \$2,500 to \$4,999

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For the complete list of 2017 donors, please visit ARVOFoundation.org/Donors

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#### \$100,000 and above

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#### \$20,000 to \$24,999

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Elena Yorio

#### \$2,500 to \$4,999

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### **2017 ARVO Foundation** Financial Report\*

Assets	Program expenses		
Cash and equivalents Investments	\$186,887 \$2,413,727		
Receivable, net	\$202,866		International Chapter
Prepaid expenses	\$46,885	Awards	Affiliates (2.5%)
Total assets	\$2,850,365	(3.1%)	
Liabilities and Net Assets			
Liabilities			
Accounts payable and accrued expenses	\$114,493		Travel Grants
Deferred revenue	\$60,160		(31.1%)
Total liabilities	\$174,653		
		Research	
Net Assets		(46.1%)	
Unrestricted	\$1,160,207		
Temporarily restricted	\$1,515,505		Education,
Total net assets	\$2,675,712		meetings, other (17.2%)
Total liabilities and net assets	\$2,850,365		
*De	ecember 31, 2017		

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