



**BrightFocus<sup>®</sup>  
Foundation**

Cure in Mind. Cure in Sight.

ONLY HALF OF THOSE  
WITH GLAUCOMA  
KNOW THEY HAVE IT

33 MILLION PEOPLE  
WORLDWIDE HAVE  
ADVANCED AMD

5 MILLION AMERICANS  
CURRENTLY HAVE  
ALZHEIMER'S DISEASE

# Sparking Discovery.

*Innovative science  
to impact lives.*

**2016 ANNUAL REPORT**

Alzheimer's Disease Research  
Macular Degeneration Research  
National Glaucoma Research

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## Dear Friends,

At BrightFocus Foundation we continue to expand our support for bold, innovative science around the world through our three research programs: **Alzheimer's Disease Research**, **Macular Degeneration Research**, and **National Glaucoma Research**. In 2016 we awarded \$11.7 million in new research grants, a record amount toward our mission of ending Alzheimer's disease, macular degeneration, and glaucoma.

Our researchers are at the forefront of scientific discovery, pushing new frontiers of knowledge in their labs and sparking creativity and innovation through prominent roles and awards at major scientific conferences and journals.

At the same time, we continue to reach larger audiences—both families impacted by these diseases who use our expanded digital and print resources, as well as policy and thought leaders across the public and private sectors.

We are driven by a fierce sense of urgency to find cures for age-related diseases—for the first time in history the world will soon have more people over age 65 than under age 5. It is imperative that we change the trajectory of these diseases. This is why our world-class Scientific Review Committees are so dedicated and demanding in identifying the most promising science.

We were recently honored to host our inaugural **An Evening of BrightFocus**, a Washington, DC event bringing together scientific, policy, diplomatic, and business leaders to celebrate our commitment to science and public awareness.

Thank you to the many scientists and donors who make our work possible. Together, along with all of us at BrightFocus, we are united in an unwavering belief that, through the power of scientific research, there will be a day when women and men everywhere will live full and vibrant lives free from diseases of mind and sight.



**STACY PAGOS HALLER**

*President and CEO*



**SCOTT D. RODGVILLE, CPA**

*Chair, Board of Directors*



**BrightFocus  
Foundation**

Cure in Mind. Cure in Sight.

● **LOOKING AT A PROTEIN  
THAT ACCUMULATES  
IN THE BRAIN PG 5**

● **THE DRUG L-DOPA  
MAY PROTECT  
AGAINST AMD PG 7**

● **MAPPING A MISSING  
ENZYME PG 9**



### **Our Mission**

BrightFocus drives innovative research worldwide and promotes awareness of Alzheimer's, macular degeneration, and glaucoma.



# **Cutting-Edge Research with Personal Impact.**

BrightFocus Foundation's three scientific research programs to end diseases of mind and sight:

- Alzheimer's Disease Research
- Macular Degeneration Research
- National Glaucoma Research



**AT LEAST**  
**1 in 16** PEOPLE IN THE U.S. OVER THE AGE OF 40 HAS ONE OR MORE OF THESE THREE DISEASES.



*Demo of citizen scientist project at BrightFocus awards dinner.*

# Innovative and Engaging Research For The Cure.

Alzheimer's disease today affects more than five million Americans. Every 66 seconds, another American develops the disease, making it the sixth leading cause of death in the United States, and the only leading cause of death that has significantly increased in recent years. Alzheimer's has no known cause or cure.

This year, our Alzheimer's Disease Research program awarded more than \$6.8 million to 32 new science projects. Since inception, the program has awarded more than \$100 million. This research is leading us to a greater understanding of the disease and is moving us closer to a cure.

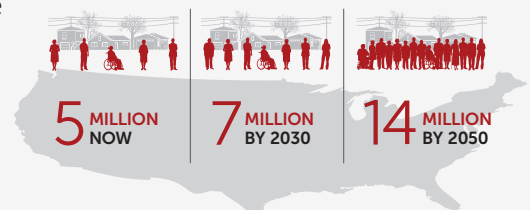
- **WE AWARDED MORE THAN \$6.8 MILLION TO 32 NEW SCIENCE PROJECTS**

A BrightFocus-funded research project is working to better study the effects of Alzheimer's on the brain. We are helping launch EyesOnALZ, a new online tool for citizen scientists across the globe to help us map the brain.

By engaging the public, we can advance our knowledge base much more quickly while also providing greater awareness of the disease.

## A Growing Epidemic

ALZHEIMER'S DISEASE IN THE UNITED STATES





BrightFocus hosts inaugural Montgomery County (MD) DFA meeting.

## Working Toward a Dementia Friendly America

BrightFocus recently joined a broad coalition of nonprofit and business leaders to launch Dementia Friendly America (DFA), a national movement creating communities that better recognize and serve Americans with dementia.

Announced at the White House Conference on Aging, DFA unites leaders from government, business, health care, and community groups to develop and implement a coordinated, compassionate approach to improving the quality of life for those affected by dementia.

Through the leadership and support of BrightFocus, Montgomery County, MD, home of our headquarters, was one of the earliest localities to join the DFA movement. Now more than 100 communities, ranging from cities to entire states, have begun to implement the DFA model.



[www.dfamerica.org](http://www.dfamerica.org)

### Researcher Spotlight

## A Grandfather Plants the Seeds of Research

For **Daniel Lee, PhD, University of South Florida**, the personal is professional. His distinguished career in neuroscience—a founding faculty member of the USF College of Pharmacy and Pharmaceutical Sciences who has won numerous research awards—began with the story of his grandfather.

As a young man, Lee could not understand “why my grandfather, who was a well-educated medical doctor, contracted Alzheimer’s disease.” During Lee’s college years, his grandfather was also diagnosed with Parkinson’s. Lee decided to pursue a doctorate in neuropharmacology, which studies the effects of drugs on the nervous system.

With the funding he received from Alzheimer’s Disease Research, Lee is looking at molecules known as polyamines that appear to influence the presence of tau—a protein that accumulates in the brain in Alzheimer’s. He hopes to help identify strategies for ending toxic tau build-up.

Lee’s grandfather “planted the seed of health care in our family,” recalls Lee, one of six other family members who went into the health field. “There is an innate drive to find cures for these devastating diseases.”



Daniel Lee, PhD  
University of  
South Florida

**DR. LEE HOPES TO HELP IDENTIFY STRATEGIES FOR ENDING TOXIC TAU BUILD-UP**



**Macular  
Degeneration  
Research**



# Using the Power of Science to Stop Vision Loss.

Age-related macular degeneration (AMD) is the leading cause of irreversible vision loss in the United States, and for Caucasians older than 40, it is the leading cause of legal blindness. An estimated 11 million Americans have AMD, including the early and later stages of the wet and dry types of the disease.

This year Macular Degeneration Research awarded 20 new research grants totaling more than \$3 million. Since its inception, the program has

awarded more than \$21 million supporting research into the causes and potential treatments of this widespread disease.

BrightFocus shares scientific news from researchers worldwide through multiple channels including our open-access, online journal,

- **WE AWARDED 20 NEW RESEARCH GRANTS TOTALING MORE THAN \$3 MILLION**

*Molecular Neurodegeneration.* At the annual conference of the Association for Research in Vision and Ophthalmology, BrightFocus pays tribute to our outstanding vision disease researchers, and we are pleased to support the Helen Keller Prize for Vision Research.



**ROUGHLY  
2 MILLION  
PEOPLE HAVE  
ADVANCED AMD**

**INCIDENCE IS  
EXPECTED TO  
DOUBLE  
BY 2050**

## Monthly Tips for Families and Caregivers

We offer a monthly telephone call-in series, BrightFocus Chats, featuring researchers, clinicians, patients, and low-vision specialists who provide the latest tips and advice for those living with vision loss. The Chats, which foster an ongoing dialogue to address the questions and concerns of callers, are archived and available on our website.

A longtime Chat participant, Sally from Union, New Jersey, says, "I am a regular listener to all of these BrightFocus Chats. I have AMD and I find this to be a wonderful, wonderful, informative resource."

**BrightFocus®**  
Chats

### Researcher Spotlight

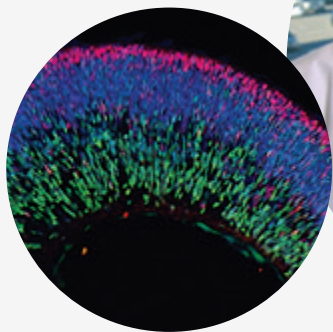
## The Benefits of Big Data: Bringing Us Closer to a Cure

**Brian McKay, PhD, University of Arizona**, was senior author of a study that made news in 2015 when it found that L-DOPA, a drug used to treat Parkinson's disease, may help protect against age-related macular degeneration (AMD).

The groundbreaking report, funded in part by Macular Degeneration Research and published in the *American Journal of Medicine*, looked at massive amounts of medical data for 87 million patients. McKay's team discovered that patients receiving L-DOPA were significantly less likely to get AMD, and when they did, its onset was delayed.

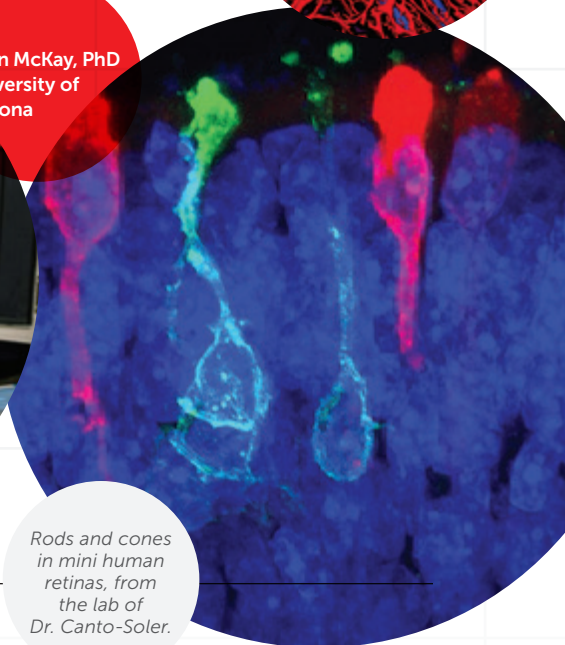
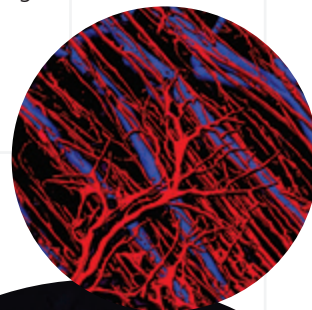
In addition to this breakthrough, McKay is investigating in his BrightFocus grant how eye health is affected by L-DOPA signaling through a receptor near the retina. Understanding this process may help uncover how AMD begins—and how it might be stopped.

Clinical trials are needed to test his team's L-DOPA findings. As McKay told *U.S. News and World Report*, "I think in the end we are going to be able to prevent AMD, but we have more work to do."



Brian McKay, PhD  
University of  
Arizona

Rods and cones  
in mini human  
retinas, from  
the lab of  
Dr. Canto-Soler.



# Protecting Sight from Glaucoma.

Glaucoma is a group of eye diseases that damage the optic nerve and, without treatment, can result in vision loss and blindness. According to the World Health Organization, glaucoma is the second leading cause of irreversible blindness worldwide.

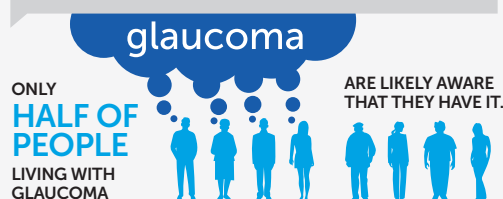
For Hispanics and African-Americans in the United States, glaucoma is the leading cause of blindness. Permanent vision loss can occur without any symptoms. BrightFocus is educating Americans across multiple platforms on the importance of scheduling a

regular eye exam. From a social media "Thunderclap" campaign to TV and billboard public service announcements across the country, we are working to protect sight.

This year, National Glaucoma Research awarded 13 new research grants totaling more than \$1.8 million. The program has awarded more than \$28 million since inception.

## Save Your Sight From Glaucoma

GLAUCOMA IN THE UNITED STATES



● WE AWARDED 13 NEW RESEARCH GRANTS TOTALING MORE THAN \$1.8 MILLION

**THUNDER CLAP** Protect Your Sight Campaign

"Permanent vision loss can occur without any symptoms. Schedule an eye exam."

#worldsightday

SUPPORTERS

100+

AUDIENCE REACHED

350,000+

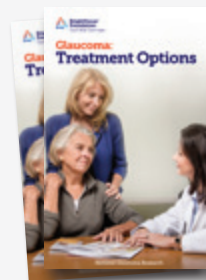


## Expanding Our Digital Footprint

To better share the latest scientific news and better provide access to our extensive library of public education materials, BrightFocus recently launched a new, more user-friendly website. At [BrightFocus.org](http://BrightFocus.org), all of our materials can be viewed with increased font size, downloaded free of charge or ordered in hard copy. We also provide helpful information via video and podcast, and are active on many social media channels including Facebook and Twitter.



## Resources for Caregivers



BrightFocus recently released a new publication to support families and caregivers of those affected by glaucoma.

✉ E-mail [info@brightfocus.org](mailto:info@brightfocus.org) to receive a free copy of the **Glaucoma: Treatment Options** brochure.

### Researcher Spotlight

## Mapping How an Enzyme Can Go Missing

Thanks to National Glaucoma Research, **Raquel Lieberman, PhD, of Georgia Tech**, and her team, have been able to provide a three-dimensional view of a protein linked to inherited forms of glaucoma.

Genetic mutations cause the protein, myocilin, to clog the eye's drainage system, causing increased eye pressure and impaired vision. With the 3-D depiction, Lieberman's team hopes to map the myocilin molecule, to help develop drugs that prevent its disease-causing variations.

Lieberman is inspired by a close friend, who suffers from a disorder known as Gaucher Disease, and is alive today because of enzyme replacement therapy. As a child, the friend was in the original clinical trial of a man-made form of an enzyme missing in Gaucher. She still takes the medication.

"It's her courage, and the commitment of her family to move from South Africa to Maryland in the hopes of a cure for their child, that motivates me every day in my work to combat human disease," said Lieberman.

● **DR. LIEBERMAN'S TEAM PROVIDES A THREE-DIMENSIONAL VIEW OF A PROTEIN LINKED TO INHERITED FORMS OF GLAUCOMA**



**Raquel Lieberman, PhD, of Georgia Tech**

# 2016 BrightFocus Grant Recipients

Most grant awards last for two to three years. These 65 new grants collectively will contribute to a nearly \$30 million research portfolio of 150 awards.

## Alzheimer's Disease Research

### Iman Aganj, PhD

New Methods to Account for Indirect Brain Connections and Improve the Accuracy of the Imaging Biomarkers for Alzheimer's Disease  
MASSACHUSETTS GENERAL HOSPITAL

### Rachel Bennett, BS, PhD

Blood Vessel Changes in Tauopathy  
MASSACHUSETTS GENERAL HOSPITAL  
*This grant is made possible in part by a bequest from the Trust of Ida R. Kreingold.*

### Jason Brandt, PhD

Feasibility and Efficacy of a High Fat, Low Carbohydrate Diet for MCI and Early Alzheimer's Disease  
JOHNS HOPKINS UNIVERSITY  
*This grant is made possible in part by support from the Jerome Jacobson Foundation.*

### Jennifer Gatchel, MD, PhD

Depressive Symptoms, Alzheimer's Disease (AD) Proteins A $\beta$  and Tau, and Neuronal Network Activity in Prodromal and Early AD  
MCLEAN HOSPITAL  
*This grant is made possible by a bequest from the Howlett Revocable Trust.*

### Swetha Gowrishankar, PhD

Role of Axonal Lysosome Transport in Alzheimer's Disease Pathology  
YALE UNIVERSITY

### Jean-Vianney Haure-Mirande, PhD

Role of Microglia in Alzheimer's Disease: Deleterious or Helpful?  
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI  
*This grant is made possible by support from the J.T. Tai Foundation.*

### Mark Henkemeyer, PhD

Identification of Novel Compounds to Promote Synapse Health and Prevent Alzheimer's Disease  
THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER

### Joachim Herz, MD

Targeting the Molecular Cause of the ApoE4-risk in Alzheimer's Disease  
THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER

### Tsuneya Ikezu, MD, PhD

Validation of Drug Candidates for Enhancing the Phagocytic Clearance in the Alzheimer's Brain  
BOSTON UNIVERSITY

### David Irwin, MD, MS

Non-Amnesic Alzheimer's Disease Biology  
UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE

### Xiong Jiang, PhD

A Novel Non-Invasive MRI-Based Biomarker of Early Stages of Alzheimer's Disease  
GEORGETOWN UNIVERSITY

### Catherine Kaczorowski, PhD

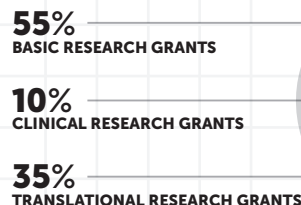
A New Method to Identify Genes Critically Involved in Alzheimer's Disease  
THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

### Patrick Kehoe, BSc, PhD

Helping the Brain to Fight Back Against Alzheimer's Disease—Using Old Drugs for New Purposes  
UNIVERSITY OF BRISTOL (UK)  
*This grant is made possible in part by a bequest from the Trust of Edward & Irene Schlosser.*



## 2016 BrightFocus Grants at a Glance



**Doo Yeon Kim, PhD**

A Human Cellular Alzheimer's Disease Model Based on 3D Culture Technology  
 MASSACHUSETTS GENERAL HOSPITAL

**Chia-Chen Liu, PhD**

The Virginia Faber Memorial Award for Alzheimer's Disease Research  
 The Effects of APOE Isoforms on Brain Functions and Alzheimer's Disease  
 MAYO CLINIC JACKSONVILLE

**Selene Lomoio, PhD**

Reorganizing the Neuronal Highway in the Alzheimer's Brain  
 TUFTS UNIVERSITY SCHOOL OF MEDICINE

**Brendan Lucey, MD**

Sleep Quality and Decreasing Aβ Levels in the Human Brain  
 WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

**Constantine Lyketsos, MD**

Accelerating the Development, Testing, and Dissemination of Home-Based Dementia Care Interventions  
 JOHNS HOPKINS UNIVERSITY

**Wenjie Luo, PhD**

Cellular Mechanisms Underlying Microglia-Mediated Amyloid Degradation  
 WEILL CORNELL MEDICAL COLLEGE

**Zixu Mao, PhD**

Understanding Brain Inflammation in Alzheimer's Disease  
 EMORY UNIVERSITY

**Stephen Martin, PhD**

A New Approach to Treating Alzheimer's Disease  
 THE UNIVERSITY OF TEXAS AT AUSTIN  
*This grant is made possible in part by a bequest from the Trust of Francis C. Dykeman and in honor of Marie E. Dykeman.*

**Pietro Michelucci, PhD**

Crowd-powered Microvascular Modeling  
 HUMAN COMPUTATION INSTITUTE

**Ana Pereira, MD**

Enhancing Glutamate Levels as a Way to Treat Alzheimer's Disease  
 THE ROCKEFELLER UNIVERSITY  
*This grant is made possible in part by support from the Ping Y. Tai Foundation.*

**Dianne Perez, PhD**

Novel Drugs against a New Receptor Target to Treat Alzheimer's Disease  
 THE CLEVELAND CLINIC FOUNDATION

**Emilie Reas, PhD**

Novel Biomarkers of Brain Microstructure in Aging and Mild Cognitive Impairment  
 UNIVERSITY OF CALIFORNIA, SAN DIEGO

**Jiri Safar, MD**

Profiling Prion-Like Strains of Aβ that Control Alzheimer's Progression  
 CASE WESTERN RESERVE UNIVERSITY

**Stephen Salton, MD, PhD**

Role of VGF in Alzheimer's Disease Pathogenesis and Progression  
 ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI

**Paul Seidler, PhD**

Blocking Assembly of Tau Protein into Toxic Structures Associated with Alzheimer's  
 UNIVERSITY OF CALIFORNIA, LOS ANGELES

**Qiaoqiao Shi, PhD**

New Mouse Models to Study the Role of Complement in Brain Aging and Neurodegeneration  
 BRIGHAM AND WOMEN'S HOSPITAL  
*This grant is made possible in part by a bequest from the Estate of Frederick J. Pelda.*

**Tara Tracy, PhD**

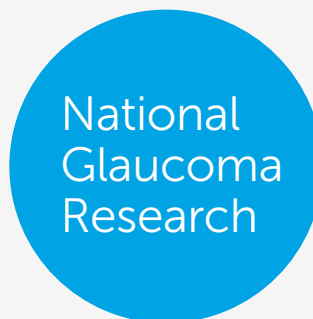
Investigating the Impact of KIBRA Protein Loss on Synapse Function and Memory  
 THE J. DAVID GLADSTONE INSTITUTES

**Laura Wisse, PhD**

Separating Early AD and Aging Effects in Search of Markers to Track Alzheimer's Treatment Effects  
 UNIVERSITY OF PENNSYLVANIA  
*This grant is made possible in part by a bequest from the Trust of Elenore Lundeen.*

**Huda Zoghbi, MD**

A Genetic Screen to Identify New Drug Targets for Alzheimer  
 BAYLOR COLLEGE OF MEDICINE

**Audrey Bernstein, PhD**

Use of Patient-Derived Cells to Test Compounds that Will Reverse Exfoliation Glaucoma  
 ICAHN MOUNT SINAI SCHOOL OF MEDICINE

**Kevin Chan, PhD**

Early Brain Changes and Visual and Motor Functions in Glaucoma  
 UNIVERSITY OF PITTSBURGH

**J. Crawford Downs, PhD**

A Wireless System to Measure and Control Fluid Pressure Around the Optic Nerve  
 UNIVERSITY OF ALABAMA AT BIRMINGHAM

**Rudolf Fuchshofer, PhD**

Identifying Underlying Pressure-Control Mechanisms in Glaucoma  
 UNIVERSITY OF REGENSBURG (GERMANY)

**Haiyan Gong, MD, PhD**

Mechanism of Decreased Giant Vacuole and Pore Formation in Glaucoma Using a Novel Method  
 BOSTON UNIVERSITY SCHOOL OF MEDICINE

**Meredith Gregory-Ksander, PhD**

The Thomas R. Lee Award for Glaucoma Research  
 A New Method to Inhibit Inflammation and Prevent Glaucoma  
 SCHEPENS EYE RESEARCH INSTITUTE, MASSACHUSETTS EYE AND EAR

**Shahid Husain, PhD**

Low Oxygen Mediated Proteins Play Pathological Role in Glaucoma  
 MEDICAL UNIVERSITY OF SOUTH CAROLINA

**Raquel Lieberman, PhD**

Function and Dysfunction of Myocilin in Glaucoma: New Insight from Proteomics  
 GEORGIA INSTITUTE OF TECHNOLOGY

**Yutao Liu, MD, PhD**

Identifying New Drug Targets to Lower Eye Pressure Via Outflow  
 AUGUSTA UNIVERSITY RESEARCH INSTITUTE, INC.

**Gillian McLellan, PhD**

A New Treatment to Protect the Optic Nerve in Glaucoma  
 UNIVERSITY OF WISCONSIN

**Xiuqian Mu, MD, PhD**

Generating Retinal Ganglion Cells in a Dish to Study and Treat Glaucoma  
 SUNY, BUFFALO

**Yvonne Ou, MD**

The Douglas H. Johnson Award for Glaucoma Research  
 Understanding the Earliest Steps of Optic Nerve Cell Death in Glaucoma  
 UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

**Daniel Sun, PhD**

Astrocyte Reactivity in the Glaucomatous Optic Nerve Head: Beneficial or Harmful for Vision?  
 SCHEPENS EYE RESEARCH INSTITUTE, MASSACHUSETTS EYE AND EAR

# 2016 BrightFocus Grant Recipients (continued)

## Macular Degeneration Research

### Paul Baird, PhD

Identifying Gene Pathways in Late-Stage AMD

CENTRE FOR EYE RESEARCH AUSTRALIA, THE UNIVERSITY OF MELBOURNE

### Brian Ballios, MD, PhD

Biomaterial-Based Stem Cell Therapies for Blinding Eye Disease

UNIVERSITY OF TORONTO (CANADA)

*This grant is made possible in part by a bequest from the Trust of Edward Primet.*

### Petr Baranov, MD, PhD

A New Approach to Rescuing Photoreceptors from Death through Activation of Endogenous Neuroprotective Mechanisms

SCHEPENS EYE RESEARCH INSTITUTE, MASSACHUSETTS EYE AND EAR

### Vera Bonilha, PhD

Atrophic Lesion Borders in AMD: What Can They Tell Us?

THE CLEVELAND CLINIC FOUNDATION

*This grant is made possible in part by a bequest from the Trust of Edna Stuver-Webster.*

### Maria Valeria Canto-Soler, PhD

The Helen Juanita Reed Award for Macular Degeneration Research

A New Model of a Human Retina in a Dish to Study AMD

JOHNS HOPKINS UNIVERSITY

### Kip Connor, PhD

Lipid Regulators of AMD

SCHEPENS EYE RESEARCH INSTITUTE, MASSACHUSETTS EYE AND EAR

*This grant is made possible in part by a bequest from the Estate of Robert J. Mac.*

### Patrick Daugherty, PhD

Characterization of Circulating Antibodies Specific to AMD

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

### Sarah Doyle, PhD

Investigating How Loss of an "Off Switch" for Inflammation Contributes to AMD

TRINITY COLLEGE DUBLIN (IRELAND)

### Jianhai Du, PhD

A New Method to Decrease Cell Death by Supplementation with NAD Metabolites

WEST VIRGINIA UNIVERSITY

*This grant is made possible in part by support from the Ivan Bowen Family Foundation.*

### Malia Edwards, PhD

A Study of Why Retinal Support Cells, Called Glia, Exit the Retina in AMD

JOHNS HOPKINS UNIVERSITY

*This grant was made possible in part by a bequest from the Robert H. McLaren Trust.*

### Kaustabh Ghosh, PhD

Understanding the Role of Increased Cell Stiffness in Cell Death Associated with AMD

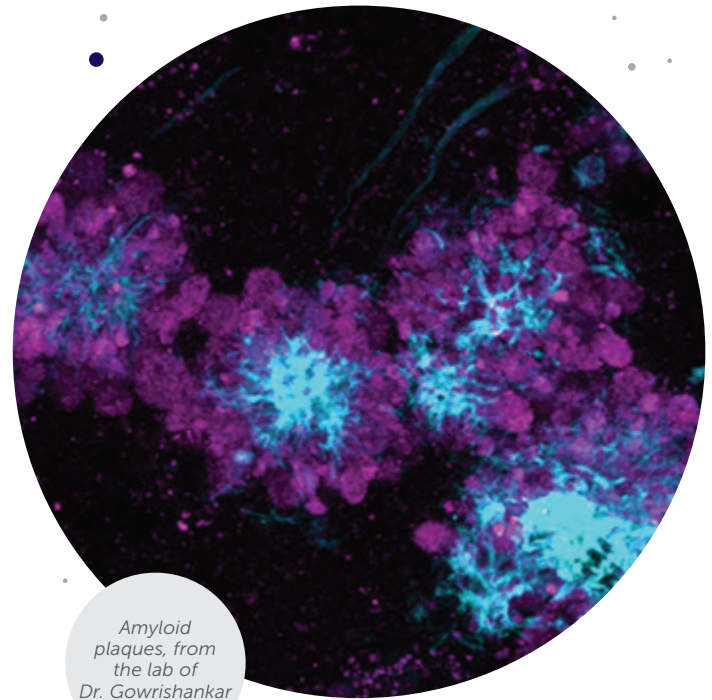
UNIVERSITY OF CALIFORNIA, RIVERSIDE

### Francesco Giorgianni, PhD

Basic and Clinical Studies to Understand the Role of the CD5L/AIM Protein in AMD

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

*This grant is made possible in part by a bequest from the Stuart Blydenburgh Trust.*



Amyloid plaques, from the lab of Dr. Gowrishankar

### Jeffrey Gross, PhD

Identification of Factors that Can Stimulate Regeneration of the RPE

UNIVERSITY OF PITTSBURGH

### Robyn Guymier, MBBS, PhD

The Carolyn K. McGillvray Memorial Award for Macular Degeneration Research

Too Much Debris as a Cause of AMD

CENTRE FOR EYE RESEARCH AUSTRALIA, THE UNIVERSITY OF MELBOURNE

### Zhihong Hu, PhD

An Automated Method to Detect and Analyze Atrophic Lesions in AMD

DOHENY EYE INSTITUTE, UCLA

### John Hulleman, PhD

A Single Genetic Manipulation for Treating ML/Dry AMD

THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER

*This grant is made possible in part by a bequest from the Trust of Anne E. Greene.*

### Benjamin Kim, MD

Therapeutic Evaluation of Alpha Lipoic Acid for Geographic Atrophy

UNIVERSITY OF PENNSYLVANIA

### Marcelo Nociari, PhD

Identification of Novel Treatments for Macular Degeneration by Alleviating Endoplasmic Reticulum Stress

WEILL CORNELL MEDICAL COLLEGE

### Debasish Sinha, PhD

Novel Therapeutic Targets for the Treatment of Early AMD

JOHNS HOPKINS UNIVERSITY

### Biju Thomas, PhD

Functional Benefits of Polarized iPSC-RPE Monolayer Transplantation Assessed in a New Immunodeficient RPE Dysfunction Rat Disease Model

UNIVERSITY OF SOUTHERN CALIFORNIA EYE INSTITUTE

*This grant is made possible by a bequest from the Estate of Jane M. Simon.*

# BrightFocus Scientific Review Committees

Our world-class scientific review committees recommend BrightFocus research grants on the basis of scientific merit with the goal of discovering a treatment or cure for Alzheimer's, macular degeneration, and glaucoma.



**We encourage researchers to propose their groundbreaking ideas.**

Alzheimer's  
Disease  
Research

## Co-Chairs:

**David R. Borchelt, PhD**  
University of Florida

**Edward Koo, MD**  
University of California,  
San Diego

## Committee Members:

**M. Flint Beal, MD**  
The New York Hospital-Cornell  
Medical Center

**Guojun Bu, PhD**  
Mayo Clinic, Jacksonville

**George Carlson, PhD**  
McLaughlin Research Institute

**Mark D'Esposito, MD**  
University of California, Berkeley

**Steven Estus, PhD**  
University of Kentucky

**Matthew Frosch, MD, PhD**  
Massachusetts General Hospital

**Douglas Galasko, MD**  
University of California,  
San Diego

**Charles G. Glabe, PhD**  
University of California, Irvine

**Alison M. Goate, DPhil**  
Icahn School of Medicine  
at Mount Sinai

**Yukiko Goda, PhD**  
RIKEN Brain Science Institute  
(Japan)

**Todd E. Golde, MD, PhD**  
University of Florida

**John Hardy, PhD, FMedSci, FRS**  
University College London

**Julie Harris, PhD**  
Allen Institute for Brain Science

**David Holtzman, MD**  
Washington University  
School of Medicine

**William Jagust, MD**  
University of California, Berkeley

**John "Keoni" Kauwe, PhD**  
Brigham Young University

**Cynthia A. Lemere, PhD**  
Harvard Medical School,  
Brigham and Women's Hospital

**Allan I. Levey, MD, PhD**  
Emory University

**Ronald K. Liem, PhD**  
Columbia University

**Hendrik Luesch, PhD**  
University of Florida

**John M. Olichney, MD**  
University of California, Davis

**David P. Salmon, PhD**  
University of California,  
San Diego

**Gerard Schellenberg, PhD**  
University of Pennsylvania  
School of Medicine

**Jane Sullivan, PhD**  
University of Washington  
School of Medicine

**Rudolph Tanzi, PhD**  
Massachusetts General Hospital

**David B. Teplow, PhD**  
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Los Angeles

**Gopal Thinakaran, PhD**  
University of Chicago

**Ronald B. Wetzel, PhD**  
University of Pittsburgh

**Tony Wyss-Coray, PhD**  
Stanford University  
Medical School

**Kristine Yaffe, MD**  
University of California,  
San Francisco

**Riqiang Yan, PhD**  
Cleveland Clinic Foundation

**Hui Zheng, PhD**  
Baylor College of Medicine



**We have a rigorous peer-review process in which renowned scientific leaders identify the most promising research to support.**

## BrightFocus Scientific Review Committees (continued)



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The Cleveland Clinic Foundation

### Interim Chair for FY16:

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University of California, Los Angeles

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The Cleveland Clinic Foundation

**Robert E. Anderson, MD, PhD**  
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**Alan Bird, MD**  
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Duke University

**Deborah Ferrington, PhD**  
University of Minnesota

**Steven Fliesler, PhD**  
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**Claire Harris, PhD**  
Cardiff University (Wales)

**Alfred S. Lewin, PhD**  
University of Florida

**John Penn, PhD**  
Vanderbilt University School of Medicine

**Nancy J. Philp, PhD**  
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**Sylvia B. Smith, PhD**  
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**Debra Thompson, PhD**  
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Oregon Health & Science University

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Oregon Health & Science University

**Darrell WuDunn, MD, PhD**  
Indiana University

# Partnerships For A Cure

BrightFocus works closely with nonprofits and corporations alike to advocate for those impacted by Alzheimer's disease, macular degeneration, and glaucoma. We collaborate with partners in advocacy coalitions, and interact with key policymakers and elected officials on behalf of greater allocation of federal resources and support for caregivers.

## Global Network for Alzheimer's

BrightFocus partners with four European countries to generate critical funding and create public awareness to advance research and educate millions around the globe about Alzheimer's disease.

### ★ Belgium

Stichting Alzheimer Onderzoek

### ★ France

Ligue Europeenne Contre  
La Maladie d'Alzheimer

### ★ Germany

Alzheimer Forschung Initiative e.V.

### ★ The Netherlands

Internationale Stichting  
Alzheimer Onderzoek



# Investing In A Cure

On behalf of current and future generations, who benefit from the research funded by Alzheimer's Disease Research, Macular Degeneration Research and National Glaucoma Research, BrightFocus Foundation thanks our generous donors for investing in a cure for current and future generations. We are fortunate to be supported by so many individuals, private foundations and corporations for our programs that advance research and promote public awareness.

We offer a wide range of contribution opportunities to accommodate resources and charitable goals. Each and every gift is important and needed to help find a cure and educate the community.



## Sowing the Seeds of Scientific Progress

**BrightFocus-funded researchers often go on to receive awards ten times greater from NIH and other sources, a 1,000% return on our early investment.**

# Donor Spotlight

Many BrightFocus donors have special connections to the research programs they support. We are honored to share three of those stories with you.

## Increasing Opportunities for Clinical Trials: A Strategic Investment

Barry Friedberg, president and CEO of FriedbergMilstein, LLC, an independent investment management firm in New York City, has served in a range of leadership positions in the world of finance over the past 50 years, including leadership of the Global Banking Investment Business of Merrill Lynch in the 1980s and 1990s. He also has a wide range of philanthropic interests, from supporting educational and arts organizations to youth development.

Mr. Friedberg has personal reasons for donating to our National Glaucoma Research (NGR), a program of BrightFocus Foundation. His mother had glaucoma, and lost most of her eyesight from the disease. Now Friedberg has glaucoma. He takes a regimen of medications for his left eye, and had procedures that remove a tiny portion of the eye's meshwork to allow better drainage. He remains active, continuing his love of skiing and golfing.



Through a generous donation to NGR, Friedberg will help support the Phase II clinical trial of ciliary neurotrophic factor—a molecule known to promote protection and regeneration of retinal ganglion cells in models of glaucoma.

Says Friedberg, "If I can make a difference in the advancement of glaucoma research and the speed of clinical trials to end this disease, I believe that is a sound investment."





*John O'Brien, BrightFocus Foundation, visited the Praise Team to thank them for their donation.*

## Honoring Their Friend's Great-Grandfather: Young Dancers Give Hope

Bonnie Walker, owner and artistic director of Next Step School of Dance in New Jersey, says she teaches young dancers on her Praise Team that, "we need to reach out to the causes that need our assistance."

Each month, the Praise Team brings their ideas to class and, through discussion and prayer, decides on an organization to receive the team donation. In spring 2016, Nicolette Zika, age 13, spoke about her great-grandfather, Alberto Lazaro Sr., and how his death from Alzheimer's had affected her family.

She shared information about the Alzheimer's Disease Research program (ADR), which her mother, Dina Marie Zika, has donated to since 2007. In honor of Nicolette's great-grandfather, the young dancers selected ADR for their donation.

As Bonnie noted, "We have been able to let a family that has lost a loved one to this disease know how much we care about them."

The team's support for Alzheimer's research also represented hope. Wrote Nicolette and Dina, "We truly hope that someday we will find a cure, not only for individuals, but also for their families."

## Educating Others, Leaving a Legacy

Lynne Rubin, 94, of Queens, New York, began having vision problems in her left eye almost 30 years ago. Her doctor at the time diagnosed her with a virus. It was not until years later that an ophthalmologist officially diagnosed her with dry macular degeneration. Lynne learned all she could about the disease and shared that knowledge, speaking at libraries and hospitals. Her message: "See your ophthalmologist every year."



*Lynne uses magnifying lenses and binoculars to help her see.*

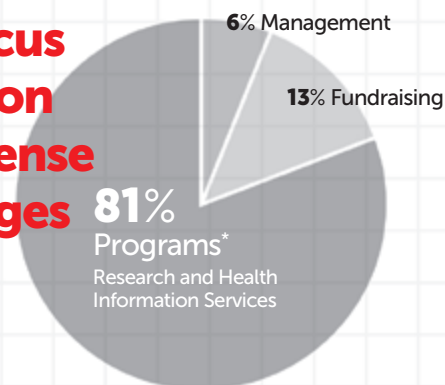
She has been a loyal supporter of BrightFocus Foundation's Macular Degeneration Research (MDR) program. Lynne applauds the program's research efforts, and loves the informative publications, which she sends to her doctors and friends. She also participates in the monthly BrightFocus Chats that provide timely information on vision disease.

MDR "does an excellent job of supporting research and educating the public about macular degeneration," says Lynne. That's why she is leaving a gift to MDR in her estate plan, and is now a member of BrightFocus Foundation's Heritage Society.

# Financial Highlights

BrightFocus is a nonprofit organization designated under Section 501(c)(3) of the Internal Revenue Code. All contributions to BrightFocus and its programs are tax-deductible to the extent allowed by law. The foundation is supported entirely by voluntary private contributions.

## BrightFocus Foundation 2016 Expense Percentages



\*BrightFocus received in-kind donations to expand public health information outreach and these are included in Program Services expenses. This allowed the organization to reach millions of people with information about risk factors, treatments, and caregiving.

A complete copy of the financial statement audited by Raffa, P.C., is available upon request from BrightFocus at 1-800-437-2423 or [www.brightfocus.org](http://www.brightfocus.org).

## Consolidated Statement of Financial Position

As of March 31, 2016 (in thousands of dollars)

ASSETS	
Cash and Investments	\$37,818
Charitable Trusts and Bequests Receivable	5,569
Rental Property	3,928
Fixed Assets, Net	4,693
Other Assets	1,268
<b>TOTAL ASSETS</b>	<b>\$53,276</b>

LIABILITIES	
Accounts Payable and Other Liabilities	\$976
Grants Payable	20,173
Charitable Gift Annuities	1,267
<b>TOTAL LIABILITIES</b>	<b>\$22,416</b>

NET ASSETS	
Unrestricted	\$19,794
Temporarily Restricted	10,976
Permanently Restricted	90
<b>TOTAL NET ASSETS</b>	<b>\$30,860</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>\$53,276</b>

## Consolidated Statement of Activities

For the Fiscal Year Ended March 31, 2016 (in thousands of dollars)

SUPPORT & REVENUE	
Contributions and Grants	\$22,501
Bequests	6,720
Donated Services	13,318
Investment Loss	(1,151)
Rental & Other Income	886
<b>TOTAL SUPPORT &amp; REVENUE</b>	<b>\$42,274</b>

EXPENSES	
<b>PROGRAM SERVICES</b>	
Research	\$15,069
Health Information Services	21,077
<b>TOTAL PROGRAM EXPENSES</b>	<b>\$36,146</b>
<b>SUPPORTING SERVICES</b>	
Fundraising	\$5,667
Management and General	2,766
<b>TOTAL SUPPORTING SERVICES</b>	<b>\$8,433</b>
<b>TOTAL EXPENSES</b>	<b>\$44,579</b>
<b>CHANGE IN NET ASSETS</b>	<b>\$(2,305)</b>

# Leadership

## BrightFocus Board of Directors

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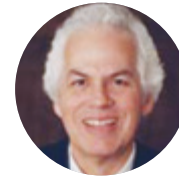
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**Nancy Lynn**

VICE PRESIDENT, FINANCE AND ADMINISTRATION  
**David F. Marks, CPA, CMA**



**BrightFocus®  
Foundation**

Cure in Mind. Cure in Sight.

## Programs

Alzheimer's Disease Research  
Macular Degeneration Research  
National Glaucoma Research

## Contact

22512 Gateway Center Drive  
Clarksburg, MD 20871  
1-800-437-2423

## Integrity



## Connect

[www.brightfocus.org](http://www.brightfocus.org)



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