



FIGHT FOR SIGHT

**F**  
**I G H T**  
**FOR**  
**S I G H T**

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**A N N U A L**

**R E P O R T**

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**2 0 0 9**

INVESTING IN EYE & VISION RESEARCH FOR 65 YEARS



**FIGHT FOR SIGHT**



In 2011, Fight for Sight will celebrate its 65th anniversary. During the year we have planned a series of events to honor and recognize the contributions of our remarkable founder Mildred Weisenfeld, who started FFS in 1946 after losing her sight to retinitis pigmentosa. During the next decades, Mildred almost singlehandedly drove the campaign to create awareness of the need for more eye research funding.



*"Fight for Sight has been in my heart since the mid-60s. Funding research is the foundation of our future and our health. It's at the core of what needs to be done, even though it will take some time."*

~ John LaSpina, Long Island, NY



*"Fight for Sight is unique, research is important, and you only get results by putting in time. The young ophthalmologists need our help."*

~ Martin Schneider, Alpern Family Foundation  
New York, NY

# Partners in Vision Research

Dear Friends, Supporters, Alumni and Mentors,

We are delighted to share with you **Fight for Sight's** latest annual report.

This past year has been one of growth, expansion, collaboration and a return to our core mission. Despite a troubled economy and unsettling events throughout the world, **FFS** remains strong, vibrant and poised to enter the next decade of the 21st century. We are committed to identifying, supporting and nurturing the next generation of academic ophthalmologists and eye and vision researchers for many years to come. We thank you for your past support and look forward to your continued insight, counsel and assistance in the future.

One of the highlights of this past year has been the successful and continuing establishment of various partnerships and collaborative efforts between **Fight for Sight** and other foundations and professional organizations designed to maximize our joint resources and cooperatively strengthen both of our missions, including:

- A joint Summer Student Fellowship with *WomensEyeHealth.org* to provide funding to deserving students researching the reasons underlying well established gender disparities in visual disability and blindness.
- A partnership with the *North American Neuro-Ophthalmology Society* funds research by an ophthalmology or neurology resident or fellow in that field.
- A Summer Student Fellowship in partnership with the Streilein Foundation for Ocular Immunology.
- **FFS** and the *Jackson Laboratory*, in Bar Harbor, ME, the nation's premier institution for mammalian genetics, are exploring ways in which to jointly support our respective research and fundraising efforts.

Our mission to provide support and recognition for the next generation of academic ophthalmologists and vision researchers remains vital and strong,

As we approach our 65th anniversary in 2011, **Fight for Sight** is proud to have provided over \$20 million in awards to more than 3,000 investigators, many of whom have gone on to distinguished careers as academic researchers, clinician scientists and industry leaders.

We hope you will join us in celebrating the achievements of our students and the foresight of the many current and former members of our Scientific Review Committee, who help identify talented individuals early in their careers. We are very grateful for their devoted efforts, essential to our grant review process, as well as the support of the many Chairpersons of Ophthalmology and Directors of Research who continue to provide valuable insights and guidance.

An exciting series of educational events, fundraisers and ways in which to honor our history and the memory of our founder Mildred Weisenfeld, are planned for the 65th Anniversary celebration. Please join us!



**Michael Wilke**  
Executive Director



**Norman Kleiman, PhD**  
President, Board of Directors

Norman J. Kleiman, PhD  
President, Board of Directors

Michael Wilke,  
Executive Director



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**Janice Benson**, Assistant Director

381 Park Avenue South

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New York, NY 10016

212-679-6060

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

# 2010 Scientific Review Committee (SRC)



*Each year, the SRC meets in conjunction with the annual meeting of the Association for Research in Vision and Ophthalmology (ARVO) to review award applications in roundtable discussions among its members. The SRC is one of Fight for Sight's greatest assets and we are extremely grateful for their assistance, dedication and hard work.*



- |   |                                   |
|---|-----------------------------------|
| Boston University                         | Sayon Roy, PhD                    |
| Calvin College                            | John L. Ubels, PhD                |
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| Columbia University                       | Norman J. Kleiman, PhD            |
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| Emory University                          | Machelle T. Pardue, PhD           |
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| Harvard University                        | Reza Dana, MD, MSc, MPH           |
| Indiana University                        | Ernest F. Talarico, PhD           |
| Mayo Clinic                               | William M. Bourne, MD             |
| Michigan State University                 | Simon M. Petersen-Jones, DVM, PhD |
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| Mount Sinai School of Medicine            | Scott E. Brodie, MD, PhD          |
| Mount Sinai School of Medicine            | Jose M. Wolosin, PhD              |
| National Eye Institute                    | S. Patricia Becerra, PhD          |
| New England College of Optometry          | Jane Gwiazda, PhD                 |
| Oregon Health & Science University        | Peter J. Francis, MD              |
| Oregon Health & Science University        | Kirsten J. Lampi, PhD             |
| Oregon Health & Science University        | Tammy M. Martin, PhD              |
| Oregon Health & Science University        | Stephen Planck, PhD               |
| Retina Foundation of the Southwest        | Eileen E. Birch, PhD              |
| Stanford University                       | Darius Moshfeghi, MD              |
| SUNY - Buffalo                            | Steven J. Fliesler, PhD           |
| SUNY - Buffalo                            | Gail M. Seigel, PhD               |
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| University of California - Los Angeles    | Lynn K. Gordon MD                 |
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| University of Florida                     | W. Clay Smith, PhD                |
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| University of Maryland                    | Steven L. Bernstein, MD, PhD      |



**Cataract is the leading cause of blindness worldwide.**

University of Maryland  
 University of Massachusetts  
 University of Miami  
 University of Miami  
 University of Miami  
 University of Miami  
 University of Miami  
 University of Michigan  
 University of Michigan  
 University of Minnesota  
 University of Nebraska  
 University of North Texas  
 University of Oklahoma  
 University of Pennsylvania  
 University of Pennsylvania  
 University of Pennsylvania  
 University of Pennsylvania  
 University of Pittsburgh  
 University of Pittsburgh  
 University of Southern California - LA  
 University of Southern California - LA  
 University of Southern California - LA  
 University of Tennessee - Memphis  
 University of Tennessee - Memphis  
 University of Texas - Southwestern  
 University of Texas - Southwestern  
 University of Utah  
 University of Wisconsin  
 University of Wisconsin  
 University of Wisconsin  
 University of Washington  
 Vanderbilt University  
 Vanderbilt University  
 Vanderbilt University  
 Washington University School of Medicine  
 Washington University School of Medicine  
 Wayne State University  
 Wayne State University  
 Weill Cornell Medical College  
 Weill Cornell Medical College  
 Weill Cornell Medical College  
 Weill Cornell Medical College  
 Johns Hopkins University  
 Johns Hopkins University  
 Yale School of Medicine  
 Yale School of Medicine  
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 Yale School of Medicine

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 Joseph Carroll, PhD  
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 Nathan G. Congdon, MD, PhD  
 Peter L. Gehlbach, MD, PhD  
 Jimmy K. Lee, MD  
 Miguel A. Materin, MD  
 Daniel J. Salchow, MD  
 Ning Tian, MD, PhD  
 James C. Tsai, MD  
 C. Jimmy Zhou, PhD

***The Scientific Review Committee (SRC) is charged with reading and evaluating grant applications for our Summer Student Fellowships, Post-Doctoral awards and Grants-in-Aid. It is composed of prominent research scientists, academicians and clinical researchers representing many disciplines in ophthalmology, vision and eye research, many of whom were previous awardees and/or FFS mentors.***



***We strive to create a diverse group of reviewers, representing many of the best academic and clinical institutions across the country, to enable us to choose a broad spectrum of the best and the brightest young students and scientists. Our review system is modeled on the peer review methods utilized by the National Institutes of Health, which evaluate and rank each application on scientific merit, strength of institutional resources and clinical relevance.***

# 2009 Grants in Aid



*"Your award will allow me to pursue important research that will help identify the genes and proteins involved in retinal detachment. At this stage of my career, recognition from Fight for Sight is truly prestigious, and I truly appreciate the support."  
~ Vinit B. Mahajan, MD, PhD, University of Iowa*



**Age-related Macular Degeneration is the leading cause of blindness in the U.S., affecting 1.7 million Americans over age 60.**

*Grants-in-Aid* are intended to fund pilot projects and generate preliminary results for investigators who have limited or no other research funding. Grants-in-Aid are awarded to junior faculty members who are developing their independent scientific skills. A majority of Grants-in-Aid recipients go on to successfully compete for larger, multi-year awards from the NIH or other governmental and private sources utilizing data generated by FFS funded projects.

**Heather A. Anderson, OD, PhD**

Assistant Professor, Optometry  
University of Houston

**Limits of accommodation for compensation of hyperopia in children**

**LAZY EYE**

**Mihaela G. Gadjeva, PhD**

Instructor, Channing Laboratory  
Brigham and Women's Hospital

**Inhibition of MIF will prevent pseudomonas aeruginosa-induced keratitis**

**CORNEA**

**Kate E. Keller, PhD**

Research Assistant Professor  
Casey Eye Institute,  
Oregon Health & Sciences University

**The role of hyaluronan in the trabecular meshwork**

**GLAUCOMA**

**Eun-Jin Lee, PhD**

Research Assistant Professor, Biomedical Engineering  
University of Southern California

**Remodeling of retinal cells during the development of myopia**

**MYOPIA**

**Vinit B. Mahajan, MD, PhD**

Assistant Professor, Ophthalmology & Visual Sciences  
University of Iowa

**Molecular genetics of retinal detachment**

**RETINA**



*"As an assistant professor who is in the early stages of my career, your support is vital to the success of my research endeavors and I am grateful for the opportunity to pursue this work with your assistance."*

~Heather A. Anderson, OD, PhD  
University of Houston



*"With so many people affected by glaucoma, I am hopeful that the results gained from my experiments will lead to new treatments or a cure for this debilitating disease. This grant provides financial support in my effort to gain funding from the NIH at this important transition point in my career."*

~ Kate E. Keller, PhD  
Casey Eye Institute,  
Oregon Health & Sciences University

# 2009 Post-Doctoral Fellowships



*"I believe that through my present post-doctoral project, I will make seminal discoveries about rhodopsin biology that will lay the basis for novel therapeutics and strategies to prevent retinal degeneration."*  
~ Wei-Chieh Chiang, PhD, University of California-San Diego



**Cataract surgery accounts for 60% of Medicare visual care costs and 12% of all health care costs overall.**



*Post-Doctoral Awards support individuals with a doctorate (PhD, MD, DrPH, OD or DVM) who are interested in academic careers in basic or clinical research in ophthalmology, vision or related sciences. Awardees typically spend a year or more engaged in vision and eye research under the supervision of a senior scientist/clinician mentor.*

**Wei-Chieh Chiang, PhD**

*University of California-San Diego*

Mentor: Jonathan H. Lin, MD, PhD

*Unfolded protein response signaling in rhodopsin processing and stability*

**RETINITIS PIGMENTOSA**

**Gregory H. Grossman, PhD**

*Cleveland Clinic*

Mentor: Stephanie A. Hagstrom, PhD

*The role of Tulp1 in the photoreceptor synapse:*

*Defining pathways of action through protein binding analysis*

**RETINITIS PIGMENTOSA**

**Amy A. Kalia, PhD**

*Massachusetts Institute of Technology*

Mentor: Pawan Sinha, PhD

*Scene recognition by vision and touch*

**VISION PROCESSING**

**Angela V. Turalba, MD**

*Massachusetts Eye and Ear Infirmary*

Mentor: Louis Pasquale, MD

*Caffeine consumption: intraocular pressure and genetic predisposition to primary open angle glaucoma*

**GLAUCOMA**

**Fan Zhang, MD, PhD, BM**

*SUNY State College of Optometry*

Mentor: Peter S. Reinach, PhD

*Resolvin mediated control of corneal epithelial function*

**DRY EYE**



*"I am sure this award will help launch my career as an independent researcher."*

~ Gregory H. Grossman, PhD

*Cleveland Clinic*

*(Pictured with mentor Stephanie A. Hagstrom, PhD)*

# 2009 Summer Student Fellowships



In memory of our long-time former Hollywood League President Ida Bockian, Fight for Sight is naming a Summer Student Fellowship for her decades of outstanding volunteer leadership. We are deeply thankful for her support.



*"Thank you for granting me this mark of distinction in the field of Ophthalmology."*  
~ **Maria Julieta Zutel**, Case Western Reserve University-School of Medicine



Glaucoma affects over 3 million Americans and is a leading cause of blindness.

**Summer Student Fellowships** are awarded to undergraduates, graduate and medical students interested in pursuing eye-related clinical or basic research. For most students, this is their first exposure to eye or vision research and the experience has resulted in many students choosing academic ophthalmology or eye research as a full-time career.

**Ilan Y. Benador** **Ida Bockian Summer Student Fellowship**

*Boston University*

Mentor: Anne B. Fulton, MD, Children's Hospital Boston

*Oxidative stress in immature neural retina*

**RETINA**

**Andrew S. Camp**

*University of Miami Miller School of Medicine, Bascom Palmer*

Mentor: Richard K. Lee, MD, PhD, Univ. of Miami Miller School of Medicine, Bascom Palmer

*Identification of retinal ganglion cell sub-populations preferentially targeted to die secondary glaucoma*

**GLAUCOMA**

**Victoria S. Chang**

*University of Miami Miller School of Medicine, Bascom Palmer*

Mentor: Sonia H. Yoo, MD, University of Miami Miller School of Medicine, Bascom Palmer

*Effects of methylprednisolone and tacrolimus on fungal growth in vitro*

**CORNEA**

**Ayan Chatterjee**

*University of Pennsylvania School of Medicine*

Mentor: George L. Spaeth, MD, Wills Eye Institute & Jefferson Medical College

*Nuclear genetic and mitochondrial influences in primary open-angle glaucoma, primary angle-closure glaucoma, and pseudoexfoliation glaucoma*

**GLAUCOMA**

**Thomas Doerdelmann**

*University of Cincinnati*

Mentor: Mark Rance, PhD, University of Cincinnati

*Biophysical analysis of an Axenfeld-Reiger syndrome (v45L) pitx2 homeodomain mutant*

**AXENFELD-REIGER SYNDROME**

**Kellen T. Galster**

*Albany Medical Center*

Mentor: James T. Rosenbaum, MD, Oregon Health & Science University

*Investigation of the role of NOD2 expression and its subsequent regulation of ocular inflammation induced by TLRs*

**UVEITIS**

**Yen Cheng Hsia**

*Case Western Reserve University-School of Medicine*

Mentor: Eric Pearlman, PhD, Case Western Reserve University-School of Medicine

*Role of Dectin-1 in fungal keratitis*

**CORNEA**

**David L. Jiang**

*University of California-San Diego*

Mentor: Jonathan H. Lin, MD, PhD, University of California-San Diego

*Optokinetic response analysis in transgenic animal models of retinal degeneration*

**RETINITIS PIGMENTOSA**

# 2009 Summer Student Fellowships



*"Thank you for granting me the opportunity to investigate a potential therapy for retinopathy of prematurity (ROP), one of the leading causes of childhood blindness around the world."*

~ **Ilan Y. Benador**, Boston University

## **Hikaru Kinouchi**

*Washington and Lee University*

Mentor: Dong Feng Chen, MD, PhD, Schepens Eye Research Institution, Harvard Medical School

*A novel regulator of optic nerve regeneration*

**GLAUCOMA**

## **Christina A. Mamalis**

*Occidental College*

Mentor: Bala Ambati, MD, PhD, University of Utah, The John A. Moran Eye Center

*Ocular bioimaging of a murine model of macular degeneration*

**MACULAR DEGENERATION**

## **Rachel A. Martin**

*Medical College of Wisconsin*

Mentor: Joseph Carroll, PhD, Medical College of Wisconsin

*Evaluating the photoreceptor mosaic in congenital rod monochromacy; prospects for gene therapy*

**RETINA**

## **Sarah M. Oros**

*University of Dayton*

Mentor: Amit Singh, PhD, University of Dayton

*Understanding the genetic basis of aniridia*

**ANIRIDIA**

## **Anish V. Patel**

*University of Chicago*

Mentor: Michael Grassi, MD, University of Chicago

*Genomic studies of diabetic retinopathy*

**DIABETIC RETINOPATHY**

## **Nimish B. Patel**

*University of Houston, College of Optometry*

Mentor: Ronald S. Harwerth, OD, PhD, University of Houston, College of Optometry

*Relationship of spectral domain optical coherence tomography (SD-OCT)*

*to retinal histology in macaca mullata*

**RETINA**

## **Tihomira D. Petkoca**

*University of Houston, College of Optometry*

Mentor: Deborah C. Otteson, PhD, University of Houston, College of Optometry

*Eph receptor expression and DNA methylation status in Muller glia derived retinal progenitor cells*

**GLAUCOMA**



*Retinopathy of Prematurity (ROP) occurs in some babies born prematurely and leads to very poor vision because of retinal damage.*

**Jagdeep K. Raince**

*Baylor College of Medicine*

Mentor: Stephen Pflugfelder, MD, Baylor College of Medicine  
*Regulated expression of IL-13 receptor by T-cell cytokines modulates conjutival goblet cell density*

**SJOGREN'S SYNDROME, STEVENS-JOHNSON SYNDROME**

**Jaime K. Stull**

*University of Delaware*

Mentor: Melinda Duncan, PhD, University of Delaware  
*Role of UPR in cataract development of connexin50 mutants*

**CATARACT**

**Kyle M. Trudeau**

*Boston University*

Mentor: Sayon Roy, PhD, Boston University  
*Effects of insulin treatment on reversing high glucose-induced mitochondrial dysfunction in retinal endothelial cells: a therapeutic strategy for decreasing vascular cell loss in diabetic retinopathy*

**DIABETIC RETINOPATHY**

**Monica L. Vandervoort**

*University of Miami*

Mentor: Jeffrey L. Goldberg, MD, PhD,  
University of Miami, Bascom Palmer  
*Regeneration-suppressing transcription factors role in retinal ganglion cell regeneration*

**GLAUCOMA**

**Yoshiro Yonekawa**

*Weill Cornell Medical College*

Mentor: Ronald H. Silverman, PhD,  
Weill Cornell Medical College  
*Acoustic radiation force impulse imaging for characterization of corneal viscoelastic properties*

**GLAUCOMA**

**Xiao Zhong**

*University of Minnesota*

Mentor: Allison Hubel, PhD, University of Minnesota  
*Influence of processing on optical properties of a novel biohybrid corneal replacement*

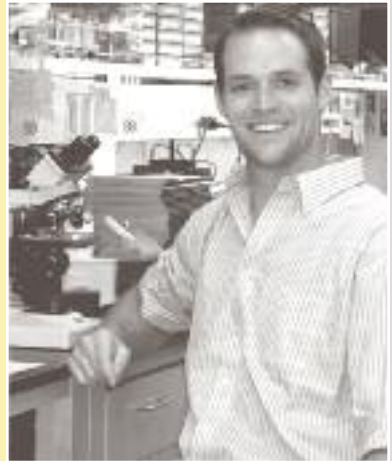
**CORNEA**

**Maria J. Zutel**

*Case Western Reserve University-School of Medicine*

Mentor: Jonathan Sears, MD, PhD,  
Cleveland Clinic, Cole Eye Institute  
*Preventing ischemic retinopathy: novel targets for therapy*

**RETINA**



*"My time researching the unique immune functions of the eye have enhanced my desire to pursue a career as an ophthalmologist. I felt very fortunate to work in a cutting edge laboratory, shedding light on the enigmatic world of innate immunology."*

~ **Kellen T. Galster**  
*Albany Medical Center*



*"I will utilize all of the funds to help advance our understanding of blindness through research so that someday, hopefully in the near future, we may stumble upon a cure or treatment for blindness."*

~ **David L. Jiang**  
*University of California-San Diego*  
*Pictured with mentor Jonathan H. Lin (center) and Matthew M. LaVail (left)*

# Donors



## Mildred Weisenfeld Society

We are grateful to these individuals who have included Fight for Sight in their estate plans. Please contact us if you would like to join.

Telsa Albee  
Bob and Ann Goldsmith  
Theodore Landy  
Richard Lane  
Florence Parker  
Ann Rosche

### Bequests

Our thanks to these individuals who have included Fight for Sight in their wills, to support eye and vision research beyond their lifetimes.

Estate of Marjorie Louise Connors  
Estate of Pauline Krakowsky

### Visionaries - \$1000+

Alpern Family Foundation\*  
Tracy Keogh  
Laurin and Norman Kleiman\*  
Gaby Kressly  
John LaSpina  
Leslie Levine  
Toni Lieberman Family Charitable Trust  
E. Marran  
Susan D. Ralston  
Michael Schwartz - IHO Dr. Kenneth Barasch  
WomensEyeHealth.org

### Sustainers - \$500-\$999

Philip Bergan  
Pamela HB Gross  
Joan Helpem - IHO Elizabeth Helpem Lass  
Lillian Redlich  
Lillian Steinberg - IMO Ida Bernstein



**Longtime Fight for Sight supporters like you have joined the Mildred Weisenfeld Society this year, including Ann Rosche:**

*"About 40 years ago I attended a benefit performance starring Liza Minelli, Bob Hope, and other major celebrities. At that 'Lights On' evening I learned about Mildred Weisenfeld and her wonderful organization. From the moment the opening song "The Eyes of God" began, I knew I was beginning a long-term commitment to Fight for Sight, because I was blessed with excellent eyesight and shared Mildred's desire to help others achieve the gift of sight. Including Fight for Sight in my will gives me the confidence that they will continue to find new methods and treatments to achieve that goal."*

### Associates - \$100-\$499

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Charles Hertzog Foundation  
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Jane Gladstein - IMO Joyce Gladstein  
Alvin Glickman  
Muriel Goldblatt  
Robert Goldsmith - IMO Abby & Mildred Mosler  
Roseann Gonzalez  
Audrey Gorelick - IHO Claire Zelvin's 90th Birthday  
Stephen E. Gottlieb - IMO Dr. Arthur Gottlieb,  
IHO Dr. Ken Barasch & Dr. Steve Obstbaum  
Henry Gross  
William Gross - IMO Lea Gross  
Marilyn Gruder - IMO Mildred Weisenfeld  
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Jeffrey Hobden\*  
Hoffman Family Foundation.  
Karen Joos\*  
Robert Kalina\*  
Eric Kanter\*  
Dr. Elaine Kaplan - IMO Mildred Landy



Leber Congenital Amaurosis is inherited and usually diagnosed near birth. Children with LCA may be blind, have low vision, uncontrolled eyes, or sensitivity to bright light.

# Did You Know?

- *Fight for Sight* has awarded over \$20 million for eye research and children's eye clinics since 1946.

- *Fight for Sight* supported these notable leaders early in their careers: Harold Scheie, MD (1950), founder of the Scheie Eye Institute at the University of Pennsylvania, Arthur Jampolsky, MD (1952), whose efforts led to the creation of the Smith-Kettlewell Eye Research Institute, A. Edward Maumenee, MD (1958) former director of the Wilmer Eye Institute, founder of the Eye Bank Association of America and a potent force behind the creation of the National Eye Institute, Carl Kupfer, MD (1961), Director of the NEI for 30 years, Paul Sieving, MD, PhD, current Director of the National Eye Institute, László Bitó, PhD (1965), who developed the glaucoma drug Xalatan, and Robert Machemer, MD (1966) the "father" of modern retinal surgery.

- *Fight for Sight* has contributed directly or indirectly to major advances in ophthalmology and vision research, including development of the Intraocular Lens (IOL), donor cornea preservation, various use of ophthalmic lasers, glaucoma therapies, and stem cell research.

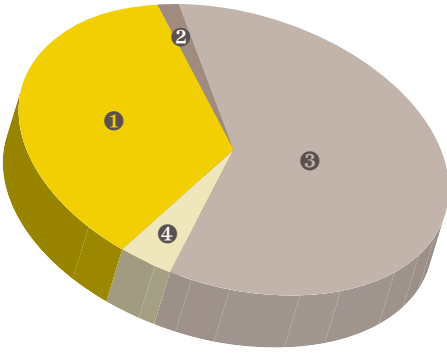
- *Fight for Sight* supporters have included Bob Hope, Sammy Davis Junior, Stevie Wonder, Barbara Streisand and Nancy Kerrigan as well as many other notable celebrities.

## Associates continued

Arnold Kaufman  
Jeffrey Kay  
Leon Klatt - *IHO Ann Prevost Herrera*  
Jay & Joyce Koppel - *IMO Jay Koppel*  
Ioannis Koutalos  
Paul & Marilyn Kramer  
Marvin Kurjan  
Peter Landau  
Barbara Lander  
Jonathan Lass\*  
David Levine  
Harvey Lieberman - *IHO Madison & Grant Lieberman*  
Louis & Estelle Chechick Charitable Endowment Fund  
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Jane McGimsey  
Thomas Mizen  
Thomas Mohr  
Alan & Jane Moss\*  
Dorothy Neustadter  
Martin Nydick  
Muriel Palitz  
Peltz Family Foundation  
Benno L. Petrig  
Joseph Pinto - *IHO Cole Nowak*  
William Ratner - *IMO Mildred Weisenfeld*  
Dr. Norman W. Reinach - *IHO Jean Lisella 90th birthday*  
Harvey Reiser\*  
Louis Rosenbaum\*  
SafeBridge Consultants Inc. - *IMO Ella Mac Ader*  
Jo Anne Schneider  
Benjamin Segan  
Allan Sexter  
Michael Sidel  
Alan Sloate  
Snyder Charitable Foundation  
Robert Stamper  
Leslie Suchman - *IMO Ethel Suchman*  
Judith Sussman  
Jean E. Symons  
Stewart & Emily Tabin - *IHO Dr. Kenneth R. Barasch*  
Allen Taylor\*  
Willa Tice  
Mary Vinton  
Bernice Waldbaum  
Barry Waldorf - *IMO Mildred Weisenfeld*  
Shirley Weiner  
Leonard Weintraub - *IMO Robert Gettinger & Chris Kaminkas*  
Sandra Wolens  
David Zee\*  
Lorenz Zimmerman\*

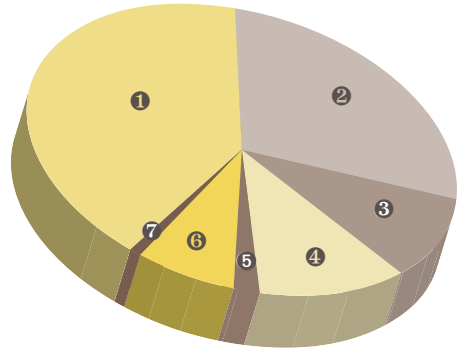
\*Alumni Society

# Financial Highlights



**SUPPORT AND REVENUE 2009\***

❶	Contributions	36%
❷	Legacies and Bequests	2%
❸	Investments	58%
❹	Misc. Income and Interest Value	4%



**EXPENSES 2009\***

❶	Grants and Awards Program	41%
❷	Salaries and Benefits	26%
❸	Occupancy	11%
❹	Insurance and Professional Fees	12%
❺	Meetings and Communications	2%
❻	Supplies, Printing and Postage	7%
❼	Depreciation & Misc.	1%

## PUBLIC SUPPORT AND REVENUE

	Fiscal Period April 1, 2009- December 31, 2009	Fiscal Period April 1, 2008- December 31, 2008
Contributions	\$ 340,172	\$ 115,551
Legacies and Bequests	\$ 14,743	\$ 291,575
Investments	\$ 559,982	\$ (687,388)
Misc. Income and Interest Value	\$ 35,252	\$ (29,938)
<b>TOTAL</b>	<b>\$ 950,149</b>	<b>\$ (310,200)</b>

## SUMMARY OF EXPENSES

Grants and Awards Program	\$ 244,623	\$ 272,207
Salaries and Benefits	\$ 150,540	\$ 125,005
Occupancy	\$ 62,729	\$ 46,930
Insurance and Professional Fees	\$ 70,758	\$ 64,356
Meetings and Conferences	\$ 11,845	\$ 19,750
Supplies, Printing and Postage	\$ 43,276	\$ 46,021
Depreciation and Misc.	\$ 3,874	\$ 1,522
<b>TOTAL</b>	<b>\$ 587,645</b>	<b>\$ 575,791</b>

## NET ASSETS

Unrestricted	\$ 2,627,537	\$ 2,058,964
Temporarily Restricted	\$ 751,673	\$ 972,968
Permanently Restricted	\$ 74,402	\$ 59,166
<b>TOTAL</b>	<b>\$ 3,453,612</b>	<b>\$ 3,091,098</b>

\*With our 2009 annual report, Fight for Sight introduces a shift of its financial reporting period from a fiscal year to a calendar year. Due to the transition, this publication reflects just the nine-month stub period between April 1, 2009, and December 31, 2009. Our new calendar year begins January 1, 2010, and runs to December 31, 2010.



**Strabismus, also referred to as crossed eyes, is the result of eye muscle weakness or abnormal muscle development.**



# A Fight for Sight Success Story



*The Fight for Sight Grant-in-Aid helped me to perform initial experiments where I have tested how the presence or absence of MIF (macrophage migration inhibitory Factor) affects bacterial infection. I have collected experimental evidence supporting my initial hypothesis that inhibition of MIF may be therapeutically beneficial. I submitted the evidence as part of my NIH grant application and was recently been granted an R21 award from NEI, and I am currently studying how MIF regulates sensitivity to bacterial infection."*

*Mihaela Gadjeva, PhD*

*Fight for Sight* provides initial support and funding to promising new eye researchers to enable them to successfully compete for grants from the National Eye Institute (NEI), the National Institutes of Health (NIH), other governmental sources and large private foundations.

In 2009, *Fight for Sight* awarded one of just five Grant-In-Aid awards to Mihaela Gadjeva, PhD, for her work on controlling bacterial inflammation in the eye. Just a year later, in large part through the support and encouragement she received from *Fight for Sight*, Dr. Gadjeva was awarded a prestigious two year R21 Exploratory/Developmental Research Grant from the National Eye Institute (NEI), a division of the National Institutes of Health (NIH). NEI scientific reviewers called her "an outstanding and productive young investigator" whose research offered "ample preliminary data" with a "well thought out approach to the research and potential problems" that "inspires confidence."

NIH R21 awards are given to eye researchers who propose "Exploratory, novel studies that break new ground or extend previous discoveries toward new directions or applications" and/or "High risk high reward studies that may lead to a breakthrough in a particular area, or result in novel techniques, agents, methodologies, models or applications that will impact biomedical, behavioral, or clinical research." We are delighted to have helped Dr. Gadjeva achieve this recognition for her research studies.

*"Without the help from Fight for Sight, the initial studies would not have been possible. I am extremely grateful to Fight for Sight for providing me with a seed of money when I needed them most: at a moment when I had an idea, but no financial means to pursue it. With the financial help from Fight for Sight I performed key experiments in the lab, and I am convinced that without them, my NIH application would have not been that strong."*

**Mihaela Gadjeva, PhD**  
Instructor in Medicine  
Channing Lab  
Brigham and Women's Hospital  
Harvard Medical School

# Publications Citing Support by Fight for Sight, 2009

*Fight for Sight grant alumni names are bolded, with their award and institution listed at the end of the citation. (Abbreviations for grant types are: PD=Post-Doctoral Fellowship, SSF=Summer Student Fellowship, GIA=Grant-In-Aid.)*

**Albuquerque, Romulo J.C.**, Hayashi, T., Cho, W.G., Kleinman, M.E., Dridi, S., et al. "Alternatively spliced vascular endothelial growth factor receptor-2 is an essential endogenous inhibitor of lymphatic vessel growth." Nature Medicine (PD, Univ. of Kentucky College of Medicine, 2008)

**Andreoli, Michael T.**, Morrison, M.A., Kim, B.J., Chen, L., Adams, S.M., et al. "Comprehensive analysis of complement factor H and LOC387715/ARMS2/HTRA1 variants with respect to phenotype in advanced age-related macular degeneration." American Journal of Ophthalmology (SSF, Massachusetts Eye and Ear Infirmary, 2007)

**Bartoli, Manuela, Al-Shabrawey, Mohamed**, Labazi, M., Behzadian, A.M., Istanboli, M., et al. (2009). "HMG-CoA reductase inhibitors (statin) prevents retinal neovascularization in a model of oxygen-induced retinopathy." Investigative Ophthalmology & Visual Science (GIA, Univ. of South Carolina School of Medicine, 2003; PD, Medical College of Georgia, 2004)

**Beltran, William A.**, Acland, G.M., and Aguirre, G.D. "Age-dependent disease expression determines remodeling of the retinal mosaic in carriers of RPGR Exon ORF15 mutations." Investigative Ophthalmology and Visual Science (GIA, Univ. of Pennsylvania, 2006 & 2007)

**Beltran, William A.**, Allore, H.G., Johnson, E., Towle, V., Tao, W., et al. "CREB1/ATF1 activation in photoreceptor degeneration and protection." Investigative Ophthalmology and Visual Science (GIA, Univ. of Pennsylvania, 2006 & 2007)

**Cabero, Nora B.**, Zhou, Y., Alvarado, G., Fan, X., and Li, W. "Efficient identification of phosphatidylserine-binding proteins by ORF phage display." Biochemical and Biophysical Research Communications (PD, Bascom Palmer Eye Institute, 2008)

**Cabero, Nora B.**, and Li, Wei. "Unconventional secretion of tubby and tubby-like protein 1." FEBS Letters (PD, Bascom Palmer Eye Institute, 2008; GIA, Bascom Palmer Eye Institute, 2004)

**Cano, Marisol del Valle**, Karagiannis, E.D., Soliman, M., Bakir, B., Zhuang, W., et al. "A peptide derived from type 1 thrombospondin repeat-containing protein WISP-1 inhibits corneal and choroidal neovascularization." Investigative Ophthalmology & Visual Science (PD, Wilmer Eye Institute, 2007)

**Carroll, Joseph**, Baraas, R.C., Wagner, M., Rha, J., Siebe, C., et al. "Cone photoreceptor mosaic disruption associated with Cys203Arg mutation in the M-cone opsin." Proceedings of the National Academy of Sciences (GIA, Medical College of Wisconsin, 2007)

Cho, W.G., **Albuquerque, Romulo J.C.**, Kleinman, M.E., Taraloc, V., Greco, A., et al. "Small interfering RNA-induced TLR3 activation inhibits blood and lymphatic vessel growth." Proceedings of the National Academy of Sciences (PD, Univ. of Kentucky College of Medicine, 2008)

**Dalgard, Clifton L.**, Gonzalez, M., deNiro, J.E., and O'Brien, J.M. "Differential microRNA-34a expression and tumor suppressor function in retinoblastoma cells." Investigative Ophthalmology and Visual Science (PD, Univ. of California-San Francisco, 2007)

Davies, M.H., Zamora, D.O., Smith, J.R., and **Powers, Michael R.** "Soluble ephrin-B2 mediates apoptosis in retinal neovascularization and in endothelial cells." Microvascular Research (GIA, Casey Eye Institute, 2005)

Epstein, S.P., **Ahdoot, M.**, Marcus, E., and **Asbell, Penny A.** (2009). "Comparative toxicity of preservatives on immortalized corneal and conjunctival epithelial cells." Journal of Ocular Pharmacology and Therapeutics (PD, Mt. Sinai Medical Center, New York, 2005; GIA, Mt. Sinai School of Medicine, 1984)

Fulton, A.B., **Akula, James D.**, Mocko, J.A., Hansen, R.M., **Benador, I.Y.**, et al. "Retinal degenerative and hypoxic ischemic disease." Documenta Ophthalmologica (PD, Children's Hospital-Boston, 2006; SSF, Boston Univ. Medical Center, 2009)

**Garcia, C. M.**, Shui, Y.B., Kamath, M., DeVillar, J., Johnson, R.S., et al. "The function of VEGFA in lens development: Formation of the hyaloid capillary network and protection against transient nuclear cataracts." Experimental Eye Research (GIA, Washington Univ. (St. Louis), 2005)

Grothe, H.L., Little, M.R., Cho, A.S., Huang, A.J., and **Yuan, Ching.** "Denaturation and solvent effect on the conformation and fibril formation of TGFβ1p." Molecular Vision (GIA, Univ. of Minnesota, 2006)

**Haddadin, Ramez I.**, Oh, D.J., Hart, L., Sage, E.H., Rhee, D.J., et al. "SPARC-null mice exhibit lower intraocular pressures." Investigative Ophthalmology and Visual Science (SSF, Massachusetts Eye and Ear Infirmary, 2008)

Hald, E.S., **Hertle, Richard W.**, and Yang, D. "Development and validation of a digital head posture measuring system." American Journal of Ophthalmology (Equipment Grant, Univ. of Pittsburgh, 2004)

Harper, M.M., Adamson, L., Blits, B., Bunge, M.B., **Grozdanic, Sinisa D.**, et al. "Brain-derived neurotrophic factor released from engineered mesenchymal stem cells attenuates glutamate- and hydrogen peroxide-mediated death of staurosporine-differentiated RGC-5 cells." Experimental Eye Research (SSF, Iowa State Univ., 2007)



**Stargardt's Disease, affecting over 25,000 Americans, is the most common form of inherited juvenile macular degeneration and is usually diagnosed before age 20.**

**Jiang, Aihua**, Hu, W., Meng, H., Gao, H., and Qiao, X. "Loss of VLDL receptor activates retinal vascular endothelial cells and promotes angiogenesis." *Investigative Ophthalmology & Visual Science* (PD, Indiana Univ., 2007)

Kassen, S.C., **Thummel, Ryan**, Campochiaro, L.A., Harding, M.J., Bennett, N.A., et al. "CNTF induces photoreceptor neuroprotection and Müller glial cell proliferation through two different signaling pathways in the adult zebrafish retina." *Experimental Eye Research* (PD, Univ. of Notre Dame, 2006)

Lebrun-Julien, F., **Duplan, Laure**, Pernet, V., Osswald, I., Sapieha, P., et al. "Excitotoxic death of retinal neurons in vivo occurs via a non-cell-autonomous mechanism." *The Journal of Neuroscience* (PD, Univ. of Montreal, 2002)

Malta, J.B., Banitt, M., Musch, D.C., Sugar, A., **Mian, Shahzad I.**, et al. "Long-term outcome of combined penetrating keratoplasty with scleral-sutured posterior chamber intraocular lens implantation." *Cornea* (GIA, Kellogg Eye Center, 2007)

Mwaikambo, B.R., Yang, C., Chemtob, S., and **Hardy, Pierre**. "Hypoxia up-regulates CD36 expression and function via hypoxia-inducible factor-1- and phosphatidylinositol 3-Kinase-dependent mechanisms." *The Journal of Biological Chemistry* (GIA, Univ. of Montreal, 2005)

**Saban, Daniel R.**, Chauhan, S.K., Zhang, X., El Annan, J., Jin, Y., and **Dana, Reza**. "'Chimeric' grafts assembled from multiple allospecific donors enjoy enhanced transplant survival." *American Journal of Transplantation* (PD, Massachusetts Eye and Ear Infirmary, 2006; GIA, Schepens Eye Research Institute, 1998)

**Sappington, Rebecca M.**, Sidorova, T., Long, D.J., and Calkins, D.J. "TRPV1: contribution to retinal ganglion cell apoptosis and increased intracellular Ca<sup>2+</sup> with exposure to hydrostatic pressure." *Investigative Ophthalmology & Visual Science* (PD, Vanderbilt Univ. School of Medicine, 2005)

**Scott, Patrick A.**, Lu, Z., Liu, Y., and Gong, H. "Relationships between increased aqueous outflow facility during washout with the changes in hydrodynamic pattern and morphology in bovine aqueous outflow pathways." *Experimental Eye Research* (PD, New England College of Optometry, 2006)

**Stella, Salvatore L., Jr.**, Hu, W.D., and Brecha, Nicholas C. "Adenosine suppresses exocytosis from cone terminals of the salamander retina." *NeuroReport* (GIA, Univ. of Central Arkansas School of Medicine, 2005, and PD, Univ. of California, 2002)

Stepien, K.E., Han, D.P., Schell, J., Godara, P., Rha, J., and **Carroll, Joseph**. "Spectral-domain optical coherence tomography and adaptive optics may detect hydroxychloroquine retinal toxicity before symptomatic vision loss." *Transactions of the American Ophthalmological Society* (GIA, Medical College of Wisconsin, 2007)

Takeda, A., Baffi, J.Z., Kleinman, M.E., Cho, W.G., Nozaki, M., Yamada, K., Kaneko, H., **Albuquerque, Romulo J. C.**, et al. "CCR3 is a target for age-related macular degeneration diagnosis and therapy." *Nature* (PD, Univ. of Kentucky College of Medicine, 2008)

**Wang, Yi-Zhong**, Morale, S.E., Cousins, R., and **Birch, Eileen**. "Course of development of global hyperacuity over lifespan." *Optometry & Vision Science* (GIA, Retina Foundation of the Southwest, 1999 & 2000; and PD, Retina Foundation of the Southwest, 1980 & 1981)

**Yamashita, Testuji**, Liu, J., Gao, J., LeNoue, S., Wang, C., et al. "Essential and synergistic roles of RP1 and RP1L1 in rod photoreceptor axoneme and retinitis pigmentosa." *The Journal of Neuroscience* (PD, St. Jude Children's Research Hospital, 2005)

Zhang, K., **Kumar, Ashok**, Wheeler, M., and Yu, F.S. "Lack of MD2 expression in human corneal epithelial cells is an underlying mechanism of lipopolysaccharide (LPS) unresponsiveness." *Immunology & Cell Biology* (GIA, Wayne State Univ., 2007, and PD, Wayne State Univ., 2005)

"Fight for Sight was cited in over a thousand journal articles from 1970-2009, including prestigious publications such as the *Journal of the American Medical Association (JAMA)*, *Nature*, *Science*, *Ophthalmology*, *American Journal of Ophthalmology*, *Journal of Biological Chemistry*, *Proceedings of the National Academy of Sciences*, and *Investigative Ophthalmology & Visual Science*."

Since 1946, Fight for Sight has supported and inspired eye and vision research by funding promising scientists early in their careers.



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