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2023



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May 18-20, 2023

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Bilyk, Jurij (2017)  
Biousse, Valerie (2023)  
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Bobrow, James (1998)  
Brodsky, Michael (2007)  
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Chan, Clement (2014)  
Chan, Paul (2015)  
Chang, Ta Chen Peter (2022)  
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Chen, John (2023)  
Chen, Teresa (2009)  
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Chow, Alan (2010)  
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Davis, Janet (2012)  
Day, Susan (1995)  
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Dua, Harminder (2014)  
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Eagle Jr., Ralph (1988)  
Edward, Deepak Paul (2011)  
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Elner, Victor (2002)  
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Fawzi, Amani (2019)  
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Fingert, John (2016)  
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Foster, William (2022)  
Fountain, Tamara (2014)  
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Freitag, Suzanne (2020)  
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Gardner, Thomas (1995)  
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Gedde, Steven (2021)  
Gelender, Henry (2006)  
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Good, William (2001)  
Gragoudas, Evangelos (1998)  
Grand, M. Gilbert (2003)  
Gross, Ronald (1999)  
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Gupta, Neeru (2019)  
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Haller, Julia (1996)  
Han, Dennis (2004)  
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Hartnett, Mary (2010)  
Hersh, Peter (2005)  
Holland, Gary (2007)  
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Huang, David (2013)  
Hubbard, G. Baker (2021)  
Humayun, Mark (2001)  
Ip, Michael (2023)  
Jabs, Douglas (1995)  
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Jayasundera, K. Thiran (2022)  
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Jurkunas, Ula (2022)  
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Karp, Carol (2019)  
Katz, L. Jay (2013)  
Kaushal, Shalesh (2006)  
Kempen, John (2019)  
Kerr, Natalie (2011)  
Khan, Arif (2015)  
Kikkawa, Don (2010)  
Kim, Ivana (2016)  
Kim, Judy (2012)  
Kinoshita, Shigeru (2012)  
Kinyoun, James (2008)  
Koch, Douglas (1996)  
Kokame, Gregg (2014)  
Krueger, Ronald (2012)  
Kuppermann, Baruch (2014)  
Lai, Timothy (2015)  
Lam, Byron (2023)  
Lawrence, Mary (2004)  
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Levin, Alex (2014)  
Levin, Leonard (2007)  
Lietman, Thomas (2020)  
Lim, Jennifer (2018)  
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Lin, Shan (2016)  
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Macasai, Marion (2008)  
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Parke II, David (2007)  
Parsa, Cameron (2013)  
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Sadun, Alfredo (1998)  
Sahel, José-Alain (2021)  
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Schubert, Hermann (2005)  
Schuman, Joel (2008)  
Schwab, Ivan (1999)  
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Scott, Ingrid (2022)  
Sears, Jonathan (2013)  
Sebag, Jerry (2005)  
Seddon, Johanna (2019)

Sen, Nida (2017)  
Sheth, Bhavna (2022)  
Shields, Carol (2000)  
Shtein, Roni (2016)  
Siatkowski, R. Michael (2011)  
Siegfried, Carla (2019)  
Silkiss, Rona (2016)  
Singer, Michael (2023)  
Singh, Arun (2022)  
Skuta, Gregory (2022)  
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Sobrin, Lucia (2021)  
Souied, Eric (2020)

Spaide, Richard (2019)  
Spencer, Rand (2006)  
Stager Jr., David (2013)  
Stamper, Robert (1984)  
Stein, Joshua (2013)  
Stewart, Michael (2019)  
Stone, Edwin (2003)  
Stout, Timothy (2006)  
Suh, Donny (2021)  
Tao, Jeremiah (2021)  
Terry, Mark (2007)  
Thompson, John (2003)  
Topouzis, Fotis (2019)  
Traboulsi, Elias (2004)

Traverso, Carlo (2017)  
Tsai, James (2008)  
Tsang, Stephen (2014)  
Tse, David (2005)  
Tyschen, R. Lawrence (2007)  
Vajaranant, Thasarat (2019)  
VanderVeen, Deborah (2022)  
Van Gelder, Russell (2021)  
Van Kuijk, Fredericus (2017)  
Van Meter, Woodford (1996)  
Volpe, Nicholas (2015)  
Wallace, David (2007)  
Walton, David (1979)  
Waring, IV, George (2021)

Weakley Jr., David (1999)  
Weinreb, Robert (2001)  
Weisenthal, Robert (2021)  
Weiss, Jayne (2007)  
Wiggs, Janey (2014)  
Wilson, David (2002)  
Wilson, M. Roy (2002)  
Wilson Jr., M. Edward (2004)  
Wladis, Edward (2019)  
Wong, Tien (2019)  
Yannuzzi, Lawrence (1986)  
Young, Terri (2004)  
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Anderson, Douglas (1981)  
Anderson Jr., W. Banks (1968)  
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Berler, David (1989)  
Biglan, Albert (1990)  
Black, Bradley (2006)  
Blair, Norman (2000)  
Bourne, William (1983)  
Bronson, Nathaniel (1972)  
Brown, Gary (1999)  
Bullock, John (1983)  
Burton, Thomas (1982)  
Carr, Ronald (1974)  
Caldwell, Delmar (1997)  
Chan, Chi-Chao (2003)  
Clarkson, John (1992)  
Coleman, D. Jackson (1986)  
Cooper, William (1985)  
Crawford, J. Brooks (1980)  
Darrell, Richard (1981)  
Dayton, Glenn (1977)  
Donshik, Peter (1994)  
Ellis, Phillip (1971)  
Erie, Jay (2003)  
Farris, R. Linsy (1985)  
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Feldon, Steven (2004)  
Feman, Stephen (1994)  
Flach, Allan (1998)  
Flanagan, Joseph (1980)  
Forbes, Max (1974)  
Forster, Richard (1992)  
Foster, C. Stephen (1986)  
France, Thomas (1984)  
Frank, Robert (1998)

Fraunfelder, Frederick (1976)  
Gaasterland, Douglas (1986)  
Godfrey, William (1987)  
Goldbaum, Michael (2005)  
Goldberg, Morton (1978)  
Gottsch, John (1996)  
Gutman, Froncie (1979)  
Guyton, David (1986)  
Hagler, William (1980)  
Harris, Gerald (1993)  
Hecknively, John (1987)  
Helveston, Eugene (1980)  
Holland, Edward (1996)  
Hull, David (1990)  
Hyndiuk, Robert (1981)  
Ilf, W. Jackson (1985)  
Ing, Malcolm (1981)  
Irvine, Alexander (1980)  
Jampol, Lee (1987)  
Jarrett, William (1981)  
Jones, Dan (1980)  
Kass, Michael (1989)  
Kaufman, Paul (1990)  
Kelley, James (1983)  
Kenyon, Kenneth (1985)  
Klein, Barbara (1993)  
Kreiger, Allan (1991)  
Laibson, Peter (1976)  
Lakhanpal, Vinod (1993)  
Landers III, Maurice (1978)  
Lawwill, Theodore (1982)  
Lemp, Michael (1989)  
L'Esperance Jr., Francis (1968)  
Lewis, Richard Alan (1989)  
Lichter, Paul (1976)  
Liesegang, Thomas (1988)  
Lindstrom, Richard (1990)  
Little, Hunter (1976)

Liu, Donald (2005)  
Manchester, Jr., P. Thomas (1970)  
Maumenee, Irene (1981)  
Mazow, Malcolm (1987)  
McCulley, James (1990)  
McMeel, J. Wallace (1971)  
Meredith, Travis (1993)  
Mets, Marilyn (1999)  
Metz, Henry (1983)  
Meyer, Roger (1986)  
Meyers, Sanford (1994)  
Minckler, Donald (1986)  
Mindel, Joel (1986)  
Miranda, Manuel (1979)  
Mitchell, Paul (1998)  
Nelson, J. Daniel (1995)  
Nirankari, Verinder (1992)  
O'Neill, John (1998)  
Parrish II, Richard (1996)  
Payne, John (1980)  
Pollard, Zane (1997)  
Pulido, Jose (1996)  
Raab, Edward (1982)  
Rao, Narsing (1990)  
Ravin, James (2008)  
Rich, Larry (1999)  
Richards, Richard (1966)  
Ritch, Robert (1994)  
Robb, Richard (1974)  
Robertson, Dennis (1978)  
Robin, Alan (1989)  
Rogers, Gary (2003)  
Runge, Paul (2000)  
Schaefer, Daniel (2007)  
Schocket, Stanley (1986)  
Schultz, Richard (1971)  
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Sergott, Robert (1991)

Sherwood, Mark (2006)  
Shields, Jerry (1981)  
Shields, M. Bruce (1983)  
Sieving, Paul (1993)  
Simon, John (2007)  
Small, Kent (1998)  
Sommer, Alfred (1983)  
Spaeth, George (1975)  
Spivey, Bruce (1976)  
Srinivasan, B. Dobli (1982)  
Stager Sr., David (1996)  
Stark, Walter (1980)  
Straatsma, Bradley (1968)  
Sugar, Alan (1989)  
Summers, C. Gail (1996)  
Taylor, Daniel (1972)  
Taylor, Hugh (1989)  
Thompson, H. Stanley (1977)  
Townsend, William (1991)  
Tso, Mark (1987)  
Van Buskirk, E. Michael (1988)  
Van Newkirk, Mylan (1997)  
Veronneau-Troutman, Suzanne (1978)  
Vine, Andrew (2000)  
Waller, Robert (1982)  
Watzke, Robert (1968)  
Wilensky, Jacob (1991)  
Wilhelmus, Kirk (2000)  
Wilkinson, Charles (1981)  
Wilson, R. Sloan (1983)  
Wilson, Steven (2002)  
Wong, Vernon (1972)  
Woog, John (2007)  
Yanoff, Myron (1975)  
Yeatts, R. Patrick (2005)  
Younge, Brian (1984)

# MINUTES OF THE PROCEEDINGS

## ONE HUNDRED AND FIFTY-NINTH ANNUAL MEETING MAY 18-20, 2023

### THE ONE HUNDRED AND FIFTY-NINTH ANNUAL MEETING OF THE AMERICAN OPHTHALMOLOGICAL SOCIETY (AOS) WAS HELD AT THE OMNI GROVE PARK INN IN ASHEVILLE, NORTH CAROLINA.

On May 18, 2023, Thursday, President **Marco A. Zarbin, MD, PhD** called the opening session to order. The program began with the following Thursday sessions.

#### SCIENTIFIC PAPER SESSION I: THURSDAY, MAY 18, 2023

1. Phase I Trial of Topical Trametinib for the Treatment of Rosacea  
**Edward Wladis, Jacqueline Busingye, Alejandro Adam**
2. Cultivated Autologous Limbal Epithelial Cell (CALEC) Transplantation: Product Development, Manufacture, and Initial Evaluation of Feasibility  
**Ula V. Jurkunas**
3. An Iris Registry-based Assessment of Primary Open-angle Glaucoma Practice Patterns in Academic versus Nonacademic Settings  
**Gregory Skuta, Kai Ding, Flora Lum, Anne Coleman**
4. Progressive Meibomian Gland Dysfunction in Ocular Graft-versus-Host Disease: A Vicious Cycle of Ocular Surface Inflammatory Damage  
**Victor L. Perez, Hazem M. Mousa, Matias Soifer, Cole Beatty, Stephanie Sarantopoulos, Daniel Saban, Robert Levy**
5. Use of Natural Language Processing to Accurately Identify Cataracts and Other Lens Pathology in Electronic Health Record Data – A Study Using the Sight Outcomes Research Collaborative (SOURCE) Repository  
**Joshua Stein, Yunshu Zhou, Chris Andrews, Victoria Addis, Jill Bixler, Judy Kim, Brian McMillian, Saleha Munir, Jeffrey Schultz, Brian Stagg, Sophia Wang, Fasika Woreta**
6. A Model to Predict Refractive Shift after Ocular Growth in Children Undergoing Bilateral Cataract Surgery  
**M. Edward Wilson, Emily Ye, Rupal Trivedi**

#### MARILYN T. MILLER LECTURE: FRIDAY, MAY 19, 2023

Gene Therapy for Retinal Degenerations – Where Do We Stand Now?  
**Jean Bennett, MD, PhD**

#### KNAPP SYMPOSIUM: ENHANCING AND PROLONGING DRUG DELIVERY TO THE EYE

1. Introduction – **Sean P. Donahue, MD, PhD**
2. Enhancing Topical Drug Delivery through Biomaterials – **Justin Hanes, PhD**
3. Suprachoroidal Cannulation and Micro-Needle Delivery – **Timothy W. Olsen, MD**
4. Gene Therapy Delivery for Age-Related Macular Degeneration – **Jacque Duncan, MD**
5. Port Delivery System and Other Intraocular Storage Devices – **Baruch Kuppermann, MD, PhD**
6. Polymeric Nanoparticles, Microparticles, Hydrogels, and Nanopore Films – **Jennifer Kang-Mieler, PhD**
7. Intra-arterial Drug Delivery for Ocular Cancers – **Jasmine H. Francis, MD, FACS**

#### SCIENTIFIC PAPER SESSION II: FRIDAY, MAY 19, 2023

1. Family History of Age-Related Macular Degeneration (AMD) and Genetic Variants Predict Progression to Advanced AMD, Adjusting for Baseline Macular Status, Demographic and Lifestyle Predictors  
**Johanna Seddon, Dikha De, Bernard Rosner**
2. CRISPR Editing Demonstrates RS10490924 Raised Oxidative Stress in iPSC-Derived Retinal Cells from Patients with ARMS2/HTRA1-Related AMD  
**Stephen Tsang, Ya-Ju Chang, Laura Jenny, Yong Shi Li, Xuan Chui, Yang Kong, Janet Sparrow**
3. Detection of Early Diabetic Retinopathy Using OCTA Bloodflow Analysis  
**Jennifer Lim, Albert Dadzie, David Le, Mansour Abtahi, Behrouz Ebrahimi, Taeyoon Son, Xincheng Yao**
4. Planning an Artificial Intelligence-based Diabetic Retinopathy Screening Program Using Human Centered Design  
**R. V. Paul Chan, Angelica Scanzera, Cameron Beversluis, Archit Potharazu, Ariel Leifer, Emily Cole, David Du, Jerry Krishnan, Hugh Musick**
5. UBX1325, A Novel Senolytic Candidate for Patients with DME: 24-Weeks Results for BEHOLD Phase 2 Study  
**Michael Singer, Quan Nguyen, Sharon Klier, Jamie Dananberg**



6. Internal Limiting Membrane Peeling in Patients Undergoing Vitrectomy for Diabetic Tractional Retinal Detachment: A Randomized Clinical Trial

**Ryan Rush**

7. Month 60 Outcomes after Treatment Initiation with Anti-Vascular Endothelial Growth Factor Therapy for Macular Edema Due to Central Retinal or Hemiretinal Vein Occlusion

**Ingrid Scott, Paul VanVeldhuisen, Neal Oden, Michael Ip, Barbara Blodi**

#### **NINTH ANNUAL ARTISTIC SOIREE, MAY 19, 2023**

#### **EXECUTIVE SESSION: SATURDAY, MAY 20, 2023**

#### **SATURDAY SYMPOSIUM: CODE TO CLINIC: IMAGING THE IMPACT OF AGING AND SPECIFIC DISEASE STATES ON THE VISUAL SYSTEM**

1. Introduction – **William F. Mieler, MD**
2. Aging Features on OCT, OCTA, and Fluorescence Lifetime Imaging Ophthalmoscopy (FLIO) – **David Sarraf, MD**
3. Imaging the Retina in Alzheimer’s Disease – Current Evidence and Unmet Needs – **Amani Fawzi, MD**
4. High Resolution Imaging of the Anterior Segment for Ocular Surface Tumors and Age-Related Conditions – **Carol L. Karp, MD**
5. Nerve Fiber Thickness, Optic Nerve Thinning, and Aging – **David Huang, MD, PhD**

#### **SCIENTIFIC PAPER SESSION III:**

#### **SATURDAY, MAY 20, 2023**

1. Five-Year Outcomes of Ranibizumab vs Laser Therapy for the Treatment of Very Low Birthweight Infants with Retinopathy of Prematurity RAINBOW Extension Study  
**James Reynolds, Brian Fleck, Neil Marlow, Alistair Fielder, Domenico Lepore, Andreas Stahl, Han Hao, Mia Weisberger**
2. Use of Immunosuppression and Subsequent Cancer Incidence: Cohort Study  
**John H. Kempen**
3. Ten-Year Outcomes of Uveal Melanoma Based on the Cancer Genome Atlas (TCGA) Classification in 1001 Cases  
**Carol Shields, Eileen Mayro, Zeynep Bas, Philip Dockery, Antonio Yaghy, Sara Lally, Arupa Gaguly, Jerry Shields**
4. Comparative Survival of Patients with Uveal Melanoma According to Gene Expression Profile and PRAME Expression: Interim 36-Month Analysis of the Collaborative Ocular Oncology Group Study Number 2  
**Zelia Correa, Amy Scheffler, Prithvi Mruthyunjaya, Tom Aaberg Jr., Cristina Decatur, Alison Skalet, J. William Harbour**
5. Small Choroidal Melanoma: Evidence for Over Treatment  
**Arun Singh**
6. Long Term Outcomes of the Intraoperative Relaxed Muscle Positioning Technique of Strabismus Surgery in Thyroid Eye Disease  
**Elias Traboulsi, Justin Muste, Kevin Wang, Cathering Hwang, Julian Perry**
7. Effect of Situational Judgment and Value-Alignment Assessment Data on the Ophthalmology Residency Match Process: Methods and Preliminary Results  
**R. Michael Siatkowski, Steven Feldon, Kai Ding, Justin Dvorak**

#### **AOS MEDAL PRESENTATION, MAY 20, 2023**

Introduction of the AOS Medalist, **Dr. Evangelos S. Gragoudas**, presented by **Dr. George Spaeth**.



Dr. Marco Zarbin & his wife Dr. Susan Carter Zarbin

# PAPER AND POSTER ABSTRACTS

## PAPER ABSTRACTS

### PHASE I TRIAL OF TOPICAL TRAMETININB FOR THE TREATMENT OF ROSACEA

**Edward Wladis**, Jacqueline Busingye, Alejandro Adam

### CULTIVATED AUTOLOGOUS LIMBAL EPITHELIAL CELL (CALEC) TRANSPLANTATION: PRODUCT DEVELOPMENT, MANUFACTURE, AND INITIAL EVALUATION OF FEASIBILITY

**Ula V. Jurkunas**

### AN IRIS REGISTRY-BASED ASSESSMENT OF PRIMARY OPEN-ANGLE GLAUCOMA PRACTICE PATTERNS IN ACADEMIC VERSUS NONACADEMIC SETTINGS

**Gregory Skuta**, Kai Ding, Flora Lum, **Anne Coleman**

### PROGRESSIVE MEIBOMIAN GLAND DYSFUNCTION IN OCULAR GRAFT-VERSUS-HOST DISEASE: A VICIOUS CYCLE OF OCULAR SURFACE INFLAMMATORY DAMAGE

**Victor L. Perez**, Hazem M. Mousa, Matias Soifer, Cole Beatty, Stephanie Sarantopoulos, Daniel Saban, Robert Levy

### USE OF NATURAL LANGUAGE PROCESSING TO ACCURATELY IDENTIFY CATARACTS AND OTHER LENS PATHOLOGY IN ELECTRONIC HEALTH RECORD DATA - A STUDY USING THE SIGHT OUTCOMES RESEARCH COLLABORATIVE (SOURCE) REPOSITORY

**Joshua Stein**, Yunshu Zhou, Chris Andrews, Victoria Addis, Jill Bixler, **Judy Kim**, Brian McMillian, Saleha Munir, Jeffrey Schultz, Brian Stagg, Sophia Wang, Fasika Woreta

### A MODEL TO PREDICT REFRACTIVE SHIFT AFTER OCULAR GROWTH IN CHILDREN UNDERGOING BILATERAL CATARACT SURGERY

**M. Edward Wilson**, Emily Ye, Rupal Trivedi

### FAMILY HISTORY OF AGE-RELATED MACULAR DEGENERATION (AMD) AND GENETIC VARIANTS PREDICT PROGRESSION TO ADVANCED AMD, ADJUSTING FOR BASELINE MACULAR STATUS, DEMOGRAPHIC AND LIFESTYLE PREDICTORS

**Johanna Seddon**, Dikha De, Bernard Rosner

### CRISPR EDITING DEMONSTRATES RS10490924 RAISED OXIDATIVE STRESS IN IPSC-DERIVED RETINAL CELLS FROM PATIENTS WITH ARMS2/HTRA1-RELATED AMD

**Stephen Tsang**, Ya-Ju Chang, Laura Jenny, Yong Shi Li, Xuan Cui, Yang Kong, Janet Sparrow

### DETECTION OF EARLY DIABETIC RETINOPATHY USING OCTA BLOODFLOW ANALYSIS

**Jennifer Lim**, Albert Dadzie, David Le, Mansour Abtahi, Behrouz Ebrahimi, Taeyoon Son, Xincheng Yao

### PLANNING AN ARTIFICIAL INTELLIGENCE-BASED DIABETIC RETINOPATHY SCREENING PROGRAM USING HUMAN CENTERED DESIGN

**R. V. Paul Chan**, Angelica Scanzera, Cameron Beversluis, Archit Potharazu, Ariel Leifer, Emily Cole, David Du, Jerry Krishnan, Hugh Musick

### UBX1325, A NOVEL SENOLYTIC CANDIDATE FOR PATIENTS WITH DME: 24-WEEKS RESULTS FOR BEHOLD PHASE 2 STUDY

Michael Singer, **Quan Nguyen**, Sharon Klier, Jamie Dananberg

### INTERNAL LIMITING MEMBRANE PEELING IN PATIENTS UNDERGOING VITRECTOMY FOR DIABETIC TRACTIONAL RETINAL DETACHMENT: A RANDOMIZED CLINICAL TRIAL

**Ryan Rush**

### MONTH 60 OUTCOMES AFTER TREATMENT INITIATION WITH ANTI-VASCULAR ENDOTHELIAL GROWTH FACTOR THERAPY FOR MACULAR EDEMA DUE TO CENTRAL RETINAL OR HEMIRETINAL VEIN OCCLUSION

**Ingrid Scott**, Paul VanVeldhuisen, Neal Oden, Michael Ip, Barbara Blodi

### FIVE-YEAR OUTCOMES OF RANIBIZUMAB VS. LASER THERAPY FOR THE TREATMENT OF VERY LOW BIRTHWEIGHT INFANTS WITH RETINOPATHY OF PREMATURITY RAINBOW EXTENSION STUDY

**James Reynolds**, Brian Fleck, Neil Marlow, Alistair Fielder, Domenico Lepore, Andreas Stahl, Han Hao, Mia Weisberger

USE OF IMMUNOSUPPRESSION AND SUBSEQUENT CANCER INCIDENCE: COHORT STUDY

**John H. Kempen**

TEN-YEAR OUTCOMES OF UVEAL MELANOMA BASED ON THE CANCER GENOME ATLAS (TCGA) CLASSIFICATION IN 1001 CASES

**Carol Shields**, Eileen Mayro, Zeynep Bas, Philip Dockery, Antonio Yaghy, Sara Lally, Arupa Gaguly, **Jerry Shields**

COMPARATIVE SURVIVAL OF PATIENTS WITH UVEAL MELANOMA ACCORDING TO GENE EXPRESSION PROFILE AND PRAME EXPRESSION: INTERIM 36-MONTH ANALYSIS OF THE COLLABORATIVE OCULAR ONCOLOGY GROUP STUDY NUMBER 2

**Zelia Correa**, Amy Scheffler, Prithvi Mruthyunjaya, Tom Aaberg Jr., Cristina Decatur, Alison Skalet, **J. William Harbour**

SMALL CHOROIDAL MELANOMA: EVIDENCE FOR OVER TREATMENT

**Arun Singh**

LONG TERM OUTCOMES OF THE INTRAOPERATIVE RELAXED MUSCLE POSITIONING TECHNIQUE OF STRABISMUS SURGERY IN THYROID EYE DISEASE

**Elias Traboulsi**, Justin Muste, Kevin Wang, Catherine Hwang, Julian Perry

EFFECT OF SITUATIONAL JUDGMENT AND VALUE-ALIGNMENT ASSESSMENT DATA ON THE OPHTHALMOLOGY RESIDENCY MATCH PROCESS: METHODS AND PRELIMINARY RESULTS

**R. Michael Siatkowski**, **Steven Feldon**, Kai Ding, Justin Dvorak

## POSTER ABSTRACTS

GENDER BIAS IN OPHTHALMOLOGY REIMBURSEMENT

**Ron Adelman**, Aidan Gibson, Ava Khosarvi

IN VITRO ANTIBIOTIC RESISTANCE AMONG PRESUMED BACTERIAL KERATITIS ISOLATES IN THE ARMOR SURVEILLANCE STUDY

**Penny A. Asbell**, Christine M. Sanfilippo, Heleen H. DeCory

RISK STRATIFICATION OF OCULAR EMERGENCIES USING SMARTPHONE EXTERNAL PHOTOGRAPHY

**Preston Blomquist**, Lance Stutz, Aiden Gregston, Linda Hynan, Richard Hession

HEALTHCARE EDUCATIONAL RETURNS

**Gary Brown**, Melissa Brown

OPHTHALMOLOGY AND THE NOBEL PRIZES

**John D. Bullock**

PRE-DESCEMET STROMA IS OPTICALLY TRANSPARENT EVEN IN THE ABSENCE OF CORNEAL ENDOTHELIUM

**Massimo Busin**, Angeli Christy Yu, Alessandro Ruzza, Diego Ponzin

FREQUENCY OF STRABISMUS AFTER TUBE SHUNT SURGERY IN THE ADULT VERSUS PEDIATRIC POPULATIONS

**Teresa Chen**, Maria Guzman Aparicio

ASSOCIATION BETWEEN SOCIAL VULNERABILITY SCORES AND VISION DIFFICULTY IN THE UNITED STATES

Janet Coleman-Belin, Deyu Pan, Victoria Tseng, Ken Kitayama, Fei Yu, **Anne Coleman**

OCULAR PAIN AFTER REFRACTIVE SURGERY: PRELIMINARY ANALYSIS OF EPIDEMIOLOGY AND RISK FACTORS

**Anat Galor**, Jason Betz, Hannah Behrens, Brooke Harkness, Richard Stutzman, **Winston Chamberlain**, Marie Perez Blanco, Deborah Hegarty, Sue Aicher

SYNTHETIC BIOLOGY FOR OPHTHALMIC GENE THERAPY

Lucie Guo, Jing Bian, Alex Davis, Rain Wen, Pingting Liu, Haoliang Huang, Hannah Kempton, Yang Hu, Sui Wang, Stanley Qi, **Jeffrey Goldberg**

OXIDIZED CHOLESTEROL INDUCES RPE TO RELEASE INFLAMMATORY CYTOKINES AND VEGF: A POTENTIALLY TREATABLE CAUSE OF FIBROSIS IN UNTREATABLE AMD

**Mary Elizabeth Hartnett**, Aniket Ramshekar, Haibo Wang, Thaonhi Cung, Chris Wallace-Carrete, Chandler Zaugg, Jasmine Nguyen

OUTCOMES OF STRABISMUS SURGERY IN PATIENTS FOLLOWING TEPROTUMUMAB THERAPY

Grant Hilliard, **Natalie Kerr**

CONTENT GENERATION, PSYCHOMETRIC VALIDATION, AND APPLICATION IN CLINICAL PRACTICE AND TRIALS OF PATIENT REPORTED OUTCOME MEASURES FOR INHERITED RETINAL DISEASES

**K. Thiran Jayasundera**, David Musch

OCULAR SURFACE SQUAMOUS NEOPLASIA: CHANGES IN THE STANDARD OF CARE 2003 TO 2022

**Carol Karp**, Jason Greenfield, Adam Cohen, **Anat Galor**, **James Chodosh**, Donald Stone

[CLINICAL CHARACTERISTICS OF AXENFELD-RIEGER SYNDROME IN CHILDREN](#)

Nikhila Khandwala, Divya Sree Ramya Achanta, Pooja Jadon, Sneha Barur, Anil Kumar Mandal, Muralidhar Ramappa, **Deepak Edward**

[SYSTEMIC DISEASE BURDEN MEDIATES RACIAL AND ETHNIC DISPARITIES IN INCISIONAL GLAUCOMA SURGICAL OUTCOMES: A CAUSAL MEDIATION ANALYSIS](#)

Ken Kitayama, Victoria Tseng, Fei Yu, **Anne Coleman**

[DID OTTOMAN TRAVELLER EVLIYA ÇELEBI INTRODUCE CATARACT ASPIRATION INTO WESTERN EUROPE IN 1665?](#)

**Christopher Leffler**

[INTER-SURGEON VARIATION IN REOPERATION FOLLOWING STRABISMUS SURGERY AMONG MEDICARE BENEFICIARIES: ASSOCIATIONS WITH ADJUSTABLE SUTURES, PATIENT AND SURGEON CHARACTERISTICS](#)

**Christopher Leffler**, Alicia Wook, Meagan Shinbashi, Melissa Suggs

[LISCH EPITHELIAL CORNEAL DYSTROPHY IS NOT A X-CHROMOSOMAL BUT AN AUTOSOMAL DOMINANT INHERITED DISORDER](#)

**Walter Lisch**

[OPHTHALMOLOGIST TURNOVER: AN ANALYSIS OF THE PHYSICIAN WORKFORCE THE UNITED STATES](#)

Ravi Parikh, Prem Patel, Amar Sheth, Parth Patel, Harris Ahmed, John Markle, Tedi Begaj, **James Tsai**

[NAION IS CAUSED BY PAPILLARY VITREOUS SEPARATION](#)

**Cameron Parsa**, Mostafa Sanjari, Khalil Falavarjani, Ali Akbarzadeh, Kaveh Aghdam

[STAKEHOLDER PERSPECTIVES ON BARRIERS AND FACILITATORS TO IMPLEMENTING SUSTAINABILITY INTERVENTIONS IN CATARACT SURGERY](#)

Brooke Sherry, Maria De Los Angeles Ramos Cadena, Christina Prescott, **Joel Schuman**, Cassandra Thiel

[NORTH CAROLINA MACULAR DYSTROPHY \(NCMD/MCDR1\): ANALYSIS OF OUR ENTIRE DATABASE, A MODEL DISEASE OF NON-CODING MUTATIONS](#)

**Kent Small**

[RACIAL AND ETHNIC DIFFERENCES IN THE PREVALENCE OF NEOVASCULAR GLAUCOMA IN AT-RISK BENEFICIARIES IN THE CALIFORNIA MEDICARE POPULATION](#)

Victoria Tseng, Ken Kitayama, Fei Yu, **Anne Coleman**

[MACHINE LEARNING APPROACHES FOR PREDICTING GLAUCOMA PROGRESSION IN A LARGE MULTICENTER ELECTRONIC HEALTH RECORDS CONSORTIUM: THE SIGHT OUTCOMES RESEARCH COLLABORATIVE \(SOURCE\)](#)

Sophia Wang, **Joshua Stein**

[COMPARISON OF THE LONG-TERM RESULTS OF DESCEMET'S STRIPPING AUTOMATED ENDOTHELIAL KERATOPLASTY \(DSAEK\) AND DESCEMET'S MEMBRANE ENDOTHELIAL KERATOPLASTY \(DMEK\) IN FELLOW EYES FOR TREATMENT OF FUCHS ENDOTHELIAL DYSTROPHY \(FED\)](#)

**Robert Weisenthal**

[CELL BASED THERAPY FOR RETINAL DISEASE](#)

**David Wilson**, Jonathan Stoddard, Martha Neuringer, Trevor McGill

# REGISTERED MEMBERS OF THE ANNUAL MEETING

Ron A. Adelman, MD, MPH, MBA.....	Active Member	Anat Galor, MD, MSPH.....	Active Member
J. Fernando Arevalo, MD, PhD, FACS.....	Active Member	William A. Godfrey, MD.....	Emeritus Member
Penny A. Asbell, MD.....	Active Member	Jeffrey L. Goldberg, MD, PhD.....	Active Member
James J. Augsburger, MD.....	Emeritus Member	John D. Gottsch, MD.....	Emeritus Member
J. Bronwyn Bateman, MD.....	Active Member	Evangelos S. Gragoudas, MD.....	Active Member
Jurij R. Bilyk, MD.....	Active Member	Hans E. Grossniklaus, MD.....	Active Member
Bradley C. Black, MD.....	Active Member	Neeru Gupta, MD, PhD, MBA, FRCSC.....	Active Member
Preston H. Blomquist, MD.....	Active Member	Julia A. Haller, MD.....	Active Member
Gary C. Brown, MD.....	Emeritus Member	Dennis P. Han, MD.....	Active Member
Don Budenz, MD, MPH.....	Active Member	J. William Harbour, MD.....	Active Member
John D. Bullock, MD, MS, MPH.....	Emeritus Member	David Huang, MD, PhD.....	Active Member
Massimo Busin, MD.....	Active Member	Henry D. Jampel, MD.....	Active Member
Louis B. Cantor, MD.....	Active Member	K. Thiran Jayasundera, MD, FRCSC, FRANZCO.....	Active Member
Winston Chamberlain, MD, PhD.....	Active Member	Ula V. Jurkunas, MD.....	Active Member
Clement Chan, MD, FACS.....	Active Member	Carol L. Karp, MD.....	Active Member
RV Paul Chan, MD.....	Active Member	L. Jay Katz, MD.....	Active Member
Ta Chen Peter Chang, MD.....	Active Member	John H. Kempen, MD, MHS, MPH, PhD.....	Active Member
Teresa Chen, MD.....	Active Member	Natalie C. Kerr, MD, FACS.....	Active Member
Emily Y. Chew, MD.....	Active Member	Ivana K. Kim, MD.....	Active Member
George A. Cioffi, MD.....	Active Member	Judy E. Kim, MD.....	Active Member
Anne L. Coleman, MD.....	Active Member	Baruch D. Kuppermann, MD, PhD.....	Active Member
Zelia M. Correa, MD, PhD.....	Active Member	Mary G. Lawrence, MD, MPH.....	Active Member
Janet L. Davis, MD.....	Active Member	Christopher T. Leffler, MD.....	Active Member
Susan H. Day, MD.....	Active Member	Jennifer I. Lim, MD.....	Active Member
Sean P. Donahue, MD, PhD.....	Active Member	Walter Lisch, MD.....	Active Member
William Joseph "BJ" Dupps Jr, MD, PhD.....	Active Member	Marian Macsai, MD.....	Active Member
Ralph C. Eagle, Jr., MD.....	Active Member	Malcolm L. Mazow, MD.....	Emeritus Member
Deepak P. Edward, MD.....	Active Member	Marguerite McDonald, MD.....	Active Member
Susan G. Elner, MD.....	Active Member	Stephen D. McLeod, MD.....	Active Member
Victor M. Elner, MD, PhD.....	Active Member	William F. Mieler, MD.....	Active Member
Bitu Esmaeli, MD, FACS.....	Active Member	Joan W. Miller, MD.....	Active Member
Amani Fawzi, MD.....	Active Member	Tatyana Milman, MD.....	Active Member
Frederick L. Ferris, MD.....	Active Member	Peter A. Netland, MD, PhD.....	Active Member
Gary E. Fish, MD.....	Active Member	Quan Dong Nguyen, MD, MS.....	Active Member
William J. Foster, MD, PhD, FRCSC.....	Active Member	T. Michael Nork, MD, MS.....	Active Member
C. Stephen Foster, MD.....	Emeritus Member	Timothy W. Olsen, MD.....	Active Member
Thomas France, MD.....	Emeritus Member	David W. Parke, II, MD.....	Active Member
Frederick W. Fraunfelder, MD.....	Active Member	Cameron F. Parsa, MD.....	Active Member
Frederick T. Fraunfelder, MD.....	Emeritus Member	Victor L. Perez, MD.....	Active Member

James D. Reynolds, MD ..... Active Member  
 Karolinne M. Rocha, MD, PhD..... Active Member  
 Paul E. Runge, MD ..... Emeritus Member  
 Ryan B. Rush, MD ..... Active Member  
 David Sarraf, MD ..... Active Member  
 Hermann D. Schubert, MD..... Active Member  
 Ivan Schwab, MD ..... Active Member  
 Daniel M. Schwartz, MD ..... Active Member  
 Ingrid U. Scott, MD, MPH..... Active Member  
 Johanna M. Seddon, MD ..... Active Member  
 Mark Sherwood, MD..... Emeritus Member  
 Bhavna P. Sheth, MD, MBA..... Active Member  
 Carol L. Shields, MD..... Active Member  
 Mike Siatkowski, MD ..... Active Member  
 Carla Siegfried, MD ..... Active Member  
 Arun D. Singh, MD..... Active Member  
 Gregory L. Skuta, MD..... Active Member  
 Kent W. Small, MD ..... Active Member  
 George L. Spaeth, MD..... Emeritus Member  
 Rand Spencer, MD ..... Active Member  
 Bruce E. Spivey, MD..... Emeritus Member  
 Joshua D. Stein, MD, MS ..... Active Member  
 Donny W. Suh, MD ..... Active Member  
 Mark A. Terry, MD..... Active Member  
 John T. Thompson, MD ..... Active Member  
 Elias I. Traboulsi, MD ..... Active Member  
 Stephen H. Tsang, MD, PhD..... Active Member  
 Thasarat Sutabutr Vajaranant, MD..... Active Member  
 Fredericus van Kuijk, MD, PhD..... Active Member  
 Woodford S. Van Meter, MD..... Active Member  
 Deborah Vanderveen, MD ..... Active Member  
 Nicholas J. Volpe, MD ..... Active Member  
 David K. Wallace, MD..... Active Member  
 George O. Waring, IV, MD ..... Active Member



New member Dr. Neeru Gupta signing the AOS membership book

Robert Weisenthal, MD ..... Active Member  
 Janey L. Wiggs, MD, PhD..... Active Member  
 Charles “Pat” Wilkinson, MD ..... Active Member  
 David J. Wilson, MD ..... Active Member  
 M. Edward Wilson, Jr., MD..... Active Member  
 M. Roy Wilson, MD, MS ..... Active Member  
 Edward “Ted” Wladis, MD ..... Active Member  
 Terri L. Young, MD, MBA..... Active Member  
 Marco A. Zarbin, MD, PhD ..... Active Member

# NAMED LECTURES

## FREDERICK H. VERHOEFF LECTURERS

1961	DR. ARTHUR J. BEDELL	2003	DR. THADDEUS P. DRYJA <i>How Molecular Genetics is Lifting the Fog: The Etiology of Retinitis Pigmentosa</i>
1964	SIR STEWART DUKE-EDLER		
1969	DR. DAVID G. COGAN		
1971	DR. LORENZ E. ZIMMERMAN	2010	DR. ADRIAN GLASSER <i>Physiology of Accommodation and Pathogenesis of Presbyopia</i>
1973	DR. IRVING H. LEOPOLD		
1975	DR. ARTHUR GERARD DEVOE	2013	DR. ALFRED SOMMER <i>Preventing Blindness &amp; Child Mortality with Vitamin A: An AOS Odyssey</i>
1977	PROF. JULES FRANCOIS		
1979	DR. SAIICHI MISHIMA		
1983	DR. RICHARD W. YOUNG	2014	DR. TIMOTHY STOUT <i>The Rocky Road to Successful Human Gene Therapy</i>
1989	DR. FREDERICK C. BLODI		
1992	DR. FRANCIS I. COLLINS	2019	DR. MICHAEL TRESE <i>A New Approach to VEGF Driven Retinal Vascular Leakage in Inherited and Acquired Retinal Vascular Disease</i>
1993	DR. JORAM PIATIGORSKY		
1997	DR. GEOFFREY ARDEN	2022	KRISTIN E. LAUTER <i>From Academia to Social Media: My Journey into Artificial Intelligence and Machine Learning</i>
2002	DR. PAUL SIEVING <i>How Many Photoreceptors Do We Need for Vision?</i>		

## FREDERICK C. BLODI LECTURERS

2015	DR. TIMOTHY W. OLSEN (Inaugural) <i>The Age-related Macular Degeneration Complex: Linking Epidemiology and Histopathology Using the Minnesota Grading System</i>	2016	DR. ELIAS I. TRABOULSI <i>Zonules and Molecules: The Underlying Pathophysiology of Ectopia Lentis</i>
		2017	DR. JOSEPH CAPRIOLI <i>Retinal Ganglion Cell Rescue in Glaucoma</i>

## MARILYN T. MILLER LECTURERS

2021	DR. ANTHONY FAUCI (Inaugural) <i>COVID-19 in 2021: Lessons Learned and Remaining Challenges</i>	2023	DR. JEAN BENNETT <i>Gene Therapy for Retinal Degenerations – Where Do We Stand Now?</i>
2022	DR. MICHAEL F. CHIANG <i>NEI: Past, Present, and Future</i>		

# MEDAL RECIPIENTS

## RECIPIENTS OF THE LUCIEN HOWE MEDAL

1922 .....	DR. CARL KOLLER, New York, NY	1961.....	DR. FREDERICK C. CORDES, San Francisco, CA
1923 .....	DR. ALEXANDER DUANE, New York, NY	1962.....	DR. FRANK B. WALSH, Baltimore, MD
1924 .....	DR ERNEST FUCHS, Vienna, Austria	1963 .....	DR. EDWIN B. DUNPHY, Boston, MA
1925 .....	NO AWARD	1964 .....	DR. WILLIAM L. BENEDICT, Rochester, MN
1926 .....	DR. EDWARD JACKSON, Denver, CO	1965 .....	DR. DAVID G. COGAN, Boston, MA
1927 .....	MR. PRIESTLY SMITH, Birmingham, England	1966 .....	DR. DOHRMANN K. PISCHEL, San Francisco, CA
1928 .....	NO AWARD	1967 .....	DR. PAUL A. CHANDLER, Boston, MA
1929 .....	DR. THEODOR AXENFELD, Freiburg, Germany	1968 .....	DR. WALTER MORTON GRANT, Boston, MA
1930 .....	NO AWARD	1969 .....	DR. A. EDWARD MAUMENEE, Baltimore, MD
1931 .....	NO AWARD	1970 .....	DR. PETER C. KRONFELD, Chicago, IL
1932 .....	DR. F. H. VERHOEFF, Boston, MA	1971 .....	DR. C. WILBUR RUCKER, Rochester, MN
1933 .....	NO AWARD	1972 .....	DR. WALTER S. ATKINSON, Watertown, NY
1934 .....	DR. GEORGE E. DE SCHWEINITZ, Philadelphia, PA	1973 .....	DR. GORDON M. BRUCE, Fort Lee, NJ
1935 .....	NO AWARD	1974 .....	DR. IRVING H. LEOPOLD, New York, NY
1936 .....	SIR JOHN HERBERT PARSONS, London, England	1975 .....	DR. MICHAEL J. HOGAN, San Francisco, CA
1937 .....	DR. ARNOLD KNAPP, New York, NY	1976 .....	DR. EDWARD W. D. NORTON, Miami, FL
1938 .....	NO AWARD	1977 .....	DR. KENNETH C. SWAN, Portland, OR
1939 .....	NO AWARD	1978 .....	DR. S. RODMAN IRVINE, Newport Beach, CA
1940 .....	NO AWARD	1979 .....	DR. FRANK W. NEWELL, Chicago, IL
1941 .....	NO AWARD	1980 .....	DR. FREDERICK C. BLODI, Iowa City, IA
1942 .....	DR. E. V. L. BROWN, Chicago, IL	1981 .....	DR. DAVID O. HARRINGTON, San Francisco, CA
1943 .....	NO AWARD	1982 .....	DR. ARTHUR GERARD DEVOE, New York, NY
1944 .....	NO AWARD	1983 .....	DR. J. DONALD M. GASS, Miami, FL
1945 .....	DR. WALTER B. LANCASTER, Boston, MA	1984 .....	DR. HAROLD G. SCHEIE, Philadelphia, PA
1946 .....	SIR STEWART DUKE-ELDER, London, England	1985 .....	DR. ROBERT N. SHAFFER, San Francisco, CA
1947 .....	DR. LAWRENCE T. POST, St Louis, MO	1986 .....	DR. ROBERT W. HOLLENHORST, Rochester, MN
1948 .....	DR. WILLIAM ZENTMAYER, Philadelphia, PA	1987 .....	DR. DUPONT GUERRY III, Richmond, VA
1949 .....	DR. PHILLIPS THYGESON, San Jose, CA	1988 .....	DR. THOMAS D. DUANE, Philadelphia, PA
1950 .....	DR. ALGERNON B. REESE, New York, NY	1989 .....	DR. MARSHALL M. PARKS, Washington, DC
1951.....	DR. JONAS S. FRIEDENWALD, Baltimore, MD	1990 .....	DR. DAVID SHOCH, Chicago, IL
1952 .....	DR. FRANCIS H. ADLER, Philadelphia, PA	1991 .....	DR. ARNALL PATZ, Baltimore, MD
1953 .....	DR. ALAN C. WOODS, Baltimore, MD	1992 .....	DR. BRADLEY R. STRAATSMA, Los Angeles, CA
1954 .....	DR. JOHN H. DUNNINGTON, New York, NY	1993 .....	DR. BRUCE E. SPIVEY, San Francisco, CA
1955 .....	DR. ARTHUR J. BEDELL, Albany, NY	1994 .....	DR. THOMAS P. KEARNS, Rochester, MN
1956 .....	DR. BERNARD SAMUELS, New York, NY	1995 .....	DR. WILLIAM H. SPENCER, San Francisco, CA
1957 .....	DR. GEORGIANA DVORAK-THEOBALD, Oak Park, IL	1996 .....	DR. ROBERT MACHEMER, Durham, NC
1958 .....	DR. IDA C. MANN, Nedlands, Western Australia	1997 .....	DR. W. RICHARD GREEN, Baltimore, MD
1959.....	DR. LUDWIG VON SALLMANN, Bethesda, MD	1998 .....	DR. ALAN B. SCOTT, San Francisco, CA
1960.....	DR. DERRICK T. VAIL, Chicago, IL	1999 .....	DR. LORENZ E. ZIMMERMAN, Washington, DC



2000 ..... DR. WILLIAM S. TASMAN, Philadelphia, PA  
2001 ..... DR. STANLEY M. TRUHLSEN, Omaha, NE  
2002 ..... DR. CROWELL BEARD, San Jose, CA  
2003 ..... DR. ALFRED SOMMER, Baltimore, MD  
2004 ..... DR. ARTHUR JAMPOLSKY, Belvedere, CA  
2005 ..... DR. STEPHEN J. RYAN, Los Angeles, CA  
2006 ..... DR. MATTHEW D. DAVIS, Madison, WI  
2007 ..... DR. DANIEL M. ALBERT, Madison, WI  
2008 ..... DR. PAUL R. LICHTER, Ann Arbor, MI  
2009 ..... DR. DENIS O'DAY, Nashville, TN

2010 ..... DR. MARILYN T. MILLER, Chicago, IL  
2011 ..... DR. ROBERT R. WALLER, Memphis, TN  
2012 ..... DR. HUGH R. TAYLOR, Carlton, Australia  
2013 ..... DR. DAN B. JONES, Bellaire, TX  
2014 ..... DR. MORTON F. GOLDBERG, Baltimore, MD  
2015 ..... DR. JOHN G. CLARKSON, Miami, FL  
2016 ..... DR. SUSAN H. DAY, Chicago, IL  
2017 ..... DR. GEORGE L. SPAETH, Philadelphia, PA  
2018 ..... DR. JOAN MILLER, Winchester, MA  
2019 ..... DR. JERRY A. SHIELDS, Philadelphia, PA

## RECIPIENTS OF THE AOS MEDAL

2020..... NO AWARD  
2021..... DR. PETER R. LAIBSON, Philadelphia, PA

2022..... DR. EMILY Y. CHEW, Bethesda, MD  
2023..... DR. EVANGELOS S. GRAGOUDAS, Cambridge, MA



2023 AOS Medalist Dr. Evangelos Gragoudas

# 2023 THESES PUBLISHED IN THE AJO

**Francesco Bandello, MD, FEBO**

IMAGING BIOMARKERS OF MESOPIC AND DARK-ADAPTED  
MACULAR FUNCTIONS IN EYES WITH TREATMENT-NAÏVE  
MILD DIABETIC RETINOPATHY

**Jesse Berry, MD**

AQUEOUS HUMOR LIQUID BIOPSY AS A COMPANION  
DIAGNOSTIC FOR RETINOBLASTOMA: IMPLICATIONS FOR  
DIAGNOSIS, PROGNOSIS AND THERAPEUTIC OPTIONS.  
FIVE YEARS OF PROGRESS

**Valerie Biousse, MD**

APPLICATION OF A DEEP LEARNING SYSTEM TO DETECT  
PAPILLOEDEMA ON NONMYDRIATIC OCULAR FUNDUS  
PHOTOGRAPHS IN AN EMERGENCY DEPARTMENT

**Claude F. Burgoyne, MD**

OCT OPTIC NERVE HEAD MORPHOLOGY IN MYOPIA  
II: PERI-NEURAL CANAL SCLERAL BOWING AND  
CHOROIDAL THICKNESS IN HIGH MYOPIA – AN AMERICAN  
OPHTHALMOLOGICAL SOCIETY THESIS

**John J. Chen, MD, PhD**

VISUAL OUTCOMES FOLLOWING PLASMA EXCHANGE  
FOR OPTIC NEURITIS: AN INTERNATIONAL MULTICENTER  
RETROSPECTIVE ANALYSIS OF 395 OPTIC NEURITIS ATTACKS

**Jacque L. Duncan, MD**

CHANGE IN CONE STRUCTURE OVER 24 MONTHS IN USH2A-  
RELATED RETINAL DEGENERATION

**Michael Ip, MD**

MONTH 60 IMAGING FINDINGS AND RELATIONSHIP TO  
TREATMENT OUTCOMES FOLLOWING ANTI-VEGF THERAPY  
FOR MACULAR EDEMA DUE TO CENTRAL OR HEMI RETINAL  
VEIN OCCLUSION

**Byron Lam, MD**

LEBER HEREDITARY OPTIC NEUROPATHY GENE THERAPY:  
LONGITUDINAL RELATIONSHIPS AMONG VISUAL FUNCTION  
AND ANATOMICAL MEASURES

**Ronald Mancini, MD**

SUTURELESS CONJUNCTIVA-SPARING POSTERIOR PTOSIS  
REPAIR SURGERY: A NOVEL TECHNIQUE

**Jonathan S. Myers, MD**

10-YEAR CLINICAL OUTCOMES OF TUBE SHUNT SURGERY  
AT A TERTIARY CARE CENTER

**Michael Singer, MD**

CORNEAL SENSITIVITY IS INVERSELY CORRELATED WITH  
SEVERITY OF DIABETIC RETINOPATHY IN A PREDOMINANTLY  
UNDERREPRESENTED POPULATION

# REPORTS

## REPORT FROM THE EXECUTIVE VICE PRESIDENT AND EDITOR

DAVID J. WILSON, MD

### EXECUTIVE VICE PRESIDENT REPORT

Following the 2022 Annual Meeting the AOS Council met in Chicago on October 15, 2022. During the Council Meeting the Council presented lectures to the residents, fellows and faculty members from multiple Chicago Academic Ophthalmology Programs. The Council reviewed the comments from the 2022 Annual Meeting, and initiated conversations on future meeting sites and topics. In addition, the plans for the 2023 AOS Annual Meeting Program were discussed and finalized. The next Fall Council Meeting will be held in Dallas on October 5, 2023.

The AOS financials are beginning to recover and the March 31, 2022 total fund balance is roughly identical to that of March 31, 2021; this despite use of revenue from the funds to cover AOS expenses including \$250,000 for the Annual Meeting.

The AOS currently has 259 active members and 140 Emeritus members. This year we have a robust number of candidates – 21.

The AOS continues with several programs to support activities in line with the AOS mission. The Annual Meeting Travel Grants are used to engage with young ophthalmologists to make them aware of the Society, and gauge their interest and suitability for membership. The AOS provides funds to support the Heed Resident Retreat, The AAO/AUPO Minority Mentoring in Ophthalmology Program, and has provided funds to support the AAO Museum of Ophthalmology. The AOS also teams with the ABO to present a symposium at the AAO Annual Meeting. This year's symposium is titled: What You Need to Know from the Past Year's Literature.



### EDITOR'S REPORT

This year there were 16 Theses accepted by the AOS Thesis Committee. The acceptance of a candidate's thesis is the final step in the application process for the AOS. The accepted theses will be published in the special edition of the American Journal of Ophthalmology. This arrangement for publication of the theses, initially worked out by **Hans Grossniklaus** and **Richard Parrish** has proven to be an excellent avenue to provide perpetual exposure of these excellent works. We plan to renew the contract between the AOS and the AJO to continue this very valuable relationship.

# REPORT FROM THE COUNCIL CHAIR

**WILLIAM F. MIELER, MD**

The 159th Annual Meeting of the American Ophthalmological Society (AOS) was held May 18-20, 2023 in Asheville, NC, at the Omni Grove Park Inn. The meeting of course was fully in person, and all members who attended the meeting seemed to thoroughly enjoy the scientific aspects of the meeting, along with the location of the meeting, and the slightly modified agenda schedule.

Similar to past years, the AOS council continues to work throughout the year, in an effort to provide a superb annual meeting. Your AOS Council consisted of **William F. Mieler, MD** as the Council Chair, and the Council members included **Preston H. Blomquist, MD**, **Emily Chew, MD** (who replaced **Stephen D. McLeod, MD** due to his role in the American Academy of Ophthalmology), **David F. Wallace, MD**, and **Mary Elizabeth Hartnett, MD**. **Marco A. Zarbin, MD**, served as President and **David J. Wilson, MD** continued his dual roles as the Executive Vice President and Editor for Transactions of the AOS (TAOS).

## THE ANNUAL MEETING OF THE AOS IN ASHEVILLE, NC, MAY 18-20, 2023

The Omni Grove Park Inn, on the outskirts of Asheville, NC, served as a great venue for the annual AOS meeting. Fortunately, the weather was pleasant throughout the meeting, allowing for the usual AOS outdoor recreational events (tennis, golf, wild food stroll), during the afternoon timeframes when the scientific meeting was not in session.

Thursday, May 18th served as a welcome and introduction of our new members. Following completion of the meeting in 2022, 14 members had their theses approved. They were welcomed into the Society via an early afternoon luncheon, followed by Spotlight introductions and presentations. Then following a late afternoon two-hour scientific session of six free papers, there was a formal early evening Welcoming Reception for the new members.

On Friday, May 19th, the scientific program continued. Many thanks to **Sean P. Donahue, MD**, who served as Chair of our Scientific Program Committee. Through the work of Sean and support from **William F. Mieler, MD** as well, Jean Bennett, MD, PhD, Philadelphia, PA, gave the featured Marilyn T. Miller Lecture on Gene Therapy for Retinal Degenerations: Where Do We Stand Now? This presentation of course followed the landmark work of Jean

Bennett and Al Maguire, MD, PhD, from six years earlier on the introduction of gene therapy into ophthalmology and medicine in general, for the treatment of Lebers Congenital Amaurosis (LCA).

The Herman Knapp Symposium followed the Marilyn T Miller Lecture and continued the theme of Drug Delivery to the Eye. Justin Hanes, PhD, Baltimore, MD, spoke on Enhancing Topical Drug Delivery through Biomaterials, followed by **Timothy Olsen, MD**, Rochester, MN, speaking on Suprachoroidal Cannulation and Micro-Needle Delivery. Following these two presentations, **Jacque Duncan, MD**, San Francisco, CA spoke on Gene Therapy Delivery for Age-Related Macular Degeneration. Next up was **Baruch Kuppermann, MD, PhD**, Newport Beach, CA, speaking on the Port Delivery System and Other Intraocular Storage Devices. Jennifer J. Kang-Mieler, PhD, Chicago, IL, then presented an update on drug delivery via Polymeric Nanoparticles, Microparticles, Hydrogels, and Nanopore Films. Finally, Jasmine Francis, MD, New York, NY concluded the symposium speaking on Intra-Arterial Drug Delivery for Ocular Cancers. The symposium was top notch and well received by the AOS membership.

The Friday scientific program then concluded with viewing and discussion of 13 posters, and an additional free paper session involving seven presentations.

The Saturday, May 20th Saturday Symposium was entitled Imaging the Impact of Aging and Specific Disease States on the Visual System. Leading off the one-hour symposium was Felipe Medeiros, MD, PhD, Raleigh Durham, NC, speaking on the Aging Brain and Its Impact on Visual Function. He was followed by **David Sarraf, MD**, Los Angeles, CA, speaking on Aging Features on OCT, OCTA, and Fluorescence Lifetime Imaging Ophthalmoscopy (FLIO). **Amani Fawzi, MD**, Chicago, IL followed speaking on imaging the Retina in Alzheimer's Disease: Current Evidence and Unmet Needs. Rounding out the symposium **Carol Karp, MD**, Miami, FL who spoke on High Resolution Imaging of the Anterior Segment for Ocular Surface Tumors and Age-Related Conditions, and finally by **David Huang MD, PhD**, Portland, OR, speaking on Nerve Fiber Thickness, Optic Nerve Thinning, and Aging. Similar to the Herman Knapp Symposium, the Saturday Symposium was very well received.

Concluding the Saturday Symposium, an additional 14 posters were presented and discussed followed by seven more scientific presentations. The Saturday scientific sessions concluded the agenda, with the exception of afternoon sports events and the usual formal Gala Banquet. With the changed agenda of the AOS, there were no scientific presentations on Sunday.

### AOS COUNCIL ACTIVITY

Similar to previous years, many thanks to the Members of the Council (previously listed) who met in Chicago, IL, in the autumn of 2022 to prepare for the 2023 Annual Meeting. Also, many thanks to the numerous committees who met virtually behind the scenes throughout the course of the past year. These committees include the Program Committee, Membership Committee, New Members Committee, Thesis Committee, Awards Committee, and the Communications Committee.

Special thanks also to **David J Wilson, MD**, who seamlessly took over the reins of the AOS organization, following the retirement of **Hans Grossniklaus, MD** a year ago. Under **David's** guidance, the AOS organization continues to flourish both professionally and financially as well.



### AOS MEMBERSHIP

Members of the AOS continue to strongly encourage eligible applicants to apply for AOS membership. The AOS organization is the oldest ongoing society in ophthalmology, and we all want the organization to thrive indefinitely. The AOS is comprised of numerous highly distinguished ophthalmologists. As noted previously, 14 new members were welcomed into the organization at the 2023 Annual Meeting. The theses of the new members get excellent visibility via the ongoing publishing agreement with the American Journal of Ophthalmology (AJO). Thanks to **Richard Parrish, MD**, as Editor of the AJO, for his ongoing support.

### SPECIAL THANKS

It has been my honor serving the AOS organization, initially as a member since 1997, followed by a member of the Council (2018-23), and most recently as Chair of the Council this past year. The success of the AOS is based on the contributions of so many talented ophthalmologists and the success of the organization is truly a team effort.

A special thanks to Amber Mendez, Alissa Evans, and Tim Losch for the AOS organizational support. They are truly wonderful, highly talented, and a pleasure to work with.

Finally, it's on to the AOS 2024 Annual Meeting, slated for La Jolla, CA, May 16-18, 2024. We are all looking forward to returning to La Jolla, CA, as the site for another top quality gathering of the AOS scientific community.

# REPORT FROM THE COMMITTEE ON THESES

**STEPHEN H. TSANG, MD, PHD**

This year the Committee on Theses continued to review theses through the online AJO editorial platform. For thesis resubmissions, efforts were made to solicit re-review from the same reviewers providing initial comments. Help was solicited from AJO editorial board members or AOS members if expertise was needed for a thesis outside the field of expertise of the thesis committee members. More extensive comments on proposals were provided to help to obtain a more likely acceptance of the theses themselves.

At the time of the 2023 Annual Meeting, decisions were made on 17 new thesis submission and 6 thesis revisions. More than 10 thesis proposals were reviewed.

Sincere thanks go to the reviewers and especially to fellow committee members, **Janey L. Wiggs** and **Fredericus (Erik) van Kuijk** for their insightful comments and reviews as well as AOS Member Reviewers, Amber Mendez, Alissa Evans and **David Wilson** (Managing Editor) for their guidance and administrative support.



2023 AOS Council (from left: Drs. David Wilson, Emily Chew, William Mieler, Marco Zarbin, Preston Blomquist, David Wallace, and Mary Elizabeth Hartnett [inset])

# REPORT FROM THE COMMITTEE ON PROGRAMS

SEAN P. DONAHUE, MD, PHD

The 159th Annual Meeting of the AOS was held at the Omni Grove Park Inn in Asheville, North Carolina from May 18-20, 2023. **Dr. Sean P. Donahue** presided over the meeting. Program committee members included **Sean Donahue** (chair), **Jennifer I. Lim**, **Carol L. Karp**, and **M. Roy Wilson**. The AOS council, **Dr. William F. Mieler** (Council Chair), and Amber Mendez (AOS association manager) provided important contributions to the program committee. The committee read all of the abstracts, ranked the abstracts, and then met virtually with the support of Amber Mendez to determine which abstracts would be assigned to platform presentations, and which would be posters. In addition, the program committee members were responsible for identifying multiple discussants for each paper that was to be presented, and then identifying and inviting them. The committee chair would like to thank those members for their extensive contributions.

The Marilyn T. Miller Lecture was delivered by Jean Bennett, and was entitled “Gene Therapy in Retinal Degenerations: where do we stand now?” This was followed by the Herrmann Knapp Symposium, that was moderated by **Dr. William Mieler**, and **Dr. Sean Donahue**, entitled “Enhancing and Prolonging Drug Delivery to the Eye”. This featured superb presentations by Drs. Justin Haines, **Timothy Olsen**, **Jacque Duncan**, **Baruch Kuppermann**, Jennifer Kang-Mieler, as well as Jasmine Francis. The speakers discussed molecular mechanisms by which pharmacologic agents could enter and maintain their potency within the eye.

Saturday’s highlight was the Saturday Symposium that was entitled “Imaging the Impact of Aging and Specific Disease States on the Visual System”. Doctors, Felipe Medeiros, **David Sarraf**, **Amani Fawzi**, **Carol Karp**, and **David Huang** described different areas of the eyes, and how aging is impacting those specific areas.

The original investigations portion of the meeting involved 20 abstracts that were oral presentations, and another 21 as electronic posters. These provided a spirited and lively discussion. The format of posters was revised slightly to have seven poster boards electronically, with a moderator, and two posters presented at each monitor. The abstracts for the papers and posters are available online.

The social programs were, as always, exceptional. The Reception Welcoming New Members was outdoors and featured a wonderful mountain view in a gorgeous setting in which to interact and welcome the 14 new members. The ninth annual Artistic Soiree, led again by **Dr. Bradley Black** was a highlight of the program, as was **Dr. Susan Day’s** special performance. It was good to see the tennis tournament, the golf outing, and the other outdoor events not be canceled or limited due to snow this year! The gala banquet, and closing reception as always, was wonderful. The women’s afternoon tea has now become an annual event and gave a fabulous opportunity for members to interact with one another.

According to ACGME guidelines, the presenting authors disclosed their financial interests that were relevant to the presentation with respect to commercial companies in medicine. There were 13.0 CME hours offered for the program in 2023. New members of the AOS are always encouraged to submit their thesis, or a portion of it, as an abstract for consideration each year. We are looking forward to the 160th Annual Meeting of the Society which is scheduled to be held at The Lodge at Torrey Pines in La Jolla, California on May 16-18, 2024.

# REPORT FROM THE COMMITTEE ON MEMBERSHIP

**JUDY E. KIM, MD, FARVO, FASRS**

The Committee on Membership (**Judy Kim, R. V. Paul Chan, Nicholas Volpe, and Michele Lim**) independently reviewed 12 membership applications and then met virtually on September 6, 2022, to discuss each candidate. A report recommending ten candidates unanimously and two with reservation by the committee was presented to the AOS Council for review and then the chair discussed it with the Council on October 14, 2022. The Council determined that all nominees be invited to prepare a thesis.

In consideration of each candidate, the strength of the individual candidates' application was determined by the criteria as outlined below.

- National/International reputation
- Academic rank
- Peer-reviewed publications in last 5 years
- Ability to write a thesis
- Boards or directorships
- Specialty(ies)
- Sponsors
- Recommendations

Additional criteria discussed included:

- Grants (funding agencies)
- Teaching responsibilities
- Presentations within 5 years
- Scholarship
- Leadership
- Ethics
- Professionalism
- Communication skills
- Diversity
- Potential contribution/participation to AOS



We utilized the online application for review. Given the importance of thesis completion, we are now asking candidates for potential thesis topic(s) or areas. This can be changed but gives us an idea that they are prepared to write a thesis. Also, the committee encourages sponsors to outline in the recommendation letters the commitment of and resources available to the applicant for completion of their thesis, particularly for candidates who do not have an extensive history of publications. This non-binding statement could address areas such as access to research data, availability of statistical expertise, and time to complete the project.

The future of the organization, as well as leadership in our profession, is dependent upon the continued growth of the AOS. Members are strongly encouraged to identify potential candidates with robust records in teaching, research, clinical/surgical care, and service. Please reach out and nominate them for membership in the Society. The deadline to submit membership nominations each year is April 30th. We hope to see a growth in the number of applications in the coming years.



# REPORT OF THE ARCHIVIST PHOTOGRAPHER

**RALPH C. EAGLE, JR, MD**

I took hundreds of digital photographs at the One Hundred Fifty-Ninth Annual Meeting of the American Ophthalmological Society held at the Omni Grove Park Inn in Asheville, North Carolina on May 19-21, 2023. The photos were taken with a Nikon Z9 mirrorless digital camera.

I photographed 15 new members signing the AOS membership book. A photo show comprising 270 captioned photos in PDF format for the members-only meeting photo section of the AOS website was prepared. The photo show includes photos of the 2023 AOS President **Marco Zarbin, Dr. Zarbin** and his wife Susan Carter Zarbin, the 2023 AOS Council, 2023 AOS Medal recipient **Evangelos Gragoudas**, as well as photos of selected members and couples. 8 x 10-inch color prints of selected photos were sent to the Officers, Council Members, New Members and other attendees.

The 2023 photo show has been posted online. The member's-only area of the AOS website now includes 27 downloadable photo shows beginning with the 1996 AOS meeting at the Grove Park Inn in Asheville, North Carolina. The digital archive of the AOS comprises thousands of high-resolution digital photographs and 1400 digital images prepared from scanned transparencies.



# REPORT FROM THE COMMITTEE ON EMERITI

THOMAS D. FRANCE, MD

The Annual Emeritus Luncheon during the AOS Annual Meeting was held on Saturday, May 20th from 12:30pm-2:00pm at The Omni Grove Park Inn in Asheville, North Carolina. We were happy to welcome a guest speaker for this luncheon, Mr. Trevor Freeman, who is the Public Programs Director with the Western North Carolina Historical Association. Mr. Freeman gave a talk on “Revolutionary War Loyalists in Western North Carolina.” Thank you to all who attended. It was wonderful to see everyone in-person again.

I regret to inform you of the passing of the following AOS members since my last *AOS Transactions* report in 2022:

William B. Glew, MD	Chevy Chase, MD	Member since 1979
Leonard M. Parver, MD	Washington, DC	Member since 2000
Richard M. Robb, MD	Boston, MA	Member since 1974
C. Gail Summers, MD	Golden, CO	Member since 1996
Stephen R. Waltman, MD	St. Louis, MO	Member since 1984



# REPORT FROM THE COMMITTEE ON NEW MEMBERS

EDWARD J. WLADIS, MD, FACS

## THE FOLLOWING NEW MEMBERS WERE WELCOMED TO THE AOS THIS YEAR

### Francesco F. Bandello, MD, FEBO

- San Raffaele Hospital
- **Specialty:** Retina/Vitreous, Comprehensive Ophthalmology
- **Thesis:** *Imaging Biomarkers of Mesopic and Dark-Adapted Macular Functions in Eyes with Treatment-Naïve Mild Diabetic Retinopathy*

### Jesse L. Berry, MD

- University of Southern California and CHLA Vision Center
- **Specialty:** Ocular Oncology, Administration/Organization Leadership
- **Thesis:** *Aqueous Humor Liquid Biopsy as a Companion Diagnostic for Retinoblastoma: Implications for Diagnosis, Prognosis and Therapeutic Options. Five Years of Progress*

### Valerie L. Biousse, MD

- Emory Eye Center
- **Specialty:** Neuro-Ophthalmology, Administration/Organization Leadership
- **Thesis:** *Application of a Deep Learning System to Detect Papilledema on Nonmydriatic Ocular Fundus Photographs in an Emergency Department*

### Claude F. Burgoyne, MD

- Legacy Research Institute
- **Specialty:** Glaucoma
- **Thesis:** *OCT Optic Nerve Head Morphology in Myopia II: Peri-Neural Canal Scleral Bowing and Choroidal Thickness in High Myopia—An American Ophthalmological Society Thesis*

### John J. Chen, MD, PhD

- Mayo Clinic
- **Specialty:** Neuro-Ophthalmology
- **Thesis:** *Visual Outcomes Following Plasma Exchange for Optic Neuritis: An International Multicenter Retrospective Analysis of 395 Optic Neuritis Attacks*

### Jacque L. Duncan, MD

- University of California, San Francisco
- **Specialty:** Retina – medical only, Ophthalmic Genetics
- **Thesis:** *Change in Cone Structure Over 24 Months in USH2A-Related Retinal Degeneration*

### Michael S. Ip, MD

- Doheny Eye Institute
- **Specialty:** Retina/Vitreous
- **Thesis:** *Month 60 Imaging Findings and Relationship to Treatment Outcomes following Anti-VEGF Therapy for Macular Edema due to Central or Hemi Retinal Vein Occlusion*

### Byron L. Lam, MD

- Bascom Palmer Eye Institute
- **Specialty:** Neuro-Ophthalmology, Ophthalmic Genetics
- **Thesis:** *Leber Hereditary Optic Neuropathy Gene Therapy: Longitudinal Relationships Among Visual Function and Anatomical Measures*

### Ronald Mancini, MD

- UT Southwestern Medical Center
- **Specialty:** Oculofacial Plastics/Reconstructive
- **Thesis:** *Sutureless Conjunctiva-Sparing Posterior Ptosis Repair Surgery: A Novel Technique*

### Jonathan S. Myers, MD

- Wills Eye Hospital
- **Specialty:** Glaucoma, Cataract/Anterior Segment
- **Thesis:** *10-Year Clinical Outcomes of Tube Shunt Surgery at a Tertiary Care Center*

### Michael A. Singer, MD

- University of Texas Health Science Center
- **Specialty:** Retina/Vitreous
- **Thesis:** *Corneal Sensitivity is Inversely Correlated with Severity of Diabetic Retinopathy in a Predominantly Underrepresented Population*

# REPORT FROM THE COMMITTEE ON ATHLETICS

WOODFORD S. VAN METER, MD

The 159th Annual Meeting of the AOS May 18-20, 2023 returned to the scenic Omni Grove Park Inn in Asheville, NC after 27 years. The last time the AOS met in Asheville was in 1996, when **Dr. Stanley Truhlsen** was AOS President and **Dr. Tom Kearns** was Chair of the Emeritus Committee.

**Dr. Robert Macheimer** won the Howe Medal, **George Stern** won the golf tournament and Alice Wilkinson and June Wood won one of their many Ladies Doubles titles. I only mention these things in passing because the heritage of the AOS is one of the things that makes being an AOS member, and my job, fun.

The weekend of the 159th AOS in the western Carolina mountains was graced with perfect weather, a scenic venue in the beautiful mountains of western North Carolina and the luxury of the Grove Park Inn. Members were happy to be outside for the traditional AOS athletic activities there after the blizzard that wiped out all athletic activities in Colorado Springs at the 158th meeting at the Broadmoor in 2022. The AOS athletic events give members new and old a chance to socialize with other names in our profession that they might not have a chance to meet otherwise. The names of past participants on the AOS athletic trophies connect all of us with an illustrious past.

Golf and tennis accolades at the Grove Park Inn were enthusiastically sought by all, coveted by many, won by a disputed few, and enjoyed across the board. The scorched

egos, recruiting violations, bad calls, coaching lapses, performance-enhancing drug scandals and profanity were all forgotten by the time the Saturday night banquet rolled around, leaving the losers little to do but question the winners' strategy and plan for resurgence next year at Torrey Pines.

## TROPHIES IN GOLF

### Men

Mishima-Michels Trophy – Low Gross: **Donny Suh**  
Canada-McCullough Cup – Low Net: **Rand Spencer**  
Truhlsen Trophy – Senior Low Gross: **Woody Van Meter**  
Knapp Trophies – Random Draw Team: William Hahn, **Peter Netland**

### Women

Ellsworth Trophy – Low Gross: Susan Suh  
Homestead-Callaway Cup – Low Net: Miriam Ridley

## DUBIOUS AWARDS FROM THE ATHLETICS DIRECTOR

Long Drive – Men: **Ryan Rush**  
Long Drive – Senior Men: **Rick Ferris**  
Long Drive – Ladies: **Ivana Kim**

Closest to the Pin – Men: John Van Beekum  
Closest to the Pin – Senior Men: **Barruch Kupperman**  
Closest to the Pin – Ladies: Susan Suh

Thomas Edison “Never Give Up” Award: **Mark Terry**

## TROPHIES IN TENNIS

### Men

EVL Brown Bowl – Doubles Winners: **Rick Fraunfelder, Davis Sarraf**  
Brown-Wilson Tray – Doubles Runners-up: Andreas Jurkunas, **Bob Weisenthal**

## THE 160TH AOS MEETING AT TORREY PINES, MAY 16-18, 2024

The 2024 AOS 160th Annual Meeting will return to The Lodge at Torrey Pines, atop the cliffs overlooking the Pacific Ocean just north of San Diego, CA, May 16-18, 2024. As you may recall, we were headed for Torrey Pines in May of 2020 for our 156th meeting when COVID-19 abruptly forced the last-minute cancellation of that meeting. Torrey Pines is named for the Torrey Pine, a rare tree that grows in the wild only along this local stretch of Pacific coastline in San Diego County. I look forward to seeing all of you there for another opportunity to catch up with your old friends, meet new members and make new friends.



Athletics Director Woodford Van Meter and new member Ryan Rush

# REPORT FROM THE COMMITTEE ON PRIZES

**GEORGE L. SPAETH, MD**

The Committee on Prizes is charged with selecting the Awardee of the AOS Medal and presenting the Award at the Annual Meeting banquet. The Committee selected a recipient for 2023. The Committee making that selection was comprised of **George L. Spaeth**, Chair, **Joan Miller**, and **Richard Abbott**.

The AOS Medal is awarded to recognize one or more of the following accomplishments: a discovery or innovation that suddenly advances the progress of ophthalmology in all parts of the world; outstanding original investigations in ophthalmology; significant contributions as an ophthalmic educator; or meritorious and remarkable service to ophthalmology. The Committee on Prizes was assisted by the help of Amber Mendez, who facilitated various matters, including requesting nominations from the members of the AOS, informing the Committee about who had been nominated in the past, arranging discussions of members of the Committee, and assuring that the candidate selected was going to attend the meeting.

E-mail communications were sent to AOS membership requesting nominations for the Medal. This year, nominations were received from 11 AOS members. All individuals newly nominated or previously nominated were considered by the Committee. The intent was to select an individual who fulfilled the established criteria. These include quite different qualities. How are they appropriately prioritized? Our intent, this year, was to select a person who had a track record demonstrating great contributions to the field of medical diagnosis and treatment, not so much “sudden” contribution but one that was lasting and evolving. Additionally, the intent was to choose a person who was a model of an unusually excellent physician who had international impact, not only as a result of medical contributions, but also due to the person’s personality, originality, courage and passion. Finally, great weight was given to the person chosen, being not just a great educator, but also a revered mentor. The Committee was aware that the Honoree need not be a member of the AOS.

The Committee on Prizes had email conversations, culminating in a conference call in December 2022. This resulted in all three of members of Committee enthusiastically agreeing that the person to be awarded The American Ophthalmological Society Medal in 2023 be **Evangelos S. Gragoudas**.

At the Annual Meeting of the AOS in May 2023, The American Ophthalmological Society Medal was awarded to **Professor Gragoudas** by **George L. Spaeth**, who stressed the love that **Professor Gragoudas’s** students felt for him. At the awarding, **Professor Gragoudas** appeared surprised and genuinely happy.

## **A COMPRESSED CAPSULE REGARDING PROFESSOR GRAGOUDAS INCLUDES THE FOLLOWING:**

- Born in Vrissa, a small city in the island of Lesbos, Greece, close to the western coast of Turkey.
- 1959 Graduated from Varvakion High School, Athens, Greece
- 1965 Graduated with an M.D from Athens National and Kapodistrian University,
- 1970 Completed a rotating internship at the Waltham Hospital, MA.
- 1970-73 Took an ophthalmology residency at Boston University.
- 1973-76 Was a Research Associate, Eye Research Institute of Retina Foundation,
- 1974-75 Was a retina Fellow in the Schepens Eye Research Institute, Boston.
- 1975 Joined the Faculty of the Massachusetts Eye and Ear Infirmary MEEI, Harvard.
- 1985 Named the Director of the Retina Service, MEEI, Harvard Medical School.
- 1994 Named Professor of Ophthalmology, Harvard Medical School.
- 2011 Named the Charles Edward Whitten Professor Harvard Medical School.
- 2021 Named the Charles Edward Whitten DISTINGUISHED Professor Harvard Medical School.

**Research**

- 1990-1995 Principal Investigator, Proton Therapy Research (Eye Component) – “Radiation Dose Trial,” NCI-MGH (CA21239), \$487,238.00. Since then, roughly \$2 million in grant support.

**Awards**

- 1959-1965 State Scholarship, Institute of Greece
- 1998 RPB Senior Scientific Investigator Award
- 2002 J Donald M Gass Medal, Macula Society
- 2004 Arnall Patz Medal, Macula Society
- 2006 Mildred Weisenfeld Excellence in Ophthalmology Award ARVO
- 2014 Establishment of Gragoudas Professorship in Ophthalmology at Harvard Medical School
- 2019 Life Achievement Honor Award of the American Academy of Ophthalmology.
- Honorary Degrees from Kapodistrian University, Athens, the University of Patras, The University of Thessaloniki.

**Principal Clinical and Hospital Service Responsibilities:**

- 1975- Director, Fluorescein Angiography Service, Massachusetts Eye and Ear Infirmary, Boston, MA
- 1975- Director, Macula Clinic, Massachusetts Eye and Ear Infirmary, Boston, MA
- 1985- Director, Vitreoretinal Fellowship, Massachusetts Eye and Ear Infirmary, Boston, MA

**Selected Publications**

1. Bouzas AG, Gragoudas ES, Balodinos MD, Brinegard CH, Aiello LM. Intraocular pressure in diabetes: Relationship to retinopathy and blood glucose level. Arch Ophthalmol 85:423-427, 1971.
4. Suit HE, Goitein M, Tepper J, Koehler AM, Gragoudas ES. Current status of proton therapy in North America. Proc Intern Particle Rad Ther Workshop, Key Biscayne, FL 529- 540, 1975.

# REPORT FROM THE COMMITTEE ON AUDITS

EDWARD G. BUCKLEY, MD

## MINUTES

### I. WELCOME AND CALL TO ORDER

**Dr. Edward Buckley**, AOS Audit Committee Chair, called the meeting to order at 4:00 p.m. PDT on Wednesday, July 26, 2023. The following Committee members, staff and guests were present:

#### Committee

**Edward Buckley, MD** – Audit Committee Chair

**Julia Haller, MD** – Audit Committee Member

**David Wilson, MD** – Executive Vice President

#### Staff

Amber J. Mendez – AOS, Client Services Manager

Alice Paw – Accounting Manager, American Academy of Ophthalmology

#### Audit Partners

Rianne Suico – Senior Manager, Moss Adams

### II. REVIEW OF FISCAL YEAR 2022 AUDITED FINANCIAL STATEMENTS

Ms. Alice Paw provided an overview of the 2022 fiscal year end audited financial statements. Ms. Paw explained that since the financials are reported on a comparative basis, statements where amounts were reported included current and prior year balances. A summary of the data is reported below in tabulated form.

Item	2021	2022
Change in net assets from operations	(\$235,106)	(\$796,414)
Net investment income	\$211,638	\$183,384
Net gain on investments	\$892,510	(\$2,091,679)
Change in net assets	\$892,042	(\$2,704,709)
Net assets beginning of year	\$11,087,865	\$11,956,907
Net assets end of year	\$11,956,907	\$9,252,198

Management expenses had a slight increase in the 2022 year, and the Annual Meeting and Council meeting expenses increased due to both events being held in-person versus virtually in 2021.

**ACTION:** The Committee accepted Ms. Paw's report as presented.

### III. AUDIT PRESENTATION

Ms. Rianne Suico of Moss Adams presented the Report of Independent Auditors, which covered internal procedures, controls, accounts payable processes, and recognition of revenue. She reported that the consolidated financial statements were fairly presented in accordance with generally accepted accounting principles. She shared that no issues were discussed prior to their retention as auditors for the AOS, and that they had no disagreements with AOS management during the process.

**ACTION:** The Committee accepted the auditor's report as presented.

### IV. EXECUTIVE SESSION

**Dr. Buckley** excused SF AMS and AAO staff, and the Committee met in an executive session with Ms. Suico of Moss Adams. The Committee did not identify any irregularities. **Dr. Buckley** confirmed that processes did not warrant further investigation and that a separate audit on internal controls was not necessary.

### V. ADJOURNMENT

**Dr. Buckley** adjourned the meeting of the Audit Committee at 4:30 p.m. PDT on Wednesday, July 26, 2023.

# AOS COUNCIL APPOINTMENTS

2023-2024

AOS President – **Timothy W. Olsen**

AOS Council – **Peter A. Netland**

Executive Vice President – **David J. Wilson**

Editor – **David J. Wilson**

Member, Committee on Theses –

**David Huang** to join

**Fredericus van Kuijk**, Chair

**Janey L. Wiggs**

Member, Committee on Programs –

**Peter S. Hersh** to join

**Jennifer I. Lim**, Chair

**Carol L. Karp**

**M. Roy Wilson**

Member, Committee on Membership –

**Tamara R. Fountain** to join

**R.V. Paul Chan**, Chair

**Nicholas J. Volpe**

**Michele C. Lim**

Members, Committee on Communications –

**Nicholas J. Volpe** to join

**Bennie H. Jeng**, Chair

**H. Nida Sen**

**Ron A. Adelman**

**Anat Galor**

Committee on New Members –

**Suzanne K. Freitag** to join

**William J. Dupps**, Chair

**Amani Fawzi**

Member, Committee on Prizes –

**Douglas D. Koch** to join

**Joan W. Miller**, Chair

**Richard L. Abbott**

Chair, Committee on Emeriti –

**Thomas D. France** to cont.

Committee on Athletics –

**Frederick W. Fraunfelder** and

**Woodford S. Van Meter** to cont.

Chair, Audit Committee –

**William F. Mieler** to join

**Julia A. Haller**

**David J. Wilson**

Investment Committee –

**Timothy W. Olsen** and

**Preston H. Blomquist** to join

**David J. Wilson**

Archivist/Photographer – **Ralph C. Eagle, Jr.** to cont.

Representative to American Academy of

Ophthalmology Council – **Sophie J. Bakri** and alt.

**Esen K. Akpek** to continue

Representative to the American College of Surgeons –

**Robert A. Goldberg**; and alt. **George L. Spaeth** to

cont.

Representative to the Pan American Association of

Ophthalmology – **Eduardo C. Alfonso** to cont.

Representatives to the American Orthoptic Council –

**James D. Reynolds**; **Steven M. Archer**; and

**Kanwal Nischal** to cont.

Representative to IJCAHPO – **Teresa C. Chen** to cont.

Representatives to the Heed Ophthalmic Foundation –

**David J. Wilson**; **Eduardo C. Alfonso**; and alt. **Julia A.**

**Haller** to cont.

Parliamentarian – **Peter A. Netland** to cont.



# REPORT FROM THE REPRESENTATIVE TO THE COUNCIL OF THE AMERICAN ACADEMY OF OPHTHALMOLOGY

**SOPHIE J. BAKRI, MD**

This year the AAO Council meeting was held in person at the American Academy of Ophthalmology in San Francisco in November 2023. I attended as AOS Councilor to the AAO.

One of the major topics with the shortage in allied health staffing especially in regards ophthalmic technicians. This is a nationwide problem, initiated and made worse by the COVID-19 pandemic. Strategies were discussed for recruiting, retaining and training allied health staff, both in the main council meeting as well as some of the regional meetings. In addition, the anticipated shortage of ophthalmologists was discussed, and the need for a team

approach to healthcare. The shortage is particularly worse in neuro-ophthalmology and pediatric ophthalmology. Strategies to mitigate the shortage and enhance recruitment were discussed.

In addition, the role of artificial intelligence in the future of ophthalmology and healthcare was discussed.

The importance of the Surgical Scope fund was emphasized and the relationship between ophthalmology and optometry was again discussed. The State and Subspecialty sections also met to discuss any local issues.

# REPORT FROM THE REPRESENTATIVE TO THE AMERICAN COLLEGE OF SURGEONS

**ROBERT A. GOLDBERG, MD**

The American College of Surgeons is dedicated to improving the care of the surgical patient and to safeguarding standards of care in an optimal and ethical practice environment. The College carries out its mission through a wide scope of activities, including physician education, public education, development of safety and quality programs, and advocacy.

The Ophthalmology Advisory Council meets annually. Activities include education (we organize an annual teaching course at the ACS meeting), advocacy (the ACS stands by Ophthalmology in the Surgery by Surgeons

scope of practice issue, as well as appropriate valuation of surgical global fee), quality (we participated in trauma guidelines, and taught a Stop the Bleed session at ASOPRS), and physician health.

Although Ophthalmologists comprise only 2% of the ACS membership, our voice and our input are important. This year we initiated 32 Ophthalmologists. ACS participation fosters our connection to the greater House of Surgery and optimizes the opportunities to achieve our common goals.

# REPORT FROM THE REPRESENTATIVE TO THE AMERICAN ORTHOPTIC COUNCIL

**JAMES D. REYNOLDS, MD**

The 2022-2023 year has been eventful for the AOC.

## I. AOS REPRESENTATION ON THE AOC

The American Orthoptic Council is an organization supported by 8 entities:

- American Association for Pediatric Ophthalmology and Strabismus (AAPOS)
- American Ophthalmological Society (AOS)
- American Academy of Ophthalmology (AAO)
- American Academy of Pediatrics Section of Ophthalmology (AAP)
- American Association of Certified Orthoptists (AACO)
- Canadian Orthoptic Council (COC)
- The Canadian Orthoptic Society (TCOS)
- North American Neuro-ophthalmology Society (NANOS) – newly added

Current AOS representatives to the AOC include:

- **James Reynolds, MD**
- **Steve Archer, MD**
- **Kanwal Nischal, MD**

The input of these members is greatly appreciated as they have provided valuable input and leadership to the organization. We continue to value the AOS as a sponsoring organization.

**James Reynolds, Ken Nischal** and **Steve Archer** are actively involved in committees. Steve Archer is currently Treasurer.

Both **Steve Archer** and **James Reynolds** are heavily involved in the Orthoptic Fellowship Programs at their institutions.

**James Reynolds** and **Ken Nischal** sit on the Editorial Board of the Journal of Binocular Vision and Ocular Motility; the journal which is now published online by Taylor and Francis and replaced the American Orthoptic Journal. **Steve Archer** serves as a reviewer.

## II. 2023 NEWLY CERTIFIED ORTHOPTISTS

In September, the AOC oral practical exams to certify orthoptists was again carried out virtually via zoom format. Fourteen candidates passed, achieving certification.

## III. ORTHOPTIC FELLOWSHIP PROGRAMS

There are currently sixteen AOC accredited orthoptic fellowship programs in the U.S.

## IV. JOURNAL OF BINOCULAR VISION AND OCULAR MOTILITY (BVOM)

AOJ, Inc, has successfully transitioned to the new publisher, Taylor & Francis. All members of AOC sit on the board which governs the publication together with the publisher. The BVOM is being published online 4 times a year with one yearly print version encompassing all 4 online publications. The journal was successful in maintaining the Medline status obtained by the AOJ and subscribers have access to all AOJ back-issues. The founding co-editors guiding this publication are Kyle Arnoldi, CO, and Burt Kushner, MD.

## V. 2023 AAPOS WORKSHOP

Thinking Outside the BOTOX: a Tribute to **Alan Scott**.

Workshop Chairs: Douglas Fredrick, MD; Sarah Whitecross, CO

Speakers were Certified Orthoptists and ophthalmologists

## VI. 2023 AAO/AOC/AACO SUNDAY SYMPOSIUM, SUNDAY, NOVEMBER 5, 2023

Understanding Myopia: Global Prevalence, Mechanism, Treatment, and Prevention in 2023.

Chairs/moderators: Alex Christoff, CO [President of AACO]; Omondi Nyong'o, MD

## VII. ACCREDITATION

The AOC application to the Commission on Accreditation of Allied Health Education Programs (CAAHEP) for the creation of the Committee on Accreditation of Orthoptic Fellowship Programs (CoA-OFP) was formally accepted in April of 2018. Through external accreditation and a formal process

of continuous quality review by CAAHEP, the quality and reputation of the orthoptic profession will become stronger. This continues to be a work in progress until such time as the transition from AOC to CAAHEP accreditation.

### **CAAHEP ACCREDITATION [COMMISSION ON ACCREDITATION OF ALLIED HEALTH EDUCATION PROGRAMS]**

CAAHEP approved the formation of the Committee of Accreditation of Orthoptic Fellowship Programs [CoA-OFP] under its jurisdiction. CAAHEP has approved the CoA-OFP Standards document. Virtual site visits are pending. The process of accrediting and re-accrediting Orthoptic Fellowship Programs will be transitioned from an activity of the American Orthoptic Council to this third-party organization. This has been a long process that is coming to fruition and was felt to be a good step towards separating the oversight of accrediting programs and certifying orthoptist candidates who study in the Orthoptic programs.

The Council will continue to be in charge of the certifying exams and certification and re-certification of certified orthoptists.

### **VIII. CORE COMPETENCY DOCUMENT**

The AOC core competency document is available, outlining the clinical skill expectations for orthoptists. This will be used for training programs to better guide and set standards for the education of their students. This will also be available for international applicants requesting certification by the AOC. This document is available for a nominal fee from the home office.

### **IX. ANNUAL BUSINESS MEETING**

We held our annual business meeting of all Council members on Friday, November 3, 2023. The annual meeting contained annual officer reports as well as committee reports. New members were welcomed (Salvatore Bellante, CO, Mallory Coughlin, OC(C), Annick Fournier, MD, **Karl Golnik, MD**). Treasurer's report shows a sound financial position with a balance of \$198,825.98 as of December 31, 2022.

Highlights included candidate exam results; an update on the evolution and near completion of our new accreditation procedure; and various committee reports.

## **REPORT FROM THE REPRESENTATIVE TO HEED**

### **DAVID J. WILSON, MD**

The Heed Ophthalmic Foundation Board of Directors consists of five members, and a minimum of two of those members are drawn from the AOS membership. The 2023 Heed Resident Retreat was held in Asheville, NC immediately following the AOS meeting. This year 13 of the 34 faculty members were AOS members. The retreat is structured to encourage promising residents to enter a career in Academic Ophthalmology. Prior to the Heed Retreat several of the residents attending the retreat were able to be guests at the AOS meeting, further stimulating their interest in an academic career.

# REPORT FROM THE REPRESENTATIVE TO THE INTERNATIONAL JOINT COMMISSION ON ALLIED HEALTH PERSONNEL IN OPHTHALMOLOGY

**TERESA C. CHEN, MD**

To promote global eye health and prevent blindness through training program accreditation, education and the certification of Allied Ophthalmic Personnel.

## **1. GOVERNANCE INITIATIVES**

- Elected new Board of Directors Officers, Secretaries of Education and Certification, and At Large Directors.

## **2. MAJOR INITIATIVES FOR THE YEAR**

- Published a new Technician Clinical Reference Manual.
- Invited by WHO to serve as technical advisor and developer of the Eye Care Competency Framework (ECCF) and piloted it with LV Prasad Eye Institute. IJCAHPO is featured in the WHO recent publication, titled “The Development of the WHO Eye care competency framework”.

## **3. GOVERNMENTAL AND PUBLIC AFFAIRS INITIATIVES**

- Delivered a presentation at the NEI/NEHEP Partnership Summit.
- Supported 3 CARs at the 2023 AAO Mid-Year Forum.
- Initiated State and Federal Apprenticeship Program applications.
- Joined the Tomorrow’s Workforce Coalition to build support for the Freedom to Invest in Tomorrow’s Workforce Act (S.722/ H.R.1477).

## **4. CERTIFICATION INITIATIVES**

- Total number of certificants – over 34,000 worldwide – 2,428 certified in 2022-2023
- Completed 2022 Job Task Analyses for the Core Certifications and Ophthalmic Surgical Assisting examinations.

## **5. EDUCATION & E-LEARNING INITIATIVES**

- IJCAHPO hosted its third annual hybrid program, a Virtual Broadcast and On-Site 50th Annual Continuing Education Program with Capstone Lecture Series: Innovations in Ophthalmology by leading ophthalmologists.

- Completed development of new Core Ophthalmic Skill Simulations.
- Provided 6 complementary/free CE Credits to certificants.
- Presented 50 Webinars and Virtual Programs.
- Launched Technician CE subscription – membership program.
- Updated JCAT Independent Study Program.

## **6. FOUNDATION INITIATIVES**

- Awarded 33 Training Program Scholarships for more than \$5,950 to ophthalmic technicians’ academic education.
- Awarded 9 certifications and continuing education grants for more than \$2,250.
- Awarded 18 – educational grants for the 2022 ACE Program and other education programs to AOP adversely and economically impacted: totaling \$4,540.
- Awarded the Harold A. Stein Scientific Paper Prize.

## **7. INTERNATIONAL INITIATIVES**

- Presented AOP career at PAAO Congress, Buenos Aires, Argentina, and WOC/ICO Virtual Program.
- Worked with Uruguay, Brazil and Afghanistan to establish AOP academic training programs.
- Certified over 39 international candidates.

## **8. CAREER ADVANCEMENT INITIATIVES**

- Initiated State and Federal Apprenticeship Program applications.
- Completed new Military and Veterans ophthalmic profession recruitment brochures.
- Presented 6th year at virtual HOSA - Health Occupations Students of America and Chapter meetings with over 10,000 students attending.

# REPORT FROM THE REPRESENTATIVE TO THE PAN-AMERICAN ASSOCIATION OF OPHTHALMOLOGY

EDUARDO C. ALFONSO, MD

## 1. PAN-AMERICAN COUNCIL OF UNIVERSITY PROFESSORS (PACUPO)

Jorge E. Valdez, MD (Mexico) chairs **PACUPO**. The purpose of this program is to unite and standardize university training programs throughout Latin America through exchange programs and other means. Towards this end, Dr. Valdez has been working with Eduardo Mayorga MD, as Chair of the PAAO eLearning Committee. Dr. Mayorga created “Campus PAAO” to offer PAAO webinars and over the years many PACUPO members have given more than 150 educational courses free of charge. Dr. Mayorga has created asynchronous courses for students. The complete list of archived webinars and the schedule of upcoming webinars and asynchronous courses are available on the PAAO’s website [www.paa.org](http://www.paa.org).

## 2. FELLOWSHIPS COMMITTEE.

Lihteh Wu MD (Costa Rica) chairs the **Fellowships Committee**. Scholarships are funded primarily by the Pan-American Foundation. Because of COVID-19, most training programs were put on hold. In 2024, training programs will reopen.

## 3. VISITING PROFESSORS COMMITTEE

José Antonio Roca MD (Peru) chairs the **Visiting Professors Committee**. The Visiting Professors Program sends Visiting Professors to present the “Pan-American Lecture” at national ophthalmological meetings in the Americas. The pandemic COVID-19 impacted this program. No professors were sent in 2023. The program will resume in 2024.

## 4. PAAO-YO ACTIVITIES

Eduardo Viteri Jr., MD (Ecuador) and Linda Cernichiaro MD (Mexico) co-chair the PAAO-YO program. The purpose of this program is to offer education and networking opportunities to young ophthalmologists around the world. The PAAO-YO organize webinars and are collaborating with the YO’s of the American Academy of Ophthalmology. For more information, please see <https://paaoyo.paa.org/>.

## 5. 2023 MEETINGS & EDUCATIONAL ACTIVITIES:

Continuing education and prevention of blindness programs are the primary mission for the PAAO.

**18th Curso de Liderazgo (2022-2024):** A live training course in collaboration with the American Academy of Ophthalmology on January 12-15, 2023, in San Francisco.

**35th Pan-American Congress of Ophthalmology:** A live training Congress in Buenos Aires, Argentina, March 17-20, 2023. More than 5,500 ophthalmologists from around the world came together and shared scientific knowledge and the latest research advances.

**20th Pan-American Research Day:** A live meeting in collaboration with ARVO on Saturday, April 22, 2023, and hosted by Nicolas Bazan MD PhD, of the LSU School of Medicine, New Orleans.

**37th Lo Mejor de la AAO en Español:** Virtual meeting on Saturday, November 11, 2023.

# NECROLOGY IN MEMORIUM

## LEONARD M. PARVER, MD



**I am sad to report that an esteemed retinal-vitreous surgical colleague and one of my best friends, Leonard M Parver M.D., born October 25, 1944, in the Bronx, raised there and in Queens, died May 29th, 2023, at the age of 79 after a yearlong courageous battle with non-Hodgkin's lymphoma. At 17 he moved to Montreal to attend and graduate from McGill University and Medical School where he subsequently did a residency in ophthalmology, prior to a retinal-vitreous fellowship with Harvey Lincoff at the New York Hospital-Cornell Medical Center. Len then fulfilled his military obligation as a Lieutenant Commander at Bethesda Naval Hospital where he and I first met and served together as Berry Planners. During that time Len and I had many conversations about our future professional careers. Len ultimately decided to pursue private practice "to ensure financial security for his family" but with a very academic orientation "to satisfy his intellectual curiosity and creativity". He founded a retinal consultant's medical group in Washington DC which flourished under his leadership, and where his son, David, ultimately joined him in practice. Lens practice was very successful in a competitive Washington DC market.**

Len's passion for scientific research, while caring for his patients, resulted in many observational research contributions, NIH research grants (R01 & R03) and 50 peer reviewed publications in respected medical journals. Len was always "thinking out-of-the-box" mechanistically and pathophysiologically. I recall him discussing the impact of choroidal blood flow on retinal physiology in 1975 which resulted in several peer reviewed publications and similar innovative thoughts throughout his career. His most recent research thoughts turned to the role of nitric oxide in the eye in collaboration with basic scientists at the NIH. During this time Len held faculty appointments at Georgetown University & the Wilmer Institute at Johns Hopkins University.

Len was also a good citizen in our profession. Len founded the National Eye Trauma and Suburban Hospital Eye Trauma Services. He co-founded and was president of the Washington Academy of Ophthalmology and the Washington Society of Ophthalmology, an active Heed fellow alumnus, and a member of the American Academy of Ophthalmology from which he received an Honor Award in 1989. He was an active participant in the AOS, ARVO, the Macular Society, Retina Society, and Vitreous Society.

Len had a great love for life professionally & personally. He leaves behind many grateful patients, colleagues, and his devoted attorney/activist wife Corrine, Ophthalmologist son David, attorney daughter Deborah, and 4 grandchildren. He will be missed by all.

The world is a better place thanks to Len!!!

*Written By,*

JAMES P. MCCULLEY, MD  
Cedar Hill, TX

## RICHARD ROBB, MD



**Richard Moore Robb, MD, pediatric ophthalmologist, died on November 6, 2022, at the age of 88 years.**

Dr. Robb was born and raised in Pennsylvania. He graduated from Princeton University with an AB in history (cum laude, Phi Beta Kappa) in 1956 and received his MD from the University of Pennsylvania School of Medicine (Alpha Omega Alpha) in 1960. His ophthalmology residency training was at the Massachusetts Eye and Ear Infirmary from 1961 to 1965, during which time he also did research in ophthalmic pathology in the Howe Laboratory of Ophthalmology. He later completed a fellowship in ophthalmic pathology at the National Eye Institute under the supervision of Dr. Toichiro Kuwabara in 1972-3.

In 1965 Dr. Robb became the first full time pediatric ophthalmologist at the Children's Hospital in Boston, and in 1969 he was appointed Ophthalmologist-in-Chief at that hospital. He continued in that position until 2002, when he became Emeritus Chief of Ophthalmology and Consultant in Pathology. Dr. Robb had an academic appointment at Harvard Medical School from 1965 until his retirement as an Associate Professor of Ophthalmology. Dr. Robb trained ophthalmology residents from the Massachusetts Eye and Ear Infirmary and the Boston University Medical Center starting in 1967, and from 1973 to 2002 he created and supervised a fellowship program in pediatric ophthalmology at Children's Hospital Boston. Many of the

33 fellows trained under his tenure have become leaders in Pediatric Ophthalmology. He became a charter member of the American Association of Pediatric Ophthalmology and Strabismus in 1974, and has received an Honor Award from that organization as well as from the American Academy of Ophthalmology.

Dr. Robb's research interests have been in pediatric ophthalmology and in experimental and clinical ophthalmic pathology. His publications have included studies of childhood cataracts and the glaucoma that is associated with early pediatric cataract surgery, studies of the refractive and visual consequences of infantile hemangiomas of the eyelids, and investigation of the natural course of congenital nasolacrimal duct obstruction and the results of probing at various ages. He became an AOS member in 1974, after presenting his work to help elucidate the histochemical changes that occur in hereditary retinal degenerations ("Electron microscopic histochemical studies of cyclic 3', 5'-nucleotide phosphodiesterase in the developing retina of normal mice and mice with hereditary retinal degeneration"). Another AOS presentation, "Fibrous congenital iris membranes with pupillary distortion", was an important contribution confirming this distinct variety of pupillary membrane with regard to its progressive nature, visual outcomes, and management. Dr. Robb also served as Senior Associate Editor of the Journal of the American Association of Pediatric Ophthalmology and Strabismus (JAAPOS) from 2006-2012.

Dr. Robb's service at Children's Hospital has been recognized by the Robb-Petersen Endowed Lectureship in Pediatric Ophthalmology, established in 1985, and by the Richard M. Robb Professorship in Pediatric Ophthalmology at Harvard Medical School, established in 2006, and an endowment in Ophthalmic Pathology. I remember Dr. Robb as a kind and thoughtful leader who listened carefully and led by example. He was an excellent clinician and surgeon, handling a wide breadth of ophthalmic conditions in children. His engagement in teaching was inspiring, and it was my privilege to train under his leadership.

Dr. Robb is survived by his wife Lucy Leinbach Robb, his children Henry, Erica William and their spouses, and 6 grandchildren. He will be missed by all who knew him.

*Written By,*

**DEBORAH K. VANDERVEEN, MD**  
Boston, MA

## STEVEN REEVES WALTMAN, MD



**Stephen Reeves Waltman died peacefully in his sleep at home in St. Louis on April 7, 2023. Dr. Waltman was born in New York City on April 20, 1941, the son of Richard Waltman, MD and Helen Esther Reeves Waltman. His father was a skilled physician and surgeon who specialized in gynecologic surgery and high-risk obstetrics. His mother was a remarkable woman who spoke several languages and pursued post-graduate studies at the Sorbonne.**

Stephen received a BS degree from the Massachusetts Institute of Technology at age 19 in 1961 and an MD degree summa cum laude from Yale University Medical School in 1964. After a surgical internship at Massachusetts General Hospital, he completed a residency in Ophthalmology at Washington University School of Medicine in 1968. He did a fellowship in corneal disease at the University of Florida under the

direction of Dr. Herbert Kaufman and was then Chief Resident in Ophthalmology at Washington University. Dr. Waltman served in the United States Army from 1970 to 1972, reaching the rank of Major and Assistant Chief of the Ophthalmology Service at Walter Reed General Hospital.

Dr. Waltman and Gillian Roper-Hall married in 1973 and celebrated their fiftieth wedding anniversary a few months before his death. They had two children, Belinda Abby Waltman MD and Michael Richard Waltman, and three grandchildren.

Dr. Waltman returned to Washington University as a faculty member in the Department of Ophthalmology, soon rising to the rank of Professor and Head of the Cornea Service. He was an excellent clinician and a gifted surgeon who trained generations of residents and fellows. He was the Medical Director of the St. Louis Eye Bank for almost two decades.

In 1989, Dr. Waltman left academia for private practice where he continued to provide superior medical and surgical care to his patients. He began teaching Ophthalmology residents and fellows at the John Cochran Veterans Administration Hospital in St. Louis, a service he continued to 2020. He received the Teacher of the Year Award from the Washington University residents and fellows twice during this time.

Dr. Waltman made several important contributions to vision science through his research efforts. He and Paul Palmberg MD helped to develop and test the modified M-K medium for penetrating keratoplasty. Dr. Waltman studied the results of penetrating keratoplasty, for pseudophakic and aphakic bullous keratopathy, noting the importance of donor size. He reported on the pathology and genotype of corneal dystrophies. Dr. Waltman helped design the slit lamp flurophotometer which measured vitreous fluroscein levels to assess the permeability of the blood retinal barrier. He reported on the evolution of diabetic retinopathy and the improvement of vascular permeability with better control of diabetes. Dr. Waltman published more than 100 papers and co-edited a textbook with Theodore Krupin MD titled *Complications in Ophthalmic Surgery*.



In person, Dr. Waltman was quiet and unassuming. However, the quiet demeanor hid a photographic memory and a powerful intellect. He remembered the names of his colleagues' spouses and children and invariably asked about them. He loved puns, jokes and riddles and often left the residents with a puzzle to be answered at the next meeting. Dr. Waltman was a keen squash player and loved travel and collecting art and fine wines. He and Gillian were generous supporters of many philanthropic groups especially the St. Louis Society for the Blind and Visually Impaired. At age 50, he completed an MBA degree at Washington University and applied this training and his intellect to political and economic questions. His most common remark was, "Show me the data that support your position".

I first met Dr. Waltman in July 1969 when I was a first-year resident, and he was the chief resident in Ophthalmology at Washington University. I followed him for six months asking rapid-fire questions like a two-year-old. He seemed to know everything and was gracious and generous, sharing his knowledge. After he died, many residents, fellows and faculty remarked that he had been the best teacher of their training. Thus, over five decades he had a powerful impact on generations of young Ophthalmologists. This is his greatest legacy.

*Written By,*

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