



International Society
for Eye Research



**BrightFocus
Foundation**
Cure in Mind. Cure in Sight.

ISER / BRIGHTFOCUS GLAUCOMA SYMPOSIUM:

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA

PROGRAM BOOK

**ATLANTA, GEORGIA, USA
OCTOBER 8 - 11, 2025**

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



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ISER and BrightFocus Letter of Welcome



Frank Lovicu
ISER President

It is our great pleasure to welcome you to the ISER/BrightFocus Glaucoma Symposium: Concepts and Breakthroughs in Glaucoma and BrightFocus Glaucoma Fast Track 2025!

The International Society for Eye Research (ISER) and BrightFocus Foundation have been co-sponsors of this event since 2017, cooperating in delivering scientific meetings and symposia to advance our understanding and treatment of glaucoma. We hope our collaboration, and your enthusiasm to come together to share your discoveries, continues well into the future.

As we come together, we would like to thank you all for your research in advancing the basic understanding, diagnosis and treatment of this devastating disease. Special thanks are due to the Program Organizing Committee, all of whom have spent countless hours helping to coordinate and facilitate this meeting, including: Drs. Dan Stamer, Rob Nickells, Ross Ethier, Adriana Di Polo, Abe Clark, Paloma Liton, Becky Sappington, Michael Fautsch, Babak N. Safa, and Colleen McDowell, as well as Drs. Diane Bovenkamp and Jimmy Liu of BrightFocus Foundation, and Drs. Paloma Liton, Carol Toris and Robert Mullins of ISER.



Diane Bovenkamp
VP Scientific Affairs

We also would like to thank and acknowledge our corporate sponsors who are essential to keep registration costs reasonable, as well as support travel awards and facilitate social activities.

The Mission of ISER is to provide a unique international platform for discussion and exchange of ideas on contemporary topics in eye and vision research among its members and the broader eye/vision research community. At BrightFocus, our mission is to harness the power of science to end the conditions we fear most – loss of sight and loss of mind. Through our work on glaucoma, macular degeneration, Alzheimer's and related dementias, we are uniquely positioned for scientific innovation by enabling the sharing of discoveries from one disease to inform another.

The current meeting is built on the vibrant success of the first three meetings held on this topic which have enabled the organizers to continue to attract world authorities in glaucoma research and the clinical applications of these findings.

We welcome you to Atlanta and hope you have an enjoyable and productive meeting.

Program Planning Committee Welcome Letter



Dear Participants,

It is our great pleasure to welcome you to the 2025 glaucoma symposium "Concepts and Breakthroughs in Glaucoma". As in 2017, 2019 and 2022, this meeting is co-sponsored by the International Society for Eye Research and the BrightFocus Foundation and is designed to create a Gordon Conference-style forum for glaucoma researchers. The meeting brings together scientists from different backgrounds and career stages (from students to established thought leaders) working on all aspects of glaucoma research, and provides a high energy and information-intense environment.



This conference marks our fourth event held at the Emory University Conference Center and the fifth conference organized around the advances in basic and translational science being conducted by the glaucoma research community. The 2017, 2019 and 2022 meetings at Emory were very successful gatherings of basic scientists, clinician-scientists, and industry-based researchers providing a much-needed platform for our community to discuss advances in science that support the development of new therapeutic and diagnostic avenues for glaucoma. This year's conference builds on our previous success to provide an even better platform for an enthusiastic exchange of ideas. We strongly think that a face-to-face interactive event best maximizes productive scientific exchange.



This year's conference is focused on cutting-edge research in all aspects of glaucoma. The program features 9 podium sessions (including one new investigator session), a poster session, and 3 plenary lectures, each given by a world-class scientist in his or her respective field. These plenary lectures cover a range of glaucoma topics, from the physiology of aqueous humor dynamics to translational glaucoma genetics to neuroinflammatory processes in glaucoma. We have programmed the platform presentations from submitted abstracts, grouping them thematically to complement the topics of the plenary lectures. We extend a special thanks to colleagues from the National Glaucoma Research Scientific Advisory Board of the BrightFocus Foundation who helped review the 151 abstract submissions we received for this meeting. This was the highest number of submissions we have had to date. With the continued increase in abstract submissions, we have built into the program an extended poster session to allow participants to interact and discuss their work.



Thanks for all your support in keeping this meeting growing and continuing in the future. This meeting would not have been possible without the generous support from our corporate, government and institutional sponsors who have collectively given over \$181,000. These funds have enabled us to offset expenses, subsidizing the meeting registration costs for all participants. For this, we thank our fundraising committee members, Drs. Abe Clark, Mike Fautsch and Carol Toris.



Again, with the great support of the BrightFocus Foundation, we are pleased to offer a pre-symposium Fast Track course on "all things glaucoma". The intent is to provide trainees, young investigators and those new to glaucoma with a significant grounding in the complexities of the disease, from both clinical and research perspectives, immediately prior to the meeting. This will be accomplished by a series of lectures, given by established and respected faculty.

We give special thanks to Drs. Diane Bovenkamp, Becky Sappington, Colleen McDowell and Abe Clark for their tireless efforts in putting the course together,

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and to Drs. Paloma Liton, Becky Sappington and Diana Lozano for leading the review process of the abstracts from students and young investigators who received travel award fellowships. Also, we recognize the generous support of the National Eye Institute for awarding an R13 grant that funded 24 travel fellowships for a third time; to the BrightFocus Foundation and ISER who provided funding for 23 travel fellowships; to Von Sallmann Memorial Fund and to an anonymous donor who funded 2 fellowships. In total, we were able to provide funding for 56 travel fellowships to attend this innovative and timely Fast Track course plus the general meeting.

Our goal with this symposium is to provide the community with a forum to hear and learn about new and exciting research in glaucoma, while maintaining an intimate setting that fosters productive discussions, new and renewed acquaintances, and successful collaborations.

Best wishes to all of you and thank you for making this year's symposium a success.

Your Meeting Co-Organizers,

Paloma Liton, C. Ross Ethier, Dan Stamer, Rob Nickells, and Adriana Di Polo

ISER President Letter of Welcome



Frank Lovicu
ISER President

On behalf of the International Society for Eye Research, it is with great pleasure that we extend a warm welcome to you all to the 4th ISER/BrightFocus 2025 Glaucoma Symposium: Concepts and Breakthroughs in Glaucoma.

The overarching mission of ISER is to provide a unique international platform for discussion and exchange of ideas on contemporary topics in eye and vision research for its members and the broader eye/vision research community. Whether you are a seasoned researcher, an emerging scientist, a clinician, or a patient advocate, your presence and contributions are what make our meetings a vital event for our global community. We are truly excited about the calibre of research to be presented over the coming days, packed with groundbreaking presentations, interactive workshops, and collaborative sessions designed to foster new ideas to accelerate our collective progress in a cure for glaucoma.

This meeting is not just a platform for sharing knowledge; it is a space for all to connect, challenge each other, and forge new partnerships that will shape the future as we advance our understanding and treatment of glaucoma. With this meeting, we continue our ongoing strong partnership with the BrightFocus Foundation, who co-sponsor this event, built on the great success of our past meetings, enabling the organizers to continue to attract world authorities in glaucoma research.

The meeting will kick off with the BrightFocus Glaucoma Fast Track workshop, building a greater understanding of the mechanistic underpinnings of glaucoma. We endeavour to attract, support, and include many early career researchers to participate in our program, providing a solid foundation for these future scientists, clinicians, and leaders of tomorrow. I would like to again take this opportunity to express our sincere gratitude to the dedicated program organizing committee for their tireless efforts in bringing this event to fruition. Their commitment to creating a comprehensive and engaging program is deeply appreciated. We also wish to extend our heartfelt thanks to all our generous sponsors. Their unwavering support is instrumental in making this symposium possible and in ensuring that we can continue to support our younger members, as well as advance glaucoma research on a global scale. A special mention goes to our professional conference organizers, OIC, who embraced every challenge and delivered, to get us here today.

We encourage you to engage with your peers during the platform sessions, explore the posters, and make the most of every opportunity to learn and collaborate.

Thank you all again for joining us. We wish you a productive and inspiring symposium, and we also look forward to welcoming you in 2026 to the upcoming ISER biennial meeting in Valencia, Spain (Aug 23-27; <https://iserbiennial-meeting2026.org/>).

Sincerely,
Professor Frank J. Lovicu, PhD, FARVO
ISER President



Stacy Haller
BrightFocus CEO
and President

Welcome to the ISER/BrightFocus 2025 Glaucoma Symposium

On behalf of BrightFocus Foundation, thank you for your dedication to advancing the diagnosis, treatment, and - ultimately - a cure for glaucoma. We are proud to partner with ISER to host our BrightFocus Glaucoma Fast Track, now in its fourth year, as the pre-symposium workshop.

At BrightFocus, our mission is clear: harness the power of science to end the conditions we fear most: loss of sight and loss of mind. Through our work on glaucoma, macular degeneration, and Alzheimer's, we serve as an umbrella on neurodegenerative disease, uniquely positioned for scientific innovation by sharing discoveries from one disease to inform another.

For more than five decades, BrightFocus has proudly supported breakthrough research. Our grantees often go on to secure follow-on funding that averages eight times greater than their original BrightFocus award. Scientists we've supported have gone on to receive major awards in their fields, including two Nobel Prizes. Beyond funding, we also share the latest research findings with millions of families affected by these diseases, ensuring that science reaches those who need it most.

We invite you to bring your boldest, most creative ideas to BrightFocus. Our research grants are designed to empower investigator-initiated projects across borders and disciplines. With the guidance of our world-class scientific review committees, we seek out the untried, the unexpected, and the most promising studies. Since our inception, we have invested more than \$109 million in vision research. To learn more about our research opportunities, please visit brightfocus.org/apply or email researchgrants@brightfocus.org.

Our pre-symposium workshop, Glaucoma Fast Track, is an immersive program for emerging researchers to learn from and interact with leaders in this field. This program is open to all, and we encourage you to take part. Recordings from past workshops in 2017, 2019, and 2022 are available at brightfocus.org/GlaucomaFastTrack.

I hope that your time at this symposium is meaningful and rewarding, accelerating your path toward scientific discovery. While diseases such as glaucoma can seem daunting, investing in bold, innovative research gives us great hope for the future.

Thank you for joining us this week. I look forward to seeing the progress we will achieve together in the years ahead.

Stacy Haller
BrightFocus CEO and President

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**International Society
for Eye Research**

Information

**Requests for
information about
membership, journal
subscriptions and
biennial meetings
should be directed to:**

ISER Secretariat
655 Beach Street
San Francisco, CA
94109 USA
Phone: + 1-415-561-
8569
Fax: + 1-415-561-8531
E-mail: mail@iser.org
Website: www.iser.org

**Requests for
information about any
other matters related
to the affairs of the
Society should be
directed to:**

Office of the President
Frank J. Lovicu, PhD,
FARVO
Save Sight Institute
and School of Medical
Sciences, FMH.
The University of
Sydney,
NSW. 2006 Australia
E-mail: frank.lovicu@sydney.edu.au

About ISER

The Mission of ISER is to provide a unique international platform for discussion and exchange of ideas on contemporary topics in eye and vision research among its members and the broader eye/vision research community.

ISER supports this mission by holding scientific meetings at venues throughout the world, through its journal, *Experimental Eye Research*, and by focusing resources on the development and support of young investigators.

ISER MEMBERSHIP INFORMATION

The Society has about 400 members from over 25 countries. The Bylaws of the Society (Article II, Section I) include the following membership categories:

- Full Members shall be investigators who are actively engaged in eye or vision research or other fields related to eye or visual system tissues and are 8 years or more past their terminal degree.
- Early Career Researchers shall be any pre-doctoral (Masters/ PhD/MD/OD/BOptom/MOptomDVM/DO)/equivalent students, or postdoctoral, clinical residents, or clinical fellows engaged in vision/eye research for no longer than 8 years since their terminal degree.
- Sustaining Members shall be persons, organizations, societies, corporations or agencies who provide ongoing financial support of the society.
- Emeritus Members shall be Full Members who have 10 years cumulative ISER membership, who have reached the age of 65, whose academic appointment is no more than 50%, and who have requested a change to Emeritus Membership in writing.

The Members Committee will solicit nominations one year prior to the ISER meeting. The Committee will review the nominations and submit recommendations to the Council for action.

ISER XXVII BIENNIAL MEETING

ISER's XXVII Biennial Meeting in Valencia, Spain will be held August 23 - 27, 2026.

OFFICIAL JOURNAL

Experimental Eye Research (EER), published by Elsevier Ltd., (3251 Riverport Lane, St. Louis, Missouri, 63043) is the official Journal of the Society. A reduced subscription rate for the journal in print or electronic format is an optional membership benefit for all members.

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About BrightFocus



**BrightFocus®
Foundation**

Cure in Mind. Cure in Sight.

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

BrightFocus is the world's premier source of funding and support for research into glaucoma, macular degeneration, and Alzheimer's. We seek to find the cures for the devastating conditions we all fear most: loss of sight and loss of mind.

We fund cutting-edge ideam scientists all over the world who are dedicated to making groundbreaking discoveries. Since our beginning, we have invested more than \$310 million in bold, innovative scientific research.

► BrightFocus Grants at a Glance 2025

56%

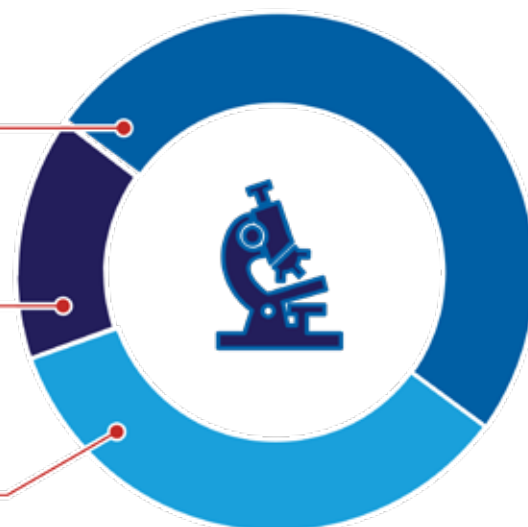
BASIC RESEARCH GRANTS

14%

CLINICAL RESEARCH GRANTS

30%

TRANSLATIONAL RESEARCH GRANTS



International Grants Available. Apply today:
www.brightfocus.org ♦ 1-800-437-2423

Code of Conduct and Safety Plan

ISER/BrightFocus Glaucoma Meeting Code of Conduct and Anti-Harassment Policy

At the ISER/BrightFocus Glaucoma Meeting, we're committed to fostering an environment where everyone feels safe, respected, and welcomed. We believe that multiple perspectives and experiences enrich our discussions and propel glaucoma research forward. This Code of Conduct and Anti-Harassment Policy is designed to ensure a positive experience for all participants, including attendees, speakers, exhibitors, organizers and staff.

Our Commitment to Respectful Engagement

We expect all participants to engage with respect, dignity, and thoughtfulness, valuing the contributions and viewpoints of others. Open and constructive dialogue is the cornerstone of productive collaboration, and we ask everyone to communicate respectfully and attentively, taking care to avoid language or actions that could be hurtful or exclusionary.

Behaviors That Have No Place Here

To maintain a positive and professional atmosphere, certain behaviors will not be tolerated. This includes any form of harassment, discrimination, or intimidation based on race, gender, gender identity, sexual orientation, disability, age, religion, nationality, or physical appearance. Offensive comments, jokes, gestures, or images, particularly those that target specific personal attributes, are prohibited. Other unacceptable behaviors include stalking, following, unwanted contact, or any form of unwanted sexual attention. Additionally, we ask that all participants respect the flow of sessions by refraining from disruptive behavior.

Reporting a Concern

If you experience or observe behavior that violates this policy, please report it promptly to meeting organizers via email or in-person at the registration/information desk. Your comfort and safety are paramount to us, and we pledge to handle all reports with confidentiality and sensitivity.

Consequences of Unacceptable Behavior

Participants who are found to violate this Code of Conduct may face consequences, including being asked to stop the offending behavior, being removed from the event without a refund, notifying the person's institution, and/or being prohibited from attending future meetings, depending upon the severity of the offense.

Contacting the HHS Office for Civil Rights (OCR)

Individuals who have questions, concerns, or complaints related to harassment or discrimination are encouraged to contact either the conference organizers or the U.S. Department of Health and Human Services (HHS) Office for Civil Rights (OCR). You can file a civil rights complaint with HHS OCR via:

- **Web:** <https://www.hhs.gov/ocr/complaints/index.html>
- **E-mail:** OCRComplaint@hhs.gov

Please note that filing a complaint with the conference organizer is not required before filing a complaint with HHS OCR, and that seeking assistance from the conference organizer does not prohibit filing a complaint with HHS OCR.

Reporting to the NIH

Participants may also report concerns regarding harassment, discrimination, or other inappropriate conduct occurring at NIH-supported conferences directly to the NIH. For more information or to file a complaint visit NIH's "Find Help" webpage at <https://grants.nih.gov/policy-and-compliance/policy-topics/harassment/find-help>

Acknowledgment of ISER/BrightFocus Code of Conduct

By joining us at the ISER/BrightFocus Glaucoma Meetings, you agree to uphold these principles and contribute to an inclusive, respectful, and dynamic environment. Thank you for helping us create a conference where everyone can focus on advancing glaucoma research in a safe and welcoming setting.

Symposium Planning Committee

ISER/BRIGHTFOCUS 2025 GLAUCOMA SYMPOSIUM CO-CHAIRS



W. Daniel Stamer, PhD

Duke University Medical Center
Durham, NC

W. Daniel Stamer, PhD currently serves as the Joseph A.C. Wadsworth Professor of Ophthalmology and Professor of Biomedical Engineering at Duke University. Professor Stamer was educated at the University of Arizona, earning his bachelor of science in Molecular and Cellular Biology in 1990 and doctorate in Pharmacology and Toxicology in 1996. He completed two research fellowships: the first with Dr. Andrea Yool in electrophysiology and the second with Dr. David Epstein in glaucoma/cell biology. Professor Stamer started his research program in 1998 at the University of Arizona, where he remained for 13 years, rising through the ranks to full Professor and Director of Ophthalmic Research. He was then recruited to the Duke Eye Center in 2011, where he remains today. Notable recent accomplishments include the Rudin Prize for Glaucoma in 2012, the RPB Senior Scientific Investigator Award in 2013 and ARVO president in 2019/2020. He currently serves on the editorial boards for the Journal of Ocular Pharmacology and Therapeutics, Investigative Ophthalmology and Visual Science and scientific advisory boards for the BrightFocus Foundation, the Glaucoma Foundation and the Glaucoma Research Foundation. The primary research focus of the Stamer laboratory is to understand the molecular and cellular mechanisms that regulate conventional outflow resistance, and thus intraocular pressure.



C. Ross Ethier, PhD

Emory University School of Medicine
Georgia Institute of Technology
Atlanta, GA

Dr. Ethier is Professor of Ophthalmology in the Department of Ophthalmology at Emory University, and holds a secondary appointment in the Wallace H. Coulter Department of Biomedical Engineering at Emory University School of Medicine & Georgia Institute of Technology. He received his PhD from MIT in 1986, his S.M. from MIT in 1983, his M. Math from Waterloo in 1982 and his BSc from Queen's in 1980. His research is in the biomechanics of cells and whole organs, with specific emphasis on ocular biomechanics. His lab seeks to understand the pathogenesis of, and develop treatments for, glaucoma, working in both the anterior and posterior segments. This has included characterizing the role of the sclera in optic nerve head biomechanics; mechanotransduction in the trabecular meshwork; and technology for stem cell delivery to the trabecular meshwork. The Ethier lab also conducts research on the biomechanics of myopia. He serves on multiple editorial and advisory boards, including being Editor-in-Chief of the ASME Journal of Biomechanical Engineering.

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Robert W. Nickells, PhD
University of Wisconsin-Madison
Madison, WI

Dr. Nickells received his PhD in developmental biology at the University of Calgary and began studying the pathophysiology of glaucoma as a research fellow at the Wilmer Eye Institute at Johns Hopkins. He is currently Professor and Frederick A. Davis Research Chair in the Department of Ophthalmology and Visual Science at the University of Wisconsin-Madison, where he runs an active research program centered on the molecular pathways activated in retinal ganglion cells after optic nerve damage. A major focus is on the interactions of the pro-apoptotic and anti-apoptotic members of the Bcl2 gene family. Major branches of this research include investigating the role of BAX in the process of mitochondrial dynamics, how modulating BAX alters the activation program, and how this will affect ganglion cells in therapies that target BAX function.



Adriana Di Polo, PhD
University of Montreal,
CRCHUM Montreal, QC

Dr. Di Polo is Full Professor in the Departments of Neuroscience and Ophthalmology at the University of Montreal and holds a Tier 1 Canada Research Chair in glaucoma and age-related neurodegeneration. She received her PhD from the University of California, Los Angeles followed by postdoctoral training at the Centre for Research in Neuroscience at McGill University. Her research program focuses on understanding mechanisms of neuronal, glial, and vascular deficits in glaucoma. The ultimate goal of the Di Polo laboratory is to develop regenerative therapies to restore retinal ganglion cell function and, ultimately, vision in patients affected by glaucoma. She is the current Director of the Retinal and Posterior Segment Group of the Quebec Vision Health Research Network, was recently served as President of the Canadian Association for Neuroscience. Dr. Di Polo is an ARVO Gold Fellow and recent accomplishments include the 2019 Shaffer Prize from the Glaucoma Research Foundation and the Lewis Rudin Glaucoma Research Prize awarded in 2020 and the Alcon Research Institute Senior Investigator in 2023.



Paloma Liton, PhD
Duke University
Durham, NC

Dr. Paloma Liton is a tenured professor at Duke University with joint appointments in the Departments of Ophthalmology and Pathology. She earned her Ph.D. in Molecular Biology from the Universidad Autónoma de Madrid in 2001 and completed postdoctoral training in outflow pathway biology and physiology in the laboratory of the late Dr. David Epstein. Dr. Liton's research explores the link between autophagy-lysosomal pathway dysfunction and glaucoma in aging eyes. She has pioneered studies on autophagy in outflow pathway physiology and neurodegeneration in glaucoma. Her contributions have earned her several prestigious awards, including the Alcon Research Institute Young Investigator Award and the Thomas R. Lee Glaucoma Research Award. An active member of the scientific community, Dr. Liton serves on editorial boards of multiple journals, including *Experimental Eye Research* as Executive Editor. She also participates in review panels for the National Eye Institute, BrightFocus Foundation, and other international study sections. Additionally, she is part of the BrightFocus Scientific Committee Board, chairs the ISER/BrightFocus Travel Award Committee and acts as the Vice-president of the Americas for ISER.

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EXHIBITS/SPONSORSHIP COMMITTEE



Abbot F. Clark, PhD

North Texas Eye Research Institute,
University of North Texas Health Science Center
Fort Worth, TX

Abbot (Abe) Clark, PhD, FARVO is Regents Professor and Executive Director of the North Texas Eye Research Institute at the University of North Texas Health Science Center in Ft. Worth, Texas, USA. The major focus of his research has been on the discovery of molecular pathogenic pathways for glaucoma and the development of novel disease modifying therapies. He has extensive expertise and experience in molecular biology, cell biology, ex vivo models (perfusion cultured anterior segments), and rodent models. His lab identified a number of glaucomatous pathogenic pathways in the TM, the retina, and the optic nerve head. They culture ocular cells including TM, optic nerve head, and retinal ganglion cells from human donor eyes, bovine eyes, and/or mouse eyes. They also have extensive experience with mouse models of glaucoma and acute retinal injury. His laboratory has recently discovered both small molecular and gene therapies that prevent glaucoma-like damage to the TM, RGCs, the optic nerve, and visual centers of the brain. Abe is on the editorial boards of 4 ophthalmic and molecular neuroscience journals and serves on NEI and BFF study sections.



Michael Fautsch, PhD

Mayo Clinic, Rochester, MN

Michael Fautsch, PhD is the Joseph E. and Rose Marie Green Professor of Visual Sciences in the Department of Ophthalmology at the Mayo Clinic in Rochester, MN. His research interests include understanding the underlying mechanisms associated with intraocular pressure regulation in normal and glaucoma patients. His studies have resulted in the development of ocular hypotensive agents that are currently in phase 2 clinical trials. He has published over 130 peer reviewed papers and chapters and currently holds 46 patents covering 12 technologies.

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



Carol Toris, PhD

The Ohio State University, USA

Carol Toris is a research professor of ophthalmology at The Ohio State University. Her primary research focus for over three decades has been and continues to be on aqueous humor dynamics (AHD) and intraocular pressure (IOP) regulation. Before joining the glaucoma research team at OSU, she worked at the University of Nebraska Medical Center for 32 years where she conducted IOP and AHD studies in cats, dogs, nonhuman primates, mice, rabbits and humans. In the primate glaucoma model, she studied a novel drainage device, many novel IOP-lowering drugs, and morphology of the outflow pathways. Her clinical research includes the study of ocular pathologies affecting IOP and normal changes that take place during aging and over a 24-hour period. She has investigated novel IOP lowering drugs when dosed alone or together, during the day and night, and under different pathological conditions. Her rabbit work included the study of ocular pathologies affecting IOP and normal changes that take place during puberty and throughout the day and night. She has studied mice with glaucoma and helped to develop a mouse fluorophotometer to measure aqueous flow. Her studies have been funded by industry in the form of collaborations or Investigator Initiated Trials, by receiving Foundation grants and by collaborations with PIs funded by NIH. This work has generated well over 300 publications, book chapters, review articles and abstracts.

COMMUNICATIONS



Babak N. Safa

University of South Florida, FL

Dr. Safa is an Assistant Professor of Medical Engineering at the University of South Florida, where he leads the Soft Tissue and Ocular Biomechanics Lab. His work integrates mechanical testing, imaging, and computational modeling to understand biomechanical mechanisms in ocular and musculoskeletal health. His research focus includes primary angle-closure glaucoma (PACG) and the role of iris biomechanics and sex differences in PACG. His work has been continually funded by the NIH and BrightFocus Foundation.

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



BRIGHTFOCUS GLAUCOMA FAST TRACK WORKSHOP COMMITTEE CHAIRS



Diane Bovenkamp, PhD

VP Scientific Affairs at BrightFocus Foundation
Clarksburg, MD

Diane Bovenkamp, PhD, Vice President of Scientific Affairs, is the chief scientist at BrightFocus Foundation, overseeing global operations of the organization's research programs. She serves as the scientific liaison in local, national, and international forums, and identifies and develops new research initiatives, partnerships, and funding policies consistent with the mission of BrightFocus. Dr. Bovenkamp obtained her PhD in Biochemistry from Queen's University in Kingston, Ontario, Canada, discovering and studying Eph receptors in angiogenesis and neural development in zebrafish and mice. She completed a Postdoctoral Fellowship in the Vascular Biology Program at Boston Children's Hospital/Harvard Medical School, isolating and characterizing zebrafish neuropilins. Dr. Bovenkamp conducted further research at the Johns Hopkins University Bayview Proteomics Center in the Division of Cardiology at Johns Hopkins School of Medicine in Baltimore, Maryland, using proteomic techniques for biomarker detection in human serum.



Abbot F. Clark, PhD

North Texas Eye Research Institute,
University of North Texas Health Science Center
Fort Worth, TX

Abbot (Abe) Clark, PhD, FARVO is Regents Professor and Executive Director of the North Texas Eye Research Institute at the University of North Texas Health Science Center in Ft. Worth, Texas, USA. The major focus of his research has been on the discovery of molecular pathogenic pathways for glaucoma and the development of novel disease modifying therapies. He has extensive expertise and experience in molecular biology, cell biology, ex vivo models (perfusion cultured anterior segments), and rodent models. His lab identified a number of glaucomatous pathogenic pathways in the TM, the retina, and the optic nerve head. They culture ocular cells including TM, optic nerve head, and retinal ganglion cells from human donor eyes, bovine eyes, and/or mouse eyes. They also have extensive experience with mouse models of glaucoma and acute retinal injury. His laboratory has recently discovered both small molecular and gene therapies that prevent glaucoma-like damage to the TM, RGCs, the optic nerve, and visual centers of the brain. Abe is on the editorial boards of 4 ophthalmic and molecular neuroscience journals and serves on NEI and BFF study sections.

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



Colleen McDowell, PhD

Associate Professor Department of Ophthalmology and Visual Sciences
University of Wisconsin-Madison
Madison, WI

Her laboratory is dedicated to dissecting the molecular mechanisms responsible for glaucomatous trabecular meshwork (TM) damage, elevated intraocular pressure (IOP), as well as damage to the retina and optic nerve (ON). Their approach utilizes in vitro, in vivo, and ex vivo model systems combined with advanced molecular genetics, physiology, and imaging techniques. The involvement of TGF β 2 signaling pathways in the regulation of the extracellular matrix (ECM) in the trabecular meshwork (TM) has been well established. Her laboratory identified for the first time crosstalk between the TGF β 2 signaling pathway and the toll like receptor 4 (TLR4) signaling pathway in the regulation of the ECM in the TM. We are now identifying new targets in the TGF β 2-TLR4 signaling crosstalk to lower IOP and further explain the mechanisms involved in the development of glaucomatous TM damage. In addition, we are exploring the mechanisms for the development and regulation of segmental outflow through the TM and Schlemm's canal. Interestingly, there are many functional, structural, and cellular similarities between TM cells and optic nerve head (ONH) astrocytes and lamina cribrosa (LC) cells. The ONH region progressively remodels during glaucoma, leading to cupping of the optic disk as well as mechanical failure and fibrosis of the LC; however, the cellular and molecular mechanisms responsible for this remodeling are poorly understood. Her laboratory is also interested in identifying these mechanisms involved in the production and regulation of the ECM in the glaucomatous ONH.



Rebecca Sappington, PhD

Wake Forest School of Medicine
Winston-Salem, NC

Dr. Sappington's research program focuses on inflammation and stress signaling in neurodegeneration, particularly in the visual system. Her work focuses on signaling pathways and disease features with commonality across neurodegenerative diseases. As such, her laboratory utilizes traditional models of eye disease as well as small and large animal models of amyotrophic lateral sclerosis and Alzheimer's disease. She also has a passion for technical innovation in basic and translational sciences. Through collaborative team science, Dr. Sappington is contributing to the development of novel particle-based drug delivery tools, tissue preservation and transplantation mediums, and modified CRISPR-based gene editing tools.

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



TRAVEL GRANT REVIEW COMMITTEE



Paloma Liton, PhD - Committe Co-chair
Duke University
Durham, NC

Dr. Paloma Liton is a tenured professor at Duke University with joint appointments in the Departments of Ophthalmology and Pathology. She earned her Ph.D. in Molecular Biology from the Universidad Autónoma de Madrid in 2001 and completed postdoctoral training in outflow pathway biology and physiology in the laboratory of the late Dr. David Epstein. Dr. Liton's research explores the link between autophagy-lysosomal pathway dysfunction and glaucoma in aging eyes. She has pioneered studies on autophagy in outflow pathway physiology and neurodegeneration in glaucoma. Her contributions have earned her several prestigious awards, including the Alcon Research Institute Young Investigator Award and the Thomas R. Lee Glaucoma Research Award. An active member of the scientific community, Dr. Liton serves on editorial boards of multiple journals, including *Experimental Eye Research* as Executive Editor. She also participates in review panels for the National Eye Institute, BrightFocus Foundation, and other international study sections. Additionally, she is part of the BrightFocus Scientific Committee Board, chairs the ISER/BrightFocus Travel Award Committee and acts as the Vice-president of the Americas for ISER.



Rebecca Sappington, PhD - Committe Co-chair
Wake Forest School of Medicine
Winston-Salem, NC

Dr. Sappington's research program focuses on inflammation and stress signaling in neurodegeneration, particularly in the visual system. Her work focuses on signaling pathways and disease features with commonality across neurodegenerative diseases. As such, her laboratory utilizes traditional models of eye disease as well as small and large animal models of amyotrophic lateral sclerosis and Alzheimer's disease. She also has a passion for technical innovation in basic and translational sciences. Through collaborative team science, Dr. Sappington is contributing to the development of novel particle-based drug delivery tools, tissue preservation and transplantation mediums, and modified CRISPR-based gene editing tools.



Diana Lozano - Committee Member-in-training
Casey Eye Institute
Portland, OR

Dr. Diana C. Lozano is an Assistant Professor at the Casey Eye Institute since 2020. Dr. Lozano's research interest is to better understand the cellular basis for glaucomatous optic nerve damage using models of elevated intraocular pressure (IOP). She is currently investigating cellular responses within the optic nerve head and trabecular meshwork to mild elevations of IOP, which may ultimately aid in designing new glaucoma therapies.

Keynote Speakers



Anthony Khawaja, MD, PhD

Professor, UCL Institute of Ophthalmology, London, UK

I aim to better understand and treat glaucoma using a range of data science approaches. Using large real-world data sources, I aim to understand outcomes in glaucoma care and factors which may lead to better outcomes. Using genetic data I aim to discover novel pathophysiological processes underlying glaucoma and related traits. I also use our knowledge of genetic risk factors to develop prediction tools which may enable targeted glaucoma screening. Another research focus is identifying novel modifiable risk factors for glaucoma, including lifestyle factors.



Carol Toris, PhD

Professor, The Ohio State University, USA

Carol Toris is a research professor of ophthalmology at The Ohio State University. Her primary research focus for over three decades has been and continues to be on aqueous humor dynamics (AHD) and intraocular pressure (IOP) regulation. Before joining the glaucoma research team at OSU, she worked at the University of Nebraska Medical Center for 32 years where she conducted IOP and AHD studies in cats, dogs, nonhuman primates, mice, rabbits and humans. In the primate glaucoma model, she studied a novel drainage device, many novel IOP-lowering drugs, and morphology of the outflow pathways. Her clinical research includes the study of ocular pathologies affecting IOP and normal changes that take place during aging and over a 24-hour period. She has investigated novel IOP lowering drugs when dosed alone or together, during the day and night, and under different pathological conditions. Her rabbit work included the study of ocular pathologies affecting IOP and normal changes that take place during puberty and throughout the day and night. She has studied mice with glaucoma and helped to develop a mouse fluorophotometer to measure aqueous flow. Her studies have been funded by industry in the form of collaborations or Investigator Initiated Trials, by receiving Foundation grants and by collaborations with PIs funded by NIH. This work has generated well over 300 publications, book chapters, review articles and abstracts.



Nicholas Marsh-Armstrong, PhD

University of California Davis, USA

Dr. Marsh-Armstrong is a Professor in the Department of Ophthalmology and Vision Science at the University of California, Davis. His laboratory investigates cellular and molecular mechanisms of relevance to how retinal ganglion cell axons are damaged in glaucoma, with the ultimate goal of discovering novel optic nerve head directed therapies. Much of his effort is directed at understanding how axonal debris is removed from the optic nerve, both during health and disease, focusing primarily on the role of astrocytes. A second major area of interest is understanding how retinal ganglion cells can regenerate their axons.

Platform Session Moderators

The Organizing Committee sincerely thanks the following session moderators:

- **Inas Aboobakar** – [Mass Eye and Ear/Harvard Medical School](#)
- **Mike Anderson** – [University of Iowa](#)
- **Revathi Balasubramaniam** – [Columbia University](#)
- **Abe Clark** – [University of North Texas Health Science Center at Fort Worth](#)
- **Silmara de Lima** – [University of Pittsburgh](#)
- **Preethi Ganapathi** – [SUNY Upstate Medical University](#)
- **Eldon Geisert** – [Emory University](#)
- **Kate Keller** – [Oregon Health & Science University](#)
- **Markus Kuehn** – [University of Iowa](#)
- **Diana Lozano** – [Oregon Health & Sciences University](#)
- **Weiming Mao** – [Indiana University School of Medicine](#)
- **Nick Marsh-Armstrong** – [University of California, Davis](#)
- **Fiona McDonnell** – [University of Utah](#)
- **Yvonne Ou** – [University of California, San Francisco](#)
- **Donna Peters** – [University of Wisconsin, Madison](#)
- **Heberto Quintero** – [University of Montreal Hospital Research Center](#)
- **Babak N. Safa** – [University of South Florida](#)
- **Tasneem Sharma** – [Indiana University School of Medicine](#)

Travel Award Grants

Congratulations to all those that received a travel award grant to attend the ISER/BrightFocus 2025 Glaucoma Symposium and BrightFocus Glaucoma Fast Track.

- **Inas Aboobakar** – [Mass Eye And Ear Institute/Harvard Medical School \(USA\)](#)
- **Aaron T. Baker** – [Indiana University \(USA\)](#)
- **Virginia Baker Mathu** – [University of Wisconsin-Madison \(USA\)](#)
- **Revathi Balasubramanian** – [Columbia University \(USA\)](#)
- **Jennifer D. Ballheim** – [University of Oklahoma Health Sciences Center \(USA\)](#)
- **Ji Won Bang** – [Stanford University \(USA\)](#)
- **Yibo Chen** – [Emory University and Georgia Institute of Technology \(USA\)](#)
- **Charis Chiang** – [Emory University \(USA\)](#) and [National University \(Singapore\)](#)
- **Jared Ching** – [National Health Group \(Singapore\)](#)
- **Thanadet Chuangsuwanich** – [Emory University \(USA\)](#)
- **Michaela Dunn** – [Devers Eye Institute \(USA\)](#)
- **Sana El Hajji** – [University of Montreal \(Canada\)](#)
- **Basem Fouda** – [University College Dublin \(Ireland\)](#)
- **Nina Sara Fraticelli-Guzman** – [Georgia Institute of Technology \(USA\)](#)
- **Magdalena Gebert** – [University of Regensburg \(Germany\)](#)
- **Rajanya Ghosh** – [SUNY Upstate Medical University \(USA\)](#)
- **Souvik Ghosh** – [SUNY Upstate Medical University \(USA\)](#)
- **Cátia Gomes** – [Indiana University School of Medicine \(USA\)](#)
- **Prakadeeswari Gopala Krishnan** – [University of California, Irvine \(USA\)](#)
- **Johanna Heimbucher** – [University of Regensburg \(Germany\)](#)
- **Shelby Hetzer** – [Indiana University School of Medicine \(USA\)](#)
- **Kamisha Hill** – [Georgia Institute of Technology \(USA\)](#)
- **Aliénor Jamet** – [Dalhousie University \(USA\)](#)
- **Naoki Kiyota** – [Northwestern University \(USA\)](#)
- **Daniel Labbe** – [Northeastern University \(USA\)](#)
- **Haiyan Li** – [Georgia Institute of Technology \(USA\)](#)
- **Sean Lydon** – [University of Rochester \(USA\)](#)
- **Shubham Maurya** – [University of California, Berkeley \(USA\)](#)

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



International Society
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BrightFocus
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- **Lucy Grace Moore** – University of California, Davis (USA)
- **Mi-Hyun Nam** – University of Colorado School of Medicine (USA)
- **Caroline Nelson** – University of Utah (USA)
- **Mohamed Omer** – Mayo Clinic (USA)
- **Shruti Patil** – Indiana University (USA)
- **Heberto Quintero** – University of Montreal (Canada)
- **Walter Radford** – Georgia Institute of Technology (USA)
- **Srimathi Raghavan** – Indiana University School of Medicine (USA)
- **Anjali Rai** – University of Wisconsin, Madison (USA)
- **Jaclyn Rittershaus** – SUNY Upstate Medical University (USA)
- **Gabriela Sanchez Rodriguez** – Georgia Institute of Technology (USA)
- **Tania Sharmin** – University of Wisconsin, Madison (USA)
- **Yukihiro Shiga** – University of Montreal (Canada)
- **Anusha Shivashankar** – Indiana University (USA)
- **Rafael Siquiera Chagas** – Georgia Institute of Technology (USA)
- **McKenna M. Somerville** – University of Alabama at Birmingham (USA)
- **Markus Spurlock** – University of Utah (USA)
- **Ana Strat** – SUNY Upstate Medical University (USA)
- **Ryan G. Strickland** – University of Alabama at Birmingham (USA)
- **Chenna Kesavulu Sugali** – Indiana University, Indianapolis (USA)
- **Mi Sun Sung** – Duke University (USA)
- **Isaac Alejandro Vidal Paredes** – University of Montreal (Canada)
- **Xinyue Wang** – University of Pittsburgh (USA)
- **Susannah Waxman** – University of Pittsburgh (USA)
- **Cydney Wong** – Georgia Institute of Technology (USA)
- **Wenjin Xu** – University of Virginia (USA)
- **Sarah Yablonski** – University of Rochester (USA)
- **Alexandra Zamitalo** – University of South Florida (USA)

Hotel and Conference Venue

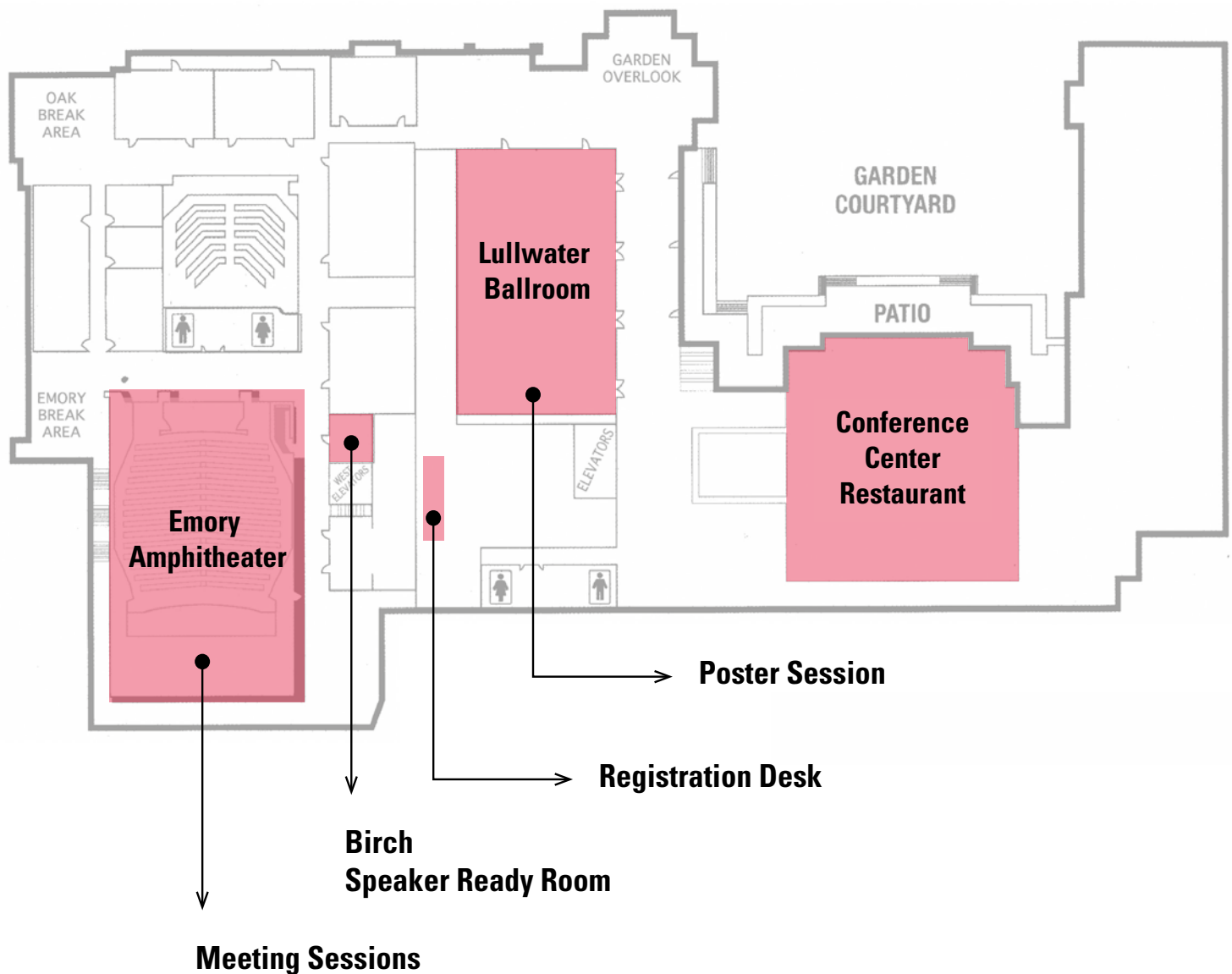


EMORY CONFERENCE CENTER HOTEL

1615 Clifton Rd N E, Atlanta, GA 30329, USA

Phone +1 4047126000

<https://www.emoryconferencecenter.com/>



ATLANTA, GEORGIA, USA
OCTOBER 8 - 11, 2025

ISER / BRIGHTFOCUS GLAUCOMA SYMPOSIUM:

**CONCEPTS AND
BREAKTHROUGHS
IN GLAUCOMA**



International Society
for Eye Research



**BrightFocus
Foundation**
Cure in Mind. Cure in Sight.

SCIENTIFIC PROGRAM

Fast Track Schedule at a Glance

	TUESDAY, OCTOBER 7, 2025	WEDNESDAY, OCTOBER 8, 2025
6:30 AM - 7:45 AM		Breakfast
7:45 AM - 8:00 AM		Welcome and Introductions
8:00 AM - 9:00 AM		Opening Talk What is Glaucoma? Clinical Aspects of Glaucoma
9:00 AM - 10:15 AM		Session 1 Fundamentals Session
10:15 AM - 10:45 AM		Break
10:45 AM - 12:00 PM		Session 2 New Models and Modeling Outcomes
12:00 PM - 1:15 PM		Lunch
1:15 PM - 2:30 PM		Session 3 AI and Imaging
2:30 PM - 3:30 PM		Session 4 Genetics / Future Therapies
3:30 PM - 4:00 PM		Break
4:00 PM - 5:00 PM	Special Session* Communication & Collaboration	Financing Scientific Pursuits / Goals
5:00 PM - 6:00 PM		
6:30 PM - 8:00 PM	Networking Dinner	

*For Travel Fellows and BrightFocus Glaucoma Fast Track Speakers/Organizing Committee only.

All the meeting sessions will be held in the Emory Amphitheater.

Breakfast, lunch and dinner will be served at the Conference Center restaurant.

Glaucoma Symposium Schedule at a Glance

	WEDNESDAY, OCTOBER 8, 2025	THURSDAY, OCTOBER 9, 2025	FRIDAY, OCTOBER 10, 2025	SATURDAY, OCTOBER 11, 2025
6:30 AM - 8:00 AM		6:30 AM - 7:50 AM Breakfast	Networking Breakfast	Breakfast
8:00 AM - 8:45 AM		7:50 AM - 8:45 AM Keynote Lecture 1 The Complex Genetics of Glaucoma: Biological Insights and clinical prediction	Keynote Lecture 2 The Ins and Outs of the Eye's Aqueous Humor	Keynote Lecture 3 Axonal Mitochondria and the Starry Night
8:45 AM - 10:05 AM		Platform Session 1 Genetics: Blame It on Your Parents!	Young Investigators Session Platform Session 4 The Next Gen-EYE-ration	8:45 AM - 10:30 AM Platform Session VIII Glial Cells: The Good, the Bad and the Ugly?
10:05 AM - 10:45 AM		Break	Break	10:30 AM-11:00 AM Break
10:45 AM - 12:30 PM		Platform Session 2 You're Stressing Me Out!	Platform Session 5 Regeneration & Neuroprotection: I Will Survive!	11:00 AM - 12:20 PM Platform Session IX EYE am Under Pressure :-{
12:30 PM - 1:45 PM		Lunch	Lunch	
1:45 PM - 3:30 PM		Platform Session 3 Get Real! - Translation	Platform Session 6 What You Need to Know About Glaucoma	
3:30 PM - 4:00 PM		Break	Break	
4:00 PM - 5:15 PM		Poster Session Hanging out with Brilliant Ideas	Platform Session 7 Go with the Flow	
5:15 PM - 6:30 PM	Kick-Off Reception		Break	
6:30 PM - 8:00 PM	Dinner	Dinner	Gala Dinner	

All the meeting sessions will be held in the Emory Amphitheater.

Breakfast, lunch and dinner will be served at the Conference Center restaurant.

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



Tuesday, October 7, 2025

Emory Amphitheater
4:00 - 6:00 PM

SPECIAL SESSION - COMMUNICATION & COLLABORATION*

Panelist: **Bri McWhorter** - *Activate to Captivate (USA)*

**For Travel Fellows and BrightFocus Glaucoma Fast Track Speakers/Organizing Committee only.*

6:30 - 8:00 PM **Networking Dinner - Conference Center Restaurant**

Wednesday, October 8, 2025

Emory Amphitheater

BrightFocus Glaucoma Fast Track Agenda

6:30 - 7:50 AM **Breakfast - Conference Center Restaurant**

7:45 AM **WELCOME AND INTRODUCTIONS**
Diane Bovenkamp (*Clarksburg - USA*)

8:00 AM **OPENING TALK**
WHAT IS GLAUCOMA? CLINICAL ASPECTS OF GLAUCOMA
Yvonne Ou (*San Francisco - USA*)

9:00 AM **SESSION 1: FUNDAMENTALS SESSION - HOW AND WHAT YOU NEED TO CONSIDER IN THE MODELING (APPROACH TO INDUCING FRONT AND BACK OF THE EYE) AND THE PATHOBIOLOGY (TO DEMONSTRATE KEY OUTCOMES)**
Panelists: **Colleen McDowell** (*Madison - USA*), **Michael Elliott** (*Oklahoma City - USA*), **Rob Nickells** (*Madison - USA*), **Rebecca Sappington** (*Winston Salem - USA*)

10:15 - 10:45 AM **Break**

10:45 AM **SESSION 2: NEW MODELS AND MODELING OUTCOMES**
Panelists: **Brad Fortune** (*Portland - USA*), **Gillian McLellan** (*Madison - USA*), **Jason Meyer** (*Indianapolis - USA*), **Tasneem Sharma** (*Indianapolis - USA*)

12:00 - 1:15 PM **Lunch - Conference Center Restaurant**

1:15 PM **SESSION 3: AI AND IMAGING**
Panelists: **Michael Anderson** (*Iowa City - USA*), **Kevin Chan** (*Palo Alto - USA*), **Luca Della Santina** (*Houston - USA*), **Cecilia Lee** (*Washington - USA*)

2:30 PM **SESSION 4: GENETICS / FUTURE THERAPIES**
Panelist: **Yutao Liu** (*Augusta - USA*), **Ahmara Ross** (*Philadelphia - USA*), **Janey L. Wiggs** (*Boston - USA*)

3:30 - 4:00 PM **Break**

4:00 PM **FINANCING SCIENTIFIC PURSUITS / GOALS**
Panelists: **Abbot F. Clark** (*Ft. Worth - USA*), **Jimmy Liu** (*Clarksburg - USA*), **Paloma Liton** (*Durham - USA*), **Cynthia Steel** (*Tampa - USA*)

5:15 - 6:30 PM **Kick-Off Reception - Garden Courtyard**

6:30 - 8:00 PM **Dinner - Conference Center Restaurant**

Thursday, October 9, 2025

6:30 - 7:45 AM Breakfast - Conference Center Restaurant

Emory Amphitheater

Glaucoma Symposium Agenda

7:50 - 8:00 AM Opening remarks

8:00 AM **KEYNOTE LECTURE 1**
**THE COMPLEX GENETICS OF GLAUCOMA: BIOLOGICAL INSIGHTS
AND CLINICAL PREDICTION**

Speaker: **Anthony Khawaja** (London - UK)

Moderator: **Daniel Stamer** (Durham - USA)

8:40 AM **Q&A**

PLATFORM SESSION 1 - GENETICS: BLAME IT ON YOUR PARENTS!

Moderators: **Inas Aboobakar** (Boston - USA), **Eldon Geisert** (Atlanta - USA)

8:45 AM **EFFECT OF AGING ON THE MOUSE SCHLEMM'S CANAL AND TRABECULAR
MESHWORK AT SINGLE-CELL RESOLUTION**

**Revathi Balasubramanian¹, Guorong Li², Nicholas Tolman¹, Vaibhav Jain²,
Krishnakumar Kizhatil³, W. Daniel Stamer², Simon John¹** (¹New York - USA, ²Durham
- USA, ³Columbus - USA)

8:55 AM **Q&A**

9:00 AM **GENETIC REGULATION DISCOVERY IN THE AQUEOUS OUTFLOW PATHWAYS,
MACULA AND OPTIC NERVE HEAD AND ITS APPLICATION FOR UNCOVERING
GLAUCOMA MECHANISMS**

**Ayellet Segre¹, Puja Mehta¹, Rinaldo Catta-Preta¹, Abbi Engel², Jason Turner-Maier¹,
Sudeep Mehrotra¹, Iris Cheng¹, Janey L. Wiggs¹, Timothy Cherry¹, Kinga Bujakowska¹,**
(¹Boston - USA, ²Seattle - USA)

9:10 AM **Q&A**

9:15 AM **LONG INTERGENIC NONCODING RNAS AS MOLECULAR SENSORS IN RETINAL
GANGLION CELL DEGENERATION**

Kevin Park, Noah Mathew, Venu Talla, Rajeshwari Koilkonda (Dallas - USA)

9:25 AM **Q&A**

9:30 AM **SINGLE CELL RNA SEQUENCING OF LAMINA CRIBROSA FIBROBLASTS
IDENTIFIES A KEY ROLE FOR THE INTEGRATED STRESS RESPONSE IN THE
PATHOPHYSIOLOGY OF HUMAN GLAUCOMA OPTIC NERVE CUPPING**

**Colm O'Brien¹, Caoimhe Normile¹, Oisín Cappa², Vadim Zhernovkov¹, Jeffrey
O'Callaghan¹, Bruce Moran¹, David Simpson², Eoghan Culligan¹, Sherri Feris³, Stacy
Curry³, Abbot Clark³, Mustapha Irnaten¹** (¹Dublin - IRL, ²Belfast - UK, ³Texas - USA)

9:40 AM **Q&A**

9:45 AM **EXPANDING GENETIC DIVERSITY ENHANCES DISCOVERY OF POAG RISK
VARIANTS ACROSS POPULATIONS**

**Jessica N. Cooke Bailey², Lauren Cruz¹, Tyler Kinzy², Osahon Asowata², Ayobami
Alimi², Andrea Waksmunski¹, Jacqueline Bartlett³, Bryan Gorman⁴, Christopher
Halladay⁵, Wen-Chiu Wu⁵, Scott Williams¹, Michael Hauser⁶, Dana Crawford¹, Sudha
Iyengar³, Neal Peachey³** (¹Cleveland - USA, ²Greenville - USA, ³Cleveland - USA,
⁴Boston - USA, ⁵Providence - USA, ⁶Durham - USA)

9:55 AM **Q&A**

10:00 - 10:45 AM Break

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



Thursday, October 9, 2025

Emory Amphitheater

PLATFORM SESSION 2 - YOU'RE STRESSING ME OUT!

Moderators: Abbot Clark (Ft. Worth - USA), Babak N. Safa (Tampa - USA)

- 10:45 AM** **FACTORS DRIVING LAMINA CRIBROSA PERFUSION AND OXYGENATION SENSITIVITY TO ELEVATED IOP**
Ian A. Sigal¹, Yuankai Lu¹, Susannah Waxman¹, Yi Hua², Xinyue Wang¹, Qi Tian¹, Joel Palko³ (¹Pittsburgh - USA, ²Oxford - USA, ³Morgantown - USA)
- 10:55 AM** **Q&A**
- 11:00 AM** **CHARACTERIZATION OF OPTIC NERVE HEAD VISCOELASTIC PROPERTIES USING PHYSIOLOGICAL OCULAR PULSE AND VIRTUAL FIELD METHOD**
Xiaofei Wang¹, Qi Li¹, Yuejiao Jin², Michael Girard³ (¹Beijing - ROC, ²Singapore - SGP, ³Atlanta - USA)
- 11:10 AM** **Q&A**
- 11:15 AM** **OCT STRUCTURAL CHANGES CORRELATE WITH RETROLAMINAR OPTIC NERVE ALTERATIONS IN NON-HUMAN PRIMATE EXPERIMENTAL GLAUCOMA**
Hongli Yang, Galen Willams, Jason Zhao, Jorie Liang, Juan Reynaud, Claude Burgoyne, Priya Chaudhary (Portland - USA)
- 11:25 AM** **Q&A**
- 11:30 AM** **AXONAL INJURY FROM REPEAT AWAKE CONTROLLED ELEVATIONS OF INTRAOCULAR PRESSURE IN ADULT AND AGED RATS**
Diana Lozano, William Cepurna, Eliesa Ing, Barbara Smoody, John Morrison (Portland - USA)
- 11:40 AM** **Q&A**
- 11:45 AM** **PRIMARY CILIUM REGULATES NITRIC OXIDE PRODUCTION IN SCHLEMM'S CANAL**
Myoungsup Sim¹, Aleks Grimsrud¹, Kevin Betsch¹, Mi Sun Sung¹, Vaibhav Desikan¹, Emrah Eroglu², Paloma Liton¹ (¹Durham - USA, ²Istanbul - Turkey)
- 11:55 AM** **Q&A**
- 12:00 PM** **SEQUESTRATION OF ROCK1 BY CAVEOLIN-1 IN HUMAN SCHLEMM'S CANAL CELLS AFTER CYCLIC STRETCH**
Philip Mzyk¹, Michael Elliott², W. Daniel Stamer¹ (¹Durham - USA, ²Oklahoma City - USA)
- 12:10 PM** **Q&A**
- 12:15 PM** **CELL INTRINSIC DIFFERENCES IN ADHESIVE AND CONTRACTILE BEHAVIOR BETWEEN TM CELLS ISOLATED FROM SEGMENTAL FLOW REGIONS**
Samuel Herberg¹, Souvik Ghosh¹, Rajanya Ghosh¹, Makenzie Miller¹, Lily Walker¹, VijayKrishna Raghunathan², Preethi Ganapathy¹ (¹Syracuse - USA, ²Houston - USA)
- 12:25 PM** **Q&A**
- 12:30 PM** **Lunch - Conference Center Restaurant**

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



Thursday, October 9, 2025

Emory Amphitheater

PLATFORM SESSION 3 - GET REAL! - TRANSLATION

Moderators: **Preethi Ganapathi** (Syracuse - USA), **Yvonne Ou** (San Francisco - USA)

- 1:45 PM** **SEEING THE DIFFERENCE: HOW AI AND OPTIC NERVE HEAD ATLASES SEPARATE GLAUCOMA FROM OPTIC NEUROPATHIES**
Michael Girard, Thanadet Chuangsuwanich (Atlanta - USA)
- 1:55 PM** **Q&A**
- 2:00 PM** **PREDICTING FAST GLAUCOMA PROGRESSION: AN EXPLAINABLE MULTIMODAL GRAPH NEURAL NETWORK USING SINGLE-TIME-POINT OPTIC NERVE HEAD MORPHOLOGY AND VISUAL FIELD**
Patipol TiyaJamorn, Thanadet Chuangsuwanich, Yibo Chen, Deepta Ghate, Michael Girard (Atlanta - USA)
- 2:10 PM** **Q&A**
- 2:15 PM** **INCREASED PULSATILITY IN PERIPAPILLARY ARTERIES IS ASSOCIATED WITH MORE RAPID DISEASE PROGRESSION IN PRIMARY OPEN-ANGLE GLAUCOMA**
Stuart Gardiner, Grant Cull, Juan Reynaud, Hongli Yang, Steve Mansberger, Brad Fortune (Portland - USA)
- 2:25 PM** **Q&A**
- 2:30 PM** **QLS-111 SAFELY AND EFFECTIVELY LOWERED INTRAOCULAR PRESSURE IN TWO PHASE 2 CLINICAL TRIALS, OSPREY AND APTERYX**
Michael Fautsch⁴, Barbara Wirostko¹, Lisa Brandano¹, Thurein Htoo¹, Uttio Roy Chowdhury¹, Ralph Casale¹, Daniel Dewalt¹, Laura Rykard¹, Janet Serle², Bac Nguyen³, Arthur J. Sit⁴ (¹Dedham - USA, ²New York - USA, ³Houston - USA, ⁴Rochester - USA)
- 2:40 PM** **Q&A**
- 2:45 PM** **PER-001 INTRAVITREAL IMPLANT (SUSTAINED RELEASE ENDOTHELIN RECEPTOR ANTAGONIST) DEMONSTRATED ≥ 7 DB VISUAL FIELD GAINS IN SUBJECTS WITH PROGRESSIVE GLAUCOMA**
Phillip Lai¹, Heather Schmitt¹, Michelle Chen¹, Dale Usner², Sevgi Gurkan¹ (¹San Francisco - USA, ²Athol - USA)
- 2:55 PM** **Q&A**
- 3:00 PM** **A NOVEL DEPLOYABLE MICROSTENT FOR THE TREATMENT OF GLAUCOMA**
Jared Ching¹, Yunlan Zhang¹, Weijia Zhang², Yunfang Yang¹, Callum Cuttle¹, Liam Morrow¹, Chun Zhang², Zhong You¹ (¹Oxford - UK, ²Beijing - China)
- 3:10 PM** **Q&A**
- 3:15 PM** **EXTENDED INTRAOCULAR PRESSURE (IOP) REDUCTION BY HYDROGEL INJECTION INTO THE SUPRACHOROIDAL SPACE**
Ross Ethier¹, Yoree Chung¹, Zachary Thomas¹, David Ku², Daniel Ng¹, Shinyoung Park¹, Shan Fan³, Carol Toris⁴, Mark Prausnitz¹ (¹Atlanta - USA, ²Decatur - USA, ³Omaha - USA, ⁴Columbus - USA)
- 3:25 PM** **Q&A**
- 3:30- 4:00 PM** **Break**
- 4:00-6:30 PM** **POSTER SESSION - Lullwater Ballroom**
HANGING OUT WITH BRILLIANT IDEAS
please see the detailed listing of posters on page 36-42

Friday, October 10, 2025

6:30 - 8:00 AM Breakfast - Conference Center Restaurant

7:00 - 8:00 AM Networking Breakfast - Conference Center Restaurant (Drawing Room)

Emory Amphitheater

8:00 AM **KEYNOTE LECTURE 2**
THE INS AND OUTS OF THE EYE'S AQUEOUS HUMOR

Speaker: **Carol Toris** (South Euclid - USA)

Moderator: **Ross Ethier** (Atlanta - USA)

8:40 AM **Q&A**

YOUNG INVESTIGATORS - PLATFORM SESSION 4 -
THE NEXT GEN-EYE-RATION

Moderators: **Revathi Balasubramanian** (New York - USA), **Kate Keller** (Oregon - USA)

8:45 AM **COL1A1 DEFICIENCY CAUSES CHANGES IN THE ULTRASTRUCTURE OF THE CORNEOSCLERAL SHELL AND LOSS OF RETINAL GANGLION CELLS AND THEIR AXONS**
Johanna Heimbucher¹, Ester Reina-Torres², Mara Imdahl¹, Matthias Mack¹, Darryl R. Overby², Ernst R. Tamm¹, Magdalena Gebert¹ (¹Regensburg - D, ²London - UK)

8:54 AM **Q&A**

8:58 AM **DIVERGENT NUCLEAR MECHANOTRANSDUCTION PROCESSES IN HUMAN SEGMENTAL TM CELLS**

Souvik Ghosh¹, Rajanya Ghosh¹, Ester Reina-Torres², Haiyan Gong³, Vijay Raghunathan⁴, Darryl Overby¹, Preethi Ganapathy¹, Samuel Herberg¹ (¹Syracuse - USA, ²London - UK, ³Boston - USA, ⁴Houston - USA)

9:07 AM **Q&A**

9:11 AM **CELL-BASED INSULIN DELIVERY PROMOTES RETINAL GANGLION CELL REGENERATION AND RESTORES VISUAL FUNCTION IN GLAUCOMA**

Sana El Hajji, Clara Goubault, Yukihiko Shiga, Renata Gheno Manrique, Nicolas Belforte, Melanie Ethier, Isaac Vidal Paredes, Florence Dotigny, Vincent Poitout, Adriana Di Polo (Montreal - Canada)

9:20 AM **Q&A**

9:24 AM **AI-BIOMECHANICAL 3D MAPPING OF OPTIC NERVE HEAD REMODELING AND AXONAL LOSS IN GLAUCOMA**

Yibo Chen, Thanadet Chuangsuwanich, Patipol TiyaJamorn, Michaël Girard (Atlanta - USA)

9:33 AM **Q&A**

9:37 AM **MICROTUBULE STABILITY MODULATES SCHLEMM'S CANAL CELL MECHANOBIOLOGY AND TRANSCELLULAR PORE FORMATION**

Haiyan Li¹, Kristin Perkumas², W. Daniel Stamer², Ross Ethier¹ (¹Atlanta - USA, ²Durham - USA)

9:46 AM **Q&A**

9:50 AM **AAV2-HSPB1 ENHANCES THE SURVIVAL OF HUMAN STEM CELL-DERIVED RETINAL GANGLION CELLS FOLLOWING TRANSPLANTATION IN MICE**

Mihyun Nam, Shama Parween, Michael Ha, Jiwoo Suk, M. Natalia Vergara, Ram Nagaraj (Aurora - USA)

10:00 AM **Q&A**

10:05 - 10:45 AM Break

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



Friday, October 10, 2025

Emory Amphitheater

PLATFORM SESSION 5 - REGENERATION & NEUROPROTECTION: I WILL SURVIVE!

Moderator: Michael Anderson (Iowa City - USA), Silmara De Lima (Pittsburgh - USA)

- 10:45 AM** **SIGNALING CROSSTALK WITHIN THE OPTIC NERVE SUPPORTS SUCCESSFUL AXON REGENERATION**
Matthew Veldman, Mengming Hu, Robert Newland, Wesley Speer, Hilda Jurkiewicz (Milwaukee - USA)
- 10:55 AM** **Q&A**
- 11:00 AM** **EXTRACELLULAR PROTEIN COMPONENTS OF AMPA RECEPTORS: EFFECTS ON RETINAL BIOLOGY AND CONNECTION TO GLAUCOMA**
Stanislav Tomarev, Preston Johnson, Dhiraj Kumar, Naoki Nakaya (Bethesda - USA)
- 11:10 AM** **Q&A**
- 11:15 AM** **SURVIVAL, MIGRATION AND MATURATION OF STEM CELL-DERIVED "REPLACEMENT" RETINAL GANGLION CELLS AFTER TRANSPLANTATION INTO GLAUCOMATOUS NONHUMAN PRIMATE RETINA**
Brad Fortune¹, Joseph Leffler¹, Kazuhiro Kurokawa¹, Aris Thanos¹, Grant Cull¹, Michaela Dunn¹, Kana Orihara¹, Priya Chaudhary¹, Morgan Nemeth¹, Carson Prosser³, Cátia Gomes², Subramanian Dharmarajan³, Yvonne Ou³, Benjamin Sivyer¹, Jason Meyer² (¹Portland - USA, ²Indianapolis - USA, ³San Francisco - USA)
- 11:25 AM** **Q&A**
- 11:30 AM** **RESTORING AIBP EXPRESSION IN THE RETINA PROVIDES NEUROPROTECTION IN GLAUCOMA**
Wonkyu Ju (La Jolla- USA)
- 11:40 AM** **Q&A**
- 11:45 AM** **PROTEASOMAL CONTROL IS CRITICAL FOR RETINAL GANGLION CELL VIABILITY**
Ekaterina Lobanova, John Ash, Issam Al Diri, Kun-Che Chang, Shaohua Pi, Takaaki Kuwajima (Pittsburgh - USA)
- 11:55 AM** **Q&A**
- 12:00 PM** **AN AI APPROACH TO IDENTIFY AND CLASSIFY RETINAL SYNAPSES IN ANIMAL MODELS OF GLAUCOMA**
Luca Della Santina (Houston - USA)
- 12:10 PM** **Q&A**
- 12:15 PM** **IPSI LATERAL OPTIC NERVE DAMAGE IS EITHER PROTECTIVE OR EXACERBATES GLAUCOMA IN THE CONTRALATERAL EYE DEPENDING ON THE SEVERITY OF THE INJURY**
Rob Nickells (Madison - USA)
- 12:25 PM** **Q&A**
- 12:30 PM** **Lunch - Conference Center Restaurant**

Friday, October 10, 2025

Emory Amphitheater

PLATFORM SESSION 6 - WHAT YOU NEED TO KNOW ABOUT GLAUCOMA (BWATA)

Moderators: Markus Kuehn (*Iowa City - USA*), Tasneem Sharma (*Indianapolis - USA*)

- 1:45 PM** **NYCHTHEMERAL RHYTHMS OF IOP FOLLOWING TRABECULAR MESHWORK (TM) LASER IN NONHUMAN PRIMATES (NHPS)**
J. Crawford Downs, Christina Nicou, Lisa Hethcox, Chester Calvert, Sonia Kuhn-Asif (*Birmingham - USA*)
- 1:55 PM** **Q&A**
- 2:00 PM** **FUNCTIONAL CHARACTERIZATIONS OF CILIA-CENTOSOMAL AND CRYSTALLIN GENES IN PRIMARY CONGENITAL GLAUCOMA PATHOGENESIS**
Subhabrata Chakrabarti, Goutham Pyatla, Anil Mandal, Samir Bera, Ashish Mishra, Meha Kabra, Seema Banerjee, Inderjeet Kaur, Rohit Khanna (*Hyderabad - India*)
- 2:10 PM** **Q&A**
- 2:15 PM** **TOWARD MOUSE MODELS OF EXFOLIATION GLAUCOMA**
Michael Anderson, Kacie Meyer (*Iowa City - USA*)
- 2:25 PM** **Q&A**
- 2:30 PM** **SIMILAR MOLECULAR PATHOGENIC SIGNALING PATHWAYS IN POAG TRABECULAR MESHWORK AND OPTIC NERVE HEAD CELLS AND TISSUES**
Abbot Clark (*Ft. Worth - USA*)
- 2:40 PM** **Q&A**
- 2:45 PM** **ELECTROPHYSIOLOGIC RESPONSE TO PROLONGED MANOMETRIC IOP ELEVATION IN THE LIVING HUMAN EYE**
Mary Anne Garner¹, Mark Clark¹, Mitzi Swift¹, Ryan Strickland¹, Melody East¹, Alecia Gross¹, Massimo Fazio¹, Gregory Grossman¹, Alan Blake¹, Christopher Girkin² (*¹Birmingham - USA, ²San Diego - USA*)
- 2:55 PM** **Q&A**
- 3:00 PM** **AUTOMATED QUANTIFICATION OF PERICYTE DENSITY ACROSS RETINAL CAPILLARY PLEXUSES IN 3D USING FLUORESCENT MOUSE MODELS**
Osamah Saeedi, Ibrahim Saleh, Ashwini Hariharan, Thomas Longden (*Baltimore - USA*)
- 3:10 PM** **Q&A**
- 3:15 PM** **EFFECTS OF ORAL NICOTINAMIDE (NAM) OR NICOTINAMIDE RIBOSIDE (NR) IN THE DBA/2J MOUSE MODEL OF LATE ONSET, CHRONIC PIGMENTARY GLAUCOMA**
Jeffrey Boatright¹, Nan Zhang², Ying Li¹, Xian Zhang³, Micah Chrenek¹, Jiaxing Wang¹, Preston Girardot¹, Jana Sellers¹, Xiangqin Cui¹, John Nickerson¹, Eldon Geisert¹ (*¹Atlanta - USA, ²Hubei - China, ³Hunan - China*)
- 3:25 PM** **Q&A**
- 3:30 - 4:00 PM** **Break**

Friday, October 10, 2025

Emory Amphitheater

PLATFORM SESSION 7 - GO WITH THE FLOW

Moderators: Weiming Mao (Indianapolis - USA), Fiona McDonnell (Salt Lake City - USA)

- 4:00 PM** **THE IMPACT OF THE GLAUCOMA-ASSOCIATED N700S VARIANT ON THE PROTEOLYTIC CLEAVAGE OF THROMBOSPONDIN-1**
Kate Keller¹, Ying Ying Sun¹, Yong-feng Yang¹, Joanne Murphy-Ullrich², Paul Holden¹
(¹Portland - USA, ²Birmingham - USA)
- 4:10 PM** **Q&A**
- 4:15 PM** **CGRP REGULATES THE FORMATION OF HIGH FLOW REGIONS IN THE TRABECULAR MESHWORK AND SCHLEMM'S CANAL**
Timur Mavlyutov, Colleen McDowell (Madison - USA)
- 4:25 PM** **Q&A**
- 4:30 PM** **WHAT OUTLIER MYOCILIN VARIANTS CAN TEACH US ABOUT PROTEOSTASIS DECLINE AND POTENTIAL NEW INTERVENTIONS FOR GLAUCOMA**
Raquel Lieberman¹, Kamisha Hill¹, Hannah Youngblood¹, Hailee Scelsi¹, Jennifer Faralli², Elijah Dunn¹, Tatsuo Itakura³, M. Fini⁴, Donna Peters² (¹Atlanta - USA, ²Madison - USA, ³Los Angeles - USA, ⁴Medford - USA)
- 4:40 PM** **Q&A**
- 4:45 PM** **ACTIVATION OF AVB3 INTEGRIN IS ASSOCIATED WITH A MYOFIBROBLAST PHENOTYPE IN TRABECULAR MESHWORK CELLS**
Donna Peters¹, Jennifer Faralli¹, Mark Filla¹, Kate Keller² (¹Madison - USA, ²Portland - USA)
- 4:55 PM** **Q&A**
- 5:00 PM** **COMPARATIVE MULTIOMICS ANALYSIS OF THE IRIDOCORNEAL REGION OF DBA/2J AND DBA/2J-GPNMB⁺/SJJ MICE**
Paloma Liton, Aleks Grimsrud, Vaibhav Desikan, Mi Sun Sung, Myoungsup Sim (Durham - USA)
- 5:10 PM** **Q&A**
- 5:15 - 6:30 PM** **Break**
- 6:30 - 8:00 PM** **Gala Dinner - Silverbell Pavilion**

Saturday, October 11, 2025

6:30 - 8:00 AM Breakfast - Conference Center Restaurant

Emory Amphitheater

8:00 AM KEYNOTE LECTURE 3

AXONAL MITOCHONDRIA AND THE STARRY NIGHT

Speaker: Nick Marsh-Armstrong (Sacramento - USA)

Moderator: Adriana Di Polo (Montreal - Canada)

8:40 AM Q&A

PLATFORM SESSION 8 - GLIAL CELLS: THE GOOD, THE BAD AND THE UGLY?

Moderators: Nick Marsh-Armstrong (Sacramento - USA),

Heberto Quintero (Montreal - Canada)

8:45 AM MODELING NEUROINFLAMMATORY COMPONENTS OF GLAUCOMA IN VITRO WITH A TRIPLE CO-CULTURE OF HUMAN INDUCED PLURIPOTENT STEM CELL-DERIVED MICROGLIA, ASTROCYTES, AND RETINAL GANGLION CELLS

Jason Meyer, Jade Harkin, Cátia Gomes, Kaylee Tutrow, Shruti Patil, Reham Afify (Indianapolis - USA)

8:55 AM Q&A

9:00 AM THE CUMULATIVE ROLE OF REPEATED IOP ELEVATIONS IN EPIGENETIC TISSUE REPROGRAMMING AND INFLAMMATION

Dorota Skowronska Krawczyk (Irvine - USA)

9:10 AM Q&A

9:15 AM RESIDENT TISSUE MACROPHAGES GOVERN INTRAOCULAR PRESSURE HOMEOSTASIS

Katy Liu¹, Maria Fernanda Suarez¹, Aleks Grimsrud¹, Darren Schuman¹, Revathi Balasubramanian², Simon John², W. Daniel Stamer¹, Daniel Saban¹ (¹Durham - USA, ²New York - USA)

9:25 AM Q&A

9:30 AM ASTROCYTE POLARIZATION AND POLARIZED MICROGLIAL ACTIVATION

Claire Mitchell, Keith Campagno, Wennan Lu (Philadelphia - USA)

9:40 AM Q&A

9:45 AM MICROGLIAL ACTIVATION AND SENESCENCE-ASSOCIATED SECRETORY PHENOTYPE IN RESPONSE TO ACUTE IOP INCREASE IN LIVING HUMAN MACULA

McKenna Somerville¹, Ryan Strickland¹, Sydney Lin¹, Mary Anne Garner¹, Massimo Fazio¹, Christopher Girkin², Alecia Gross¹ (¹Birmingham - USA, ²San Diego - USA)

9:55 AM Q&A

10:00 AM COMPLEMENT C3 ACTIVATION IN REACTIVE ASTROCYTES DRIVES AXONAL DEGENERATION OF RETINAL GANGLION CELLS IN HUMAN PLURIPOTENT STEM CELL-DERIVED MODELS

Cátia Gomes, Kang-Chieh Huang, Jade Harkin, Carson Prosser, Aaron Baker, Laurna Varghese, Parker Wilcox, Tsai-Yu Lin, Jason Meyer (Indianapolis - USA)

10:10 AM Q&A

10:15 AM A TRANSCRIPTOMIC ATLAS OF IMMUNE CELL POPULATIONS IN GLAUCOMATOUS MOUSE RETINA AND OPTIC NERVE

Milica Margeta¹, Zhuoran Yin¹, James Harris¹, Paul Cullen¹, Yixi Xue¹, Anthony Mukwaya¹, Dario Tommasini², George Baldwin¹, Nasir Uddin¹, Navita Lopez³, Daniel Sun¹, Sandro Da Mesquita⁴, Monica Vetter³, Karthik Shekhar² (¹Boston - USA, ²Berkeley - USA, ³Salt Lake City - USA, ⁴Jacksonville - USA)

10:25 AM Q&A

10:30 - 11:00 AM Break

Saturday, October 11, 2025

Emory Amphitheater

PLATFORM SESSION 9 - EYE AM UNDER PRESSURE :-{

Moderators: Diana Lozano (Portland - USA), Donna Peters (Madison - USA)

- 11:00 AM** **QLS-111-FDC, A FIXED DOSE COMBINATION OF QLS-111 WITH LATANOPROST, EFFECTIVELY LOWERS IOP IN A NORMOTENSIVE PRECLINICAL MOUSE MODEL**
Uttio Roy Chowdhury², Mike Fautsch¹, Lisa Brandano², Ralph Casale², Daniel Dewalt², Laura Rykard², Thurein Htoo², Barbara Wirostko² (¹Rochester - USA, ²Dedham - USA)
- 11:10 AM** **Q&A**
- 11:15 AM** **ESTROGEN RECEPTOR SIGNALING AGAINST TGFB2-INDUCED TRANSCRIPTOMICS CHANGES ON HUMAN TRABECULAR MESHWORK CELLS**
Yutao Liu¹, Ola Elsayed¹, Jingwen Cai¹, Hongfang Yu¹, Hongyan Xu¹, Louis Pasquale², W. Daniel Stamer³ (¹Augusta - USA, ²New York - USA, ³Durham - USA)
- 11:25 AM** **Q&A**
- 11:30 AM** **ANGIOPOIETIN-LIKE PROTEIN 4 (ANGPTL4) CONTRIBUTES TO GLAUCOMATOUS CHANGES IN THE TRABECULAR MESHWORK AND OCULAR HYPERTENSION**
Weiming Mao, Chenna Kesavulu Sugali, Kamesh Dhamodaran, Jiannong Dai (Indianapolis - USA)
- 11:40 AM** **Q&A**
- 11:45 AM** **A ROLE FOR THE CATIONIC AMINO ACID TRANSPORTER SLC7A1 IN REGULATION OF AQUEOUS HUMOR OUTFLOW**
Krishnakumar Kizhatil¹, Manvi Goel¹, Graham Clark², Reynolds Ablordeppey³, Fiona McDonell³ (¹Columbus - USA, ²Bar Harbor - USA, ³Salt Lake City - USA)
- 11:55 AM** **Q&A**
- 12:00 PM** **CONDITIONAL DELETION OF AP-2B IN THE ANTERIOR SEGMENT OF ADULT MICE RESULTS IN ELEVATED IOP**
Judith West-Mays, Aysha Jamal, Lindsey Kukoly, Aftab Taiyab (Hamilton - Canada)
- 12:10 PM** **Q&A**

Poster Schedule

The poster session runs from 4:00-6:30 PM on Thursday. Poster presenters in Session 1 are asked to stay at their posters from 4:00-5:15 PM, while presenters in Session 2 are asked to stay at their posters from 5:15 - 6:30 PM. Please, remove your poster before the end of the meeting, otherwise it will be thrown away.

LULLWATER BALLROOM

FRONT OF THE ROOM

1	2	3		4	5	6	
46	47	48		49	50	51	
7	8	9	10	11	12	13	14
52	53	54	55	56	57	58	59
15	16	17	18	19	20	21	22
60	61	62	63	64	65	66	67
23	24	25	26	27	28	29	30
68	69	70	71	72	73	74	75
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76	77	78	79	80	81	82	83
39	40	41	42		43	44	45
84	85	86	87		88	89	90

LULLWATER BALLROOM

POSTER SESSION 1 - HANGING OUT WITH BRILLIANT IDEAS

- P01 HOMEOSTATIC PLASTICITY IN THE DORSOLATERAL GENICULATE NUCLEUS OF DBA/2J MICE**
Matt Van Hook, Jennie Smith, Arnav Jain, Shaylah McCool (Omaha - USA)
- P02 DNAJC3 ENHANCES AXON REGENERATION IN A MOUSE MODEL OF OPTIC INJURY**
Eldon Geisert, Ying Li, Sandra Jardines, Su-Ting Lin, Fangyu Lin, Jiaxing Wang (Atlanta - USA)
- P03 LOSS- AND GAIN-OF-FUNCTION ESTABLISHES A CRITICAL PROTECTIVE ROLE FOR LIPOXINS IN OPTIC NERVE DEGENERATION AND NEUROINFLAMMATION**
Shubham Maurya, Branson Bajoua, Matangi Kumar, Cici Liu, Paripoorna Sharma, Jiwoo Han, Amodini Chaudhary, Sydney Adcock, Shruthi Karnam, John Flanagan, Karsten Gronert (Berkeley - USA)
- P04 SINGLE-NUCLEI RNA SEQUENCING OF HUMAN TRABECULAR MESHWORK CELLS: EXPLORING CELLULAR DIVERSITY AND MOLECULAR MECHANISMS IN GLAUCOMA**
Prakadeeswari Gopala Krishnan, Pei Tan, Zaid Ahmed, Jinjing Jian, Mai-Linh Ton, Linya Li, Yogapriya Sundaresan, Balasankara Kaipa, Xiangmin Xu, Rui Chen, Gulab Zode (Irvine - USA)
- P05 COMPARATIVE OCULAR PARAMETERS OF THE ESR1 CONDITIONAL KNOCKOUT MOUSE**
Beam Yongphiphatwong¹, Micah Chrenek¹, Zbynek Kozmik², Andrew Feola¹ (¹Atlanta - USA, ²Prague - Czech Republic)
- P06 ENHANCED AXON REGENERATION IN THE BXD29-TLR4LPS-2J/J MOUSE IS NOT DUE TO TLR4 MUTATION**
Fangyu Lin, Jiaxing Wang, Eldon Geisert (Atlanta - USA)

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



- P07 INVESTIGATING THE ROLE OF ANGPTL7 GENE MUTATIONS IN MODULATING INTRAOCULAR PRESSURE: A STUDY USING GENETICALLY ENGINEERED NEW ZEALAND WHITE RABBITS**
Kristina Chern, Thomas Tedeschi, Jade Zhang, Charleen Hunt, Thomas Kehrer, Jessica Kuhnert, John Nuara, Craig Grant, Joseph Hickey, Eric Chiao, Brian Zambrowicz, Guochun Gong, Gaurang Patel, Botir Sagdullaev (Tarrytown - USA)
- P08 DISTINCT TRANSCRIPTOMIC SIGNATURES IN HIGH AND LOW FLOW REGIONS OF THE HUMAN AND MOUSE TRABECULAR MESHWORK**
Cydney Wong¹, A. Thomas Read¹, Guorong Li², W. Daniel Stamer², Ross Ethier¹ (¹Atlanta - USA, ²Durham - USA)
- P09 MODEL OF GLIAL SPECIFIC SIGMA-1 RECEPTOR KNOCKDOWN IN THE MOUSE EYE**
Barbara Mysona, Julia Spychalski, Xutong Sun, Graydon Gonzalvez, Lin Gan, Kathryn Bollinger (Augusta - USA)
- P10 OVARECTOMY MODULATES GENE EXPRESSION OF CELL-ADHESION AND IMMUNE PATHWAYS IN RETINAL GLIAL CELLS AND RETINAL GANGLION CELLS**
Gabriela Sanchez Rodriguez, Xinyi Jiang, Katie Bales, Levi Wood, Andrew Feola (Atlanta - USA)
- P11 MITOCHONDRIAL DYSREGULATION IN OPTIC NERVE HEAD ASTROCYTES FOLLOWING BIOMECHANICAL STRAIN AND PIEZO1 ACTIVATION**
Jaclyn Rittershaus, Ana Strat, Christopher Rudzitis, Camille Chin, Arunkumar Venkatesan, Dan Tso, Audrey Bernstein, Samuel Herberg, Preethi Ganapathy (Syracuse - USA)
- P12 THE EMORY ONH ATLAS: STRUCTURAL BIOMARKERS FOR GLAUCOMA SEVERITY CLASSIFICATION**
Thanadet Chuangsuwanich, Patipol TiyaJamorn, Yibo Chen, Nancy Newman, Valerie Biousse, Michael Girard (Decatur - USA)
- P13 THE HDAC3/P300-NF-KB REGULATORY AXIS AS A KEY EPIGENETIC MODULATOR OF ABERRANT NUCLEAR DYNAMICS IN GLAUCOMATOUS TM CELL DYSFUNCTION**
Rajanya Ghosh¹, Souvik Ghosh¹, Ahmed Elrefaey¹, Rachel Hadvina², Ana Strat¹, Izzy Salama¹, W. Daniel Stamer³, Kate Keller⁴, Haiyan Gong⁵, Preethi Ganapathy¹, Yutao Liu², Samuel Herberg¹ (¹Syracuse - USA, ²Augusta - USA, ³Durham - USA, ⁴Oregon - USA, ⁵Boston - USA)
- P14 THE AUTOPHAGY PROTEIN LC3 INTERACTS WITH COMPONENTS OF THE NUCLEAR CYTOSKELETON IN TRABECULAR MESHWORK CELLS**
Mi Sun Sung, Myoungsup Sim, Nikolai Skiba, Paloma B. Liton (Durham - USA)
- P15 PSEUDO-CENTRAL RETINAL BLOOD VESSEL IN PIG, SHEEP AND GOAT**
Xinyue Wang, Susannah Waxman, Ian Sigal (Pittsburgh - USA)
- P16 STRESS-INDUCED MITOCHONDRIAL FRAGMENTATION IN ENDOTHELIAL CELLS DISRUPTS BLOOD-RETINAL BARRIER INTEGRITY CAUSING NEURODEGENERATION**
Isaac Vidal Paredes, Jorge Cueva Vargas, Nicolas Belforte, Florence Dotigny, Heberto Quintero, Adriana Di Polo (Montreal - Canada)
- P17 INVESTIGATING THE ROLE OF NETRIN1/DCC SIGNALING IN MAINTAINING RGC INTEGRITY DURING GLAUCOMA PATHOLOGY**
Ching Yuan¹, Amanda Averbeck², Zhe Chen² (¹Saint Paul - USA, ²Minneapolis - USA)
- P18 THE ROLE OF MULLER GLIA CALCIUM AND PURINERGIC SIGNALING IN THE RESPONSE TO OCULAR HYPERTENSION**
Markus Spurlock, Monika Lakk, David Krizaj (Salt Lake City - USA)
- P19 GLAUCOMA-RELATED REDUCTION IN TUBERAL-INFERIOR HYPOTHALAMIC VOLUME ALTERS HORMONAL REGULATION OF METABOLIC FUNCTION**
Ji Won Bang¹, Justin Veerasami², Gadi Wollstein³, Joel Schuman³, Kevin Chan¹ (¹Palo Alto - USA, ²New York - USA, ³Philadelphia - USA)

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



- P20 IP3R1-DEPENDENT EXCITATION INSTABILITY CONTRIBUTES TO RETINAL GANGLION CELL DYSFUNCTION IN EXPERIMENTAL GLAUCOMA**
Yukihiro Shiga, Jorge Luis Cueva Vargas, Sana El Hajji, Nicolas Belforte, Florence Dotigny, Adriana Di Polo (*Montreal - Canada*)
- P21 STABILIZED 21OLF SCAFFOLD ENABLES BIOCHEMICAL, BIOPHYSICAL, AND STRUCTURAL CHARACTERIZATION OF SEVERE OLF-MYOCILIN MUTANTS**
Rafael Siqueira Chagas, Hailee Scelsi, Charlotte Miller, Nicolle Chavez-Ramirez, Sonali Mudiyansele, Mubark Mebrat, Wade Van Horn, Dustin Huard, Raquel Lieberman (*Atlanta - USA*)
- P22 DEGENERATION OF TARGET-SPECIFIC IPRGC CIRCUITS UNDERLIES NON-IMAGE-FORMING DEFICITS IN GLAUCOMATOUS MICE**
Wenjin Xu, Shichu Chang, Samrath Sandhu, Ignacio Provencio, Xiaorong Liu (*Charlottesville - USA*)
- P23 TENSIN 3: A NOVEL TARGET FOR CONTROLLING TISSUE STIFFNESS AND CONTRACTILITY**
Anusha Shivashankar, Avinash Soundararajan, Padmanabhan Pattabiraman (*Indianapolis - USA*)
- P24 ROLE OF IL-6/STAT3 PATHWAY IN GLAUCOMATOUS IRISES AND ITS ASSOCIATION WITH FILTERING SURGERY OUTCOMES**
Suneeta Dubey, Nisha Sinha, Julie Pegu, Virender Sangwan, Anil Tiwari (*Delhi - India*)
- P25 SUBSTRATE MECHANICS DIFFERENTIALLY AFFECT THE STIFFNESS OF PRIMARY HEALTHY AND GLAUCOMATOUS HUMAN TRABECULAR MESHWORK CELLS**
Daniel Labbe¹, Monika Lakk², Amir Vahabikashi¹, David Krizaj² (¹*Boston - USA*, ²*Salt Lake City - USA*)
- P26 ASTROCYTE AND MÜLLER GLIA REACTIVITY IN RESPONSE TO ACUTE INTRAOCULAR PRESSURE ELEVATION IN THE LIVING HUMAN MACULA**
Ryan Strickland¹, McKenna Somerville¹, Sydney Lin¹, Mary Anne Garner¹, Alan Blake¹, Gregory Grossman¹, Massimo Fazio¹, Christopher Girkin², Alecia Gross¹ (¹*Birmingham - USA*, ²*San Diego - USA*)
- P27 ROLE FOR CAVEOLIN-1 IN IOP HOMEOSTASIS AND OUTFLOW VESSEL TONE INDEPENDENT OF ROCK INHIBITION OR ISOFLURANE IOP LOWERING EFFECTS**
Jennifer Ballheim¹, Philip Mzyk², W. Daniel Stamer², Michael Elliott¹ (¹*Oklahoma City - USA*, ²*Durham - USA*)
- P28 IN TOTO VASCULAR LABELING OF THE NON-HUMAN PRIMATE AND HUMAN OPTIC NERVE HEAD**
Susannah Waxman¹, Ashley Linton¹, Brad Fortune², Adriana Di Polo³, Ian A. Sigal¹ (¹*Pittsburgh - USA*, ²*Portland - USA*, ³*Montreal - Canada*)
- P29 MKK4 AND MKK7 ARE REQUIRED FOR RETINAL GANGLION CELL AXONAL MAINTENANCE LONG-TERM**
Sarah Yablonski, Richard Libby (*Rochester- USA*)
- P30 TREM2 DEFICIENCY ALTERS MICROGLIA RESPONSE TO OPTIC NERVE CRUSH**
Sean Lydon, Sarah Yablonski, Richard Libby (*Rochester- USA*)
- P31 MODELING OPTIC NERVE GLIOMA FORMATION AND AXONAL DEGENERATION USING A HUMAN IPSC-DERIVED COMPARTMENTALIZED MICROFLUIDIC PLATFORM**
Shruti Patil, Melody Hernandez, George Chittum, Carson Prosser, Sherry Scott¹, Cátia Gomes, Jason Meyer (*Indianapolis - USA*)
- P32 ESTABLISHING AN IN VITRO MODEL OF EYE-TO-BRAIN CONNECTIVITY USING HUMAN PLURIPOTENT STEM CELLS**
Shelby Hetzer, Sherry Scott, Cátia Gomes, Jason Meyer (*Indianapolis - USA*)

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



- P33** **ROLE OF INTEGRIN ALPHA 4 AND ALPHA 9 IN FN+EDA-INDUCED TRABECULAR MESHWORK DAMAGE AND OCULAR HYPERTENSION**
Tania Sharmin, Colleen McDowell (*Madison - USA*)
- P34** **IOP-LOWERING EFFICACY OF A TOPICAL EP2 RECEPTOR AGONIST IN FELINE GLAUCOMA**
Anjali Rai, Kazuya Oikawa, Julie Kiland, Virginia Mathu, Gillian McLellan (*Madison - USA*)
- P35** **A COMPREHENSIVE SET OF PATHWAY-WIDE POLYGENIC RISK SCORES TO FACILITATE PRECISION GLAUCOMA CARE**
Inas Aboobakar¹, Michelle Bartolo¹, Louis Pasquale², Ayellet Segre¹, Janey L. Wiggs¹
(¹Boston - USA, ²New York - USA)
- P36** **LOOKING BEYOND THE RETINA: COULD OPTIC NERVE GEOMETRY AND COMPOSITE ORBIT FEATURES INFLUENCE GLAUCOMATOUS NEURODEGENERATION?**
Charis Chiang¹, Xiaofei Wang², Stuart Gardiner³, Martin Buist⁴, Michael Girard¹
(¹Atlanta - USA, ²Beijing - ROC, ³Singapore - Singapore)
- P37** **VISUAL AND COGNITIVE FUNCTIONAL ABNORMALITIES IN FEMALE 5XFAD MICE WITH ALZHEIMER'S PATHOLOGY ARE WORSENERED BY OPTIC NERVE DAMAGE**
Virginia Mathu, Kazuya Oikawa, Julie Kiland, Rebecca Burkhalter, Gillian McLellan (*Madison - USA*)
- P38** **FUNCTIONAL ASSESSMENT OF THE MAPK PATHWAY IN AXONAL REGENERATION**
Lucy Moore, Nick Marsh-Armstrong (*Davis - USA*)
- P39** **THE EFFECT OF THE HIGH-FLOW-PIEZO1-ITGA9 AXIS ON SCHLEMM'S CANAL ENDOTHELIAL CELL PROLIFERATION**
Naoki Kiyota, Benjamin Thomson, Susan Quaggin (*Chicago - USA*)
- P40** **HUMAN OCULAR FLUID OUTFLOW ON-CHIP REVEALS TRABECULAR MESHWORK-MEDIATED SCHLEMM'S CANAL ENDOTHELIAL DYSFUNCTION IN STEROID-INDUCED GLAUCOMA**
Renhao Lu¹, Anna M. Kolarzyk¹, W. Daniel Stamer², Esak Lee¹ (*¹Ithaca - USA, ²Durham - USA*)

POSTER SESSION 2 - HANGING OUT WITH MORE BRILLIANT IDEAS

- P41** **MICRORNA REGULATION OF GLUCOCORTICOID SIGNALLING IN THE TRABECULAR MESHWORK**
Eva Mihalovova¹, Sarah Atkinson¹, Declan McKenna¹, Srinivasan Senthilkumari², Colin Willoughby¹
(¹Coleraine - UK, ²Madurai - India)
- P42** **PIEZO1-MEDIATED MECHANOTRANSDUCTION PROMOTES RETINAL GANGLION CELL NEUROPROTECTION IN GLAUCOMA**
Wendy Liu, Julian Garcia-Sanchez, Danting Lin, Wenjun Yan, Ying Zhu, Michael Kapiloff, Jeffrey Goldberg (*Palo Alto - USA*)
- P43** **HUMAN IPSC-DERIVED MITOVESICLES ENHANCE RETINAL GANGLION CELL RESCUE AND PROMOTE AXONAL ARBORIZATION: A NOVEL NEUROPROTECTIVE STRATEGY FOR OPTIC NEUROPATHIES**
Sandeep Vishwakarma, Mallikarjuna Gedda, Dhiraj Kumar, Noor Carreiro, Stanislav Tomarev (*Bethesda - USA*)
- P44** **NEURITIN MAINTAINS RETINAL GANGLION CELL FUNCTION AND VISUAL PATHWAY CONNECTIVITY**
Jiarui Nie, Preston Johnson, Naoki Nakaya, Stanislav Tomarev (*Bethesda - USA*)
- P45** **NEUROPROTECTION OF RETINAL GANGLION CELLS IN EXPERIMENTAL GLAUCOMA USING A NOVEL GENE THERAPY CONSTRUCT AAV2-HSYN1-TRKB-2A-MBDNF IN ADULT AND OLD MICE**
Aliénor Jamet¹, Michele Hooper¹, Daniel Urrutia Cabrera², Andrew Osborne³, Melina Agosto¹, Keith Martin², Balwantray Chauhan¹ (*¹Halifax - Canada, ²Melbourne - AUS, ³Norwich - UK*)

CONCEPTS AND BREAKTHROUGHS IN GLAUCOMA



- P46 ADDITIVE EFFECT OF STANNIOCALCIN-1 WITH TIMOLOL BUT NOT LATANOPROST IN A MOUSE MODEL OF OCULAR HYPERTENSION**
Mohammed Omer, Kjersten J. Anderson, Michael P. Fautsch, Gavin W. Roddy (Rochester - USA)
- P47 CHARACTERIZATION OF MYOCILIN'S COILED COIL DOMAIN AND INTRINSICALLY DISORDER LINKER REGION USING NMR**
Elijah Dunn, Emily Saccuzzo, Raquel Lieberman (Richland - USA)
- P48 STRUCTURAL CHARACTERIZATION OF PSEUDOEXFOLIATION GLAUCOMA-ASSOCIATED LOXL1: APPROACHES, CHALLENGES, AND PROGRESS**
Hannah Youngblood, Megan Alexander, Hailee Scelsi¹ Raquel Lieberman (Atlanta - USA)
- P49 GENETIC MODULATION OF TRPV4 CHANNELS IN RETINAL GANGLION CELLS PROFOUNDLY AFFECTS GLIAL ACTIVITY AND NEURODEGENERATION IN MOUSE GLAUCOMA**
Yun-Ting Tseng, Monika Lakk, David Krizaj (Salt Lake City - USA)
- P50 UNRAVELING RIG-I-MEDIATED GLAUCOMA MECHANISMS AND THERAPEUTIC AVENUES IN A MOUSE MODEL OF SINGLETON-MERTEN SYNDROME**
Diana Gallego, Su Qing Wang, Hannah Pittman, J. Michelle Kahlenberg, Lev Prasov (Ann Arbor - USA)
- P51 DEVELOPMENT OF TARGETED OPTIC NERVE HEAD DELIVERY SYSTEMS FOR TREATMENT OF OPTIC NEUROPATHIES**
Bryce Chiang (Baltimore - USA)
- P52 THE ROLE OF TREM FAMILY GENES IN AN ACUTE INDUCIBLE MODEL OF OCULAR HYPERTENSION**
Cory Diemler¹, Travis Cossette¹, Amanda Hewes¹, Richard Libby², Gareth Howell¹ (¹Bar Harbor - USA, ²Rochester - USA)
- P53 BIOMECHANICAL FORCES AND PIEZO1 ACTIVATION ALTER OPTIC NERVE HEAD ASTROCYTE MORPHOLOGY AND METABOLIC FUNCTION**
Ana Strat, Suhani Patel, Jaclyn Rittershaus, Christopher Rudzitis, Arunkumar Venkatesan, Dan Tso, Audrey Bernstein, Alison Patteson, Samuel Herberg, Preethi Ganapathy (Syracuse - USA)
- P54 OPTIMIZATION OF DATA SAMPLING FOR IOP AND CSFP TELEMETRY**
Christina Nicou, Marshall Holland, Sonia Kuhn Asif, J. Crawford Downs (Birmingham - USA)
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Phillip Buckman, Andras Komaromy (East Lansing - USA)
- P56 VITREOUS INFLAMMATION AS A DANGER SIGNAL FOR RETINAL GANGLION CELL LOSS FOLLOWING OPTIC NERVE INJURY**
Shichu Chang¹, Weijia Fan², Jiahui Wu¹, Virginia Lee¹, Charlotte Zhang¹, Ned Kronenberg¹, Wenjin Xu¹, Hao Zhang², Xiaorong Liu¹ (¹Charlottesville - USA, ²Evanston - USA)
- P57 CONDITIONAL EXPRESSION OF THE TVA RECEPTOR IN RETINAL GANGLION CELLS PERMITS CELL-SPECIFIC TRANSDUCTION WITH ENVA-PSEUDOTYPED VIRUSES**
Daniel Brock, Justin Ma, Yong Park, Graeme Mardon, Benjamin Frankfort (Houston - USA)
- P58 IOP BUT NOT AGE INCREASES LOSS OF OPTIC NERVE AXONS IN MICE WITH A DEFICIENCY IN MACROGLIAL INTERMEDIATE FILAMENTS**
Leni Schnappauf, Johanna Heimbucher, Ernst R. Tamm, Magdalena Gebert (Regensburg - Germany)
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Heberto Quintero, Renata Ghenno-Manrique, Xavier Sanchez-Saez, Yukihiro Shiga, Isaac Vidal Paredes, Nicolas Belfore, John Geisler, Adriana Di Polo (Montreal - Canada)

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Irina Padilla Montoya, Hailee Scelsi, Raquel Lieberman (*Atlanta - USA*)
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Kai Mongan, Tasneem Sharma, Shahna Shahul (*Indianapolis - USA*)
- P62 ASYMMETRY IN THE ON AND OFF PHOTOPIC NEGATIVE RESPONSE OF THE FULL-FIELD ELECTRORETINOGRAM IN NON-HUMAN PRIMATE EXPERIMENTAL GLAUCOMA**
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- P63 EXTRACELLULAR VESICLE MEDITATED REMODELING OF THE TRABECULAR MESHWORK**
Caroline Nelson, Fiona McDonnell (*Salt Lake City - USA*)
- P64 OVARECTOMY IN YOUNG ANIMALS LEADS TO INCREASED INTRAOCULAR PRESSURE (IOP) BY MIDDLE-AGE**
Nina Sara Fraticelli-Guzman, Beam Yongphiphatwong, Andrew J. Feola (*Atlanta - USA*)
- P65 DIGITAL LIGHT PROCESSING 3D BIOPRINTING OF A SCALED UP GELMA-BASED LAMINA CRIBROSA MODEL FOR CELL CULTURE**
Basem Fouda¹, Adrián M. Alambiaga-Caravaca¹, Simon Neary¹, J. Crawford Downs², Alan Hibbits¹, Colm O'Brien¹ (¹Dublin - IRL, ²Alabama - USA)
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Osahon Asowata¹, Briana L. McIntosh¹, Kaitlyn Funk², Kendall Pixley¹, Tyler Kinzy¹, Ayobami Alimi¹, Jessica N. Cooke Bailey¹, Camara Brown³ (¹Greenville - USAs, ²Cincinnati - USA, ³Kingston - Jamaica)
- P67 NOGGIN PRESERVES RETINAL INTEGRITY IN A MURINE MODEL OF OCULAR HYPERTENSION**
Zalak Modi, Rochile Khan, Kyle Marguiles, Maria Miah, E-Jine Tsai, Brian Heist, Justin George, Maria Alfano, Jacquelyn Gerhart, Arturo Bravo-Nuevo (*Philadelphia - USA*)
- P68 DIVERGENT ROLES OF HEALTHY AND GLAUCOMATOUS TRABECULAR MESHWORK-DERIVED EXTRACELLULAR VESICLES IN REGULATING EXTRACELLULAR MATRIX HOMEOSTASIS AND FIBROTIC SIGNALING**
Reynolds Ablordeppey, Caroline Nelson, Fiona McDonnell (*Salt Lake City - USA*)
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- P70 CIRCADIAN MODULATION OF AQUEOUS NOREPINEPHRINE LEVELS DRIVES OUTFLOW FACILITY RHYTHM IN RATS**
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- P73 YEAST AS A MODEL EUKARYOTIC ORGANISM FOR MYOCILIN-INDUCED GLAUCOMA CYTOTOXICITY**
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Kamisha Hill¹, Hannah Youngblood¹, Jennifer Faralli², Tatsuo Itakura³, M. Elizabeth Fini⁴, Donna Peters², Raquel Lieberman¹ (¹Atlanta - USA, ²Madison - USA, ³Los Angeles - USA, ⁴Boston - USA)
- P75 MODULATING UNDESIRE TM CELL MISLOCALIZATION WITHIN 3D TM/SC CELL CO-CULTURE HYDROGELS BY USING PERMEABLE SUBSTRATES**
Ahmed Elrefaey, Souvik Ghosh, Ayushi Singh, Amanda Davenport, Krishna Patel, Christopher Rudzitis, Lily Walker, Sejoon Jun, Preethi Ganapathy, Samuel Herberg (Syracuse - USA)
- P76 ACTIVATION OF THE WNT SIGNALING PATHWAY INHIBITS STEROID-INDUCED OCULAR HYPERTENSION WITHOUT COMPROMISING ITS ANTI-INFLAMMATORY FUNCTIONS IN THE MOUSE MODEL**
Chenna Kesavulu Sugali, Kamesh Dhamodaran, Jiannong Dai, Devon Harvey, Weiming Mao (Indianapolis - USA)
- P77 DEVELOPMENT AND CHARACTERIZATION OF A THREE-DIMENSIONAL HUMAN LAMINA CRIBROSA AND OPTIC NERVE HEAD ASTROCYTE CO-CULTURE SYSTEM**
Christopher Rudzitis¹, Souvik Ghosh¹, Kelsey Mathers², Colleen M. McDowell², Preethi Ganapathy¹ (¹Syracuse - USA, ²Madison - USA)
- P78 ASSESSING MOLECULAR AND FUNCTIONAL CONSEQUENCES OF THE GLAUCOMA-ASSOCIATED APBB2 SNP USING HUMAN INDUCED PLURIPOTENT STEM CELL MODELS**
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- P79 EVALUATION OF IRIS WATER CONTENT AND HISTOMORPHOLOGY IN PRIMARY ANGLE-CLOSURE GLAUCOMA**
Nima Rafezi, Sunaya Amrin Rahman, Babak N. Safa (Tampa - USA)
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Hector Navarro, Nick Marsh-Armstrong (Davis - USA)
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Shaohua Pi (Pittsburgh - USA)
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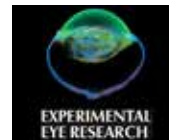
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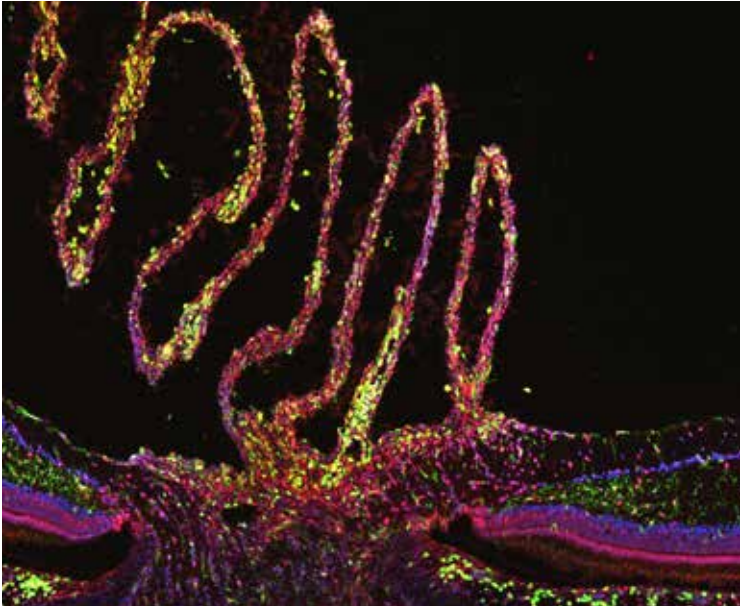


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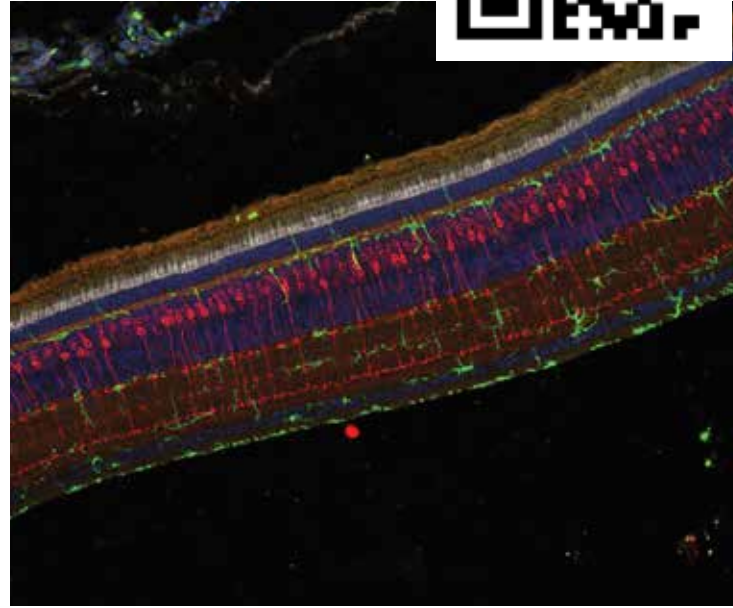




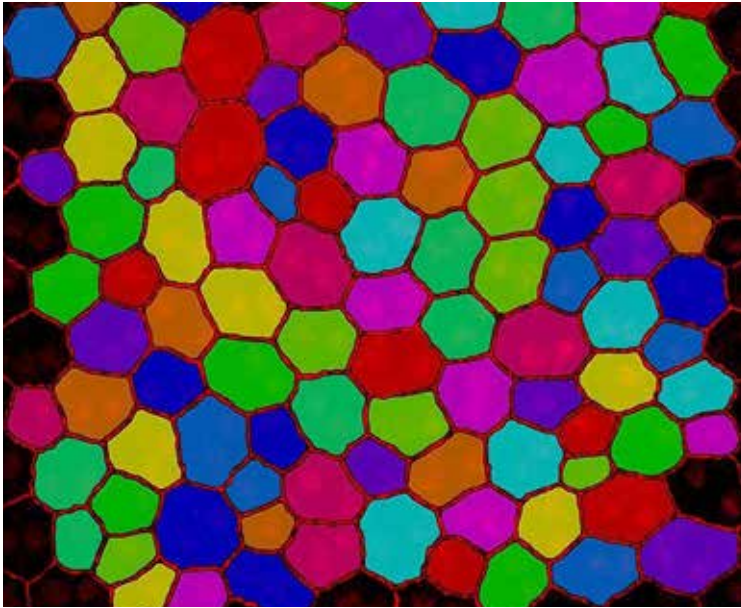
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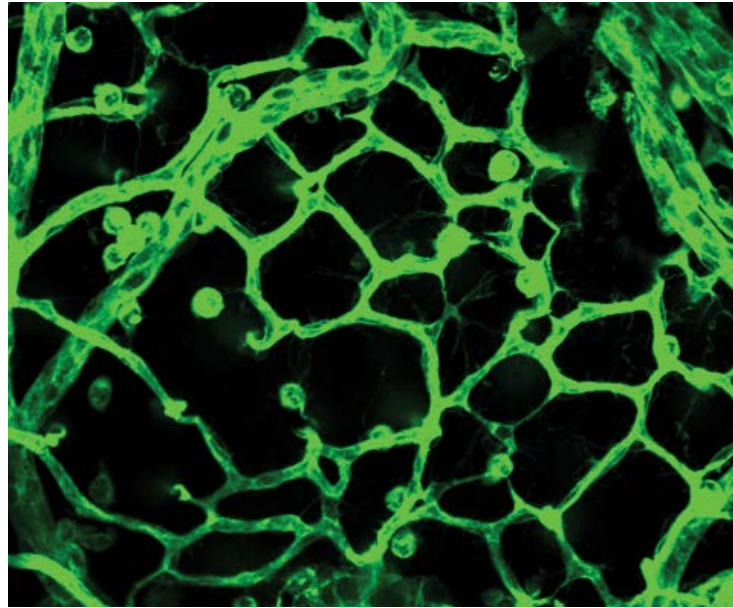
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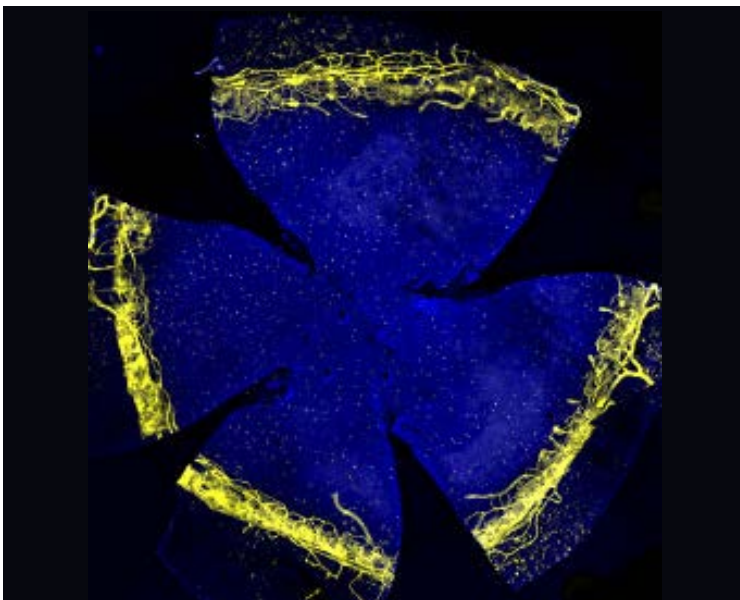
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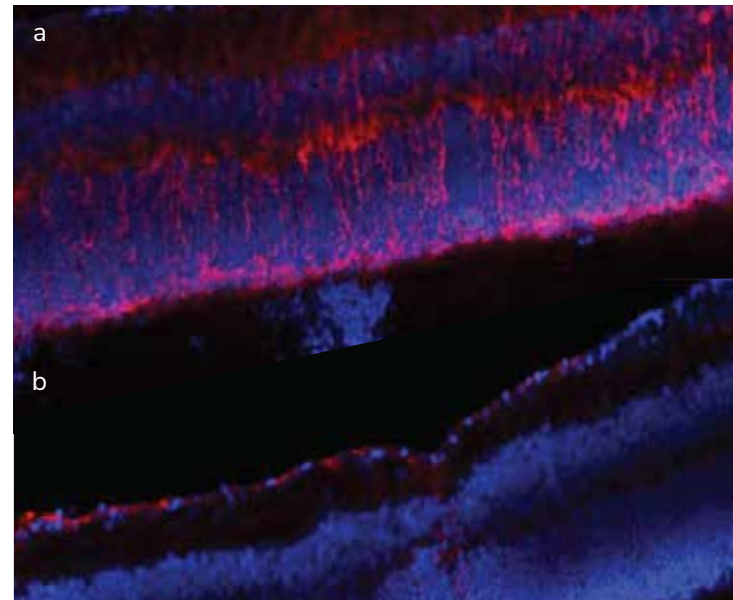
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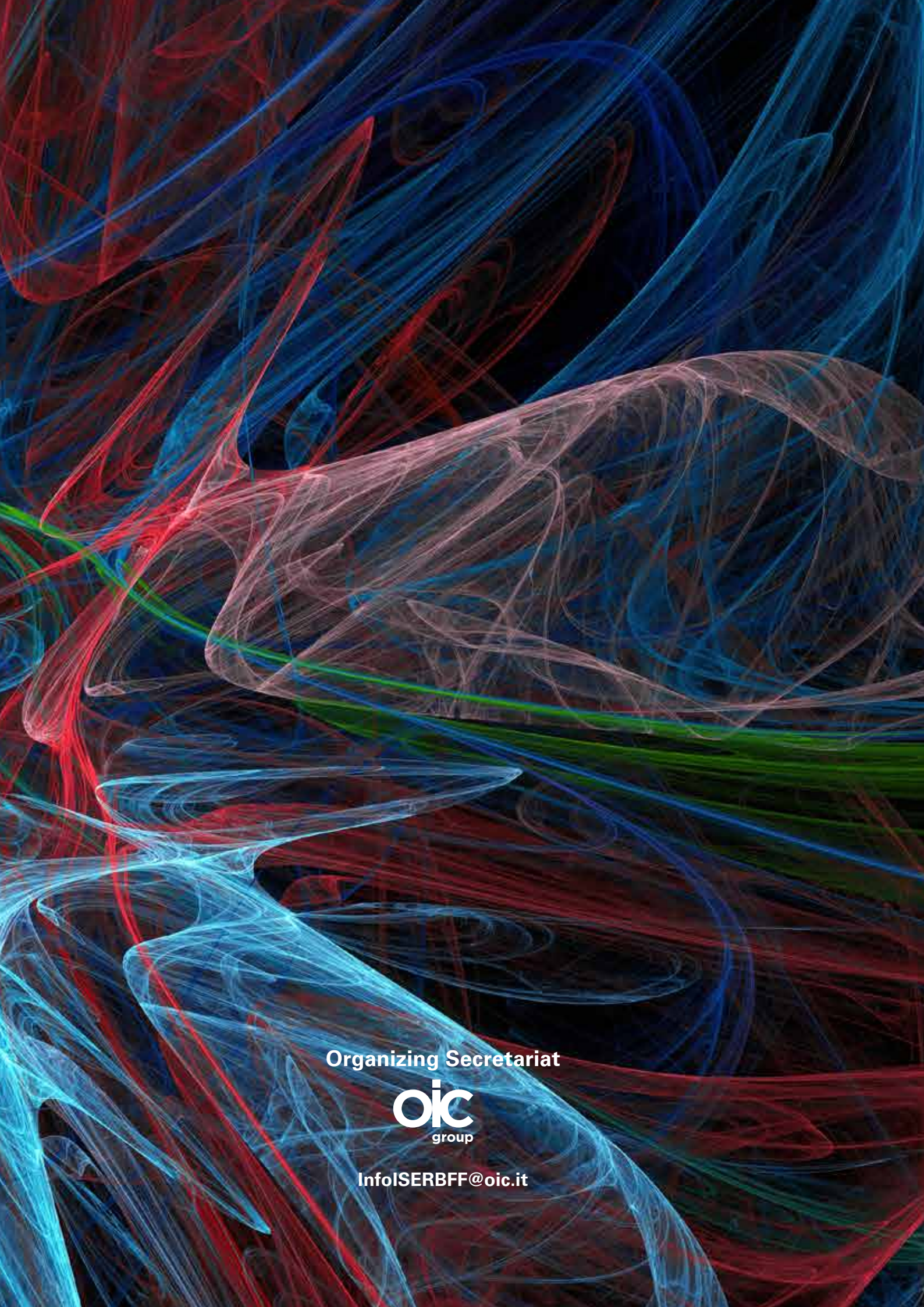
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