



2023 ARVO Annual Meeting Where to Find University of Iowa Colleagues April 23-27, 2023 | New Orleans, LA

SATURDAY, APRIL 22

Education Course

1:00 PM – 1:25 PM

Elliott Sohn

Diabetic Retinopathy: Moving the Field Forward – Neuronal dysfunction in diabetic retinopathy | Location: R02-R03

1:15 PM – 1:45 PM

Arlene Drack

The Use of Electrophysiologic Techniques in Vision Research – Application of visual electrophysiology in pediatric ophthalmology: clinical and research | Location: R07-R08

SUNDAY, APRIL 23

Paper Session

1:30 PM – 1:45 PM

Edwin Stone (presenter), **Adam DeLuca**, **Jeaneen Andorf**, **Ben Faga**, **Laurel Faga**, **Louisa Affatigato**, **Jeremy Hoffmann**, **Douglas Critser**, Nicholas Lessing, **Terry Braun**, **Todd Scheetz**

Differential GABA receptor gene expression and risk for primary open angle glaucoma, Presentation # 480 | Location: Exhibit Hall

12:15 PM – 12:30 PM

David Szanto (presenter), **Jui-Kai Wang**, Brian Woods, Tobias Elze, Mona Garvin, Louis Pasquale, **Randy Kardon**, Joseph Branco, Mark Kupersmith

Patterns of Neuronal and Central Visual Field Loss in Optic Neuritis at Outcome Identified by Machine Learning, Presentation # 542 | Location: 356-357

Poster Session

8:00 AM – 9:45 AM

John Fingert (presenter), Adam Hedberg-Buenz, Floyd Evans, **Michael Anderson**, **Robert Mullins**

Differential GABA receptor gene expression and risk for primary open angle glaucoma, Poster # C0339 | Location: Exhibit Hall

8:00 AM – 9:45 AM

Nicole Hehr (presenter), Patrick Barlow, **Arnulfo Garza Reyes**, **Wisam Najdawi**, **Andrew Pouw**

The Effect of Insurance Coverage Laws on Glaucoma Eyedrop Medication Use, Poster # C0232 | Location: Exhibit Hall

8:00 AM – 9:45 AM

Rishabh Singh (presenter), Yan Zhao, **John Fingert**, Mae Gordon, Michael Kass, Yuyang Luo, Ayellet Segre, Jany Wiggs, Tobias Elze, Nazlee Zebardast

Baseline visual field patterns identified by archetypal analysis are associated with glaucoma onset and progression in the Ocular Hypertension Treatment Study, Poster # C0240 | Location: Exhibit Hall

12:00 PM – 1:45 PM

Emma Hartness (presenter), **Hanna Shevalye**, **Jessica Skeie**, **Greg Schmidt**, **Mark Greiner**



Fuchs Endothelial Corneal Dystrophy Involves Decreased Expression of Genes for Fe-S Cluster Synthesis, Poster # B0293 | Location: Exhibit Hall

12:00 PM – 1:45 PM

Kenten Kingsbury (presenter), **Jessica Skeie**, **Tim Eggleston**, **Hanna Shevalye**, **Greg Schmidt**, **Esther Baker**, **Mark Greiner**
Diabetes-related Hyperglycemia Affects Protein Expression and Glycation Events in the Extracellular Matrix of Corneal Endothelial Cells, Poster # B0297 | Location: Exhibit Hall

12:00 PM – 1:45 PM

Sean Rodriguez (presenter), **Elaine Binkley**, **H. Culver Boldt**, **Connie Hinz**

Poster Session: *The Rim Creeper: Edge creep, increased pigmentation at the border of choroidal melanomas treated with plaque brachytherapy*, Poster # C0646 | Location: Exhibit Hall

12:00 PM – 1:45 PM

Jacob Thompson (presenter), **Ying Hsu**, **Ella Gehrke**, **Salma Hassan**, **Sara Mayer**, **Angela Mahoney**, **Arlene Drack**

Resolution of retinal cysts following subretinal buffer injection in a mouse model of Juvenile X-linked Retinoschisis, Poster # C0361 | Location: Exhibit Hall

3:45 PM – 5:30 PM

Matthew Hunt (presenter), K McKay, Aaron Lee, Cecilia Lee, Russell Van Gelder

Uveitis Burden in US Ophthalmology Practices Using the IRIS® Registry (Intelligent Research in Sight), Poster # C0426 | Location: Exhibit Hall

3:45 PM – 5:30 PM

Edward Linton (presenter), **Julie Nellis**, Thomas Tedeschi, **Randy Kardon**, Russell Van Gelder

Retinal Blood Flow Waveform Measurement With Laser Speckle Flowgraphy Reveals Specific Signs Of Carotid-Cavernous Fistula, Poster # C0016 | Location: Exhibit Hall

3:45 PM – 5:30 PM

Narendra Pandala (presenter), **Ian Han**, **Emily Meyering**, **Mallory Lang**, **Robert Mullins**, **Budd Tucker**

Autologous choroidal endothelial cell replacement using Laminin based hydrogels for the treatment of AMD, Poster # B0297 | Location: Exhibit Hall

MONDAY, APRIL 24

Minisymposium

11:30 AM – 1:15 PM

Ian Han (moderator), Daniel SW Ting

AI in Retina OCTs | Location: La Nouvelle AB

Paper Session

1:00 PM – 1:15 PM

Sanjib Saha (presenter), **Jessica Skeie**, **Megan Polz**, **Hanna Shevalye**, **Tim Eggleston**, Apurva Dusane, Pornpoj Phruttiwanichakun, Esraa Mohamed, **Greg Schmidt**, **Mark Greiner**, Aliasger Salem

Ubiquinol loaded targeted nanoparticles for Fuchs endothelial corneal dystrophy, Presentation # 1335 | Location: Rm 244

3:30 PM – 3:45 PM

Nathaniel Mullin (presenter), **Laura Bohrer**, **Allison Wright**, **Kristin Anfinson**, **Andrew Voigt**, **Edwin Stone**, **Robert Mullins**, **Budd Tucker**

NR2E3-deficient progenitors commit to a rod fate yet fail to form mature rod photoreceptors in an induced pluripotent stem cell-based model of human retinal development, Presentation # 1893 | Location: R02-R03



4:00 PM – 4:15 PM

Markus Kuehn (presenter), **David Wadkins**, **Huilan Zeng**

Loss of SARM1 imparts retinal ganglion cell protection in a glaucoma model of chronic IOP elevation, Presentation # 1902

| Location: R04-R05

Poster Session

11:30 AM – 1:15 PM

Adam DeLuca (presenter), **S Scott Whitmore**, **Beau Fenner**, **Nicole Tatro**, **Kelsey Wieland**, **Katayoun Varzavand**, **Edwin Stone**, **Todd Scheetz**

Quantification of Goldmann visual field volume to track the progression of Choroideremia in a large retrospective cohort, Poster # B0172 | Location: Exhibit Hall

11:30 AM – 1:30 PM

Beau Fenner (presenter), **Adam DeLuca**, **S Scott Whitmore**, **Jeaneen Andorf**, **Heather Daggett**, **Meagan Luse**, **Todd Scheetz**, **Budd Tucker**, **Ian Han**, **Edwin Stone**

A Retrospective Longitudinal Study of 458 Patient with Molecularly Confirmed ABCA4-Associated Retinal Disease, Poster # B0176 | Location: Exhibit Hall

11:30 AM – 1:15 PM

Mahsaw Mansoor (presenter), **S. Bilal Ahmed**, **James Folk**, **Michael Abramoff**

Reduction of post-intravitreal injection intraocular pressure spikes with caliper ocular decompression, Poster # B0036

| Location: Exhibit Hall

11:30 AM – 1:15 PM

Paige Noble (presenter), **Amanda Chang**, **Wisam Najdawi**, **Andrew Pouw**

Identifying Practice Patterns in Managing Target IOP in Glaucoma, Poster # B0012 | Location: Exhibit Hall

11:30 AM – 1:15 PM

Christine Sindt (presenter), **Marcus Noyes**

Comparison of Two different sets of aberrometer data and methods of orientation, on the same contact lens, with resultant measurements on the same eye, Poster # B0140 | Location: Exhibit Hall

11:30 AM – 1:15 PM

S Scott Whitmore (presenter), **Douglas Critser**, **Adam DeLuca**, **Malia Collins**, **Austin Reutzler**, **Edwin Stone**, **Ian Han**

The Waterfall in Disease Progression of Early Onset Stargardt Macular Dystrophy: Implications for Clinical Trial Design, Poster # B0171 | Location: Exhibit Hall

11:30 AM – 1:15 PM

Anushi Wijayagunaratne (presenter), **Edward Linton**, **Ivan Marin Franch**, **Karam Alawa**, **Michael Wall**

Smartphone Perimetry: Comparison to Standard Automated Perimetry and Assessment of Size-Modulation Strategy with Frequency-Of-Seeing Curves in Healthy Subjects, Poster # B0158 | Location: Exhibit Hall

11:30 AM – 1:15 PM

M. Reza Bahrani Fard (presenter), **Jessica Chan**, **Marybeth Yonk**, **A. Thomas Read**, **Shreya Kuturu**, **Stanislav Emelianov**, **Markus Kuehn**, **Ross Ethier**

Quantifying specificity of stem cell delivery to the trabecular meshwork, Poster # B0234 | Location: Exhibit Hall

TUESDAY, APRIL 25

Minisymposium

8:45 AM – 10:30 AM



Budd Tucker (moderator), Richard Singh

Section: Retinal Cell Biology: *Gene-independent therapeutic approaches for treatment of retinal disease*, Session # 342 |

Location: La Nouvelle AB

9:45 AM – 10:05 AM

Robert Mullins

Insights into the Human RPE through Single Cell Multiomic Analysis, Presentation # 2444 | **Location:** R07-R08

Paper Session

3:45 PM – 4:00 PM

Jeffrey Anders (presenter), **Benjamin Elwood**, **Randy Kardon**, **Oliver Gramlich**

Inhibition of HIF-1 Signaling Reduces Visual Impairment in a Mouse Model of Multiple Sclerosis-like Optic Neuritis, Presentation # 3245 | **Location:** R01

Poster Session

8:45 AM – 10:30 AM

Noo-Us-Sabah Ahmad (presenter), Kristen Staggars, Kyungmoo Lee, Amitha Domalpally, Benjamin Frankfort, Roomasa Channa

Total retinal thickness is an important factor in evaluating diabetic retinal neurodegeneration, Poster # B0484 | **Location:** Exhibit Hall

8:45 AM – 10:30 AM

Ian Han (presenter), **Narendra Pandala**, Nuzhat Maisha, Tolulope Ale, **Robert Mullins**, Erin Lavik, **Budd Tucker**

Nanocapsules with HIF-1-alpha Inhibitor for Treatment of Choroidal Neovascularization in a Rat Model, Poster # B0326 | **Location:** Exhibit Hall

11:45 AM – 1:30 PM

Laura Bohrer (presenter), **Arwin Shrestha**, **Erin Burnight**, **Luan Streb**, **Robert Mullins**, **Edwin Stone**, **Budd Tucker**

Engineering a photoreceptor cell-RPE microphysiological system, Poster # C0370 | **Location:** Exhibit Hall

11:45 AM – 1:30 PM

Erin Burnight (presenter), **Cathryn Cranston**, **Heather Daggett**, **Janet Riley**, **Robert Mullins**, **Edwin Stone**, **Budd Tucker**

Demonstration of the pathogenicity of a common non-exomic mutation in ABCA4 using iPSC-derived retinal organoids, retinal pigment epithelium, and retrospective clinical data, Poster # C0368 | **Location:** Exhibit Hall

11:45 AM – 1:30 PM

Jessica Cooke (presenter), **Andrew Voigt**, **Michael Collingwood**, **Nicholas Stone**, **Sarah Carrothers**, **S Scott Whitmore**, **Adam DeLuca**, **Edwin Stone**, **Robert Mullins**, **Budd Tucker**

Entry into the pluripotency continuum impacts retinal cell fate decisions of human iPSCs, Poster # C0367 | **Location:** Exhibit Hall

11:45 AM – 1:30 PM

Lola Lozano (presenter), **Laura Bohrer**, **Nathaniel Mullin**, **Edwin Stone**, **H Boldt**, **Robert Mullins**, **Elaine Binkley**, **Budd Tucker**

Modeling VHL-associated hemangioblastomas in vitro using patient-derived stem cells, Poster # C0369 | **Location:** Exhibit Hall

11:45 AM – 1:30 PM

Emma Navratil (presenter), **Miles Flamme-Wiese**, **Brynnon Harman**, **Edwin Stone**, **Budd Tucker**, **Robert Mullins**

Evaluation of senescence in RPE and choriocapillaris in young, age matched, and AMD human donor eyes, Poster # C0070 | **Location:** Exhibit Hall

11:45 AM – 1:45 PM

Luke Wiley (presenter), **Timothy Boyce**, **Daylz Ochoa**, **Katie Sheehan**, **Edwin Stone**, **Robert Mullins**, **Budd Tucker**, **Ian Han**

The degree of AAV-induced retinal inflammation varies based on serotype and route of delivery: intravitreal, subretinal or suprachoroidal, Poster # B0434 | **Location:** Exhibit Hall



WEDNESDAY, APRIL 26

Award Lecture

9:35 AM – 10:15 PM

Budd Tucker

Cogan Award Lecture: *Treating inherited retinal degenerative blindness* | Location: Great Hall AD

Paper Session

2:15 PM – 4:00 PM

John Fingert (moderator), **Sudha Lyengar**, **Marta Del Pozo Valero**

Molecular basis of heritable ocular phenotypes, Session # 237 | Location: R06

Poster Session

10:30 AM – 12:15 PM

Erin Capper (presenter), **Jeffrey Anders**, **Benjamin Elwood**, **Randy Kardon**, **Oliver Gramlich**

Utilization of Ketogenic Diet Worsens Visual Deficits in Experimental Optic Neuritis, Poster # B0402 | Location: Exhibit Hall

10:30 AM – 12:15 PM

Christopher Fortenbach (presenter), **Michael Abramoff**

Vision Loss Disproportionally Drives Millions of Inhabitants of Low-Income Nations Into Poverty, Poster # C0167 |

Location: Exhibit Hall

10:30 AM – 12:15 PM

Oliver Gramlich (presenter), **Benjamin Elwood**, **Jeffrey Anders**, **Randy Kardon**, Jeffrey Bennett

Complement Dependent Cytotoxicity Drives Retinal Ganglion Cell Loss in a Novel In Vivo Model of Neuromyelitis Optica, Poster # B0403 | Location: Exhibit Hall

10:30 AM – 12:15 PM

Huilan Zeng (presenter), **Markus Kuehn**

Increased T-regulatory cell activity protects retinal ganglion cells in glaucoma, Poster # B0202 | Location: Exhibit Hall

10:30 AM – 12:15 PM

Luke Wiley (moderator)

Gene and Cell Therapy | Location: Exhibit Hall

2:15 PM – 4:00 PM

Matthew Field (presenter), **Anna Paulson**, **Alina Dumitrescu**

A compendia of previously unknown autosomal dominant pathologic variants with phenotypic ocular and systemic manifestations, Poster # B0106 | Location: Exhibit Hall

2:15 PM – 4:00 PM

Nicholas Stone (presenter), **Jessica Cooke**, **Laura Bohrer**, **Erin Burnight**, **Jessica Fick**, **Robert Mullins**, **Budd Tucker**

Microfluidic Cell Sorting for Autologous Photoreceptor Replacement Therapies, Poster # C0079 | Location: Exhibit Hall

THURSDAY, APRIL 27

Paper Session



10:30 AM – 12:15 PM

Chris Johnson (moderator), **Allison McKendrick**
Visual Fields and Psychophysics | Location: 255-257

12:45 PM – 2:30 PM

Robert Mullins (moderator), **Claire Mitchell**
Age and Cellular Senescence | Location: 255-257

1:00 PM – 1:15 PM

Jui-Kai Wang (presenter), Zhi Chen, Honghai Zhang, Yun Jae Choi, **Brett Johnson**, **Mark Kupersmith**, **Milan Sonka**, Mona Garvin, **Randy Kardon**
A Hybrid Deep Learning and Optimal 3D Graph Search Approach Improves Retinal Layer Segmentation in Very Thin Retina,
Presentation # 5448 | Location: 356-357

1:45 PM – 2:00 PM

Kelly Mulfaul (presenter), **Xiuying Liu**, **Megan Riker**, **Edwin Stone**, **Budd Tucker**, **Robert Mullins**
Inflammatory cytokine profiling identifies elevated G-CSF protein in human age-related macular degeneration (AMD) donor choroid., Presentation # 5448 | Location: 356-357

Poster Session

10:30 AM – 12:15 PM

Ryan Neuhaus, **Jaclyn Haugsdal**, **Erin Boese**, **Aaron Dotson**, **Matthew Field**, **Tina Hendricks**, **Andrew Pouw** (presenter)
Hand motion tracking of faculty and residents during simulated surgical maneuvers, Poster # C0331 | Location: Exhibit Hall

10:30 AM – 12:15 PM

Marcus Noyes (presenter), Xifeng Xiao, Daniel Neal, **Christine Sindt**
Comparison of Refraction Calculations for the Highly Aberrated Eye, Poster # C0176 | Location: Exhibit Hall

10:30 AM – 12:15 PM

Araniko Pandey (presenter), **Jacob Thompson**, **Ying Hsu**, **Sajag Bhattarai**, **Prajwal Gurung**, **Arlene Drack**
Investigating the role of caspase-1 in a mouse model of juvenile X-linked retinoschisis, Poster # B0218 | Location: Exhibit Hall

12:45 PM – 2:30 PM

Wisam Najdawi (presenter), **Chris Johnson**, **Andrew Pouw**
Validation of a Novel Head-Mounted Perimeter versus the Humphrey Field Analyzer, Poster # C0225 | Location: Exhibit Hall