

ISER/BrightFocus Glaucoma Symposium Platform Sessions

Platform Session I - 80 minutes - Title: Stress Management

Talk #	Name	Abstract Title
1	Rachel W. Kuchtey, MD, PhD	Elastic Fiber Defects in Glaucoma Pathogenesis
2	Terete Borrás, PhD, FARVO	Matrix GLA (MGP) Ablation Increases Stiffness in the Trabecular Meshwork and Disrupts the Retinal Vasculature in Living Mice
3	J. Crawford Downs, PhD, FARVO	Simulating the Biomechanics of the Lamina Cribrosa Microstructure and Associated Neural Tissues
4	Thao (Vicky) Nguyen, PhD	OCT Measurement of In Vivo Deformation and Strain in the Human Lamina Cribrosa after Laser Suturelysis
5	Ian A. Sigal, PhD	The Strain that Broke the Axon's Back; Towards Axon-Centric Optic Nerve Head Biomechanics

Platform Session II - 120 minutes - Title: Translational Advances

Talk #	Name	Abstract Title
1	C. Ross Ethier, PhD	Sustained IOP Lowering by a Novel Non-Surgical, Non-Pharmacologic Mechanism
2	Gaurang C. Patel, PhD	RNAi Based Approach for MYOC-Associated Glaucoma
3	Tonia S. Rex, PhD	Sustained Release Of EPO-R76E Protects Against Glaucoma by Activating Nrf2 Via the MAPK Pathway
4	Nikos Stergiopoulos, PhD	One Year Follow-Up Using the eyeWatch™ System for the Treatment of Refractory Glaucoma
5	Cynthia L. Steel, MBA, PhD	Preclinical Efficacy and Safety Profile of QLS-101, A Novel ATP-Sensitive Potassium Channel Opener for the Reduction of IOP
6	Ariana M Levin, MD	The Bigger Picture: Use of Daily Round-the-Clock Intraocular Pressure Measurements for Understanding Glaucoma Progression
7	Carl Romano, PhD	ANGPTL7 Gene Silencing and Knockdown Lowers IOP

Platform Session III - 90 minutes - Title: Molecular Mechanisms

Talk #	Name	Abstract Title
1	Raquel L. Lieberman, PhD	Benign or Pathogenic? Perplexing Variants of the Glaucoma-Associated Myocilin Olfactomedin Domain
2	Simon Kaja, PhD	Functional Effects of Optic Nerve Head Astrocyte-Derived Extracellular Vesicles
3	Yutao Liu, MD, PHD	The Role of miR-182 in Conventional Outflow Pathway
4	Stanislav Tomarev, PhD	miRNA Changes in Retinal Ganglion Cells After Optic Nerve Crush and Glaucomatous Damage
5	Dorota Skowronska-Krawczyk, PhD	Age-Related Response to Ocular Hypertension

Platform Session IV - 80 minutes - Title: NextGen Glaucoma

Talk #	Name	Abstract Title
1	Ester Reina-Torres, PhD	Nitric Oxide Mediates Rapid IOP-Dependent Homeostatic Regulation of Aqueous Humour Outflow in Mice
2	Ajay Kumar, PhD	Stem Cell Secretome as a Potential Treatment for Steroid-Induced and Primary Open-Angle Glaucoma Models
3	Olivia J. Marola, MS	MKK4 and MKK7 Control Retinal Ganglion Cell Soma Loss, Axonal Degeneration, and Dendritic Remodeling after Glaucoma-Relevant Injury
4	Yukihiro Shiga, MD, PhD	Live Two-Photon Calcium Imaging in Retinal Ganglion Cells: Characterization of Early Changes in a Mouse Glaucoma Model
5	Margarete Karg, PhD	Sustained Reversal of Glaucoma-Induced Vision Loss by in Vivo Epigenetic Reprogramming
6	Kazuhiro Kurokawa	Measuring Cumulative Loss of Ganglion Cell Layer Somas in Normal and Glaucomatous Subjects

Platform Session V - 120 minutes - Title: Inflammation and Glial Activation

Talk #	Name	Abstract Title
1	Milica A. Margeta, MD, PhD	APOE4 Ameliorates Microglial Cytotoxicity and Neurodegeneration in Glaucoma
2	Kin-Sang Cho, PhD	Novel Function of Insulin Like Growth Factor Binding Protein-Like 1 (IGFBPL1) Against Microglia Activation and Protects Glaucomatous Degeneration
3	Markus Kuehn, PhD	Passive Transfer of Mononuclear Cells from POAG Donors Confers Retinal Ganglion Cell Loss in Recipient Mice
4	Rudolf Fuchshofer	Decorin - An Antagonist of TGF- β in Astrocytes of the Optic Nerve
5	Qi N. Cui, MD, PhD	The GLP-1 Receptor Agonist NLY01 Reduces Neuroinflammation and Protects Against Neuron Loss in Ocular Hypertension
6	Valery Shestopalov	Inflammasome Facilitates Ganglion Cell Dysfunction and Loss in Ocular Hypertension Glaucoma
7	Claire Mitchell	Signaling Pathways that Link IOP Elevation with Retinal Microglial Activation and IL-1 β Release

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Platform Session VI - 120 minutes - Title: Insights From Novel Models

Talk #	Name	Abstract Title
1	Alejandra Bosco, PhD	Schlemm's Canal-Tie2 Knockdown (SC-Tie2 KD) as an Inducible Mouse Model of Adult-Onset Glaucoma
2	Dr. Sabrina Reinehr	Enhanced Optic Nerve and Retinal Ganglion Cell Degeneration in a new Multifactorial Glaucoma Animal Model
3	Matthew B Veldman, PhD	SREBF2 is Necessary for Efficient Optic Nerve Regeneration in Zebrafish
4	Monica M. Jablonski, PhD, FARVO	Mining The BXD Family of Mice to Model the Natural Progression of Glaucoma
5	Francisco M. Nadal-Nicolas, PhD	Establishing the Ground Squirrel as a Model for Exploring Optic Neuropathologies, Neurodegeneration and Neuroprotection
6	John Kuchtey	Mice Carrying an A387T Variant of ADAMTS10 Recapitulate Phenotypes of Weill-Marchesani Syndrome
7	Jason S. Meyer, PhD	Human Stem Cell-Derived Retinal Ganglion Cells Carrying a Glaucoma-Causing Mutation Exhibit Neurodegenerative Phenotypes and are Sensitive to the Effects of Diseased Astrocytes

Platform Session VII - 80 minutes - Title: Structural and Functional Neuroenhancement

Talk #	Name	Abstract Title
1	Paloma B.Liton	Autophagy Deficiency Protects Against IOP Elevation and Offers Neuroprotection in Experimental and Chronic Glaucoma Mouse Models
2	Luca Della Santina, PhD	Rod Pathway Asymmetries Following to Transient Intraocular Pressure Elevation
3	Ramesh Kasetti	Impaired Mitochondrial Proteostasis in Myocilin Associated Glaucoma
4	Jiaxing Wang, MD, PhD	Robust Optic Nerve Regeneration in a Mouse Mutant
5	Matthew J. Van Hook, PhD	Loss of RGC Synaptic Outputs to the Visual Thalamus in a Mouse Model of Glaucoma

Platform Session VIII - 80 minutes - Title: Modulation and Enhancement of Outflow Function

Talk #	Name	Abstract Title
1	Michael P. Fautsch, PhD	Effect of ATP-Sensitive Potassium (KATP) Channel Openers on Intraocular Pressure (IOP) and Aqueous Humor Dynamics in Preclinical Ocular Hypertensive Models
2	Haiyan Gong	Schlemm's Canal Endothelium Cellular Connectivity in Giant Vacuole and Pore Formation in Different Flow Regions: A 3D Electron Microscopy Study
3	Yiqin Du, MD, PhD	Stem Cell Effects on Myocilin Mutant TM Cells and on a Mouse Model with Myocilin Mutation
4	Samuel Herberg, PhD	TGF β 2 Modulates YAP/TAZ Activity in Human Trabecular Meshwork Cells Through ERK and ROCK Signaling Pathways
5	Vasanth Rao Ponugoti, PhD	Glypican-4 Activated Wnt5 PCP Pathway-Induced Actin Cytoskeletal Reorganization is a Predominant Response in Trabecular Meshwork Cells Treated with Dexamethasone

Platform Session IX - 120 minutes - Title: The Last Word in Glaucoma

Talk #	Name	Abstract Title
1	Michael G. Anderson, PhD	Mechanism of APBB2 Contributions to Glaucoma
2	Cindy Hoppe, MSc	Inhibiting the Alternative Complement Pathway is Neuroprotective in a Microbead-Induced Mouse Model of Glaucoma
3	Ryan J. Donahue, PhD	Bax Activation in Damaged Retinal Ganglion Cells in Vivo Occurs in Two Distinct and Delayed Stages
4	Christina Nicou	IOP Variability in Conscious Rats
5	Wenlan Lu	Morphologic Changes to Microglial Cells Accompany Stimulation of the P2X7 Receptor in the Retina
6	Michael Risner, PhD	Axon Development in Human Derived Retinal Ganglion Cells
7	Harry Quigley	Aquaporins Absent and Specialized Junctional Complexes: Unique Astrocyte Phenotype in Nerve Head Across Species Shows Lack of Glymphatic Pathway