



## ARVO 2018 Annual Meeting Emerging Trends and Hot Topics

The following abstracts have been identified by members of the Annual Meeting Program Committee as representing the newest and most innovative research being conducted in the various specialties. To view abstracts, enter the program number (xxx – xxxxx) or title below in the "Search" field of the [Online Planner](#) or [mobile app](#).

### **Sunday, April 29**

#### **Anatomy and Pathology/Oncology**

713 - C0308. Scleral crosslinking using glycerinaldehyde for the prevention of myopia progression in the rabbit: biochemical and ultrastructural changes. 1:00pm

712 - C0307. An ultrasound-based biomarker of myopia in the guinea pig sclera. 1:00pm

689 - C0284. Effects of Caffeine, an Adenosine Receptor Antagonist, on Lens Compensation in Rhesus Monkeys. 1:00pm

687 - C0282. The effect of blue light on the guinea pigs with lens induced myopia. 1:00pm

686 - C0281. Effects of spectral composition of light on dopamine release and myopia development in chicks. 1:00pm

683 - C0278. Indoor Illuminants, S-Cone Stimulation, and Eye Growth in Chicks. 1:00pm

329 - C0262. Triamcinolone acetonide loaded microemulsion for enhanced ocular bioavailability via topical route. 8:15am

328 - C0261. Molecular genetic investigation of two distinct monogenic disorders with ocular involvement in a large consanguineous Roma family. 8:15am

316 - C0249. Visuo-retinal effects of chemotherapy in hematological malignancy. 8:15am

313 - C0246. Synaptic coupling of unmyelinated optic nerve axons – a novel insight into optic nerve structure and conductivity properties. 8:15am

302 - C0235. Optical coherence tomography angiography of choriocapillaris: normative macular choriocapillaris vasculature and novel classification of early-stage systemic hypertensive changes: A cross-sectional study. 8:15am

### **Biochemistry/Molecular Biology**

374 - A0034. CRISPR/Cas9 Targeted Disruption of Herpes Simplex Virus type 1 in a Rabbit Latency Model Reduces Viral Reactivation and Associated Corneal Pathology. 1:00pm

790. Functional Analysis of the Complement Inhibitor Factor I in Sera of Patients with Advanced Age-Related Macular Degeneration. 3:30pm

### **Cornea**

910 - B0088. Isolation and Analysis of Normal Human Tear Extracellular Vesicle RNA. 3:15pm

534 - B0149. Identification of the function of keratocan positive keratocytes. 1:00pm

747. Native-Like, Cell-Laden, Orthogonal-Multilayer and Transplantable Tissue- Engineered Corneal Stroma Induced by a Mechanical Collagen Microenvironment. 4:30pm

### **Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology**

106 - A0269. Idiopathic Dacryoadenitis Treated with Intralesional Rituximab. 8:15am

726. Effect of stimulus intensity, visual field location and duration on the rod- , cone- and melanopsin-mediated pupillary light reflex. 4:30am

### **Glaucoma**

490 - A0350. The Effect of Smoking on Trabeculectomy Outcomes. 1:00pm

480 - A0340. Novel characterization and intravital imaging of dynamic conjunctival lymphangiogenesis after filtration surgery. 1:00pm

### **Immunology/Microbiology**

719. Ebola Virus Persistence in Ocular Tissues and Fluids (EVICT) Study: Ebolavirus RT-PCR Results and Cataract Surgery Outcomes. 4:00pm

718. Murine cytomegalovirus (MCMV) disseminates to and remains latent in the choroid following systemic infection of neonatal BALB/c mice. 3:45pm

717. The Use of Predatory Prokaryotes to Control an Ocular Pathogen in the Vitreous. 3:30pm

### **Multidisciplinary Ophthalmic Imaging Group**

295 - C0196. Investigating the functional response of cone photoreceptors during bleaching and dark adaptation with 1.7MHz optical coherence tomography. 8:15am

### **Physiology/Pharmacology**

232 - C0043. Delivery and Toxicity of Ruthenium Pyridine-based Nanophotoswitches in Retina. 8:15am

## **Retina**

883 - A0215. Post-vitreectomy ocular hemorrhage among United States adults on oral antithrombotics. 3:15pm

873 - A0205. Preferred practice patterns among young retina specialists. 3:15pm

861 - A0193. Vitrectomy without Prone Positioning for Rhegmatogenous Retinal Detachments in Eyes with Inferior Retinal Breaks. 3:15pm

855 - A0187. Correlation between choroidal thickness and intraocular pressure after 23-gauge and 25-gauge vitrectomy for idiopathic epiretinal membrane. 3:15pm

391 - A0091. Establishing a Colony of Non-human Primates with Cystoid Macular Edema. 1:00pm

## **Retinal Cell Biology**

998 - B0252. New insights into the mechanisms of retinal degeneration due to Phosphodiesterase 6 (PDE6) deficiency. 3:15pm

992 - B0246. Transcriptomics analysis of Muller glia in response to different damage paradigms in the adult zebrafish retina. 3:15pm

978 - B0232. Effect of heat shock on mutant rhodopsin expression in a *Xenopus laevis* model of retinitis pigmentosa. 3:15pm

586 - B0201. Laminin  $\beta$ 2 Chain Regulates Retinal Progenitor Cell Mitotic Spindle Orientation Via Dystroglycan. 1:00pm

583 - B0198. Expression of an opsin protein in developing starburst amacrine cells. 1:00pm

1013 - B0267. Variability in therapeutic outcome due to age of P23H rhodopsin mice at time of dosing can be reduced by enhanced retinal drug delivery. 3:15pm

1005 - B0259. Long-term Rescue of Photoreceptors in a Rodent Model of Retinitis Pigmentosa Associated with MERTK Gene Mutation. 3:15pm

764. Photoreceptor glucose metabolic modulation by adiponectin prevents hyperglycemic ROP. 4:00pm

763. Preconditioning Across Generations: Intermittent Hypoxia in F0 Mice Promotes Neuroprotection from Retinal Ischemia in F1 Offspring. 3:45pm

762. Modulation of endothelial cell function and pathologic ocular angiogenesis by microRNA-145. 3:30pm

## **Visual Psychophysics/Physiological Optics**

730. Influence of light on the diurnal rhythm of photoreceptor disc shedding in humans. 3:45pm

728. Imaging retinal function with phase-sensitive adaptive optics optical coherence tomography. 3:15pm

## **Monday, April 30**

### **Anatomy and Pathology/Oncology**

1626 - A0002. Mitochondrial bioenergetic characterization of cellular models of retinoblastoma. 11:15am

1176. Time of the day influences the response to optical defocus in human eyes. 9:45am

2158 - A0292. Retinal structure & oxygen metabolism in highly myopic vs emmetropic eyes. 3:30pm

### **Clinical/Epidemiologic Research**

1601. Provision of Near Glasses Improves Productivity in Indian Tea Pickers: PROSPER Randomized Trial. 12:30pm

1598. Trends in eyecare access and affordability: The National Health Interview Survey (NHIS) 2008–2016. 11:45am

### **Cornea**

2243 - B0197. K14+ epithelial-targeted Myc ablation induces  $\Delta$ DNp63 overexpression in corneal epithelium. 3:30pm

2247 - B0201. Restoration of the epithelial stem cell population by the grafting of a tissue-engineered human corneal epithelium: a case report. 3:30pm

1966. IL-14: a Putative Biomarker for Stratification of Dry Eyes in Primary Sjögren's Syndrome. 4:30pm

### **Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology**

2171 - A0340. Thyroid stimulating hormone (TSH) receptor expression in human extraocular muscle cells in in vitro primary culture. 3:30pm

1142. Three-dimensional ex vivo modeling of Graves' orbitopathy reveals a novel pathogenic role for the HIF2A-LOX pathway. 8:15am

1552. Magnetic resonance imaging (MRI) demonstrates different patterns of horizontal extraocular muscle co-contraction in fusional divergence to near and distant targets. 11:30am

2173 - A0342. Optic Nerve Head Abnormalities Associated with Congenital Fibrosis of Extraocular Muscles. 3:30pm

1147. Adult Abducens Nerve and Lateral Rectus Muscle Regenerate in a Coordinated Fashion Following Injury, Revealing Important Biological Interactions. 9:30am

2162 - A0331. A holographic waveguide based eye tracking device. 3:30pm

2172 - A0341. Epigenetic regulation of myocyte dedifferentiation and myofiber growth during zebrafish EOM regeneration. 3:30pm

1144. Retinoid-regulated expression of pro-inflammatory cytokines in orbital tissues: a potential common denominator in orbital inflammatory syndromes. 8:45am

## **Genetics Group**

1434 - B0353. Mutations in JAG1 Gene May Lead to Familial Exudative Vitreoretinopathy. 8:15am

1421 - B0340. Slc38A1 blockade inhibits angiogenesis and laser-induced choroidal neovascularization. 8:15am

## **Glaucoma**

2112 - A0170. Pitfalls of Ganglion Cell Complex Analysis in Eyes With Vitreomacular Traction Syndrome. 3:30pm

2111 - A0169. Prelaminar Tissue Thickness in Moderate to Advanced Glaucoma. 3:30pm

1241 - A0082. Recombinant human nerve growth factor (rhNGF) eye drops for glaucoma: Interim results. 8:15am

## **Immunology/Microbiology**

1136. Health related quality of life in uveitis patients. 8:15am

2530 - C0259. Genetic ablation of TGFbR2 in microglia results in neuroinflammatory and neurodegenerative changes in the retina. 3:30pm

## **Lens**

1607. Lens epithelial cells rapidly initiate the innate immune response following cataract surgery. 12:30pm

## **Low Vision Group**

1942. Hazard Perception in Older Adults with Visual Impairment. 3:30pm

1943. Visual features most relevant to functional impairment in glaucoma. 3:45pm

## **Multidisciplinary Ophthalmic Imaging Group**

1227. Assisted reads for diabetic retinopathy using a deep learning algorithm and integrated gradient explanation. 9:45am

1226. Deep-learning Framework for Summarization of OCT Volumes. 9:30am

## **Physiology/Pharmacology**

1193. Development of a platform protein delivery system for retinal cells in vivo following intravitreal injection. 9:00am

## **Retina**

1442 - C0004. Sustained anti-VEGF activity of aflibercept (Eylea™) after storage in polycarbonate syringes used for intravitreal injection: a pathway to safety and efficiency in high volume clinics providing intravitreal therapy. 8:15am

1448 - C0010. Subanalysis of data from rAAV.sFLT-1 phase 1 and 2a randomized gene therapy trials for wet age-related macular degeneration. 8:15am

1158. Changes in Vitreoretinal Adhesion with Age and Region in Human and Sheep Eyes. 8:45am

### **Retinal Cell Biology**

1983. Monitoring the developing photoreceptors in the hiPSC-derived three dimension retinal organoid culture using bicistronic 2A-peptide-based co-expression reporter knock-in system. 3:30pm

1988. Single-Cell Transcriptome Profiling of Human Stem Cell-Derived Retinal Ganglion Cells in a Dominant Optic Atrophy Model. 4:45pm

1484 - C0226. Nuclear Cyclic-AMP Signaling in Developing Astrocytes. 8:15am

2512 - C0216. Microglia suppression during hibernation prevents axonal injury-induced retinal ganglion cell death in the ground squirrel retina. 3:30pm

### **Visual Psychophysics/Physiological Optics**

1151. Cellular-scale assessment of visual function in Choroideremia. 8:45am

1150. Evaluation of Retinal Vasculature in Patients with Branch Retinal Vein Occlusion Through Optical Coherence Tomography Angiography. 8:30am

## **Tuesday, May 1**

### **Anatomy and Pathology/Oncology**

3173 - A0316. RNA m6A Methylation Regulates Uveal Melanoma Cell Proliferation and Migration by Targeting c-Met. 11:15am

3622 - A0283. Safety, efficacy and biology of the gp100 TCR-based bispecific T cell redirector IMCgp100 in advanced uveal melanoma. 3:30pm

### **Biochemistry/Molecular Biology**

3533 - A0096. Interrogating new targets for glaucoma gene therapy. 3:30pm

### **Clinical/Epidemiologic Research**

3010. Mediterranean diet and incidence of advanced AMD: The EYE-RISK CONSORTIUM. 11:30am

2599. Five-year progression of newly diagnosed untreated diabetic retinopathy in a real-world setting from a large US claims database. 8:15am

3786 - C0013. Polymerase Chain Reaction (PCR) for Varicella Zoster Virus (VZV) in VZV Keratitis. 3:30pm

### **Cornea**

3342 - C0184. Promotion of high-risk corneal graft survival via corneal UV-light crosslinking. 11:15am

2990. Accelerated deployment of K14-Confetti limbal epithelial progenitor-derived clones during corneal wound-healing visualized in real-time. 11:45am

2579. Evaluation of a sustained drug delivery system for anti-VEGF antibody after alkali burns to the eye. 9:45am

2576. Severing corneal nerves induces the release of substance P which converts ocular surface CD11c+ cells to contrasuppressor cells that abolish ocular immune privilege. 9:00am

3326 - C0168. Higher Corneal Allograft Rejection Rates in the Very Young Are Associated with a Heightened NK cell Response in the Setting of Regulatory T cell Dysfunction. 11:15am

3449. Disruption of primary cilium in neural crest cells leads to Anterior Segment Dysgenesis (ASD). 3:30pm

3285 - C0079. Untargeted Mass Spectrometry Analysis of Lipids in Human Tears. 11:15am

3321 - C0163. A Murine Model of Alzheimer's Disease Shows Gender-Specific Ocular Surface Findings. 11:15am

2575. Caspase-8 Promotes Inflammation-Induced Lymphangiogenesis and Allograft Rejection in the Cornea. 8:45am

2573. In Situ Hybridization Visualizes Bacterial Clusters on Cells of the Human Conjunctival Epithelium. 8:15am

### **Glaucoma**

3456. Development of targeted siRNA nanotherapeutics to prevent fibrosis in experimental glaucoma filtration surgery. 3:30pm

3498. Macular and Optic Nerve Head Vessel Density and Progressive Retinal Nerve Fiber Layer Loss in Glaucoma. 4:00pm

3024. Construction of a deep learning algorithm to automatically diagnose glaucoma using a fundus photograph. 11:30am

3027. Microtubule deficit predisposes the retinal ganglion cell axons to atrophy in DBA/2J. 12:15pm

3501. Disease Severity Threshold (Tipping Point) at which RNFL and GCIPL Glaucoma Progression Rates Fall. 4:45pm

### **Lens**

3043 - A0014. TEM analysis of  $\alpha$ A66-80 peptide-induced protein aggregates and amyloid fibrils in human and guinea pig  $\alpha$ A-crystallins. 11:15am

3488. Calponin-3 Regulated Lens Epithelial Contractile Activity Induces Fibrogenic Activity via Yap/Taz Transcriptional Activation. 4:45pm

### **Multidisciplinary Ophthalmic Imaging Group**

2843 - B0261. MASS optical coherence tomography angiography. 8:15am

2842 - B0260. Projection-Resolved Optical Coherence Tomography Angiography of Retinal Plexuses in Retinitis Pigmentosa and Usher Syndrome Type 1. 8:15am

2880 - B0298. Accurate visualization and quantification of choriocapillaris with swept source OCTA through averaging repeated volume scans. 8:15am

### **Physiology/Pharmacology**

3479. Effect of intracranial pressure on conventional outflow facility in rats. 4:15pm

### **Retina**

2987. Safety and Activity of a Single, Intravitreal Injection of Human Retinal Progenitor Cells (jCell) for Treatment of Retinitis Pigmentosa (RP). 12:30pm

3267 - B0366. Modeling outer blood-retinal barrier and choroidal neovascularization in vitro. 11:15am

3465. Efficacy & Tolerability of OTX-TKI, a Sustained Hydrogel Delivery System for a Tyrosine Kinase Inhibitor, in a VEGF Induced Retinal Leakage Model Through 12 Months.4:00pm

3468. A novel subtype of retinal angiomatous proliferation (RAP): Cilioretinal RAP. 4:45pm

### **Retinal Cell Biology**

2598. Molecular determinants of photoreceptor pre-synapse morphogenesis. 9:45am

3473. Hemodynamic shear stress in the inner choroid primes endothelium for complement damage. 4:30pm

3103 - A0111. Development of a human reporter stem cell line for mature cones in retinal organoids. 11:15am

2594. Conditional knockout of mTORC1 in retina blocks developmental formation of the astrocyte network and retinal vasculature. 8:45am

### **Visual Neuroscience**

2589. Channelrhodopsin mediated retinal ganglion cell responses in the living macaque. 9:15am

## **Wednesday, May 2**

### **Anatomy and Pathology/Oncology**

4743 - B0244. Altered whole-brain gray matter volume in high myopia patients: a voxel-based morphometry study. 11:15am

### **Biochemistry/Molecular Biology**

4981. Identification of small molecule compounds that alleviate retinal ciliopathy phenotype. 4:30pm



4523 - A0038. Long-term rescue of vision with antisense oligonucleotides in a mouse model of Usher syndrome. 11:15am

### **Clinical/Epidemiologic Research**

5162 - B0185. Subjective Memory Complaints in the Visually Impaired: An NHANES Analysis. 3:30pm

5225 - B0338. Accuracy of a popular online symptom checker for ophthalmic diagnoses. 3:30pm

3957. Prevalence, Risk Factors and Impact of Myopic Macular Degeneration on Visual Impairment and Functioning Among Adults in Singapore. 9:15am

4463. Rates of Progressive Visual Field Loss and Driving Performance in Glaucoma. 12:00pm

4460. Visual Impairment, Multi-Morbidity and Their Association with Short Term Mortality. 11:15am

### **Cornea**

4334 - C0382. Characterization and Role of KCa3.1 Ion Channel in Corneal Wound Healing and Fibrosis. 8:15am

### **Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology**

4115 - B0278. Suppression rather than visual acuity loss limits threshold stereoacuity. 8:15am

4414. The cerebellar oculomotor vermis is involved in reflexive but not tonic vergence adaptation. 12:00pm

4413. The effect of stimulus type and autism quotient score on visual scanning of faces. 11:45am

4140 - B0303. Novel NDUFV1 mutations with optic nerve atrophy. 8:15am

4415. THE EFFECT OF HORIZONTAL GAZE DIRECTION ON VERTICAL FUSIONAL VERGENCE AMPLITUDE. 12:15pm

4118 - B0281. Is there meridional anisotropy in children with normal visual acuity and different astigmatic refractive errors? An electrophysiology and psychophysical study. 8:15am

4138 - B0301. Immature Retina, Immature Pupil Light Response. 8:15am

### **Glaucoma**

4987. Combining Structural (Visual Field) and Functional (OCT) Information to Confirm Early Glaucoma: A Topographical Method is Better Than Metrics. 4:15pm

5127 - B0116. Pointwise variability of a tablet perimetry application. 3:30pm

5054 - B0005. Sectoral First Peak Fractal Analysis of Optical Coherence Tomography Angiography in Glaucomatous Eyes. 3:30pm

5064 - B0015. Amplitudes of spontaneous venous pulsations are associated with retinal ganglion cell count estimates in glaucoma. 3:30pm

4986. Comparison of Rates of Progression of Macular OCT Parameters in Glaucoma. 4:00pm

5067 - B0018. Peripheral blood flow and peripapillary vessel density in exfoliation syndrome and exfoliation glaucoma: a nailfold capillaroscopy and optical coherence tomography angiography study. 3:30pm

4988. Factors Predicting a Greater Likelihood of Poor Visual Field Reliability in Glaucoma Patients and Suspects. 4:30pm

5066 - B0017. Attenuation Correction and Building 3-D Geometry of Retinal Vasculature from SD-OCT Volume Scans without Contrast Agents. 3:30pm

### **Immunology/Microbiology**

4936. The HSV-1  $\Delta$ NLS vaccine functionally preserves visual axis integrity following corneal HSV-1 challenge in mice. 4:45pm

### **Lens**

4975. Physiological optics of the accommodating lens: a clinical observational study using MRI. 4:30pm

### **Low Vision Group**

3910. Relation of Personality Traits to Low Vision Rehabilitation Outcomes. 8:45am

### **Multidisciplinary Ophthalmic Imaging Group**

4684 - A326. Miniaturized indirect ophthalmoscopy for nonmydriatic wide-field fundus photography. 11:15am

4642 - A0284. Adaptive optics scanning laser ophthalmoscopy of the human iridocorneal angle in vivo. 11:15am

### **Physiology/Pharmacology**

5334 - C0267. CRISPR/Cas9 and antisense oligonucleotides for therapy of a deep intronic CLRN1 splice mutation. 3:30pm

5308 - C0241. Hepatocyte growth factor (HGF) induces vascular leakage in the retina. 3:30pm

4458. Luminescent porous silicon particles as a self-reporting intravitreal drug delivery system. 12:30pm

### **Retina**

4998 - A0069. Detection of complement activators in immune attack eyes after iPS-derived retinal pigment epithelial cell transplantation. 3:30pm

4995. Sublingual/Transmucosal Fluorescein Angiography. 4:30pm

5268 - C0114. Managing focal vitreomacular traction with pneumatic vitreolysis, an emerging surgical technique. 3:30pm

4429. Quality measures of macular surgery – can we characterize surgical skill? 12:15pm

5257 - C0103. Caveolin-1 downregulates glial fibrillary acidic protein and vimentin expression of mouse retina and cultured human Muller cell in pathology of proliferative vitreoretinopathy. 3:30pm

4484. Low-Cost Home-Care OCT for AMD with Off-Axis Full-Field Time-Domain OCT – Analysis of Reliability and Feasibility in Disease Monitoring. 12:15pm

5260 - C0106. p38 signaling activates quiescent primary adult human RPE into contractile membranes modeling Proliferative Vitreoretinopathy. 3:30pm

4430. Postoperative complications following 23, 25, and 27-gauge pars plana vitrectomy and the utility of routine follow-up. 12:30pm

### **Retinal Cell Biology**

3940. Complement Landscape of the Mouse Retina Based on Single-cell Transcriptomics. 8:30am

3939. Retinal glial cells respond differently to the activation of the mechanosensitive channel TRPV4. 8:15am

4020 - A0145. Microphthalmia-associated transcription factor (Mitf) modulates autophagy in mouse primary RPE cells. 8:15am

3944. C3 deficiency results in accelerated rod photoreceptor loss in a mouse model of retinitis pigmentosa. 9:30am

4606 - A0195. Obesity-induced metabolic disturbance drives complement activation by retinal microglia. 11:15am

## **Thursday, May 3**

### **Anatomy and Pathology/Oncology**

5984. Vitreous Seed and Soil: Elevated Levels of Platelet-Derived Growth Factor (PDGF) in the Vitreous of Patients with Retinoblastoma. 11:30am

5985. Recurrence prediction and usefulness of Mohs microscopic surgery in Chinese patients of eyelid sebaceous gland carcinoma: a retrospective cohort study of 238 patients. 11:45am

5577 - A0296. Relapse of Leukemia in the Anterior Segment of the Eye: A systematic review. 8:15am

### **Clinical/Epidemiologic Research**

6013. Visual acuity outcomes in eyes treated with anti-VEGF injections during the Age-Related Eye Disease Study 2 (AREDS2). 12:15pm

### **Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology**

5955. Spiking Noise in V2 Neurons in Infants Monkeys. 11:15am

5958. Attention is biased towards the fellow eye in strabismic amblyopia. 12:00pm

5630 - A0349. Deoxycholic Acid and the Marginal Mandibular Nerve: A Cadaver Study. 8:15am

5960. The acuity and crowding deficits in strabismic amblyopia are stronger in the fovea than the visual periphery. 12:30pm

5789 - C0076. Assessing visual acuity – test-retest repeatability and level of agreement between the electronic ETDRS chart (E-ETDRS), optokinetic nystagmus (OKN), and sweep VEP. 8:15am

5618 - A0337. The negative psychosocial impact of thyroid eye disease - comparing results from the CIRTED trial with strabismus and other facially disfiguring conditions. 8:15am

### **Glaucoma**

5899 - C0186. A Novel Smartphone-Based Method for Quantitative Estimation of the Anterior Chamber Depth. 8:15am

6027. Robot assistants for perimetry: Patient experience and performance. 11:00am

6029. Visual Field Testing on a Personal Smartphone. 11:30am

5884 - C0171. Methods of analyzing chromatic pupillometry in glaucoma. 8:15am

5888 - C0175. Influence of Music on Intraocular Pressure and Morphology of Schlemm's Canal: An SS-OCT Study. 8:15am

6036. The effects of Vitamin B3 on fibroblast mitochondrial function in glaucoma patients. 11:30am

### **Immunology/Microbiology**

5567 - A0259. Development of a RNAi therapeutic for the treatment of allergic conjunctivitis. 8:15am

5552 - A0244. Complement C3a Induces Macrophage to Myofibroblast Transition (MMT) in Sub-retinal Fibrosis Secondary to Neovascular Age-Related Macular Degeneration. 8:15am

5558 - A0250. Role of macrophage microRNA-150 in age-related macular degeneration. 8:15am

### **Lens**

5640 - A0359. A $\beta$ -potentiated and A $\beta$ -independent age-related changes in the lens of Alzheimer's Disease and wild-type mice. 8:15am

### **Physiology/Pharmacology**

5684 - A0403. Lipid DNA Nanoparticles – a versatile vehicle for anterior segment drug delivery. 8:15am

### **Retina**

6190 - C0309. Quantifying Ocular Manifestations in Abusive Head Trauma. 11:00am

5917 - C0314. Intra-ocular diathermy forceps: first study in human subjects. 8:15am

6177 - C0296. Ocular TASER Trauma. 11:00am

### **Retinal Cell Biology**

5464 - A0133. Serine metabolism is a key pathway involved in the prevention of oxygen-induced retinopathy by Roxadustat. 8:15am

5495 - A0164. Receptors of intermediates of carbohydrate metabolism, GPR91 and GPR99, mediate axon growth. 8:15am

6071 - A0200. Ceramide-induced Mitochondrial Damage in Diabetic Retinopathy. 11:00am

5498 - A0167. Melanopsin phototransduction is repurposed by ipRGC subtypes to shape distinct visual circuits. 8:15am

**Visual Psychophysics/Physiological Optics**

5813 - C0100. Scattering extinction of human eye lenses and straylight. 8:15am