Thursday
May 2, 2019

ARVO Annual Meeting
Registration
Main Lobby
7am – 1pm

ARVO 2020 —Baltimore
Kickoff Reception/
All Posters
2 – 3pm

Beckman-Argyros Award
Lecture
3:15 –4:15pm

ARVO/Alcon
Closing Keynote
ARVO Ballroom
4:30 – 6pm
### Thursday, May 2 – Symposia, papers, workshops/SIGs and lectures

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<th>Time</th>
<th>Session</th>
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<tr>
<td>10:15am – 12 noon</td>
<td>502</td>
<td><strong>The single cell revolution: Novel insights and applications for single cell RNA sequencing in eye research</strong> [IM, AP, BI, CO, PH, RC, VN, GEN]</td>
<td>West 217-219</td>
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<tr>
<td>12 noon</td>
<td>528</td>
<td>Mechanistic analysis of ocular morphogenesis, growth and disease [AP]</td>
<td>East 1</td>
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<td>529</td>
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<td>AMD and Antiangiogenic agents [PH]</td>
<td>East 2/3</td>
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<td>530</td>
<td></td>
<td>Advances in Retinal Gene Therapy and Stem Cells [RE]</td>
<td>East 8&amp;15</td>
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<td>531</td>
<td></td>
<td>Biology of Retinal Neurons [RC]</td>
<td>East 11/12</td>
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<td>532</td>
<td></td>
<td>Ocular microbiology and vaccines [IM]</td>
<td>East Ballroom A</td>
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<td>533</td>
<td></td>
<td>Retinal Surgery and PVR [RE]</td>
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<td>534</td>
<td></td>
<td>Biochemistry and molecular biology of diabetic retinopathy [BI]</td>
<td>East Ballroom C</td>
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<td>535</td>
<td></td>
<td>Corneal surgery- refractive [CO]</td>
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<td>536</td>
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<td>Visual Diseases and Protection [VN]</td>
<td>West 212-214</td>
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<td>537</td>
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<td>Posterior Capsular Opacification [LE]</td>
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<td>538</td>
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<td>Myopia prevalence and progression [CL]</td>
<td>West 220</td>
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<td>539</td>
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<td>Brain and the Eye [EY]</td>
<td>West 221/222</td>
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<td>540</td>
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<td>Intraocular Lenses and Presbyopia Correction [VI]</td>
<td>West 223/224</td>
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<td>541</td>
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<td>Pharmacological Interventions and Cellular Interventions [GL]</td>
<td>ARVO Ballroom</td>
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<td>12:15 – 1:45pm</td>
<td>552</td>
<td><strong>The implications of immune response in ocular gene therapy — SIG [RE, CL, IM, PH]</strong></td>
<td>East 1</td>
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<td>553</td>
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<td>Re-Engineering Clinical Perimetry — SIG [GL, RE, VI, VN, LV]</td>
<td>East 8&amp;15</td>
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<tr>
<td>554</td>
<td></td>
<td>Exploring Controversial Issues in BEST1-related Retinal Disease — SIG [RC, RE]</td>
<td>East Ballroom A</td>
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<tr>
<td>555</td>
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<td>Optical Coherence Tomographic Angiography of the Eye — SIG [MOI, GL, RE]</td>
<td>East Ballroom B</td>
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<td>556</td>
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<td>EVER/ARVO workshop: The breadcrumb trail in glaucoma: From biology to the patient</td>
<td>West 211</td>
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<td>557</td>
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<td>Lipids and Eye Diseases- where should we focus? — SIG [BI, RC]</td>
<td>West 212-214</td>
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<tr>
<td>559</td>
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<td>Are there alternatives to in vivo models in eye research? — SIG [GL, BI, IM, PH, RE, GEN]</td>
<td>West 220</td>
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<td>560</td>
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<td>Addressing global blindness through international research collaborations — Next frontier for 2020</td>
<td>West 221/222</td>
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<td>561</td>
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<td>Chinese Ophthalmology Society (COS) workshop: Cell biology and stem cells</td>
<td>West 223/224</td>
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<td>562</td>
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<td>NEI grants Workshop: New NIH regulations concerning human subject and animal research</td>
<td>Harbour Ballroom</td>
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<td>3:15 – 4:15pm</td>
<td>564</td>
<td>Beckman-Arypeiros Award in Vision Research</td>
<td>ARVO Ballroom</td>
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<td>4:30 – 6pm</td>
<td>565</td>
<td><strong>ARVO/Alcon Closing Keynote: Models of translational science to span innovation gaps in academia</strong></td>
<td>ARVO Ballroom</td>
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Symposia highlighted in **boldface**
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<td>8 – 9:45am</td>
<td>503</td>
<td>Glaucoma: biochemistry and molecular biology, genomics and proteomics [BI]</td>
<td>A0001 - A0030</td>
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<td>504</td>
<td>Proteomics, lipiddomics, metabolomics and systems biology [BI]</td>
<td>A0031 - A0043</td>
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<td>505</td>
<td>Lens Biochemistry and Cell Biology [LE]</td>
<td>A0044 - A0062</td>
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<td>506</td>
<td>Retina/RPE new drugs, mechanism of action, and toxicity [PH]</td>
<td>A0099 - A0119</td>
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<td>509</td>
<td>Proliferative Vitreoretinopathy- Translational Studies [RE]</td>
<td>A0251 - A0261</td>
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<td>510</td>
<td>Myopia and Refractive Error [CL]</td>
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<td>511</td>
<td>Molecular mechanisms and anatomical changes in experimental myopia [AP, CL]</td>
<td>A0359 - A0395</td>
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<td>514</td>
<td>Animal Electrophysiology [VN]</td>
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<td>515</td>
<td>Retinal Cell Biology [RC]</td>
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<td>516</td>
<td>Retinal Development [RC]</td>
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<td>517</td>
<td>Photoreceptor Cell &amp; Developmental Biology [RC]</td>
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<td>519</td>
<td>Functional and Molecular Imaging [MOI]</td>
<td>A0574 - A0584a</td>
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<td>520</td>
<td>Multidisciplinary Imaging Technologies and Applications [MOI, GEN, RC]</td>
<td>A0585 - A0631</td>
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<td>521</td>
<td>Structure/Function Relationships [GL, RE]</td>
<td>B0001 - B0033</td>
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<td>Biomechanics [GL]</td>
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<td>523</td>
<td>Orbit and Thyroid eye Disease [EY]</td>
<td>B0184 - B0203</td>
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<td>Eyelid and Lacrimal System [EY]</td>
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<td>525</td>
<td>Conjunctival Cell Biology, Disease and Surgery [CO, AP]</td>
<td>B0227 - B0252</td>
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<td>526</td>
<td>Corneal surgery-non refractive [CO]</td>
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<td>527</td>
<td>Contact lens [CO]</td>
<td>B0414 - B0469</td>
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<td>10:15am – 12 noon</td>
<td>542</td>
<td>Cataract, Cornea, and Ocular Surface Disease [CL]</td>
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<td>543</td>
<td>Retinopathy of Prematurity, Detection and Clinical [RE]</td>
<td>A0141 - A0167</td>
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<td>544</td>
<td>Diabetic Retinopathy and Surgery [RE]</td>
<td>A0168 - A0190</td>
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<td>545</td>
<td>Retinal Detachment, Trauma and Repair [RE, BI, CO, RC]</td>
<td>A0262 - A0313</td>
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<td>546</td>
<td>Surgery and Wound Healing II [GL]</td>
<td>B0070 - B0111</td>
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<td>547</td>
<td>Uveitis / ocular inflammatory disease: Epidemiology, clinical characteristics and QoL [IM]</td>
<td>B0112 - B0158</td>
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<td>548</td>
<td>Non-infectious anterior segment / orbital inflammation and allergy [IM]</td>
<td>B0159 - B0183</td>
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<td>549</td>
<td>Cornea Dry Eye Clinical Treatment [CO]</td>
<td>B0253 - B0284</td>
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<td>550</td>
<td>Cornea Dry Eye Clinical I Diagnostics [CO, MOI]</td>
<td>B0285 - B0322</td>
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<td>551</td>
<td>Corneal biomechanics [CO]</td>
<td>B0377 - B0413</td>
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Poster board numbers correspond to poster location in Exhibit Hall; A = Poster Area A, B = Poster Area B
501 The gut-eye axis: Emerging roles of the microbiome in ocular immunity and diseases

The gut serves as host to a diverse population of microorganisms, and research linking the significance of the gut microbiome to health and disease has exploded in the last decade. The composition of the intestinal microbiota has been found to be crucial for host metabolic efficiency, regulation of the immune system, tumor growth in cancer, and neurological and developmental health. Recent ophthalmology research has uncovered a critical role for the gut microbiome in ocular health and responses to diseases. This symposium will bring together leading scientists who will share their latest cutting edge research on the impact of the gut microbiome on the nervous system, ocular immunity, and ocular diseases such as diabetic retinopathy and macular degeneration.

Moderators: Przemyslaw Mike Sapieha, Cecilia Lee and Ashok Kumar

— 8:00 Introduction

5631 — 8:03 Lessons from the microbiota-gut-brain axis; implications for the eye. John Bienenstock. McMaster University

— 8:28 Q&A

5632 — 8:32 Commensals in ocular immunity and autoimmunity. Rachel R. Caspi. Laboratory of Immunology, National Eye Inst/NIH

— 8:52 Q&A

5633 — 8:54 Microbiota regulated neutrophil function during infection. Mihaela G. Gadjева. Medicine, Brigham and Womens Hospital

— 9:14 Q&A


— 9:36 Q&A


— 9:58 Q&A

502 The single cell revolution: Novel insights and applications for single cell RNA sequencing in eye research

Single-cell mRNA-sequencing (scRNA-seq) is rapidly revolutionizing biomedical research and accelerating the development of personalized medicine. This unbiased, high-throughput, and high-resolution analysis of individual cell transcriptomes is revealing previously unappreciated detail about the heterogeneity of cell populations, their origins, and functions in development and disease. This Symposium will enable participants to discuss new research approaches using scRNA-seq technologies and cutting edge bioinformatic pipelines. Presentations will cover glial cell biology, retinal cell development and degeneration, vascular endothelial cells and immunology, opening the door for exciting discussions on novel opportunities and challenges for translational eye research.

Moderators: Daniel R. Saban, John D. Ash and Zi-Bing Jin

— 8:00 Introduction


5637 — 8:19 Building and rebuilding the retina one cell at a time. Seth Blackshaw. Neuroscience, Johns Hopkins Univ Sch of Med


5639 — 8:53 Monocyte infiltration and differentiation during photoreceptor degeneration. Marie E. Burns. Center for Neuroscience, Univ of California-Davis

5640 — 9:10 Elucidating niche-associated function of retinal microglia at the single cell level. Daniel R. Saban. Ophthalmology, Immunology, Duke University School of Medicine

5641 — 9:27 The power of ONE: Immunology in the age of single cell genomics. Ido Amit. Weizmann Institute

— 9:52 Discussion

* Refer to the Program Number in the Clinical Trial (CT) Registration Index. *CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
5642 – 5659 – Thursday – Posters

West Exhibition Hall A0001-A0030

Thursday, May 02, 2019 8:00 AM-9:45 AM

Biochemistry/Molecular Biology

503 Glaucoma: biochemistry and molecular biology, genomics and proteomics

Moderators: Ordan J. Lehmann and John G. Flanagan

5642 — A0001 Measurements of hydroxylinoleate and hydroxyarachidonate isomers in serum from patients with primary open-angle glaucoma. Masaki Tanito1, A. Umeno2, S. Kaidzu1, Y. TAKAI1, M. Horie2, Y. Yoshida2. 1Ophthalmology, Shimane University Faculty of Medicine; 2National Institute of Advanced Industrial Science and Technology

5643 — A0002 Pseudofolating glaucoma and microRNAs in anterior lens capsule. Alka Khera1, S. Pandav1, J. Ram1, M. Khullar1. 1Advanced Eye Center, Postgraduate Institute of Medical Education and Research; 2Department of Experimental medicine and research, PGIMER

5644 — A0003 Valuation of oxidative stress profiles of the serum and aqueous humor in patients with open-angle glaucoma. YASUYUKI TAKAI, K. SUGIHARA, S. Kaidzu, M. Tanito. Ophthalmology, Shimane University Faculty of Medicine

5645 — A0004 Rapid immunoprecipitation mass spectrometry of endogenous protein (RIME) method identifies calreticulin as a myocilin binding partner. Jeff Lynch1, P. Katoli2, H. Zhai3, T. Rejtar4, Y. K. Wong5, A. Chen6. 1Ophthalmology, Novartis Institutes for Biomedical Research; 2Analytical Sciences and Imaging, Novartis Institutes for BioMedical Research *CR

5646 — A0005 The role of peristin in the conjunctival bleb after filtration surgery in mice. KEISUKE ADACHI. Juntendo University of Graduate School of Medicine

5647 — A0006 Are agonistic β2-adrenergic receptor autoantibodies present in normal tension glaucoma and secondary open-angle glaucoma? Bettina Hohberger1, C. Y. Mardin2, S. Hossari3, R. Lämmer4, R. Kanze1, A. Jünemann1, U. Schlotzer-Schrehardt5, G. Wallukat6, M. Herrmann7. 1Ophthalmology, University Erlangen-Nuremberg; 2University of Rostock; 3Science office, Berlin-Brandenburg, Campus Max Delbrück Center for Molecular Medicine; 4Institute of Clinical Immunology and Rheumatology, Department of Internal Medicine III, University of Erlangen-Nürnberg; 5Max Delbrück Center for Molecular Medicine

5648 — A0007 The association between oxidative stress and corneal hysteresis in patients with glaucoma. Keiko Uchida1, N. Himori1, H. Kuzuki2, M. Inoue-Yunagimachi3, N. Kiyota1, M. Sato1, S. Maezawa1, Y. Shiga2, S. Tsuda3, K. Omodaka, T. Nakazawa2. 1ophthalmology, Tohoku university; 2Ophthalmic Imaging and Information Analytics, Tohoku university *CR

5649 — A0008 Ephrin Receptor Activation in the Neuropathic Progression of the DBA/2J Glaucoma Model. Thomas Strong1, 2, D. Pelaez2, 4. 1Molecular, Cellular & Developmental Biology, University of Miami Miller School of Medicine; 2Dr. Nasser Al-Rashid Orbital Vision Research Center, Bascom Palmer Eye Institute; 3Ophthalmology, Bascom Palmer Eye Institute

5650 — A0009 Evidence of Increased Glycolysis and Glutaminolysis in Glaucoma Lamina Cribrosa Cells. Mustapha Irrnaten1, D. Hickey4, D. Brennan3, W. Stamper1, A. F. Clark2, C. J. O’Brien1. 1Ophthalmology, Mater Misericordiae University Hospital; 2Ophthalmology, Duke Eye Center; 3Health Science Center, University of North Texas; 4Anatomy, University College Dublin

5651 — A0010 MRNA-18A Is A Key Regulator Of Human Trabecular Meshwork Cell Response To TGFB: Implications For Glaucoma. John Knox1, K. Lester1, 2, K. Hamill1, C. Willoughby1. 1Department of Eye and Vision Science, Institute of Ageing and Chronic Disease, University of Liverpool; 2Genomic Medicine Group, Biomedical Sciences Research Institute, Ulster University

5652 — A0011 Identification of the Aqueous Humor Proteins correlated with Intraocular Pressure in Primary Open Angle Glaucoma Patients. Sai Karthik Kodeboyina1, T. Lee2, S. Sharma3, W. Zhi4, K. E. Bollinger5, L. Ulrich6, A. Sharma7. 1Center for Biotechnology and Genomic Medicine, Augusta University; 2Department of Ophthalmology, Augusta University; 3Department of Cellular Biology and Anatomy, Augusta University; 4Department of Population Health Sciences, Augusta University

5653 — A0012 Angiotensin II-Induced Oxidative Stress Inactivates Neuroprotective Mechanisms in Retina and Heightens Acute Vascular Adaptive Responses in Ophthalmic Artery: A Proteomic Perspective. Caroline Manican1, L. Straßburger1, D. Herzog2, N. Pfeiffer1, F. H. Grus1, N. Perumal1. 1Department of Ophthalmology, University Medical Centre Mainz; 2Department of Psychiatry and Psychotherapy & Focus Program Translational Neurosciences, University Medical Centre of the Johannes Gutenberg University Mainz

5654 — A0013 Reduced Oxidative Phosphorylation and Increased Glycolysis (The Warburg Effect) in Glaucoma Lamina Cribrosa Cells. Khalid Kamel1, M. Irrnaten1, A. Zhadanov2, D. Papkovsky3, C. J. O’Brien4. 1Department of Ophthalmology, Mater Misericordiae University Hospital and University College Dublin; 2Biochemistry and Cell Biology, University College Cork

5655 — A0014 Quantitative proteomic analysis of retina in primary and secondary retinal ganglion cell (RGC) degeneration using SWATH-mass spectrometry (MS). Jacky Man Kwong Kwong1, T. Lam2, F. Yu1, A. Sze2, K. Li2, C. To3, J. Caprioli4. 1Ophthalmology, Jules Stein Eye Institute, UCLA; 2Optometry, Hong Kong Polytechnic University

5656 — A0015 Aqueous Humor β4-Amylloid And Total Proteins Concentration In Glaucomatous Patients. Francesca Cappelli1, M. Marenco1, V. Testa1, A. Masala1, F. Caudano2, D. Sindaco3, A. Macri3, E. C. Traverso4, R. Riccirelli5, M. M. Iester6. 1Eye Clinic of Genoa, Policlinico San Martino, Department of Neuroscience, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health (DINOGM), University of Genova, 16132 Genova, Italy; 2Department of Experimental Medicine, Section of General Pathology, School of Medical and Pharmaceutical Sciences, University of Genova, 16132 Genova, Italy


5658 — A0017 Serial Block-Face Scanning EM (SBEM) Provides Evidence for Retrolaminar Demyelination of Structurally Intact Axons in Non-Human Primate (NHP) Early Experimental Glaucoma (EG). Cheri Stowell1, 2, E. Bushong2, H. Lockwood1, I. Williams1, J. Reynaud3, 4, S. K. Gardiner2, 5, N. Marsh-Armstrong3, M. Ellisman2, C. F. Burgoyne5, 6. 1Discoveries in Sight, Devers Eye Institute; 2National Center for Microscopy & Imaging Research; 3Legacy Research Institute; 4Department of Ophthalmology, University of California

5659 — A0018 Tear micro RNA expression signature in primary open-angle glaucoma versus ocular hypertension. Maria D. Pinazo-Durán1, 2, J. Raga-Cervera3, S. Sanz-Gonzalez2, J. García-Medina1, 4, M. López-Gálvez5, V. Zanón-Moreno6, 1Ophthalmic Research Unit “S Grisolia”, Health Counseling of Valencia; 2Surgery (ophthalmology), University of Valencia; 3Ophthalmology, University Hospital Morales Meseguer; 4Ophthalmology, Hospit; 5Diabetic Retinopathy, Institute ophthalmobiology IOBA

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
5660 — A0019 Myocilin expression in the eye and blood of zebrafish. Raquel Atienzar Aroca1, J. Aroca Aguilar1, S. Alexandre2, J. Ferre Fernández1, J. Bonet Fernández1, L. Fernández Sánchez1, N. Cuenca1, J. Escrivano Martínez1.1Area de genética, IDINE, Universidad de Castilla-La Mancha; 2RED de patología del envejecimiento, calidad visual y calidad de vida, OftaRed, Instituto de Salud Carlos III; 3Physiology, Genetics and Microbiology, Universidad de Alicante

5661 — A0020 Profile of inflammatory cytokines in aqueous humour of patients across primary angle closure disease spectrum. Monisha E. Nongpiur1, E. N. Vithana1, T. Aung1, T. T. Wong1. Glaucoma, SNEC Building, #05-00, Singapore Eye Research Institute

5662 — A0021 The proteins of mitochondrial dysfunction and integrin signaling change in the rat retina following cerebrospinal fluid pressure reduction. Fancheng Yan1, F. Yu1, Y. Gong1, F. Xue2, H. Deng1, N. Wang1. 1Beijing Institute of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University; Beijing Ophthalmology & Visual Sciences Key Laboratory; 2Key Laboratory of Reproduction Regulation of NPFFC (SIPPR, IRD, Fudan University); 3Department of Ophthalmology, Affiliated Hospital of Guangzhou Medical University; 4MOE Key Laboratory of Bioinformatics, School of Life Sciences, Tsinghua University

5663 — A0022 Use of next-generation sequencing to identify microRNAs in aqueous humor and blood of primary open-angle glaucoma and cataract patients. Wouter H. Habens1, 2, J. Krauskopf3, F. Caient1, H. J. Beckers1, J. C. Kleinjans1, C. A. Webers1, T. G. Gorgels1. 1University Eye Clinic Maastricht; 2Mental Health and Neuroscience, Maastricht University; 3Department of Toxicogenomics, Maastricht University

5664 — A0023 Characterization of gene expression profiles of cultured human primary trabecular meshwork cells, transformed cell lines and human skin fibroblasts. Ankur Jain1, 2, T. P. Sharma1, S. S. whitmore1, 2, T. E. Scheetz2, 2, A. F. Clark1, 2, B. Tucker1, 2, J. H. Fingeri3, 2. 1Institute for Vision Research, University of Iowa; 2Department of Ophthalmology and Visual Sciences, University of Iowa; 3North Texas Eye Research Institute, University of North Texas Health Science Center

5665 — A0024 Characterization of cholesterol metabolism in an experimental model of glaucoma in rats. Elodie A. Masson1, E. Léger-Charnay1, 2, S. Gamber1, L. Martine1, B. Buteau1, M. Maira1, V. Gigot1, A. M. Brom1, C. Creuzot-Garcher2, N. Acrã, L. Bretillon1. 1UMR CSGA – Eye and Nutrition Research Group, INRA; 2University Hospital *CR

5666 — A0025 A potential role for impaired retinoic acid signaling in the pathophysiology of pseudoxfoliation syndrome/glaucoma. Matthias Zenkel1, D. Berner1, U. Hoja1, F. Pasutto1, F. E. Kruse1, U. Slodtzer-Schrehardt1. 1Department of Ophthalmology, University Erlangen Nuremberg; 2Institute of Human Genetics, University Erlangen Nuremberg

5667 — A0026 TGFβ2 Regulation of DNMTs in Optic Nerve Head Astrocytes. Tara Tovar-Vidales1, N. Lopez1, A. F. Clark2. 1North Texas Eye Research Institute, Pharmacology & Neuroscience, University of North Texas Health Science Center

5668 — A0027 Epigenetic regulation of optic nerve head fibrosis in glaucoma. Navita Lopez1, A. F. Clark2, T. Tovar-Vidales1. UNTHSC

5669 — A0028 Genome-wide Transcriptome Profiling of Human Trabecular Meshwork Cells treated with Dexamethasone. Srinivasan Senthikumarani1, K. Lester2, B. Lane3, K. Whysall3, C. Sheridan1, D. A. Simpson1, K. S. R1, M. V1, C. Willoughby1. 1Department of Ocular Pharmacology, Aravind Medical Research Foundation; 2Genomic Medicine Group, Biomedical Sciences Research Institute, Ulster University, Northern Ireland; 3Institute of Ageing and Chronic Disease, University of Liverpool; 4Centre for Experimental Medicine, Queen’s University Belfast; 5Glaucoma Clinic, Aravind Eye Hospital; 6Aravind Medical Research Foundation

5670 — A0029 Elevated Levels of GDF-15 in Aqueous Humor Are Positively Correlated with Increased Intraocular Pressure in Primary Open Angle Glaucoma Patients. Leona Ho1, P. Chall9, R. Yam2, C. Ullmer2, Y. Ruo3. 1Ophthalmology, Duke University; 2Roche Pharma Research & Early Development (pRED), F. Hoffmann-La Roche *CR

5671 — A0030 Canonical Wnt signaling in optic nerve head astrocytes. Declan I. Hesson1, 2, Y. Liu2, A. F. Clark2. 1Pharmacology and Neroscience, University of North Texas Health Science Center; 2North Texas Eye Research Institute, University of North Texas Health Science Center

5672 — A0031 Changes of eicosanoids after eyelid warming or thermopulsation treatment for Meibomian gland dysfunction (MGD). Yohannes A. Ambaw1, 2, D. Fuchs1, F. Torta1, 2, C. Wheelock1, M. Wrenk1, L. Tong3, 2. 1Singapore Lipidomics Incubator, National University of Singapore; 2Department of Medical Biochemistry and Biophysics, Karolinska Institutet; 3Department of Cornea and External Eye Disease, Singapore National Eye Center; 4Department of Ophthalmology, National University of Singapore; 5Biochemistry, National University of Singapore, Department of Biochemistry

5673 — A0032 Eye Metabolics in Vagibatrin (VGB)-treated Mice: New Clues to VGB Ocular Toxicity. Dana Walters1, E. Arning1, T. Bottiglieri1, E. Jansen1, G. Salomon1, M. Brown1, M. Schmidt1, G. Ainslie1, J. Roullet1, K. Gibson1. 1Metabolic Disease, Baylor Scott & White Research Institute; 2Clinical Chemistry, Metabolic Laboratory, Amsterdam University Medical Center; 3Theravance Biopharma US; 4Pharmacotherapy, Washington State University College of Pharmacy and Pharmaceutical Sciences

5674 — A0033 Identification and Analysis of Bovine and Mouse Retina-Specific Tau Isoforms. Vladimir A. Borendrko. Basic Sciences, Touro University Nevada

5675 — A0034 Ophthalmic specimens from bedside to bench: An integrated biorepository platform to bridge the gap between the operating room and laboratory. Sai Parveen T. Chemudupati, V. B. Mahajan, P. Mruthyunjaya. Ophthalmology, Stanford University School of Medicine

5676 — A0035 Establishing the baselines for genomic and lipidomic analyses of human meibomian glands. Igor A. Butovich1, N. Bhat1, T. Suzuki2, S. Kinoshita1, J. Wujowicz2. 1Ophthalmology, University of Texas Southwestern Medical Center; 2Ophthalmology, Kyoto Prefectural University of Medicine; 3Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine; 4Centro Oftalmologico de Valencia

* Refer to the Program Number in the Clinical Trial (CT) Registration Index. *CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
West Exhibition Hall A0044-A0062
Thursday, May 02, 2019 8:00 AM-9:45 AM

Lens

505 Lens Biochemistry and Cell Biology

Moderator: Kuldalaiappan Varadaraj

5685 — A0044 Characterization of aquaporin-5 protein-protein interactions, subcellular localization, and phosphorylation in the ocular lens. Romell Gletten1, R. Petrova1, P. J. Donaldson1, K. L. Schey1. Biochemistry, Vanderbilt University; 2Medical Sciences, University of Auckland

5686 — A0045 DCTN5 mutant mice reveal a role for dynactin in lens biogenesis. Ting-Yu Yeh1, E. Zion1, A. Caverts1, M. Ayushman1,2, F. Dong1, H. Zhao1, T. Schroer1. Biology, Johns Hopkins University; 2Chemical Engineering, Indian Institute of Technology Kharagpur

5687 — A0046 The Role of Dystrophin (Dp71) in Membrane Organization and Mechanics of the Ocular Lens. Shrutii Karnam1, V. Ponugoti1,2. Ophthalmology, Duke University Medical Center; 2Pharmacology and Cancer Biology, Duke University Medical Center

5688 — A0047 Effects of North American Ginseng Extracts on Lens Health and Plasma in Streptozotocin Diabetic Rats Using Early and Late Treatment. Tomasz M. Dzialoszynski1, V. Jaremek1, E. Noble1, K. P. Mitton1, M. Karmazyn2, J. R. Trehivich1. Faculty of Health Sciences, Western University; 2Physiology & Pharmacology, Western University; 3Eye Research Institute, Pediatric Retinal Research Lab, Oakland University; 4Anatomy & Cell Biology, Western University


5690 — A0049 Age-related changes in lenses of healthy centenarians and old wild-type mice. Juliet A. Moncaster1, O. Minaeva1, J. Drury1, S. Sidlowski1, S. Anderson-Tookey1, T. Perls1, L. E. Goldstein1. Radiology, Boston University; 2Medicine, Boston University

5691 — A0050 Discovery of non-sterol αB-crystallin ligands as potential cataract therapeutics. Bryan Dunyk1, B. Su1, K. Molnar1, P. Hamilton1, S. Bozeman1, S. Li1, L. Liu1, U. P. Audley1, L. Makley1. ViewPoint Therapeutics; 2Washington University in St. Louis *CR

5692 — A0051 IP3-containing peptides stabilize mutant αB-crystallin oligomers through conformational rearrangement. Bonnie Su, B. Dunyk, K. Molnar, L. Makley. ViewPoint Therapeutics *CR

5693 — A0052 Determination and localization of Lanosterol Synthase in human cataractous lenses and their relationship with αA crystallin proteins. Laura P. Reyes Vivas1, T. C. Reyes Vivas1, Z. J. Dueñas1, M. Y. Avila1. Ophthalmology, Universidad Nacional de Colombia; 2Universidad Nacional de Colombia; 3School of Medicine - Physiological Sciences Department, Universidad Nacional de Colombia

5694 — A0053 Low Fluorescence Ratios seem to indicate Early-life Sport Activities. Cetin K. Koc1, N. Koyluoglu1, Y. Z. Arslan1. Center for Artificial Intelligence in Medicine, Istinye University; 2Istanbul University

5695 — A0054 A fibrill-like oligomeric form of zebrash αB1 crystallin is modulated by phosphorylation. Smriti Mishra, S. Mishra, H. S. Mchaourab. Molecular Physiology and Biophysics, Vanderbilt University

5696 — A0055 Minichaperones inhibit the hemolytic activity of Mellitein. K. Krishna Sharma, P. Santhoshkumar. Ophthalmology, University of Missouri *CR

5697 — A0056 Age-related changes of the lens in Tropomyosin 1 conditional knockout mice. Teppie Shibata1, S. Shibata1, D. P. Singh1, E. Kiyokawa1, M. Ikawa1, H. Sasaki1, E. Kubo1. Kanazawa Medical University; 2University of Nebraska Medical Center; 3Osaka University *CR

5698 — A0057 Expression of nicotinamide N-methyltransferase (NNMT) in atopic cataract. Satoshi Iwamoto1, K. Kobayashi1, T. Funaki1, K. Hori1, S. Nakatani1, A. Matsuda1. 1Juntendo Univ School of Med; 2Japanese Red Cross Medical Center


5700 — A0059 The effect of Conbercept on the proliferation of lens epithelial cells. YANHUA QI. Ophthalmology, The Second Affiliated Hospital Of Harbin Medical University ▶

5701 — A0060 ROS-dependent Exosomes Secreted by Injured Lens Epithelial Cells Induced Posterior Capsule Opacification via TGFβ transmitting. Ruixin Wang, X. Zhang, X. Wu, H. Lin. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University

5702 — A0061 YAP Inhibition Halts Mechanotransductive Regulation of Lens Growth. Bharat Kumar1, M. A. Reilly1,2. 1Biomedical Engineering, The Ohio State University; 2Ophthalmology & Visual Science, The Ohio State University
5703 — A0062  ATF4 Modulates CREB Functions in Regulating Stress-Induced Apoptosis. Ling Wang, L. Yang, D. W. Li. Zhongshan Ophthalmic Center, Sun Yat-sen University

West Exhibition Hall A0099-A0119

Thursday, May 02, 2019 8:00 AM-9:45 AM

Physiology/Pharmacology

506 Retina/RPE new drugs, mechanism of action, and toxicity

Moderator: Sankarath Balayia

507 — A0099  Designing a clinical trial to evaluate the safety and efficacy of oral soraprazan in Stargardt Disease. Carol C. Hoyng, A. Lotery1, K. Stingl, C. Boon, M. Parodi, P. Dhooge1, T. Peters, W. Klein, M. G. Fsadni, H. Müller, O. Jungmann. Ophthalmology, Nijmegen Univ Medical Center; 2Eberhard Karls Institute, Cedars-Sinai Medical Center; 3Universität Tübingen; 4Academisch Ziekenhuis Wilrijk, Belgium; 5Katairo GmbH; 6University of Southampton

Thursday Posters – 5703 – 5720

507 — A0100  Effects of standard pulmonary tuberculosis treatment on macular pigment optical density and central macular thickness. Mahsa Doustkhahvazari, T. Jiqbal, V. Subravanjan, R. Ritch. 1University of Malaysia- Faculty of Medicine, 2Department of Ophthalmology; 3Einhorn Clinical Research Institute, New York Eye and Ear Infirmary of Mount Sinai

507 — A0101  Puerarin protects retinal pigment epithelium (ARPE19) against hypoxia-induced apoptosis through activation of the PI3/Akt pathway. Minh-Anh Nguyen Ngo Le, Y. Wen, T. Tsai. 1Institute of Medical Science, Tzu Chi University; 2Institute of Eye Research, Tzu Chi Medical Center

507 — A0102  Sustainable protection of retinal degeneration in a rodent model for RP by stable and biocompatible nanoparticle-neurotrophic factor complexes. Shi-Jiang Liu, B. Lu, Q. Feng, A. Mercado, Y. Zhang, J. Loscalzo, S. Wang. 1NanoparticleNeuron Therapeutics, 2Med. Reg. Med. Institute, Cedars-Sinai Medical Center; 3Medicine, Brigham and Women’s Hospital, Harvard Medical School; 4Hebecell Corporation

508 — A0103  Potential therapy of neurodegenerative retinopathies via activation of the BDNF-TrkB signaling pathway by a specific aptamer. Marina Löscher, E. Lilou, K. Bartz-Schmidt, S. Schnichels, J. Hurst. Centre of Ophthalmology Tübingen, University Eye Hospital Tübingen

509 — A0104  A Bioactive Small Molecule Derivative of Fluoro-catechol Esters of 3-Hydroxy-Benzoic Acid Inhibits High Glucose/ Hypoxia-Induced Endothelial Switch to Angiogenic Phenotype in Diabetes Induced Retinal Microvascularopathy. Ahmed S. Ibrahim, S. Eltanani, H. Saleh, E. Eldeeb, F. Badria, M. A. Al-Shabrawey. 1Oral Biology and Diagnostic Science, Augusta University; 2Biochemistry, Faculty of Pharmacy, Mansoura University; 3Clinical Pathology, Faculty of Medicine, Mansoura University; 4Pharmacognosy, Faculty of Pharmacy, Mansoura University; 5Institute for Glycomics, Griffith University

510 — A0105  Endothelin-I-Induced Phosphorylation of p38 MAP Kinase in Rat Retinal Ganglion Cells. Shaqing He, R. Chaphalkar, B. Kodati, R. R. Krishnamoorthy. Pharmacology and Neuroscience/ North Texas Eye Research Institute, University of North Texas Health Science Center

511 — A0106  The FDA-Approved Drug Carvedilol Improves Vision and Retinal Morphology in a Zebrafish Model of Retinitis Pigmentosa. Logan Ganzen, R. M. James, C. C. Pang, M. Zhang, M. Tsjikijawa, Y. Leung. 1Department of Biological Sciences, Purdue University; 2Interdisciplinary Life Sciences Program, Purdue University; 3Department of Ophthalmology and Visual Sciences, Chinese University of Hong Kong; 4Joint Shantou International Eye Center, Shantou University & the Chinese University of Hong Kong; 5Department of Ophthalmology, Osaka University Graduate School of Medicine; 6Institute for Integrative Neuroscience, Purdue University

512 — A0107  Chemical and medical optimization to generate long-acting intravitreal aptamers. Renta M. Huatabara, A. Bowmick, R. Quick, J. V. McCandliss, S. Kossodio, M. Levy, C. Rusconi, C. Erickson. 1Nonclinical, Vitrisa Therapeutics; 2Nonclinical, Vitrisa Therapeutics; 3Discovery, Vitrisa Therapeutics; 4Chemistry, Vitrisa Therapeutics; 5Discovery, Vitrisa Therapeutics; 6CMC, Vitrisa Therapeutics; 7Research, Vitrisa Therapeutics; 8Vitrisa Therapeutics

513 — A0108  A patient-specific database facilitates the assessment of feasibility and supports the planning of a clinical trial with soraprazan for the treatment of Stargardt Disease. Patty Dhooge, C. C. Hoyng, C. Oomen, W. Klein, M. G. Fsadni, H. Müller, O. Jungmann. 1Ophthalmology, Radboudumc; 2Katairo GmbH; 3Smerud Medical Research


515 — A0110  Comparison of Choroidal and Retinal Thicknesses in Patients With and Without Hydroxychloroquine Toxicity. Munir Iqbal, W. T. Wong, E. Y. Chew, C. A. Cukras. 1Chief, Section on Neuron-Glia Interactions in Retinal Disease, National Eye Institute, NIH; 2Director, Division of Epidemiology and Clinical Applications, National Eye Institute, NIH; 3Clinical Fellow, Medical retina and Uveitis, National Eye Institute, NIH; 4Clinical Investigator, Medical Retina and Ophthalmic Genetics, National Eye Institute, NIH

516 — A0111  Effect of Indocyanine Green Concentration on Subfoveal Hyporeflective Space after Internal Limiting Membrane Peel for Macular Hole Surgery, sager patel, A. Moshfeghi, R. Lee, B. K. Do. Ophthalmology, USC

517 — A0112  ELX-03, a translational nonsense mutation read-through agent demonstrates tolerability and activity for use in inherited retinal disorders. Neal Sharpe, S. Landskroner, I. Eshkar-Oren, M. Goddeeris. Eloxo Pharmaceuticals

518 — A0113  Melanin binding as drug delivery strategy to the posterior eye segment – establishment of in vitro–in vivo correlations. Ruben Alvarez Sanchez. F. Hoffmann-La Roche

519 — A0114  Allele specific knock-down of human P23H rhodopsin mRNA and prevention of retinal degeneration in humanized P23H rhodopsin knock-in mouse, following treatment with an intravitreal GAmPiper antisense oligonucleotide (QR-1123). Patricia Biasutto, P. S. Adamson, K. Dullia, S. Murray, B. Monia, M. McCabe. 1ProQR Therapeutics; 2Ionis Pharmaceuticals

520 — A0115  Retina transcriptome underlie the neuroprotective actions of transferrin. Picard Emilie, A. Darwich1, q. Ierouze2, M. Naudi2, L. Lonet3, K. Kowalczyk4, J. Pourmaras5, J. Boartright6, A. Thomas7, N. Turck8, A. Moulin9, F. F. Behar-Cohen10. 1UMRS1138 team 17, INSERM; 2UMRS1138 team 17, Université Sorbonne Paris Cité; 3Ophthalmology Department, Necker-Enfants Malades University Hospital; 4Fondation Asile des Aveugles, Jules-Gonin Eye Hospital; 5Department of ophthalmology, University of Lausanne; 6Department of Ophthalmology, School of Medicine., Emory University; 7Center of Excellence, Atlanta Veterans Administration Medical Center; 8Unit of Toxicology, CURML, Geneva University Hospitals; 9Faculty of Biology and Medicine, University of Lausanne; 10Department of Human Protein Science, Geneva University; 11Ophthalmologie, Cochin Hospital

*CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
5721 — A0116 Neuroprotective effects via hypothymia on hydrogen peroxide damaged porcine retinae. Stephanie C. Joachim1, A. Maila2, S. Grauthoff1, S. Kuehn1, J. Hurst1, H. Doeppe1, S. Schnicke1. 1Experimental Eye Research Institute, Ruhr-University Bochum; 2Centre for Ophthalmology Tuebingen, University Eye Hospital Tuebingen

5722 — A0117 New nature-inspired hybrids targeting the Nr2-HO1 pathway protect retinal pigment epithelial cells under stress conditions. Marialaura Amadio1, M. Catanzaro1, I. D’Angelo1, M. Rosini2, S. Govoni3, C. Lanni4. 1Department of Drug Sciences, University of Pavia; 2Dept. of Pharmacy and Biotechnology, University of Bologna

5723 — A0118 Lipophilic simvastatin/atorvastatin prevent pro-inflammatory IL-6 and -8 cytokine response in RPE cells. Sirpa Loukovaara5, M. Mysore5, A. Kauppinen5. 1Ophthalmology, Helsinki University Central Hospital; 2School of Pharmacy, School of Pharmacy, Faculty of Health Science, University of Eastern Finland, P.O.B. 1627, FI-70211, Kuopio, Finland

5724 — A0119 Histopathology of radiation-related ocular toxicity following intravitreal placement of 125Iodine-labeled anti-VEGF therapeutic agents in a non-human primate model. John B. Christoforidis1, D. Cable1, K. Briley1, K. Kumar1, M. Knopp1, K. La Perle1. 1Retina Specialists of Southern Arizona; 2Veterinary Preventive Medicine, The Ohio State University; 3Radiology, The Ohio State University; 4Department of Veterinary Biosciences, The Ohio State University

Moderator: Leopold Schmetterer

5725 — A0120 The effect of dietary nitrate supplementation on retinal vessel responses in young healthy subjects. Naim Terai1, F. Helbig2, L. Ramm2, R. P. Stodtmeister1, L. E. Pillunat2. 1Ophthalmology, University of Dresden

5726 — A0121 Retinal venous pressure at fixed airway pressure levels. Richard P. Stodtmeister1, M. Heinmann1, N. Terai, L. E. Pillunat2. 1Ophthalmology, TU Dresden

5727 — A0122 Characteristics of Retinal Blood Flow, Velocity and Vessel Diameter of eyes with Branch Retinal Vein Occlusion as revealed by Doppler Optical Coherence Tomography Flowmeter. Kengo Takahashi1, Y. Song1, K. Sogawa2, T. Yoshioka3, T. Tani4, M. Akiba5, J. Sakai5, S. Nakamura5, K. MINAMIDE6, S. Ishiko7, Y. Yanagi1, A. Yoshida8. 1Asahikawa Medical University; 2R&D division, Topcon Corporation; 3Singapore National Eye Centre* CR

5728 — A0123 Theoretical predictions of oxygenation in a heterogeneous vascular network of the retina. Lucas Rowe1, A. Harris1, B. C. Fry2, A. Vercellino3, 4, B. A. Siesky4, J. Arciero2. 1Ophthalmology, Indiana University School of Medicine; 2Mathematical Sciences, IUPUI; 3Mathematical and Computer Sciences, Metropolitan State University of Denver; 4Ophthalmology, University of Pavia; 5IRCCS - Fondazione Istituto Italiano di Ottica Biomedica

5729 — A0124 Measurement of flicker induced hyperemia in the retina and optic nerve head by Laser Speckle Flowgraphy. Doreen Schmid1, K. Föndl1, A. Bata2, N. Lu1, K. Wikowska1, R. M. Werkmester1, L. Schmetterer2, 3, G. Garhofer4. 1Department of Clinical Pharmacology, Medical University of Vienna; 2Department of Ophthalmology, Kepler University Hospital; 3University Eye Hospital, Ludwig-Maximilians-University; 4Center for Medical Physics and Biomedical Engineering, Medical University of Vienna; 5Singapore Eye Research Institute

5730 — A0125 Real-time evaluation of systemic-ocular microcirculation using laser speckle flowgraphy in white rabbits. Tetsuya Komatsu1, T. Shiba1, T. Nagasawa1, M. Aimoto2, K. Sakuma1, T. Chib1, X. Cao2, A. Takahara2, T. Matsutomo1, Y. Hori1. 1Ophthalmology, Toho University; 2Pharmacology, Toho University; 3Pharmacology, University of Pavia; 4Ophthalmology, University of Medizin, University of California, San Diego; 5University of California Los Angeles; 6Vitreous Retina Macula Consultants NY

5731 — A0126 Longitudinal Measurements of Changes in Retinal Blood Flow in Feline Retinal Vein Occlusion Model Measured by Doppler Optical Coherence Tomography and Optical Coherence Tomography Angiography. Takanari Wada1, Y. Song1, T. Omae1, K. Sogawa2, T. Yoshioka3, S. Nakabayashi4, K. Takahashi1, T. Tani4, A. Ishibazawa1, S. Ishiko7, Y. Yanagi1, A. Yoshida8. 1Asahikawa Medical University; 2Singapore National Eye Centre

5732 — A0127 Regulation of retinal blood flow in response to an experimental increase in intraocular pressure. Kornelia Schatenberger1, S. Puchner1, L. Ginner2, D. Schmidt2, G. C. Aschinger2, G. Garhofer2, R. A. Leitgeb2, L. Schmetterer2, 3, R. M. Werkeiester2, 4. 1Center for Medical Physics and Biomedical Engineering, Medical University of Vienna; 2Department of Clinical Pharmacology, Medical University of Vienna; 3Singapore Eye Research Institute, Singapore National Eye Centre

5733 — A0128 Raspberry Pi controlled flicker stimulation in dynamic retinal vessel analysis. Dietmar Link5, S. Klee5. 1Biomedical Engineering & Informatics, Technische Universitaet Ilmenau


5735 — A0130 Noninvasive High-resolution Measurement of Retinal Blood Velocity and Flow. Cherilyn Mae A. Palochak1, 2, H. Lee1, S. A. Burns1, A. A. Fawzi1. 1Ophthalmology, Feinberg School of Medicine, Northwestern University; 2Chicago Medical School, Rosalind Franklin University of Medicine and Science; 3School of Optometry, Indiana University

5736 — A0131 Dilatation of the retinal capillaryplexuses in branch retinal vein occlusion. Christopher F. Long1, M. Bakhoun1, C. B. Toomey2, D. G. Bartsch1, E. Nudelman2, M. H. Goldbaum2, K. Freund3, D. Sarraf1, W. R. Freeman2. 1University of California, San Diego; 2University of California Los Angeles; 3Vitreous Retina Macula Consultants NY

5737 — A0132 Characterization of Vascular Cell Receptors that Regulate Blood Perfusion of the Mouse Retina. Alejandro L. Acosta1, 2, A. L. Garcia1, 2, 3, D. F. Muller2, 3, M. J. Chaves1, 2, M. N. Tapia1, 2, D. Pelaez1, 2, S. K. Bhattacharya1, 2, L. E. Vasquez1, 2. 1Ophthalmology, University of Miami, Miller School of Medicine; 2Ophthalmology, Bascom Palmer Eye Institute

5738 — A0133 Determination of absolute diastolic erythrocyte velocities in peripapillary arterioles and venules of human subjects using erythrocyte mediated angiography. Victoria Chen1, B. Tracey2, C. Le3, C. Renner1, J. Li4, L. Mayo5, J. Tsai6, M. Ou2, S. Kalarn6, L. Im7, M. Kaleem6, O. Saeedi6. 1Department of Ophthalmology and Visual Sciences, University of Maryland School of Medicine* CR

5739 — A0134 The role of Acid-sensing ion channel 1a in a mouse model of ischemic retinopathy. Ayumi Ouchi1, 2, E. Aguilar1, K. V. Marra1, M. Guang2, Y. Guang2, R. Lerner3, 2, M. Friedlander4, 5. 1Molecular Medicine, The Scripps Research Institute; 2Shanghai Institute for Advanced Immunochemical Studies, ShanghaiTech University; 3Chemistry, The Scripps Research Institute; 4Ophthalmology, Juntendo University School of Medicine

5740 — A0135 A rapid technique to quantify retinal oxidative stress and the protection provided by novel nitroxide-based antioxidant / anti-inflammatory compounds. Nigel L. Barnett1, 2, S. E. Bottje1, J. Tong2, K. Thomas3, C. L. Rayner1, 2. 1Queensland University of Technology; 2Faculty of Health Sciences & Medicine, Bond University; 3Queensland Eye Institute

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
5741 — A0136 Delayed trans-scleral electrical stimulation preserved the survival of retinal ganglion cells after ischemia-reperfusion injury in mice model. LIN Youhong1, V. Lee2, K. Chiu3. 1Ophthalmology, HKU; 2State Key Laboratory of Brain and Cognitive Sciences, The University of Hong Kong

5742 — A0137 The effect of hyperoxia and hypercapnia on retinal vascular blood flow in healthy adults. Keiko Yamada1, 2, B. Seto1, C. Llerena1, C. Hsu1, C. Sotozono1, T. Maeno1, J. G. Arroyo1. 1Beth Israel Deaconess Medical Center; 2Ophthalmology, Kyoto Prefectural University of Medicine; 3Ophthalmology, Toho University Sakura Medical Center

5743 — A0138 Xanthohumol protects corneal epithelial cells against oxidative stress in vitro. Samantha Anikredy1, H. N. Hariani1, K. A. Oriaff2, A. Kolli3, J. J. Hakkarainen4, A. K. Ghosh2, 5, S. Kaja1. 1Department of Molecular Pharmacology and Therapeutics, Loyola University Medical Center; 2Graduate Program in Neuroscience, Loyola University Medical Center; 3Department of Ophthalmology, Loyola University Medical Center; 4Research and Development, Experimentica Ltd.; 5Research and Development, eyeNOS Inc. *CR

5744 — A0139 Cellular response of human meningoethelial cells to oxidative stress. Xiaorong Xin. Qinghai Red Cross Hospital

5745 — A0140 The effects of Nrf2 activator in a rodent model of anterior ischemic optic neuropathy (rAI ON). Shun-Ping Huang2, 3, J. Chien1, Y. Chow. 1Molecular Biology and Human Genetics, Tzu Chi University; 2Ophthalmology, Taichung Tzu Chi Hospital; 3Institute of Medical Sciences, Tzu Chi University


5747 — A0192 Inner Retinal Fenestration for Pediatric Optic Disc Pit Maculopathy. Sai Chien Wong1, 2, N. K. Scripsersen. 1Great Ormond Street Hospital for Children; 2Moordields Eye Hospital

5748 — A0193 Comparison of refractive outcome between wholly attached macula and wholly detached macula after vitrectomy combined with cataract operation for rhegmatogenous retinal detachment. Sung Who Park1, E. Kim1, J. E. Lee3, I. Byon1. 1Ophthalmology, Pusan national university hospital; 2Ophthalmology, Veterans Hospital

5749 — A0194 Comparison of Predicted Versus Actual Refractive Outcomes for Four Point Scleral Fixation of an Acrylic Closed-Loop Haptic Lens Placed at the 3 mm Position. Matthew Ohr. Ophthalmology, The Ohio State University


5751 — A0196 Cost-effectiveness of a triple procedure - phaco vitrectomy with posterior capsulotomy, Goran Petrovski1, S. N. Walekhwat1, N. Veil1, B. R. Bragadottir1, K. Eriksen1, M. C. Moe1, B. É. Petrovski1. 1Department of Ophthalmology, University of Oslo; 2Faculty of Dentistry, University of Oslo

5752 — A0197 Submacular hemorrhage: functional and anatomical results after vitreoretinal surgery. Multicentral case series in La Rochelle and Poitiers hospital. Melissa Lit1, F. Gobert1, N. Leveziel1. 1CHU Poitiers; 2CH La Rochelle


5754 — A0199 Pneumatic Displacement with Recombinant Intravitreal Tissue Plasminogen Activator (rTPA) versus Vitrectomy with subretinal rTPA for Submacular Haemorrhage secondary to Neovascular Age Related Macular Degeneration: A Dual Centre Comparative Case Series. Jared Ching1, 2, J. Cardoso1, R. Cabrera1, A. Grabowska1, N. Karia1, S. Saidkasimova2, A. Chandra1. 1Ophthalmology, Addenbrooke’s Hospital; 2John van Geest Centre for Brain Repair; 3Southend Hospital; 4Norfolk and Norwich University Hospital

5755 — A0200 Sub-retinal rTPA injection with pars plana vitrectomy and air-liquid displacement of dense sub-macular hemorrhage. Carl S. Wilkins1, N. S. Mehta1, C. Wu1, A. Barashi2, A. Deobhakti1, 2, R. B. Rosen1, 2. 1Ophthalmology, Icahn School of Medicine at Mount Sinai; 2Ophthalmology, New York Eye and Ear Infirmary of Mount Sinai

5756 — A0201 Visual field changes within the central 10 degrees after vitrectomy for epiretinal membranes with or without glaucoma. Shunsuke Tsujiya1, T. Higashide1, S. Udagawa1, K. Sugiyama1. 1Ophthalmology, Kanazawa University; 2Ishikawa Prefectural Central Hospital

5757 — A0202 Occurrence of surgical epithelial debridement with use of hydroyopropyl methylcellulose vs. sodium hyaluronate-chondroitin sulfate for corneal coating during vitrectomy. Chelsey Krumbee1, K. Beck2, J. Sohn3, A. Kheirkhah4, M. Singer1. 1TTUHSC Paul L. Foster SOM; 2Long School of Medicine at UT Health San Antonio *CR

5758 — A0203 Functional and morphological outcomes in patients with idiopathic full-thickness macular holes using the inserted internal limiting membrane flap technique – a subgroup analysis. Nathalie Bleidijel, S. Bohnacker, N. Feucht, C. Lohmann, M. Maier. Technical University of Munich

5759 — A0204 Regional densities of retinal capillaries and retinal sensitivities after macular hole surgery with internal limiting membrane peeling. Takayuki Baba, M. Kakisu, T. Nizawa, S. Yamamoto. Ophthalmology & Visual Science, Chiba Univ Grad School of Med

5760 — A0205 Thickness Segmentation Measurements and Disorganization of the Inner Retinal Layers on Optical Coherence Tomography as Pre-Operative Indicators of Visual Outcome following Vitrectomy with Epiretinal Membrane Peeling. Paul R. Parker1, J. C. Zeyer1, 2, M. W. MacCumber1, 2. 1Ophthalmology, Rush University Medical Center; 2Illinois Retina Associates, S.C.

5761 — A0206 Comparison of the retinal microstructure and visual function after macular hole surgery with and without brilliant Blue G. Yuko Komiya, A. Takaegawa, M. Shihata, Y. Inamura, M. Ishida. Teikyo University School of Medicine, University Hospital Mizonokuchi

5762 — A0207 Analysis of retinal nerve fiber layer and radial peripapillary capillaries after internal membrane peeling for full thickness macular hole using optical coherence tomography (OCT). Nathan Schuck1, M. Heisler2, M. V. Sarunic2, E. V. Navajas1. 1University of British Columbia; 2Simon Fraser University

5763 — A0208 Influence of Vitrectomy and Maculapexing on Abnormalities of the Central Foveal Bouquet in eyes with Epiretinal Membranes. Max Brinkmann1, C. Salji2, M. Becker1, S. Michelet1, 2. 1Department of Ophthalmology, Stadtspital Triemli Zurich; 2Laboratory for Angiogenesis & Ocular Cell Transplantation, University of Lübeck; 3University of Heidelberg; 4Augenklinik Zürich West; 5University of Zurich

West Exhibition Hall A0191-A0250
Thursday, May 02, 2019 8:00 AM-9:45 AM

Retina

508 Vitreoretinal Surgery, Novel Techniques and Clinical Applications

Moderators: John T. Thompson and Jayanth Sridhar


5747 — A0192 Inner Retinal Fenestration for Pediatric Optic Disc Pit Maculopathy. Sai Chien Wong1, 2, N. K. Scripsersen. 1Great Ormond Street Hospital for Children; 2Moordields Eye Hospital

5755 — A0200 Sub-retinal rTPA injection with pars plana vitrectomy and air-liquid displacement of dense sub-macular hemorrhage. Carl S. Wilkins1, N. S. Mehta1, C. Wu1, A. Barashi2, A. Deobhakti1, 2, R. B. Rosen1, 2. 1Ophthalmology, Icahn School of Medicine at Mount Sinai; 2Ophthalmology, New York Eye and Ear Infirmary of Mount Sinai

5756 — A0201 Visual field changes within the central 10 degrees after vitrectomy for epiretinal membranes with or without glaucoma. Shunsuke Tsujiya1, T. Higashide1, S. Udagawa1, K. Sugiyama1. 1Ophthalmology, Kanazawa University; 2Ishikawa Prefectural Central Hospital

* Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
5764 — A0209 Internal limiting membrane peeling to prevent epiretinal membrane growth after retinal detachment repair: retinal surface wrinkling as a sign of proliferation. Kunihiko Akiyama, K. Watanabe, M. Fukai, K. Fujinami, Y. Tsunoda, T. Noda. 1Ophthalmology, National Hospital Organization, Tokyo Medical Center; 2Division of Vision Research, National Institute of Sensory Organs, National Hospital Organization, Tokyo Medical Center *CR

5765 — A0210 The impact of extent of internal limiting membrane peeling on anatomical outcomes of macular hole surgery: a randomized clinical trial. Yuan Yao, M. Zhao. Ophthalmology, Peking University People’s Hospital


5768 — A0213 Vitrectomy with perfluorocarbon liquid-assisted inverted limiting membrane flap technique for macular hole retinal detachment in highly myopic eyes. Ping Xie, Z. Hu, S. Yuan, Q. Liu. Department of Ophthalmology, Nanjing Medical University

5769 — A0214 Inverted Internal Limiting Membrane flap peeling technique for large macular holes: 1-year results. Giulia Airighi, A. Sanna, E. Medda, E. Giancipoli, F. Boscia, M. M. Rossi, M. Al Oum, G. D’Amico Ricci. 1Department of Surgical, Microsurgical, and Medical Sciences, Section of Ophthalmology, University of Sassari; 2Department of Ophthalmology, ASST Valle Olena; 3Ospedale Oftalmico, Asl Città di Torino

5770 — A0215 Subthreshold laser treatment following full thickness macular hole surgery. Boris V. Stanzel, L. M. Ramirez Paez, S. Al-Nawaiseh, P. Szumaw. 1Macula Center Saar, Knappschaft Eye Hospital Sulzbach; 2Eye Clinic Sulzbach *CR

5771 — A0216 Cost Savings and Results from Reducing Vitrectomy Surgical Tray Size at a Major US Academic Hospital. Christos Theophanous, J. Grodsky, S. Schechter, P. Veldman, S. Hartrupasad. 1Ophthalmology and Visual Sciences, University of Chicago; 2Louisiana State University School of Medicine

5772 — A0217 Stereopsis and retinal microstructure following macular hole surgery. Fumiki Okamoto, Y. Sugita, T. Hiraoka, T. Oshika. Dept of Ophthalmology, University of Tsukuba *CR


5774 — A0219 Internal Limiting Membrane “Flower Technique” improves foveal anatomy compared to standard surgical management for large macular holes. Taishin Khundkar, J. P. Shulman, J. Feistmann. Department of Ophthalmology, New York Medical College

5775 — A0220 Post-Operative Day 1 and Week 1 Complications and Their Potential Risk Factors Following Pars Plana Vitrectomy. Jorge A. Jimenez, T. Coleman, S. Dawoud, H. Miller, J. Lippincott, J. McKenzie, A. Lin, B. Tieu. 1Ophthalmology, University of Mississippi Medical Center; 2University of Mississippi Medical Center

5776 — A0221 Impact of intraoperative ocular lubricants on corneal debridement rate during vitreoretinal surgery. Michael Mathison, A. Li, Y. Bao, A. J. Huang, R. Rajagopal. Department of Ophthalmology, University of St Louis


5778 — A0223 Sutureless Intrascleral Posterior Chamber Intraocular Lens Fixation under 27-Gauge Pars Plana Vitrectomy: Analysis of Clinical Outcomes and Postoperative Complications. Shaomin Peng, J. Liu. 1Aier School of Ophthalmology, Central South University; 2Harbin Aier Eye Hospital

5779 — A0224 Correlation between retinal thickness change and visual improvement in patients undergoing idiopathic epiretinal membrane surgery. Andrea Cacciamani, P. Cosimi, F. Scarcini, G. Ripandelli, R. Gattegno, M. Di Nicola. 1Ophthalmology, IRCCS Fondazione G.B. Bietti; 2Department of Medical, Oral and Biotechnological Sciences, University Chieti-Pescara


5781 — A0226 Outcomes of radial retinotomy for persistent full thickness macular hole after primary vitrectomy and internal limiting membrane peel. Jennifer Hind, D. Yorston. Tennent Institute of Ophthalmology


5784 — A0229 Pars plana vitrectomy for symptomatic vitreous floaters: Another look. Tayab Waseem, E. Dabreo, D. Jiang, R. Clavson, A. Wagner, K. Kapoor. 1Microbiology, Eastern Virginia Medical School; 2Wagner Macula & Retina Center; 3Eastern Virginia Medical School

5785 — A0230 Post-operative Endophthalmitis in a UK Region in the last 15 years. Ahmed Shalaby, A. Sepetis, S. Di Simplicio, A. Lockwood. 1Ophthalmology Department, Oxford University Hospitals; 2Nuffield Department of Clinical Neurosciences, University of Oxford; 3Ophthalmology, Portsmouth Hospitals NHS Trust; 4Newcastle upon Tyne Hospitals NHS Foundation Trust; 5Southampton University Hospitals NHS Foundation Trust


5788 — A0233 Endoscopy-assisted vitreoretinal surgery with an integrated or separate endolaser probe. Joey Luvisi, A. Desai, M. A. Mainster, R. Ajjar. 1Department of Ophthalmology, University of Kansas School of Medicine; 2School of Medicine, University of Missouri Kansas City


5792 — A0237 Outcomes of subretinal high-dose tissue plasminogen activator injection in massive submacular hemorrhage. Peter Kally, M. Chua, D. Lo, E. S. Brodie, K. Wald. 1Ophthalmology, New York University Langone Medical Center; 2Ophthalmology, New York Eye and Ear Infirmary

5793 — A0238 A study of degradation controlling of the oligo-Tetra-PEG hydrogels applied for an artificial vitreous body. Tomohiko Fujii, Y. Shinohara, M. Nakatani, S. Hoshii, F. Okamoto, T. Sakai, T. Oshika. 1Bioengineering Institute, R&D Div., NIDEK Co., Ltd.; 2Department of Ophthalmology, Faculty of Medicine, University of Tsukuba; 3Department of Bioengineering, Graduate School of Engineering, The University of Tokyo; 4Nidek Co., Ltd.; 5Department of Ophthalmology, Faculty of Medicine, University of Tsukuba


5795 — A0240 Comparative study of chemical composition, molecular and rheological properties of Silicone Oil medical devices. Mariantonia Ferrara, R. Mendichi, A. Giaccometti Schierirom, D. Piovani, D. Allegrini, M. R. Romano. 1Humanitas Gavazzeni; 2Istituto per lo Studio delle Macromolecole (CRN); 3Humanitas University

5796 — A0241 In vitro assessment of the ability of non-swelling polyethylene glycol based artificial vitreous hydrogel to maintain transparency in the presence of vitreous hemorrhage. Sajin Hoshi, P. Okamoto, T. Murakami, T. Sakai, M. Nakatani, Y. Shinohara, T. Fujii, T. Oshika. 1Department of Bioengineering, Graduate School of Engineering, The University of Tokyo; 2Nidek Co., Ltd.; 3Department of Ophthalmology, Faculty of Medicine, University of Tsukuba

5797 — A0242 Patient Satisfaction in Oral versus Intravenous Sedation for Vitrectomies: A Randomized Clinical Trial. Manju L. Subramanian, M. Fiorello, J. Kim, V. Fug, S. D. Ness, N. Siegel. 1Ophthalmology, Boston University School of Medicine; 2Ophthalmology, Boston Medical Center

5798 — A0243 Robotic assistance affects manipulation skills in bimanual retinal surgery simulation: a tool-to-sclera force study. Changyan He, J. M. Roizenblatt, N. Patel, A. Brahimi, P. L. Gehlbach, J. Iordachita. 1The Johns Hopkins University; 2Johs Hopkins Hospital; 3Beihang University; 4Federal University of Sao Paulo

5799 — A0244 Performance assessment of ultrasound vs guillotine vitrectomy probes. Mario R. Romano, A. Stocchino, M. Ferrara, I. Nepita, R. Repetto. 1Humanitas University; 2University of Genoa DIICA; 3Humanitas Gavazzeni

5800 — A0245 Optical coherence tomography distal-sensor guided manual injection device for transscleral subretinal access. Mandeep Singh, Gyeongsang National University Changwon Medical Center; 2Department of Ophthalmology, New York University Langone Medical Center; 3Ophthalmology, University of Cagliari; 4Department of Materials Engineering, Johns Hopkins University; 5Computer Engineering, Johns Hopkins University

5801 — A0246 Subretinal Bleb Retention in a Porcine Model Using a Novel Subretinal Delivery Cannula; An Alternative to Vitreoretinal Approach. Thomas Meyer, K. Lott, N. Choti, S. Velasquez. 1NEI, National Institutes of Health; 2National Center for Advancing Translational Sciences


5803 — A0248 Modified posterior scleral reinforcement as a treatment for high myopia in children and its therapeutic effect. Zequn Miao, L. Wang. Peking University People’s Hospital

5804 — A0249 Three dimensional analysis of OCT macular pseudo-holes images with ReV Analyzer. Roberta Facci, B. Lay, M. Possarelli, 1University of Cagliari; 2ABCIS

5805 — A0250 Digital Filters Enhance Contrast and Visualization During 3DHD Retinal Surgery. Alan J. Franklin. Ophthalmology, Diagnostic And Medical Clinic

5806 — A0251 Nicotinamide reverses RPE contractility in a model of PVR. Timothy A. Blenkensop, M. Fernandez, N. Boles, L. Schiff, B. Nachmann. 1Cell Development Regenerative Biology, MSSM; 2Eye Group, Neural Stem Cell Institute

5807 — A0252 Lidocaine blocks the proliferation, migration, and Epithelial-Mesenchymal Transition of Human Retinal Epithelial cells. Yoon Hyung Kwon, M. Woo, Y. Kim. 1Department of ophthalmology, Dong-A University Hospital; 2Department of Convergence Medical Science, Gyeongsang National University; 3Department of Anesthesiology and Pain Medicine, Gyeongsang National University Changwon Hospital

5808 — A0253 Salinomycin Inhibits TGFβ-induced RPE cell migration and contraction, key events in the pathogenesis of proliferative vitreoretinopathy. Jacob Proaño, A. Heffer, C. Woelter, S. E. Feldon, R. P. Phipps, A. E. Kuriyan. 1Lake Erie College of Osteopathic Medicine; 2Palm Eyel Institute, University of Rochester Medical Center

5809 — A0254 Salinomycin inhibits epithelial-mesenchymal transition in retinal pigment epithelial cells. Alison Heffer, J. Proaño, E. Roztocil, C. Woelter, R. P. Phipps, S. E. Feldon, A. E. Kuriyan. 1Ophthalmology, University of Rochester; 2Lake Erie college of Osteopathic Medicine; 3Palm Eyel Institute, University of Rochester Medical Center

5810 — A0255 Withdrawal Changed Subcellular Localization of NOX4, a NADPH Oxidase is Associated with EMT in RPE Cells. Karla Y. Barbosa, J. Chang, G. Liang, M. Coene, M. Lai, K. Bharti. 1NEI, National Institutes of Health; 2National Center for Advancing Translational Sciences


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5812 — A0257  Effects of Intravitreal Connective Tissue Growth Factor Neutralizing Antibody on the Epiretinal Membrane Formation; an Experimental Study. Narsis Dasturian1,2, I. O Bayeghi2, M. Rezaei Kanavi1, H. Ahmadieh1,2. 1Ocular Tissue Engineering Research Center, Shahid Beheshti University of Medical Sciences; 2Ophthalmic Research Center, Shahid Beheshti University of Medical Sciences

5813 — A0258  Effects of chicken ovalbumin upstream promoter transcription factor 1 silencing on preventing proliferative vitreoretinopathy. Hui Jin. Department of Ophthalmology, Shanghai Tenth People’s Hospital, Tongji University School of Medical Science, Shanghai

5814 — A0259  Prevention of post-traumatic proliferative vitreoretinopathy using sustained release system of dasatinib. Shigeto Tamiya1, S. O’Toole1. 1University of Louisville; 2Tokyo Medical University Hospital

5815 — A0260  Inflammation and intracocular fibrosis in a rabbit model of penetrating injury to the posterior segment. Whitney Greene, T. Burke, G. Bramblett, H. H. Wang. United States Army Inst of Surgical Resch

5816 — A0261  Cigarette smoke promotes epithelial-mesenchymal transition in retinal pigment epithelial cells. Mohammad H. Bawany1, A. Heffer2, J. Proano3, A. E. Kuriyan2. 1University of Rochester School of Medicine and Dentistry; 2Flaun Eye Institute, University of Rochester Medical Center; 3Lake Erie college of Osteopathic Medicine


5818 — A0315  Withdrawal, The Association between Near Work Activities and Myopia. jie xu, W. Zhang, J. B. Jonas1, L. Xu. 1fundus, Beijing Institute of Ophthalmology; 2Department of Ophthalmology, Medical Faculty Mannheim of the Ruprecht-Karls-University of Heidelberg

5819 — A0316  A randomized non-inferiority trial of adjustable glasses versus standard and ready-made spectacles among Chinese school children: WEAR (Wearability and Evaluation of Adjustable Refraction) III. Congyang Wang1, N. G. Congdon2, G. Zhang3, L. Jie4, B. Tang5, T. Chen6, W. Zhu7, J. Wang8, B. Xiao9. 1State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Centre, Sun Yat-sen University; 2Centre for Public Health, Queen’s University Belfast; 3Department of Ophthalmology, First Affiliated Hospital of Sun Yat-sen University

5820 — A0317  Distribution of corneal spherical aberration in a Tanzanian population. Hiroki Asano1, T. Hiraoka1, Y. Seki2, T. Shibata3, H. Osada4,5, T. Saruta1, N. Hatusaka2, F. Fujikake3, Y. Tabata1, C. Miha3, A. Sanyiwa1, T. Oshika4, H. Sasaki5. 1Ophthalmology, Namegata District Medical Center; 2Ophthalmology, University of Tsukuba; 3Ophthalmology, Kanazawa Medical University; 4Ophthalmology, Nagano Matsusiro General Hospital; 5Rehabilitation, Tohoku Bunka Gakuen University; 6Ophthalmology, Kagoshima Minami Eye Clinic; 7Ophthalmology, Muhimbili University of Health and Allied Sciences *CR

5821 — A0318  Attitudes, Beliefs and Perceived Barriers toward Myopia Management in Clinical Practice. Sàoirse McCrann1, I. Flicot2, C. Barrett3, J. Loughman1,4. 1Optometry, Technological University of Dublin; 2Childrens University Hospital, Dublin; 3African Vision Research Institute, University of KwaZulu Natal

5822 — A0319  Relation between treatment effect of myopia control lenses and demographic factors in children. Rebecca Y. Weng, T. J. Naduvilath1, R. C. Bakaraju1, X. Chen2, P. Sankaridurg2. 1Brien Holden Vision Institute; 2School of Optometry and Vision Science, University of New South Wales; 3Zhongshan Ophthalmic Centre, Sun Yet Sen University

5823 — A0320  Characteristics of Best Corrected Visual Acuity with Machine Learning: In a Large Population. weiting hao1, j. butler1, A. Yang2, D. Paille2,3, H. Wang1,3, J. Bao1,3, A. Yang2, D. Paille2,3, H. Chen1,3. 1Brien Holden Vision Institute; 2School of Ophthalmology and Optometry, Wenzhou Medical University; 3Sossilor International, R&D Vision Sciences AMERA; 4WEIRC, Wenzhou Medical University-Essilor International Research Centre *CR

5824 — A0321  The Aloka Vision Program - Holistic approach increase availability of eye care in unserved areas in India. Siegfried Wahl1,2, A. Leube1,2, R. Dhasmana1, P. Moodbidri1, J. Kuss2. 1ZESS Vision Science Lab, University Tuebingen; 2Carl Zeiss Vision International GmbH, 3Himalayan Institute of Medical Science, Dehradun; 4Carl Zeiss India Pvt. Ltd, Bangalore *CR

5825 — A0322  Compliance rates in children using soft bifocal contact lenses and 0.01% atropine. Juan Huang, D. O. Mutti, B. E. Dougherty, L. Jones-Jordan, J. J. Walline. The Ohio State University

5826 — A0323  Association between Myopia and Lower Serum Zinc Status in Adolescents: The 2010 Korean National Health and Nutrition Examination Study. Niahm Burke1, J. Butler2, I. Flicot3, J. Loughman4. 1Dublin Institute of Technology; 2Dublin Institute of Technology; 3Temple Street Children’s University Hospital; 4African Vision Research Institute

5827 — A0324  Prevalence and Risk Factors of Myopia in Adult Korean Population: Korea National Health and Nutrition Examination Survey 2015-2016 (KNHANES VI-VII). Sang Beom Han1, S. Lee2, H. Yang3, J. Hwang4, D. Kim5, S. Park1. 1Ophthalmology, Kangwon National University College of Medicine; 2Ophthalmology, Kangwon National University Hospital; 3Seoul National University Bundang Hospital; 4Department of Ophthalmology, Gachon University College of Medicine; 5Seoul National University College of Medicine; *Gil Medical Center


5829 — A0326  The effect of peripheral defocus on axial growth in hyperopes. Ian Beasley, L. Davies, N. S. Logan. Aston Optometry School, Aston University *CR

5830 — A0327  Influence of prismatic round segment bifocals on posture during near tasks in Chinese myopic children. Zuopao Zhuo1,4, Y. Wang1,5, J. Bao1,3, A. Yang2, D. Paille2,3, H. Chen1,3. 1Brien Holden Vision Institute; 2School of Ophthalmology and Optometry, Wenzhou Medical University; 3Sossilor International, R&D Vision Sciences AMERA; 4WEIRC, Wenzhou Medical University-Essilor International Research Centre *CR

5831 — A0328  The impact of computers on myopia in 6 to 9 year old school children. Clair Entovnen1, W. Tideman1, J. Polling1, V. J. Verhoeven1, C. C. Klaver1,2, P. Giridhar1, S. Banerjee5, K. Shekar6, S. Chakrabarti7, H. Pant, G. Murthy3, C. Gilbert1, G. N. Rao3,4, Allen Foster Community Eye Health Research Centre, Gullapalli Pratibha Rao International Centre for Advancement of Rural Eye care, L V Prasad Eye Institute; 2Rutgers Robert Wood Johnson Medical School; 3Brien Holden Eye Research Centre, L V Prasad Eye Institute; 4Indian Institute of Public Health; 5International Centre for Eye Health, Department of Clinical Research, London School of Hygiene and Tropical Medicine; 6School of Optometry, The Hong Kong polytechnic university

5833 — A0330  Two-Year Incidence of Myopia among Schoolchildren in China. Damien Paillé1,2, Y. Huang1, Y. Yuan3, B. Sidé1,2, M. Li1,2, D. Yang1, B. Jiao4, B. Drobre2, H. Chen1,2. 1Vision Science Department, Essilor; 2WEIRC - WMU-Essilor International Research Centre; 3Saw Swee Hock School of Public Health, National University of Singapore; 4WMU - Wenzhou Medical University

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5835 — A0332  Time trend of the prevalence of uncorrected visual acuity in middle school students in Japan: 2012-2016. Ryo Kawasaki1,2, J. Itô2, S. SATO3, H. Sakaguchi2, K. Nishida1. 1Department of Vision Informatics, Osaka University Graduate School of Medicine; 2Ophthalmology, Osaka University Graduate School of Medicine

5836 — A0333  Can refractive error impact the academic performance? Efrain Castellanos, P. G. Davey, K. Remick-Waltman. Western University College of Optometry

5837 — A0334  The Relationship Between Open Recreation Areas and Myopia Among UCLA Preschool Vision Program Participants. Jessica Jara1,2, V. Sampao1,2, A. Young3, F. Yu1, A. L. Coleman1. 1Epidemiology, UCLA Fielding School of Public Health; 2Ophthalmology, UCLA Jules Stein Eye Institute

5838 — A0335  Retrospective study of myopia progression and correlation with median household income for pediatric patients in the greater Cincinnati area. Kelsey A. Carriere1, P. Cobb1, K. Castleberry1, C. Liu1. 1Ophthalmology, Cincinnati Children’s Hospital Medical Center; 2Biosciences and Epidemiology, Cincinnati Children’s Hospital Medical Center

5839 — A0336  Can young adults accurately recall their time spent outdoors during childhood? Gareth Lingham1, E. Milne2, R. M. Lucas1, D. A. Mackey1, S. Yazav1. 1Centre for Ophthalmology and Visual Science, Lions Eye Institute/University of Western Australia; 2Teledon Kids Institute/University of Western Australia; 3National Centre for Epidemiology and Population Health, Australian National University

5840 — A0337  Near viewing distances predict the faster myopic progression in Chinese myopic children: 2 years results of a prospective study. Binjun Zhang1,2, B. Drobre3, J. Bao4, x. yu1, H. Chen1,2. 1School of Ophthalmology and Optometry, Wenzhou Medical University; 2Wenzhou Medical University-Essilor International Research Centre, WEIRC; 3R&D Vision Sciences AMERA, Essilor International

5841 — A0338  Latent growth modelling of refractive error development in white children & young adults. Sara J. McCullough1, G. Adamson1, L. Doyle2, S. Saunders1. 1School of Psychology, Ulster University; 2Optometry & Vision Science, Ulster University


5843 — A0340  Longitudinal changes in spherical equivalent refractive error among schoolchildren with moderate to high hyperopia. Wenchen Zhao, Y. Hu, D. Cui, C. Li, X. Yang. Zhongshan Ophthalmic Center, Sun Yat-sen University

5844 — A0341  The use of analogies associated with refractive error shift toward hypermetropia. Karina Patasova1, P. G. Hys1, C. J. Hammond1, R. Wojciechowski2. 1King’s College; 2Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health

5845 — A0342  Tolerability of novel myopia control spectacle designs. Joe Rapi2,1, J. Woods2, D. Jones2, L. W. Jones2. 1SightGlass Vision, Inc.; 2Centre for Ocular Research & Education, University of Waterloo

5846 — A0343  Assessment of the association among physical activity, sleep status, and high-degree myopia using objective wearable devices. Luoming Huang1, H. Kawasaki2, Y. Liu2, Z. Wang1. 1Graduate School of Biomedical & Health Sciences, Hiroshima University; 2School of Material Engineering, School of Material Engineering, Jinling Institute of Technology; 3School of Economics & Management, Changsha University of Science & Technology

5847 — A0344  Effect of Defocus Incorporated Multiple Segments (DIMIS) spectacle lens wear on visual functions in myopic children. Carly S. Lam, W. Tang, D. Y. Yee, R. Chun, C. To. Centre for Myopia Research, School of Optometry, The Hong Kong Polytechnic Univ

5848 — A0345  Evaluation of the necessity for cycloplegia during refraction of 4-10 years old Chinese children. Xinting Liu, X. Mao. School of Ophthalmology & Optometry, Wenzhou Medical University

5849 — A0346  Refractive Characteristics of Pseudomyopia and Its Association With Myopia Progression: Anyang Childhood Eye Study. Meng Tian Kang, Beijing Tongren Hospital


5851 — A0348  The Investigation on Professional Degree of Optometry in Spectacle Stores in Urban Area of China. Xintong Liang, M. Kang, S. Li, N. Wang, Y. Sun, S. Wei, J. Gan. Beijing TongRen Eye Center

5852 — A0349  Changes of refraction, visual function and ocular biometrics of schoolchildren: Follow-up data of the WEPRoM Study in Wenzhou, China. Yinim Yuan1, B. Su2, D. Yang1, Y. Wong2, J. Bao3, B. Drobre3, M. Li1, H. Chen1,2. 1School of Ophthalmology & Optometry, Wenzhou Medical University; 2R&D Vision Sciences AMERA, Essilor International, Singapore; 3WEIRC, WMU-Essilor International Research Centre

5853 — A0350  Prevalence of anisometropia and its effects on visual acuity and stereoacuity, and anisometropic spectacle prescribing pattern in a clinical population. Myra Leung1, M. Uddin2, C. S. Lam2. 1School of Optometry, The Hong Kong Polytechnic University; 2Centre for Myopia Research, School of Optometry, The Hong Kong Polytechnic University

5854 — A0351  Development of geometric visual perception during childhood and adolescence. Jiahe Gan1, S. Li2, M. Kang1, N. Wang2, B. Wang3. 1Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University; 2Ophthalmology & Visual Science Key Lab, Beijing Institute of Ophthalmology; 3State Key Laboratory of Brain and Cognitive Science, Institute of Biophysics, Chinese Academy of Sciences

5855 — A0352  Smartphone Usage as a Possible Contributor to the Increasing Prevalence of Myopia. James Loughman1, S. McCrann1, J. BUTLER1, I. FLITCROFT1. 1Technological University of Dublin; 2Temple Street Children’s University Hospital

5856 — A0353  What can anisometropia tell us about eye growth? Kathryn Saunders1, S. J. McCullough1, D. I. Flitcroft1. 1Ulster University; 2Ophthalmology, Children’s University Hospital; 3Centre for Eye Research Ireland, Dublin Institute of Technology

5857 — A0354  A Retrospective Longitudinal Study of Refractive Error Change in Children Aged 3 to 17 Years. Yi Pang1, Q. Li2, S. S. Block1. 1Illinois Coll of Optom; 2Fujian Hospital


5859 — A0356  The UIH NEAR Survey: University of Houston Near work, Environment, Activity, and Refraction. Rachel Williams, K. Richdale, L. A. Ostrin. College of Optometry, University of Houston
5860 — A0357 Exome-chip Association Study of Refractive Error in U.S. Caucasians, Dyana Lewis1, I. Jain1, T. Alexander1, 2, A. Musolf1, D. Stambolian1, J. E. Bailey-Wilson1. 1National Human Genome Research Institute; 2National Institute of Arthritis and Musculoskeletal and Skin Diseases; 1Department of Ophthalmology, Perelman School of Medicine, University of Pennsylvania

5861 — A0358 Parental Myopia and Myopia in 6- to 72-month-old Multiethnic Children. Rohit Varma1, 2, K. Tarity-Hornoch1, S. A. Cotter3, S. Matsumura1, S. Seang Mei1, P. Mitchell1, K. A. Rose1, X. Jiang1, 4. 1Ophthalmology, University of Southern California; 2Southern California Eye Care and Vision Research Institute; 3Ophthalmology, University of Washington; 4Southern California College of Optometry; 1Southern California Eyecare Vision Institute

5862 — A0359 Scleral crosslinking using genipin can effect normal eye development in tree shrews. Mustapha El Hamdouni, M. Gaonkar, C. A. Girkin, B. C. Samuels, R. Grytz. The University of Alabama at Birmingham

5863 — A0360 Scleral Changes in Induced Refractive Error in Chicks. Elizabeth L. Irving, D. Hileeto. School of Optometry and Vision Science, University of Waterloo

5864 — A0361 Altered Scleral Biomechanics in the Mouse Model of Myopia. Dyllon M. Brown1, R. Strickland1, E. Landis1, C. R. Ethier1, M. T. Pardué2, 3. 1Biomedical Engineering, Georgia Institute of Technology; 2Center for Visual and Neurocognitive Rehabilitation, Atlanta VA Healthcare System

5865 — A0362 Sex specific endocrine differences in sclera of myopically progressing chicks. Patrick Carney1, 3, B. Ford1, D. Nomura1, C. F. Wildsoet1. 1School of Optometry, UC Berkeley; 2Graduate Group in Endocrinology, UC Berkeley; 3Vision Science Graduate Program, UC Berkeley

5866 — A0363 Scleral macrophages contribute to myopia development via MMP-2 upregulation. Xiangtian Zhou, F. Zhao, H. Wu, L. Ma, Y. Wu, J. Qu. School of Ophthalmology and Optometry, Wenzhou Medical University

5867 — A0364 Validation of lens-induced myopia protocols in C57BL/6 mice. Emilie van der Sarde1, B. Winkelmann1, 2, C. de Zeeuw1, 2, C. C. Klaver1. 1Ophthalmology, Erasmus Medical Center; 2Netherlands Institute for Neuroscience; 3Neuroscience, Erasmus Medical Center; 4Ophthalmology, Epidemiology, Erasmus Medical Center; 5Ophthalmology, Radboud Medical Center

5868 — A0365 Altered retinal responses in chicken myopia model using image-guided global flash multifocal electroretinogram. Sonal Vyas1, Y. LAKSHMANAN2, H. H. Chan1, 4. 1School of Optometry, The Hong Kong Polytechnic University; 2Department of Biomedical Engineering, The Hong Kong Polytechnic University; 3University Research Facility in Behavioral and Systems Neuroscience (UBSN), The Hong Kong Polytechnic University, Kowloon, Hong Kong

5869 — A0366 The effect of a common tissue preservative on form deprivation myopia in the guinea pig. Quan V. Hoang1, 2, S. A. McFadden1. 1Singapore Eye Research Institute, Singapore National Eye Centre, Duke-NUS; 2Ophthalmology, Harkness Eye Institute, Columbia University Medical Center; 3Hunter Medical Research Institute and School of Psychology, Faculty of Science, University of Newcastle

5870 — A0367 Screening of high myopia in non-human primates. qiang lin1, R. Liu1, K. Wu1, G. Jin1, R. Shen1, W. Liu1, Z. Chen1, K. Zhang2, Z. Jin1. 1Laboratory for Stem Cell & Retinal Regeneration, Institute of Stem Cell Research, Division of Ophthalmic Genomics, The Eye Hospital, Wenzhou Medical University, State Key Laboratory for Ophthalmology, Optometry & Vision Science, National Center for International Research in Regenerative Medicine and Neurogenetics, Division of Ophthalmology, Kuming Biomedical International (KBI)


5872 — A0369 Myopia-related changes in the retinal capillaries and co-localized astrocytes of juvenile marmosets. Carol Lin, A. Tooyehchi, N. Slavi, M. Srivivas, A. Nour, A. Benavente-Perez. SUNY College of Optometry


5875 — A0372 Constructing Murine Model of Posterior Staphyloma Through Targeted Disruption of Bruch’s Membrane. Kritchai Vatipongstotorn1, T. Yoshida1, X. Lf, K. Cao1, K. Ohno-Matsui1, 2. 1Medicine, Imperial College London; 2Ophthalmology and Visual Science, Tokyo Medical and Dental University


5877 — A0374 Immunohistochemical localization of alpha-2A adrenergic receptor in chicken retina. Ute Mathis. Ophthalmic Research Institute, Section Neurobiology of the Eye, University of Tuebingen

5878 — A0375 Effect of 7-methylxanthine (7-MX) on Deprivation Myopia and Retinal Dopamine Release in Chicks. Hong Liu1, 2, F. Schaeffel1, K. Triever1, M. P. Feldkaempfer1. 1Section of Neurobiology of the Eye, Ophthalmic Research Institute, University of Tuebingen, Tuebingen, Germany; 2Aier School of Ophthalmology, Central South University, Changsha, China; 3Trier Research Laboratories, Hellerup, Denmark

5879 — A0376 Combining Narrow-Band Red and Blue Ambient Light Causes Moderate Myopia in Tree Shrews. Timothy Gawne1, R. Grytz2, T. T. Norton1. 1Optometry and Vision Science, University of Alabama at Birmingham; 2Ophthalmology and Visual Science, University of Alabama at Birmingham

5880 — A0377 Influence of light and autonomic innervation on growth factor expression in chick choroid. Alexandra Kaser-Eichberger1, 2, C. Platzi1, 2, C. Taylor1, A. Trost1, C. Strohmaier1, B. Bogner1, C. Runge1, D. Bruckner1, H. Reitsamer1, F. J. Rucker1, F. Schroedl1, 2. 1Dept. of Ophthalmology and Optometry, Research Program Experimental Ophthalmology and Glaucoma Research, Paracelsus Medical University; 2Dept. of Anatomy, Paracelsus Medical University; 3Dept. of Biomedical Sciences and Disease, New England College of Optometry

5881 — A0378 Dopamine in Flickering Illumination and Monochromatic Light. Tian Tian, R. Liu. Eye & ENT Hospital of Fudan University

5882 — A0379 In vivo stiffening of rabbit sclera by bacteriochlorophyll derivative WST11 and near infrared light. Arie L. Marcovich1, 2, A. Goz1, 2, J. Brekelmans1, A. Brandis1, S. R. Cohen1, A. Scherz1. 1Plant and Environmental Sciences, Weizmann Institute of Science; 2Ophthalmology, Kaplan Medical Center; 3Ophthalmology, University eye clinic Maastricht; 4Biological Services, Weizmann Institute of Science; 5Chemical Research Support, Weizmann Institute of Science

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.

5884 — A0381 Effects of short-term dynamic ON and OFF stimulation on choroidal thickness in humans and on choroidal thickness and dopamine release in chicks. Andrea Carrillo Aleman1, M. Wang2, F. Schaeffel1. 1University of Tuebingen; 2Department of Ophthalmology, The Second Xiangya Hospital, Central South University

5885 — A0382 Early Changes in Gene Expression in the Choroid of Chick Eyes in Response to Myopic Defocus. Mohsain Gill1, J. A. Summers2. 1College of Medicine, University of Oklahoma Health Science Center; 2Department of Cell Biology, University of Oklahoma Health Science Center

5886 — A0383 Effects of long-term dynamic ON and OFF stimulation on refractive development, ocular dimensions and dopamine release in chickens. Min Wang1, A. Carrillo Aleman1, F. Schaeffel1. 1University of Tuebingen; 2Department of Ophthalmology, The Second Xiangya Hospital, Central South University

5887 — A0384 PRSS56 inactivation induced retinal expression of ADAMTS19 ameliorates ocular axial length reduction/hyperopia. Swanand Kolli1, C. Labella-Dumais1, S. Payakh1, V. Chi1, S. Nair1, 2. 1Department of Ophthalmology, University of California San Francisco; 2Department of Anatomy, University of California San Francisco

5888 — A0385 QTL remapping of murine eye weight reveals novel candidate genes for ocular growth. Roberto Y. Cordero, R. W. Williams, L. Lu, C. L. Simpson. University of Tennessee Health Science Center

5889 — A0386 GC/MS metabolomics in chick myopia and hyperopia models. Nina Riddell, M. J. Murphy, S. G. Crowther. Psychology and Counselling, La Trobe University

5890 — A0387 Oral lactoferrin administration suppresses lens-induced myopia in mice. Shin-ichi Ikeda1, T. Kurihara1, X. Jiang1, M. Toda2, K. Tsuota2. 1Laboratory of Photobiology, Keio University School of Medicine; 2Department of Ophthalmology, Keio University School of Medicine

5891 — A0388 Expression of the mechanotransduction channels is altered in the retina of myopic marmosets. Tam phuong1, A. Nou2, D. Kriza3, A. Benavente-Perez2. 1Department of Ophthalmology, University of Utah; 2SUNY College of Optometry


5893 — A0390 miRNA-mRNA Signalling Pathways in Chick Models of Development of Refractive Error. Sheila G. Crowther, N. Riddell. Psychological Science, La Trobe University

5894 — A0391 Spontaneous variations in refractive error and axial length identified in a population of geriatric rhesus macaques. Hidetaka Miyag1, S. Kim1, A. Strom2, G. Yiu1, A. Moshiri1, L. Garzel1, A. Marangakis2, C. Chang1, J. Roberts1, C. J. Murphy1, S. M. Thomas1. 1Ophthalmology and Visual Science, Hiroshima University; 2Department of Surgical and Radiological Sciences, School of Veterinary Medicine, University of California, Davis; 3Department of Ophthalmology & Vision Science, School of Medicine, University of California, Davis; 4California National Primate Research Center, University of California, Davis

5895 — A0392 Atropine and NO inhibit form-deprivation myopia via retinal mechanisms in the chick. William K. Stell1, A. D. Lillywhite2, B. J. Carr1. 1Cell Biology & Anatomy, Hotchkiss Brain Institute, and Alberta Children’s Hospital Research Institute, Cumming School of Medicine, University of Calgary; 2School of Optometry and Vision Science, University of Waterloo; 3Department of Ophthalmology and Visual Sciences, Faculty of Medicine, University of British Columbia

5896 — A0393 IVMED-85 eye drops for myopia control in guinea pigs. Sarah Molokhia1, H. Hauritz1, B. Archer2, L. A. Owen2, B. K. Ambati2. 1Veena Delivery Systems; 2University of Utah

5897 — A0394 The Effects of Latanoprost on Negative-Lens-Induced Myopia in Rhesus Monkeys. Krista M. Beach, L. Hung, Z. She, L. A. Lesmes4, J. B. Miller1. 1Institute of Ophthalmic Research; 2Carl Zeiss Vision International GmbH

5898 — A0395 Scera-specific Hif-1a knockdown attenuates form deprivation myopia (FDM) development in mice. Fei Zhao, Q. Zhou, Y. Zhai, J. Qu, X. Zhou. School of Optometry and Ophthalmology, Wenzhou Medical University

5899 — A0396 Contrast Sensitivity Function (CSF) of Anisometropia with Spectacle Lens and Soft Contact Lenses. Ming Li, L. Cui, L. Zhang, W. Zhou, F. Hou. Ophthalmology, Eye Hospital of Wenzhou Medical University

5900 — A0397 Perceptual learning along the “weaker” principal meridian improves contrast sensitivity function and visual acuity in patients with astigmatism. Li Gu1, J. Li2, Z. jing1, Z. Chen1, S. Zhang1, Z. Lu1, J. Yuan1. Zhongshan Ophthalmic Center; The Ohio State University

5901 — A0398 Improving the efficacy of ocularmetric measures of contrast sensitivity. Mark P. Burton, P. V. McGraw, C. Scholes, N. W. Roach. School of Psychology, University of Nottingham

5902 — A0399 Induced straylight decreases visual performance homogenously at different spatial frequencies measured by the Tuebingen Contrast Sensitivity Test. Tim Schilling1, A. Ohlendorf1, S. Wahl1. 1Institute of Ophthalmic Research; 2Carl Zeiss Vision International GmbH

5903 — A0400 Active learning of contrast sensitivity function as a clinical endpoint in cataract disease. Megan A. Kasetty1, 2, R. Silverman1, 2, R. Zeng1, Z. K. Luo1, R. Vasari2, A. Lorch1, J. Cho3, A. Lesmes1, 2. 1Retina, Massachusetts Eye and Ear; 2Comprehensive Ophthalmology and Cataract, Massachusetts Eye and Ear; 3Tufts University School of Medicine; 4Boston University School of Medicine; 5Northeastern University; 6Adaptive Sensory Technology, Inc.

5904 — A0401 The repeatability of visual changes measured with tests of visual acuity and contrast sensitivity. Manonnmani Murugappar1, A. M. Janoff1, A. Lesmes1, E. Flor1, M. J. Barnes1, A. K. Bittner1. 1College of Optometry, Nova Southeastern University; 2College of Osteopathic Medicine, Nova Southeastern University; 3Ophthalmology, University of California, Los Angeles; 4Adaptive Sensory Technology

5905 — A0402 Reliability of Testing Methodology Aimed to Measure Visual Acuity and Contrast Sensitivity. Kevin Bui1, M. Gomez2, M. Maniglia1, A. Sette1, P. G. Davey1. 1College of Optometry, Western University of Health Sciences; 2Psychology, University of California, Riverside

Refer to the Program Number in the Clinical Trial (CT) Registration Index. *CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
5906 – A0403 Pupil-tracking-based determination of visual acuity. Consuelo Robles1, 2, P. Prieto1, 2, P. Aratl3. 1Voptica SL; 2Laboratorio de Óptica, Universidad de Murcia *CR

5907 – A0404 Visual acuity assessment in adults using optokinetic nystagmus. Paul A. Harris1, T. Garner3, M. Sugi4, P. Gwe1, T. Turuwhenua2, B. Thompson4. 1Optometry, Southern College of Optometry; 2University of Auckland; 3School of Optometry and Vision Science, University of Waterloo *CR

5908 – A0405 Accuracy and Precision of the ETDRS Chart, E-ETDRS and Bayesian qVA Method. Yukai Zhao1, L. A. Lesmes3, M. Dorp5, 6, P. Bex7, Z. Lu1. 1Psychology, the Ohio State University; 2Adaptive Sensory Technology, Inc; 3Technical University of Munich; 4Psychology, Northeastern University *CR

5909 – A0406 Luminance and visual acuity: 20/30 could be 20/40! David W. Evans1, M. M. Yu2, P. G. Davey2. 1Guardian Health Sciences; 2Orange County Retina; 3Western University of Health Sciences *CR

5910 – A0407 Repeatability and Sensitivity Validation of an ipab based Visual Acuity Application. Michel Guillot1, 2, P. Pepe1, K. Patel2, R. Gupta1, 2. 1Ocular Technology Group International; 2School of Heath Sciences, Aston University *CR

5911 – A0408 A novel automated visual acuity test using a portable augmented reality headset. See Chuan Ong1, I. Peck2, C. Chiang2, H. Soon1, K. Chua1, C. Cassman3, V. T. Koh4, 5, 6. 1Yong Loo Lin School of Medicine, National University of Singapore; 2Singapore: Department of Ophthalmology, National University Hospital; 3School Of Engineering, Ngee Ann Polytechnic

5912 – A0409 Kinetic visual acuity was correlated with functional visual acuity and binocular summation. Ikko lehisu1, M. Ayuki2, 3, K. Tsubota1, K. Negishi4, 5. 1Department of ophthalmology, Keio University; 2Otake Clinic Moon View Eye Center *CR

5913 – A0410 Visual acuity and contrast sensitivity at various stages of cognitive impairment in the COMPASS-ND study. Walter Wittich1, 2, F. Al-Yasser3, N. Phillips3. 1School of Optometry, University of Montreal; 2Centre de recherche interdisciplinaire en réadaptation du Montréal métropolitain; 3Psychology, Concordia University

5914 – A0411 Macular pigment and low luminance vision in the Carotenoids in Age-Related Eye Disease Study (CAREDS), an ancillary study of the Women’s Health Initiative. Krista Christensen1, Z. Liu2, J. N. Ver Hoeve2, J. Stringham1, Y. Liu1, R. Wallace2, K. Gehry3, L. Tinker2, T. Lawler2, J. A. Mares2. 1University of Wisconsin Madison; 2University of Iowa; 3Fred Hutchinson Cancer Research Center; 4Duke Eye Center

5915 – A0412 Healthy and pathological visual aging in a French follow-up cohort study. Karine LAGRENE1, 2, M. Bécu3, W. H. Seiple4, 5, M. Raphaelen Batallière6, S. Combarieu7, M. Puques2, A. Aubois2, B. Duclos2, C. Eandí5, J. Girmens2, S. Mohand-Said2, A. Arle2. 1Sorbonne Université, INSERM, CNRS, Institut de la Vision; 2Streetlab; 3Lighthouse Guild; 4CHNO des Quinze-Vingts, DHU Sight Restore, INSERM-DGOS CIC 1423 *CR


5917 – A0414 Infrared light sensitivity in healthy eyes of different age groups. Gregzor Labuz1, J. Usinger1, K. Komar2, 3, H. Soek1, T. Wildrim2, S. Shah1, F. Bour1, P. Merz1, R. Khoramnia1, G. U. Auffarth1. 1David J. Apple Center for Vision Research; 2Faculty of Physics, Nicolaus Copernicus University; 3Baltic Institute of Technology *CR


5919 – A0416 The effects of healthy ageing on central and peripheral motion perception. Juan A. Sepulveda1, A. M. McKendrick1, A. J. Anderson2, J. M. Wood3, 4, 5, 6. 1Optometry and Vision Sciences, The University of Melbourne; 2Optometry and Vision Science, Queensland University of Technology

5920 – A0417 Contextual visual processing and visual working memory deficits in Alzheimer’s disease. William J. Harrison1, J. B. Mattingley1, 2, G. A. Robinson1. 1Queensland Brain Institute, The University of Queensland; 2School of Psychology, The University of Queensland

5921 – A0418 Considerable age-related contrast sensitivity loss due to less efficient cones. Daphné Silvestre1, A. Arleo1, A. Aubois4, 5, 6, B. Duclos4, 5, 6, C. Eandi4, 5, 6, J. Girmens4, 5, 6, S. Shah1, 7. 1Sorbonne Université, INSERM, CNRS, Institut de la Vision, 17 rue Moreau, F-75012 Paris, France *CR


5924 – A0421 Oculomotor changes after sustained Virtual Reality use. Angelica Godinez1, E. N. Harb, J. Grimes, S. Davulcharu, C. F. Wildsoet, D. M. Levi. 1School of Optometry, University of California, Berkeley

5925 – A0422 Impact of healthy aging on ocular fixation stability and microsaccades during optic flow. Angelo Arleo1, M. Bécu, G. Tatur, D. Sheynikhovich. Sorbonne Université, INSERM, CNRS, Institut de la Vision, 17 rue Moreau, F-75012 Paris, France *CR

5926 – A0423 Impact of single vision lens designs for myopes on driving skills and comfort. Bernardin Delphine1, J. Michaels2, A. Gouler, R. Chauvillon1, 2. 1Research and Development, Essilor Canada; 2Faubert Laboratory; 3Optometry School, Université de Montréal; 4Recherche and Development, Essilor International

5927 – A0424 Characterization of a new glare source for a driving simulator under varying levels of visibility: A pilot study. Breno Schwambach1, J. Brooks1, C. Jenkins1, L. Mims1, P. Rosopa2, R. Tanner2, C. Woody3, D. Evans4, K. Melnick5, R. Stassaki6, R. Suryakumar6. 1Automotive Engineering, Clemson University; 2Psychology, Clemson University; 3Pelham Vision Center; 4DriveSafety; 5Alcon *CR

5928 – A0425 Visual Acuity, Motor Vehicle Collisions, and Moving Violations in a Cohort of Patients Who Have Undergone Eyelid Surgery. Katherine Lucarelli1, 2, M. Lucarelli1, 2, S. van Landingham1. 1Department of Ophthalmology and Visual Sciences, University of Wisconsin Madison; 2University of Wisconsin Madison School of Medicine and Public Health; 3Department of Ophthalmology and Visual Sciences, University of Wisconsin Madison

5929 – A0426 Variations in pupil size and light levels while driving at night. Alex A. Black1, J. M. Wood2, M. J. Collins3, G. Isardi3. 1School of Optometry & Vision Science, Queensland University of Technology; 2Light Naturally

5930 – A0427 Comparison of straylight in cataracts to the CIE PSF model. Thomas J. Van Den Berg. Ophthalmic Research, Netherlands Inst for Neurosci, Royal Acad *CR

5931 – A0428 Detection of the Purkinje shift with the rapid dark adaption test, age and vision related correlates. Gregory Fu1, J. Kanter2, R. Aramburo2, B. I. Gaynes2. 1Loyola University Chicago: Stritch School of Medicine; 2Loyola University Medical Center

5932 – A0429 The Effects of a Blue Light Screening Filter on Blue Light Emission from a Smartphone. Andrew Smith1, 2, J. Conger3, B. Hedaya1, M. C. Mehta4. 1Ophthalmology, UC Irvine; 2Ophthalmology, Gavin Herbert Eye Institute

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
5933 — A0430 Macular Recovery Following Photostress in Low Luminance Conditions in Young and Old Subjects. Donna Welch1, D. Narayanan1, J. D. Rodriguez1, M. J. Chaplin1, G. Wallstrom1, M. B. Abelson1. 1Ora, Inc.; 2SDC, Inc. *CR

5934 — A0431 Response Reliability during Automated Visual Photosensitivity Assessment in Achromatopsia. Alex Gonzalez1, M. Aguilar1, C. Rowan1, P. R. Rosa1, V. M. Graham1, B. E. Hurwitz2, B. L. Lam2, J. Parel1, 3. Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine; 2Ophthalmology, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine; 1Brien Holden Vision Institute, University of New South Wales; Barbara M. Junghans, S. Khuu. Testing? using the digital Slurp eye-hand coordination test? Barbara M. Junghans, S. Khuu. Univ of New South Wales


5936 — A0433 Does the stylus matter when using the digital Slurp eye-hand coordination test? Barbara M. Junghans, S. Khuu. Univ of New South Wales

5937 — A0434 Effect of induced blur on performance on the Beery VMI and its supplemental tests. Rebecca Findlay1, J. Black2, N. Anstice3. 1School of Optometry and Vision Science, University of Auckland; 2Optometry and Vision Science, University of Canberra

5938 — A0435 The role of vision in balance control. Guillaume L. Giraudet. R&D, ESSILOR INTL *CR

5939 — A0436 Influence of smartphone viewing on eyes under the train shaking condition. Fumiatsu Maeda1, 2, S. Tatara1, 2, Y. Tsukahara1, H. Yamamoto1, K. Kani1. 1Orthoptics and Visual sciences, Niigata University of Health and Welfare; 2Field of Visual Sciences, Graduate School, Niigata University of Health and Welfare; 3Graduate School of Human and Environmental Studies, Kyoto University; 4Orthoptics and Visual Sciences, Kyushu University of Health and Welfare *CR

5940 — A0437 Comparison of a video game-based vision screening to conventional vision screening performed by optometry students. Kristy Remick-Waltman, E. Castellanos, P. G. Davey. Western University of Health Sciences *CR

5941 — A0438 Print Size and Display Size Constraints on Reading with Reduced Acuity. Nitü̈ Atλgn̄, Y. HONG, G. E. Legge. Psychology, University of Minnesota

5942 — A0439 Evaluation of relationship between font and silent reading performance in healthy subjects using the eye tracking system. Noriaki Murata1, 2, H. Toda1, 3, C. Sasagawar4, E. Seki1, A. Takayama1, T. Fukuchi1. 1Niigata University; 2Niigata University of Health and Welfare

5943 — A0440 Influence of the Stiles-Crawford effect of the first kind on visual acuity for decentered pupils. Alessandra Marie Carmichael Martins1, M. Vinas2, A. Gonzalez-Ramos3, C. Benedito-Garcia4, C. Dorrornov5, S. Marcos5, B. Vohsen1. 1School of Physics, University College Dublin; 2Instituto de Optica, CSIC

5944 — A0441 Rapid changes in the Stiles Crawford function in response to a decentered aperture. Michael J. Collins, F. Yi, B. A. Davis, H. J. McNeill. School of Optometry, Queensland University of Technology

5945 — A0442 Two photon vision with a supercontinuum source. Silvestre Manzanera1, D. Solá1, K. Komar2, M. Wojtkowski3, P. Arta1. 1Laboratorio de Optica, University of Murcia; 2Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University; 3Institute of Physical Chemistry, Polish Academy of Sciences; 4Baltic Institute of Technology *CR

West Exhibition Hall A0443-A0461
Thurday, May 02, 2019 8:00 AM-9:45 AM
Visual Neuroscience
513 Visual Disease Models and Restoration: Humans

Moderator: Rachael S. Allen

5946 — A0443 The Retina in Preclinical Alzheimer’s Disease: Degeneration of the Eye Before the Brain. Samuel Asnadi1, 2, M. Fantini1, 2, W. C. Sultan1, M. Nassisi1, C. Felix1, J. Wier1, R. Kajaranja1, F. N. Ross-Cisneros3, M. Harrington4, A. A. Sadun1, 2. 1Ophthalmology, NYU-Langone Medical Center; 2Ophthalmology, Icahn School of Medicine at Mount Sinai

5947 — A0444 Electroretinographic and Tomographic Features of macular retina in patients with optic neuritis. Danjie Li1, 3, S. Kishi2, H. Akiyama1. 1Ophthalmology, Chen Du Aier eye Hospital, China; 2Maebashi Central Hospital; 3Department of Ophthalmology, Gunma University School of Medicine


5949 — A0446 Oscillatory Potentials in Patients with Posterior Uveitis. Scott E. Brodie1, N. Goldberg2, A. Friedman3, D. A. Jabs4, D. Wang5. 1Ophthalmology, NYU-Langone Medical Center; 2Ophthalmology, Northwell Health; 3Ophthalmology, Icahn School of Medicine at Mount Sinai

5950 — A0447 Clinical and molecular characterization of autosomal recessive and X-linked incomplete congenital stationary night blindness. Rola Ba-Abbad1, G. Arto2, O. A. Mahroo2, M. Michaelides2, A. Webster2, 3, A. G. Robson2. 1UCL Institute of Ophthalmology; 2Moorefield Eye Hospital; 3Electrophysiology, Moorfields Eye Hospital


5952 — A0449 Rapid non-mydiatic assessment of panretinal cone system function using a hand-held electoretinography device in ABCA4 retinopathy, Diana-maria butu1, 2, A. Fakin1, T. Soorma1, C. J. Hammond1, M. Michaelides1, 2, A. Webster1, 2, O. A. Mahroo1, 3. 1Moorefield Eye Hospital, London; 2Royal Free Hospital, London; 3Department of Ophthalmology, King’s College London; 4UCL Institute of Ophthalmology, University College London

5953 — A0450 The Photopic negative response (PhNR) of the full-field electroretinogram (ERG) in an Asian-Indian population with Glaucoma: A Pilot Study, Wai Siene Ng1, O. A. Mahroo2, 3, H. Jayaram1. 1NIHR, Moorfields Biomedical Research Centre; 2Medical Retina Service, Moorfields Eye Hospital; 3UCL Institute of Ophthalmology, University College London *CR


5955 — A0452 Short-term levodopa treatments ameliorate early stage electroretinogram (ERG) delays in diabetic patients. Cara Motz1, K. Chesler1, R. S. Allen1, L. Mees1, D. Olson2, A. Y. Maa1, 2, M. Coulter2, P. M. Thule2, P. Iuvone1, A. Hendrick2, M. T. Pardue1, 3. 1Center for Visual and Neurocognitive Rehabilitation, Atlanta VA Medical Center; 2Ophthalmology, Emory University; 3Biomedical Engineering, Georgia Tech; *Endocrinology, Emory University

5956 — A0453 Changes in retinal thickness and alterations in multifocal electroretinogram in Alzheimers disease. Johanna Garzon. Primary visual care research group, University of La Salle

5958 – A0455 Electrophysiological and pupillometric measures of inner-retina function in on-proliferative diabetic retinopathy. Jason C. Park1, J. McAnany2, 3. Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago; 1Department of Bioengineering, University of Illinois at Chicago

5959 – A0456 Machine learning to identify multifocal ERG deficits in patients taking hydroxychloroquine. Tom Wright1, P. Tan2, M. Easterbrook3. Kensington Vision & Research Centre; 1Ophthalmology and Vision Sciences, University of Toronto

5960 – A0457 Full-field flicker electroretinograms in preterm infants at risk of retinopathy of prematurity (ROP). Marc Hebert1, 2, G. Anne-Marie3, M. Dubois2, K. Francis1. Ophthalmology, Université Laval; 1CERVO Brain Research Center; 2Ophthalmology, University of Florence

5961 – A0458 Electroretinography anomalies in schizophrenia using a portable device. Marc Hebert1, 2, G. Anne-Marie3, M. Dubois2, K. Francis1. Ophthalmology, Université Laval; 1CERVO Brain Research Center

5962 – A0459 Correlations between Optical Coherence Tomography Angiography Findings and Multifocal Electroretinogram Parameters in Diabetic Retinopathy Patients. Young-Hoon Oh1, 2, H. Kim3, 2, E. Lee4, J. Kim1, K. Park1, T. Park2, 1Department of Ophthalmology, Soonchunhyang University Hospital; 2Department of Ophthalmology, College of Medicine, Soonchunhyang University; 3Department of Ophthalmology, Soonchunhyang University Hospital


5964 – A0461 Preliminary Evidence for Clinical Relevance of Peripheral Pattern ERG in Diabetic Retinopathy. Shresta Patangay1, J. C. Park2, J. I. Lim1, J. McAnany2, 3, J. R. Hetling2, 1Ophthalmology and Visual Science, University of Illinois at Chicago; 2Bioengineering, University of Illinois

West Exhibition Hall A0462-A0475
Thursday, May 02, 2019 8:00 AM-9:45 AM
Visual Neuroscience
514 Animal Electrophysiology

Moderator: Christopher L. Passaglia

5965 – A0462 Scotopic ERG Protocols for Rabbits. Jamila M. Ahmad1, G. Ioshimoto2, A. Liber3, D. Ventura3. 1MHIRT, University of Sao Paulo

5966 – A0463 Development of An Automated Electroretinography Analysis Approach. Andrew Feola1, 2, K. Chesler1, 2, C. A. Worthy1, 3, C. Motz1, R. S. Allen1, 2, C. R. Ethier1, M. T. Pardue1, 2. Center for Visual and Neurocognitive Rehabilitation, Veterans Affairs Health Care System; 1Biomedical Engineering, Georgia Institute of Technology

5967 – A0464 From humans to mice: an equivalent of the ISCEV standard for full field electroretinography for assessment of rod and cone function in mice. ArkaIy Lyubarsky4, 1, J. Bennett1. 1FM Kirby Center for Mol Ophthalm, SOM Univ, of Pennsylvania; 2Center for Advanced Retinal and Ophthalmic Therapeutics (CAROT), Department of Ophthalmology, University of Pennsylvania; 3Vision Research Center, University of Pennsylvania *CR

5968 – A0465 K+-dependent components of ERG generated by Muller cells in isolated mouse retina. Andrey Dmitriev1, 2, R. A. Linsenmeier1, 2. 1Biomedical Engineering, Northwestern University; 2Neurobiology, Northwestern University

5969 – A0466 Comparison of light-evoked spike trains, compound action potentials, and electroretinograms in rats. Yousef Mohamed1, N. Johnson1, R. T. Tzekov2, C. L. Passaglia1. 1Neuroscience, University of South Florida; 2Ophthalmology, University of South Florida; 3ChBME, University of South Florida

5970 – A0467 The Effect of the Glucose Substitution Through Succinate on the ERG of the Isolated Superfused Vertebrate Retina. Serge Sapic1, 2, F. Weller1, P. Walter1. 1Department of Ophthalmology, RWTH Aachen University; 2Institute for Neurophysiology of the University of Cologne

5971 – A0468 A comparison of the electroretinogram in the cone-dominant thirteen-lined ground squirrel and the rod-dominant Brown Norway rat. Hanmeng Zhang1, 2, B. S. Sajdak1, 2, D. K. Merriman3, J. Carroll1, 2, M. A. McClure4, D. M. Lipinski1, 2. Department of Cell biology, Neurobiology and Anatomy, Medical college of wisconsin; 1Department of Ophthalmology & Visual Science, Medical College of Wisconsin; 2Department of Biology, University of Wisconsin Oshkosh; 3Department of Ophthalmology and Visual Sciences, University of Louisville; 4Nuffield Laboratory of Ophthalmology, University of Oxford

5972 – A0469 Clinically relevant timing of L-DOPA treatment in diabetic rats slows the progression of retinopathy. Kyle Chesler1, C. Motz1, R. S. Allen1, 2, P. Ivone1, 3, M. T. Pardue1, 4. Biomedical Engineering, Georgia Institute of Technology; 1Department of Pharmacology, Emory University School of Medicine; 2Department of Ophthalmology, Emory University School of Medicine; 3Center for Visual and Neurocognitive Rehabilitation, Atlanta VA Healthcare System

5973 – A0470 Circadian disruption produces lasting retinal dysfunction in a type II diabetic rat model. Danielle Clarkson Townsend1, R. S. Allen1, 2, C. Motz1, S. Sachdev1, J. Fiu1, 3, M. T. Pardue1, 3. Environmental Health, Rollsin School of Public Health, Emory University; 1Center for Visual and Neurocognitive Rehabilitation, Atlanta VA Healthcare System; 2Biomedical Engineering, Georgia Institute of Technology

5974 – A0471 Do ganglion cells contribute to long-flash electroretinograms (ERGs) in chicks? Clement Afari, D. L. McCulloch, V. Choh. School of Optometry and Vision Science, University of Waterloo

5975 – A0472 The Impact of Luminance and Temporal Frequency on S-Cone-Driven ERGs in Wildtype Mice and Mice with Long-Wavelength Absorption Spectra. Anmeka Joachimshalter1, 2, J. J. Kramer1. 1Dept. of Ophthalmology, University Hospital Erlangen; 2Dept. of Biology, Animal Physiology, FAU Erlangen-Nürnberg


5977 – A0474 Normative Values for Multifocal ERGs Recorded from Cynomolgus Macaques in a Non-clinical Setting. Yelena Krakova1, C. B. Kim2, 1, B. J. Eaton1, 2, J. Christian1, E. Budzynski1, J. Miller1, T. Nork2, 3, C. J. Murphy1, 2, J. N. Ver Hoeve1, 2. 1OSOD LLC; 2Ophthalmology and Visual Sciences, School of Medicine and Public Health, University of Wisconsin-Madison; 3Covance Laboratories; 4Surgical and Radiological Sciences, School of Veterinary Medicine, University of California-Davis *CR

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
Thursday – Posters – 5978 – 6001


5979 — A0476  Deregulation of POS phagocytosis and retinal adhesion rhythms in Ppff31-mutant mice: implication of the RPE circadian clock. Elvira Vanoni, E. F. Nandrot. Institut de la Vision


5981 — A0478  Lysosomal distribution and function may be affected by the cell type and spatial localization of the cell within the tissue. Nadezda A. Stepicheva, J. Weiss, P. Shang, M. Yazdankhah, S. Ghosh, I. A. Bluto, S. L. Hose, J. S. Zigler Jr, D. Sinha. Ophthalmology, University of Pittsburgh; 3Wilmer Eye Institute, Johns Hopkins University


5984 — A0481  Influence of Loss of Retinitis Pigmentosa 2 (RP2) and Retinitis Pigmentosa GTPase Regulator (RPGR) Genes on Inner Retina. Mahesh Shivanna, A. Short, B. Wadas, R. Periasamy, H. Khanna. School of Optometry, MCPHS University; 3Ophthalmology, UMASS Medical School


5987 — A0484  Retinal Neurocytes are more Sensitive to Light-induced Damage than Gliocytes Due to DNA Double-strand Breaks. Jing Zhuang, J. Qi, P. Chen, Y. Wu, S. Chen, J. Zhang, K. Yu. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University

5988 — A0485  The effect of intravitreal sodium iodate injection on the retinal degeneration in the canine after vitrectomy. So Min Ahn, C. Yoo, M. Woo, B. Choi, J. Ahn, S. Cha, Y. Goo, S. Kim. 1Korea university; 2Chungbuk National University

5989 — A0486  Expression of the Endoplasmic Reticulum Chaperone GRP78 in a Retinal Degeneration Model Induced by Blue LED Exposure. Yongsoo Park, S. Lee, I. KIM. 1Department of Anatomy, College of Medicine, The Catholic University of Korea; 2Catholic Neuroscience Institute, The Catholic University of Korea

5990 — A0487  Making eyes invisible to make things more visible: An optimized tissue clearing approach for three-dimensional imaging and high-throughput analysis of whole rodent eyes. Akshay Gurdita, P. Nickerson, N. Pokrajac, N. CPI. 1Histopathology, Vision research Foundation; 2Department of Medicine, University Health Network; 3Department of Physics, Div. of Physics, Div. of Solid State Physics, Box 118, SE-221 00, Lund University; 4Department of Physics, Div. of Neurocytes are more Sensitive to Light-induced Damage than Gliocytes Due to DNA Double-strand Breaks. Jing Zhuang, J. Qi, P. Chen, Y. Wu, S. Chen, J. Zhang, K. Yu. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University

5991 — A0488  Prolactin Expression is Induced in Photoreceptors of Degenerating Retina. Raghavi Sadharsan, L. Murgiano, G. D. Aguierre, W. A. Beltran. Clinical Sciences and Advanced Medicine, University of Pennsylvania

5992 — A0489  Deoxygedunin activates autophagic mechanisms in retinal cells through its modulatory effects on TrkB and p75NTR. Abubakar Siddiq Mangani, C. Joseph, M. Mirzaei, V. Gupta, S. L. Graham. Macquarie University


5994 — A0491  MacTel patients carry rare phosphoglycerate dehydrogenase (PHGDH) variants with reduced enzymatic activity. Regis Follini, J. Berlow, J. Zernati, T. Nagasaki, M. Ganner, S. Harkins-Perry, K. Eade, R. Allikmets, M. Friedlander. Lowy Medical Research Institute; 3Department of Integrative Structural and Computational Biology, The Scripps Research Institute; 4Department of Ophthalmology, Columbia University; 5Department of Molecular Medicine, The Scripps Research Institute


5996 — A0493  Differential Expression of Sumoylation Enzymes in Normal Ocular Tissues and Mouse Models for Major Ocular Diseases. Qian Nie, D. W. Li. Zhongshan Ophthalmic Center, Sun Yat-sen University


6000 — A0497  Reduced retinal glial cell proliferation on nanowire arrays. Vijayalakshmi Rajendran, M. Lard, B. Custódio, T. Olsson, C. Príncipe, M. Perez. 1Dept. of Clin. Sciences, Div. of Ophthalmology, BMC, B11, SE-221 85, Lund University; 2Dept. of Physics, Div. of Solid State Physics, Box 118, SE-221 00, Lund University; 3Nanolund Box 118, SE-221 00

6001 — A0498  Expression Of BH3 In Ocular Tissues. Bhuvaneswari Ganesan, K. Subramaniam, S. Parameswaran, A. Sharma. 1Histopathology, Vision research Foundation; 3Chemistry and Biology, Indian Institute of Science Education and Research *CR

* Refer to the Program Number in the Clinical Trial (CT) Registration Index. *CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
6002 — A0499 Withdrawal_Complement Landscape of Human Retina based on Single-Cell Transcriptomics. Dwight Stamblowitz1, N. Dana1, Y. Lyu1, S. Liu1, P. D. Gamin1, C. A. Curcio1, C. E. Strang2, R. Ziau2, M. Li1. 1Ophthalmology, University of Pennsylvania; 2Biostatistics and Epidemiology, University of Pennsylvania; 3Ophthalmology and Visual Sciences, University of Alabama at Birmingham; 4Psychology, University of Alabama at Birmingham; 5Chemistry and Biochemistry, University of the Sciences in Philadelphia; 6Biochemistry and Molecular Genetics, University of Alabama at Birmingham

6003 — A0500 Analysis of markers of regeneration in adult Zebrafish retina through single-cell RNA sequencing. Eyad Shihabeddin, A. Santhanam, J. O’Brien. UTHHealth


6005 — A0502 Retinal amyloid beta load in Alzheimer’s disease. Kailun Jiang1,2, S. Lee1, B. McIlmoyle2, V. Hirsch-Reinshagen1, I. Mackenzie1, R. Hsiung2, C. Wang2, S. Liu6, P. D. Gamlin3, C. A. Curcio3, Kailun Jiang1, 2, S. Lee2, 3, B. Eadie3, M. V. Sarunic4, M. F. Beg6, J. Z. Cui4, J. A. Matsubara5. 1Moorfields Eye Hospital, NHS foundation trust; 2Department of Ophthalmology and Visual Sciences, University of British Columbia; 3Department of Ophthalmology & Visual Sciences, Dalhousie University; 4School of Engineering Science, Simon Fraser University

6006 — A0503 Ocular biomarkers of Alzheimer’s disease (AD): Distribution of amyloid-beta in human AD and non-AD retina. Qinyuan (Alis) Xu1, S. Lee2, V. Hirsch-Reinshagen1, I. Mackenzie1, R. Hsiung2, G. Charm2, E. To1, K. Jiang1, M. V. Sarunic1, M. F. Beg2, J. Z. Cui2, E. To1, J. A. Matsubara5. 1University of British Columbia; 2School of Engineering Science, Simon Fraser University

West Exhibition Hall A0504-A0529

Thursday, May 02, 2019 8:00 AM-9:45 AM

Retinal Cell Biology

516 Retinal Development

Moderator: Michael H. Farkas

6007 — A0504 Adhesion Dynamics During Choroid Fissure Closure in a Developing Zebrafish Eye. Andrea James1, Z. Murry1, J. Pardue2, T. Likes3, M. Meyer2. 1Biology, University of Northern Colorado; 2Shared Equipment Authority, Rice University

6008 — A0505 Zika virus infection induces retinal neuronal and vascular defects during development. Yi Li1, C. Shan2, Y. Hai3, F. Xia4, H. Liu4, P. Shi4, W. Zhang4, 1Department of Ophthalmology and Visual Sciences, University of Texas Medical Branch; 2Tianjin Medical University Eye Hospital; 3Department of Biochemistry & Molecular Biology, University of Texas Medical Branch; 4Department of Ophthalmology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology; 5Departments of Neuroscience, Cell Biology & Anatomy


6011 — A0508 LKB1 controls cellular development and laminar patterning of dopaminergic amacrine cells. Justine H. Liang1, A. Cassa1, C. A. Burger1, M. Samuel1. 1Integrative Molecular and Biomedical Sciences, Baylor College of Medicine; 2Neuroscience, Baylor College of Medicine; 3Huffington Center of Aging, Baylor College of Medicine

6012 — A0509 Growth hormone-releasing hormone receptor signaling in rat retinal development. Qichen Yang1, C. Wang2, S. Chan1, H. Cheung4, 5, A. Schally6, 7, C. C. Pang1, 8, T. Mullins2, 1, E. M. Stone2, 1, B. Tucker2, 1, R. F. Mullins1. 1Ophthalmology and Visual Sciences, University of Alabama at Birmingham; 2Department of Ophthalmology, Wenzhou Medical University; 3State Key Laboratory of Genetic Engineering, Institute of Genetics, Collaborative Innovation Center of Genetics and Development, School of Life Sciences, Fudan University; 4Division of Developmental Biology, Perinatal Institute, Cincinnati Children’s Hospital Medical Center

6013 — A0510 The direct reprogramming of retinal astrocytes into neurons with small-molecule compounds. Yuya Fujii, M. Arima, S. Shimokawa, Y. Murakami, K. Sonoda. Kyushu University

6014 — A0511 Ddx11 regulates all amacrine cell number in the mouse retina. Bridget Kulesh1, P. W. Keeley2, B. E. Reese3, 1Molecular, Cellular, and Developmental Biology, University of California, Santa Barbara; 2Neuroscience Research Institute, University of California, Santa Barbara; 3Psychological and Brain Sciences, University of California, Santa Barbara

6015 — A0512 BMP Signaling mediates choroid fissure closure by remodeling the retinal epithelium and regulating embryonic vasculature. Seema Agarwala1, C. S. Bernstein1, a. ramchandri2. 1Molecular Biosciences, Univ of Texas Austin; 2Institute for Cell and Molecular Biology, University of Texas at Austin

6016 — A0513 NF2 is required during late stages of optic fissure closure in the developing mouse eye. Sabine Fuhrmann, K. Spiller, W. Sun. Ophthalmal & Vis Sci, Vanderbilt University Medical Center

6017 — A0514 Migratory neural crest directs optic cup morphogenesis by depositing nidogens to build extracellular matrix superstructure. Kristen Kwan1, C. Bryan1, M. Casey1, R. L. Pfeiffer2, B. W. Jones1. 1Human Genetics, University of Utah; 2Ophthalmology and Visual Sciences, University of Utah

6018 — A0515 Bim Expression Modulates Retinal Astrocyte Function through Regulation of the Extracellular Microenvironment. Christine M. Sorenson, J. Falero-Perez, N. Sheibani. University of Wisconsin School of Medicine and Public Health

6019 — A0516 Functional studies of Znhit1 in the mouse retinal development. Jianhong An1, J. Liu1, X. Cao1, X. Lin1, X. Zhou1. 1School of Ophthalmology and Optometry, Wenzhou Medical University; 2State Key Laboratory of Genetic Engineering, Institute of Genetics, Collaborative Innovation Center of Genetics and Development, School of Life Sciences, Fudan University; 3Division of Developmental Biology, Perinatal Institute, Cincinnati Children’s Hospital Medical Center

6020 — A0517 Ndr influences Nestin expression in mouse retinal neuroblasts. Helene Leger, F. C. Luca. School of Veterinary Medicine

6021 — A0518 Role of somatostatin in determining cell type in the developing retina. Kurt Weir1, S. Blackshaw1. 1Mckusick/Nathans Institute of Genetic Medicine, Johns Hopkins School of Medicine; 2Neuroscience, Johns Hopkins School of Medicine

6022 — A0519 OTX2 controls cell fate in the developing retina. Miruna G. Ghinia-Tegla1, D. F. Buenaventura1, 2, D. Kim1, C. Thakurdin1, K. C. Gonzalez1, M. Emerson1. 1Biology, CCNY, CUNY; 2CUNY Graduate Center

6023 — A0520 NF1A is essential for functional ALL amacrine cells. Patrick W. Keeley1, B. E. Reese2, 1Neuroscience Research Institute, University of California, Santa Barbara; 2Psychological and Brain Sciences, University of California, Santa Barbara

6024 — A0521 Inhibiting Sox2 expression in developmental mouse retina leads to increased retina bipolar cells. Yumeng Shen, Y. Li, Y. Shen. Wuhan University
6025 — A0522 Regulation of mRNA decay by Zfp36L1 and Zfp36L2 in retinal development and maintenance. Xiutian Mu1, F. Wu2, T. J. Kaczynski3, M. Turner3, T. Liu1. 1Ophthalmology, University at Buffalo; 2The Babraham Institute; 3Biochemistry, University at Buffalo


6027 — A0524 Molecular targets of homeodomain transcription factor Six3 and Six6 in murine retinal differentiation. Wei Liu, R. Diacou, Y. Zhao, D. Zheng, A. CvekL. Albert Einstein College of Med

6028 — A0525 Mutation of Bmp3 represents a novel cause of ocular coloboma. Lisa Prichard1, S. Widen2, O. J. Lehmann3, A. Waskiewicz1. 1Department of Biological Sciences, MacEwan University; 2Department of Biological Sciences, University of Alberta; 3Department of Medical Genetics, University of Alberta

6029 — A0526 Müller Glia Lose Neurogenic Potential over Development. Leah VandlenBosch1, S. G. Wohl1, C. Cox2, L. Chipman3, T. Reh2. 1Biological Structure, University of Washington; 2College of Optometry, SUNY


6031 — A0528 MicroRNAs in Foveal Development. Anna La Torre, C. L. Fairchild, S. Cheena, J. Wong. Cell Biology and Human Anatomy, University of California Davis


6034 — A0531 The Snf2h/Smarca5 Chromatin Remodeling Protein is Essential for Retinal Structure and Function. Pamela S Logali1, A. N. Baker1, K. Yan2, D. J. Pickets3, C. Tsiftsides1. 1Neuroscience, Ottawa Hospital Research Institute; 2Regenerative Medicine, Ottawa Hospital Research Institute; 3University of Ottawa Eye Institute; 4Biochemistry, Microbiology & Immunology, University of Ottawa


6036 — A0533 The microRNA mir-18a regulates photoreceptor regeneration. Scott M. Taylor, E. Magner. Biology, University of West Florida


6038 — A0535 What makes the fovea so special? Todd E. Schuetz1, A. Voigt1, A. Deluca2. 1Department of Ophthalmology, University of Iowa; 2Institute for Vision Research

6039 — A0536 Thyroid hormone regulates the tandemly-quadruplicated rh2 cone opsin gene array in zebrafish. Ashley Farre, R. Mackin, D. L. Stenkamp. University of Idaho

6040 — A0537 A novel in vitro model of intracellular protein exchange between primary photoreceptors. Nicole Yan1, L. Comanita1, Z. Liu1, A. Ortiz-Martinez1, E. Tsai2, N. Tachibana2, V. Wallace1, 3. 1Laboratory Medicine & Pathobiology, University of Toronto; 2Donald K. Johnson Eye Institute; 3Ophthalmology and Vision Science, University Of Toronto


Thursday – Posters –6025 – 6052

6043 — A0540 Utilizing CRISPR to perturb photoreceptor/bipolar enhancer mediated cell fate decisions in the mouse retina. Noah Goodson1, J. A. Brzezinski1. 1Ophthalmology, University of Colorado Denver; 2Neuroscience Program, University of Colorado Denver


6045 — A0542 Transcriptome analysis of adult zebrafish LWS1 vs LWS2 (long wavelength sensitive) cones. Deborah L. Stenkamp1, A. L. Farre1, C. SUN1, M. Starosiek2, L. Gieser3, M. English, A. Svarovski1. 1Biological Sciences, University of Idaho; 2National Eye Institute

6046 — A0543 Interdependency of photoreceptor matrix proteoglycans IMPG1 (SPARC) and IMPG2 (SPARCAN) in mouse vision. Ezequiel M. Salido, V. Ramamurthy. Ophthalmology, West Virginia University


6048 — A0545 Spontaneous in vitro generation of rhodopsin with all-trans retinal. Anne M. Hanneken1, M. Kono1. 1Molec & Exp Med, Scripps Research Institute; 2Retina Consultants San Diego; 3Ophthalmology, Medical University of South Carolina


6050 — A0547 ER-resident BH3 only protein, BNip1, is a safe guard that limits the upper threshold of vesicular transport. Yako Nishiwaki, I. Masai. Okinawa Institute of Science and Technology

6051 — A0548 Characterization of primary cilia in mouse retina during retinal development. Ke Ning1, T. Kowal1, K. Chang1, J. A. Alvarado1, R. A. Silva1, A. Kreymerman1, V. B. Mahajan1, Y. Hu1, Y. Sun1, 2. 1Department of Ophthalmology, Stanford University; 2Palo Alto VA medical center

6052 — A0549 PRCD supports the organized structure of the photoreceptor outer segment. WILLIAM SPENCER1, J. N. Pearring2, J. Ding1, N. P. Skiba1, M. E. Burns2, V. Y. Arshavsky1. 1Duke University; 2University of Michigan; 3University of California Davis
6053 – 6071 – Thursday – Posters

West Exhibition Hall A0550-A0573
Thursday, May 02, 2019 8:00 AM-9:45 AM
Genetics Group

518 Functional Genomics
Characterization and animal models

Moderator: Baojian Fan

6053 — A0550 Transcriptome of the canine macular RPE/choroid and retina: parallels with human macular gene expression. Freya Mowat1, M. Foster2, D. Jin3. 1Clinical Sciences, North Carolina State University; 2Center for Human Health and the Environment, North Carolina State University; 3Bioinformatics Research Center, College of Sciences, North Carolina State University

6054 — A0551 Multimodal genomic analysis of hydroxychloroquine toxicity in a large cohort. Ehsan Ullah1, D. McGaughey1, A. Turriff1, A.0551 University Center, College of Sciences, North Carolina State University; 2Paediatric Academic Clinical Programme, Duke-NUS Medical School; 3Medical Technology and Physics, Sir Charles Gairdner Hospital; 4Medical Retina Department, Singapore National Eye Centre

6055 — A0552 CRISPR/Cas9-targeted enrichment and long-read sequencing of the Fuchs endothelial corneal dystrophy-associated TCF4 triplet repeat. Alice E. Davidson1, N. J. Hafford Tear1, Y. Tsai1, A. Sadan1, B. Sanchez-Pintado1, C. Zarouchlioti1, P. Liskova1, S. J. Tuft1, T. A. Clarke1, A. J. Hardcastle1. 1Institute of Ophthalmology, UCL; 2Pacific Biosciences; 3Department of Ophthalmology, Charles University and General University Hospital in Prague; 4Moorfields Eye Hospital *CR

6056 — A0553 Small molecules restore the expression and function of mutant alleles underpinning autosomal dominant and recessive inherited retinal dystrophies. Jingshu Liu, F. Manson, G. Black. The University of Manchester

6057 — A0554 Remarkable decrease of rbp1 expression as hallmark of zebrafish eye with digenic eye+/−, lrp5+/- retinitis pigmentosa-candidate mutations. Shimpei Takita, Y. Zanui, Y. Deng+1, C. X. Zhao+, B. Beutler1. 1Ophthalmology, Shenzhen Eye Hospital; 2Ophthalmology, Central Hospital of Wuhan; 3Ophthalmology, UT Southwestern Medical Center; 4Center for the Genetics of Host Defense, UT Southwestern Medical Center

6058 — A0555 Withdrawal Fast retinal degenerations in mice with two different mutations in the Microphthalmia-associated transcription factor (Mifff) gene. Thor Eysteinsson1, 2, A. Garcia Llorca1, 3, T. B. Gudmundsdottir1, M. H. Gudmundsdottir1, E. Steingrimsdottir1, 3. 1Physiology, BioMedical Center, Faculty of Medicine, University of Iceland; 2Ophthalmology, National University Hospital; 3Biochemistry and Molecular Biology, BioMedical Center, Faculty of Medicine, University of Iceland

6059 — A0556 Phenotype characterization and transcript analysis in RCBTI1-associated retinopathy. Zhiqin Huang1, S. McLenanach2, D. Zhang1, J. A. Thompson1, S. Jamuar3, T. McLaren1, T. Lamey1, E. Chevd1, J. Roach1, C. Chan1, F. K. Chen1. 1The University of Western Australia; 2Lions eye institute; 3Australian Inherited Retinal Disease Registry and DNA Bank, Sir Charles Gairdner Hospital; 4Genetics service, Department of Paediatrics, KK Women’s and Children’s Hospital; 5Paediatric Academic Clinical Programme, Duke-NUS Medical School; 6Medical Technology and Physics, Sir Charles Gairdner Hospital; 7Medical Retina Department, Singapore National Eye Centre

6060 — A0557 Forward genetics: searching for novel genes essential to retinal development and homeostasis. Rafael Ufret-Vincetiny1, B. Arend1, B. Chen1, 2, Y. Zhu1, 2, Y. Ding1, C. X. Zhao1, B. Beutler1. 1Ophthalmology, Shenzhen Eye Hospital; 2Ophthalmology, Central Hospital of Wuhan; 3Ophthalmology, UT Southwestern Medical Center; 4Center for the Genetics of Host Defense, UT Southwestern Medical Center

6061 — A0558 Gene editing of mouse Lrrtm4, a bipolar synaptic protein, responsible for macular dystrophy in human, shows photoreceptor degeneration by light stimulation. Akiko Suga1, M. Yamamoto2, T. Iwata1. 1National Institute of Sensory Organs, National Hospital Organization; 2JAC *CR

6062 — A0559 In vivo molecular imaging of endoglin mRNA using anti-sense shRNA-lipid conjugates as predictive biomarkers of neovascularization. Md Imam Uddin, T. C. Kilburn, T. C. Glenn. Ophthalmology, Vanderbilt University School of Medicine

6063 — A0560 Vps13b knockout mice are affected with Cohen syndrome’s ophthalmic issues. Romain Da Costa1, 2, V. Lhussiez1, Q. Cesar1, E. Dubus1, M. Simonutti1, E. F. Nandrot1, N. Acar1, L. Breitolin1, S. A. Picaud1, L. Faivre1, C. Thavrin2, L. Duplomb2. 1Genetics of Developmental Disorders - Team COHEN, INSERM UMR1231 - Université de Bourgogne; 2EHU TRANSLAD, CHU Dijon; 3Sorbonne Université, INSERM, CNRS, Institut de la Vision; 4Eye, Nutrition and Signalization Research Group, UMR CSGA 1324 INRA - 6265 CNRS - Université de Bourgogne

6064 — A0561 Vps13b knockout mice are affected with Cohen syndrome’s ophthalmic issues. Romain Da Costa1, 2, V. Lhussiez1, Q. Cesar1, E. Dubus1, M. Simonutti1, E. F. Nandrot1, N. Acar1, L. Breitolin1, S. A. Picaud1, L. Faivre1, C. Thavrin2, L. Duplomb2. 1Genetics of Developmental Disorders - Team COHEN, INSERM UMR1231 - Université de Bourgogne; 2EHU TRANSLAD, CHU Dijon; 3Sorbonne Université, INSERM, CNRS, Institut de la Vision; 4Eye, Nutrition and Signalization Research Group, UMR CSGA 1324 INRA - 6265 CNRS - Université de Bourgogne

6065 — A0562 Remodeling in rescued RP retina. Susanne Koch1, J. Kajtza1, S. Tsang1. 1Physiology, LMU; 2Ophthalmology, Columbia University

6066 — A0563 Vision and myelination defects due to loss of Vps11 function in a zebrafish model of genetic leukoencephalopathy. Ryan Thunnell1, S. Banerjee1, L. Ranspack1, X. Luo1, D. Besser1, J. Fogerty1, B. D. Perkins1, R. Skoff1. 1Ophthalmology, Visual and Anatomical Sciences, Wayne State University School of Medicine; 2Cleveland Clinic Foundation

6067 — A0564 Identification of a Novel Nonhuman Primate Model of Bardet-Biedl Syndrome. Martha Neuringer1, 2, L. Renner1, J. Stoddard1, S. Petersen1, B. Ferguson1, A. Lewis1, L. Colgon1, K. Prongay1, C. Cullin1, B. Dozier1, D. J. Wilson1, J. Gay1, J. T. McGill2, 1Oregon National Primate Research Center, Oregon Health & Science University; 2Casey Eye Institute, Oregon Health & Science University; 3School of Optometry, University of California Berkeley

6068 — A0565 Meta-Analysis of Genetic Expression Profiles in Glaucoma. Clara Castillo Jimenez Becerra1, A. Sabbagh1, J. Aljabban1, S. Frank1, J. Tahboub1, D. Hadley1. 1The Ohio State University College of Medicine; 2University of Michigan Medical School; 3Central Michigan University College of Medicine; 4Institute for Computational Health Sciences, University of California, San Francisco

6069 — A0566 Neuroprotective effects of SS-31 on retinal ganglion cell in experimental model of glaucoma by improving mitochondrial function. Shenghui Zhang. Eye and ENT hospital, Fudan University

6070 — A0567 Manipulating Gene Expression of Human Lamina Cribrosa Cells and Astrocytes. Jr-Juin Liou1, S. Tien1, M. Yee1, P. R. Kinchington1, C. A. Girkin1, 2. 1Department of Bioengineering, University of Pittsburgh; 2Department of Ophthalmology, University of Pittsburgh; 3Department of Ophthalmology and Visual Sciences, University of Alabama at Birmingham

6071 — A0568 DNA Methylation of human trabecular meshwork: searching for biomarkers of glaucoma. Vicente Zanon-Moreno1, S. M. Sanz-Gonzalez1, J. Garcia-Medina2, 3, M. D. Pinzani-Duran1, 4, O. Collet1, D. Corella1, 2, 3. 1Area of Health Sciences, Valencia International University - VUI; 2Ophthalmology Research Unit “Santiago Grisolía”, FISABIO; 3Thematic Network of Cooperative Research in Ocular Pathology (FOTARED), Carlos III Health Institute; 4Department of Ophthalmology, Morales Meseguer University General Hospital; 5Department of Computer Languages and Systems, Universitat Jaume I; 6CIBER Fisiopatología de la Obesidad y Nutrición, Instituto de Salud Carlos III; 7Department of Preventive Medicine & Public Health, University of Valencia

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
6072 — A0569 Identifying Genes that Underlie Exfoliation Syndrome using Genetically Determined Gene Expression. *Jibril Hibb*, F. Passato*1, P. Pavur*1, J. Sealock*, P. Evans*1, E. Gamazori*, R. Tao*1, A. Reis*1, D. Berne*1, U. Schlotzer-Schrehardt*2, M. A. Bramley*1, C. Khor*1, N. Cox*1, K. M. Joss*1. *Vanderbilt University School of Medicine; *Institute of Human Genetics, Friedrich-Alexander-Universität Erlangen-Nürnberg FAU; *Vanderbilt Eye Institute; *Ophthalmology, Universitätssklinikum Erlangen; *Singapore Eye Research Institute

6073 — A0570 Long-non coding RNAs associated to Fuch’s Dystrophy: a bioinformatic analysis. Judith Zavala, J. Valdez-García, R. Cuevas-Díaz Duran. Escuela de Medicina, Tecnológico de Monterrey

6074 — A0571 miR-199a-5p directly regulates the expression of ZEB1 and Snail1 in corneal endothelial cells. Matilda F. Chan*2, D. Weisenberger*1, S. Zheng*1, M. Wolf*1, D. G. Hwang*1, J. Rose-Nussbaum*1, U. V. Jurkunas*1, P. Pan*1. *Ophthalmology, Univ of California-San Francisco; *Proctor Foundation, University of California, San Francisco; *Biochemistry and Molecular Medicine, University of Southern California; *Ophthalmology, Harvard Medical School; *Scheepens Eye Research Institute, Massachusetts Eye and Ear

6075 — A0572 Mapping mRNA expression of glaucoma genes in healthy mouse eyes. Theo G. Gorgels1, W. H. Hubens1, W. D. Ramdas1, C. A. Webers1. *University Eye Clinic Maastricht, Maastricht University Medical Center; *Ophthalmology, Erasmus Medical Center; *School for Mental Health and Neuroscience, University Maastricht *CR

6076 — A0573 Development of a rapid and cost-effective CRISPR-based molecular detection platform for a novel myocilin mutation in rural Philippines. Edward Ryan Collantes1, N. Pendas1, A. Dy1, J. Gootenberg1, Abudayye1, B. Fan1, J. J. Collins*, F. Zhang1, E. A. Pierce1, Q. Liu1, J. L. Wiggins1. *Harvard Medical School, Mass Eye and Ear; *Broad Institute of MIT and Harvard

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West Exhibition Hall A0574-A0584a

Thursday, May 02, 2019 8:00 AM-9:45 AM

Multidisciplinary Ophthalmic Imaging Group

519 Functional and Molecular Imaging

Moderator: Morgan Heisler

6077 — A0574 The effect of reduced oxygen delivery and metabolism on electroretinogram b-wave in rats. Nathanael Matej1, J. Burford1, S. Leahy1, S. L. Auvazian1, B. Thomas1, N. P. Blair2, M. Shahidi1. *Ophthalmology, University of Southern California; *Ophthalmology and Visual Sciences, University of Illinois at Chicago *CR

6078 — A0575 Imaging of Retinal Oxygen Delivery and Metabolism in Diabetic Retinopathy. Mahnaz Shahidi1, S. Leahy1, S. L. Auvazian1, O. Tan1, D. Huang1, A. H. Kashani1, A. A. Moshrefi1, H. Ameri1, N. P. Blair2. *Ophthalmology, University of Southern California; *Ophthalmology, Oregon Health & Science University; *Ophthalmology & Visual Sciences, University of Illinois at Chicago *CR

6079 — A0576 Extensive impact of selective retina treatment on RPE metabolism: insights from fluorescence lifetime measurement. Svenja R. Sonntag1, A. Huftild1, B. Leiske1, D. Theisen-Kunde1, R. Brinkmann1, S. Grisanti1, Y. Miura2. *Department of Ophthalmology, University Hospital Schleswig-Holstein, Campus Lübeck; *Institute of Biomedical Optics, University of Lübeck; *Medical Laser Center Lübeck

6080 — A0577 Establishing a normative database to monitor mitochondria flavoprotein fluorescence in the retina. Grant L. How1, R. Raimondi1, T. F. Conti2, J. Hauk2, R. P. Singh2. *Cole Eye Institute, Cleveland Clinic; *Case Western Reserve University School of Medicine *CR

6081 — A0578 The effect of different flicker contrasts on the Dynamic Vessel Analysis. Sascha Klee, D. Link. Biomed Eng & Informatics, Technische Universität Ilmenau

6082 — A0579 Real time eye-tracking and blinking compensation for artefact-free acquisition of polarisation-sensitive OCT volumes. Florian Schwarzhans1, S. Desissaire2, S. Steiner1, H. Reisch1, M. Pircher1, C. K. Hüttenbrenner1, C. Vass2, G. Fischer1. *Center for Medical Statistics, Informatics and Intelligent Systems, Medical University of Vienna; *Department of Ophthalmology and Optometry, Medical University of Vienna; *Center for Medical Physics and Biomedical Engineering, Medical University of Vienna

6083 — A0580 Functional imaging of retinal neurons using OCT. Clara Pfajffe*1, D. Hillmann*1, H. Spahr*1, L. Kutzer*1, S. Burhan*1, F. Hilge*1, Y. Miura2, G. Huttmann*1. *Medizinisches Laserzentrum Lübeck (MLL); *Biomedical Optics, Universität zu Lübeck; *Thorlabs GmbH *CR

6084 — A0581 Biodegradable nano-probes for the detection of molecular retinal biomarkers of diabetes. Ali Hafezi-Moghaddam1, Y. Tu2, A. Radwani1, A. Barakat1, C. Russmann1, D. Sun2, M. Amiji3. *Radiology, Harvard Medical School; *Molecular Biomarkers Nano-Imaging Laboratory (MBNI), Brigham and Women’s Hospital; *Pharmaceutical Sciences, Northeastern University

6085 — A0582 In vivo analysis reveals a switch in metabolism and oxidative state of zebrafish eyes during development. Andrew W. Browne1,2, F. Xue1, T. Kalukanttar1, W. Tang1, L. Malacrida1, T. F. Schilling1, I. Vorontsova2. *Ophthalmology, University of California Irvine; *Biomedical Engineering, University of California Irvine; *Developmental Biology, University of California Irvine; *Facultad de Medicina, 2Área de Investigación Respiratoria, Departamento de Fisiopatología, Hospital de Clínicas, Facultad de Medicina; *Cell Physiology and Biophysics, University of California


6087 — A0584 Evaluation of Retinal Arteriosclerosis using Doppler Optical Coherence Tomography Flowmeter in Healthy Subjects. Masatake Murono1, T. Tan1, Y. Song1, K. Sogowa1, T. Yoshioka1, K. Takahashi1, T. Wade1, M. Akiba2, J. Sakai2, S. Nakamura2, K. MINAMIDE2, S. Ishiko2, Y. Yanaogi2, A. Yoshida2. *Asahikawa Medical University; *R&D division, Topcon Corporation; *Singapore National Eye Centre (SNEC) *CR

6087a — A0584a Investigation of rod outer segment disc shedding in vivo in mouse with optophysiological signals measured by OCT. Pengfei Zhang1, G. Peinado2, R. J. Zawadzki1, E. N. Pugh1. *Cell Biology and Human Anatomy, University of California Davis; *Center for Neuroscience, University of California Davis

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West Exhibition Hall A0585-A0631

Thursday, May 02, 2019 8:00 AM-9:45 AM

Multidisciplinary Ophthalmic Imaging Group

520 Multidisciplinary Imaging Technologies and Applications

Moderators: Ji Won Bang and Jesse B. Schallek

6088 — A0585 Dynamic Ocular Thermography: Discovering New Diagnostic Parameters. ILYA DIGEL, S. Lienz, K. E. Kotliar, D. Porst. Biomedical Engineering, FH Aachen University of Applied Sciences

6089 — A0586 Temperature Of The Ocular Surface Through Infrared Thermography Imaging In The Healthy Adults Population. Diana Alejandro Cortes Rojas1, S. Belalcazar2, A. C. Rodriguez Cedei1, D. Roa1, M. Plata1, S. Rosenstiel1, C. Carvajal1, F. Rodriguez1. *Fundacion Oftalmologica Nacional ; *Universidad Distrital
6090 — A0587 The application of Terahertz scanning system on cornneas. Yu-Chi Liu1, L. Ke1, N. Zhang2, E. Teo2, J. Mehta1. 1Ophthalmology, Singapore Eye Research Institute; 2Duke-NUS Medical School; 3Institute of Materials Research & Engineering, The Agency for Science, Technology and Research, Singapore; 4Singapore National Eye Center

6091 — A0588 In vivo corneal confocal imaging and its potential utility for Alzheimer’s disease: A feasibility study. Cürius Dehglishi, L. E. Downie1, S. Frost1, R. Jayasena1, C. Fowler1, C. L. Masters2, Y. Kanagasingam1. 1Australian e-Health Research Center, CSIRO; 2The Florey Institute of Neuroscience and Mental Health; 3Department of Optometry and Vision Sciences, The University of Melbourne


6093 — A0590 Label-Free Imaging of Bipolar Cell Axons in Fresh Retina by Second-Harmonic Generation. Hyungskil Lim, F. Bucinca-Cupallari. Physics, Hunter College of CUNY

6094 — A0591 An optical method to assess the macular pigment density. Dimitrios Christaras1, H. Ginis1, A. Penagos2, J. Monpeam3, P. Artal4. 1Department of Research, Athens Eye Hospital; 2Laboratorio de Optica, Universidad de Murcia

6095 — A0592 Transcranial transmission fundus imaging. Timothy Weber1, J. Mertz2. 1Department of Biomedical Engineering, Boston University; 2Boston University Photonics Center

6096 — A0593 High resolution three-dimensional imaging of the intact eyeball using tissue clearing and light sheet microscopy. Yujia Yang, G. Li, L. Chen. University of California, Berkeley

6097 — A0594 Longitudinal study of retinal vessel oxygen saturation in diabetic retinopathy. Sveinn H. Hardarson1, R. A. Karlsson1, T. Bek1. 1Institute of Physiology, University of Iceland; 2Ophthalmology, University of Iceland; 3Electrical and Computer Engineering, University of Iceland; 4Department of Ophthalmology, Aarhus University Hospital

6098 — A0595 Multimodal Adaptive Optics Imaging of the Cellular Status and Progression of the Outer Retinal Complex in Bietti Crystalline Dystrophy. Johnny Tarn1, L. Hury1, Z. Liu1, J. Liu1, H. Jung1, N. Aguilar2, D. Hammer2, W. M. Zein3, T. Liu1. 1National Eye Institute, National Institutes of Health; 2U.S. Food and Drug Administration, Center for Devices and Radiological Health


6100 — A0597 Quantitative detection of flavoproteins for fluorescence imaging of oxygen metabolism in the retina. Julia Nourbakhsh1, C. Marconi1, K. Smith1, A. Harvey3. 1School of Physics and Astronomy, University of Glasgow; 2Department of Neuroinflammation, University College London Queen Square Institute of Neurology

6101 — A0598 Fluorescein sodium loaded by polyethyleneimine for fundus fluorescein angiography. Wenting Cai1, J. Yu1. Tongji university; Ophthalmology, Shanghai tenth people’s hospital

6102 — A0599 The correlation between retinal pigment epithelium thickness and lipofuscin accumulation in healthy eyes: an in vivo optical coherence tomography and quantitative autofluorescence study. Mariano Cozzi1, M. Belotti1, M. Cigada1, F. Volta1, G. Strauenger1, A. Invernizzi1. Ophthalmology, Eye Clinic Luigi Sacco Hospital, University of Milan; Ophthalmology, IRCCS-Cà Grande Foundation- Ospedale Maggiore PoliClinico, University of Milan

6103 — A0600 Bevacizumab Diffusion Coefficient In Vivo Measurement Of Rabbit Vitreous Humor With Fluorescein Labeling. Anita N. Penkovka1, J. Martinez1, M. Humayun3, A. Tade1, A. Galacic1, A. Calle2, M. Thompson2, M. Pratt2, S. S. Sadhal1, 2. 1Aerospace and Mechanical Engineering, University of Southern California; 2Radiology, SAIRC; Saban Research Center, Children’s Hospital Los Angeles; 3USC Roski Eye Institute; 4USC Institute for Biomedical Therapeutics; 5Department of Chemistry, University of Southern California; 6Department of Chemistry, University of Southern California; 7Department of Chemistry, University of Southern California; 8USC Roski Eye Institute, University of Southern California; 9USC Ginsburg Institute for Biomedical Therapeutics, University of Southern California


6105 — A0602 Trans-pars-planar illumination enables a 200° ultra-wide field pediatric fundus camera to allow easy examination of the peripheral retina up to the ora serrata. Xincheng Yao1, P. F. Chau2, M. K. Erol3, R. V. Chant4, T. Sou5. 1Department of Bioengineering, University of Illinois at Chicago; 2Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago; 3Department of Ophthalmology, Antalya Training and Research Hospital; 4Biolight Engineering LLC

6106 — A0603 Ultra-widefield imaging of the retinal vasculature in mild cognitive impairment and Alzheimer’s disease: A pilot study. Emma J. Peal1, D. S. Grewal1, S. P. Youn1, B. Polascik1, A. Thompson1, J. R. Burke2, C. Dunn2, E. Trucco2, T. MacGillivray3, S. Fekrat4. 1Centre for Clinical Brain Sciences, The University of Edinburgh; 2Department of Neurology, Duke University School of Medicine; 3Computing (School of Science and Engineering), The University of Dundee; 4Department of Ophthalmology, Duke University School of Medicine


6108 — A0605 Super-resolution ultrasonic microvessel imaging for retinal and choroidal blood flow measurement. Xuejuan Qian1, H. Kang2, E. Grant1, K. Shung1, M. Humayun3, Q. Zhou1. 1USC Roski Eye Institute, University of Southern California; 2Department of Biomedical Engineering, University of Southern California; 3Department of Radiology, University of Southern California; 4USC Ginsburg Institute for Biomedical Therapeutics, University of Southern California

6109 — A0606 Normative retinobullar measurements of the optic nerve using ultra high field magnetic resonance imaging. Bao N. Nguyen1, J. O. Cleary1, R. Glarin2, S. C. Kolbe3, B. A. Moffat1, R. J. Ordidge1, B. V. Bui4, A. M. McKendrick1. 1Department of Optometry and Vision Sciences, The University of Melbourne; 2Melbourne Brain Centre Imaging Unit, Department of Anatomy and Neuroscience, The University of Melbourne; 3Department of Radiology, Guy’s and St. Thomas’ NHS Foundation Trust; 4Department of Radiology, Royal Melbourne Hospital

6110 — A0607 Exploring the Haemodynamic Response Function in the occipital lobe in glaucoma. Melissa E. Wright1, K. Singh2, S. Rassh3, S. Kasmin3, R. Wise3, D. Schwarzkoff4, T. Redmond4. 1School of Optometry and Vision Sciences, Cardiff University; 2Cardiff University Brain Research Imaging Centre (CUBRIC), Cardiff University; 3School of Psychology, Cardiff University; 4School of Optometry and Vision Science, University of Auckland

6111 — A0608 MRI Screening for Adalimumab Therapy in Uveitis. Joshua Luis1, P. Sanghi1, E. Hindle1, A. L. Rees1, M. C. Westcott1. 1Moorefields Eye Hospital; 2Institute of Ophthalmology

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
6112 — A0609  Motion-Resolved 3D Magnetic Resonance Imaging Of The Human Eye. Benedetta Francescilli1, L. Di Sopra1, S. Ionita1, D. Zeugm1, M. Notter2, J. A. Bastiaansen1, J. Jorg1, J. Yerly2, M. Stuber2, M. Murray3. 1Ophthalmology, Fondation Asile des Aveugles; 2Radiology, CHUV, Laboratory for Investigative Neurophysiology; 3Department of Radiology, Lausanne University Hospital (CHUV) and University of Lausanne (UNIL); 1Department of Ophthalmology-University of Lausanne, Fondation Asile des Aveugles, Sensory-Motor Lab (SeMoLa); 2Ecole Polytechnique Fédérale de Lausanne (EPFL); 3Center for Biomedical Imaging (CIBM) *CR


6114 — A0611  Use of CT Scan in Detecting open Globe Injuries. Rachel Schneider, s. azar, G. Wong. Ophthalmology, Tulane University

6115 — A0612  Idiopathic Full Thickness Macular Holes larger than 450 µm: A Comparison between Traditional ILM Peeling Vs Inverted ILM Flap. Salvatore Parrulli, I. D’agostino, M. Cigada, F. Bottoni, G. Staurenghi, S. van Wijngaarden2, 3, J. G. Crowston2, 3. 2Radiology, CHUV, Laboratory for Investigative Neurophysiology; 3Department of Radiology, Lausanne University Hospital (CHUV) and University of Lausanne (UNIL); 1Department of Ophthalmology-University of Lausanne, Fondation Asile des Aveugles, Sensory-Motor Lab (SeMoLa); 2Ecole Polytechnique Fédérale de Lausanne (EPFL); 3Center for Biomedical Imaging (CIBM) *CR

6116 — A0613  Is the spectral effect of cataract in hyperspectral imaging random or well-defined? Jason Hsu1, X. Hudou1, F. Hu1, P. van Wijngaarden2, J. G. Crowston3. 1Faculty of Medicine, Nursing and Health Sciences, Monash University; 2Centre for Eye Research Australia; 3Ophthalmology, Department of Surgery, University of Melbourne

6117 — A0614  Fundus imaging in the freely gazing eye during long amplitude saccades. Kavitha Ratnam1, R. Sharma1, R. Konradi2, K. Curtis1, N. Trail1, A. Fix1, R. Cavin1. 1Facebook Reality Labs; 2Stanford University

6118 — A0615  EyeNED workstation: Development of a multi-modal vendor-independent application for annotation, spatial alignment and analysis of retinal images. Harm van Zeeland1, J. Meakin1, B. Liefer1, C. Gonzalez-Gonzalez2, A. Vaidyanathan1, B. van Ginneken1, C. C. Klaver1, J. S. Sanchez2. 1EyeNED Research Group, Department of Radiology and Nuclear medicine, Radboud University Medical Center; 2Department of Ophthalmology, Radboud University Medical Center; 3Ophthalmology & Epidemiology, Erasmus MC; 4Diagnostic Image Analysis Group, Department of Radiology and Nuclear Medicine, Radboud University Medical Center

6119 — A0616  Comparison of Feature Detectors for Retinal Image Alignment. Stefanos Apostolopoulos2, P. Truong1, S. De Zanet1. 1ARTORG Center, University of Bern; 2RetinaAI Medical AG; 3EPFL *CR


6121 — A0618  Comparison of the performance of four Fundus Cameras in clinical practice. JILI CHEN. ophthalmology, Shanghai Shiebi Hospital of Jing’an District

6122 — A0619  Investigation of the origin of the specular fundus reflex. Mohamed Belmouhoud, S. Rothenbuecher1, M. Larson1. 1Department of Ophthalmology, Rigshospitalet, Copenhagen; 2Eye Clinic, Basel University Clinic, Basel; 3Faculty of Health and Medical Sciences, University of Copenhagen


6125 — A0622  Use of a tablet attachment in teleophthalmology for real time video transmission from rural vision centres in a three tier eyecare network in India – eyeSmart Cyclops. Abhinav Loomba1, S. Vempati1, A. Pipin Das1, M. Taneja1, N. Deepthi1, 1M. Cornea and Teleophthalmology, LV Prasad Eye Institute; 1LVEPI Center for Innovation, LV Prasad Eye Institute; 1Department of eeyeSmart EMR & AEye3, LV Prasad Eye Institute; 1Teleophthalmology, LV Prasad Eye Institute


6127 — A0624  Telemedicine using a macro lens for anterior segment imaging in rural India. Louie Cao1, P. Bhatt1, A. Crochetiere1, L. Cuevas1, K. Enendu1, E. Frisch1, S. Raefsky2, C. Shumway3, A. Brown1. 1UC Irvine School of Medicine; 2John Moran Eye Center; 3Gavin Herbert Eye Institute


6131 — A0628  Quantification of RPE changes in choroideremia using a Photoshop-based protocol. Yi Zhui1, X. Xu1, J. Dimopoulos2, D. G. Birch3, P. S. Bernstein1, P. Francis1, J. Holt3, D. Kirn4, I. M. MacDonald5. 1Department of Ophthalmology and Visual Sciences, University of Alberta; 2Retina Foundation of the Southwest; 3Department of Ophthalmology and Visual Sciences, Moran Eye Center, University of Utah; 4Department of Ophthalmology, University of Ottawa *CR

6132 — A0629  Nanoparticle-augmented ultrasound and photoacoustic imaging to track stem cells in the anterior eye. Kelsey P. Kabelic1, E. Snider1, A. Karpouk1, C. R. Ehrier1, S. Emeljanov2. 1Biomedical Engineering, Georgia Institute of Technology & Emory University; 2Electrical and Computer Engineering, Georgia Institute of Technology

6133 — A0630  Hyperspectral autofluorescence (AF) of lipofuscin (LF) and viliform granules in a canine bestrophinopathy. Yuehong Tong1, J. Rosenbloom2, T. Mohammed1, N. Challa1, R. Smith1. 1Ophthalmology, Icahn School of Medicine at Mount Sinai; 2Keck School of Medicine of USC; 3New York University; 4The Ohio State University College of Medicine

6134 — A0631  Using Oxygen Saturation as an Alternative Contrast Agent for Angiography. Ross Drysdale1, L. E. MacKenzie1, T. R. Choudhary2, 4, J. Fernandez Ramos3, N. B. Benjamin1, C. Delloy1, A. Harvey1. 1School of Physics and Astronomy, University of Glasgow; 2Department of Chemistry, Durham University; 3School of Engineering and Physical Sciences, Heriot-Watt University; 4EPSRC IRC Hub, MRC Centre for Inflammation Research, Queens Medical Research Centre, University of Edinburgh; 5Torbay and South Devon NHS Foundation Trust; 6Institute of Cardiovascular & Medical Sciences, University of Glasgow

West Exhibition Hall B0001-B0033

Thursday, May 02, 2019 8:00 AM-9:45 AM

Glaucoma

521 Structure/Function Relationships

Moderators: David Crabb and Lyne Racette

6135 — B0001  The effect of ageing on the recovery of retinal function and structure following intraocular pressure elevation in mice. Pei Ying Lee1, Z. He1, V. H. Wong1, J. G. Crowston2, B. V. Bui1. 1Department of Optometry and Vision Sciences, The University of Melbourne; 2Centre for Eye Research Australia
6136 — B0002 Joint analysis of pointwise linear regression with structure and function may not increase sensitivity to glaucoma progression. Ivan Marin-Franch1, 3, P. H. Artes2, L. Racette1. 1Computational Optometry; 2Eye and Vision research group, Faculty of Health and Human Sciences, University of Plymouth; 3Callahan Eye Hospital & Clinics, UAB Medicine


6138 — B0004 Hierarchical cluster analysis of peripapillary retinal nerve fiber layer damages and macular ganglion cell loss in open angle glaucoma. Kwanghyun Lee, S. Kim, C. Park, H. Bae, S. Lee, G. Sung, C. Y. Kim. department of ophthalmology, Yonsei college of medicine

6139 — B0005 Clustered spatial alignment of ganglion cell structure and function delivers near perfect correlation enabling prediction of visual function. Barbara Zangerl1, J. Tong1, D. Alonso-Caneiro1, N. Yoshioka1, M. Kalloniatis1, 2. 1Centre for Eye Health, UNSW Sydney; 2School for Optometry and Vision Science, UNSW Sydney; 3School of Optometry and Vision Science, QUT

6140 — B0006 Updated Customizable Structure-Function Map from Visual Field to Optic Nerve Head. Andrew Turpin1, A. M. McKendrick. 1Computing and Information Systems, University of Melbourne; 2Optometry and Vision Science, The University of Melbourne

6141 — B0007 An automated method for assessing topographical structure-function assessment in abnormal regions in glaucoma. Emmanouil (Manos) Tsamis1, N. Bommakanti1, A. Sun1, K. A. Thakoor1, C. De Moraes1, D. C. Hood1, 2. 1Ophthalmology, Columbia University; 2Psychology, Columbia University; 3Biomedical Engineering, Columbia University

6142 — B0008 The relationship between clinical versus optical coherence tomography defined optic nerve cup to disc ratios in pediatric glaucoma suspects. Lindsay Machen, I. Jang, C. Mocan. University of Illinois at Chicago

6143 — B0009 Structure–function relationship in end-stage glaucoma after reaching the RNFL floor. Mi Sun Sung, S. Park. Ophthalmology, Chonnam National University Medical School and Hospital

6144 — B0010 Individual Macular Layer Evaluation with Spectral Domain Optical Coherence Tomography in Normal and Glaucoma Eyes. Fernanda Mari. Fujihara1, P. d. Mello1, C. Z. Benfica1, N. Castoldi1, F. M. Mendes1, 2, R. L. Lindenmeyer1, 2, D. Lavinsky1, 2, H. M. Pakter1, 2, F. Lavinsky1, 2, 3. 1Hospital Banco de Onhos de Porto Alegre; 2Department of Ophthalmology, Paulista School of Medicine, Federal University of São Paulo; 3Hospital de Clinicas de Porto Alegre; 4Department of Ophthalmology, Federal University of Rio Grande do Sul; 5Ophthalmology, Hospital Nossa Senhora da Conceição

6145 — B0011 Correlation between the visual field (VF) quadrant-specific mean deviation (qMD) and the corresponding optical coherence tomography angiography (OCTA) superficial peripapillary vessel density (spV/D), Ahmad Najafi1, M. Doukshakovajari1, S. Philip1, A. Tantraworasin1, 2, R. Ritch1. 1Einhorn Clinical Research Institute, New York Eye and Ear Infirmary of Mount Sinai; 2Lake Erie College of Osteopathic Medicine; 3Clinical Epidemiology and Clinical Statistic Center and Department of Surgery, Chiang Mai University


6147 — B0013 Point-by-point correlations between macular structure and function using OCT and microperimetry in healthy and glaucomatous eyes. Monica Del-Rio-Vellosillo1, L. Lopez-Canovas1, M. D. Pinazo-Duran1, 2, V. Zanin-Moreno3, 4, J. Garcia-Medina3. 1University Hospital La Arrixaca; 2Surgery, University of Murcia; 3Ophthalmology cellular y molecular, University of Valencia; 4Area of Health Sciences, Valencia International University; 5University Hospital Morales Meseguer


6149 — B0015 The Effect of Sleep Disorders on Retinal Peripapillary, Macular, and Optic Nerve Anatomy. Arash Davanian1, L. Williamson1, K. E. Bollinger1, B. Chaudhary1, D. M. Marcus1. 1Ophthalmology, Augusta University Medical Center; 2The Sleep Institute of Augusta


6153 — B0019 The influence of profession on intraocular pressure. Andreas Hartwig1, 2, N. Stuehiger1, 2. 1Hartwig Research Center; 2Aston University; 3Ostfalia; 4University Medical Hospital

6154 — B0020 Contrast-to-noise ratios to evaluate the detection of progression in eyes with diffuse and local glaucomatous damage. Juleke E. Majoor, K. A. Vermeer, H. G. Lemij. Rotterdam Ophthalmic Institute

6155 — B0021 Dissecting Neural and Vascular Contributions to Glaucoma Progression Using In Face OCT-Reflectance and OCT-Angiography. Davis B. Zhou1, 2, M. V. Castanos1, J. S. Andrade Romo1, M. Eguita1, 1, E. B. Jacobs, D. C. Hood1, 2, R. Ritch1, R. B. Rosen1, 2, T. Y. Chiu1, 2, 3, 3. 1Ophthalmology, New York Eye and Ear Infirmary at Mount Sinai; 2Ophthalmology, Icahn School of Medicine at Mount Sinai; 3Psychology, Columbia University; 4Ophthalmology, Columbia University; 5Einhorn Clinical Research Center, New York Eye & Ear Infirmary of Mount Sinai *CR

6156 — B0022 Glaucoma progression prediction using trend-based analysis in optical coherence tomography. Maki Nakao, A. Arikawa, S. Hori, Y. Mochizuki. Mochizuki eye clinic

6157 — B0023 Predicting glaucoma progression in one eye based on the progression status of the fellow eye. Sampson L. Abu1, I. Marin-Franch1, L. Racette1. 1University of Alabama at Birmingham; 2Computational Optometry

6158 — B0024 OCT-Angiography: agonistic β2-adrenergic receptor autoantibodies and FAS-to-FAZ-ratio in glaucoma patients. Christian Y. Mardin1, S. Hosari1, G. Wallukat1, R. Kunze1, M. Hermann1, R. Lämmer1, B. Hohberger1, 4. 1Ophthalmology, University Erlangen-Nuremberg; 2Max Delbrueck Center for Molecular Medicine; 3Internal Medicine III, University Erlangen-Nuremberg; 4Ophthalmology, University Erlangen-Nuremberg

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
6159 — B0025  The XFG- Associated Deaminase LOXL1 Is An Intrinsically Disordered Protein With A High Aggregative Ability. J. Mario Wolosin1, Z. Wang2, R. Ritchie3, A. M. Bernstein1. 1Ophthalmology, Icahn School of Medicine at Mount Sinai; 2Ophthalmology, New York Eye & Ear Infirmary of Mount Sinai; 3Ophthalmology, SUNY Upstate Medical University

6160 — B0026  Functional and cell loss in a genetic βα1-CTGF primary open-angle glaucoma model. Maximilian Weiss1, S. Reinehr2, C. Voss1, R. Fachhofer1, B. Dick3, S. C. Joachim3. 1Experimental Eye Research Institute; 2Institute of human anatomy and embryology

6161 — B0027  Gil1, Pitx2, FOXC1, and FOXC2 are expressed in periocular mesoderm (POM) in postnatal mice. Kathy K. Sibovod1, R. J. Thomson1, M. J. Serrano1, M. Pettro1, H. Zhao1. 1Biomedical Science, Texas A&M University; 2Ophthalmology, UTSW Medical School

6162 — B0028  The number of Myo/Nog cells increases in a murine model of glaucoma. Alexa N. McGrath1, V. MacPherson1, R. Brahmbhatt1, S. Murad1, S. Young1, J. Gerhart1, S. Egberts2, N. McGrath3, V. MacPherson1, R. Brahmbhatt1. 1Anatomy, School of Medicine, University College Dublin; 2Clinical Research Centre, School of Medicine, University College Dublin; 3Tissue Engineering Research Group (TERG), Royal College of Surgeons in Ireland; 4Institute of Ophthalmology, Mater Misericordiae University Hospital

6163 — B0029  Glaucoma surveillance in patients receiving intravitreal injections in a regional eye clinic. Jie C. Song1, E. L. Ong1, M. Adams1. Ophthalmology, Sunshine Coast Hospital and Health Services

6164 — B0030  Distribution of inter-endothelial junction and vascular mural cells may account for iridal volume change during pupil reflexion. Hongfang Yang. Ophthalmology Department, Fudan University

6165 — B0031  High-Frequency Ultrasound Biomicroscopy Measurement of Anterior Chamber Angle Structures in Patients with Primary Congenital Glaucoma. Yan Shi1, N. Wang2. 1Ophthalmology, Stein Eye Institute, UCLA; 2Bioengineering, UCLA

6166 — B0032  Health-Related Quality of Life in Patients with Baerveldt 250 and 350, and Ahmed FP7 Glaucoma Drainage Devices. Khin Kilgore1, F. Wang1, N. C. Stern2, N. N. Diehl3, D. O. Hodge1, C. L. Khanna1. Mayo Clinic

6167 — B0033  Iridocorneal angle of eyes in children with cataract. Yun-e Zhao1, Z. Li2, D. Wang3, Y. Zhao3. Eye Hospital of Wenzhou Medical University

6168 — B0034  Biomimetic modelling of the lamina cribrosa region using tissue engineered scaffolds - a novel 3D model for glaucoma research. Deirdre Brennan1, D. Clissmann1, R. Murphy1, D. Wallace1, I. Pascu1, A. Hibbits1, F. J. O’Brien1, C. J. O’Brien2. 1Anatomy, School of Medicine, University College Dublin; 2Clinical Research Centre, School of Medicine, University College Dublin; 3Tissue Engineering Research Group (TERG), Royal College of Surgeons in Ireland; 4Institute of Ophthalmology, Mater Misericordiae University Hospital

6169 — B0035  Decellularized optic nerve head model to study glaucoma biomechanics. Michelle D. Drewry1, J. Liou1, D. Krahe1, D. Brown1, J. P. Vande Geest1, 2. 1Bioengineering, University of Pittsburgh; 2McGowan Institute for Regenerative Medicine, University of Pittsburgh

6170 — B0036  Glaucoma-on-a-chip: an in vitro model for glaucoma drug discovery based on mimicking mechanical stress of high eye pressure.ascal A. Vroemen1, R. Sinha1, J. Rouwendaal1, L. Moroni1, J. d. Boer1, C. A. Weber1, T. G. Rogele1. 1University Eye Clinic Maastricht; 2MERLN Institute for Technology-Inspired Regenerative Medicine, Maastricht University; 3Biomechanical Engineering, University of Twente; 4Biomedical Engineering and Institute for Complex Molecular Structures, Eindhoven University of Technology *CR

6171 — B0037  Towards optic nerve head on a chip: a tool for understanding glaucomatous optic neuropathy. Elizabeth M. Boazak1, J. d’Humieres1, L. Schildmeyer1, G. Kim1, P. Pareek1, S. Takayama1, C. R. Ethier1. BME, The Georgia Institute of Technology

6172 — B0038  Finite Element Analysis (FEA) of Anatomical Factors Exaggerating Optic Nerve (ON) Strain During Adduction Tethering in Primary Open Angle Glaucoma (POAG) Without Elevated Intraocular Pressure (IOP). Joseph Park1, J. Giaconi1, K. Nouri-Mahdavi1, S. K. Law1, L. Bonelli1, A. L. Coleman1, J. Caprioli1, J. L. Demer1. Department of Ophthalmology, Stein Eye Institute - UCLA

6173 — B0039  Horizontal Duction Causes Age-dependent Deformation of the Optic Nerve Head and Peripapillary Retina. Alan Le1, M. Lesgart1, B. A. Gavargious1, S. Shi1, J. L. Demer1. 1Ophthalmology, UCLA; 2Bioengineering, UCLA

6174 — B0040  Globe Retraction During Adduction Tethering of the Optic Nerve (ON) Occurs in Primary Open Angle Glaucoma (POAG) With and Without Elevated Intraocular Pressure (IOP). Joseph L. Demer1, R. A. Clark1, S. Y. Shih1, J. Giaconi1, K. Nouri-Mahdavi1, S. K. Law1, L. Bonelli1, A. L. Coleman1, J. Caprioli1. 1Ophthalmology, Stein Eye Institute, UCLA; 2Neurology, University of California, Los Angeles

6175 — B0041  Effects of mechanical load on cytoskeletal protein arrangement in scleral fibroblasts. Petar Markov1, C. Boote1, H. Zhu1, E. Blain1. 1School of Biosciences, Cardiff University; 2School of Optometry and Vision Sciences, Cardiff University; 3School of Engineering, Cardiff University; 4Department of Biomedical Engineering, National University of Singapore

6176 — B0042  CXCR2 Regulates Extracellular Matrix Production by JAK/STAT3 and Cell Motility by FAK/MLC in Human Peripapillary Scleral Fibroblasts Under Mechanical Strain. Chen Qiu1, S. Qian1, X. Sun1. Eye and ENT Hospital of Fudan University

6177 — B0043  Collagen fiber interweaving strongly influences sclera stiffness, and likely plays a central role in globe mechanics. Ian A. Sigal1, B. Wang1, B. Yang1, P. Lee1, T. Y. Foong1, B. Brazile1, Y. Hua1. 1University of Pittsburgh; 2Southwest Jiaotong University

6178 — B0044  Hydrodynamic effects of interfacial tension on microtubes. Christin Hencin1, Y. Bouremel1, S. Brocchini1, P. T. Khaw1. 1National Institute for Health Research (NIHR) Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology; 2School of Pharmacy, UCL; 3Department of Mechanical Engineering, UCL

6179 — B0045  Effect of Changing Heart Rate and Body Posture on the Oscular Pulse Amplitude and Optic Nerve Head Deformations. Yuejiao Jin1, X. Wang2, S. Febrina Rachmawati3, Irnadiastupri1, R. Elsa Mohan4, T. Aung5, L. Schmetterer1, M. J. Girard1. 1Department of Biomedical Engineering, National University of Singapore; 2NUS Graduate School for Integrative Sciences and Engineering, National University of Singapore; 3Beijing Advanced Innovation Center for Biomedical Engineering, Beihang University; 4Singapore National Eye Centre, Singapore Eye Research Institute; 5Duke-NUS Medical School

6181 — B0047 Anterograde Neurotropic Viruse Infection from Trigeminal Ganglion Nerve Endings Innervating the Rat Anterior Eye Chamber to the Nuclei of Hypothalamus. Haixia Liu. ophthalmology, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China

6182 — B0048 Acquired Optic Pits Associated with Laser-assisted in situ keratomileusis: A Case Series. John Ling, S. Mosaed. UC Irvine

6183 — B0049 An improved mathematical model for OCT-based ocular rigidity measurements: clinical validation. Diane N. Sayah1, 2, J. Mazzaferrri1, P. Ghesquière1, R. Duval2, F. A. Rezende2, S. Costantino1, 2, M. R. Lesk2, 2. 1Maisonneuve-Rosemont Hospital Research Center; 2Department of Ophthalmology, University of Montreal

6184 — B0050 The tissue within a retina organoid shows a yield stress, the amount of mechanical stress necessary to induce irreversible deformations, which regulates the retina’s mechanical integrity. Florian H. Huhnke1, J. Di Russo1, P. Wysmolek1, J. Diemer1, N. Dhanovici1, I. P. Spatz1, 2, F. Serwane1, 2, 2. 1Department of Ophthalmology, University of Alabama Birmingham

6185 — B0051 Piezo1 plays a role in optic nerve head astrocyte mechanotransduction. Yang Liu1, J. Liu1, A. F. Clark1, Y. Yang1. 1North Texas Eye Research Institute, Department of Pharmacology & Neuroscience, UNT Health Science Center; 2Department of Biomedical Engineering, University of North Texas

6186 — B0052 Regional Rate-Dependent Mechanical Response of the Optic Nerve Head. Sunny Kwok1, Y. Ma1, X. Pan1, J. Liu1, 1. 1Biomedical Engineering, The Ohio State University; 2Department of Bioinformatics, The Ohio State University; 3Department of Ophthalmology and Visual Science, The Ohio State University

6187 — B0053 The role of lamina cribrosa tissue stiffness as a fundamental biomechanical driver of pathological glaucomatous cupping. Colm J. O’Brien, R. Murphy, M. Irranaten, A. Hopkins. Ophthalmology, Clinical Research Centre, Catherine McAuley Centre, School of Medicine, University College Dublin


6189 — B0055 Biomechanical Response of the Lamina Cribrosa in Glaucomatous and Non-glaucomatous samples. Jonathan F. Vande Geest1, H. G. Kolleck1, R. Behkama1, A. Jana1, U. Utzinger1, C. A. Girki1. 1Bioengineering, University of Pittsburgh; 2McGowan Institute for Regenerative Medicine, University of Pittsburgh; 3Computational Modeling and Simulation, University of Pittsburgh; 4Artificial Intelligence and Big Data, Pittsburgh Supercomputing Center; 5Biomedical Engineering, University of Arizona; 6Department of Ophthalmology, University of Arizona College of Medicine

6190 — B0056 Analysis for the effects of glaucoma and optic nerve damage on the pressure-induced strains in the human lamina cribrosa. Thao D. Nguyen1, D. Midgert1, B. Liu1, H. A. Quigley1. 1Mechanical Engineering, The Johns Hopkins University; 2Wilmer Ophthalmological Institute, School of Medicine, The Johns Hopkins University

6191 — B0057 Peri-papillary Bruch’s membrane and peri-papillary anterior scleral layer as the reference planes for measuring lamina cribrosa depth. Kalwane Royanlanangn1, P. Jaijalerpong1. 1Ophthalmology, Mettapracharak (Wat Rai Khing) hospital; 2Ophthalmology, Somdet Phraputthalerda Hospital

6192 — B0058 Association of Optic Nerve Head Structural Biometric Measures with Refractive Error through Axial Length. Seyhan Yazar1, P. Sanfilippo2, D. A. Mackey1. 1Centre for Ophthalmology and Visual Science, University of Western Australia; 2Centre for Eye Research Australia

6193 — B0059 Shape of globe expansion determines the optic nerve head configuration. Kyoung Min Lee1, M. Kim1, S. Oh1, S. Kim1. 1Department of Ophthalmology, Seoul National University Boramae Medical Center; 2Ophthalmology, Dongguk University Ilsan Hospital

6194 — B0060 Determinants of Lamina Cribrosa Depth in Asian Eyes. Tin A. Tun1, T. Wang1, T. Aung3, C. Cheng1, M. J. Girard2. 1Clinic, Singapore Eye Research Institute; 2Beijing Advanced Innovation Center for Biomedical Engineering, School of Biological Science and Medical Engineering, Beijing University, Beijing, China; 3Glucoma, Singapore National Eye Centre, Singapore; 4Department of Biomedical Engineering, National University of Singapore, Singapore

6195 — B0061 Dynamic changes in iris parameters under physiological conditions -development of a predictive model of angle closure risk. Rupert R. Bourne1, 2, I. Zhkov1, S. Parthian1. 1Vision & Eye Research Unit, Anglia Ruskin University; 2School of Medicine, University of Cambridge

6196 — B0062 Effect of IOP Reduction by Latanoprost on Corneal Biomechanical Properties in Glaucomatous Eyes Using Ultrasound Surface Wave Elastography. Arash Kazemi1, 2, Z. Zhou1, X. Zhang2, A. J. Sir1. 1Department of Ophthalmology, Mayo Clinic; 2Department of Radiology, Mayo Clinic

6197 — B0063 Influence of prostaglandin analogues on corneal biomechanical parameters measured with a dynamic Scheimpflug analyzer. Yuichi Yasukura1, 2, A. Mik1, S. Kuki1, N. Maeda1, 2, K. Nishida1. 1Osaka university hospital; 2Yodogawa Christian Hospital; 3Kozaki eye clinic

6198 — B0064 The influence of fluorescein and Goldmann’s Applation Tonometry on the Ultra-High Speed Dynamic Scheimpflug Non-contact Tonometry. Marcelo Macedo1, M. Hatatuka1, R. Susana1, R. Ambrosio1. 1Ophthalmology, University of São Paulo; 2Department of Ophthalmology, Federal University of São Paulo; 3Department of Ophthalmology, Federal University of the State of Rio de Janeiro


6201 — B0067 Corneal Deflection Amplitude and Visual Field Progression in Primary Open- Angle Glaucoma. Youn Hea Jung1, J. Moon1, J. Shin1. 1Ophthalmology, Yeouido St Mary’s; 2Department of Ophthalmology, Bundang Jesaeng General Hospital

6202 — B0068 Evaluation of spectral changes in corneal pulse signal following canoloplasty. Monika E. Danielewska1, A. Kicinska2, M. M. Placek1, K. Lewczuk2, M. Rekas2. 1Department of Biomedical Engineering, Wroclaw University of Technology; 2Department of Ophthalmology, Military Institute of Medicine

6203 — B0069 The increment of IOP counterbalanced by thinning the cornea to result in normal tension of model eye imitating the biomechanical properties of the human cornea. Sae Chae Jeong1, H. Cho1, S. Lee1, H. Moon1, H. Lee1. 1Advanced Instrumentation Institute, Korea Research Institute of Standards and Science; 2Ophthalmology, Bundang Jesaeng General Hospital; 3Nano Chemistry, Gachon University

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary. 370
523 Orbit and Thyroid eye Disease

Moderator: Sachin Kedar

6204 — B0184 Orbital fibroblasts from thyroid-associated ophthalmopathy patients secrete IL-6 via up-regulation of IGF-1 by activating the NF-κB pathway. Sung Eun Kim1, J. Kim2, J. Lee2, S. Lee2, J. Park3, S. Kim3, S. Yang3. 1Department of Ophthalmology and Visual Science, Seoul St. Mary’s Hospital, College of Medicine, The Catholic University of Korea; 2Department of Ophthalmology and Visual Science, Seoul St. Mary’s Hospital, College of Medicine, The Catholic University of Korea; 3Institute of Ophthalmology, Zhongshan Ophthalmic Center

6205 — B0185 Insulin-like growth factor I receptor (IGF-1R) expression in peripheral blood mononuclear cells (PBMC) in Thyroid-Associated Orbitopathy (TAO), Kam-hung, Kelvin Chong, W. CHU. Ophthalmology and Visual Science, The Chinese University of Hong Kong

6206 — B0186 Comparison of biomechanical properties of the orbit in patients with active and inactive endocrine orbitopathy measured with the Dynamic Scheimpflug Analyzer Corvis ST, Anna Leszczyńska, N. Terai, R. Herber, L. E. Pilunat. Medical University Dresden

6207 — B0187 Thyroid-associated ophthalmopathy in patients with thyroid carcinoma. Bin Sun, Z. Zhang, X. Ji. Shanxi Eye Hospital

6208 — B0188 The Cambridge Thyroid Eye Disease Treatment Regime: Retrospective Case Series. Nima J. Ghadiri1, P. Meyer2, R. Murthy3, 1Department of Ophthalmology, Norfolk and Norwich University Hospital; 2Department of Ophthalmology, Cambridge University Hospitals; 3Department of Ophthalmology, Ipswich Hospitals

6209 — B0189 Evaluation of choroidal thickness and choroidal vascular blood flow in patients with Thyroid Associated Orbitopathy (TAO) using SD-OCT and Angio-OCT. Chiara Del Noce, A. Vagge, C. E. Traverso. Di.N.O.G.M.I., University Eye Clinic Genoa

6210 — B0190 Withdrawal Non-responsiveness of raised intracocular pressure in thyroid associated ophthalmopathy. Karthikeyan Mahalingam, A. KISHAN, V. Gupta, S. GUPTA. Ophthalmology, Dr.R.P.Centre for Ophthalmic Sciences, AIIMS

6211 — B0191 Value of Radiologic Imaging in Orbital Inflammatory Diseases: Diagnostic Accuracy and the Assessment of Activity. Min Joong Lee1, B. Hamilton2, K. Ogle3, J. Murdock4, S. R. Planck5, T. M. Martin6, D. Choi7, R. A. Dailey7, J. D. Ng8, E. A. Steele8, R. Verma8, K. S. Biggess9, J. T. Rosenbaum. 1Casey Eye Institute, Oregon Health & Science University; 2Ophthalmology, Hallym University Sacred Heart Hospital; 3Radiology, Oregon Health & Science University; 4Ophthalmology, Portland State University School of Public Health; 5Graduate School of Dentistry, Kyung Hee University; 6Ophthalmology, UC San Diego, Shiley Eye Institute; 7Kaiser Permanente Northwest *CR

6212 — B0192 The use of MRI 3D reconstruction of orbital tissue in dysthyroid optic neuropathy. Zhang Ye1, Y. huasheng1. 1Sun Yat-Sen University; 2State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center


6214 — B0194 Gaze Evoked Deformations of the Optic Nerve Head in Thyroid Eye Disease. Liam Fisher1, 2, X. Wang3, T. A. Tur4, H. Chung5, D. Milet6, M. J. Girardi7. 1NUS Graduate School for Integrative Sciences and Engineering, National University of Singapore; 2In Vivo Biomechanics Laboratory, Department of Biomedical Engineering, National University of Singapore; 3Beijing Advanced Innovation Center for Biomedical Engineering, School of Biological Science and Medical Engineering, Beihang University; 4Singapore Eye Research Institute, Singapore National Eye Centre; 5Duke-NUS Medical School


6216 — B0196 Deep lateral wall decompression for thyroid eye disease using an ultrasonic bone aspirator. Janani Singaravelu, S. Couch. Ophthalmology, Washington University in St. Louis

6217 — B0197 Utility of PROSE in thyroid eye disease patients with recurrent proptosis after orbital decompression. Kalla A. Gervasio1, K. J. Godfrey1, J. P. Winesrake2, M. N. Lee3, K. C. Sippe1, E. C. Lai1, G. Lelli1. 1Wills Eye Hospital; 2Ophthalmology, Weil Cornell Medical College; 3Ophthalmology, Edward S. Harkness Eye Institute, Columbia University Medical Center

6218 — B0198 Novel histopathological, immunohistochemical and electron microscopic observations in explanted orbital peri-implant capsules. Tarjani V. Dave1, 2, D. Mishra3, V. Singh1, N. Mitragotri1, S. Kuma3. 1Department of Ophthalmic Plastic Surgery, L V Prasad Eye Institute; 2Ophthalmic Pathology Laboratory, L V Prasad Eye Institute; 3L V Prasad Eye Institute

6219 — B0199 Effect of a Foldable Capsular Vitreous Body on Stimulation of Orbital Growth and Maintenance of Globe Shape in Immature Rabbits. Danping Huang, B. Lin, L. Fang, Q. Gao. Oculoplasty Department, Zhongshan Ophthalmic Center

6220 — B0200 Evaluation of Socket Complications after Enucleation. Lucy A. Bailey1, J. C. Hunt2, K. Richanti-Reverol1. 1Ophthalmology and Visual Science, McGovern Medical School at The University of Texas Health Science Center; 2Robert Cizik Eye Clinic

6221 — B0201 Local excision of orbital metastasis from renal cell carcinoma: 3 cases including one 8-year follow-up. Julia Kang, T. Wojno. Ophthalmology, Emory Eye Center

6222 — B0202 Globe Preservation in the Management of Orbital Nerve Avulsion. Duy Vu1, G. Justin2, M. Colyer2, M. Somogyi2, B. Davies2, M. Sniegowski3, D. Lyon2. 1Ophthalmology, University of Missouri Kansas City; 2Ophthalmology, Brooke Army Medical Center; 3Ophthalmology, Walter Reed National Military Medical Center; 4Surgery, Uniformed Services University of the Health Sciences; 5Ophthalmology, Brooke Army Medical Center; 6Texas Oculoplastics Consultants; 7University of Texas

6223 — B0203 Development of an Institutional Orbital Cellulitis Clinical Pathway. Lisa Lin1, 2, K. Revere3, W. Katowitz4, J. Lavelle, N. Topping-Waller1, T. Kau5, M. Rizzi6, A. Bazi7, M. Hayes1, C. Wilbur1, M. Blackstone1, M. Russo1, K. Reddy6, I. F. Kuhn7, G. Binenbaum1. 1Perelman School of Medicine, University of Pennsylvania; 2Department of Ophthalmology, Children’s Hospital of Philadelphia; 3Department of Ophthalmology, Children’s Hospital of Philadelphia; 4Department of Otolaryngology, Children’s Hospital of Philadelphia; 5Pathway Program, Children’s Hospital of Philadelphia; 6Department of Pediatrics, Children’s Hospital of Philadelphia; 7Department of Infectious Diseases, Children’s Hospital of Philadelphia

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524 Eyelid and Lacrimal System

Moderators: Ningdong Li and Stephen P. Christiansen

6224 — B0204 Lacrimal tissue resection and dry eye in Fasanella-Servat Operation. Shani Golan, G. Lelli, C. Magro. Ophthalmology, Weill Cornell Medical college; Pathology and Laboratory Medicine, Weill Cornell Medical college

6225 — B0205 Exposure challenges with vismodegib treatment for basal cell carcinoma. Gabriela Rijkin. Ophthalmology, Flaum Eye Institute

6226 — B0206 Switchover study of onabotulinumtoxinA to incobotulinumtoxinA for facial dystonia. John Bladen, M. Favor, A. Litwin, R. Malhotra. Ophthalmology, Queen Victoria Hospital, East Grinstead

6227 — B0207 Repair of a full thickness lower eyelid defect with an ipsilateral full thickness bilamellar graft from the upper eyelid in a porcine model (Sus scrofa). Donovan Reed, W. Brundridge, C. Gallagher, T. Soeken, B. Davies. SAUSHEC


6229 — B0209 A prospective study of eyelid position after retina surgery. Livia Teo, A. Jung, L. S. Lim. Singapore National Eye Centre


6232 — B0212 Correction of recurrent pediatric ptosis with poor levator function: A modified pentagon frontalis suspension. Jingjing Jiang, L. Li. Department of Ophthalmology, Beijing Children’s Hospital

6233 — B0213 The Effect of Ptosis Repair on Tear Film Lipid Layer Thickness and Dry Eye Symptoms. Neel Vaidya, S. Kirk, D. Yoo. Ophthalmology, Loyola University Medical Center


6235 — B0215 Age-related changes in anthropometric measurements in the ocular region from childhood to adulthood in Chinese Han population. Huan Ma1, 2, Y. Chen2, R. Lu2, 2Zhongshan Ophthalmic Center; State Key Laboratory of Ophthalmology


6239 — B0219 Seven novel and three known mutations in FOXL1 in 10 Chinese families with Blepharophimosis syndrome. Bingying Liu, B. Zeng, D. Huang, 2Zhongshan Ophthalmic Center, Sun Yat-sen University; 2Guanghua School of Stomatology, Hospital of Stomatology, Guangdong Provincial Key Laboratory of Stomatology, Sun Yat-sen University, Guangzhou

6240 — B0220 Treatment of corneal opacity by automatic blepharopigmentor. Jeong Yong Kim. BORA Eye Hospital

6241 — B0221 The role of topical antibiotic prophylaxis in eyelid surgery: interim analysis of a pilot randomized controlled trial. Qinyuan Wang1, O. O. Idowu1, S. Sanaboonyawat2, T. S. Copperman1, M. R. Vagefi1, R. C. Kersten1. UCSC Ophthalmology; Department of Ophthalmology, Phramongkutklao College of Medicine, Royal Thai Army

6242 — B0222 Rebamipide promotes lacrimal duct epithelial cell survival via protecting the barrier function. Michiko Tsukamoto1, 2, H. Tanaka1, 2, T. Nakayama1, T. Nakamura1, A. Watanabe1, S. Cotozonoi1, S. Kinoshita1, 2, 3, 2Kyoto Prefectural University of Medicine; 3Saiseikai Shigaken Hospital; 3Japanese Red Cross Kyoto Daimi Hospital; 3Frontier Medical Science and Technology for Ophthalmology 2CR


6245 — B0225 Development of customized lacrimal bypass ducts using high resolution 3D-printing technology. Xian Zhang2, 1, R. Liu, g. Shaof, H. Henry Oliver Tenadoob Ware3, D. Ke1, N. Xiang1, H. F. Zhang2, c. sun1. Ophthalmology, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology; Biomedical Engineering, Northwestern University

Moderator: Takefumi Yamaguchi

6246 — B0227 A Phase 2 Multicenter, Randomized, Vehicle-Controlled Study to Evaluate the Safety and Efficacy of CBT-001 for Pterygia. Scott M. Whitecup1, 2, K. N. Sall3, J. A. Hovanessian1, D. F. Goldberg1, S. Bernstein1, O. L. Lee2. 1Whitecap Biosciences; 2Ophthalmology, UCLA Stein Eye Institute; 3Sall Research Medical Center; 2Doheny Image Reading Center, Doheny Eye Institute; 3Harvard Eye Associates; 1Bernstein Biostatistics Consulting; 3Wolstan & Goldberg Eye Associates *CR

6247 — B0228 Effect of N-Acetylcysteine in conjunctival pterygium. Fidelina Parra1, M. Toledo-Blas1, A. Franco-Vadillo1, D. Capiz-Correa1, A. Kormanski-Kovzova1, R. Jarillo Luna1, G. Guevara-Balcazar1, M. Castillo-Hernandez1. 1Laboratorio de Farmacologia Cardiovascular y Medicina Hiperbarica Experimental, Escuela Superior de Medicina, Instituto Politecnico Nacional; 2Laboratorio de Morfologia, Escuela Superior de Medicina, Instituto Politecnico Nacional; 3Orbita y Oculoplastica, Fundacion Hospital Nuestra Señora de la Luz, IAP

6248 — B0229 Conjunctival transcriptome profiling in vernal keratoconjunctivitis. Andrea Leonardi1, P. Dau1, P. Bruno2, R. L. Modugno1, J. Garrigue1. 1Neuroscience, Ophthalmology, University of Padova; 2Santen SAS; 1Department of Molecular Medicine, University of Padua

6249 — B0230 Shear stress affects expression of mucins in conjunctival epithelia. Kazuhiro Yokoyama1, T. Usunomiya1, A. Ishibazawa1, N. Ishii1, K. Hanada1, Y. Yanagi2, A. Yoshida1. 1Asahikawa Medical University; 2Singapore Eye Research Institute
Thursday – Posters – 6250 – 6273

6250 — B0231 Treatment of Pyogenic Granulomas with Intravitreal Injections of Bevacizumab. Randal Pham1, N. Phu1, A. Pham1, C. Chow2. 1Aesthetic and Refractive Surgery Medical Center; 2Byers Eye Institute; 1Rutgers College of Ophthalmic Medicine; 2Retina Diagnostic Center; 1Advanced Surgery Medical Center

6251 — B0232 Comparison of the P.E.R.F.E.C.T. and a modified amniotic membrane graft version of the technique for pterygium removal. Sahitya Podila1, G. Nguyen2, O. Myers3, L. Rose4. 1Family and Community Medicine, University of New Mexico Health Sciences Center; 2Surgery, Division of Ophthalmology, University of New Mexico Health Sciences Center; 3School of Medicine, University of New Mexico Health Sciences Center

6252 — B0233 Isolation and Identification of Human Conjunctival Epithelial Stem Cells by Neurotrophy Recovery P75. Yao Fu, N. Wu, X. Fan. Department of Ophthalmology, Shanghai Ninth People’s Hospital, Shanghai Jiao Tong University School of Medicine

6253 — B0234 Tissue engineered conjunctival substitute on the basis of decellularized porcine conjunctiva. Joana Wittr1, J. Dietrich1, G. Geering1, S. Merz1, S. Schrader1, K. Spaniol1. 1Department of Ophthalmology, University Hospital Dusseldorf; 2Department of Ophthalmology, Pius Hospital, University of Oldenburg

6254 — B0235 Comparative Evaluation of Typical and Atypical Pterygia Using Stem Cell and Germ Cell Markers. Rebecca Weiss1, M. Abadi2, A. Herzlich3, T. Nagasaki1, J. MBEKEAN1. 1Montefiore Medical Center; 2Jacobi Medical Center; 3Columbia University

6255 — B0236 Conjunctival bacterial flora in eyes with lacrimal passage obstruction before and after successful endoscopic recanalization. Takahiro Hiraoka1, S. Hoshi1, K. Tasaki1, Y. Kaji1, M. Maruyama1, T. Oshika1. 1University of Tsukuba; 2Maruyama Eye Clinic


6257 — B0238 Reducing Adenoviral Patient-Infected Days (RAPID) Study: A Randomized Trial Assessing Efficacy of One Time, In-Office Application of 5% Povidone-Iodine in Treatment of Adenoviral Conjunctivitis. Andrew Hartwick1, T. Than1, B. Rodic-Polic1, S. Johnson1, M. Migneco2, E. Shorter2, J. S. Harthan3, C. Morettin2, M. Whiteside3, C. Olson4, M. Margolis5, J. Huercker3, G. Storch6, M. O. Gordon6. 1Optometry, Ohio State University; 2Carl Vanon VAMC; 3Diasorin Molecular; 1University of Illinois; 2Northeastern State University; 3Washington University in St. Louis; 4Illinois College of Optometry; 5UC Berkeley; 6Fort Sam Houston

6258 — B0239 Extracellular eosophinophile traps formation was observed at the giant papillae of atopic keratoconjunctivitis patients. Akira Matsuda, Y. Asada, S. Iwamoto, T. Hirokata, N. Ebihara. Department of Ophthalmology, Juntendo Univ School of Med

6259 — B0240 Histological differences between plica semilunaris and conjunctivochalasis in Patients with epiphora. Nam Yeong Kim, Y. Kwon, M. Rho, W. Park, H. Ahn. Ophthalmology, Dong-A University Hospital

6260 — B0241 Comparison of Signaling Pathways used by the Specialized Pro-Resolving Mediators Maresin-1 and Maresin-2 to Regulate Conjunctival Goblet Cell Function. Darlene A. Darte1, J. Bair1, C. R. Olsen1, R. Hodges1, T. P. Ut High1, C. N. Serhan1. 1Scheeps Eye Research Institute/MEEI, 2Ophthalmology, Harvard Medical School; 3Faculty of Medicine, University of Oslo; 4Institute of Clinical Medicine, Faculty of Medicine, University of Oslo; 5Medical Biochemistry, Oslo University Hospital; 6Center for Experimental Therapeutics and Reperfusion Injury, Department of Anesthesia, Harvard Medical School

6261 — B0242 Withdrawal Evaluation of the Adenoplus™, an immunochromatography kit in US, for the novel adenoviruses (Types 53,54,56). Tomoko Tsukahara-Kawamura1, N. Hanazaka1, T. Fujimoto2, M. Konagaya2, E. Uchio1. 1Ophthalmology, Fukuoka University School of Medicine; 2Infectious Disease Surveillance Center, National Institute of Infectious Diseases

6262 — B0243 Pterygium: Prevalence and Associations in Western Australian Adults. David A. Mackey1, L. Stevenson1, G. Lingham1, A. Burton1, H. Brown1, E. Hayn1, L. Taw2, P. Santiaggio2, S. Yazar1. 1Lions Eye Institute, University of Western Australia/Lions Eye Institute; 2Centre for Eye Research Australia


6264 — B0245 Superior conjunctival healing after autografting used in pterygium excision: pre and postoperative outcomes. Fernando S. Vidal, S. Cronemberger, J. A. Massote. Ophthalmology, Federal Univ of Minas Gerais

6265 — B0246 Anterior Segment Optical Coherence Tomography Angiography Demonstrates Limbal Vascular Changes in Patients with Limbal Stem Cell Deficiency. William Binotti, R. Nose, K. Kenyon, P. Hamrah. Ophthalmology, Tufts Medical Center

6266 — B0247 Morphofunctional study of porcine ocular surface for preclinical research. Yolanda Diebold1, L. Garcia-Posadas1,2, A. Lépez-Garcia3, M. Crespo-Moral4. 1IBOA (Institute of Applied Ophthalmobiology), University of Valladolid; 2CIBER-BBN (Biomedical Research Networking Center Bioengineering, Biomaterials and Nanomedicine), Carlos III National Institute of Health


6268 — B0249 Antiproliferative, antioxidant and anti-inflammatory activity of lophyphiled Siempreviva in human pterygium fibroblasts. Paloma Lopez1, J. Zavala1, G. Guerrero-Ramirez2, J. E. Valde1. 1Ophthalmology, Tecnologico de Monterrey; 2Tecnologico de Monterrey Escuela de Medicina

6269 — B0250 Subconjunctival bevacizumab injections in the management of impending recurrent pterygium. Ying Chen1,2, H. Levine1, A. Quar12, R. Goldhar12, A. Galor123. 1Ophthalmology, Bascom Palmer Eye Institute; 2Miller School of Medicine, University of Miami; 3Ophthalmology, Miami Veterans Affairs Hospital

6270 — B0251 Standardized Lid Margin Redness Scale for Blepharitis. Yesha Raval, P. J. Gomes, M. B. Abelos. Ora *CR


West Exhibition Hall B0323-B0376
Thursday, May 02, 2019 8:00 AM-9:45 AM
Cornea

526 Corneal surgery-non refractive

Moderators: Jong Suk Song and Tor P. Utheim

6272 — B0233 An International Skills Assessment Rubric for Pterygium Surgery. Mehran Zarei Ghanavati1, H. Ghasesmi2, M. Salabati3, R. Mahmoudzadeh4, J. Belte2, M. Danieli2, A. J. Huang2, C. Liu2, A. R. Djellalian6. 1Farabi Eye Hospital; 2University of Illinois at Chicago; 3Washington University School of Medicine; 4Royal Victorian Eye and Ear Hospital; 5Royal Victorian Eye and Ear Hospital; 6Sussex Eye Hospital

6273 — B0234 Comparing fibrin glue and suture for graft fixation in pterygium surgery in area of high levels of ultraviolet radiation. Rafael d. Borges1, R. Y. Hida1, L. B. Vergara2, R. S. Ferro3, D. A. Montenegro1. 1Ophthalmology, Santa Casa de Misericordia de Sao Paulo; 2Ophthalmology, Universidade Federal da Paraiba

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6275 – B0326 Corneal patch grafts for exposed glaucoma drainage devices. Manothon Ray1,2. Ophthalmology, National University Health System; 2Ophthalmology, Yong Loo Lin School of Medicine.

6276 – B0327 Autologous Tenons Patch Graft in Corneal Fistula. Deepali Singh, P. Sahay, P. K. Maharan. All India Institute of Medical Sciences.

6277 – B0328 Study of clinical profile and outcome of cases of traumatic and nontraumatic wound dehiscence following Corneal Transplantation Surgery. Rashid B. Vajpayee1, L. Stevenson2, R. Abell3, M. McGuinness1. Royal Victorian Eye and Ear Hospital, University of Melbourne; 2Vision Eye Institute; 3Royal Victorian Eye and Ear Hospital; 4Centre for Eye Research Australia, University of Melbourne.

6278 – B0329 The Newcastle Corneal Transplant Registry: 15-year outcomes of the first corneal transplantation. Francisco C. Figueiredo1,2, A. E. Ghareeb1, M. S. Figueiredo1, W. J. Armitage1,3, S. Pradhan4. Ophthalmology/Institute of Genetic Medicine, Newcastle University; 2Ophthalmology, Royal Victoria Infnrmary, Newcastle Upon Tyne; 3Newcastle University.

6279 – B0330 Long-term survival of re-grafts by penetrating keratoplasty – a prospective study in the UK. Sayali Pradhan1, M. S. Figueiredo1, A. E. Ghareeb1, F. Figueiredo1,2. Ophthalmology, Royal Victoria Infnrmary, Newcastle Upon Tyne; 2Newcastle University.

6280 – B0331 Comparison of Intraocular Pressure, Steroid use, and Glaucoma Incidence after Penetrating Keratoplasty versus Endothelial Keratoplasty. Priscilla Vu1, S. Aggarwal2, Y. Lu1, K. Xie1, M. Wade1, A. Bhatt1. Ophthalmology, UC Irvine.


6283 – B0334 Outcomes of complex Descemet’s stripping automated endothelial keratoplasty (DSAEK) in eyes with significant ocular comorbidities. Kevin K. Mar1, Y. Wang1, N. Sanjiv1, U. V. Jirkunas2, J. Yin1. Massachusetts Eye and Ear Infirmary, Harvard Medical School; 2Boston University School of Medicine.

6284 – B0335 Clinical Outcomes of Replacing a Failed Descemet’s Stripping Automated Endothelial Keratoplasty Graft. Alex Bauer1,4, L. Potts5, S. Chen5, K. D. Tran4, M. D. Straiko1, M. A. Terry5. Tanya Trinh, N. Sorkin.*CR


6286 – B0337 DMEK tamponade using 20% sulfur hexafluoride (SF6) gas is associated with a significantly lower re-bubbling rate but comparable endothelial cell count in contrast to air. Cedric Matar1,4, L. Daas1, G. Milioti1, S. Suffo, B. Seitz2. Ophthalmology, Universitätsklinikum des Saarlandes.

6287 – B0338 Descemet Membrane Endothelial Keratoplasty with small grafts (mini-DMEK) for the treatment of focal defects in Descemet’s membrane. Björn Händel1, S. E. Siebelmann1, M. Matthaei2, A. Händel1, S. E. Siebelmann1, M. Matthaei2. Department of Ophthalmology, University of Cologne.

6288 – B0339 Cystoid macular edema following staged Descemet’s Membrane Endothelial Keratoplasty in Asian Eyes. Satoru Inoda1, T. Hayashi2, H. Takahashi1, I. Oyakawa2, H. Yokogawa3, A. Kobayashi1, N. Kato1, H. Kawashima1. Ophthalmology, Jichi Medical University; 2Ophthalmology, Yokohama Minami Kousai Hospital; 3Ophthalmology, Heart Life Hospital; 4Ophthalmology, Kanazawa Univ Grad Sch of Med; 5Ophthalmologym, Saitama Medical University.*CR

6289 – B0340 Incidence of and Risk Factors for Cystoid Macular Edema Post-Descemet Membrane Endothelial Keratoplasty. Geoffrey Ching1, M. Al-Obthani2, A. Covello1, M. McCarthy2, S. P. Holland1, R. Ritenour3, S. Yeung2, A. Iovieno2. 1Hospital Clinico San Carlos; 2Fundación Jiménez Diaz.


6291 – B0342 DMEK vs phaco-DMEK triple procedure: a comparative multivariate study about 106 cases. Sarah Stoebener1, A. MADKAUD, C. Gisquet1, c. goetz2, N. Ouamara1, Z. Mohamed1, L. Luillier1, J. Perone2. CHR Metz-Thionville.


6293 – B0344 Clinical outcome of 150 consecutive cases undergoing Descemet Membrane Endothelial Keratoplasty. Mayte Arino1, I. Jimenez-Alfaro1, B. Garcia Sandoval1, N. A. Jaramillo2, M. Iradier1, P. Arriola-villalobos1. 1Hospital Clínico San Carlos; 2Fundación Jiménez Diaz.

6294 – B0345 Changes in Anterior and Posterior Corneal Astigmatism after Descemet Membrane Endothelial Keratoplasty versus Ulitrathin Descemet Stripping Automated Endothelial Keratoplasty: Results from the Randomized Controlled DETECT Trial. Samuel Werner1, J. Rose-Nussbaumer2, L. Lin3, A. Austin1, W. Chamberlain1. 1Cornea, Casey Eye Institute, Oregon Health and Science University; 2Ophthalmology, University of California, San Francisco; 3Ophthalmology, Stanford University.

6295 – B0346 Simplified DMEK Technique: Description and Clinical Outcomes about 106 Eyes. Anne-Claude MADKAUD, S. Stoebener, D. Marie1, Z. Mohamed1, L. Luillier1, N. Ouamara1, c. goetz2, J. Perone3. Hôpital de Mercy, CHR Metz-Thionville.

6296 – B0347 Descemet’s membrane endothelial keratoplasty (DMEK) scrolling patterns following paired small radial incisions (hinges). Peter Bedard1, J. J. Justin1, M. S. Hansen1, J. H. Hou1. 1Dept of Ophthalmology and Visual Neuroscience, University of Minnesota; 2Lions Gift of Sight; 3Minnesota Eye Consultants.

6297 – B0348 Ultrasound Biomicroscopy for monitoring Descemet’s Membrane Endothelial Keratoplasty (DMEK) graft viability post-operatively. R. Ritenour1,3, S. Yeung2, A. Iovieno2. 1Department of Ophthalmology, Mayo Clinic; 2Mayo Faculty Primary Care; 3Mayo Clinic.

6298 – B0349 First in human trial of Novel DMEK punch to facilitate DMEK surgery. Chandra Bala. Department of Ophthalmology, Macquarie University.*CR

6299 – B0350 An alternative stain for DMEK grafts: safety, stain retention, and feasibility of Patent blue, Shin-Yi Chen1, K. D. Tran1, S. Wehner1, L. Potts1, A. Bauer1, M. D. Straiko1, M. A. Terry5. 1Cornea service, Devers Eye Institute; 2Ophthalmology, Chang Gung Memorial Hospital; 3Lions VisionGift.
6300 — B0351 Supplementation of amphotericin B in Optisol-GS for Descemet membrane endothelial keratoplasty (DMEK).

6301 — B0352 The Association of Eye Bank Observations, Donor and Recipient Factors with Operative Complications in the Cornea Preservation Time Study. Kevin Roos, C. Stoeger1, R. O’Brien, L. Szczotka-Flynn, A. Ayala1, M. G. Maguire2, B. Benetzi, J. H. Lass1. Eversight; 1Lions VisionGift; 2Jaeb Center for Health Research; 3Ophthalmology, Case Western Reserve University and University Hospitals Eye Institute; 4Center for Preventive Ophthalmology and Biostatistics, Perelman School of Medicine, University of Pennsylvania

6302 — B0353 Suitability of Corneal Tissue Related to Donor Ophthalmic History, Taylor Fields1, R. Jaberi1, L. James2, K. Jones2, K. McCoy3, M. Secic2. 1Ophthalmology, University of Saarland; 2Institute of Experimental Sales1.

6303 — B0354 Routine Donor Tomography in the Eye Bank as Sterile Screening Method for Improved Graft Selection in Corneal Transplantation. Berthold Seitz1, S. Mauerer2, F. Asl3, L. Hamon4, L. Daas5, A. Abdin5, T. Eppig6, A. Langenbucher6. 1Department of Ophthalmology, University of Saarland; 2Institute of Experimental Ophthalmology, Saarland University

6304 — B0355 Prospective Comparison of Telemedicine versus In-Person Consultations to Determine Corneal Tissue Suitability for Transplantation. Daniel L. Kornberg1, R. Alabi1, A. Ansini1, J. Clover1, K. D. Traw1, C. S. Sales1. 1Ophthalmology, Weill Cornell Medical College/NewYork-Presbyterian; 2Vision Research Laboratory, Lions VisionGift


6307 — B0358 Corneal grafts from body donors from the Institute of Anatomy - the experience of the LIONS Eye Bank in Homburg/Saar. Cristina Martin1, B. Seitz1, T. Tschernig1, K. Schäfer1, I. Scheck1, H. Mayer1, R. Dullwett1, M. Bischoff-Jung1. 1Department of Ophthalmology, Saarland University Hospital Medical Center UKS; 2Institute of Anatomy and Cell Biology of the Saarland University

6308 — B0359 Two-year Outcomes of Femtosecond Laser Myring Implantation Combined with Corneal Transsplot Cross-linking in Treatment of Keratoconus. Hosam Ibrahim-Elzembely1, M. Iqbal2, A. Elnasr3. 1Ophthalmology, Minia University; 2Ophthalmology, Sohag University; 3Ophthalmology, Alexandria University

6309 — B0360 Sinsky Assisted descemet endothelium Frill formation and Edge lifting (SAFE) for descememt membrane endothelial keratoplasty (DMEK) donor preparation in eye bank. Pratulla K. Maharana, P. Sahay, D. Singhal. Dr Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences

6310 — B0361 Implantation of Intrastromal Allograft Corneal Segment (ISACS) for treatment of pellucid marginal degeneration (PMD). Mohammad Jafuririnasab1, 2, M. Javadi1, S. Safi2, H. Abbas3, Y. Hadi4, 1labafinejad Medical Center, Department of Ophthalmology, Ophthalmic Research Center, Shahid Beheshti University of Medical Sciences; 2Ophthalmic Epidemiology Research Center, Shahid Beheshti University of Medical Sciences; 3Eye Bank Management

6311 — B0362 Small graft, simultaneous amniotic membrane transplantation, temporary lateral tarsorrhaphy and autologous serum improves outcome of penetrating keratoplasty in congenital aniridia with aniridia associated keratopathy. Fabian N. Fries, C. Farah, L. Latta, B. Käsmann-Kellner, B. Seitz. Ophthalmology, Saarland University

6312 — B0363 In vitro bio-functional profiles and in vivo outcome of α1,3-galactosyltransferase gene-knockout miniature pig-to-nonhuman primate corneal xenotransplantation. Mee Kun Kim1, 2, C. Yoon3, 2, S. Choi1, 2, H. Lee2, H. Kang2, J. Kim3, C. Park4, K. Choi2, H. Kim2, C. Ahn5, H. Choi2, 2, 2Ophthalmology, Seoul National University College of Medicine; 3Laboratory of Ocular Regenerative Medicine and Immunology, Seoul Artificial Eye Center, Seoul National University Hospital Biomedical Research Institute; 1Department of Laboratory Medicine, Hallym University College of Medicine; 2Optipharm, Inc.; 3Department of Internal medicine, Seoul National University College of Medicine

6313 — B0364 Predictive biomarkers for graft rejection in pig-to-non-human primate corneal xenotransplantation. Chung Ho Yoon1, 2, S. Choi2, H. Lee2, H. Kang2, M. Kim2. 1Ophthalmology, Seoul National University Hospital; 2Laboratory of Ocular Regenerative Medicine and Immunology, Seoul Artificial Eye Center, Seoul National University Hospital Biomedical Research Institute; 3Department of Laboratory Medicine, Hallym University College of Medicine


6317 — B0368 Long-term Outcomes of Pediatric Keratoprosthesis. Snea Bonta, P. Chhadva, J. de la Cruz, M. S. Cortina. University of Illinois at Chicago

6319 — B0370 Association between retroprosthetic membrane formation and post-operative angle closure after Boston type 1 Keratoprosthesis surgery. Carmen Somavilla, F. I. Karas, M. S. Cortina. Cornea, Illinois Eye and Ear Infirmary University of Illinois at Chicago

6320 — B0371 Corneal Topographic Characteristics after Crosslinking in pediatric patients after one year follow-up. Regina Velasco, M. LOPEZ-DIMAS, A. BABAYAN-SOSA, O. Fernandez Vizcaya, E. Alegría Gomez, C. Pacheco Del Valle, O. Baca Lozada. Cornea, Hospital de la Luz


6322 — B0373 Compared effectiveness of Dresden-protocol versus pulsed-accelerated crosslinking for halting keratectasia in progressive keratoconus. Liam O Sullivan, D. Johnson, A. Rulhan. Ophthalmology, Queen’s University

*CR* Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.

Thursday – Posters – 6300 – 6322
6323 — B0374  Morphological corneal changes up to one year after crossinglinking surgery with and without intracorneal ring segment insertion. Lacey Haines*, O. Kralj†, S. Marschall‡, A. Gavish§, P. Fieguth¶, N. Singal®, H. Chew®, D. Rootman®, A. Slomovic®, W. Hatch³, K. K. Bizeha², L. Sorbara². 1School of Optometry and Vision Science, University of Waterloo; 2Dept. of Physics and Astronomy, University of Waterloo School of Optometry and Vision Science; 3Oculus; 4Systems Design Engineering Dept., University of Waterloo School of Optometry and Vision Science; 5Dept. of Ophthalmology and Vision Sciences, University of Toronto *CR


6325 — B0376  Save Sight Keratoconus Registry: Outcomes of corneal cross-linking for Keratoconus from routine clinical practice. Stephanie L. Watson¹, A. Ferdi², M. Abbondanza³, V. Nguyen³, M. Garcia Molina¹, D. Barthelmes³, M. C. Gillies¹. 1The University of Sydney, Save Sight Institute, Discipline of Ophthalmology, Sydney Medical School, Sydney, New South Wales, Australia; 2Studio Oculistico Abbondanza; 3University of Zurich

West Exhibition Hall B0414-B0469 Thursday, May 02, 2019 8:00 AM-9:45 AM

Cornea

527 Contact lens

Moderators: Ping Situ and Eduardo M. Rocha

6326 — B0414  Development of an eye model with polyvinyl alcohol. Chau-Minh Phan¹, H. Qiao², R. Shinde², L. W. Jones³. 1School of Optometry and Vision Science, University of Waterloo; 2Manipal Institute of Technology *CR

6327 — B0415  Can orthokeratology lens design be modified to alter peripheral refraction? Paul Gifford, P. Kang, V. Massedepally, M. Tran, C. Priestley. Sch of Optometry & Vision Sci, University of New South Wales *CR

6328 — B0416  Modelling non-invasive tear break-up times of soft lenses using a sophisticated in vitroblink platform. Hendrik Walther, V. W. Chan, C. Phan, L. W. Jones. CORE, School of Optometry, University of Waterloo *CR


6330 — B0418  Conjunctival neuropathic and inflammatory pain-related gene expression in contact lens discomfort. Amalia Enriquez-De-Salamanca³, A. Lopez-de-la Rosa⁴, I. Fernandez⁴, C. Garcia-Vazquez⁵, C. Arroyo-del-Arroyo⁵, M. Calonge⁶, M. Gonzalez-Garcia⁵, 1IOBA- University of Valladolid; 2CIBER-BBN

6331 — B0419  The clinical study of orthokeratology: implications and the discontinue reasons. Jiwen Yang², C. Chen², C. Zhou³, J. Lin³, Y. He³, Z. Fan³, J. Li³, Z. Lin³. 1Aier Eye Hospital Group Shenyang aier eye hospital; 2Aier Eye Hospital Group Changsha aier eye hospital; 3Aier Eye Hospital Group Wuhan aier eye hospital; 4Aier Eye Hospital Group Chengdu aier eye hospital; 5Aier Eye Hospital Group Chongqing aier eye hospital; 6Aier Eye Hospital Group Lanzhou aier eye hospital; 7Aier Eye Hospital Group Guangzhou aier eye hospital; 8Aier Eye Hospital Group Changchun aier eye hospital

6332 — B0420  Influence of contact lens material in shielding against atmospheric pollutants. Sam Popoweli¹, C. W. Scales¹, B. Liang¹, D. Riederer¹, E. Dow¹, Z. Faddi², M. Scholten², P. Offermans³. 1Johnson & Johnson Vision; 2Philips Electronics

6333 — B0421  The effect of Glycoprotein 340’s scavenger receptor cysteine-rich domain on bacterial adhesion on soft contact lens. Kwaku A. Osei¹, C. Deivanayagam², J. J. Nichols². 1School of Optometry, University of Alabama at Birmingham; 2Department of Biochemistry and Molecular Genetics, University of Alabama at Birmingham

6334 — B0422  Re-Centering Dynamics Of Contact Lenses. Kara Maki, D. Ross. School of Mathematical Sciences, Rochester Institute of Technology *CR

6335 — B0423  Segmentation Tools for the Fourier Evaluation of Commercially Available Multifocal Contact Lenses. Pablo De Gracia¹,², C. Des Rosiers¹, T. D. Whitescarver¹. 1Chicago College of Optometry, Midwestern University; 2Viam Optical Solutions; 3Chicago College of Osteopathic Medicine, Midwestern University *CR

6336 — B0424  Shape discrimination ability and disability glare in orthokeratology children. Jun Jiang¹, B. Su¹, L. Zhou¹, B. Zhang¹, F. Lu¹. 1Optometry Clinic, Eye Hospital of Wenzhou Medical University; 2College of Optometry, Nova Southeastern University


6338 — B0426  The Impact of Contact Lens Discomfort on Symptoms of Ocular Pain and Quality of Life. Seyed Rezaeyan¹, M. Ozmen², G. Dieckmann³, N. Koseoglu³, M. Seyed-Rezaee, C. Chao, A. Jumali⁴, R. Nose⁴, A. Akhalqa⁵, Z. Salem⁵, A. Sabin⁵, P. Harmah⁵. 1Center for Translational Ocular Immunology, Department of Ophthalmology, Tufts Medical Center, Tufts University School of Medicine, Boston; 2Cornea Service, New England Eye Center, Department of Ophthalmology, Tufts Medical School, Tufts University School of Medicine, Boston *CR

6339 — B0427  Protein Deposition on antimicrobial contact lenses during extended wear. Parthasarathi Kalaiselvan¹, D. Dutta², S. Sharma³, F. Stapleton³, M. Wilcox³. 1School of Optometry and Vision Science, University of New South Wales; 2Jhaveri Microbiology Centre, L V Prasad Eye Institute *CR

6340 — B0428  The impact of orthokeratology lens on corneal sensitivity and corneal nerve fibers. qian gao¹, J. Yang². 1Aier eye hospital group Shenyang aier eye hospital; 2Aier School of Ophthalmology, Central South University *CR

6341 — B0429  Short-Term Changes of Subfoveal Choroidal Thickness and Axial Length in Myopic Children After Orthokeratology. Ruigi Zhang², J. Yang², 1Central South University; 2Aier eye hospital group Shengyang aier eye hospital

6342 — B0430  Association Between Endothelial Cell Density and Corneal Swelling in Post-Penetrating Keratoplasty Scleral Contact Lens Wear. Sofia Murillo¹,², J. Caty¹, A. Shariff¹, L. Szczoza-Flynn¹. 1Case Western Reserve University; 2University Hospitals *CR

6343 — B0431  Quantifying Pre- and Post-Lens Tear Film Thickness over Time with Alternative Contact Lens Packaging Solutions. Chloe Degre¹, O. Pikul¹, S. Basutkhari³, G. Yoon¹,². 1Flaum Eye Institute, University of Rochester; 2CooperVision Inc.; 3Center for Visual Science, University of Rochester *CR

6344 — B0432  Adverse events with contact lens wear in children. Padmaja Sankidar⁴, R. Y. Weng², T. Naduvilath². 1Brien Holden Vision Institute; 2Optometry, School of Optometry and Vision Science *CR

6345 — B0433  Minimal Effect of Evaporation on Ocular Surface Temperature with Contact-lens Wear. Clayton J. Radku¹, Y. Kim², S. M. Yi, K. H. Panora¹, J. W. Yuen¹, W. Li³, M. C. Lin². 1Chemical and Biomolecular Engineering, University of California, Berkeley; 2Vision Science Graduate Group, University of California, Berkeley; 3Clinical Research Center, School of Optometry, University of California, Berkeley *CR

6346 — B0434  Measurement of the optical quality of contact lens materials with dehydration. soheila boojari, J. Schwiegerling. university of arizona *CR

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
6347 — B0435 A large-scale, epidemiologic study of the influence of ultraviolet light on myopia progression: A 5-year follow-up study of approximately 57,000 Japanese patients’ eyes. Masao Yoshida, N. Mizuki, M. Takeuchi, T. Yamane, E. Okada. 1Department of Public Health, Koyarin University School of Medicine; 2Department of Ophthalmology, Yokohama City University School of Medicine; 3Okada Eye Clinic

6348 — B0436 Assessment of Corneal Endothelium (CE) in Patients Undergoing Temporary Myopia Therapy (Ortho-K) with CRT Contact Lenses (CL). Tania M. Schaefer1, I. F. Godinho1, R. Godinho1, G. Carracedo1, P. Oliveira2, F. C. Abib3. 1Schaefer Clinic Research Center; 2Universidad Complutense de Madrid; 3Department of Optometry, Ulsan College of Medicine


6350 — B0438 Symptoms associated with mid-day fogging when using a novel scleral lens filling solution. Jennifer S. Fogt, M. Karres, A. Menner, J. T. Barr. The Ohio State University College of Optometry *CR

6351 — B0439 Sensitivity of contact lens-related Pseudomonas aeruginosa keratitis isolates to antibiotics, multipurpose disinfesting solutions and disinfectants. Fiona Stapleton1, D. Silva1, H. Sousa1, H. Gil1, C. Alvarez - Lorenzo1, B. Saramago1, A. Correia2,3. 1Ophthalmology, Hospital das Forcas Armadas/PL-EMGFA; 2Ophthalmology, Hospital SAMS; 3OIE, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal; 4CIEQPO, Departamento de Engenharia Química, Universidade de Coimbra, Rua Silvio Lima, Pólo II, Pinhal de Marrocos, Coimbra, Portugal.

6352 — B0440 Asymptomatic versus symptomatic young contact lens wearers: differences in corneal sensitivity, ocular surface temperature, tear stability and blinking rate. M Carmen Acosta1, J. A. Pastor-Zaplan2, J. Gallar2. 1Instituto de Neurociencias, Universidad Miguel Hernandez-CSIC; 2Instituto de Investigación Sanitaria y Biomédica of Alicante

6353 — B0441 Presenting clinical, microbiological and treatment characteristics of contact lens related corneal infections in Asia. Chris H. Lim2, J. S. Mehta3, F. Stapleton4. 1Department of Ophthalmology, National University Hospital; 2School of Optometry and Vision Sciences, University of New South Wales; 3Singapore National Eye Centre; 4Ophthalmology and Visual Sciences Academic Clinical Program, Duke-NUS Graduate Medical School.

6354 — B0442 What are the effects of a short term interruption in contact lens wear on the supraphreshold response among symptomatic wearers? Ping Situ1, C. G. Begley1, T. L. Simpson1. 1School of Optometry, Indiana University Bloomington; 2School of Optometry and Vision Science, University of Waterloo *CR

6355 — B0443 Reciprocal geometrical interactions of modern soft contact lenses and the corneal epithelium. Bartłomiej J. Kalczyn1, P. Mlynia2, J. Stachura1, A. Jimenez-Villar3, I. Grulkowski1. 1Division of Ophthalmology and Optometry, Department of Ophthalmology, Collegium Medicum, Nicolaus Copernicus University; 2Institute of Physics; 3Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University

6356 — B0444 Vision Modeling Prediction of Senofilon-A with HYDRACLEAR® PLUS and Senofilon-A with HydraLuxe™ Contact Lenses. Vrushali Korde1, X. Wei1, G. Hofmann1, P. Gerlég2, P. Jusin1, B. Woolley2. 1R&D, Johnson & Johnson Vision Care; 2Artech Information Systems, LLC *CR

6357 — B0445 Layer-by-layer coating to control the diclofenac release from contact lenses material. Helena Filipe1, D. Silva1, H. Sousa1, H. Gil1, C. Alvarez - Lorenzo1, B. Saramago1, A. Correia2,3. 1Ophthalmology, Hospital das Forcas Armadas/PL-EMGFA; 2Ophthalmology, Hospital SAMS; 3OIE, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal; 4CIEQPO, Departamento de Engenharia Química, Universidade de Coimbra, Rua Silvio Lima, Pólo II, Pinhal de Marrocos, Coimbra, Portugal.

6358 — B0446 Ocular Comfort observed with Revitalens Solution at 45 and 120 minutes. Ming Bai, M. J. Bishop, B. K. Hoyt, R. Patrizi. Johnson & Johnson Vision Care *CR

6359 — B0447 Efficacy of Euclid Spherical and Toric Orthokeratology Lenses in Decreasing Corneal Astigmatism. Erin Tomiyama, K. Richdale. Cornea and Contact Lens, University of Houston College of Optometry *CR

6360 — B0448 The Changes of Higher-order Aberrations After Wearing Orthokeratology Lenses. Jae Yong Kim1, J. Hahn1, D. Lee2, H. Tcha1. 1University of Ulsan College of Medicine, Asan Medical Center; 2Bitsarang Eye Clinic

6361 — B0449 Agreement among high-definition anterior segment optical coherence tomography instrumentation in the evaluation of scleral contact lenses in vivo. Dorcas Tsang, J. Shen, F. Spors. College of Optometry, Western University of Health Sciences

6362 — B0450 Cosmetic contact lens-related corneal infections in Asia. Fiona Stapleton1, C. H. Lim2, S. Kwoon1, D. Bautista1, D. Tan3, J. Mehul4. 1School of Optometry and Vision Science, University of New South Wales; 2Department of Ophthalmology, National University Health System; 3Singapore Clinical Research Institute; 4Singapore National Eye Centre; 5Singapore Eye Research Institute

6363 — B0451 Translation and Validation of the 8-Item Contact Lens Dry Eye Questionnaire (CLDEQ-8) among Japanese Soft Contact Lens Wearers: the J-CLDEQ-8, Shizuka K 1, R. Chalmers1, D. Kabata1, A. Shintani, K. Nishida2. 1Innovative Visual Science, Osaka University Graduate School of Medicine; 2Ophthalmology, Osaka University Graduate School of Medicine; 3Clinical Trial Consultant; 4Medical Statistics, Osaka City University Graduate School of Medicine *CR

6364 — B0452 Clinical evaluation of higher add bifocal soft contact lens to control axial length growth in myopic children. Remy Marcotte-Collard. School of optometry, Université de Montréal

6365 — B0453 Clinical Evaluation Of Customized Ortho-K Design On Myopia Control And Axial Length Elongation. Patrick Simard. School of Optometry, Univ of Montreal

6366 — B0454 The Relationship Between Vision And Comfort In Contact Lens Wear. Jennie Diei1, T. J. Naduvilath1, D. Tilia2, R. C. Bakaraju1. 1Brien Holden Vision Institute; 2School of Optometry and Vision Science, University of New South Wales *CR

6367 — B0455 Visual performance and binocular vision function in adults wearing prototype extended depth-of-focus contact lenses. Jennifer Sha1, D. Tilia1,2, H. Amriza1, N. Yeotikar1, V. Thomas1, R. C. Bakaraju1. 1Brien Holden Vision Institute; 2School of Optometry and Vision Science, University of New South Wales *CR


6369 — B0457 Binocular vision disorders and contact lens dissatisfaction. Daniel Tilia1, R. C. Bakaraju1, L. J. Asper1, E. Papas. 1Clinical Research and Trials Centre, Brien Holden Vision Institute; 2School of Optometry and Vision Science, University of New South Wales

6370 — B0458 A radioactive labelling technique for evaluating the uptake and release of myristamidopropyl dimethylamine (MAP-D) from contact lenses. Alan Yee, V. W. Chan, M. L. Heynen, L. W. Jones. Centre for Ocular Research and Education (CORE), University of Waterloo *CR

*CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
6371 — B0459  The Attenuation of Hydrophobicity Recovery on Contact Lens Surface via Plasma UV Induced Grafting Polymerization of NVP and PEGMA. Man-Ching Huang¹, T. Wang², J. Hu³.¹ Department of Ophthalmology, Taipei Medical University Hospital; ²Department of Ophthalmology, School of Medicine, College of Medicine, Taipei Medical University

6372 — B0460  Scleral lens reservoir densitometry changes in small and large diameter lenses after one hour of wear. Cherie B. Nau¹, E. Shorter¹, A. C. Nau¹, J. S. Fogt¹, M. Schornack¹, J. S. Harthan¹.¹ Optometry, Mayo Clinic; ¹University of Illinois; ²Korb & Associates; ³The Ohio State University; ¹Illinois College of Optometry *CR

6373 — B0461  Effects of horizontal eye movement and contact lens decentration on horizontal peripheral refraction. David A. Atchison¹, Jaisankar¹, K. Gifford¹, A. Leube², ³, K. L. Schmid¹.¹ Institute of Health and Biomedical Innov, Queensland University of Technology; ²Institute for Ophthalmic Research, Eberhard Karls University Tuebingen; ³Carl Zeiss Vision International GmbH *CR

6374 — B0462  Spherical aberration in center-distance multifocal soft contact lenses as a function of power and pupil size. Augustine N. Nti¹, G. D. Hastings¹, J. D. Marsack¹, E. R. Ritchey¹, D. A. Berntsen¹.¹ The Ocular Surface Institute, University of Houston; ³College of Optometry, University of Houston *CR

6375 — B0463  Patient-Reported Mid-Day Fogging with Scleral Lens Wear. Mariel Schornack¹, C. B. Nau¹, A. C. Nau¹, J. S. Harthan¹, J. S. Fogt¹, E. Shorter¹.¹ Ophthalmology, Mayo Clinic; ¹Korb & Associates; ³Illinois Eye Institute; ¹College of Optometry, The Ohio State University; ¹Ophthalmology, University of Illinois


6377 — B0465  How reliable is labelled power of cast molded soft contact lenses? Klaus Ehrmann¹, ², F. Wüllmann³, ⁴, A. Neumann¹, ².¹ Technology, Brien Holden Vision Institute; ²School of Optometry and Vision Science, University of New South Wales; ³Optometry, Aalen University

6378 — B0466  Functional visual acuity in rigid gas permeable contact lens wearers. Takashi Suzuki¹, T. Iwakawa¹, S. Koji¹, Y. Hori¹.¹ Ophthalmology, Ishizuchi eye clinic; ²Ophthalmology, Toho University Omori Medical Center; ³Innovative Visual Science, Osaka University Graduate School of Medicine *CR


6380 — B0468  Evaluation of eye drop lubrication on contact lenses using a pendulum tester. Hiroko Iwashita¹, T. Iwakawa², K. Kakisu², Y. Okajima², T. Suzuki², K. Matsumi², Y. Hori².¹ Toho University Graduate School of Medicine; ²Ophthalmology, Toho University School of Medicine; ³Biomedical Engineering, Kitasato University *CR

6381 — B0469  Evaluation of the compatibility of multipurpose solutions with manufacturer’s contact lenses and storage cases on antimicrobial efficacy. Monica Crary, C. McAnally, R. Walters, E. Miller, V. Harris, M. M. Gabriel, S. Shannon. Alcon Laboratories *CR

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
6382 — 10:15 New insight into tear transport through the upper and lower canaliculi of the nasolacrimal ducts. Friedrich P. Paulsen1, M. Zetzsche2, M. J. Ali3, J. Heichel3, M. Scholz4, C. M. Hammer4. 1 Institute of Functional and Clinical Anatomy, Friedrich Alexander University Erlangen-Nürnberg; 2V. Prasad Eye Institute, Govindram Seksaria Institute of Dacryology; 3Department of Otorhinolaryngology, Martin Luther University Halle-Wittenberg *CR


6384 — 10:45 Determining the role of MITF family of transcription factors during choroidal fissure closure. Katie L. Wagner1, A. Larimer-Benedict2, J. Di Domenico2, I. Stalmans3, 2. 1Department of Ophthalmology, University of Pittsburgh; 2Department of Ophthalmology, University of California, San Francisco; 3Department of Ophthalmology, Osaka University Graduate School of Medicine

6385 — 11:00 Fractal dimension of the retinal vasculature: ge-related evolution in the general population and effect of cardiovascular health status. Sophie Lemmens1, 2, C. Landmeeters1, R. Peeters1, A. Simons1, J. Vereauteren1, J. Barbosa-Breda1, 2, K. Van Keer1, 2, P. De Boever4. 1Ophthalmology, University of Pittsburgh; 2Human and Molecular Genetics, Virginia Commonwealth University

6386 — 11:15 Antagonistic interactions of Sreb2 and Lrp2 in controlling mouse eye size. MAI SHUY3, D. M. Wei4, W. Xiong4. 1Department of Biomedical Sciences, City University of Hong Kong; 2Massachusetts Eye and Ear Infirmary; 3Department of Genetics, Harvard Medical School; 4City University of Hong Kong Shenzhen Research Institute

6387 — 11:30 The optic nerve lamina region (ONL/ONR) contains a neural progenitor/stem cell (NPC/NSC) niche. Steven L. Bernstein1, Y. Guo2, Z. Mehrabian2, C. Keri1, R. J. Fawcett2, s. Temple3, J. Sterrin1. 1Ophthalmology, Univ of Maryland Sch of Medicine; 2Neural Stem Cell Institute; 3Division of Aging Biology, National Institutes of Health *CR

6388 — 11:45 Autophagy is required for maintaining of oligodendrocyte precursor cells in optic nerve. Meysam Yazdanlkhah1, S. Ghosh1, I. A. Bhutto3, P. Shang2, N. A. Stepilechv2, S. L. Hose2, J. Weiss4, J. S. Zigler5, 3D. Sinha2. 1Ophthalmology, University of Pittsburgh; 2Wilmer Eye Institute, Johns Hopkins University

6389 — 10:15 Extracellular vesicles shed from endothelial colony forming cells (ECFCs) with high expression of CD44 are paracrine mediators of neurovasculotrophic retinal repair. Kyle V. Marra6, E. Aguilar7, A. Ouchi7, S. Sakimoto7, M. Friedlander1. 1Department of Molecular Medicine, The Scripps Research Institute; 2School of Medicine, University of California, San Diego; 3Department of Ophthalmology, Osaka University Graduate School of Medicine

6390 — 10:30 Ranibizumab and aflibercept levels and its impact on vascular endothelial growth factor in human breast milk following intravitreal injection. Verena Junical1, 2, Q. Paracha2, M. Bamakrid3, C. Franciscon3, 2, J. L. Farah1, A. Kherani1, R. Muni1, 2. 1University of Toronto; 2Ophthalmology, St. Michael’s Hospital; 3Ophthalmology, University of Calgary *CR

6391 — 10:45 Development of long-acting, pan-specific aptamer inhibitors of vascular endothelial growth factor-A optimized for use in retinal diseases. Sarah E. Thacker1, K. E. Maier2, S. Kossodo1, R. Quick3, A. A. Paylor4, K. G. Mcalure5, R. Carris6, R. M. Hutabarat7, 8, D. J. Perkins8, M. Levy9, C. Erickson6, C. Rusconi1. 1Biology, Vitrisa Therapeutics; 2Discovery, Vitrisa Therapeutics; 3Non-Clinical, Vitrisa Therapeutics; 4Chemistry, Vitrisa Therapeutics; 5Program Management, Vitrisa Therapeutics; 6CEO, Vitrisa Therapeutics; 7Research, Vitrisa Therapeutics *CR

6392 — 11:00 Novel aptamers inhibiting interleukin-8 for the treatment of anti-VEGF non-responsive neovascular retinal diseases. Matt Walker1, A. Bhowmick2, R. M. Hutabarat2, R. Quick1, A. A. Paylor1, S. Kossodo1, R. Carris4, 5, K. G. Mcalure2, D. J. Perkins4, M. Levy6, C. Erickson6, C. Rusconi2. 1Discovery, Vitrisa Therapeutics; 2Non-Clinical, Vitrisa Therapeutics; 3Chemistry, Vitrisa Therapeutics; 4Program Management, Vitrisa Therapeutics; 5CEO, Vitrisa Therapeutics; 6Biology, Vitrisa Therapeutics; 7Research, Vitrisa Therapeutics *CR

6393 — 11:15 Fenofibrate-loaded biodegradable nanoparticles for treating retinal neovascularization. Qingguo Xie1, 2, F. Qi1, Q. Chen3, K. Zhou4, Y. Shao5, G. Matlock6, X. Ma7, W. Wu8, T. Meng9, Y. Du9, X. Wang9, G. Deng9, J. Me1. 1Pharmaceuticals, Virginia Commonwealth University; 2Ophthalmology, Virginia Commonwealth University; 3Physiology, The University of Oklahoma Health Sciences Center

6394 — 11:30 A semi-automated phenotypic RPE in vitro scratch assay for screening of small molecule compounds able to influence RPE wound healing. Tina storm1, R. Campbell2, I. R. Wilson3, A. Bolinches-Amoros3, A. J. Russel4, 2, S. G. Davies3, A. R. Barnardi1, 1, R. E. MacLaren1, 1. 1Nuffield laboratory of ophthalmology, University of Oxford; 2Oxford University Hospitals NHS Trust, Oxford Eye Hospital; 3Department of Chemistry, University of Oxford; 4Department of Pharmacology, University of Oxford *CR

6395 — 11:45 Pharmacokinetics of micellar nanoparticle drug delivery for laser-induced choroidal neovascularization as seen on live ocular imaging. Iris N. Mollhoff1, S. K. Manna2, 1, W. Xiao1, L. Zhang1, K. Lam1, B. J. Zawadzki1, 2, G. Yu1. 1Ophthalmology and Vision Science, UC Davis Eye Center; 2Department of Cell Biology and Human Anatomy, UC Davis Eye-Pod Small Animal Ocular Imaging Laboratory; 3Biochemistry and Molecular Medicine, UC Davis School of Medicine *CR


6397 — 10:30 Survival and migration of photoreceptor precursors following transplantation into a macaque eye with host photoreceptors ablated. Ebrahim Ayoubzadeh1, M. Phillips2, 1, J. Strazzeri3, D. Diloreto4, 1, K. Dhakal1, B. Bateman5, J. J. Hunter6, W. H. Mergan7, 1, D. M. Gamm3, 1, D. R. Williams4. 1Center for Visual Science, University of Rochester; 2Waisman Center, University of Wisconsin-Madison; 3McPherson Eye Research Institute, University of Wisconsin-Madison; 4Flaum Eye Institute, University of Rochester; 5Department of Ophthalmology and Visual Sciences, University of Wisconsin-Madison; 6Center of Experimental Optics, University of Rochester *CR

*CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
6398 — 10:45  Bleb resolution time following subretinal injections of a cell therapy in porcine eyes appears sensitive to formulation osmolality. Jordi Mones1, R. Beckmann1, K. O’donnovan1, R. Woodward1, M. Biarnés2, E. Rodriguez1, M. García1, L. Ferraro1, E. Aguiler1, E. Izquierdo2, B. Reyes1, S. Patel1. 1Institut de la Macula; 2Barcelona Macula Foundation; 3Regeneon Ltd; 4Specigip Breeding and Biomedical Research *CR

6399 — 11:00  An analysis of intraoperative optical coherence tomography findings in subretinal gene therapy surgery. Huber Vasconcelos Junior1, P. Yang1, M. E. Pennesi1, B. J. Lujan1, A. K. Lau1. 1Casey Eye Institute - OHSU; 2Ophthalmology, Universidade Federal de Sao Paulo - EPM *CR

6400 — 11:15  Assessing the level of evidence for the benefit of commercially-available “cell therapy” treatments in the U.S. for ocular diseases. Andrew Chen1, D. Simhace1, R. S. Nirwan1, T. A. Albini1, J. Sridhar1, H. Flynn1, A. E. Kariyan1. 1Flaum Eye Institute, University of Rochester; 2Bascom Palmer Eye Institute, University of Miami

6401 — 11:30  Subfoveal gene augmentation therapy for choroideremia: One-year results from a Phase I/II trial of AAV2-hCHM. Rachel M. Huckfeldt1, T. S. Alemen4, T. Doan1, X. Wen1, C. Weigel-DiFranco1, D. C. Chung1, E. Liu1, E. A. Pierce1, J. Bennett1, A. M. Maguire4, A. E. Oakley1, J. Comander1. 1Massachusetts Eye and Ear, Department of Ophthalmology, Harvard Medical School; 2Department of Ophthalmology, Scheie Eye Institute, University of Pennsylvania; 3Spark Therapeutics; 4Center for Advanced Retinal and Ocular Therapeutics, Department of Ophthalmology, University of Pennsylvania *CR

6402 — 11:45  Phase I/IIa Clinical Trial of Human Embryonic Stem Cell (hESC)-Derived Retinal Pigmented Epithelium (RPE, OpRegen) Transplantation in Advanced Dry Form Age-Related Macular Degeneration (AMD): Interim Results. Eyal Banin1, A. Barak1, D. S. Boyer2, V. Do1, R. Ehrlich1, T. Jacquin1, R. McDonalda1, D. G. Tealander1, M. Gurevich1, O. Cohen1, G. Razag1, G. S. Hogge2, B. Reubinoff1, 6. 1Department of Ophthalmology, Hadassah-Hebrew Univ Med Ctr; 2Department of Ophthalmology, Soursky Medical Center; 3Retina Vitreous Associates Medical Group; 4Department of Ophthalmology, Byers Eye Institute, Stanford University School of Medicine; 5Department of Ophthalmology, Rabin Medical Center; 6West Coast Retina Group; 7Retinal Consultants Medical Group; 8BioTime subsidiary, Cell Cure Neurosciences; 9BioTime, Inc.; 10Center for Embryonic Stem Cells and the Department of Gynecology and Obstetrics, Hadassah-Hebrew University Medical Center *CR

East 11/12
Thursday, May 02, 2019 10:15 AM-12:00 PM
Retinal Cell Biology

531 Biology of Retinal Neurons

Moderators: Ann C. Morris and Tom Glaser

6403 — 10:15  Decorin Loss Compromises RPE Microvilli and Photoreceptor Interactions in the Retinal Interphotoreceptor Matrix. Shyam S. Chaurasia1, R. Lim1, S. Gupta1, D. P. Hanssworth1, R. R. Mohan2, 1Veterinary Medicine and Surgery, University of Missouri; 2Ophthalmology, Mason Eye Institute

6404 — 10:30  6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 2 governs the metabolic flux between rod and cone photoreceptors. Géraldine M. Puel1, M. Cordonnier1, A. Saint-charles1, E. Clerin1, F. Blond2, S. Achédi1, N. Ait-Alli1, O. Corchia1, L. Klipfel1, Y. Yang1, R. V. Rajala2, E. T. Camacho1, T. D. Leveillard1. 1Department of Genetics, Sorbonne Université, INSERM, CNRS, Institut de la Vision; 2Department of Ophthalmology and Physiology, University of Oklahoma Health Sciences Center; 3School of Mathematical & Natural Sciences, Arizona State University *CR

6405 — 10:45  Thyroid hormone signaling specifies cone subtypes in human retinal organoids. Robert J. Johnston1, K. Eldred2, S. Hadyniak1, K. Hussey1, R. Breranmer1, P. Zhang1, X. Chamling1, V. Sluch3, D. S. Welsbie3, S. Hattar4, J. Taylor5, K. J. Wahn1, D. J. Zack1. 1Biology, Johns Hopkins University; 2Wilmer Eye Institute; 3UCSD; 4NIH

6406 — 11:00  Müller glia proliferation and cone regeneration is triggered by acute damage but not progressive photoreceptor degeneration in zebrafish cep2900 mutants. Joseph Fogerty1, P. Song1, L. T. Cianciolo1, R. DiCicco1, D. B. Perkins1. Ophthalmic Research, Cleveland Clinic

6407 — 11:15  Pax2 positively regulates angiogenesis in order to initiate optic fissure fusion. Jakub Famulski1, M. Weaver1. Biology, University of Kentucky *CR

6408 — 11:30  Atoh7 cis regulation during retinal ganglion cell development: A multi species approach. Joel B. Miedel1, L. Jao1, S. K. MANNA1, R. J. Zavadzki1, N. Marsh-Armstrong1, N. L. Brown1, T. Glaser1. 1Cell Biology and Human Anatomy, University of California Davis; 2Ophthalmology & Vision Science, University of California Davis; 3Neuroscience and Ophthalmology, University of California Davis

6409 — 11:45  β2- and γ3-containing laminas regulate axon sorting at the chiasm and SCN nervation. Reyna I. Martinez-De Luna1, G. Bachay1, D. D. Hunter1, W. J. Brunken1. Ophthalmology, Upstate Medical University

East Ballroom A
Thursday, May 02, 2019 10:15 AM-12:00 PM
Immunology/Microbiology

532 Ocular microbiology and vaccines

Moderators: Linda D. Hazlett, victor L. Perez, and Marilyn P. Langford

6410 — 10:15  Absence of S-layer impacts pathogenesis of Bacillus endophthalmitis. Md Hazzzudd Mursali1, P. S. Coburn1, E. Livingston1, A. Fouert1, M. C. Cogle2, 1Microbiology and Immunology, University of Oklahoma Health Science Center; 2Department of Ophthalmology, University of Oklahoma Health Science Center and Dean McGee Eye Institute; 3Institut Cochin INSERM U1016, CNRS 8104, University Paris Descartes

6411 — 10:30  Pseudomonas aeruginosa T3SS effectors delay epithelial cell death to favor intracellular survival. Abby Kroken1, V. Nieto1, A. Jolly1, D. J. Evans3, S. M. Fleitzig1. 1School of Optometry, University of California, Berkeley; 2Biological & Pharmaceutical Sciences, Touro University, California


6413 — 11:00  Mechanism of LAT inhibition of apoptosis during latent HSV-1 infection. Kati Tormanen1, H. Ghiasi1. Surgery, Cedars-Sinai Medical Center

6414 — 11:15  Complement C3 and CD4 T cells coordinate corneal sensation loss in HSV-1 keratitis. Derek J. Royer1, D. J. Carr1, 1Ophthalmology, Duke University School of Medicine; 2Ophthalmology, University of Oklahoma Health Sciences Center; 3Microbiology & Immunology, University of Oklahoma Health Sciences Center

6415 — 11:30  Zika virus microneedle vaccination confers long-term protection to immune-privileged compartments. Jacob Beaver1, I. Skountzou1. Microbiology and Immunology, Emory University

6416 — 11:45  Virus-specific T cell receptor transgenic mice vaccinated with HSV-1 ΔNLS limit HSV–induced corneal neovascularization in the absence of antibody. Daniel J. Carr1, M. Montgomery1, D. J. Royer1. Ophthalmology, Univ of Oklahoma Hlth Sci Ctr *CR

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
Thursday, May 02, 2019 10:15 AM-12:00 PM

**533 Retinal Surgery and PVR**

**Moderators:** Gary W. Abrams and Tamer H. Mahmoud

**6417 — 10:15** Human recombinant Galectin-1 mitigates the cellular mechanisms of proliferative vitreoretinopathy in primary human tractive membranes in-vitro. Annabel von Studnitz1, C. Wertheimer1, A. Hillemmayer1, A. Geerlof2, S. Kassumek1, S. Priglinger1, A. Wolf1, C. Priglinger2. 1Laboratory for Cell- and Molecular Biology, Department of Ophthalmology, Ludwig-Maximilians-University Munich; 2Helmholtz-Zentrum Munich

**6418 — 10:30** Inactive Cas9 blocks TGF-β2-induced expression of Mdm2 and epithelial to mesenchymal transition in retinal pigment epithelial cells. Bing Liu1, J. Song1, Z. Hu1, N. Chen1. 1Ophthalmology, Schepens Eye Research Institute of Massachusetts Eye and Ear Infirmary, Harvard Medical School; 2Ophthalmology, The First Affiliated Hospital of Jinan University


**6420 — 11:00** Possible mechanism of silicone-oil related vision loss in intractable retinal diseases. Hiroki Kaneko1, H. Shimizu1, K. Yamada1, A. Suzuki1, R. Namba1, H. Terasaki1. Ophthalmology, Nagoya Univ Graduate School of Medicine

**6421 — 11:15** The Posturing after Retinal Detachment (PostRD) Trial. Edward Casswell1, D. Yorston1, E. Lee1, T. Heeren1, N. Harris1, T. Zvobgo1, S. Tarafdar1, W. Xing1, C. Bunce1, D. G. Charters1. Moorfields Eye Hospital; 2Tennant Institute of Ophthalmology

**6422 — 11:30** Long-term outcomes on lens clarity after lens-sparing vitrectomy for persistent fetal vasculature syndrome. Irina De la Huerta1, M. Gappy2, K. A. Drenser1, A. Capone1, M. T. Tresco1. 1Department of Ophthalmology and Visual Sciences, Vanderbilt University School of Medicine; 2Oakland University William Beaumont School of Medicine; 3Associated Retinal Consultants, P.C.

**6423 — 11:45** Factors Influencing the Adoption of a New Disruptive Surgical Technology by Vitreoretinal Surgeons. Naryan S. Sabherwal1, 2, K. A. Rezaei1, 2. 1Illinois Retina Associates; 2Ophthalmology, Rush University Medical Center

**6424 — 10:15** Loss of Xbp1 leads to early-onset retinal neurodegeneration in a mouse model of type I diabetes. Todd McLaughlin1, D. Seyfried2, M. Siddiqui1, J. J. Wang1, 2, S. X. Zhang1, 2. 1Department of Ophthalmology, University at Buffalo, State University of New York; 2Ross Eye Institute

**6425 — 10:30** Diabetes-induced down-regulation of PPARα plays a key role in the deficiency of endothelial progenitor cells and mitochondrial function. van shao1, J. Chen1, X. Li1, J. Ma1. 1Physiology, OHUISC; 2Vitreous and Retinal Disorders, Tianjin Medical University Eye Hospital

**6426 — 10:45** O-linked glycosylation of the translational repressor 4E-BPI promotes mitochondrial dysfunction in retina. Michael D. Dennis1, S. K. Dierschke1, W. P. Miller1. 1Cellular and Molecular Physiology, Penn State College of Medicine; 2Ophthalmology, Penn State College of Medicine

**6427 — 11:00** Identification of Photoreceptor Protein, Retinol Binding Protein 3 (RBP3), as a Protective Factor for Diabetic Retinopathy. Ward Fickweiler1, H. Yokomizo1, K. Park1, A. C. Clermont1, Y. Maeda1, S. M. Paniagua3, Y. Li3, J. K. Sun3, 4, G. L. King4. 1Beetham Eye Institute, Joslin Diabetes Center; 2Ophthalmology, Harvard Medical School; 3Vascular Cell Biology, Joslin Diabetes Center; 4Cellular and Molecular Physiology, Penn State College of Medicine

**6428 — 11:15** TRIB3 ablation attenuates hypoxia-induced angiogenesis in mouse retinas. Priyamwada M. Pitale1, Y. Ado-Agieiwah1, S. Li Calz1, T. Satok1, S. Akira1, M. R. Grant1, M. S. Gorbatyuk. 1University of Alabama at Birmingham; 2Osaka University

**6429 — 11:30** Retinal Ganglion Cell Protein Synthesis is Regulated by Glycolysis, mTORC1 Signalling, and Diabetes. Mandy Losiewicz1, L. Elghazi1, D. Kong1, D. Fingar2, R. V. Rajala1, P. E. Fort1, S. F. Abcouwer1, T. W. Gardner1. 1Ophthalmology & Visual Sciences, University of Michigan; 2Biological Chemistry, University of Michigan; 3Ophthalmology and Physiolog, University of Oklahoma; 4Molecular & Integrative Physiology, University of Michigan

**6430 — 11:45** Mitochondrial quality control is dysregulated in diabetic retinopathy. Jose Manuel Romero del Hombre1, L. Cairns1, T. J. Lyons1, P. Moynagh1, T. M. Currie1, H. Xu1. 1Centre for Experimental Medicine, Queen’s University Belfast; 2Division of Endocrinology and Diabetes, Medical University of South Carolina; 3Department of Biology, National University of Ireland Maynooth

**Moderators:** Sarah X. Zhang, Michael D. Dennis and Marina S. Gorbatyuk

**East Ballroom C**

Thursday, May 02, 2019 10:15 AM-12:00 PM

**534 Biochemistry and molecular biology of diabetic retinopathy**

**Moderators:** Yuka Okada and Keith H. Baratz


**6432 — 10:30** Effect of LASER Beam Truncation and Ordered Dithering on residual smoothness after PMMA ablations, using a close-to-Gaussian beam profile. Samuel Arba Mosquera1, D. T. Lin2, S. Verma3. 1Research & Development, SCHWIND eye-tech-solution; 2Pacific Eye Laser Centre

**6433 — 10:45** Refractive predictability of laser vision correction to treat hyperopia in a large patient cohort. Julie M. Schallhorn4, L. LF, S. C. Schallhorn1, 2. UCSF; 3Zeiss

**6434 — 11:00** Twelve-Month Astigmatic Outcomes from a Prospective, Randomized, Eye-to-Eye Comparison of Wavefront-Guided and Wavefront-Optimized PRK in Myopes. Ryan Smith, E. E. Manche. Ophthalmology, Stanford University


**6436 — 11:30** Can Corneal Crosslinking Stabilize Corneal Shape after Orthokeratology? A Proof-of-Concept Study in Rhesus Monkeys. Chimei Liao1, X. Lin1, S. Keel2, J. Ha3, X. Yang4, M. He1. 1Zhongshan Ophthalmic Center, Guangzhou, China; 2Center for Eye Research Australia; 3Monash University

**West 211**

Thursday, May 02, 2019 10:15 AM-12:00 PM

**535 Corneal surgery- refractive**

**6437 — 11:15** Refractive predictability of laser vision correction to treat hyperopia in a large patient cohort. Julie M. Schallhorn4, L. LF, S. C. Schallhorn1, 2. UCSF; 3Zeiss

**6438 — 11:30** Can Corneal Crosslinking Stabilize Corneal Shape after Orthokeratology? A Proof-of-Concept Study in Rhesus Monkeys. Chimei Liao1, X. Lin1, S. Keel2, J. Ha3, X. Yang4, M. He1. 1Zhongshan Ophthalmic Center, Guangzhou, China; 2Center for Eye Research Australia; 3Monash University
**6437 — 10:15** In vivo imaging of functional photoreceptor recovery after injury and its relationship to the time courses of microglia and Müller cell activation. Eric B. Miller1, P. Zhang2, K. Ching2, K. Ronning3, R. J. Zawadzki1, E. N. Pugh1, M. E. Burns3,4. Center for Neuroscience, UC Davis; 2Cell Biology & Human Anatomy, UC Davis; 3EyePod Small Animal Ocular Imaging Lab, UC Davis; 4Ophthalmology & Vision Science, UC Davis; 5Physiology & Membrane Biology, UC Davis


**6439 — 10:45** Diabetic rats with endogenously high levels of retinal dopamine do not display retinal vascular hallmarks of diabetic retinopathy. Rachael S. Allen1, 2, C. Motoyoshi2, 2, A. Frolov2, 2, K. Chester2, 2, S. Dhakal2, P. M. Thude2, P. Iovone2, T. S. Kernt3, M. T. Purdie1, 3. Center for Visual and Neurocognitive Rehabilitation, Atlanta VA Healthcare System; 2Biomedical Engineering, Georgia Institute of Technology; 3Ophthalmology, Emory University School of Medicine; 4Section Endocrinology & Metabolism, Atlanta VA Healthcare System; 5Section Endocrinology & Metabolism, Emory University School of Medicine; 6Pharmacology, Case Western Reserve University

**6440 — 11:00** Disassembly and rewiring of synaptic connectivity in the inner retina in experimental glaucoma. Yvonne Ou, A. A. Yu, K. Mai, A. Tran, L. Della Santina. Ophthalmology, University of California, San Francisco

**6441 — 11:15** Coupling architecture of the Aii/ON cone bipolar cell network in degenerate retina. Crystal Sigulinsky1, R. L. Pfeiffer1, J. Anderson1, D. Enrich1, C. Rapp1, J. Dahal1, J. Garcia1, H. Morrison1, K. Rapp1, J. Yang2, C. Watt2, M. Kondo3, H. Terasaki4, R. Marc5, B. W. Jones6. 1Ophthalmology & Visual Sciences, University of Utah; 2Ophthalmology, Nagoya Univ School of Medicine; 3Ophthalmology, Mie University Graduate School of Med

**6442 — 11:30** Ocular hypertension increases expression of Ca2+-permeable AMPA receptors in a OFF RGCs. Asia Cahill, S. A. Navy. Ophthalmology and Visual Sciences, UNMC

**6443 — 11:45** In Vivo Assessment of Retinal Ganglion Cells in Human Preclinical Alzheimer’s disease using Electrotetroretinography. Christian Felix1, 2, S. Asanad3, L. R. Karanja4, 5, M. Harrington1, A. A. Sadun2, 6. Department of Ophthalmology, David Geffen School of Medicine at UCLA; 2Doheny Eye Institute; 3Molecular Neurology Program, Huntington Medical Research Institutes (HMRI); 4Ottawa Eye Institute, University of Ottawa

**6444 — 10:15** Role of ErbBs in PCO-related TGFβ signaling, Linda Musil. Biochemistry & Molecular Biology, Oregon Health & Science Univ

**6445 — 10:30** Non-canonical TGFβ-signaling pathways in lens EMT: interplay between EGFR and p38 MAPK. Daisy Shiu1, 2, B. P. Mao1, F. J. Lovica3, 4. Ophthalmology, Save Sight Institute; 5Anatomy and Histology, The University of Sydney

**6446 — 10:45** Aspirin Inhibits TGFβ2-induced Mesenchymal Gene Transcription in Lens Epithelial Cells by Acetylation of the Lateral Surface Lysine Residues in Histone H3. Mihyun Nami1, M. Wormstone2, k. Fritz3, J. Galligani4, M. B. Pancheva4, R. H. Nagaraja5. 1Department of Ophthalmology, School of Medicine, University of Colorado Denver; 2Department of Ophthalmology, University of East Anglia; 3Department of Pharmaceutical Sciences, Skaggs School of Pharmacy and Pharmaceutical Sciences, University of Colorado; 4Department of Pharmacology and Toxicology, University of Arizona

**6447 — 11:00** Immediate early genes as drivers of inflammation and posterior capsular opacification following cataract surgery. Samuel Novo, M. H. Shihan, Y. Wang, M. K. Duncan. Biology, University of Delaware

**6448 — 11:15** How the wound-repair microenvironment regulates whether outcomes are regenerative repair or fibrosis. Janice L. Walker1, 2, A. Menko1, 2. 1Pathology/Anatomy&Cell Biology, Thomas Jefferson University; 2Ophthalmology, Thomas Jefferson University

**6449 — 11:30** The role of αVβ3-integrin in posterior capsular opacification (PCO). Melinda K. Duncan, M. H. Shihan, N. M. Rossi, Y. Wang. Biological Sciences, University of Delaware
West 221/222
Thursday, May 02, 2019 10:15 AM–12:00 PM
Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology

539 Brain and the Eye

Moderators: Linda K. McLoon and Larry A. Abel

6457 — 10:15 Progressive Neurodegeneration of the Retinal Nerve Fiber Layer in Veterans with Mild Traumatic Brain Injury. Randy H. Kardon1, 2, C. Gilmore1, 3, L. Dobler2, A. Fenske2, J. Full1, 4, J. Nellis2, 5, P. Pooman1, M. Garvin1, J. Wang1, T. Hendrickson1, K. Lim1, 6. 1Ophthalmology and Visual Sciences, University of Iowa; 2Center for the Prevention and Treatment of Visual Loss, Department of Veterans Affairs, Iowa City VA Healthcare System; 3Statistics, University of Iowa Business College; 4Geriatric Research, Education and Clinical Center (GRECC), Minneapolis VA Healthcare System; 5Electrical and Computer Engineering, University of Iowa; 6Informatics Institute, University of Minnesota; Defense and Veterans Brain Injury Center, Department of Veterans Affairs *CR

6458 — 10:30 Primary visual cortex transcranial random noise stimulation improves contrast sensitivity in adults with amblyopia. Richard Donkor1, C. Teske1, M. Wallis-Duffy2, M. Barnett-Cowan1, B. Thompson1. 1School of Optometry and Vision Science, University of Waterloo; 2Kinesiology, University of Waterloo


6460 — 11:00 Pupillary light response and sleep-wake activity in preclinical Alzheimer’s disease. Angela Ow1, G. Amore1, W. Sultan1, R. Karamnja1, M. Harrington1, C. La Morgia1, A. A. Sadun1. 1Ophthalmology, UCLA Doheny Eye Institute; 2Huntington Medical Research Institutes and Molecular Neurology Program; 3Department of Biomedical Science and Neurorobotics Center, University of Bologna; 4Ircs Institute of Neurological Sciences of Bologna, Bellaria Hospital

6461 — 11:15 Pupil campimetry: An objective measurement of local rod and/or cone function by pupillary response. Krunoslav Stingl1, T. Peters1, T. Strasser1, H. Wilhelm1, B. Wilhelm1, M. Kempf2, K. Stingl2, C. Kelbsch1. 1University Eye Hospital, University of Tübingen, Center for Ophthalmology; 2STZ eyetial at the Centre for Ophthalmology, University of Tübingen; 3Institute for Ophthalmic Research, University of Tübingen, Center for Ophthalmology

6462 — 11:30 Chromatic pupillopertimetry for objective automated perimeter in retinitis pigmentosa patients. Ifat Sher-Roenthal1, M. Gurevich1, Y. Tucker1, A. Hamburger1, D. BenNer2, K. Jft3, E. Derazne1, Y. Rotenstreich1. 1Goldschleger Eye Institute, Sheba Medical Center; 2Medical School, St. Georges University of London; 3Sackler Faculty of Medicine, Tel Aviv University *CR, *

West 223/224
Thursday, May 02, 2019 10:15 AM–12:00 PM
Visual Psychophysics/Physiological Optics

540 Intraocular Lenses and Presbyopia Correction

Moderators: Pablo De Gracia and Jos J. Rozema


6464 — 10:30 Axial Intraocular Lens Position: The Principal Determinant of Far Temporal Field Vignetting in Pseudophakic Eyes. Viswanathan Ramasubramanian1, N. Lopez-Gil2, P. S. Kollbaum1, A. Bradley1. 1Indiana University School of Optometry; 2Facultad de Óptica y Optometría, Universidad de Murcia

6465 — 10:45 Perceptual and physical limits to temporal multiplexing simulation of multifocal corrections. Carlos Dorronsoro2, V. Rodriguez-Lopez1, X. Barcala1, e. Gamba2, V. Akondi1, L. Sawides3, Y. Marrakchi3, E. Lage4, W. S. Geisler5, S. Marcos1. 1INSTITUTO DE ÓPTICA (IO-CSIC); 2Center for Perceptual Systems, University of Texas at Austin; 3Eyes Vision; 4Universidad Autonoma de Madrid *CR

6466 — 11:00 Pattern ERG as an Objective Outcome Measure of Contrast Sensitivity in Patients with Multifocal Intraocular Lenses. Jack TIAN1, M. Garcia1, A. A. Sadun1, S. G. Coupland1, R. Karamnja1, K. Liu1. 1Ophthalmology, University of Ottawa Eye Institute; 2Ottawa Hospital Research Institute; 3Flaum Eye Institute; 4Ophthalmology, David Geffen School of Medicine

6467 — 11:15 Comparison of defocus curves for four presbyopia-correcting intraocular lenses with four different designs: diffraction panfocal, diffraction trifocal, segmental refractive, and extended depth of vision. Myriam S. Boehm1, K. Petermann1, E. Honkepper1, T. Kohnen1. 1Ophthalmology, Goethe University Frankfurt; 2Ophthalmology, Scheppens Eye Research Institute, Massachusetts Eye and Ear, Harvard Medical School; 3Ophthalmology, Cullen Eye Institute, Baylor College of Medicine *CR

6468 — 11:30 Optical and visual quality with physical and visually simulated presbyopic multifocal contact lenses. Maria Vinas1, S. Aissati2, A. Gonzalez-Ramos1, M. Romero1, L. Sawides2, V. Akondi3, e. Gamba3, C. Dorronsoro4. 1Instituto de Óptica, CSIC; 2Eyes Vision; 3Research & Development, Johnson & Johnson Vision, Inc. *CR

6469 — 11:45 Perceptual differences across binocular corrections for presbyopia. Xoana Barcala1, M. Vinas1, e. Gamba2, S. Marcos1, C. Dorronsoro3. 1Instituto de Óptica, CSIC; 2Eyes Vision; 3Eyes Vision *CR

ARVO Ballroom
Thursday, May 02, 2019 10:15 AM–12:00 PM
Glucoma

541 Pharmacological Interventions and Cellular Interventions

Moderators: John Danius and M. Francesca Cordeiro


6471 — 10:30 Stem Cell Secretome as a Potential Treatment for Glaucoma and the Possible Mechanism. AYJ KUMAR5, Y. Du1. 1University of Pittsburgh; 2McGowan Institute for Regenerative Medicine, University of Pittsburgh

* Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures. *CR Refer to the Program Number in the Clinical Trial (CT) Registration Index.
6472 — 10:45  Adrenergic Control of Lymphatic Drainage from the Eye. Joseph Hanna1, Y. H. Yucel2, X. Zhou1, N. Kim1, N. Gupta1, 2. 1Keenan Research Centre for Biomedical Science, St. Michael’s Hospital; 2Departments of Ophthalmology and Vision Sciences, and Laboratory Medicine and Pathobiology, St. Michael’s Hospital, University of Toronto

6473 — 11:00  Activation of TRPV4 channels reduces IOP and improves outflow facility by regulating eNOS dependent NO release from the TM. Pinkal D. Patel, R. Kasetti, p. maddineni, J. Millar, G. Zode. Department of Pharmacology and Neuroscience, North Texas Eye Research Institute - UNTHSC


6475 — 11:30  microRNA21 mimics reduce intraocular pressure by PTEN/Akt/eNOS pathway. Yuan Lei1, C. Tan1, J. Chen1, X. Sun1, W. Stamer2. 1Ophthalmology, Eye and ENT Hosp of Fudan Univ; 2Biomedical engineering, Duke University

6476 — 11:45  Fibrillin-1 mutant mouse mimics abnormal aqueous humor TGFβ2 and phenotype of human POAG. MinHee K. Ko1, J. Woo1, J. Gonzalez2, G. Kim1, J. Tan1, 2. 1Doheny Eye Institute; 2Ophthalmology, University of California, Los Angeles
542 Cataract, Cornea, and Ocular Surface Disease

Moderators: Allen O. Eghrari and Qinbin Liu

6477 — A0063 Assessing cataract surgery outcomes with toric intraocular lenses in a teaching hospital. Elaine M. Tran1, K. S. Tang2, A. J. Chen1, M. L. Chen1, D. R. Rivera3, J. J. Rivera3, P. B. Greenberg2,3. 1Division of Ophthalmology, Albert Medical School, Brown University; 2Section of Ophthalmology, Providence VA Medical Center; 3Shiley Eye Institute and Department of Ophthalmology, University of California San Diego; 4Harvard University


6479 — A0065 Prevalence of pterygium and its associations in a Russian population: the Ural Eye and Medical Study. Renat Kazakbaev1, M. Bikkov2, T. Gilmanshin3, R. Zaimullin4, G. Kazakbaeva5, S. Panda-Jonas2, J. B. Jonas6. 1Ufa Eye Research Institute; 2Department of Ophthalmology, Medical Faculty Mannheim of the Ruprecht-Karls-University of Heidelberg

6480 — A0066 Incidence, progression and risk factors of age-related cataract in Malays: the Singapore Malay Eye Study. Jie Jin Wang1, A. G. Tan2, Y. Tham3, M. Chee4, P. Mitchell5, R. G. Cumming6, C. Sabanayagam4,5, C. Cheng4,6, T. Y. Wong7,8. 1Centre for Clinician-Scientist Dev., Duke-NUS Medical School, Singapore; 2Centre for Vision Research, Department of Ophthalmology, The Westmead Institute for Medical Research, University of Sydney; 3Singapore Eye Research Institute; 4Department of Ophthalmology, Yong Loo Lin School of Medicine, National University of Singapore; 5Ophthalmology and Visual Sciences Academic Clinical Program, Singapore National Eye Centre, Duke-NUS Medical School; 6School of Public Health, University of Sydney; 7Singapore Eye Research Institute

6481 — A0067 Correlation of Clinical Aqueous Flare Grade to Semi-automated Flare Assessment using Laser Flare Meter. Anh N. Tran1, M. Halim2, M. Hassan3, M. Hasanreisoglu4, R. Afzil5, M. S. Ormaechea6, G. Uludağ7, N. V. Nguyen8, S. Mahajan9, J. Bae10, K. Y. Al-Kirwel11, D. V. Do12, M. A. Ibrahim13, Y. Sepah14, Q. D. Nguyen15. 1Ophthalmology, Byers Eye Institute, Stanford University; 2Ophthalmology, Gazi University, School of Medicine; 3Ophthalmology, Hospital Universitario Austral; 4Ophthalmology, Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine; 5Ocular Imaging Research and Reading Center 6CR


6484 — A0070 Comparison of Incidence of Cataracts in Pre-menopausal and Post-menopausal Women at a County Hospital. Amrita D. Kanakamedala1, J. Gao2, M. Khan3, Z. N. Al-Mohtaseb4,5. 1School of Medicine, Baylor College of Medicine; 2Ophthalmology, Baylor College of Medicine; 3Ophthalmology, Ben Taub General Hospital

6485 — A0071 Surgical Outcomes of an Expedited Pre-operative Anesthesia Pathway for Cataract Surgery in a County Healthcare System. Justin Park1, C. Hooferlin1, L. Daskivich1, P. Prasad2. 1Harbor-UCLA Medical Center; 2Ophthalmology, Jules Stein Eye Institute, UCLA

6486 — A0072 Complication rates in resident-performed cataract surgeries: A systematic review. Gaya Sivakumar1, G. Ng2, D. Mullen3. 1Schulich School of Medicine & Dentistry, Western University; 2Ophthalmology, Byers Eye Institute, Stanford University; 3Department of Ophthalmology, Ivey Eye Institute, Schulich School of Medicine and Dentistry, Western University; 4Department of Ophthalmology and Bio-statistics, Schulich School of Medicine and Dentistry, Western University

6487 — A0073 Building research capacity through global partnerships. Suzanne S. Gilbert1, K. L. Basset1. 1Research & Learning, Seva Foundation; 2Seva Canada; 3Ophthalmology and Vision Sciences, University of British Columbia


6489 — A0075 A 5 year review of microbial keratitis disease profile and resistance patterns in Western Sydney, Australia. Mia Zhang1, 2, R. Afridi1, M. S. Ormaechea1, C. Samarawickrama1, S. L. Watson1,2. 1The University of Sydney; 2Save Sight Institute; 3Westmead Hospital

6490 — A0076 Phototherapeutic keratotomy for treatment of Recurrent Corneal Erosion Syndrome (RCES): a retrospective review of outcomes for different underlying aetiologies. Alice Dutton, G. Cleary, C. Crook. The Royal Victorian Eye and Ear Hospital

6491 — A0077 Evaluation of Corneal Opacities in Patients with Cystinosis by using Anterior Segment Optical Coherence Tomography. Yauka Yamamoto1, T. Okamura2, Y. Shimizu2, M. Akahira3, Y. Ooka4, S. Itinohe5, H. Hukushima6, T. Ueta7, S. Yashiro8, M. Nagahara1. 1Ophthalmology, Center Hospital of National Center for Global Health and Medicine; 2Reserch Institute National Center for Global Health and Medicine; 3Pediatrics, Center Hospital Of the National Center for Global Health and Medicine

6492 — A0078 Rates of Prophylactic Ocular Lubrication Administration and Exposure Keratopathy in Adult Patients Admitted to Intensive Care Units of an Academic Medical Center. Gaytri Gupta Elera, S. D. Kim, D. Sambhara, J. U. Scott, S. Pantanelli. Penn State Hershey Eye Center

6493 — A0079 Transepithelial versus epithelium-off corneal collagen cross-linking for corneal ectasia: a systematic review and meta-analysis. Siddharth Nath1, C. Shen2, A. Koziarz3, L. Banfield4, M. Fava5, W. G. Hodge6,7. 1Division of Ophthalmology, Department of Surgery, Faculty of Health Sciences, McMaster University; 2MD/PhD Program, McMaster University; 3Faculty of Medicine, University of Toronto; 4Health Sciences Library, McMaster University; 5Department of Ophthalmology, Ivey Eye Institute, Schulich School of Medicine and Dentistry, Western University; 6Department of Epidemiology and Bio-statistics, Schulich School of Medicine and Dentistry, Western University


6495 — A0081 Treatment outcome of acanthamoeba keratitis in the last decade. Kanno Okamura, T. Oshio, E. Uchio. Fukuoka University

6496 — A0082 Causes and Management outcomes of Acquired corneal opacity in pre-school age (0-5 years) group: A Hospital based study. Namrata Sharma1, V. Jhanji2, P. Maharan3, S. Nawaz4, R. B. Vajpayee5. 1Dr.R.P.Centre for Ophthalmic Science, All India Institute of Medical Sciences; 2Department of Ophthalmology, University of Pittsburgh; 3ASG Eye Hospital, Srinagar; 4Royal Victorian Eye and Ear Hospital, University of Melbourne, Melbourne, VIC, Australia.
6497 – A0083 Incidence, Demographics and Risk Factors of Stevens-Johnson Syndrome in India, Swapna Shanbhag1, A. Vinip Das1, P. Douthinem1, S. Basu1. 1Cornea and Anterior segment, L.V. Prasad Eye Institute; 2EyeSmart EMR, L.V. Prasad Eye Institute

6498 – A0084 Fuchs dystrophy and weight loss: more than an eye disease, Allen O. Egbaru, D. Dzhaber, J. D. Gottsch. Wilmer Eye Institute, Johns Hopkins Hospital

6499 – A0085 Incidence of Corneal Dystrophy and Degeneration in a Large Ocular Pathology Centre: A 10 Year Analysis, Ayman Aljohani, S. Bergeron, T. C. Figueiredo, D. Cheema, C. Mastroemonaco, M. N. Burnier. The MUHC-McGill University Ocular Pathology & Translational Research Laboratory

6500 – A0086 Herpes simplex virus keratitis in a tertiary corneal subspecialty referral center in Germany – clinical features and surgical approaches, Raul Alfero, S. Lepper, A. Langenbucher, N. Szentmáry, B. Seitz. Ophthalmology, University of Saarland

6501 – A0087 New insights from Phylogenetic analysis of Pythium keratitis isolates from India. Ram Ramrmoohan1, L. Mendzao2, R. Vielea3, A. Raghavan1, N. Venkatapathy1. 1Microbiology, Aravind Eye Hospital; 2Microbiology, Michigan State University; 3Cornea and Refractive Surgery, Aravind Eye Hospital; 4Microbiology, Federal University Minas Gerais; 5Aravind Eye Hospital

6502 – A0088 Trends in the indications for corneal transplantation in Brazil, 2012-2017, Marcia R. Libânio1, J. E. Queiroz1, P. G. Libânio1, R. R. Nothen1. 1Ministry of Health; 2Federal University of Minas Gerais; 3Ministry of Health; 4Hemominas Foundation

6503 – A0089 Ocular chemical burns secondary to assault – a retrospective study in the UK, Charlotte Bruce1, S. Pridham1, F. Figueiredo2, 3. 1Ophthalmology, Royal Victoria Infirmary, Newcastle University; 2Ophthalmology, Royal Victoria Infirmary, Newcastle University; 3Ophthalmology, Royal Victoria Infirmary


6505 – A0091 Gender could play an important part in the onset of keratoconus-insights from characterizing an Australia keratoconus cohort. Chris Hodge1, 2, A. Aggarwala1, M. D’Souza1, 3, G. Sutton1, 2, J. Yu1, 3. 1Save Sight Institute, The University of Sydney; 2Vision Eye Institute; 3University of New South Wales; 4Central School of Medicine, The University of Sydney; 5Sydney Local Health District

6506 – A0092 Overall and Cancer-Related Mortality in the Sjögren’s International Collaborative Clinical Alliance (SICCA). John A. Gonzales1, 2, J. Takhar1, 2, Y. Y. Bunya1, 2, J. Rose-Nussbaumer3, 4, A. Chou1, 2, L. Criswell2, C. Shiboski1, T. Lienman3, 4. 1F.I. Proctor Foundation; 2Department of Ophthalmology, University of California, San Francisco; 3Scheie Eye Institute, Department of Ophthalmology, University of Pennsylvania; 4Department of Oronofacial Sciences, School of Dentistry, University of California, San Francisco; 5Departments of Medicine and Oronofacial Sciences, University of California, San Francisco *CR

6507 – A0093 Corneal perforations related to rheumatoid arthritis, Juan Carlos Serna-Ojeda1, 3, C. Cantu-Rosas1, 2, L. Flores-Suárez1, 2, E. O. Graue-Hernandez1, 2. 1Ophthalmology, Banco de Ojos y Tejidos de Aguascalientes; 2Instituto de Oftalmologia Conde de Valenciana; 3Instituto Nacional de Enfermedades Respiratorias

6508 – A0094 Demographic and temporal variation in incidence of herpes simplex virus keratitis in the United States, Nidhi Talwar, J. D. Stein, N. Shekhawat. Department of Ophthalmology & Visual Sciences, University of Michigan

6509 – A0095 ALDEN based determination of culprit drugs in Stevens-Johnson Syndrome: a 15-year single center review. Charles S. Bouchard1, P. de Bustros1, A. Baldea2, A. Sanford2, C. Joyce2. 1Ophthalmology, Loyola Univ of Chicago; 2Surgery, Loyola University of Chicago; 3Public Health Sciences, Loyola University of Chicago

6510 – A0096 Clinical profile and age related risk factors in microbial keratitis in the elderly in a referral center in Mexico City, Leire Inusteta1, E. O. Graue-Hernandez1, A. J. Ramirez-Miranda1, A. Navas1, E. J. Polania1. Oftalmología, Instituto de Oftalmología Conde de Valenciana

6511 – A0097 Trend of Corneal Transplantation in South Korea: a nationwide population-based study, Kyounghoon Shin1, 2, K. Han1, J. Han3, T. Chung1. 1Dentistry, University of California, San Francisco; 2Rush University Medical Center; 3Syria University Medical Center

6512 – A0098 Association between Cogan Syndrome and Aortitis, Jimena Siordia1, 2, J. A. Siordia1, 2. 1Ophthalmology, Jamaica Hospital Medical Center; 2Medicine, University of Arizona

6513 – A0141 Our experience with retinopathy of prematurity: a retrospective computerized database review, Sarah Chorfi1, P. Hamel1, F. Nicole1, L. Osprina1, C. Belanger1, R. Superstein1, 2. 1University of Montreal; 2McGill University

6514 – A0142 Mother’s Own Milk and Retinopathy of Prematurity, Jennifer Rossen1, J. Cohen1, A. Patel2, P. Meier2, T. Johnson2, R. Kimura3, M. Schoony4, J. Silvestri5, K. Rodriguez2, W. Haufe2, H. Phillips1. 1Ophthalmology, Rush University Medical Center; 2Rush University Medical Center

6515 – A0143 A Ten-year Epidemiology of Retinopathy of Prematurity Treatment in Taiwan. Wei-Chi Wu1, Y. Kang2, S. Chu1, R. Lien1. 1Ophthalmology, Chang Gung Memorial Hospital; 2Pediatrics, Chang Gung Memorial Hospital

6516 – A0144 Refractive Status of Premature Infants with and without Retinopathy of Prematurity in the First 12 months of Life, Peter Clark, L. Kong. Department of Ophthalmology and Visual Science, Texas Tech University Health Sciences Center

6517 – A0145 Evaluating the effect of prematurity and retinopathy of prematurity disease severity on change in axial length over time, Sasapin G. Prakalapakorn1, N. Sarin2, N. Sarin1, B. McGehee3, S. F. Freedman1, C. A. Toth4. 1Ophthalmology, Duke Eye Center; 2Center for Preventative Ophthalmology and Biostatistics *CR, 3

6518 – A0146 Characteristics of High Risk Infants That Do Not Develop Retinopathy of Prematurity, Alyssa Spiller1, P. Donohue2, Y. Yu, G. Ying1, L. Tomlinson1, G. Binenbaum1. 1The Children’s Hospital of Philadelphia; 2Johns Hopkins University; 3Scheie Eye Institute, Perelman School of Medicine at the University of Pennsylvania

6519 – A0147 Estimate of incidence of ROP requiring treatment in extreme preterms and impact on service – 7 year review in tertiary unit. Shokufeh Tavassoli1, R. Wacht1, R. Haynes2, R. markhan3, C. Williams4. 1University of Bristol, Bristol Eye Hospital; 2Neonatal Unit Southmead Hospital, Bristol

West Exhibition Hall A0141-A0167
Thursday, May 02, 2019 10:15 AM-12:00 PM
Retina

543 Retinopathy of Prematurity, Detection and Clinical

Moderator: Cagri G. Besirli

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
6520 — A0148  Comparison of Trends in Risk Factors for Retinopathy of Prematurity Over 12 years in Colorado: How One Academic Medical Center Compares to Statewide Data. Lauren Mehner1, B. D. Wagner1, K. A. Boi2, J. K. Singh3, S. C. Oliver4, E. A. McCourt5, J. Patnaik6, A. Palestine7, N. Manda8, A. Lynch9, 1Ophthalmology, University of Colorado; 2Colorado Department of Public Health and Environment

6521 — A0149  Outcome and quality of ROP-screening in a nationwide survey in the Netherlands. Kasia Treciakowska1, J. Ternote2, N. Schall-Jelfos3, 1Department of Ophthalmology, Leiden University Medical Center; 2Department of Pediatrics, Wilhelmina Children’s Hospital

6522 — A0150  Retinopathy of Prematurity screening criteria based on the ROPE-SOS trial in India. Nita Vulkodah4, R. V. Chan4, F. Becat5, M. Allamah6, E. Cole7, J. Hallak8, J. Campbell9, M. F. Chiang10, P. Shah11, N. Venkatapathy12, 1Department of Ophthalmology and Visual Sciences, Illinois Eye and Ear Infirmary, University of Illinois at Chicago; 2Department of Ophthalmology, Oregon Health and Sciences University Hospital; 3Department of Ophthalmology, Aravind Eye Institute; Center for Global Health, College of Medicine, University of Illinois at Chicago *CR

6523 — A0151  Oct findings in a ROP population with brain lesions. Lorenzo Orazzi3, G. Amorelli4, F. Ricci5, F. Molle6, D. Lepore7, 1Polo Nazionale ipovisione IAPB Italia; 2Ophthalmology, Università Cattolica del Sacro Cuore

6524 — A0152  Lateral Flow Immuno Assay for Point-of-care Screening of Retinopathy of Prematurity. Aablash Ganguly1, S. Ghoshdastidar2, J. Kainth3, A. Elangovan4, K. Premkumar4, P. John4, B. Erica5, A. Upendran6, R. Kannan7, D. P. Hainsworth8, 1Radiology, University of Missouri; 2Neonatology, University of Missouri; 3Ophthalmology, University of Missouri; 4Institute of Clinical and Translational Sciences, University of Missouri; 5Medical Pharmacology and Physiology, University of Missouri; 6Biological Engineering, University of Missouri

6525 — A0153  Higher ROP incidence in extremely preterm infants. Christina Gerth-Kahler1, A. Taner2, S. Tekle3, T. Hothorn4, M. Adams5, 1Dept of Ophthalmology, University of Zurich; 2Department of Biostatistics, Institute for Epidemiology, Biostatistics, and Prevention; 3Department of Neonatology, University Hospital and University of Zurich


6527 — A0155  Late Onset Exudation and Fibrovascular Proliferation in Adolescents and Adults with Retinopathy of Prematurity. Ogal E. Uner, G. Hubbard, 1Department of Ophthalmology, Emory University School of Medicine; 2Retina Service, Emory Eye Center

6528 — A0156  Ten years of ROP-screening and treatment in Sweden - consideration of modified screening guidelines based on a national quality register. Gerd Holnstrom1, L. Granne2, A. Hellstrom3, E. Larsson4, M. Sarc5, B. Sunnqvist6, K. Torngqvist6, A. Wallin7, 1Ophthalmology, Neuroscience; 2Ophthalmology, Department of Clinical Sciences; 3Department of Clinical Neuroscience and rehabilitation, Institute of Neuroscience and Physiology, Sahlgrenska Academy, University of Gothenburg; 4Ophthalmology, Department of Clinical Sciences, Umeå University; 5Ophthalmology, Länsjukhuset Ryhov; 6Department of Clinical Sciences, Ophthalmology, Skane University Hospital; 7Ophthalmology, St Erik Hospital, Stockholm

6529 — A0157  Insulin insensitivity in very preterm infants is associated with decreased levels of IGF-1 and increased risk for ROP. Bertan Cakir1, R. Liegl1, I. Hansen-Puppi2, G. Helligren3, Y. Tomita1, A. Poblete1, S. Cho1, W. Britton1, Z. Fu1, Y. Sun1, C. Lofqvist4, A. Hellstrom4, L. E. Smith1, 1Boston Children’s Hospital; 2Eye Center, Medical Center, Faculty of Medicine, University of Freiburg, Germany; 3Department of Pediatrics, Lund University and Skane University Hospital; 4Department of Ophthalmology, Institute of Neuroscience and Physiology Sahlgrenska Academy *CR

6530 — A0158  Retinal findings in neonates with congenital diaphragmatic hernia and extracorporeal membrane oxygenation. Petra P. Larson1, F. Kippnuebler2, F. G. Holz3, A. Müller4, T. U. Krohn5, 1Ophthalmology, University of Bonn; 2Neonatology and Pediatric Critical Care Medicine, University Children’s Hospital Bonn *CR

6531 — A0159  Telemedicine for ROP Diagnosis in a Real-World System: Technical Description and Evaluation. Ian Danford1, M. F. Greenwald2, S. Ostmo3, R. Schelonka1, H. S. Cohen4, J. Campbell5, M. F. Chiang6, 1Ophthalmology, Casey Eye Institute; 2Salem Hospital; 3Neonatology, Oregon Health and Science University *CR


6533 — A0161  Treatment of Retinopathy of Prematurity with Intravitreal Bevacizumab in Infants Weighing 500 Grams or Less at Birth. Elise Timtim1, C. Peyton2, M. Blair2, S. Hilker Rodriguez, 1Ophthalmology, University of Chicago; 2Retina Consultants, Ltd; 3Physical Therapy and Human Movement Sciences, Northwestern University

6534 — A0162  Optical coherence tomography evaluation of early foveal structural changes after anti-VEGF treatment for type 1 ROP. Giulia Maria Amorelli1, L. Orazi2, C. Barresi3, F. Molle4, D. Lepore5, 1Catholic University of Sacred Heart - Rome; 2Polo Nazionale Riabilitazione visiva - IAPB Italia Onlus

6535 — A0163  Outcomes of intravitreal bevacizumab and laser photocoagulation for treatment of retinopathy of prematurity. Kamran Ahmed1, A. Ali2, N. Delwadia3, M. Greven4, 1Ophthalmology, Wake Forest; 2Pediatrics, Wake Forest; 3School of Medicine, Wake Forest

6536 — A0164  Functional Outcomes after Intravitreal Bevacizumab or Laser Photocoagulation or Combination of Both treatment for Retinopathy of Prematurity. Cheng Hsiao Wu. Chang Gung Memorial Hospital Keelung branch


6538 — A0166  Regression patterns of Retinopathy of Prematurity after intravitreal injection of Ranibizumab. Marco H. Ji1, D. Mosheghi2, R. A. Shields3, Z. Bodnar4, C. A. Ludwig5, N. F. Callaway6, T. Leng7, S. Sanislo8, L. Orazi9, G. Amorelli10, D. Lepore11, 1Ophthalmology, Catholic University of Sacred Heart; 2Ophthalmology, Stanford University; 3Italian National Center of Services and Research for Prevention of Blindness and Rehabilitation of the Visually Impaired *CR

6540 – 6561 – Thursday – Posters

West Exhibition Hall A0168-A0190
Thursday, May 02, 2019 10:15 AM-12:00 PM

Retina

544 Diabetic Retinopathy and Surgery

Moderator: Esther M. Bowie

6540 – A0168 Degree of Capillary Nonperfusion Noted on Wide-angle Angiography Directly Correlate With Intravitreal VEGF Levels in Proliferative Vascular Retinopathies. K V Chalam1, S. Gupta1. 1Loma Linda University School of Medicine, ‘ophthalmology, Florida

Atlantic University

6541 – A0169 The Role of Preoperative Bevacizumab in Patients Undergoing Pars Plana Vitrectomy for Proliferative Diabetic Retinopathy without Trabecular Detachment. John McLaughlin1, J. Alvarez1, P. H. Scharper2. ‘Ophthalmology, Krieger Eye Institute/Sinai Hospital; ‘Retina Specialists of Alabama

6542 – A0170 The efficacy of intravitreal bevacizumab in treating recurrent vitreous hemorrhage after pars plana vitrectomy for diabetic vitreous hemorrhage. Maram Abdalla-Diabetic vitreous hemorrhage. Hemorrhage after pars plana vitrectomy for bevacizumab in treating recurrent vitreous hemorrhage. A0170


6544 – A0172 Ranibizumab as the Primary Treatment for Proliferative Diabetic Retinopathy in a “Real Life” Private Retina Office Setting. Itay Kiazaz, M. J. Elman. Elman Retina Group *CR

6545 – A0173 The efficacy of intravitreal aflibercept injection in improvement of retinal nonperfusion in patients with diabetic retinopathy. Yoon Jeon Kim, J. Y. sjoonn@hanmail.net, G. Son, J. Lee, Y. Yoon. Asan Medical Center *CR

6548 – A0174 Aflibercept can reduce the severity of deep hemorrhages and IRMA but not venous beading. Liz Pearce1, V. Chong1, S. Sivaprasad1. 1Boehringer Ingelheim International GmbH; ‘Moorfields Eye Hospital, NIHR Moorfields Biomedical Research Centre *CR, ▲

6547 – A0175 Intravitreal Aflibercept for Retinal Non-Perfusion in Proliferative Diabetic Retinopathy: Primary Outcomes from the RECOVERY Study. Muneeswar Gupta Nittala1, W. Fan1, S. Velagap, B. Zhou1, S. Lampion1, A. M. Ruskевич1, M. S. Ip1, C. C. Wykoff1, S. R. Sadda1. ‘Ophthalmology, Doheny Eye Institute; ‘Blanton Eye Institute & Houston Methodist Hospital, Retina Consultants of Houston *CR, ▲

6549 – A0177 Clinical application of Retinal Biomarkers in Diabetic Retinopathy Patients. ida Ceravolo, G. Oliverio, C. Trombetta. University of Messina

6550 – A0178 Development of diabetic retinopathy and age-related macular degeneration in aged and metabolic dysregulated non-human primates. Kai Ming Zhang1, J. Zhu1, Q. Yang1, R. Lin1, Q. Lin1, G. Jin1, L. Yang1, K. Wu1, C. Zhang1, T. Wang1, R. Perez1, S. Li1, B. Zhang1, Z. Jin1. ‘Ophthalmology, Kunming Biomed International, 1Laboratory for Stem Cell & Retinal Regeneration (Jin Lab), Institute of Stem Cell Research, State Key Laboratory of Ophthalmology, Optometry and Vision Science, National Center for International Research in Regenerative Medicine and Neurogenetics, Wenzhou Medical University *CR

6551 – A0179 Five-year progression to vision threatening complications of mild NPDR in patients with diabetes type 2. Ines Marquez1, D. Alves1, T. Santos2, A. Santos1, M. Ribeiro1, C. Lobo1, J. G. Cunha-Vaz1, Y. C, Association for Innovation and Biomedical Research on Light and Image; ‘CNTM, Association for Innovation and Biomedical Research on Light and Image; ‘Faculty of Medicine, University of Coimbra; ‘CEC, Association for Innovation and Biomedical Research on Light; ‘Coimbra Institute for Clinical and Biomedical Research (iCBR), Faculty of Medicine, University of Coimbra

6552 – A0180 Plasma and Vitreous Complement Levels in Humans with Proliferative Diabetic Retinopathy. Nikhil K. Mandava1, V. Tirado1, M. D. Geiger1, J. Patnaik1, A. Frazer-Abel1, A. Lynch1, N. Mandava1, A. Palestine1, M. Holers1, B. D. Wagner1, I. Sanchez-Santos1, D. Meizner2, H. Quiriz-Mercado2, J. Smith1. ‘Ophthalmology, University of Colorado Denver; ‘Retina, Asociación para Evitar la Ceguera México *CR

6553 – A0181 Analysis of patient population presenting with proliferative diabetic retinopathy identified and referred from Irish National Screening Program, RetinaScreen. Sarah Powell1, L. Landi2, K. Blauoe2, N. Elseed1, M. Abdelrahim1, D. Minaysan1, R. Fandez2, D. J. Keegan1. ‘Mater Retinal Research Group, Mater Misericordiae University Hospital, Dublin, Ireland; ‘Diabetic RetinaScreen National Screening Service, HSE; ‘Department of Ophthalmology, Mater Misericordiae University Hospital

6554 – A0182 The impact of additional laser photocoagulation on PRP evaluated by the simulation based on photoreceptor densities. Kenturo Nishida, H. Sakaguchi, S. SATO, A. Shiraki, Y. Fukushima, T. Wakabayashi, C. Hara, S. Sakamoto, K. Sayanagi, R. Kawasaki, K. Nishida. Osaka University Graduate School of Medicine

6555 – A0183 Treatment response based on topography of retinal neovascularization in proliferative diabetic retinopathy. Sandra Halimi1, A. A. Kirkwood2, T. Peto3, U. Chakravarthy4, J. Ramu1, P. G. Hykin1, S. Sivaprasad1, 2NIHR Moorfields Biomedical Research Centre; ‘University College London; ‘Cancer Research UK and UCL Cancer Trials Centre, UCL Cancer Institute; ‘Queens University *CR, ▲


6557 – A0185 Practice Patterns Regarding Treatment of Vitreous Hemorrhage in Patients Following Pars Plana Vitrectomy. Effie Rahman1, K. Beck1, R. Diaz-Rohen1, M. Singh2. 1Ophthalmology, UT Health Science Center San Antonio; ‘Ophthalmology, South Texas VA Hospital; ‘Ophthalmology, Medical Center Ophthalmology Associates

6558 – A0186 Beneficial visual outcome of vitrectomy and delamination surgery in a cohort of black patients. Jason Ho, A. Laidlaw. Ophthalmology, St Thomas’ Hospital

6559 – A0187 Endolaserless Vitrectomy with Intravitreal Aflibercept Injection (IAI) for Proliferative Diabetic Retinopathy (PDR)-Related Vitreous Hemorrhage: LASER LESS TRIAL 1-Year Results. Davis C. Starnes1, R. Lalane1, H. Walla1, A. Farook1, H. Frazier1, W. Marcus1, H. Singh1, D. M. Marcus1. ‘Research, Southeast Retina Center; ‘Morehouse School of Medicine *CR, ▲

6560 – A0188 Preoperative Treatment History as A Predictor for Change in Visual Acuity After Surgical Correction of Diabetic Retinal Detachment. Zach Unruh, E. Ablah, H. Okut, D. M. Chacko. University Kansas School of Medicine-Wichita


The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
6562 — A0190 Risk and Prognostic Factors of Neovascular Glaucoma After 25-gauge Vitrectomy for Proliferative Diabetic Retinopathy with Vitreous Hemorrhage: A Retrospective Multicenter Study. Kei Takayama1, H. Someya1, H. Yokoshiba1, Y. Takamura1, M. Morikota1, S. Sameshima1, T. Ueda2, S. Kitano3, M. Tashiro1, M. Sugimoto1, M. Kondo1, T. Sakamoto1, M. Takeuchi1. 1National Defense Medical College; 2Hyogo College of Medicine; 3University of Fukui Faculty of Medical Sciences; 4Kagoshima University; 5Me University; 6Tokyo Women’s Medical University School of Medicine; 7Nara Medical University

6563 — A0262 Pediatric retinal microvasculature mechanics during trauma. Brittany Coats, M. P. Byrne. Mechanical Engineering, University of Utah


6565 — A0264 Comparative analysis of the prognostic value between the Pediatric Ocular Trauma Score and the Toddler/Infant Ocular Trauma Score in Brazilian children. Gilvan Vilariño da Silva-Filho, A. Moreno-Morgan, N. Kasahara. Ophthalmology, Irmandade da Santa Casa de Misericordia de Sao Paulo

6566 — A0265 Macula ON and OFF Retinal Detachment and Ocular Trauma: clinical features. Hae Jin Kim, j. aceves-velázquez, J. Ariza-Camacho. Retina and Vitreous, Instituto de Oftalmología Fundación Conde de Valenciana

6567 — A0266 Surgical outcomes of fall-related open globe injuries. Risa Abe, F. Okamoto, S. Morikawa, Y. Okamoto, T. Oshika. Ophthalmology, University of Tsukuba *CR


6569 — A0268 Morphological parameters and their prognostic value in SD-OCT in patients with center involving retinal detachment. Philip Rechl, J. Klaas, N. Feuchi, C. Lohmann, M. Maier. Technical University of Munich - Klinikum rechts der Isar

6570 — A0269 Visual acuity incompletely represents visual function in patients after successful repair of rhegmatogenous retinal detachment with macular involvement. Heijan Ng1, K. A. Vermeer1, J. van Meurs2, E. La Heij1. 1Rotterdam Ophthalmic Institute; 2The Rotterdam Eye Hospital

6571 — A0270 Higher Single Surgery Anatomic Success Rates in Retinal Detachment Repair with Meticulosus Vitreous Removal. Tedi Begaj1, A. Marmalidou1, T. D. Papakostas2, J. Diaz1, L. A. Kim1, D. M. Wu1, J. B. Miller1. 1Ophthalmology, Massachusetts Eye and Ear-Harvard Medical School; 2Retina Service, Weill Cornell Medical College

6572 — A0271 Wide-angle B-mode evaluation of the shape of eyeballs in rhegmatogenous retinal detachment. Yoshiaki Shimada, R. Sakurai, T. Mizuguchi, R. Nomura, A. Tanikawa, M. Horiguchi. fujita health university

6573 — A0272 The Effect of Scleral Buckle Selection, Corneal Thinning, and Scleral Compliance on Eye Morphology: a Biomechanical Model. Benjamin W. Boitsoford1, A. F. Durran1, R. Alhajfeey1, P. Smolinski1, T. R. Friberg1. 1Ophthalmology/UPMC Eye Center, University of Pittsburgh Medical Center; 2Mechanical Engineering, University of Pittsburgh


6575 — A0274 Silicone Oil Removal: Timing and Retinal Detachment Recurrence. Katherine McCabe1, M. E. Jansen1, G. Cloud1, R. Cheng He1, A. Barash1, R. B. Rosen1, A. Deobhakta1. 1Ophthalmology, New York Eye & Ear Infirmary of Mount Sinai; 2New York University; 3Taub School of Medicine, Mount Sinai *CR

6576 — A0275 Visual and anatomical outcomes from ultra-complex retinal detachment repair in a large county hospital. Christina Y. Weng1, A. Chen1, R. E. Coffee1, R. C. Date1, R. Channa1. 1Retina, Baylor College of Medicine-Cullen Eye Institute; 2Ben Taub General Hospital; 3Berkeley Eye Center; 4Baylor College of Medicine *CR

6577 — A0276 An analysis of the time to retinal detachment failure. Rohan W. Esses1, R. Heath-Jeffrey1, W. Atkins1, B. Young1, M. Okada1, P. J. Allen1. 1Ophthalmology, Cranberry Hospital; 2Medical School, Australian National University; 3Vitreoretinal Surgery Unit, Royal Victorian Eye and Ear Hospital; 4Centre for eye Research Australia, University of Melbourne


6579 — A0278 Long-term follow up of Analysing Foveal Avascular Zone Area and Vessel Density Changes Using OCT Angiography After Rhegmatogenous Retinal Detachment Surgery. Eung Suk Kim, K. Kim, S. Yu. Ophthalmology, Kyunghee Univ Medical Center

6580 — A0279 Factors affecting persistent subfoveal fluid after rhegmatogenous retinal detachment surgery. Hyoung Seok Kim. Kim’s Eye Hospital

6581 — A0280 The efficacy of sutureless 27G+ axial vitreoretinal surgery for macular epiretinal membrane. Zhiyong Wu. Ophthalmology, WUXI NO.2 people’s Hospital

6582 — A0281 Exploring the vitreoretinal interface: a key instigator of unique retinal hemorrhage patterns in abusive head trauma. Helen Song1, J. Prullick1, B. Angle1, D. A. Ghatel1, V. Gulati1, D. W. Suh1. 1University of Nebraska Medical Center; 2Retina Consultants of the Midlands; 3Children’s Hospital of Omaha

6583 — A0282 Outcomes of fellow-performed retinal detachment repairs at a large county hospital. Varun Reddy, H. Bhalli, Y. GoldenMerry, B. Winard, Z. Robertson. Ophthalmology, UT Southwestern Medical Center

6584 — A0283 Morphological and functional assessment of photoreceptors after macula-off retinal detachment with adaptive-optics optical coherence tomography (AO-OCT) and micropimeriady. Adrian Reumueller1, L. Wassermann1, M. Karantonis1, M. Salas1, S. Sacu1, M. Georgopouloso1, W. Drexler1, M. Pircher1, U. Schmidt-Erfurth1, A. Pollreich1. 1Department of Ophthalmology and Optometry, Medical University of Vienna; 2Center for Medical Physics and Biomedical Engineering, Medical University of Vienna

6585 — A0284 Comparison of scleral buckle surgery with and without gas tamponade for the treatment of rhegmatogenous retinal detachment. Elinor Megiddo1, Y. Weinberger1, A. Sternfeld1, N. Hadar Cohen1, R. Ehrlich2, M. Tennant1, A. Doate1. 1Sackler Faculty of Medicine, Tel Aviv University; 2Department of Ophthalmology, Rabin Medical Center, Beilinson Campus; 3Department of Ophthalmology, Royal Alexandra Hospital, University of Alberta

6586 — A0285 Incidence of cystoid macula edema after primary rhegmatogenous retinal detachment surgery. Sebastian Bemme1, M. Gehler1, S. Pfeiffer2, J. Callizo1, H. Hoerauf1, N. Feldgen1. 1Department of Ophthalmology, University Medical Center Goettingen; 2Department of Medical Statistics, University Medical Center Goettingen
6587 — A0286 Long-term prognosis of eyes with tilted disc syndrome-associated serous retinal detachment. Soichiro Kiyawatama, F. Kubota1, A. Kato1, F. Gomi2, S. Takagi3, T. Kinoshita4, H. Ishikawa5, Y. Mitamura6, M. Kondo7, C. Iwashashi8, Y. Kurimoto9, Y. Ogura10, T. Yasaki11. Ophthalmology and Visual Science, Nagoya City University Graduate School of Medical Sciences; Ophthalmology, Hyogo College of Medicine; Ophthalmology, Sumitomo Hospital; Ophthalmology, Kobe City Eye Hospital; Ophthalmology, Teikyo University; Ophthalmology, Sapporo City General Hospital; Ophthalmology, Tokushima University; Ophthalmology, Mie University Graduate School of Medicine


6590 — A0289 Demarcation Laser Photocoagulation for the Treatment of Large Retinal Breaks with Significant Subretinal Fluid. Collin Rozanski1, A. Barashi2, R. Kaplan2, J. Lo2, R. Cho2. Icahn School of Medicine at Mount Sinai; Ophthalmology - Retina, New York Eye and Ear Infirmary of Mount Sinai

6591 — A0290 Thickened choroid may associate with long-lasting macular serous retinal detachment after vitrectomy in cases with rhegmatogenous retinal detachment. Ryo Mukai, H. Matsumoto, H. Akiyama. Ophthalmology, Gunma University Graduate School of Medicine

6592 — A0291 Predictive Factors in Patient History for Diagnosis of Acute Retinal Pathology. Meleha Ahmad1, J. Sein1, A. Scott1, J. Ramroop1, J. Wang2, K. Jiramongkolchai3, J. T. Handa3, I. E. Zimmer-Galler3, J. Arevalo1. Wilmer Eye Institute, Johns Hopkins University School of Medicine; Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health

6593 — A0292 Recurrent retinal detachment: Surgical practices and outcomes, Elaine Downie1, Z. Oakey1, I. Holmen1, M. M. Altaweel1, J. Gottlieb1, M. S. Ip1, T. Nork1, J. S. Chung1. Ophthalmology and Visual Sciences, University of Wisconsin - Madison; Doheny Eye Center UCLA


6597 — A0296 Clinical characteristics of proven acute intraocular toxicity by perfluorocarbon liquids (PFCL) used in retinal surgery. Jose-Carlos Pastor1,2, C. Andres iglesias1, G. K. Srivastava1, I. Fernandez-Bueno1, A. Dueñas-Laita3,4, F. Rulli5, J. Medina5, J. Garcia6, Serna3,7, A. Garcia-Layand3,4, R. Coca-Martín1. 1OBA-Eye Institute, University of Valladolid; 2Ophthalmology, Hospital Clínico Universidad; 3Medicine and Toxicology, University of Valladolid; 4Crystallography and Mineralogy, University of Valladolid; 5Biomedicine and Electronics, University of Valladolid; 6Bioeconomy Institute, Department of Chemical Engineering and Environmental Technologies, University of Valladolid; Ophthalmology, University of Navarra; Oftared, Instituto de Salud Carlos III


6599 — A0298 Real-World Evidence of Anatomical Success Rates and Visual Acuity Outcomes of Pneumatic Retinopexy in Patients with Primary Rhegmatogenous Retinal Detachment meeting PIVOT Trial Criteria.. Rajeev H. Muni, M. Bamakrid, Q. Paracha, S. Jin, C. Francisconi, V. Juncal. Department of Ophthalmology and Vision Sciences, St. Michael’s Hospital, University of Toronto

6600 — A0299 Prognostic value of subfoveal subretinal fluid optical density ratio in macula-involving shallow retinal detachment. Tong Kam1, J. Luvisi2, M. Champion3, M. A. Mainster1, R. Ajlani4. 1Department of Ophthalmology, University of Kansas School of Medicine; 2Institute of Cellular and Molecular Biology, A*STAR; 3Mt Sinai, NY


6602 — A0301 The functional effects of photoreceptor loss in patients with retinal detachment. Sana Rasool1, R. Chaudhary1, K. Blachford1, R. Scott1, A. Logan2, R. J. Blanch2. 1University Hospital Coventry & Warwickshire; 2Academic Department of Military Surgery & Trauma, Royal Centre for Defence Medicine; 3Neuroscience & Ophthalmology, Institute of Inflammation and Ageing, University of Birmingham; 4Research & Development, Sandwell & West Birmingham NHS Trust


6605 — A0304 Microglia prevent photoreceptor apoptosis in a rat model of retinal detachment. Aniko Balogh1,2, T. Milibák1, Z. Z. Nagy1, M. D. Resch3. 1Ophthalmology, Uzsoki Hospital; 2Ophthalmology, Semmelweis University

6606 — A0307 Thiolated cross-linked hydrogel as a vitreous substitute – a 6-month follow-up study. Lisa Pohl1, N. Heider2, J. Hurst3, M. Prinz4, C. Hohenadl5, C. Reither6, K. Januschowski1, S. Schichels9, M. Spitzer1,2,4. 1Center of Ophthalmology, University Hospital Tübingen; 2Croma Pharma; 3Eye Hospital Sulzbach; 4University Medical Center Hamburg-Eppendorf

6609 — A0308 Hydrogel-based vitreous tamponade prevents proliferative vitreoretinopathy in an in-vitro model. Xinyi Su1,2, B. H. Parikh1,2, Z. Liu2, T. A. Blenkinsop1. 1Ophthalmology, National University of Singapore; 2Institute of Cellular and Molecular Biology, A*STAR; 3Mt Sinai, NY

6610 — A0309 Unexplained visual loss under silicone oil tamponade: Absorption of silicone oil droplets and proinflammatory response in retinal microglia cells. Johann Roeder1, A. Harms, V. Waetzig1, J. Tode1, K. Purtskhvanidze, A. Klettner2. 1Klinik für Ophthalmologie, University of Kiel; 2Pharmacology, University of Kiel


Comparative analysis of Cypass vs. iStent. Paul A. Zioutro, S. Syeda, C. Kim, B. Hughes. Wayne State University School of Medicine; Kresge Eye Institute

Comparison of Intraocular Pressure (IOP) Reduction of Xen vs. Cypass Stent. Caroline E. Aey, J. P. Aey. Eye Care Assoc., Inc.

Comparison of 1 year effectiveness of trabecular microbypass stent (iStent) among mild, moderate, and severe primary open angle glaucoma. Sunee Chansangpetch, M. Itarar, S. Yang, A. C. Fisher, K. Singh, S. C. Liu, R. Chang. UCSF, Chulalongkorn University and King Chulalongkorn Memorial Hospital; Stanford University; Glaucoma Center of San Francisco; Beijing Chaoyang Hospital, Capital Medical University

Engineering a partially degradable glaucoma microshunt for controlled intraocular pressure reduction. Aditya Josyula, J. Abu, S. Ramesh, R. Omiatez, J. Szeto, L. Esign, H. Hanes, K. Prakhik, I. F. Pitha. Chemical and Biomolecular Engineering, Johns Hopkins University; Center for Nanomedicine, Johns Hopkins University, School of medicine; Biomedical Engineering, Johns Hopkins University; Ophthalmology, Johns Hopkins University, School of medicine; Center for Bioengineering Innovation & Design, Johns Hopkins University

Hybrid MIGS procedure combining Dual Blade Goniometry and Direct Viscodilation of the Collector Channels with Cataract Surgery - Fifteen Months Follow-up. Linda L. Burk, J. Gilmore, L. Gilmore. Department of Ophthalmology, University of Texas Southwestern Medical Center; School of Medicine, Texas Tech University Health Science Center; St. Edwards University

Unique MIGS procedure combining Dual Blade Goniometry and Direct Viscodilation of the collector channels combined with cataract surgery in Narrow angle glaucoma: One year follow-up. LINDA GILMORE, J. GILMORE, L. L. BURK. St. Edward’s University; School of Medicine, Texas Tech University Health Science Center; Department of Ophthalmology, University of Texas Southwestern Medical Center

Comparison of two glaucoma surgical techniques, Kahook Dual Blade goniometry versus Trabecome ab-interno trabeculotomy, in combination with cataract surgery. Arjun J. Dirghangi, P. A. Netland, T. M. Roa. Ophthalmology, University of Virginia School of Medicine


A Novel Modified Minimally Invasive Trabeculotomy: A Preliminary Study. Bennett Y. Hong, Y. Zhou, J. J. Mattingly, B. A. Bunag, G. Vizzetti. Ophthalmology, University of Texas Medical Branch; University of Texas Medical Branch - School of Medicine


Injected vs. topical mitomycin C in patients undergoing trabeculotomy; long-term outcomes. Sarah Syeda, R. Kherallah, C. Kim, B. Hughes. Kresge Eye Institute

One-Year Results on Efficacy and Safety after Trabeculotomy Comparing Two Methods to Deliver Mitomycin-C: Sub-Tenon’s Injection (STI) versus STI plus Impregnated Sponges. Andrea Orozco Garcia, J. A. Paczka, S. Garcia y Otero Sanchez, L. Giorgi-Sandoval, J. Rodriguez-Lopez. Instituto de Oftalmología y Ciencias Visuales, Universidad de Guadalajara; Research & Development, Unidad de Diagnóstico Temprano del Glaucoma; School of Medicine, Universidad Autónoma de Guadalajara; Asistencia e Investigación en Glaucoma

6634 — B0089 The influence of ethnicity on adjunctive medical and surgical interventions following trabeculectomy. Jonathan Clarke, N. Srikantha. Glaucoma Service, NIHR Biomedical Research Centre at Moorfields Eye Hospital and UCL Institute of Ophthalmology

6635 — B0090 Trabeculectomy followed by phacoemulsification versus trabeculectomy alone: The Collaborative Bleb-Related Infection Incidence and Treatment Study. Shogo Inatani. Ophthalmology, University of Fukui

6636 — B0091 Incidence and risk factors for the ptosis after trabeculectomy. Jong Yeon Lee1, 2, H. Park1, M. Chi1, 2, Y. Kim3. Ophthalmology, Gachon University; Ophthalmology, Gachon Univ, Gil Medical Center; Ophthalmology, Korea University

6637 — B0092 Prospective Cohort Study of Refractive Change After Trabeculectomy. Kentaro Iwasaki, S. Arimura, Y. Takamura, M. Inatani. Department of Ophthalmology, University of Fukui


6639 — B0094 Outcomes of combined Baerveldt glaucoma implant & trabeculectomy with mitomycin C in patients with advanced glaucoma with high risk of primary Trabeculectomy failure. Saurabh Goyal, H. Ho, J. Ho, S. Georgoulas, M. Parnell, R. Lim, C. Yu-Wai-Man. Ophthalmology, St Thomas’ Hospital


6643 — B0098 Ologen Implant over the Plate during Ahmed Glaucoma Implantation and Early Intraocular Pressure (IOP)/Hypertensive Phase. Sandra M. Johnson1, 2, K. Humphrey3, K. Greenridge. 1Ophthalmology, University of South Florida; 2Ophthalmology, Eye Institute of West Florida


6645 — B0100 Short-term changes in corneal endothelial cell density after glaucoma drainage device. Ricardo I. Mata Hofmann, Y. Azses Halabe, R. Gonzalez-Salinas, J. Gamiotchipi Arjona, J. Jiménez Román, G. Lazcano, M. Garcia Huerta. Asociacion para Evitar la Ceguera en Mexico

6646 — B0101 Clinical outcomes following the triple procedure. Obi Umunakwe, S. Wakil, A. C. Thompson, G. J. Jaffe, T. Kim, L. Herndon. Duke University Eye Center

6647 — B0102 Comparison and efficacy of three surgical goniotomy techniques. Jang Hyun Kim, D. Hayes1, 2, A. Angelilli1, 2, R. Rothman1, 2, A. Prywe2, 2, C. Marcus2, 2. Ophthalmology, Zucker School of Medicine at Hofstra/Northwell; Eye Care Associates & Glaucoma Consultants of Long Island

6648 — B0103 Goniotomy for the childhood glauomas: Where is it most useful?. Haron Armarnin, Stephen Farrell, Christopher Lyons, University of British Columbia and BC Children’s Hospital. CHRISTOPHER J. LYONS, S. Armarnin, S. Farrell. Ophthalmology and Visual Sciences, University of British Columbia

6649 — B0104 Outcomes of microcatheter-assisted trabeculotomy in the treatment of juvenile open angle glaucoma. huazhou wang. Ophthalmology, Beijing Tongren Hospital

6650 — B0105 Schlemm’s Canal Examination with Swept-Source Anterior Segment OCT after Canaloplasty: a Pilot Study. Ioannis K. Petropoulos1, 2, N. Mastorakos1, A. N. Stangos1, 2, G. Sunaric-Megevand1, 2, 1Clinical Eye Research Center, Memorial A. de Rothschild; 2Centre Ophthalmologique de Rive; 3Centre Ophthalmologique de Florissant

6651 — B0106 KDB-Assisted Goniotomy Combined With Cataract Surgery: A Prospective Analysis Of Surgical Outcomes And Success Predictors. Lamylya F. Sá1, 2, L. TERENZI1, 2, C. CARVALHO2, 2, A. VIEIRA2, 2, D. T. DIAS2, 2, A. SCORALICK2, 2, D. Dorrafa2, F. Kanadani2, T. Prata2, 2. Glaucoma, IOCM; Glaucoma, HMS; UNIFESP; Mayo


6653 — B0108 Glaucoma drainage device implantation vs transcleral diode laser cyclophotocoagulation in blind painful eyes with neovascular glaucoma. Ann L. Thomas1, G. H. Tanaka1, 1. California Pacific Medical Center; 2Glaucoma Specialists of San Francisco


6655 — B0110 Intraocular pressure reduction after Enspner Clip Implantation during deep sklerectomy in 20 glaucoma patients. Stephanie V. Weissleder, M. Klemm. University of Hamburg *CR

6656 — B0111 Incidence of Surgical Glaucoma secondary to Anti-VEGF intravitreal injections in a 2 years study. Natalia Maes1, S. Schendel1, F. Mikelberg1, C. Tadrous2. Glaucoma, University of British Columbia; Ophthalmology, University of British Columbia

West Exhibition Hall B0112-B0158

Thursday, May 02, 2019 10:15 AM-12:00 PM
Immunology/Microbiology

547 Uveitis / ocular inflammatory disease: Epidemiology, clinical characteristics and QoL

Moderator: Alastair K. Denniston

6657 — B0112 Race, sex and state affect Medicare utilization rates for infectious and inflammatory eye diseases in the United States. Krati Chauhan1, J. T. Rosenbaum2, 2. Rheumatology, Southern Illinois University School of Medicine; 2Oregon Health and Science University- School of Medicine; Legacy Devers Eye Institute *CR


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6660 — B0115 Detailed analysis of seasonal variation of ocular attack in Japanese patients with Bechet’s disease. Takahiro Yamane¹, A. Meguro¹, M. Takeuchi¹, T. Sakono¹, T. Kato¹, S. Ohno¹, N. Mizuki¹. ¹Department of Ophthalmology and Visual Science, Yokohama City University Graduate School of Medicine; ²Department of Ophthalmology, Yokohama Rosai Hospital; ³Department of Ophthalmology, Faculty of Medicine and Graduate School of Medicine, Hokkaido University

6661 — B0116 Evolving demographics, risk factors, and treatment strategies for uveitis at a tertiary care hospital over a decade: 2008-2018. Jong Park¹, M. Halim¹, M. S. Ormaecha¹², M. Hassan¹, A. N. Tran¹, Q. D. Nguyen¹. ¹Ophthalmology, Byers Eye Institute, Stanford University School of Medicine; ²Hospital Universitario Austral


6664 — B0119 Outcomes of Vogt Koyanagi-Harada Disease Among At-Risk Native Americans. Finny T. John, K. Ding, A. Reddy. Ophthalmology, University of Oklahoma Health Sciences Center - Dean McGee Eye Institute

6665 — B0120 Identifying the Risk of Development of Macular Edema in Patients with Vogt-Koyanagi-Harada Disease. Maria S. Ormaecha¹², M. Hassan¹, S. Mahajan¹, A. Tran¹, M. Halim¹, G. Uludag¹, J. Bae¹, K. Y. Al-Kirbi¹, R. Afri¹, Y. Sepah¹, Q. D. Nguyen¹, A. Schlaen². ¹Ophthalmology, Byers Eye Institute; ²Ophthalmology, Hospital Universitario Austral

6666 — B0121 Sympathetic Ophthalmia – Then to Now and the Effect of Multiple Trigger Events. Evgenia Anikina¹, ² S. K. Wagner¹, S. Liyanage¹, P. Sullivan¹, C. Pavesio¹, N. Okhravi¹. ¹Moorefields Eye Hospital; ²UCL Institute of Ophthalmology; ³Bristol Eye Hospital

6667 — B0122 Presenting features of patients with Birdshot chorioretinopathy in the United Kingdom: findings from a nationwide incidence study.. Mark C. Westcott¹, R. Khalil², H. Petsalidou³, A. Rees¹, C. Pavesio¹. ¹Moorefields Eye Hospital; ²UCL Institute of Ophthalmology; ³Trinity College Dublin

6668 — B0123 Clinical and epidemiological description of multiple evanescent white dot syndrome in Mexican population. Felipe Prado Vázquez, D. N. Delgado Arellano, M. Pedroza Seres, R. Y. Bobadilla, H. Kim. Instituto de Oftalmología FAP Conde de Valenciana

6669 — B0124 Multifocal evanescent white dot syndrome following inflammatory and myopic choroidal neovascularization. Tomas Burke¹, P. Addison¹, C. Pavesio¹. Ophthalmology, University Hospitals Bristol NHS Foundation Trust; ²Moorefields Eye Hospital

6670 — B0125 Multiple evanescent white dot syndrome with overlapping white dot syndrome. Christopher S. Lee, H. G. Kang, E. Choi, S. Lee. Ophthalmology, Yonsei University College of Medicine

6671 — B0126 White dot syndrome: incidence, clinical findings and management in ophthalmology reference center during the last 17 years. Valery Ascuna, M. Pedroza Seres, F. Prado Vázquez, D. N. Delgado Arellano. uvea, institute of ophthalmology private assistance foundation conde de valenciana


6675 — B0130 Clinical, Electrophysiological and Immunological Features of Patients with Autoimmune Retinopathy. RAGONDÈNE AMER, K. Safadi, E. Banin, B. Rosin, I. Chowers. Department of Ophthalmology, Hadassah Medical Center

6676 — B0131 Correlation of immunohistochemical markers with disease and clinical outcome measures in patients with autoimmune retinopathy, Weilin Chan¹, L. Stanney¹, A. Sood¹, J. Romano¹, M. Pefkianaki¹, T. Jayasundera¹, J. R. Heckenlevy¹, S. K. Lundy¹, L. Sobot¹. ¹Harvard Department of Ophthalmology, Massachusetts Eye and Ear; ²University of Michigan

6677 — B0132 Frequency of anti-Toxoplasma gondii serology, ocular lesions and associated risk factors in Cassia dos Coqueiros, Brazil. Joao M. Furtado¹, R. De Angelis¹, J. de Paula¹, V. Bollela¹, M. Simões¹, B. Vieira¹, M. Lucena¹, T. Moralles¹, R. Jorge¹, A. C. Passos¹, M. Rodrigues¹. Division of Ophthalmology, Ribeirão Preto Medical School, University of São Paulo; ²Internal Medicine, Ribeirão Preto Medical School, University of São Paulo; ³Social Medicine, Ribeirão Preto Medical School, University of São Paulo


6679 — B0134 Epidemiology of epiretinal membrane and macular edema in a large cohort of patients with uveitis. Chihiro Tanagida, Y. Usui, R. Mitsuhashi, K. Tsuobita, n. nezu, T. Kezuka, H. Goto. Tokyo Medical University

6680 — B0135 Characteristics of Glaucoma in Uveitis Patients. James M. Samson¹, D. Parikh³, M. Fabrykowski³, B. Wong³, C. Samson¹. ¹Ophthalmology, Manhattan Eye, Ear, and Throat Hospital; ²Medicine, Donald and Barbara Zucker School of Medicine at Hofstra


6682 — B0137 Trimestral And Meteorological Variations In Associated-HLA-B27 and Idiopathic Acute Anterior Uveitis: 45 Months Results. Bernardo Villanueva, S. Vooandem Ramos, M. Valdez, E. González Rubio Medina, I. Peñaloza Roman. Enfermedades Inflamatorias Oculares, Hospital de la Luz

6683 — B0138 Factors Predictive of Remission of Chronic Anterior Uveitis. Lucia Sohrin¹, M. Pistoii¹, S. Kohari¹, N. Khacharyan¹, P. Artornsombudh³, S. Pujari¹, C. S. Foster¹, D. A. Jabs¹, J. T. Rosenbaum¹, G. Levy-Clarke¹, H. Sen², E. B. Suhler¹, J. E. Thorne¹, N. P. Bhatt¹, J. H. Kempen¹. Ophthalmology, University of Pennsylvania; ²Ophthalmology, Harvard Medical School; ³Massachusetts Eye Research and Surgery Institute; ⁴Ophthalmology and Medicine, Icahn School of Medicine at Mount Sinai; ⁵Ophthalmology and Medicine, Oregon Health and Science University; ⁶The Tampa Bay Uveitis Center; ⁷Laboratory of Immunology, National Eye Institute; ⁸Ophthalmology, Oregon Health and Science University; ⁹Ophthalmology, The Johns Hopkins School of Medicine; ¹⁰MCM Eye Unit, MyungSung Christian Medical Center and College; ¹¹Ophthalmology, Massachusetts Eye and Ear Infirmary; ¹²Ophthalmology, Boston Children’s Hospital; ¹³Epidemiology, Johns Hopkins Bloomberg School of Public Health; ¹⁴Devers Eye Institute; ¹⁵Ophthalmology, Portland Veterans Affairs Medical Center *CR

*CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
**6684 — B0139**  

**6685 — B0140**  
**A Forty Years Follow-Up Study of Patients with Uveitis Associated with Juvenile Idiopathic Arthritis (JIA).** Angelika Skarin, O. Rauer, E. Bengtsson-Stigmar. Department of Clinical Sciences Lund, Ophthalmology Lund, Sweden, Lund University, Skåne University Hospital

**6686 — B0141**  
**Ophthalmologic screening intervals in patients with juvenile idiopathic arthritis: Data from the Inception Cohort of Newly diagnosed patients with juvenile idiopathic arthritis (ICON-JIA).** Karoline Walscheid1, J. Klotsche1, C. Tappeiner1, M. Niewerth2, D. Foell3, K. Minden3, 6, A. Helligenhau11. 1Department of Ophthalmology and Ophtha-Lab at St. Franziskus-Hospital; 2Department of Ophthalmology, University Hospital Essen; 3German Rheumatism Research Center (DRFZ), a Leibniz Institute; 4Institute for Social Medicine, Epidemiology and Health Economics, Charité Universitätsmedizin Berlin; 5Department of Ophthalmology, Inselspital, University of Bern; 6Department of Rheumatology and Clinical Immunology, Charité Universitätsmedizin Berlin; 7Department of Pediatric Rheumatology and Immunology, University Hospital Muenster; 8University Duisburg-Essen

**6687 — B0142**  
**Objective quantification of intraocular inflammation in anterior uveitis using standard optical coherence tomography macular scans.** Jon Roger Eidet, M. Akopian. Department of ophthalmology, Oslo University Hospital

**6688 — B0143**  
**Aqueous flare in uveitis: Measurements with an enhanced spot fluorometer.** Sangily P. Srivinas1, M. Rathore2, S. Murugan1, S. Rachapalle2, P. Padmanabhan2, A. Jain1, A. Hasheem3, R. Babu3, J. Biswas2. 1Institute of Applied Health Research, University of Birmingham; 2Academic unity of ophthalmology, and Ophtha-Lab at St. Franziskus-Hospital; 3Department of Ophthalmology, University Hospital Essen; 4German Rheumatism Research Center (DRFZ), a Leibniz Institute; 5Institute for Social Medicine, Epidemiology and Health Economics, Charité Universitätsmedizin Berlin; 6Department of Ophthalmology, Inselspital, University of Bern; 7Department of Rheumatology and Clinical Immunology, Charité Universitätsmedizin Berlin; 8Department of Pediatric Rheumatology and Immunology, University Hospital Muenster; 9University Duisburg-Essen

**6689 — B0144**  
**Cost effectiveness of the analysis of intraocular samples in the diagnosis of uveitis.** Lidia Cocho1, 2, S. Peña1, R. Reinoso1, J. Herreras1, 2. 1Institute of Applied Health Research, University of Birmingham; 2Academic unity of ophthalmology, and Ophtha-Lab at St. Franziskus-Hospital

**6690 — B0145**  
**Chest X-ray and Uveitis.** Evaluation in the Western United States. Richard W. Yenni1, P. E. Pecen2, G. Fliney3, A. Palestine1. 1Ophthalmology, University of Colorado; 2School of Medicine, University of Colorado

**6691 — B0146**  
**Resident Grading of Uveitis Parameters.** Nicholas Shokoohi. Ophthalmology, Kresge Eye Institute

**6692 — B0147**  
**Association Between Axial Length and Uveitis.** Marina Ogawa, Y. Usui, K. Tsobota, J. Sakai, H. Goto. Tokyo Medical University Hospital

**6693 — B0148**  
**Development and validation of decision trees for predicting systemic diseases associated with uveitis.** Zhenyu Zhong1, 2, P. Yang3, 6. 1The First Affiliated Hospital of Chongqing Medical University; 2Chongqing Key Laboratory of Ophthalmology and Chongqing Eye Institute

**6694 — B0149**  
**Association of low vitamin D with active phase of non-infectious uveitis in a cross-sectional study.** Samaneth Davoudi, Y. Islam, S. Iyer. Ophthalmology, University of Florida

**6695 — B0150**  

**6696 — B0151**  
**Outcomes important to patients with Posterior Segment-Involving Uveitis.** Mohammad Tallouzi1, 2, J. M. Mathers1, D. J. Moore1, P. L. Murray2, m. Calvert1, A. K. Denniston1. 1Institute of Applied Health Research, University of Birmingham; 2Academic unity of ophthalmology, Sandwell and West Birmingham NHS trust; 3Queen Elizabeth Hospital Birmingham, University Hospitals Birmingham NHS Foundation Trus, Department of Ophthalmology

**6697 — B0152**  
**Health Literacy, Adherence, and Quality of Life in Uveitis Patients.** Claire Mueller1, G. O’Keefe1. 1Emory University School of Medicine; 2Ophthalmology, Emory University School of Medicine

**6698 — B0153**  
**Migration related ocular tuberculosis (TB) in a TB low incidence country.** Talin Barrisani-Asenbauer, K. Beqiri, H. Chalabi. 1Institute of Applied Health Research, University of Birmingham; 2Academic unity of ophthalmology, Sandwell and West Birmingham NHS trust; 3Queen Elizabeth Hospital Birmingham, University Hospitals Birmingham NHS Foundation Trus, Department of Ophthalmology

**6699 — B0154**  
**Ocular and orbital involvement in IgG4-related disease.** Thomas Ness, M. Daniel, W. Lagreze, S. Heinzelmann-Mink. Eye Center, University of Freiburg

**6700 — B0155**  
**Visual morbidity and outcomes in patients with scleritis associated with intraocular inflammation.** Caroline Vasseneix, G. O’Keefe, J. Shantha, S. Teh. Ophthalmology, Emory University Hospital

**6701 — B0156**  
**Ocular complications in herpes zoster ophthalmicus, Dana Darwish, J. Sugar, E. Tu, J. de la Cruz, A. Lobo. Illinois Eye and Ear Infirmary

**6702 — B0157**  
**Ocular surface disease in patients with panuveitis: incidence and characteristics.** Maryam Toulouzi1, 2, J. M. Mathers1, D. J. Moore1, P. L. Murray2, m. Calvert1, A. K. Denniston1. 1Institute of Applied Health Research, University of Birmingham; 2Academic unity of ophthalmology, Sandwell and West Birmingham NHS trust; 3Queen Elizabeth Hospital Birmingham, University Hospitals Birmingham NHS Foundation Trus, Department of Ophthalmology

**6703 — B0158**  
**Differences in treatment outcomes is related to degree of peripapillary retinal thickness in patients with POEMS syndrome.** Katsuya Yagisawa, H. Yokouchi, T. lwase, T. Baba, S. Yamamoto. Chiba University Graduate School of Medicine

**West Exhibition Hall B0159-B0183**

**Thursday, May 02, 2019 10:15-12:00 PM**

**Immunology/Microbiology**

**548 Non-infectious anterior segment / orbital inflammation and allergy**

**Moderator: Carlos R. De Figueiredo**

**6704 — B0159**  
**Genetic mutations in archival ocular biopsies from histiocytic orbital disease lesions.** Tammy M. Martin1, 2, K. Ogle1, 2, H. Stiefel3, 4, t. Neff2, D. M. Albert1, 2, M. Lee3, 4, S. R. Planck1, 3, C. Corless2, J. T. Rosenbaum1. 1Ophthalmology, Oregon Health & Science University; 2Knight Diagnostic Laboratories, Oregon Health & Science University; 3Casey Eye Institute *CR

**6705 — B0160**  
**CDCP1 as a novel regulator of corneal epithelial wound healing.** Lingjun Zhang1, Y. Beck2, P. Huang2, K. Tan3, F. Lin1, 2. 1Department of Inflammation and Immunity, Lerner Research Institute, Cleveland Clinic; 2Department of Ophthalmic Research, Cole Eye Institute, Cleveland Clinic

**6706 — B0161**  
**The essential role of gene GALC and CASC16-CHD9 in the pathogenesis of Ocular mucous membrane pemphigoid (OcMMP).** Yuan Tian1, 2, K. Tsang, G. F. Buttr1, J. Darr1, S. Ibrahim1, M. Hirose2, S. Rauz1. 1Academic Unit of Ophthalmology, University of Birmingham, UK; 2Ophthalmology department, The First Affiliated Hospital of Chongqing Medical University; 3Moorfields Eye Hospital; 4Lübeck Institute of Experimental Dermatology, University of Lübeck

**6707 — B0162**  
**Disease Relapse after Drug-Free Remission in Mucous Membrane Pemphigoid.** Ande Selassie Shiferai1, G. H. Hong1, I. Khan1, C. Okeagwu1, J. E. Thorn1. 1Ophthalmology, Johns Hopkins University; 2NIH; 3University of Virginia; 4Johns Hopkins University *CR

**6708 — B0163**  
**Conjunctival Inflammation Measured by Confocal Microscopy to Evaluate New Therapeutic Agents.** Paul J. Gomes, M. J. Chapin, D. A. Hollander, M. B. Abelson. ORA

**6709 — B0164**  
**Influence of presenting features of atopic keratoconjunctivitis on course of the disease.** Marina Peskina, C. Foster. Massachusetts Eye Research and Surgery Institute
**Thursday – Posters – 6710 – 6733**

**6710 — B0165**  Safety and Tolerability of Topical Cyclosporine A Cationic Emulsion in Patients With Active Severe Vernal Keratoconjunctivitis (VKC) in Pediatric Patients: Pooled Results of the NOVATIVE and Vektis Trials. Dominique Brendon-Gignac1, 2, P. Aragona1, S. Doan, M. Amrane, D. ISMAIL3, J. Montero1, J. Német3, A. Leonard1. 1University Hospital Necker Enfants Malades, APHP; 2CNRS Unit FR 3636, Paris V Descartes University; 3Department of Biomedical Science, University of Messina; 4Bichat Hospital and Foundation A. de Rothschild; 5Sanet SAS; 6Universidad de Sevilla; 7Department of Ophthalmology, Semmelweis University; 8Department of Neurosciences, Ophthalmology Unit, University of Padua  "CR, ✿

**6711 — B0166**  Seven Common Allergen Groups of Eyelid Dermatitis: Education and Avoidance Strategies. Crystal Huang1, J. Yannias1, J. Killian1, J. F. Shen1. 1Mayo Clinic Alix School of Medicine; 2Ophthalmology, Mayo Clinic in Arizona; 3Dermatology, Mayo Clinic in Arizona; 4Health Sciences Research, Mayo Clinic in Minnesota  "CR

**6712 — B0167**  Conjunctivitis due to Dupilumab Treatment in Atopic Dermatitis: Clinical features and impact on gut microbiome. Robert J. Barry1, 2, L. Lov1, 2, M. Shamdas2, K. Suleiman1, M. Murad3, K. Molloy2, S. Velangi1, P. I. Murray1, 2, G. R. Wallace1, 2, S. Rauz1, 2. 1Academic Unit of Ophthalmology, Institute of Inflammation and Ageing University of Birmingham; 2Inflammatory Eye Disease Service, Birmingham & Midland Eye Centre; 3Department of Dermatology, Queen Elizabeth Hospital Birmingham

**6713 — B0168**  The Treatment Effect of 0.1% Tacrolimus Eye Drops in Young and Elder Vernal Keratoconjunctivitis Patients. Keiko Yokoi, N. Yokoi, M. Ueta, C. Sotozono. Ophthalmology, Kyoto Prefectural University of Medicine

**6714 — B0169**  Analysis of relationship between exacerbation of vernal keratoconjunctivitis and atmospheric PM 2.5 concentration. Kazuhiro Harada. Fukuoka university

**6715 — B0170**  Clinical Trial Evaluating the Reduction of Itch with a Novel Contact Lens and Antihistamine Combination Product. Brian Pali1, P. J. Gomes1, F. Yi2. 1Ocular Surface Center, Cullen Eye Institute, Department of Ophthalmology, Baylor College of Medicine; 2School of Optometry and Ophthalmology, Wenzhou Medical University

**6716 — B0171**  Therapeutic Potential of Biodegradable Hydrogel Contact lens in Treatment of Ocular Conjunctivitis. Anka Hu1, R. Liu1. 1The Forsyth Institute; 2Chongqing University

**6717 — B0172**  Usefulness of eyelash solution on allergic conjunctivitis. Megumi Yamamoto1, T. Mimura1, A. Mizota1, K. Fukagawa2, U. Chiohi2, R. Ko3, H. Fujishima3. 1Ophthalmology, Teikyo University Hospital; 2Ryougoku Eye Clinic; 3Fukuoka University; 4Ibarumi University


**6719 — B0174**  Tacrolimus: A novel aqueous tacrolimus eye drop formulation for the treatment of immune mediated eye diseases. Cornelia Siegl1, M. Koenig-Schuster1, S. Nakowskit2, C. Koller1, P. Graf1, W. Sipos3, E. Prieschl-Grassauer1. 1Marinomed Biotech AG; 2Clinical Department for Farm Animals and Herd Management, University of Veterinary Medicine Vienna  "CR

**6720 — B0175**  Ocular eye drop preparations inhibit neutrophil extracellular trap formation. Graham R. Wallace, M. Davidson, M. Murad, M. Shamdas, S. Rauz. Institute of Inflammation and Ageing, University of Birmingham

**6721 — B0176**  FcεRI-stimulated human cord blood mast cell (CBMC) responses: decrease in chemokine secretion and MAPK/inhibitor of nuclear factor kappa B pathway activation. Virginia L. Calder1, G. Galatowicz1, M. E. Stern2. 1Institute of Ophthalmology; 2ImmunEye

**6722 — B0177**  IL-27 Signaling Deficiency Develops Th17-enhanced Allergic Inflammation. Yun Zhang1, 2, X. Chen1, 2, R. Deng1, 2, W. Chi1, S. C. Pfugfelder3, D. Li4. 1Ocular Surface Center, Cullen Eye Institute, Department of Ophthalmology, Baylor College of Medicine; 2School of Optometry and Ophthalmology, Wenzhou Medical University

**6723 — B0178**  The role of LTβ in the allergic conjunctivitis mouse model. Yoshiaki Hirakata1, 2, H. Lee1, K. Yasukawa2, K. ADACHI3, K. Saeki1, T. Okuno1, A. Murakami1, A. Matsuura1, T. Yokomizo1. 1Ophthalmology, Juntendo University Graduate School of Medicine; 2Biochemistry, Juntendo University Graduate School of Medicine

**6724 — B0179**  Genomewide gene expression analysis of ragweed-induced mouse conjunctivitis model. Yosuke Asada1, S. Iwamoto1, T. Hirakata1, N. Ebihara2, A. Matsuura1. 1Ophthalmology, Juntendo University Graduate School of Medicine; 2Clinical Department for Farm Animals and Herd Management, University of Veterinary Medicine Vienna

**6725 — B0180**  5 Lipoxigenase Mediates Sex-Specific Protective Responses in Dry Eye Disease. Becca A. Flitter, N. M. Rossi, A. Modi, C. Cheung, R. Li, K. Gronert. Vision Science Program, School of Optometry, University of California, Berkeley

**6726 — B0181**  Interleukin-23 is Required for the In Vivo Generation of Memory T Helper-17 Cells. Yihe Chen, C. Shao, T. Nakao, S. Chauhan, R. Dana. Schepens Eye Research Ins /MEI

**6727 — B0182**  A novel and effective oral antibiotics treatment to the graft-versus-host disease model mouse. Eisuke Shimizu1, Y. Ogawa1, H. YAZU1, M. Fuki2, S. Fukuda2, Y. Kawakami2, K. Tsubota1. 1Ophthalmology, Keio University; 2Institute for Advanced Biosciences, Keio University; 3Division of Cellular Signaling, Institute for Advanced Medical Research Keio University School of Medicine

**6728 — B0183**  Expression of TLT-2 on T cells and macrophages in corneal allografts. Kazuho Isamu. Ophthalmology, Nippon Medical School Tamanagayama Hospital

**West Exhibition Hall B0253-B0284**

**Thursday, May 02, 2019 10:15 AM-12:00 PM**

**Cornea**

**549 Cornea Dry Eye Clinical Treatment**

**Moderators:** Sayan Basu and Jennifer Rose-Nussbaumer

**6729 — B0253**  DREAM Extension Study - Comparison of placebo and omega-3 fatty acid supplement groups on OSDI, 4 key signs of DED and adverse events. Munira Hussain1, R. M. Shein1, M. Pistilli1, M. G. Maguire2, P. A. Asbell1. 1Ophthalmology and Visual Sciences, University of Michigan; 2Ophthalmology, University of Pennsylvania; 3Ophthalmology, University of Tennessee Health Science Center  "CR, ✿


**6731 — B0255**  Clinical effects of preservative free diquafosol eyedrops after phacoemulsification of preexisting dry eye patients. Ikhyun Jun1, S. Park2, S. Choi3, H. Lee4, E. Kim5, K. Seo6, T. Kim7. 1Yonsei University College of Medicine; 2Eyereum Eye Clinic  "CR

**6732 — B0256**  Comparison of 0.1% Cyclosporine A, 3% Diquafosol, and 0.1% Hyaluronic acid eye drops in the treatment of dry eye after cataract surgery by evaluating the changes in noninvasive assessment of tear film and corneal wavefront. Bae Jeong Bum, B. Choi. Lee eye clinic

**6733 — B0257**  Intense pulsed light therapy with meibomian gland expression vs meibomian gland expression for treatment of dry eye in ocular rosacea. Samantha Sagaser4, R. Butterfield4, H. Kostorek1, Y. Kusne2, W. M. Bourne2, M. Fantschit1, D. Patel1, J. F. Shen1. 1Mayo Clinic Alix School of Medicine; 2Ophthalmology, Mayo Clinic; 3Ophthalmology, Mayo Clinic; 4Research Biostatistics, Mayo Clinic  ✿

* ✿ Refer to the Program Number in the Clinical Trial (CT) Registration Index.  "CR ✿ Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
6734 — B0258  Autologous Blood in the treatment of Severe Dry Eyes and Ocular Surface Disease. Ore-oluwa C. Erikitola1,2, O. A. Williams3,4, D. Lyalil, A. Ferni. 1Ophthalmology, NHS Greater Glasgow and Clyde; 2Ophthalmology, NHS Lanarkshire

6735 — B0259  Tear cytokines and conjunctival microvascular alterations in dry eye patients in responses to anti-inflammation treatment. YUQING DENG1, J. Wang2, H. Jiang3, J. Yuan2. 1Zhongshan Ophthalmic Centre, Sun Yat-sen University; 2Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine; 3Department of Neurology, University of Miami Miller School of Medicine

6736 — B0260  Efficacy and safety of OTX-101, a novel nanomicellar cyclosporin formulation, in patients with keratoconjunctivitis sicca: Results of a pooled analysis. Melissa Toyo1, D. F. Goldberg1, J. Taube2, R. Malhotra2, C. Darby3, A. Ospundele4, J. Luchs. 1Toyo Clinic; Jules Stein Eye Institute; 2Wolstan & Goldberg Eye Associates; TuTa Eye Center; Ophthalmology Associates; 3Sun Pharma Advanced Research Company Ltd; 4Sun Pharmaceuticals Industries, Inc.; Hofstra Northwell School of Medicine

6737 — B0261  Influence of Intense Regulated Pulse Light on Tear Film Lipid Layer. Taeyoung Gil, S. SHIN. Department of Ophthalmology, SahmYook Medical Centre

6738 — B0262  Clinical Results of tivasiran, a siRNA for the treatment of dry eye disease. Veronica Rae1, V. Gonzalez2, A. Blear3, B. Vargas4, A. Jimenez5. 1Regulatory Affairs, Sylenis; 2Sylenis *CR


6740 — B0264  Dry eye patients report improvement in symptoms with hypochlorous acid use over 30 days. Jami R. Kern1, A. M. Fahmy2. 1Kern Consulting; 2Minnesota Eye Consultants


6742 — B0266  Comparison between homologous serum eye drops and platelet-rich plasma eye drops as treatment for dry eye disease. Mattia Passiollongo1, L. Bergamo2, F. Romanelli3, A. Lavis1, M. Colosio1. 1APSS - Provincia Autonoma di Trento - Clinica Oculistica; 2APSS - Provincia Autonoma di Trento - Centro trasfusionale e di immunoematologia


6744 — B0268  MC2-03, an innovative ciclosporin eyelrop, shows favorable safety and tolerability after 6 months of treatment in moderate-to-severe DED patients. Morten Prastegaard2, F. Gomez', J. Selmer', S. Heegaard3. 1MC2 Therapeutics; 2Rigshospitalet *CR

6745 — B0269  Ocular Pain Response to Treatment in Dry Eye Patients. Andrew N. Siedlecki1, S. Smith4, R. R. Sayegh1. 1Ophthalmology, Case Western Reserve University; 2Ophthalmology, University Hospitals of Cleveland; 3Ophthalmology, Cleveland Clinic

6746 — B0270  Safety & effect of tivasiran eye drops on ocular surface: corneal sensitivity, mucin production and proinflammatory mediator’s expression. Victoria Gonzalez1, B. Vargas1, T. Martinez1, A. Guerra1, V. Ruz1, A. Jimenez1. 1Clinical, Sylenis; 2Sylesint *CR

6747 — B0271  Determinants of Ocular Dyscomfort Severity Among Participants in the Dry Eye Assessment and Management (DREAM) Study. Rony R. Sayegh1, M. G. Maguire2, E. Yu3, J. Farrar3, R. M. Shein1, E. Kukliniski1, P. A. Asbell1. 1Ophthalmology, Case Western Reserve University; 2Ophthalmology, Cleveland Clinic Abu Dhabi; 3Ophthalmology, University of Pennsylvania; 4Ophthalmology, University of Michigan; 5Ophthalmology, Icahn School of Medicine at Mount Sinai; 6Ophthalmology, University of Tennessee Health Science Center *CR


6749 — B0273  Innovative high-frequency electrotherapy device Rexon-Eye successfully treats Meibomian gland disease patients. Alfredo Ruggeri1, A. Colucci1, M. Barbariga2, P. Rama1, G. Ferrari1. 1Dept of Information Engineering, University of Padua; 2Resono Ophthalmic; 3Ospedale San Raffaele *CR

6750 — B0274  Safety and Efficacy of First-in-Class mtrROS scavenger SkQ1 for the Treatment of Dry Eye Disease: A Phase 3 Clinical Trial. Lawrence T. Friedhoff1, A. Petrov2, G. W. Ousler2, M. Watson3, Q. Xue3, M. Ngiam3. 1Mitotech, SA; 2Ora, Inc; 3Nicox Ophthalmics, Inc. *CR

6751 — B0275  Clinical Efficacy of Immediate Manual Meibomian Gland Expression after Thermal Pulsation (LipiFlow) for Obstructive Meibomian Gland Obstruction: Comparison with Thermal Pulsation. Jin Hyung Park1. 1Ophthalmology, Miso Eye Clinic; 2Research Institute for Biomacromolecules, University of Ulsan College of Medicine, Asan Medical Center

6752 — B0276  Safety and Efficacy of Intense Pulsed Light Treatment with Expression for Severe Meibomian Gland Dysfunction of the Upper Eyelids Using a Novel Lightguide. Rolando Toyo1, M. Toyo1. Toyo’s Clinic *CR

6753 — B0277  Patients Enrichment for Increased Dendritiform Cells using in Vivo Confocal Microscopy Results in Improved Response to Topical Steroids in Dry Eye Disease: Results of the Therapeutic Response to Anti-inflammatory agents in the Corneal Epithelium (TRACE) study. Anam Akhlaq1, A. Kheirkhah4, S. Aggarwal2, B. Cavalcanti3, R. Mueller1, A. Abbouda2, Z. Salem2, R. Duna1, P. Hamrah1. 1Center for Translational Ocular Immunology, Tufts Medical Center; 2Cornea Service, Department of Ophthalmology, New England Eye Center, Tufts Medical Center; 3Ocular Surface Imaging Center, Massachusetts Eye & Ear Infirmary, Department of Ophthalmology, Harvard Medical School; 4Cornea Service, Massachusetts Eye & Ear Infirmary, Department of Ophthalmology, Harvard Medical School *CR

6754 — B0278  Dehydrated Extracellular Membranes in the Treatment of Severe Dry Eye. Ankur A. Parikh1, S. Yalamanchili, D. Gemmel1, S. Erzurum1, 2Northeast Ohio Medical University; 3Eye Care Associates; 4Mercy Health - St. Elizabeth Youngstown Hospital


6756 — B0280  Safety and efficacy of a novel ocular comfort agent: Interim analysis. Judith Flanagan1, N. Yeotikar2, J. Dieck2, D. Tilia1. 1Brien Holden Vision Institute, Brien Holden Vision Institute; 2School of Optometry and Vision Science, University of New South Wales

6757 — B0281  Onabotulinum toxin A improves photophoria and sensations of dryness independent of ocular surface parameters. Nandini Venkateswaran1, J. Hwang2, A. Kong1, A. Levitt3, R. Levitt4, W. Lee5, A. Galor1, 2Bascom Palmer Eye Institute; 3University of Miami Miller School of Medicine; 4Miami Veterans Administration Medical Center

6758 — B0282  A review of the artificial tears marketed in the US for their preservative composition, label information and cost per application. Avani Kathuria, A. Sharma. School of Pharmacy, Chapman University
Thursday – Posters – 6759 – 6781

6759 — B0283  Recombinant Deoxyribonuclease (DNase) Eye Drops Use in Patients with Dry Eye Disease: Results of a Randomized Clinical Trial. Christine Mun1, S. Tibrewal2, A. Ahu3, A. Lopez4, N. Atassi5, B. Surenkha6, M. Buswick7, H. Shah8, S. Shukle9, J. Mun1, A. Pradeep1,1, Raji4, S. Jain9. 1Ophthalmology, University of Illinois at Chicago; 2Midwestern University Chicago College of Osteopathic Medicine  *CR

6760 — B0284  Transplantation of mesenchymal stem cells for lacrimal gland regeneration in a dry eye mouse model. Jana Dietrich1, L. Ott1, M. Roth2, J. Witt1, G. Geerling1, S. Mertsch1, S. Schrader1. 1Department of Ophthalmology, Pius Hospital, University of Oldenburg; 2Department of Ophthalmology, University Hospital of Duesseldorf

West Exhibition Hall B0285-B0322
Thursday, May 02, 2019 10:15 AM-12:00 PM

550 Cornea Dry Eye Clinical I Diagnostics

Moderators: Vatinee Y. Bunya and .ambi Nallasamy

6761 — B0285  Evaluation of Partial Blink Rate as a Measurement of Dry Eye Disease. Ruti Sella1, Y. Jie2, J. Feng2, L. M. Gomez1, N. A. Afshari1. 1OPTHALMOLOGY, Shiley Eye Institute; 2Ophthalmology, Beijing Tongren Eye Center

6762 — B0286  Meibomian gland dropout in non-proliferative diabetic retinopathy patients. Karim Mohamed-Noriega1, C. Gonzalez-Arocha1, F. Morales-Wong1, J. Mohamed-Noriega1, B. Velasco-Sepulveda1, C. Fernandez-De Luna1, A. Martinez-Lopez Portillo1, J. Mohamed-Hamsho1. Universidad Autonoma de Nuevo Leon, Hospital Universitario “Dr. Jose Eleuterio Gonzalez”, Facultad de Medicina, Departamento de Oftalmologia

6763 — B0287  Intensity of lid wiper epithelial staining with alterations of dye amounts and timing of observation. Christopher Lievens1, Y. Norgert1, N. Briggs1, M. Viana-Estopaa1. 1Southern College of Optometry; 2Anglia Ruskin University; 3University of New South Wales

6764 — B0288  LIGHT Protein is a Potential Biomarker for Ocular Graft-VS-Host Disease (oGVHD). Bagavasgali Surekha1, I. Raju1, S. AN, J. Kwon1, A. Pradeep1, N. Atassi1, C. Mun3, S. Jain2. University of Illinois at Chicago  *CR

6765 — B0289  Fornix depth in ocular graft-versus-host disease and cicatrical pemphigoid using a novel fornix scale. Manuel M. Hermann1, K. Czubkowski1, S. Wittig1, P. Steven1. 1Department of Ophthalmology, University of Cologne; 2Division of Dry eye and ocular GVHD, University of Cologne; 3Centrum Mikrochirurgii Oka Laser

6766 — B0290  Is the Schirmer test associated with local and systemic medication? Results of the German population-based Gutenberg Health Study (GHS). Ulrike Hampel1, A. Schuster1, S. Nickels1, A. Schule2, K. Lackner2, T. Müntzel1, P. Wild2, M. Beutel1, I. Schmidtmann1, N. Pfeiffer1. 1Department of Ophthalmology, University Medical Center of the Johannes Gutenberg-University Mainz; 2Preventive Cardiology and Preventive Medicine, Center for Cardiology, University Medical Center of the Johannes Gutenberg-University Mainz; 3Institute for Clinical Chemistry and Laboratory Medicine, University Medical Center of the Johannes Gutenberg-University Mainz; 4Center for Cardiology I, University Medical Center of the Johannes Gutenberg-University Mainz; 5Department of Psychosomatic Medicine and Psychotherapy, University Medical Center of the Johannes Gutenberg-University Mainz; 6Institute for Medical Biostatistics, Epidemiology and Informatics, University Medical Center of the Johannes Gutenberg-University Mainz

6767 — B0291  Changes in tear meniscus and ocular surface after absorbable punctal plug insertion. Byung H L Ko1, S. Song1, Y. Lee. 1Ophthalmology, Konyang University Hospital


6769 — B0293  Blink dynamics in healthy versus dry eye subjects as assessed by a novel device. Anat Galor1, Y. Cohen1, Y. Arieli1, S. Epshtin2, R. Gefen1, A. Harris1. 1Ophthalmology, Bascom Palmer; 2Ophthalmology, Miami VAMC; 3ADOM; 4The Jerusalem College of Technology; 5Indiana University  *CR

6770 — B0294  The correlation between the tear MMP-9 concentration and the clinical findings in patients with dry eye disease. Hyokyung Lee1, J. Na. 1Ophthalmology, Inje Univ.

6771 — B0295  The effects of MMP-9 (Preform and active form) concentration and loading volume on the positive results of InflammaDry® Test. Jangah Huh1, B. Lee1, S. Choi1, Y. Eom1, H. Kim1, J. Song1. Ophthalmology, Korea University College of Medicine

6772 — B0296  Relationship between the meniscus parameters evaluated by different methods. Yukiko Sonomura1, N. Yokoi1, R. Sakai1, H. Kato1, A. Komuro1, C. Sotozono1. 1Kyoto Yamashiro general medical center; 2Kyoto prefectural university of medicine

6773 — B0297  Evaluation of tear film osmolarity using TearLab® and I-Pen® osmometry. Elisabeth M. Messmer1, M. M. Schaumberger1, S. Priglinger1, F. Y. Bunya1. 1Department of Ophthalmology, LMU, Ludwig Maximilians University  *CR

6774 — B0298  Changes of tear eicosanoids in cohort of trabeculectomy patients. Louis Tong1, Y. Anbav1, M. R. Wenk1, T. Wong1. 1National University Of Singapore; 2Singapore National Eye Center; 3Singapore Eye Research Institute

6775 — B0299  Investigation of the difference of clinical manifestation of dry-eye subtype classified by breakup pattern. Norihiko Yokay1, H. Kato1, R. Sakai1, A. Komuro1, Y. Sonomura1, Y. Koike1, C. Sotozono1. Ophthalmology, Kyoto Prefectural Univ of Med

6776 — B0300  The Ocular Surface Frailty Index as a predictor of dry eye onset after cataract surgery. Edoardo Villani1, L. Marelli1, S. Lucentini1, E. Ruggiero1, P. Nucci1. 1Clinical Science and Community Health, University of Milan; 2Eye Clinic, San Giuseppe Hospital

6777 — B0301  A Brief Questionnaire to Screen Dry Eye Patients for Sjogren’s Syndrome. Vatinee Y. Bunya1, M. Massaro-Giordano1, F. B. Vivino1, E. Akpek1, A. Baer1, J. A. Gonzales1, T. Lietsman1, G. Ying2. 1Ophthalmology, Scheie Eye Institute; 2Rheumatology, University of Pennsylvania; 3Ophthalmology, Wilmer Eye Institute; 4Rheumatology, Johns Hopkins University; 5Ophthalmology, F.I. Proctor Foundation  *CR

6778 — B0302  Comparison of Clinical and Reading Center Assessments of Meibomian Glands in the Dry Eye Assessment and Management (DREAM) Study. Maxwell Pistilli1, M. G. Maguire1, E. Daniel1, V. Y. Bunya1, M. Massaro-Giordano1, E. Smith1, P. Kadakia1, P. A. Asbell1. 1Ophthalmology, University of Pennsylvania; 2University of the Sciences; 3Ophthalmology, University of Tennessee Health Science Center  *CR

6779 — B0303  Newly-developed Ocular Surface Tribometer can measure frictional coefficient of human ocular surface in vivo. Masahiko Yamaguchi1, Y. Sakane1, A. Shiraishi1, S. Pranoto1, S. Okamoto1, R. Kataoka1, J. H. Lee1, Y. Ohashi1. 1Ophthalmology, Ehime Prefectural Central Hospital; 2Ophthalmology, Ehime Graduated School of Medicine; 3Mechanical Engineering, Ehime Graduated School of Science and Engineering

6780 — B0304  A new hyperspectral imaging method to evaluate dry eye disease – 3D-WLT study results. Raanan Gefen1, F. Segev1, N. Gefen1, A. Galor1, Y. Cohen1, Y. Arieli1, S. Epshtin1, A. Harris1. 1ADOM advance optical technologies; 2Ophthalmology, Meir Medical Center; 3Ophthalmology, Rabin Medical Center; 4Ophthalmology, Tel Aviv University; 5Bascom Palmer; 6Indiana University; 7The Jerusalem College of Technology  *CR

6781 — B0305  The Pain Response during Tear Breakup (TBU). Deborah Antwi1, C. G. Begley1, R. J. Braun1, R. A. Luke1, P. Sini1. 1Indiana university, school of optometry; 2University of Delaware

Refer to the Program Number in the Clinical Trial (CT) Registration Index.  *CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
7682 — B0306 Repeatability of Modified Schirmer Strip Wetted Lengths and Basal Tear Production Rates, Young Hyun Kim1,2, A. D. Graham, W. Li,3 C. J. Radeke1,3, M. C. Lin1,3
1Vision Science Graduate Group, University of California, Berkeley; 2Chemical and Biomolecular Engineering, University of California, Berkeley; 3Clinical Research Center, School of Optometry, University of California, Berkeley

7683 — B0307 Grading and Baseline Characteristics of Meibomian Glands using Meibography images in the Dry Eye Assessment and Management (DREAM) Trial. Ebenesser Daniel1, M. G. Maguire1, M. Pistilli1, V. Y. Buyn4, G. Massaro-giordano1, E. Smith1, P. Kadakia1,2, P. A. Ashell1,4
1Ophthalmology, University of Pennsylvania; 2University of the Sciences in Philadelphia; 3Ophthalmology, University of Tennessee Heath Science Center *CR, X

7684 — B0308 Tear lipid profile in evaporative and non-evaporative dry eye. Mark Willcox1, T. Tan1, K. Wong3, F. Stapleton3, H. Liu2, S. Masoudi1
1Optometry and Vision Science, University of New South Wales; 2Allergan Plc *CR

7685 — B0309 Patients with neuropathic corneal pain demonstrate decrease in their relative centralized component of pain with therapy. Stephanie Cox1,2, R. Rashad1,3, M. H. Chen, C. Leahy. Carl Zeiss Meditec, Inc
*CR

7686 — B0310 Anti-Citrullinated Protein Antibodies (ACPA) are Present in Tear Fluid of Dry Eye Disease (DED) Patients: Diagnostic and Therapeutic Implications. Sandeep Jain, S. AN, J. Kwon, B. Surenkhuu, I. Raja, N. Atassi, A. Pradeep, C. Muntz. Ophthalmology, University of New Hampshire *CR


7688 — B0312 Test efficacy of the fluorescein breakup time test in the diagnosis of dry eye – a re-examination. Jerry R. Paugh,1 E. Chen1, J. Tse1, T. Nguyen2, A. Sasa3, M. Thomas-DeJesus1, J. Kwart1, A. Nguyen,4 M. Farid1, S. Garg1, J. V. Jester5,6
1SCCO at Marshall B. Ketchum University; 2Mathematics, California State University; 3Ophthalmology, University of California at Irvine; 4Biomedical Engineering, University of California at Irvine; 5Gavin Herbert Eye Institute, University of California at Irvine; 6Private Practice; 7Private Practice

7689 — B0313 Tear Film Lipid Layer Spread - A Possible Indicator for Evaluating the Severest Form of Aqueous Tear Deficient Dry Eye. Yamato Yoshikawa1, N. Yokoi2, H. Kato2, A. Komuro2, Y. Sonomura2, T. Ikeda,3 C. Sotozono. Osaka Medical College; 4Kyo To Prefectural Univ of Medicine

7690 — B0314 Morphological alterations in corneal nerves of dry eye patients. Yuichi Uchino1,2, M. Miki1,2, M. Uchino1,2, Y. shigeno2, J. Shimazaki3,4,5
1Keio University School of Medicine; 2COSMOS Study Group; 3Tokyo Dental College

7691 — B0315 TearLab Discovery Quantification of MMP-9 Levels in Patients With Significant Inflammatory Eye Disease and Concordance with InflammataDry. Benjamin Sullivan1, C. B. Garcia2, T. Hovington2, M. S. Berg,3 D. Cohen,4 V. L. Perez.1 TearLab Corp.; 2Ophthalmology, Duke University *CR

7692 — B0316 Histatin-1 is present in normal human tears and reduced in aqueous deficient dry eye disease. Kyung-No Son1, S. Kalmodia1, D. Cao1, B. Lee1, D. Shah1, M. Ali1, A. Balasubramaniam1, S. Jain1, V. K. Akalkal1.
1University of Illinois at Chicago; 2Surgery, Jesse Brown Veterans Affairs Hospital


7694 — B0318 Improved Demodex diagnosis and grading using a novel in situ technique. Alex Munte1, C. Purslow, J. S. Wolfsohn1, J. P. Craig1.1 Ophthalmology, University of Auckland; 2School of Health Professions, University of Plymouth; 3School of Life and Health Sciences, Aston University

7695 — B0319 Frictional coefficient of soft contact lenses on ocular surface measured with ocular surface tribometer. Ryoosuke Tachibana1, Y. Sakane1, M. Yamaguchi1, A. Shiraishi1, S. Pranoto2, S. Okamoto1, R. Kataoka1, J. H. Lee1, Y. Okashi1.
1Eihe university; 2Eihe Prefuctural Central Hospital

7696 — B0320 Development of a New Scale for Ocular Surface Staining Based on Psychophysical Principles. Carolyn Begley1, P. Site1, S. Butterworth Connell1, B. Caffery1, J. Nelson2, C. Springs3, T. L. Simpson.1 School of Optometry, Indiana University; 2Department of Ophthalmology, HealthPartners Medical Group; 3Department of Ophthalmology External Eye & Corneal Disease, HealthPartners Eye Care; 4Consultant; 5Toronto Eye Care; 6School of Optometry, University of Waterloo; 7Department of Ophthalmology, Indiana University; 8Eye Specialists of Indiana

7697 — B0321 Correlation between ocular surface disease index and dry eye functional parameters using a non-invasive method. Nalllly R. Morales-Mancillas, J. C. Hernandez, C. Gustrero-Perez, J. E. Valdez. Cornea and Refractive Surgery, Tecnologico de Monterrey School of Medicine

7698 — B0322 Assessment of a preclinical dry eye model using ultrahigh-resolution optical coherence tomography. Martin Pfister1, A. Messner1, C. Fischak2, F. Garreis1, F. P. Paulsen1, K. Schutzenberger1, V. Arana dos Santos1, H. Stegmann1, G. Garhofer1, L. Schmetterer1, R. M. Werkmeister1. 1Center for Medical Physics and Biomedical Engineering, Medical University of Vienna; 2Christian Doppler Laboratory of Ocular and Dermal Effects of Thiomers, Medical University of Vienna; 3Institute of Applied Physics, Vienna University of Technology; 4Department of Functional and Clinical Anatomy, Friedrich Alexander University Erlangen-Nürnberg (FAU); 5Department of Clinical Pharmacology, Medical University of Vienna; 6Singapore Eye Research Institute

West Exhibition Hall B0377-B0413
Thursday, May 2, 2019 10:15 AM-12:00 PM

531 Corneal biomechanics

Moderators: Bryn Biazzi and Vishal Jhanji

7699 — B0377 Measuring Real-Time Corneal Elasticity Standardized to Intraocular Pressure. Sean J. McCafferty1,2. 1Arizona Eye Consultants; 2ophthalmology, university of arizona

8600 — B0378 Ocular pulse induced corneal deformation in healthy subjects. Jun Liu1,2, T. Sandvicschi1, K. Clayson1, Y. Ma1, S. Kwock1, E. Pavlato1, X. Pan1. 1Biomedical Engineering, Ohio State University; 2Ophthalmology and Visual Science, Ohio State University; 3Biophysics graduate program, Ohio State University; 4Bioinformatics, Ohio State University

8601 — B0379 Comparison of long-term changes in corneal biomechanical properties after laser in situ keratomileusis and photorefractive keratectomy. Sami Saad1,2, R. Saad1,2, M. Delbarre2, F. Froussart2. 1Ophthalmology, Centre Hospitalier National d’ Ophthalmologie; 2Ophthalmology, Percy Military Hospital

6802 — B0380 Factors influencing corneal biomechanics in diabetes mellitus. Lisa Ramn, R. Herber, N. Terai, L. E. Pillutla. University Hospital Carl Gustav Carus TU Dresden
6803 — B0381 Recovery of corneal hysteresis and tangent modulus from long-term overnight orthokeratology. Andrew K. Lam1, S. Hon1, S. K. Lee1, S. Low1, J. Chong1, D. Lam1. 1School of Optometry, The Hong Kong Polytechnic University; 2Department of Mechanical and Aerospace Engineering, The Hong Kong University of Science and Technology; 3Department of Biomedical Engineering, The Hong Kong Polytechnic University *CR, *

6804 — B0382 Corneal hydration control and effect on whole eye inflation. Keyston Clayson1, Y. Ma1, X. Pan1, E. Pavlato1, J. Liu1. 1Biomedical Engineering, The Ohio State University; 2Ophthalmology & Visual Science, The Ohio State University; 3Center for Biostatistics, The Ohio State University *CR

6805 — B0383 Distribution and measurement of corneal thickness in rabbits. Muhammad Ahmad Khaw1, 2. 1Aier School of Ophthalmology, C.S.U.; 2Refractive surgery, Changsha Aier Eye Hospital

6806 — B0384 Biomechanical changes and intraocular pressure measurement of the cornea after Femtosecond laser-assisted Descemet stripping endothelial keratoplasty. Huiyi Chen. Department of Ophthalmology, Eye, Ear, Nose, and Throat Hospital, Fudan University, Shanghai

6807 — B0385 Elevation matrix data in the evaluation of normal and keratoconus corneas. Jaime Testador1, 2, J. F. Gutierrez-Carmona1. 1Ophthalmology, Hospital Ramon y Cajal; 2Neurosciences, Universidad Autonoma de Madrid

6808 — B0386 The relevance of Bowman’s layer in corneal biomechanics. Emilio A. Torres-Netto1, 2, S. Klink1, B. Spirl1, W. Sekundo1, F. Hafezi1. 1University of Zurich; 2Ophthalmology, Federal University of Sao Paulo - Paulista School of Medicine; 3Computer Vision Laboratory, Swiss Federal Institute of Technology; 4Ophthalmology, Phillips University of Marburg; 5Ophthalmology, University of Geneva


6810 — B0388 Ocular Graft Versus-host Disease Patients Exhibit Impaired Corneal Biomechanics. Giuseppe Giannaccare1, M. Pellegrini1, L. Taroni1, F. Bernabei1, C. Senni1, A. Grendelee1, F. Moscardelli1, M. Arpinati1, F. Bonfazi1, M. Sessa1, P. Versura1, E. C. Campos1. 1Ophthalmology Unit, DIMES Dept, Alma Mater Studiorum University of Bologna; 2Haematology Institute “L.A. Seragnoli”, S.Orsola-Malpighi University Hospital, Bologna, University of Bologna

6811 — B0389 A biomechanical and topographical analysis of the “healthy” partner eye in unilateral keratoconus. Doris Franekel1, L. Hamori1, A. Abdin1, S. Saffii1, L. Daas1, T. Eppeg1, B. Seitz1. 1Department of Ophthalmology, Saarland University Medical Center UKS; 2Department of Ophthalmology, Institute of Experimental Ophthalmology, Saarland University


6813 — B0391 Non-contact Acoustic Micro-Tapping Optical Coherence Elastography (AuT-OCE) for Human Cornea. Mitchell Kirby1, R. Wallace1, L. Gar1, S. Song1, I. Pellevanov1, K. Zhou1, R. K. Wang1, 2, M. O’Donnell1, T. Shew1. 1Bioengineering, University of Washington; 2Ophthalmology, University of Washington; 3School of Medicine, University of Washington; 4School of Science and Engineering, University of Dundee

6814 — B0392 Biomechanical changes among healthy, subclinical keratocoric and keratoconic corneas before/after cross-linking. Qingyan Zeng. Hankou Aier Eye Hospital

6815 — B0393 The effect of corneal cross-linking on biomechanical properties in human eye-banked corneas using nano-indentation microscopy. Bandar Almezi1, 2, C. Hillarby2, A. Kazaifi1, R. Akhtar1, H. Radhakrishnai2. 1School of Health Sciences, Faculty of Biology, Medicine and Health, University of Manchester; 2Manchester Royal Eye Hospital, Central Manchester University Hospitals NHS Foundation Trust, Manchester Academic Health Science Centre; 3Department of Mechanical, Materials and Aerospace Engineering, School of Engineering, University of Liverpool

6816 — B0394 Brillouin Microscopy measurement of the anisotropic properties of the cornea. Joshua N. Webb, G. Scarcelli. University of Maryland

6817 — B0395 Application of Optical Coherence Tomography and Optical Path Length Measurement to Monitor Corneal Thinning and Refractive Index Change During UVA-Riboflavin Corneal Cross-Linking. Sofia Xin Tan, A. Agrawal, D. Hammer, i. 1ev. Center for Devices and Radiological Health, FDA

6818 — B0396 Assessing Corneal Elasticity as a Function of Hydration with Optical Coherence Elastography. Salavat Aglyamov1, 2, M. Singh1, Z. Harr1, J. Li1, S. Vantipalli1, K. Larin1, 2, M. D. Twa1. 1Mechanical Engineering, University of Houston; 2Biomedical Engineering, University of Texas at Austin; 3Biomedical Engineering, University of Houston; 4Ocean and Civil Engineering, The School of Naval Architecture, Shanghai Jiao Tong University; 5Molecular Physiology and Biophysics, Baylor College of Medicine; 6School of Optometry, University of Alabama at Birmingham; 7College of Optometry, University of Houston

6819 — B0397 Can corneal viscoelasticity be determined from in vivo air-puff application? Abhijit Sinha Roy1, M. Francis1, R. Shetty2. 1Narayana Nethralaya Foundation; 2Narayana Nethralaya Eye Hospital *CR

6820 — B0398 Stiffening effects of collagen crosslinking procedure on posterior and anterior corneal flaps. Hamed Hatami-Marbini. University of Illinois at Chicago

6821 — B0399 Assessing the biomechanical properties of cross-linked cornea in vivo with optical coherence elastography. Dexi Zhu, Y. Zhou, Z. Jin, M. Shen. School of Ophthalmology & Optometry, Wenzhou Medical University

6822 — B0400 Air-puff induced eye retraction and crystalline lens wobbling measured with long depth range swept source optical coherence tomography. Alfonso Jimenez-Villar1, E. Maczynska1, J. Rezewska1, M. Wojtkowski1, B. J. Kalm1, I. Grudkowski1. 1Institute of Physics, Nicolaus Copernicus University; 2College of Medicine, Nicolaus Copernicus University; 3Institute of Physical Chemistry, Polish Academy of Sciences


6824 — B0402 Evaluation of biomechanical changes and corneal stiffening after corneal cross-linking in progressive keratoconus: A prospective follow-up study using an air-puff application Scheimpflug analyzer. Robert Herber1, M. Francis1, E. Spoerl1, L. E. Pillunat1, F. Raikv1. 1Department of Ophthalmology - Univ, Dresden; 2Narayana Nethralaya Foundation

6825 — B0403 Preliminary study on biomechanical properties of normal human corneal stroma. Tan Wang1, c. Xu2, y. xiang3. 1Refractive & Vis Correction Ctr, Tianjin Eye Hospital & Eye Institute; 2School of Mechanical Engineering, Tianjin University

* Refer to the Program Number in the Clinical Trial (CT) Registration Index. *CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.

399
6826 — B0404  
**In vivo characterization of corneal natural frequency using optical coherence elastography.** Gongpu Lan¹, K. Linar³, M. D. Twu². ¹Department of Photoelectric Technology, Foshan University; ²School of Optometry, University of Alabama at Birmingham; ³Department of Biomedical Engineering, University of Houston; ⁴Department of Molecular Physiology and Biophysics, Baylor College of Medicine

6827 — B0405  
**Precise Nonlinear Optical Corneal Crosslinking (NLO CXL), Mechanical Stiffening, and Corneal Flattening Using Amplified Femtosecond Pulses.** Samantha Bradford¹, e. mikula¹, T. Juhasz², D. Brown³, J. V. Jester², ¹Ophthalmology, University of California, Irvine; ²Biomedical Engineering, University of California, Irvine

6828 — B0406  
**Clinical Application of Optical Coherence Elastography for Corneal Biomechanics.** Michael D. Twu¹, G. Lang², S. Aglianov³, K. Linar³, ¹Optometry and Vision Science, University of Alabama at Birmingham; ²Photoelectric Technology, Foshan University; ³Biomedical Engineering, University of Houston; ⁴Molecular Physiology and Biophysics, Baylor College of Medicine; ⁵Mechanical Engineering, University of Houston

6829 — B0407  
**A new method for individualized characterization of the distribution of collagen fibril dispersion using corneal aberrations.** Mengchen Xu¹, ¹M. A. Ramirez-Garcia, H. Narang,ug, M. Buckley, A. L. Lerner¹, G. Yoon¹. ¹Department of Mechanical Engineering, University of Rochester; ²Department of Biomedical Engineering, University of Rochester; ³Flaum Eye Institute, University of Rochester; ⁴Department of Biomedical Engineering, Willerson Center for Cardiovascular Modeling and Simulation

6830 — B0408  
**In vivo keratometric changes in rabbit eye induced by topical 17β-estradiol.** Ari Leshno³, ³N. Avni², K. Prokai-Tatrai¹, Y. Rotenstreich¹, A. Magid¹, E. Bubis¹, A. Barak², ¹The Goldschleger Eye Institute, Sheba Medical Center; ²Sackler faculty of medicine, Tel-Aviv University; ³Department of Pharmacology and Neuroscience, and the Institute for Healthy Aging, University of North Texas Health Science Center; ⁴Ophthalmology department, Tel-Aviv Medical Center

6831 — B0409  
**Time-resolved detection of corneal UV Collagen Cross-linking (CXL) using Non-contact Optical Coherence Elastography (OCE).** Ryan Wallace³, M. Kirby¹, L. Guo¹, S. SONG³, I. Pelivanov¹, K. Zhou³, R. K. Wang³, ³M. O’Donnell², ¹T. Shen². ¹Bioengineering, University of Washington; ²Science and Engineering, University of Dundee; ³Ophthalmology, University of Washington; ⁴School of Medicine, University of Washington

6832 — B0410  
**The Effect of Proteoglycan Digestion on the Viscoelastic Shear Properties of the Cornea.** Anna Olsen¹, A. Goyal¹, M. Ramirez Garcia¹, Y. M. Khalife¹, M. Buckley¹. ¹Biomedical Engineering, University of Rochester; ²Ophthalmology, Emory University

6833 — B0411  
**A nonlinear viscoelastic model of corneal and whole-eye motion of prostaglandin-analog treated subjects under loading by dynamic Scheimpflug analyzer.** B. Audrey Nguyen¹, M. A. Reilly², C. J. Roberts². ¹Biomedical Engineering, The Ohio State University; ²Ophthalmology & Visual Sciences, The Ohio State University

6834 — B0412  
**Keratoconus Recognition Using A Parameter Set Determined from IOP-Matched Scenario.** tian lei¹, Y. Zhou¹. ¹Beijing Institute of Ophthalmology; ²Shenzhen University, Health Science Center

6835 — B0413  
**3D Patient-Specific Finite Element Model (FEM) of Intracorneal Ring Segment (ICRS) Implantation.** Ibrahim Seven¹, R. Grytze², W. J. Dupps¹. ¹Ophthalmic Research, Cleveland Clinic; ²Ophthalmic Research, University of Alabama at Birmingham

*CR

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
Recently there have been a number of landmarks in the treatment of inherited retinal diseases (IRDs) which include the approval of the first gene therapy treatment for an IRD. The increasing number of clinical trials promise new treatments for a wider number of IRDs. However, there are a number of barriers to the long term success of gene therapy. One of these is the development of an immune response following treatment. This SIG gathers together a panel of experts who will discuss gene therapy and vector design considerations, provide an update on the immune response and detail the findings from clinical trials. This will be followed by a discussion on recommendations for identifying, preventing and treating the immune response in gene therapy.

**Moderator:** Shyamanga Borooah

**Panelist.** Andrew D. Dick. 1Institute of Ophthalmology, University College London, London, United Kingdom; 2Faculty of Health Sciences, University of Bristol, Bristol, United Kingdom

**Panelist.** John G. Flannery. The School of Optometry, The University of California, Berkeley, CA

**Panelist.** Alessandro Iannaccone. Duke Eye Center, Duke University, NC *CR

**Panelist.** Paul A. Sieving. National Eye Institute, National Institutes of Health, MD

**Organizer.** Shyamanga Borooah. Shiley eye Institute, University of California San Diego, CA

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**552 The implications of immune response in ocular gene therapy - SIG**

Static automated perimetry, a clinical reference standard for functional assessment of the visual system, relies on stimuli and technology that were developed 70 years ago. Testing is time and space consuming; the test is not intuitive for most patients-many of whom fail in their initial attempts; and it is not particularly adaptable to specific disease or patient-related conditions. Advances in vision science and technology have paved the way for new approaches to perimetry including head mounted, virtual reality and tablet devices each of which brings new possibilities in addition to new obstacles. This SIG will provide a forum to discuss the scientific underpinnings of alternative perimetric paradigms including alternative and adaptable stimulus profiles and patterns; novel approaches to the patient interface; and the potential for applications of this technology remote from a clinical setting and with indirect clinical supervision.

**Moderator:** Mitchell W. Dul

**Panelist.** Mitchell W. Dul. Clinical Sciences, SUNY College of Optometry, New York, NY

**Panelist.** Allison M. McKendrick. Optometry and Vision Sciences, University of Melbourne, Melbourne, Victoria, Australia *CR.

**Panelist.** Chris A. Johnson. Institute for Vision Research, University of Iowa, Iowa City, IA *CR

**Panelist.** Chota Matsumoto. Ophthalmology, Kindai University, Osaka, Kansai, Japan *CR

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**553 Re-Engineering Clinical Perimetry - SIG**

Mutations in Bestrophin-1 (BEST1) cause retinopathies varying in age of onset, inheritance patterns, rate of progression and presence of single versus multiple lesions. BEST1 protein is localized to the basolateral plasma membrane of RPE. Consensus as to the function of the BEST1 protein has been complicated by mouse models that do not replicate the disease. Panelists and attendees will discuss evidence pointing to BEST1 as the channel responsible for a calcium-activated chloride current in human RPE, how this function is reflected in the disease mechanisms, and influence of disease causing mutations on BEST1 channel activity. Information gleaned from the canine and in vitro patient-specific disease models will be presented. Consideration will be given to fundus autofluorescence and SD-OCT findings as they relate to the natural history of the disease. Also to be discussed will be long-standing issues such as the current views of the role played by impaired phagocytosis and RPE lipofuscin in the disease process and the source of the hyper-autofluorescence that characterizes the vitelliform lesion. Prospects for gene and cell-based therapies will be reviewed.

**Moderators:** Janet R. Sparrow and Stephen H. Tsang

**Introduction to Discussion.** Janet R. Sparrow. Department of Ophthalmology, Columbia University, New York, NY

**Introduction to Discussion.** Stephen Tsang. Department of Ophthalmology, Columbia University, New York, NY

**Clinical Characterization of BEST1 Disease.** Anthony Moore. Department of Ophthalmology & Visual Sciences, UCSF, San Francisco, NY

**A Multidisciplinary platform to study bestrophin1.** Tingting Yang. Department of Pharmacology and Physiology, University of Rochester, Rochester, NY

**Treatment approaches in dominant-negative diseases as exemplified in BEST1-related autosomal dominant disease.** Bernhard H. Weber. Institute of Human Genetics, University of Regensburg, Germany

**A Mutation-centered approach to the treatment of Best disease.** David M. Gamm. Department of Ophthalmology & Visual Sciences, University of Wisconsin, Madison, WI

**Ca2+ signaling and Best’s disease.** Olaf Strauss. Department of Ophthalmology, Charite University Medicine Berlin, Germany
OCT angiography is a novel non-invasively imaging technology with rapidly broadening indications in the management of retinal and optic nerve diseases. This forum seeks to join technological advances with clinical applications. The following recent advances will be discussed: (1) Identifying retinal ischemic areas, with emphasis on the fovea; (2) Detecting choriocapillaris loss in age-related macular degeneration; (3) Using wide-field OCTA to detect neovascularization in proliferative diabetic retinopathy; (4) Correlating retinal perfusion changes with visual field loss and structural thinning in glaucoma. The emphasis will be on improving the detection of ocular pathologies and performing measurements that are not possible with conventional fundus photography, dye-based angiography, and structural OCT. 

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**555 Optical Coherence Tomographic Angiography of the Eye - SIG**

West 212-214
Thursday, May 02, 2019 12:15 PM-1:45 PM
Biochemistry/Molecular Biology / Retinal Cell Biology

**557 Lipids and Eye Diseases - where should we focus? - SIG**

Lipids are essential components of every cell; they are diverse in their structure and function. Modern day vision research have identified lipid pathways in various ocular disease mechanisms and as novel therapeutic targets; lipid molecules are emerging as novel therapies, and lipid signatures are being discovered as disease biomarkers. As there are many novel discoveries around lipid biology, many controversies are also arising regarding the use of lipids as potential therapy for eye diseases. This SIG will gather a panel of world experts of lipids and lipids as potential therapy for eye diseases. This SIG will gather a panel of world experts of lipids and lipids as potential therapy for eye diseases.

**Moderator:** Steven J. Fliesler

**Lipids in eye diseases - an update with**

- **Sphingolipids.** Nawajes A. Mandal. Ophthalmology, Univ of Tennessee, Health Science Center, Memphis, TN
- **Lipids in RPE and AMD.** James T. Handa. Johns Hopkins Wilmer Eye Inst, MD
- **Elovanoids act as epigenetic regulators in cell survival/senescence decisions in photoreceptors.** Nicolas G. Buzan. LSU Health Sciences Center, MD *CR
- **Bioactive inflammatory lipids for ocular surface disease.** Karsten Gronert. University of California, Berkeley, CA

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The aim of this workshop is to appraise the current stage of knowledge in experimental and clinical glaucoma research. It will cover topics ranging from the fundamental pathophysiology of the disease through to clinical translation of future therapies.

**Moderators:** Alain M. Bron and Balwantray C. Chauhan

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The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
559 Are there alternatives to in vivo models in eye research? - SIG

Not only regulatory, but also ethical concerns and several downsides of animal research, foster the need for alternative models for eye research. Therefore, the pressure from all sides (politics, media, society, science, and regulatory bodies) for alternatives in animal research is extremely high worldwide. Especially in Europe, several governments plan to stop animal research in the next decades. On one hand, this SIG discusses the need for excellent and relevant models for future eye research, on the other also the pros and cons of animal models in eye research are debated. In addition, novel model systems for glaucoma and retina research as well as drug-delivery testing will be introduced. Regulations regarding research involving animal and alternative models as well as the university and industry perspective on different model systems will be presented and discussed.

Moderators: Stephanie C. Joachim and Sven Schnichels

Human organotypic retinal cultures as a retinal ganglion cell degeneration model. Julie Sanderson. Pharmacology, University of East Anglia, United Kingdom

Value of animal models in drug testing.
Christoph Ullmer. Roche Pharma Research & Early Development, F. Hoffmann-La Roche Ltd., Switzerland *CR

Ex vivo bovine retinal explants to study drug delivery into the retina. Katrien Remaut. General Biochemistry and Physical Pharmacy, Ghent University, Belgium

Organizer. Stephanie C. Joachim. Experimental Eye Research Institute, Ruhr-University Bochum, Bochum, Germany

560 Addressing global blindness through international research collaborations – Next frontier for 2020

As much as 90 percent of the global burden of eye disease is shouldered by developing countries, where many treatable diseases often go undiagnosed. About 39 million people around the world are blind and a further 246 million are visually impaired, according to the WHO. Eighty percent of blindness is considered preventable; however, development of effective screening and treatment strategies require sustained research efforts that would benefit from international research collaborations. Several international research collaborative programs have been successful in bringing international colleagues to make significant contributions to vision research. However, a wider participation of researchers is needed to advance the high-quality science in many areas of vision research. A coordinated strategy for basic science and health services research will help in reducing the global burden of eye diseases and implementation of research findings. This ARVO session will focus on several current and planned international research programs and will discuss the strategies and challenges in building international collaborations in vision research. The ARVO session will stimulate discussion on forming new research partnerships and address the current issues and challenges in international research collaborations.

Moderators: Gyan “John” Prakash and Janey L. Wiggs

— 12:15 Welcome & Introductions


561 Chinese Ophthalmology Society (COS) workshop: Cell biology and stem cells

This topic focuses on the pathological changes of various types of cells in common eye diseases and their role in the occurrence of eye diseases. It also introduces the research progress and clinical problems of stem cells in the treatment of common eye diseases. Special focus and introduction to the latest research progress of Chinese ophthalmology research experts. It provides a platform for understanding the latest developments and promoting exchanges and cooperation in China.

Moderators: Ningli Wang and Xing-Huai Sun

— 12:15 Welcome & Introductions


— 12:35 AAV mediated Gene Therapy Approaches in a Transgenic P23H Swine Model of RP. Maureen A. McCall. Ophth. & Visual Sciences, University of Louisville *CR

— 12:47 Mitochondrial dysfunction contributes to the progressive loss of RGCs in glaucoma. Xing-Huai Sun. Ophthalmology, EENT hospital of Fudan University

— 12:59 Novel insights into the genetics of Macular Telangiectasia Type 2 (MacTel). Paul S. Bernstein. Ophthal and Visual Sciences, Univ of Utah/Moran Eye Center
Thursday – Workshop/SIGs

— 1:11 Doing early phases of clinical trials in Australia and Asian Pacific countries. Meidong Zhu. 1, 2. 1New South Wales Tissue Bank, New South Wales Organ and Tissue Donation Service; 2Greenlight Clinical Pty Ltd, Australia *CR

— 1:23 Scleral hypoxia is a target for myopia control. Xiangtian Zhou. School of Ophthalmology and Optometry, Wenzhou Medical University

Harbour Ballroom
Thursday, May 02, 2019 12:15 PM-1:45 PM
562 NEI grants Workshop: New NIH regulations concerning human subject and animal research

Whether you are new to the NIH grant process, or established NEI investigators seeking information to successfully navigate your NEI grant applications and research protocols through human research protections review or Institutional Animal Care and Use Committee assurance, join this session to meet with the NEI Extramural Staff. During this session, you will learn about new regulations concerning Human Subject and Animal Models research and how it applies to extramural grants and how to ensure your institution is meeting the requirements or the policy and the law. There will be short presentations, Q&A, and roundtable discussion with the staff.

*CR — 1:23 Scleral hypoxia is a target for myopia control. Xiangtian Zhou. School of Ophthalmology and Optometry, Wenzhou Medical University

Moderator: Michael A. Steinmetz


— 12:30 Clinical Trial: What You Need to Know. Cheri Wiggs. National Eye Institute

— 12:45 Human Subjects and Inclusion: NIH Current Requirements and Beyond. Donald Everett. National Eye Institute

— 1:00 Research Involving Animals: Policies and Regulations. Brian Hoshaw. National Eye Institute

— 1:15 Post-Review to Award. Grace Shen. National Eye Institute

— 1:30 After the Award is Made: How to Manage Your Award. Karen R. Smith. National Eye Institute

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
West Exhibition Hall
Thursday, May 02, 2019 2:00 PM-3:00 PM
563 All Posters and Networking

* Refer to the Program Number in the Clinical Trial (CT) Registration Index. *CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
ARVO Ballroom

Thursday, May 02, 2019 3:15 PM-4:15 PM

564 Beckman-Argyros Award in Vision Research

The Arnold and Mabel Beckman Foundation supports cutting-edge research through their generous Beckman-Argyros Award in Vision Research. The Award recognizes an individual who has made significant, transformative breakthroughs in vision research. The fifth award has been presented to Mark F. Bear, PhD, of the Massachusetts Institute of Technology. Dr. Bear is the Picower Professor of Neuroscience in The Picower Institute for Learning and Memory and the Department of Brain and Cognitive Sciences at MIT. The award will help Bear’s lab further advance their research harnessing synaptic plasticity to promote recovery from amblyopia.

— 3:15 Synaptic Plasticity and Amblyopia - Mark F. Bear, PhD, of the Massachusetts
Dr. Gleave’s research demonstrates how science can successfully move from the lab bench to a therapeutic intervention for patients. His studies have centered around characterizing the molecular mechanisms that mediate treatment resistance in cancer, focusing on stress-activated adaptive responses that drive acquired treatment resistance and designing rational combination co-targeting strategies to abrogate the stress response to create conditional lethality and improve cancer control. He has patented several anti-cancer drugs and, in 2001, founded OncoGenex Technologies, for which he serves as chief scientific officer.

— 4:30  Models of translational science to span innovation gaps in academia: Martin Gleave, CM, MD, FRCSC, FACS, The Vancouver Prostate Centre