Sunday
April 28, 2019

ARVO Annual Meeting
Registration
Main Lobby
7am – 6pm

Exhibit hours
8:30am – 5pm

ARVO/Alcon
Opening Keynote
ARVO Ballroom
10:15 – 11:45am

All Posters
5 – 6pm

Sunday Social
Vancouver Aquarium
7 – 10pm
(tickets required)
### Sunday, April 28 – Symposia, minisymposia, papers, workshops/SIGs and lectures

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<td>8–10am</td>
<td>101</td>
<td>Approaches to restoring vision: Where are we now? [VN, AP, EY, GL, PH, RE, RC, VI]</td>
<td>East Ballroom A</td>
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<td></td>
<td>103</td>
<td>The potential and pitfalls of big data [CL, CO, GL, RE, MOI, LV]</td>
<td>East Ballroom C</td>
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<tr>
<td>10:15–11:45am</td>
<td>115</td>
<td>ARVO/Alcon Opening Keynote: How cells export proteins and RNA — applications to the treatment of disease</td>
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<td>12 noon–12:45pm</td>
<td>116</td>
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<td>1–2:30pm</td>
<td>117</td>
<td>New perspectives on sub-RPE deposit formation: discussing clinical and molecular progress — SIG [BI, RE, RC]</td>
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<td>119</td>
<td>New ideas about metabolic interactions between photoreceptors and Müller cells — SIG [RC, BI, RE]</td>
<td>East 8&amp;15</td>
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<td>Diabetic Keratopathy: An Understudied Corneal Disease — SIG [CO]</td>
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<td>121</td>
<td>Tear film, inflammation and the nervous system—the three pillars of dry eye disease resulting in symptoms of discomfort — SIG [CO, IM]</td>
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<td>122</td>
<td>Biomechanical Injury and Inflammatory Signaling in the Eye — SIG [VN, BI, GL, IM, PH, RC, VN, GEN]</td>
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<td>123a</td>
<td>Functional Imaging Technologies for Regenerative Medicine</td>
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<td>Grant writing: Early career funding opportunities</td>
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<td>Win-win collaborations between academia and industry</td>
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<td>126</td>
<td>The importance of animal research in the bench to bedside pipeline</td>
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<td>Low Vision Group — The effects of mesopic light levels on vision and functional activities [LV]</td>
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<td>China-ARVO networking forum</td>
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<td>147</td>
<td>Uveal Melanoma [AP]</td>
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<td>149</td>
<td>Emerging AMD Therapeutics [RE]</td>
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<td>150</td>
<td>Novel Pathogenic Mechanisms in Diabetic Retinopathy [RC]</td>
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<td>151</td>
<td>Myeloid and Innate Immunology of the Retina [IM, AP]</td>
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<td>152</td>
<td>New and emerging clinical trials endpoints — Minisymposium [RE, CL, GL, RE, RC, VI, GEN, MOI]</td>
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<td>153</td>
<td>Omics and systems biology approaches for profiling ocular tissues in health and disease [BI]</td>
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<td>154</td>
<td>Photoreceptors [VN]</td>
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<td>155</td>
<td>Cataract Surgery, Epidemiology and Clinical Outcomes [LE]</td>
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<td>Healthcare Delivery [CL]</td>
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<td>Amblyopia and Visual Plasticity [EY]</td>
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<td>Advanced Imaging of Retinal Structure and Function in Disease [VI]</td>
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<td>159</td>
<td>Epstein Award Session [GL]</td>
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Symposia, minisymposia and basic clinical lecture highlighted in **boldface**
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<td>8 - 9:45am</td>
<td>104</td>
<td>Physiology/Pharmacology [PH]</td>
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<td>105 AMD screening, risk factors, and consequences [CL]</td>
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<td>106 AMD anti-VEGF I [RE]</td>
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<td>108 Image Processing and Interpretation [MOI, CL]</td>
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<td>109 Animal Imaging [MOI]</td>
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<td>110 Amblyopia: Mechanisms and Associations [EY]</td>
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<td>A0618 - A0636</td>
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<td>111 Strabismus: Surgical management and outcomes [EY]</td>
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<td>112 Anti-inflammatory agents, antibiotics and antivirals [PH]</td>
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<td>113 Dry Eye [CO]</td>
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<td>114 Keratokonus and corneal crosslinking [CO]</td>
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<td>1 - 2:45pm</td>
<td>129</td>
<td>AMD therapies (excluding anti-VEGF) [RE]</td>
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<td>130 Gene variants and regulation of ocular genes expression in health and disease [BI]</td>
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<td>132 Cataract Surgery I [LE, RE]</td>
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<td>133 Eye Movements and Nystagmus [EY]</td>
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<td>134 Inner Retinal Circuits [VN]</td>
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<td>135 Outer Retinal Function [VN]</td>
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<td>136 Aberrations, Ocular Optics, and Retinal Image Quality [VI]</td>
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<td>137 Neuroprotection [GL]</td>
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<td>138 Neurodegeneration [GL]</td>
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<td>139 Laser Therapy [GL]</td>
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<tr>
<td>140 Clinical Melanoma. Therapy and Complications [AP, CL, MOI]</td>
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<td>141 Melanoma: Immunotherapy, Genomics, New Strategies [AP]</td>
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<td>142 Mechanistic and translational studies of retinal degeneration and uveitis [IM]</td>
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<td>143 Clinical and epidemiological aspects of infection [IM]</td>
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<td>144 Corneal Immunology [CO, RC]</td>
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<td>145 Corneal Epithelium [CO]</td>
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<td>146 Corneal neovascularization [CO]</td>
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<td>162 Diabetic eye disease [CL]</td>
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<td>163 Cataractogenesis, Prevention, and Treatment [LE]</td>
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<td>164 AMD clinical research I [RE]</td>
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<td>167 From Modeling to Potential Therapies [RC]</td>
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<td>169 Color. Adaptation and Sensitivity [VI]</td>
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Poster board numbers correspond to poster location in Exhibit Hall; A = Poster Area A, B = Poster Area B
East Ballroom A
Sunday, April 28, 2019 8:00 AM-10:00 AM
Anatomy and Pathology/Oncology / Eye
Movements/Strabismus/Amblyopia/Neuro-
Ophthalmology / Glaucoma / Physiology/
Pharmacology / Retina / Retinal Cell Biology/
Visual Neuroscience / Visual Psychophysics/
Physiological Optics
101 Approaches to restoring vision: Where are we now?

Restoring vision is the common aim of many researchers and has led to a variety of approaches. The field is moving rapidly with new approaches reaching clinical trials. This symposium will bring together leading experts representing these different approaches including retinal prostheses, gene therapy, cell replacement, and optogenetics. This symposium will thus allow researchers to share insights into different approaches to restoring vision.

Moderators: Ulrike Grunert, Erika D. Eggers and Serge A. Picaud
— 8:00 Introduction - Serge Picaud

1 — 8:06 Subretinal visual implant. Where are we today and where are we going to? Katarina Stingl. Ophthalmology, Center for Ophthalmology, University Tuebingen *CR


3 — 8:44 Human stem-cell-derived photoreceptors for cell-based therapies. Volker Busskamp. Neuroscience, TU Dresden - Center for Regenerative Therapies

4 — 9:03 Gene delivery to the primate retina. Leah Byrne. Department of Ophthalmology, University of Pittsburgh *CR


6 — 9:41 Optogenetic restoration of vision in the macaque. William H. Merigan1, 2. 1Flaum Eye Institute, University of Rochester; 2Center for Visual Science, University of Rochester

East Ballroom B
Sunday, April 28, 2019 8:00 AM-10:00 AM
Anatomy and Pathology/Oncology / Eye
Movements/Strabismus/Amblyopia/Neuro-
Ophthalmology / Genetics / Glaucoma / Retina /
Visual Neuroscience

102 A window on the soul: How systemic disease manifests in the eye

This symposium will bring together diverse experts to describe how systemic disease manifests in the eye in unexpected ways. It will highlight aspects of bench-to-bedside work in identifying biomarkers and potential therapeutic targets, and bedside-to-bench understanding of pathologies.

Moderators: Timothy W. Corson, Colleen M. Cebulla and Maya Koronyo-Hamaoui
— 8:00 Introductions

7 — 8:05 Alzheimer’s disease manifestation in the retina: early biomarkers and retinal imaging in patients. Maya Koronyo-Hamaoui1, 2. 1Department of Neurosurgery, Cedars Sinai Medical Center; 2Department of Biomedical Sciences, Cedars-Sinai Medical Center *CR

8 — 8:25 The retina as a biomarker of Parkinson disease. Nicolas Cuenca. University of Alicante

9 — 8:45 Ocular manifestations of traumatic brain injury. José E. Capo-Aponte. Womack Army Medical Center

10 — 9:05 Ocular and systemic presentations of phosphoinositide signaling defects. Yang Sun1, 2. 1Department of Ophthalmology, Stanford University; 2Palo Alto VA medical center


— 9:45 Discussion and Questions

East Ballroom C
Sunday, April 28, 2019 8:00 AM-10:00 AM
Clinical/Epidemiologic Research / Cornea / Glaucoma / Low Vision / Multidisciplinary Ophthalmic Imaging / Retina

103 The potential and pitfalls of big data

The use of “Big Data” has increased in ophthalmology over the past five years, and ranges from mining administrative databases, using electronic medical records, and leveraging telemedicine data. This session will: (1) describe the advantages and limitations of big data and related analyses, (2) review how big data can be integrated into ophthalmology research and clinical settings, and (3) discuss the potential implications and future of big data in ophthalmology.

Moderators: Anne L. Coleman and Michael F. Chiang
12 — 8:00 An overview of Big Data: Promises and potential pitfalls. Laura B. Balzer. University of Massachusetts-Amherst
— 8:20 Discussion

13 — 8:24 Integrating Big Data into Ophthalmology. Michael F. Chiang. Ophthalmology and Medical Informatics, Oregon Health & Science University *CR
— 8:44 Discussion

— 9:08 Discussion

15 — 9:12 Big Data -Omines: Approaches for Genetics and Biological Research. Christopher J. Hammond. Ophthalmology, King’s College London
— 9:32 Discussion

— 9:56 Discussion

* Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
17 — 0091 Adenosine triphosphate (ATP) induces constriction after intravascular and dilatation after extravascular administration on porcine retinal arterioles ex vivo. Charlotte Ernst1, P. Skov Jensen2, C. Aalbjerg3, T. Bek4. 1Department of Ophthalmology, Aarhus University Hospital; 2Institute of Biomedicine (physiology), University of Aarhus

18 — 0092 Ocular biodistribution and duration of action of low-dose LNA oligonucleotides. Sindri Traustason1, R. Alvarez Sanchez2, U. Wessels3, J. Mary4, E. Atzpodien5, F. Kunk6, H. Hudlebushi7, S. Kannmayer8. 1Roche Innovation Center Copenhagen, Roche Pharma Research and Early Development; 2Roche Innovation Center Basel, Roche Pharma Research and Early Development; 3Roche Innovation Center Munich, Roche Pharma Research and Early Development

19 — 0093 Age-related decline of retinal oxygen extraction in healthy subjects. Gerhard Garhofer1, A. Bata2, S. Szegezdi3, G. C. Aschinger4, D. Schmidt5, T. Chua6, R. M. Werkmeister7, L. Schmetterer5,8. 1Department of Clinical Pharmacology, Medical University of Vienna; 2Center for Medical Physics and Biomedical Engineering, Medical University of Vienna; 3Singapore Eye Research Institute

20 — 0094 Modulation of the electrical activity in degenerative retinas of rd10 mice using neuroprotective drugs. Kim Schaffrath1, S. Diarra2, J. Gehlen2, F. Muller2, F. Walter2, S. Johnen1. 1Augenklinik der Uniklinik RWTH Aachen; 2Research Center Juelich

21 — 0095 Retinal oxygen metabolism is altered in patients with mild cognitive impairment and Alzheimer’s disease. Stephan Szegedi1, P. Dal-Bianco2, E. Stößmann3, T. Traub-Weidinger4, M. Rainer5, A. Masching5, D. Schmidt5, R. M. Werkmeister7, L. Schmetterer5,8, G. Garhofer1. 1Department of Clinical Pharmacology, Medical University of Vienna; 2Department of Neurology, Medical University of Vienna; 3Department of Biomedical Imaging and Image-guided Therapy, Division of Nuclear Medicine, Medical University of Vienna; 4Department of Psychiatry, Social and Medical Centre East - Danube Hospital; 5Karl Landsteiner Institute for Memory and Alzheimer Research; 6Center for Medical Physics and Biomedical Engineering, Medical University of Vienna; 7Singapore Eye Research Institute

22 — 0096 Role of hypoxia-inducible factor-1α (HIF-1α) in retinal ganglion cell (RGC) death in glaucoma. Sadha Singh, S. Husain. Ophthalmology, Medical University of South Carolina

23 — 0097 A comparison between injection speed and transient IOP elevation in normotensive eyes receiving intravitreal injections of bevacizumab. Oliver Fischer, P. S. Rosenbaum, Z. Zhou. Ophthalmology, Bronx Care Health System of Icahn School of Medicine at Mount Sinai

24 — 0098 Endothelin-1 Mediated Decrease in Expression of Mitochondrial Proteins ATP5H and COX17 in Retinal Ganglion Cells. Renuka Chappalkar, D. L. Stankowska, S. He, B. Kodati, R. R. Krishnamoorthy. North University of Texas Health Science Center

25 — 0099 Electrophysiological Responses of Isolated Retinal Pigment Epithelial (RPE) Cells to Physiological Concentrations of Thiocyanate. Brett A. Hughes1,2, X. Cao. 1Ophthalmology and Visual Sciences, University of Michigan; 2Molecular and Integrative Physiology, University of Michigan


27 — 0101 Involvement of Upregulated P53-Induced Death Domain Protein in Retinal Ganglion Cells Apoptosis after Optic Nerve Crush. Fan Xu, L. Jiang, S. Zeng, M. Li, L. Li. Guangxi Ophthalmology Center

28 — 0102 Quantifying retinal and choroidal contributions to macular oxygenation: a theoretical approach. Alice Chandra Verticchio Vercellin1,4, A. Harris1, T. A. Cialla2, G. Chiaravalli3, R. Sacco2, B. A. Sieksy1, I. Jamuleviciene4, G. Guidoboni2. 1Ophthalmology, University of Pavia; 2IRCCS - Fondazione Istituto Bietti; 3Ophthalmology, Indiana University School of Medicine; 4Eye Clinic of Lithuanian University of Health Sciences; 5University of Missouri; 6Politecnico di Milano; 7Midwest Eye Institute


30 — 0104 Changes in histone deacetylases (HDACs) in glaucomatous optic nerve. Wendy Guzman, S. Singh, S. Husain. Ophthalmology, Medical University of South Carolina

31 — 0105 Modulatory effect of polyphenolic plant compounds on structure and function of rod visual receptor. Beata Jastrzębska, J. T. Ortega, T. Farina. Pharmacology, Case Western Reserve University

32 — 0106 Can inhibition of phosphodiesterase 6 mimic the oxidative stress phenotype in vivo found in mice with a loss-of-function phosphodiesterase 6 mutation? Collin Richards1, H. Olds1, J. Joy1, T. Rosales1, R. H. Podolsky2, K. M. Lins-Childers3, R. Roberts3, B. A. Berkowitz4. 1Ophthalmology, Visual, and Anatomical Sciences, Wayne State University School of Medicine; 2Beaumont Research Institute

33 — 0107 Azithromycin Protects retinal ganglion cells against Ischemia-Reperfusion induced Injury in rat retina. Zhenzhen Zhang, Ophthalmology, The ninth People’s Hospital, Shanghai Jiao Tong University School of Medicine

34 — 0108 The role of mTORC1 signaling in retinal bipolar cells. Jing Li, Y. Rao. Ophthalmology, Xin Hua Hospital Affiliated to Shanghai Jiao Tong University School of Medicine

35 — 0109 Controlled illumination of a PDMS-free Retina-on-a-Chip for the proximity-culture of retinal organoids with pigment epithelial cells, Johanna Chuchuy1, K. A. Schiffer4, C. Probst1, J. Haderspeck1, L. Ankowiak5, S. Liebau3, P. Loskill2,3. 1Institute for Interfacial Engineering and Biotechnology IGB, Fraunhofer; 2Department of Women’s Health, University of Tuebingen; 3Institute of Neuroanatomy & Developmental Biology (INDB), University of Tuebingen

36 — 0110 Evaluation of visual functional changes in eyes with drusen using the Micronized Lipid-Based Carotenoid Liquid Supplementation and AREDS2 Formula. Drake W. Lem1, T. Henderson1, R. Weiss2, D. W. Evans1, S. Amonoo-Monney3, P. G. Davey1. 1Western University of Health Sciences; 2Eye Clinic of Austin; 3VectorVision/Guardion Health Sciences

37 — 0111 Regulation of cytokines and STATs by delta opioid receptor activation in rat glaucoma model. Syed A. Zaidi, S. Singh, S. Husain. Ophthalmology, Medical University of South Carolina

38 — 0112 Macular Pigment Reflectometry: A Technique To Measure Peripheral Measurements. Juan C. Sanabria1, J. S. Bass2, F. Spors3, D. L. Gierhart1, P. G. Davey1. 1Western University of Health Sciences; 2ZeaVision
39 — A0113 New Formulations Based On Innovative Brilliant Blue G Derivative To Stain Retinal Membranes. Claudio Bucolo1, 2, F. Drago2, 3, M. R. Romano1, M. Rao, A. Spadaro4
1Biomedical and Biotechnological Sciences, University of Catania; 2Center for Research in Ocular Pharmacology-CERFO, University of Catania; 3Biomedical Sciences, Humanitas University; 4Drug Sciences, University of Catania
40 — A0114 The Endothelin Receptor Antagonist Macitentan Attenuates Vasconstrictive Effects of Endothelin-1 following Intravitreal Administration in Rodents. Raghu R. Krishnamoorthy, W. Zhang, S. Chavala, D. L. Stankowska. Pharmacology and Neuroscience, NTERI, UNT Health Science Ctr
41 — A0115 The dynamic assessment of retinal structural changes due to heavy physical exercise, Gabor M. Somfai1, 2, I. Szalai2, F. Palýa2, A. Csorba2, E. Bosnyák, E. Szendel1, Z. Z. Nagy2, J. Tisné1, M. Tóth1, D. Cabrera DeBucc1
1Biomedical and Biotechnological Sciences, Humanitas University; 2Center for Research in Ocular Pharmacology-CERFO, University of Catania

43 — A0117 Small molecules selectively reduce the misfolded rhodopsin that causes retinitis pigmentosa. Yuanyan Chen1, K. Palczewski2, X. Liu3. University of Pittsburgh; 3University of California at Irvine
44 — A0118 Upregulation of Interleukin-10 (IL-10) by interleukin-1β (IL-1β) in Muller cells. Sofia Noor Habib1, 2, N. Niyadurupola1, D. C. Broadway2, J. Sanderson2
1The University of East Anglia; 2Ophthalmology, Norfolk and Norwich University Hospital
46 — A0120 Selective episcleral delivery of indomethacin: Pre-clinical safety and pharmacokinetics. Pamela P. Ko, J. Manders, R. Carvalho, R. Brito, M. V. Dougherty, m. guilherme. Ophthalmology, 3T Ophthalmics
47 — A0121 Background Data for P23H Line 1 Heterozygous Rats Raised under Dim Light Conditions for the First 30 Days Post Partum. Mark Vezina1, T. Bryant2, E. Edwards1, J. Levac1, E. Lebel1, A. Lambert2. Ocular And Neuroscience, Charles River; 2Pathology, Charles River
48 — A0122 Pharmacokinetics of intravitreal flurbiprofen in rats with chiral and non-chiral analysis. Pavlina Tsoká1, M. Tsatzarakis1, E. Iatrou2, M. K. Tsilimbaris1. 1Laboratory of Optics and Vision, University of Crete Medical School; 2Toxicology, University of Crete Medical School
49 — A0123 Sustained oral delivery of tiagrelor (Brilinta) protects against retinal degeneration. Wenwu Liu1, K. Campagnolo1, L. Carlsson1, C. H. Mitchell1, 2. 1Anatomy & Cell Biology, Univ of Pennsylvania, Sch of Dental Med; 2Ophthalmology, University of Pennsylvania; 3AstraZeneca CR
50 — A0124 Retinal Ganglion Cell Losses in an Optic Nerve Crush Model Correlate with Time-Dependent Up-Regulation in phosphorylated c-Jun, c-Jun and Caspase 3. Dorette Z. Ellis1, L. Li1, Y. Liu2, S. He3, T. Yorio2. 1UN System College of Pharmacy; 2Pharmacology and Neuroscience, UNTHSC

West Exhibition Hall A0125-A0146
Sunday, April 28, 2019 8:00 AM-9:45 AM
Clinical/Epidemiologic Research
105 AMD screening, risk factors, and consequences

Moderators: Christopher J. Brady and Maria C. Ibanez Bruron
51 — A0125 Relationship Between Adult Body Height and Age-Related Macular Degeneration: A Korean Nationwide Population-Based Survey. Jeong Hun Baek1, 2, I. Hwang3, M. Hassan2, M. Halim1, M. Ormaechea2, G. Uhudzić, A. Tran1, S. Mahajani1, K. Y. Al-Kuwii2, R. Afridi2, Y. Sepah1, D. V. Do3, Q. D. Nguyen2. 1Department of Ophthalmology, Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine; 2Department of Ophthalmology, University of British Columbia, Vancouver; 3Department of Family Medicine, Gachon University of Medicine; 4Medical Biometry, Informatics and Epidemiology, University of Bonn; 5Ophthalmology, University of Bonn

52 — A0126 Association of short-term progression in AMD score with risk of development of late AMD and vision loss in the AREDS2 study. Susan Vitale1, E. Agron1, T. E. Clemons2, A. Dompal12, R. P. Davis3, T. D. Keenan3, E. Y. Chew1, 1Div Epidemiol & Clin Applications, National Eye Inst/NHIH; 2Emmes Corporation; 3Funds Photograph Reading Center, University of Wisconsin

53 — A0127 Dietary Zinc Intake is Associated with Key Clinical Outcomes in Neovascular Age-Related Macular Degeneration Patients. Harshil Dharmadasantani Detaram1, P. Mitchell1, 2, Russell1, G. Burtlebsky1, N. D. Joachim1, G. Liew1, B. Gopinath1. 1Centre for Vision Research, Westmead Institute for Medical Research, University of Sydney; 2School of Health and Society, University of Wollongong

54 — A0128 A further increase of late age-related macular degeneration until 2050 in Europe – a systematic review, meta-analysis and meta-regression. Jeany Q. Li1, T. Welcowski1, M. Schmidt1, F. G. Holz2, R. P. Finger3. 1Ophthalmology, University Hospital Bonn; 2Medical Biometry, Informatics and Epidemiology, University of Bonn; 3Ophthalmology, University of Bonn

55 — A0129 Features of Fear of Falling (FOF) and Balance Self-efficacy in Men and Women with Age-related Macular Degeneration (AMD). Claire S. Barnes. Independent Research Scholar

56 — A0130 Mail-based Stool Collection in Women with and without Age-Related Macular Degeneration (AMD). Amy E. Millen1, K. Half1, K. B. Kamm1, Z. Liu1, B. J. Krajewski2, J. Wactawski-Wendte3, G. Lema1, 2, M. Buck1, R. Hageman Blair2, Y. Sun1, D. McSkimming4. 1University at Buffalo; 2University of Wisconsin-Madison; 3Michigan Technological University

57 — A0131 Higher Intake of Polysaturated Fatty Acid and Monounsaturated Fatty Acid is inversely associated with presence of Age-Related Macular Degeneration. Min Roh1, 2, H. J. Shin1, I. Lains1, J. Provvidinni2, E. Caseiro-Alves3, P. Barreto3, C. Lopes4, D. Vavas5, J. B. Miller1, 2, I. K. Kim1, L. Liang6, 7, R. Silva1, 8, J. W. Miller1, D. Husain2. 1Ophthalmology, Beetham Eye institute, Joslin Diabetes center; 2Ophthalmology, Massachusetts Eye and Ear; 3General Internal Medicine, Brigham and Women’s Hospital; 4Epidemiology, Harvard T.H. Chan School of Public Health; 5Biostatistics, Harvard T.H. Chan School of Public Health; 6Ophthalmology, Faculty of Medicine

58 — A0132 Incidence of age-related macular degeneration in the central region of Portugal: the Coimbra Eye Study – report 5. Claudia Farinha1, 2, M. Cachulo1, 2, D. Alves1, 2, A. Tran2, 3, E. Y. Chew1, 1Ophthalmology, Beetham Eye Institute, University of Coimbra; 2Research & Analysis Team, National Health Service Coimbra; 3Epidemiology, University of Coimbra

59 — A0133 Association of medications and neovascular age-related macular degeneration: National Sample Cohort 2010-2015. Jiyong Kwak1, T. Rim1, T. Yoo1, S. Kim1, 2, D. Kim1, 3. 1Ophthalmology, Severance Hospital, Institute of Vision Research, Yonsei University College of Medicine; 2Research & Analysis Team, National Health Insurance Service Ilsan Hospital

* 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.
60 — A0134  High-Dose Statins and Progression of Age-Related Macular Degeneration in Commercially Insured Patients, 2007 to 2016. 
Cassie A. Ludwig1, N. Rajeshshri2, D. Vail3, N. F. Cullaway2, D. Moslehjeh1. 1Ophthalmology, Byers Eye Institute, Stanford University; 2School of Medicine, Stanford University

61 — A0135  Effect of Proliferative Diabetic Retinopathy on Development of Neovascular AMD: A Big Data Analysis. 

62 — A0136  Seasonal variation of first presentation with neovascular age-related macular degeneration. 
Roy Schwartz, T. Heeren, A. Tufail, C. A. Egan. Medical Retina, Moorfields Eye Hospital

63 — A0137  Prevalence of Age-related macular degeneration using multi-modal retinal imaging in a population based aging cohort: the NICOLA Study. 
Ruth E. Hogg, N. B. Quinn, T. Petro, D. WRIGHT, B. McGuinness, I. Young, F. Kee, U. Chakravarthy. Centre for Public Health, Queen’s University Belfast

64 — A0138  The Association between Late Age-Related Macular Degeneration and Hospital Admission in the California Medicare Database. 
Alejandro Ochoa III1, F. Yu2, V. Tseng2, S. Sanislo, D. V. Palanker. Ophthalmology, UBC Vancouver General Hospital

65 — A0139  Clinical Manifestation of Cuticular Drusen in Korean Patients. 
Dongsuon SHIN, D. Ham. Ophthalmology, Samsung Medical Center, Sungkyunkwan University School of Medicine

66 — A0140  Subretinal drusenoid deposits in the elderly in a population-based study (the Montrachet study: Maculopathy, Optic Nerve, nuTRition, neuroVAsCular and HEarT diseases). 
Pierre-Henry GABRIELLE1, A. A. Seydoue1, L. Arnould1, N. Acar2, C. Biquet1, A. M. Bron1, C. Creuzot-Garcher1. 1Ophthalmology department, Dijon University Hospital; 2Department of Epidemiology, INSERM unit, Dijon University Hospital; 3Eye and Nutrition Research Group, CSGA, UMR 1324 INRA, 6265 CNRS

67 — A0141  The National Eye Institute Visual Function Questionnaire-25 in Patients with Age-Related Macular Degeneration and Controls. 
Jennifer Patnak, P. Pecen, A. Lynch, F. Siringo, M. Mathias, N. Mandava. University of Colorado School of Medicine

68 — A0142  Is Polypoidal Choroidal Vasculopathy differentiated from Age-related Macular Degeneration? 
Handan Akil1, T. Fang1, T. Wien1, D. Maherley1, E. V. Navajas1, 1Ophthalmology, UBC Vancouver General Hospital; 2Ophthalmology, University of Liverpool

69 — A0143  Sociodemographic disparities in presenting visual acuity of neovascular age related macular degeneration patients. 

70 — A0144  Prevalence and associated factors of age-related macular degeneration in a Russian Population. 
The Ural Eye and Medical Study. 
Rinat Zainulbin1, M. Bikbov1, T. Gilmanshin1, G. Kazakbaeva1, E. Rakhimov1, S. Safiullina1, S. Panda-Jonas1, I. Ruskova1, N. Bolshakova1, G. Bikbova1, J. B. Jonas1, 1Ufa Eye Research Institute; 2Department of Ophthalmology, Medical Faculty Mannheim of the Ruprecht-Karls-University of Heidelberg

71 — A0145  Updated incidence rates of legal blindness from age-related macular degeneration in Denmark: 2010-2016. 
Michael Javaheri1, S. Brandi1, I. Munch1, 1Department of Ophthalmology, Rigshospitalet; 2Faculty of Health and Medical Sciences, University of Copenhagen; 3Department of Ophthalmology, Zealand University Hospital

72 — A0146  Dietary intake of saturated fatty acid and early age-related macular degeneration in a Japanese population. 
Mariko Sasaki1, S. Harada1, Y. Kawasaki1, K. Tsuhota3, T. Takebayashi2, Y. Nishiwaki1, R. Kawasaki1, 1Tachikawa hospital; 2Keio University School of Medicine; 3Osaka University Graduate School of Medicine; 4Toho University

73 — A0153  Two-year outcomes of the integrated management scheme for AMD clinics and patient feedback with Eylea treatment protocol - The Swindon model. 
Hani Hasan1, 2 Department of Ophthalmology, Wills Eye Hospital; 3Eye and Ear, Harvard Medical School; 4Eye Clinic, University Hospital of Heraklion; 5OMMA Eye Institute; 6Department of Ophthalmology, Korigalioen Benakio Hospital

74 — A0147  Three-year Outcomes of Treat and Extend Aflibercept Treatment for Neovascular Age-related Macular Degeneration. 
Keiko Kataoka, K. Asai, Y. Tsunekawa, Y. Ito, H. Terasaki. Ophthalmology, Nagoya University Graduate School of Medicine

75 — A0148  modulation of the response to single Ranibizumab Injection: a HARBOR Subanalysis. 
Michael Javaheri1, L. Hill1, A. Ghanekar1, I. Stoll1, 1Retina Specialists of Beverly Hills; 2Genentech, Inc. 3CR, 80

76 — A0149  Subconjunctival injection of nano/micro-formulations of aflibercept reduces vascular leakage in mouse model of AMD. 
Gordon Xiong1, R. Bhuthalingam1, S. Yeow2, N. Khandelwal3, V. A. Baradhi2, R. F. Agrawal4, S. Venkatraman4, 1Nanyang Technological University; 2Singapore Eye Research Institute; 3Tan Tock Seng Hospital

77 — A0150  Anti-VEGF Non-Responders are often short-term responders. 
Saghar Bagheri1, G. Bontzos1, L. Ioannidi1, S. Kabanarou1, I. K. Kim1, E. S. Gregoudas1, I. W. Miller1, I. DATSERIS1, M. K. Tslilmaris1, D. Vavvas1, 1Massachusetts Eye and Ear, Harvard Medical School; 2Eye Clinic, University Hospital of Heraklion; 3OMMA Eye Institute; 4Department of Ophthalmology, Korigalioen Benakio Hospital

78 — A0151  Changes in the inner retinal layer thickness in patients with exudative age-related macular degeneration during treatment with intravitreal anti-vascular endothelial growth factor according to dose of injection. 
Jae Yong Park1, B. Kim2, J. Kim1, M. Song1, J. Hwang1, I. Jang, W. Oh1, 1Ophthalmology, Sunggye Paik Hospital; 2Busan Paik Hospital

79 — A0152  A randomised clinical trial of slow versus fast intravitreal injection of ranibizumab (Lucentis®) and its impact on intraocular pressure (the Speed IOP Study). 
Samantha Fraser-Bell1, S. Zagara1, H. Mehta1, A. Campain1, H. Seng Wong1, Y. Aaron1, M. C. Gilles1, 1Sydney Eye Hospital; 2University of Sydney

80 — A0260  Short-Term Outcomes of Eyes with Neovascular Age-related Macular Degeneration (nAMD) that Switched from Aflibercept to Ranibizumab. 

81 — A0250  Subfoveal choroidal thickness in eyes with neovascular age-related macular degeneration treated with anti-VEGF agents: one year follow-up at the Sunderland Eye Infirmary. 
Tereza kanadani1, F. Kanadani1, c. veloso2, M. Nemhey1, 1Instituto De Olhos Ciencias Medias; 2Universidade Federal de Minas Gerais

82 — A0259  Real-life long-term outcomes for patients receiving intra-vitreal Aflibercept for neovascular age related macular degeneration (nAMD): five(5)-year follow-up. 

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
84 — A0264 Frequency of intra- and extraretinal macular atrophy in the IVAN Follow-up trial. Tunde Peto1, R. Evans1, B. Reeve2, U. Chakravarthy1,3. CTU, University of Bristol; 2Centre for Public Health, Queen’s University Belfast. *CR, *

85 — A0265 Individualizing therapy for neovascular age-related macular degeneration with aflibercept (the VITAL study): A two year prospective, interventional single-centre trial. Simona Degli Esposti1,2, M. K. Gemenetzii1,2, M. Eleftheriadou1,3, H. Jayaram1, B. Pal1, N. Islam1,2, P. Addison1,2, R. Hamilton1,2, P. Patel1,2. NHIR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, Moorfields Eye Hospital NHS Foundation Trust; 1Medical Retina Department, Moorfields Eye Hospital NHS Foundation Trust; 2Cataract Department, Moorfields Eye Hospital NHS Foundation Trust. *CR, *

86 — A0266 10-year Mortality and Clinical Outcomes in Patients with Neovascular Age-related Macular Degeneration Treated with Intravitreal Anti-VEGF Injections. Su Ling Young1, M. Anderson1, S. Borooah1, A. Ambrecht1, P. D. Cackett1. 1Princess Alexandra Eye Pavilion, NHS Lothian; 2Shiley Eye Institute, University of California; 3Centre for Clinical Brain Sciences, University of Edinburgh. *CR


89 — A0269 Psychological impact of treat-and-extend ranibizumab therapy in patients with age-related macular degeneration. SATOSHI KUWAYAMA1, A. Kato1, T. Yasukawa1, I. Sugita2, M. Yoshida2, M. Nozaki3, Y. Hirano1, J. Kondo1, T. Abe1, K. Sugita1, T. Okita2, H. Morita2, K. Sugitani2, N. Inoue3, N. Takase1, Y. Ogura1. 1Ophthalmology and Visual Science, Nagoya City University Graduate School of Medical Sciences; 2Sugita Eye Hospital


91 — A0271 Twelve percent of 6142 patients treated for neovascular age-related macular degeneration (nAMD) presented with low vision outcome within two years. Analysis from the Swedish Macula Registry (SMR). Marion Schroeder, M. K. Loewestam-Adrian. Lund University *CR


93 — A0273 Patient Preferences for Anti-VEGF Treatment Regimens for Wet Age-Related Macular Degeneration in Japan. Yui Oshima1,2, T. Joka1, Y. Nagai1,2, R. Mori1, K. Tanaka1, Y. Hikichi1, T. Komori2, J. Carrasco3, M. Maculaitis1, O. Will1, K. Beusterien1, K. Takahashi3. 1Department of Ophthalmology, Graduate School of Medical Sciences, Kyushu University; 2Department of Ophthalmology, Ehime University School of Medicine; 3Department of Health Outcomes Research, Kantar Health, LLC; 4Department of Market Access, Bayer Consumer Care AG; 5Division of Ophthalmology, Department of Visual Sciences, Nihon University School of Medicine; 6Department of Ophthalmology, Kansai Medical University; 7Department of Research & Product Development, Bayer Yakuhin, Ltd *CR

94 — A0274 One-year efficacy of anti-vascular endothelial growth factor agents in patients with neovascular age-related macular degeneration: a meta-analysis and meta-regression. Daniele Verini1,2, C. Danese1, P. Lanzetta1,2. 1Department of Medicine - Ophthalmology, University of Udine; 2Istituto Europeo di Microchirurgia Oculare - IEMO. *CR

95 — A0275 Intravitreal Aflibercept in a Routine Treat and Extend (T&E) Regimen for Treatment-Naive wet AMD Patients: 2-Year Outcomes of the observational ASTERIA Study. Andreas Ebneter1, S. Micheli1, P. Inesch1, F. Eilenberger1, S. Oesch1, C. Prantl2, K. Hutz1. 1Department of Ophthalmology, University of Bern; 2Augenklinik Zürich West; 3Eyespark; 4Alcedis GmbH; 5Bayer (Schweiz) AG; 6University Eye Clinic Basel; 7Vista Klinik *CR


98 — A0278 Assessing the Efficacy and Safety of Intravitreal Dexamethazone Implant in Treating Macular Edema in Eyes with an Incomplete Response to Anti-vascular Endothelial Growth Factor Agents. Walid Abdallah1,2, M. Barakat1,2, D. Goldenberg1,2, S. Itty1,2, P. U. Dugel1, K. Jamal1,2, D. Kunimoto1,2, S. Mehtia1,2, E. Quinlan1,2, N. Palewala1,2. 1Retinal Consultants of Arizona; 2Department of Ophthalmology, Keck School of Medicine, University of Southern California

99 — A0279 Anatomic and functional results with Aflibercept in poor-responders to Ranibizumab with long term recurrent neovascular AMD. Laura Andrea Lima Modino, G. Pacheco Callirgos, C. Blondo Labrandero, M. Lopez Galvez. Hospital Clinico Universitario de Valladolid


101 — A0281 Efficacy of the Treat-And-Extend Regimen in the Management of Neovascular Age-Related Macular Degeneration: 5-year Results of the RENO Study. Jonathan Dang1, A. M. Khanani1, G. Gahn1, M. Kooi1, N. Mojiunder1, S. Phillips1, L. Hill1. 1University of Nevada, Reno School of Medicine; 2Independent Statistical Consultant; 3Sierra Eye Associates *CR

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Χ Refer to the Program Number in the Clinical Trial (CT) Registration Index.
102 — A0282 Are patients with wet AMD as satisfied following a switch from Treat and Extend to Observe and Plan protocol? Alietha Vorren1, D. Austeng2, T. Mørken3. 1Eye Department, Aalesund Hospital; 2Neuroscience, Norwegian University of Science and Technology

103 — A0283 Outcomes of quarterly anti-VEGF dosing for nAMD management in real-world clinical practice. Alexander M. Rusakevich4, B. Zhou5, C. C. Wykoff5. 2Retina Consultants of Houston; 3Blanton Eye Institute, Houston Methodist Hospital, Weill Cornell Medical College

104 — A0284 Factors predictive of visual outcome and retreatment of polypoidal choroidal vasculopathy 6 years after photodynamic therapy combined with intravitreal injection of anti-vascular endothelial growth factor. Wataru Fukuhara, N. Shekoh, T. Hadi, C. Kenney, B. D. Chou, S. Ferguson, Q. Gong. 1Aptitude Medical Systems; 2STZ OcuTox Preclinical Drug Assessment; 3Natural and Medical Institute at the University of Tuebingen, Applied Material Science and Electron Microscopy


West Exhibition Hall A0287-A0320 Sunday, April 28, 2019 8:00 AM-9:45 AM Retina

107 AMD anti-VEGF II

Moderators: Andreas Pollreisz and Mark C. Gillies


108 — A0289 Changes in the SOD2, HIF1α and VEGFA gene expression in wet AMD cybrid cells after treatment with aflibercept or ranibizumab. Jaime Toledo Corral, R. S. Gabriel, P. Sakemi Fukuhara, N. Shekoh, T. Hadi, C. Kenney, B. D. Kuppermann. UC Irvine

109 — A0290 Survey of Intravitreal Injection Practice Patterns among Retina Specialists. Stephen J. Smith1, T. Sussalov1, N. Patel2, C. Andrews2, D. C. Muschl3, C. G. Besiril3. 1Kellogg Eye Center, University of Michigan; 2Byers Eye Institute, Stanford University

110 — A0291 Macular Atrophy Affecting Visual Outcomes in Patients Undergoing Anti-VEGF Treatment. Weliin Song1, 2, N. B. Rieveschi3, A. Lti4, T. Conti4, 5, G. L. Hon5, 6, R. P. Singh7. 1Cleveland Clinic Lerner College of Medicine at Case Western Reserve University School of Medicine; 2Case Western Reserve University School of Medicine; 3Cole Eye Institute, Cleveland Clinic Foundation; 4Center for Ophthalmic Bioinformatics, Cole Eye Institute, Cleveland Clinic Foundation; 5Cleveland Clinic

111 — A0292 Ten-Year Treatment Outcomes of Neovascular Age-Related Macular Degeneration. Mark C. Gillies1, 2, S. BHANDARI4, B. Wolff5, J. J. Arnold1, 6, R. W. Essex6, S. Young2, D. M. Squirell7, D. Barthelmes8, V. Nguyen9. 1Ophthalmology, University of Sydney; 2Save Sight Institute; 3Marsden Eye Specialists; 4Academic Unit of Ophthalmology, Australian National University; 5Gladesville Eye Specialists; 6Auckland District Health Board; 7Department of Ophthalmology, University Hospital Zurich; 9Rothschild Foundation

112 — A0293 High-Dose High-Frequency Aflibercept For Recalcitrant Neovascular Age-Related Macular Degeneration (2-year follow up). Manuel Amador, M. Jhingan, A. Meshi, K. Dans, T. Lin, M. Cavichini Cordeiro, W. R. Freeman. UCSD

113 — A0294 Volume evaluation of additional Anti-VEGF agents released when the plunger is double squeezed. Miryoung Song, J. Kim, J. Hwang, W. Oh, J. Park, B. KIM. Sanggye Paik Hospital

114 — A0295 A Novel Long-Acting Drug Conjugate for Extended Anti-VEGF Therapy. Wesley M. Jackson1, 2, L. W. Brier1, A. Twite1, M. Mahomed1, R. Lamy2, M. F. Chan2. 1Valitor, Inc.; 2Ophthalmology, UCSF

115 — A0296 Interleukin-8 production by cells in peripheral blood is associated with age-related macular degeneration lesion activity during anti-VEGF treatment and with variants of the interleukin-8 gene. Ilkka J. Immonen1, A. Robciuc2, J. Kivioja3, J. Moilanen4, S. Seitsonen5, I. Järvelä5, A. Hautamäki6. 1Ophthalmology, Helsinki University Hospital; 2Dept. of Medical Genetics, University of Helsinki

116 — A0297 Anatomical outcomes of patients receiving 50 or more intravitreal anti-VEGF injections for neovascular age-related macular degeneration. Cristina Arpa1, 2, G. Moraes1, K. de Oliveira1, 2, G. Moraes1, K. de Oliveira1, 2. 1UCAM University; 2Valitor, Inc.

117 — A0298 Efficacy of Intravitreal Aflibercept Administered using Treat-and-Extend Regimen over 2 Years in Patients with Neovascular Age-Related Macular Degeneration: 1-Year ARIES Results. Paul Mitchell1, 2, H. H. Souied2, E. Mileda3, F. G. Holz4, P. G. Hykin5, S. Wolff6, H. Allmeier7. 1Ophthalmology, University of Sydney; 2Hopital Intercommunal de Creteil, Department d’ophthalmologie; 3University of Padova, Department of Ophthalmology; 4Department of Ophthalmology, University of Bonn; 5Moorfields Eye Hospital, Ophthalmology; 6Reading Centre and department for Ophthalmology, Inselspital; 7Bayer AG

118 — A0299 Predictors of five-year visual outcome for exudative age-related macular degeneration treated with intravitreal aflibercept using treat and extend regimen. Manabu Yamamoto, T. Kohno, K. Hirayama, S. Honda. Ophthalmology & Visual Sciences, Osaka City Univ Grad School of Medicine


120 — A0301 High-Frequency Anti-VEGF Treatment for Neovascular AMD. Dillion Matthews, K. G. Kapoor, A. Wagner. Wagner Macula and Retina Center

121 — A0302 A valid VEGF overexpression-induced rat choroidal neovascularization model for the investigation of antiangiogenic therapies. Shan Liu1, 2, A. Biesemeier1, 2, A. Tschulakow1, 2, S. Julien1, 2, H. Thakkar1, 2, Y. Fang1, 2, U. Schroenemeier1, 2. 1Center for Ophthalmology, Division for experimental vitreoretinal surgery; 2STZ OcuTox Preclinical Drug Assessment; 3Natural and Medical Institute at the University of Tuebingen, Applied Material Science and Electron Microscopy

122 — A0303 Quantification of Anterior Chamber Reaction after Intravitreal Injections of Conbercept and Ranibizumab: a pilot study. Haoyu Chen1, X. Liao1, C. Jin1, W. Chen1, G. Zhang2, L. Cen2, S. Ng2. 1Joint Shantou International Eye Center; 2Ophthalmology & Vision Sciences, Chinese University of Hong Kong

123 — A0304 Long-term treatment patterns and visual outcomes of anti-vascular endothelial growth factor agents among people with neovascular age-related macular degeneration in the US. Adrian Skelly1, 2, M. Khanani2, R. Griner3, V. Beleyka1, J. Clark4, A. Sagkiotis5. 1Novartis Pharma AG; 2Sierra Eye Associates; 3IQVIA; 4Novartis Pharmaceuticals


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126 — A0307 Chronic Nonclinical Ocular Toxicity Study of KSI-301 Demonstrates Tolerability after Intravitreal Administration in Cynomolgus Monkeys. John Sinclair1, H. Liang1, Z. Antonio2, P. Miller1, A. Tolsa3, J. Naor4, L. Quaerberg5, A. Sharma6, X. Huang7, J. Li8, W. Ngo9, D. Dang1, F. Clemo1, J. N. Ver Hoeve1, T. Nork1, D. Perriot71. 1Kodiak Sciences Inc.; 2Covance Laboratories Inc.; 3OSOD, LLC. *CR

127 — A0308 Rhegmatogenous retinal detachment in active neovascular age-related macular degeneration. Danny Mammo1, A. L. Ringesës1, D. Parke1. 1Ophthalmology, University of Minnesota; 2Vitreoretinal Surgery, PA

128 — A0309 Drug Testing in the Virtual Eye. Simon Dörsam1, G. U. Auffarth2, E. Friedmann3. 1Department of Applied Mathematics, Heidelberg University; 2Department of Ophthalmology, Heidelberg University

129 — A0310 A new phenotype of atypical wet age-related macular degeneration. Bishwanath Pal1, F. Rodrigues1, H. Khalid1. 1Medical Retina, Moorfields Eye Hospital NHS Foundation Trust; 2NIHR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology

130 — A0311 The efficacy of treatment with aflibercept intravitreal injections in patients with wet age-related macular degeneration. Anna Heinke1,2. 1Department of Ophthalmology, Medical University of Silesia; 2Department of Ophthalmology, Klinikum Frankfurt Höchst

131 — A0312 Intraocular pressure trends in the Canadian treat and extend trial with ranibizumab in patients with nAMD: CANTREAT study 24-month results. Peter Kerets1, T. Sheidow1, G. Williams1, M. Greve1, I. Galic2, E. Rampalakiez1, M. Lahie2. 1Ophthalmology and Vision Sciences, Sunnybrook Health Sciences Centre; 2Ophthalmology and Vision Sciences, The University of Toronto; 3Calgary Retina Consultants; 4Ivey Eye Institute; 5Institut de la Rétine de Montréal; 6Alberta Retina Consultants; 7University of Nebraska, Reno School of Medicine; 8Sierra Eye Associates; 9Independent Statistical Consultant. *CR

132 — A0313 A Novel Surrobody Reduces Neovascularization in a Rat Model of CNV. Anthony A. Jones1, J. L. Morgenstern1, A. D. Strong1, J. Olson1. 1Ophthalmology, University of Colorado School of Medicine; 2Rocky Vista University College of Osteopathic Medicine

133 — A0314 Visual Acuity Outcomes of Fellow Eyes Treated for New Onset Neovascular Age-Related Macular Degeneration in Patients in the RENO study. Nazred Mojumder1, J. Dang2, A. M. Khana2, G. Gahra2, M. Koch3, S. Philippe2, L. Hill1. 1University of Nevada, Reno School of Medicine; 2Sierra Eye Associates; 3Independent Statistical Consultant. *CR

134 — A0315 Correlation of BCVA and SRF in Type 1 CNV(Choroidal Neovascularisation) with Pachychoroid Features. Vinder Kaur Dhillon, A. Ding Wu, B. Pal. 1Ophthalmology, Moorfields Eye Hospital

135 — A0316 Treatment of type 3 choroidal neovascularization with intravitreal injections of Aflibercept: a prospective study. Nicolas Leveziel1, R. Warrak1, E. Bedue1, M. Omar1, P. Ingrand1. 1CHU Poitiers; 2University of Poitiers. *CR

136 — A0317 Treatment and Management of Neovascular AMD: Impact on Patients. Vincent W. Li1, I. R. Gabriel1, M. M. Li1, A. N. Antoszyk1, C. W. Baker2, P. U. Dugel3, R. A. Goldberg2, J. Heier4, A. Ho2, J. S. Pollack3, C. C. Wykoff4, D. Vavas3, W. W. Li5. 1Angiogenesis Foundation; 2Charlotte Eye Ear Nose & Throat Associates; 3Paduch Retinal Center; 4Retinal Consultants of Arizona; 5Bay Area Retina Associates; 6Ophthalmic Consultants of Boston; 7Wills Eye Hospital; 8Rush University Medical Center; 9Retina Consultants of Houston; 10Massachusetts Eye and Ear Infirmary

137 — A0318 Thermo-sensitive hydrogel for the controlled release of Aflibercept: in vitro release and ex vivo bioactivity. Xinxin Zhao1, K. Xu1, X. Su1. 1Institute of Molecular and Cell Biology, Agency for Science, Technology and Research (A*STAR); 2IMRE

138 — A0319 Significant Correlation between Ganglion Cell Layer & Inner Plexiform Layer Thickness and Retinal Sensitivity Changes After Intravitreal Aflibercept Treatment in Eyes with Exudative Age-related Macular Degeneration. Rie Osaka1, C. Shiragami1, A. Ono1, Y. Takasago1, M. Kobayashi1, A. Yamashita1, S. Manabe2, A. Tsujikawa1, K. Suzuma1. 1Kagawa University Faculty of Medicine; 2Kyoto University Graduate School of Medicine

139 — A0320 Outcomes of suspending VEGF inhibitors for neovascular age-related macular degeneration when lesions have been inactive for 3 months. Vuong Nguyen1, A. Vaze1, S. Fraser-Bell1, J. J. Arnold2, R. W. Essex3, D. Barthelmes4, M. C. Gillies1. 1Save Sight Institute; 2Marsden Eye Specialists; 3Australian National University; 4University Hospital Zurich. *CR


142 — A0551 Optical coherence tomography shape analysis describes myopic retinal shape. Stewart Lake1, M. Bottema1, K. Williams1, K. Reynolds2. 1College of Medicine and Public Health, Flinders University; 2College of Science and Engineering, Flinders University


144 — A0553 Speckle Noise Reduction in Visible-Light OCT. Jenna Tauber1, R. Karanov2, I. Rubinoff1, Y. Wang1, Z. Ghassab1, R. Luc1, H. F. Zhang2, G. Wolfstein3, J. S. Schuman4, H. Ishikawa5. 1NYU Eye Center, NYU Langone Health; 2Department of Biomedical Engineering, Northwestern University; 3Opticent Inc. *CR

145 — A0554 Variability and repeatability of inner retinal macula layers segmentation by SD-OCT. Radoul T. Tzekov1,2, K. Zimmerman1, D. Richards3, A. Ayyala1. 1USF Eye Institute; 2Medical Engineering, University of South Florida; 3Physics, University of South Florida

146 — A0555 Clinical implementation of malarial retinopathy screening system for improved diagnosis of cerebral malaria. Finayak S. Joshi1, J. C. Wigdal1, S. C. Nemeth1, G. Zamora1, P. Soltz2, S. Lewallen2, S. P. Harding1, B. Turner1, C. Manda1, T. Taylor1. 1VisionQuest Biomedical LLC; 2University of Liverpool; 3University of Malawi; 4Michigan State University; 5Kilimanjaro center for community ophthalmology. *CR

*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.

148 — A0557 Enhancing visibility of choroidal vasculature in OCT via attenuation compensation and coherence transport inpainting. Jianlong Yang, X. Mu, Y. Zhao, F. Li, L. Fang, Y. Hu, J. Cheng, X. Zhang, J. Liu. iCixi Institute of Biomedical Engineering, Chinese Academy of Sciences; Zhongshan Ophthalmic Center, State Key Laboratory of Ophthalmology

149 — A0558 A theoretical study of vascular configurations of retinal capillary plexi based on OCTA data. Greta Chiaravalli, G. Guidoboni, R. Sacco, T. A. Cuillà, A. Harris. Politecnico di Milano; University of Missouri; Ophthalmology, Indiana University School of Medicine; Eye Clinic of Lithuanian University of Health Sciences *CR

150 — A0559 Investigation of parameters to quantify local variations in the circumpapillary retinal nerve fiber layer on OCT circle scans of eyes with early glaucoma. William E. McKee, E. Tsamis, K. Tsang, C. De Moraes, D. C. Hood. Psychology, Columbia University; Ophthalmology, Columbia University *CR


154 — A0563 Correlation between Retinal Nerve Fiber Layer Thickness of Different Parapapillary Regions and the Age. Chen LIN, Q. Li, W. Huang. Aier school of Ophthalmology, Central South University; ShenZhen Aier Eye Hospital

155 — A0564 Fast and memory-efficient Just-Enough Interaction for retinal layer segmentation in OCT in layer-disrupting pathology. Kyungmoo Lee, H. Zhang, Z. Guo, A. Wahle, H. Bogunovic, S. M. Waldstein, B. Gerendais, U. Schmidt-Erfurth, M. D. Abramoff, M. Sonka. Electrical and Computer Engineering, University of Iowa; Biomedical Engineering, University of Iowa; Christian-Doppler-Laboratory for Ophthalmic Image Analysis, Medical University of Vienna; Ophthalmology and Visual Sciences, University of Iowa *CR

156 — A0565 Real-time retinal layer segmentation for high-resolution OCT angiography. Woraruee Janpongprasit, M. Heisler, M. J. Ju, M. V. Sarunic, Y. Tian. Simon Fraser University; Casey Eye Institute, Oregon Health & Science University *CR


159 — A0568 Distinguishing cognitive impairment with multifractal complexity of the retinal vascular network. Delia Cabrera DeBuc, E. Arthur, G. M. Sonfia, M. Kostic, S. Oropeza, C. Mendoza-Santiesteban. Ophthalmology, University of Miami; Retinology Unit, Pallas Klinik *CR

160 — A0569 Characterization of macular edema in the initial stages of diabetic retinopathy. Torcato Santos, I. Marques, A. Santos, D. Alves, C. Lobo, J. G. Cunha-Vaz. Association for Innovation and Biomedical Research on Light and Image; Faculty of Medicine, University of Coimbra


162 — A0571 Integration of Artificial Intelligence and OpacitySuppression™ Software in Tele-Retinal Screenings. Andrew Caterfino, A. Ooms, S. Trikha, B. Caterfino, B. Szirth, A. S. Khouri. Rutgers New Jersey Medical School; King’s College Hospital; Flatiron School

163 — A0572 Quantitative analysis of fundus images as affected by cataract. Lydia Mineeva, C. L. Passaglia, L. Balashevich, D. Richards, L. Shubin, A. Kabanov, B. Madow, E. Greenberg. Ophthalmology, Yaroslavl state Medical University; Biomedical Engineering, University of South Florida; Eye Microsurgery Complex; Physics, University of South Florida; Anatomopathology, Yaroslavl state Medical University; Clinical Pharmacology, Yaroslavl state Medical University; Ophthalmology, University of South Florida


165 — A0574 Corneal Confocal Image Fusion. Simone Pajaro, M. Menin, M. Pascolini. NIDEK Technologies Srl; Department of Information Engineering, University of Padova *CR

166 — A0575 Chromatic vs monochromatic blue fundus autofluorescence in patients with cataract. Marco U. Morales, A. Muraca, C. Tomà, E. Poletti, S. De Cilli, W. W. Amoako, S. Vajosevic. Academic Ophthalmology, Nottingham University; Retina, University Hospital Maggiore della Carità; Centervue SpA *CR

167 — A0576 Fully automated segmentation algorithm for corneal nerves analysis from in-vivo UHR-OCT images. Zohreh Hosseinaee, L. Han, K. Krull, A. Wong, L. Sorbara, K. K. Bicheva. System Design Engineering, University of Waterloo; Physics and astronomy, University of Waterloo; School of Optometry and Vision Science, University of Waterloo


The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
173 — **A0582** Retinal pulsatile shift enhancement with blind source separation. Ivana Labounkova1, R. Labounek2, J. Odstrcilik1, M. Hrachova1, I. Nestrassi1, R. P. Tornow1, R. Kolar1. 1Department of Biomedical Engineering, Brno University of Technology; 2Department of Pediatrics, University of Minnesota; 3Department of Neurology, Palacky University; 4Center for Magnetic Resonance Research (CMRR), University of Minnesota; 5Department of Ophthalmology, Friedrich-Alexander-University of Erlangen-Nuremberg

174 — **A0583** Pattern recognition for the distinction of drusen from retinal pseudodrusen. Angelica Ly, L. Nivison-Smith, M. Kallonitis. Centre for Eye Health *CR*

175 — **A0584** The Prospective Imaging Quantification of Ocular Inflammation (IQI) Study. Sanil K. Srivastava, K. Baynes, S. Sharma, A. Venkat, C. Lowder. Cole Eye Institute, Cleveland Clinic *CR*

176 — **A0585** High resolution Scanning Laser Ophthalmoscope imaging with ultrafast retinal tracking. Maciej Szulkowski1, M. Nowakowski1, K. Dalasinski2, M. M. Bartuzel1, 3, K. Wrobel1, Kolar1. 1Department of Eye and Vision Science, University of Minnesota; 2Aeon Technology, Chinese Academy of Sciences; 3Wroclaw University of Technology; 4Ningbo Institute of Industrial Electrical Engineering and Electronics, University of British Columbia; 5Department of Ophthalmology, University Hospitals NHS Trust; 6Aeon Imaging, LLC; 7School of Optometry, Indiana University *CR*

177 — **A0586** Fully Convolutional Segmentation of Corneal Limbus and Foveal Blood Vessels in Fluorescein Angiography. Yalin Zheng1, 2, H. Yao1, Y. Shen1, Y. Zhao1, 2, B. Williams1. 1Department of Eye and Vision Science, University of Liverpool; 2St Paul’s Eye Unit, Royal Liverpool University Hospitals NHS Trust; 3Department of Electrical Engineering and Electronics, University of Liverpool; 4Ningbo Institute of Industrial Technology, Chinese Academy of Sciences

178 — **A0587** Non-mydriatic structured light imaging of the retina with the Digital Light Ophthalmoscope. Matthew S. Muller1, J. Papay1, R. N. Gilbert1, T. Gasi1, A. E. Elsner1, 2. Aeon Imaging, LLC; 3School of Optometry, Indiana University *CR*

179 — **A0588** Euclidean distance method for retinal amyloid polarimetry segmentation. Erik Mason1, M. C. Campbell1, 2. University of Waterloo; 3Optometry, University of Waterloo *CR*

180 — **A0589** Confocal and multiply scattered light imaging with the Digital Light Ophthalmoscope. Joel Papay1, M. S. Muller1, R. N. Gilbert1, T. Gasi1, A. E. Elsner1, 2. Aeon Imaging, LLC; 3School of Optometry, Indiana University *CR*

181 — **A0590** Prediction of Late Dry and Wet Age-related Macular Degeneration (AMD) in 1-year and 2-year Incident using Retinal Imaging and Traditional Risk Factors. Auluddin Bhuivyan, A. Govindiaish, IhealthScreen

182 — **A0591** Robust Alignment of Retinal Sequential Multispectral Images. Yu Wang1, Y. Ding2, W. Jiao2, F. Yan1, B. Zhao1, Y. Zheng1. 1School of Information Science & Engineering, Shandong Normal University; 2Ophthalmology, Shandong Provincial Hospital affiliated to Shandong University

West Exhibition Hall A0592-A0617

Sunday, April 28, 2019 8:00 AM-9:45 AM

**Multidisciplinary Ophthalmic Imaging Group**

109 Animal Imaging

Moderators: Gillian J. McLellan and Robert J. Zawadzki

183 — **A0592** Multiphoton microscopy for three dimensional histology of retinal whole mounts. Chintan Patel1, R. Torres1, R. Olson1, M. Levene1, M. S. Lawrence1. 1RxGen; 2School of Medicine, Yale University; 3Applikate Technologies *CR*

184 — **A0593** Outer Retinal Oxidative Stress Measured In Vivo using QUEnch-assiSTed (QUEST) OCT. Haohua Qian1, R. H. Podolsky2, K. M. Lins-Childers3, Y. Li1, B. A. Berkowitz2. 1Cell Biology, Neurobiology, Anatomy, University of California, Davis; 2Biomedical Engineering, Georgia Institute of Technology/Emory University; 3Department of Ophthalmology, Novartis Institutes for Biomedical Research *CR*

185 — **A0594** Mouse corneal topography, pachymetry, and keratometry utilizing OCT with keratometer validation. Alice S. Liu1, D. Brown2, R. E. Conn1, R. P. McNabb1, M. T. Parude3, A. N. Kuo1, 2. 1Biomedical Engineering, Duke University; 2Biomedical Engineering, Georgia Institute of Technology/Emory University; 3Neuroscience, Emory University; 4Center for Visual and Neurocognitive Rehabilitation, Atlanta VA Healthcare System; 5Biomedical Engineering, Duke University *CR*

186 — **A0595** Functional and Ultrastructural Assessment of Novel OCT Findings in the Cynomolgus Monkey. Helen Bolder1, A. M. Kusi1, N. Tassev1, C. Frantz1, M. Holdren1, P. Lau1, T. Nork2, C. Rusmussen2, W. Meier2, V. Bantsev1. *Genentech; Ocular Services On Demand; Department of Ophthalmology and Visual Sciences, University of Wisconsin School of Medicine and Public Health; Covance *CR*

187 — **A0596** Monitoring Retinal Responses to Acute Intravascular Pressure Elevation in Rats with Visible Light Optical Coherence Tomography. Shaohua Pi, T. Hormel, X. Wei, W. Cepurna, A. Camino, Y. Guo, D. Huang, J. C. Morrison, Y. Jia. Oregon Health & Science University *CR*

188 — **A0597** Retinal thickness increases in anesthetized but not awake-behaving mice. GUANPING FENG1, J. B. Schallek1. 1Center for Vision Science, University of Rochester; 2Biomedical Engineering, University of Rochester; 3Flauim Eye Institute, University of Rochester *CR*


190 — **A0599** Multimodal longitudinal in vivo retinal and cerebral imaging-based framework for neurodegenerative diseases using mouse model of Alzheimer’s Disease. Da Ma1, S. Lee2, J. D. Wahl1, A. Sidiqi1, A. Yang1, J. A. Matsubara1, P. Kozlowski1, M. F. Beg1, M. V. Sarunic1. 1School of Engineering Science, Simon Fraser University; 2Department of Ophthalmology & Visual Science, University of British Columbia; 3MRI Research Centre, University of British Columbia

191 — **A0600** Retinal Oxygen Delivery, Metabolism, and Extraction Fraction During Long-term Bilateral Common Carotid Artery Occlusion in Rats. Sophie Leahy1, J. Burford1, S. Farzad1, N. P. Blair1, M. Shahidi1. 1Department of Ophthalmology, University of Southern California; 2Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago *CR*


193 — **A0602** Assessing longitudinal changes in the SOD1 knock-out mouse model by OCT imaging. Marco Augustin1, D. J. Harper1, C. W. Merkle1, C. K. Hitzenberger1, M. Glössmann1, B. Baumann1. 1Center for Medical Physics and Biomedical Engineering, Medical University of Vienna; 2VetCore Facility for Research, Imaging Unit, University of Veterinary Medicine Vienna

*CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
194 — A0603 A longitudinal study of in vivo fluorescence imaging of curcumin-labeled amyloid beta deposits in the retina of an Alzheimer mouse model. Ahmad Siddiqui1, D. J. Wahl1, S. Lee1, D. Mur1, E. To1, S. Cao1, E. To1, J. Z. Cui1, M. F. Beg1, M. V. Sarunic1, J. A. Matsubara1.

- Ophthalmology and Visual Sciences, University of British Columbia; Engineering, Simon Fraser University *CR

195 — A0604 Visualization of three-dimensional microcirculation of rodents’ retina for study of critical illness using optical coherence tomography angiography. Jung Ryul Park1, Y. Kim1, K. Kim2, W. Oh1. KAIST; SNUH

196 — A0605 Real-time guidance and monitoring of CNV through subretinal injection in rabbit eyes using multimodal PAM and OCT imaging system. Juzuo Li1, W. Zhang1, V. P. Nguyen1, X. Xia1, X. Wang1, Y. M. Paulus1.1-1.

1Department of Ophthalmology and Visual Science, University of Michigan; 2Department of Ophthalmology, Xangya Hospital, Central South University; 3Department of Biomedical Engineering, University of Michigan

197 — A0606 Increased scattering by the RPE of Abca4+ mice relative to WT controls measured with OCT in vivo correlates with increased fundus autofluorescence measured with SLO. Ratheesh Kumar Meleppat1, S. K. MANNA1, G. Peinado1, K. Ronning1, P. Zhang1, E. N. Pugh1, R. J. Zawadzki1.2.1University of California Davis; 2Ophthalmology & Vision Science, University of California Davis

198 — A0607 3D visualization of angiogenesis in the mouse eye using light sheet fluorescence microscopy. Marie Darche1, M. Belle1, S. Fouquet1, A. Chédotal1, J. Cascone1, M. Paques1.2.1 UPMC - Institut de la Vision; 2CIC, 15-20 hospital; "CRRET laboratory

199 — A0608 Investigating Retinal Changes in a Mouse Model of Alzheimer’s Disease using OCT. Bernhard Baumann1, D. J. Harper1, A. Lichtenegger1, M. Muck1.2, C. W. Merkle1, J. Gesperger1.2, T. Himmel1, A. Woehrer2, M. Glösmann1, M. Augustin1.

1UPMC - Institut de la Vision; 2CIC, 15-20 hospital; "CRRET laboratory


201 — A0610 OCT in Neonate Monkeys With and Without Maternal Zika Virus Exposure. Carol A. Rasmussen1, S. Eaton1, N. Diers1, P. Cueto1, E. L. Mohr1, D. H. O’Connor1, A. W. Katz1, M. Schotzko1, C. J. Murphy1, Y. Huang1, T. Nork1.2.

1Ophthalmology and Visual Sciences, University of Wisconsin-Madison; 2OSOD LLC; "EyeKor, Inc.; Department of Pediatrics, University of Wisconsin-Madison; Department of Pathology and Laboratory Medicine, University of Wisconsin-Madison; Wisconsin National Primate Research Center, University of Wisconsin-Madison; "Surgical & Radiological Sciences, School of Veterinary Medicine, UC Davis; 3Ophthalmology & Vision Science, School of Medicine, UC Davis, *CR

202 — A0611 Assessment of the nonhuman primate macula across the lifespan: Thickness of retinal layers measured with sdOCT. Lauren Renner1, L. Sam1, M. Neuringer1.2, T. J. McGill1.2.1Neuroscience, Oregon Health & Science University; 2Casey Eye Institute, Oregon Health & Science University

203 — A0612 Characterization of the Royal College of Surgeon’s Rat Model Endpoints for Use in Preclinical Ophthalmic Studies. Justin Prater1, Y. Peele1, D. Culp1, B. C. Gilger2.1Powered Research; 2Clinical Sciences, North Carolina State University *CR

204 — A0613 Comparison of amyloid deposits in retinas of cognitively impaired and cognitively normal beagles. Laura Emptage1, M. C. Campbell1.2, R. Redekop1, E. Mason1, M. Kitor1, M. Hame1.1Physics, University of Waterloo; 2Optometry, University of Waterloo *CR

205 — A0614 Quantitative analysis of retinal structure and function in two chromosomally altered mouse models of Down syndrome. Alberto Costa1, D. B. Victorino1.2, J. J. Scott-McKean1.1Case Western Reserve University School of Medicine; 2Postgraduate Program in Neurology and Neuroscience, Federal University of São Paulo

206 — A0615 Classification of Fluorophore Hyperspectral Signatures in Canine Best Disease. Jacob Rosenblum1, Y. Tong1, T. Mohammed3, N. Khan1, S. Chen1, G. Maehara2, K. Yaoeda3.1Department of Ophthalmology, Icahn School of Medicine; 2Optometry, University of California, Irvine; 3New York University

207 — A0616 Changes in visual function and visual pathway in experimental glaucoma induced by intracamerual injection of a chemically cross-linked hydrogel. Tianmin Ren1, K. C. Chan1, Y. Yu1, S. Ng1, H. Mak1, W. Yip1, Y. VAN DER MERWE1, J. S. Yang1, S. Biwa1, X. Cao1, Y. Chau1, C. K. Leung1.1Department of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong; 2Department of Chemical and Biological Engineering, The Hong Kong University of Science and Technology; 3Departments of Ophthalmology and Bioengineering, University of Pittsburgh; Departments of Ophthalmology and Radiology, NYU School of Medicine, NYU Langone Health, New York University


West Exhibition Hall A0618-A0636

Sunday, April 28, 2019 8:00 AM-9:45 AM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology

110 Amblyopia: Mechanisms and Associations

Moderators: Bin Zhang and Frank A. Proudlock

209 — A0618 Evaluation of foveal avascular zone and macular vessel density in unilateral amblyopia using optical coherence tomographic angiography. Atsushi Miki1, S. Araki1, K. Goto1, T. Yamashita1, T. Toned1, K. Harai1, Y. Ieki1, J. Kiryu1, G. Maehara1, K. Yaoeda1.1Department of Ophthalmology, Kawasaki Medical School; 2Department of Human Sciences, Kanagawa University; 3Yaoeda Eye Clinic


211 — A0620 Improving Grating Acuity in Adult Amblyopia by Perceptual Learning. Tsz Wing Leung1, M. Antonucci1, B. Li1, S. Wong1, K. Chan1, B. Feldman1, K. D. Tran1, C. Kee1, R. Li2.1School of Optometry, The Hong Kong Polytechnic University; 2School of Optometry, University of California, Berkeley

212 — A0621 Training under constant instead of progressively elevated interocular inhibition leads to better cooperation between the two eyes in amblyopia. Zidong Chen1, Z. Liu1, D. Deng1, J. Yuan1, C. Huang2, M. Yu1. Zhongshan Ophthalmic Center, Sun Yat-sen University; 2Institute of Psychology, CAS
213 — A0622 Response to Patching in Amblyopic patients with and without Fusion Maldevelopment Nystagmus, Fatema F. Ghaitha, A. Shaikh. 1Ophthalmology and visual science, Cole Eye Institute-Cleveland Clinic; 2Neurology, Case Western Reserve University

214 — A0623 Initial occlusion, a binocularly motivated treatment for amblyopia, Jiawei Zhou, Y. Wu', Y. Chen', X. Chen', Y. Liang', Y. Mao', Z. Yao', Z. He', F. Lu', J. Qu', R. Hess2. 1Ophthalmology, Wenzhou Medical University; 2Ophthalmology, McGill University

215 — A0624 Short-term deprivation of the amblyopic eye, combined with physical exercise, promotes long-term visual recovery in young amblyopic children. Michelena Fresneta, C. Luhghi1, C. Fariselli1, A. Sale1, M. C. Morron3,4, E. C. Campos3,4. 1DIMES, University of Bologna; 2Department of Translational Research on New Technologies in Medicine and Surgery, University of Pisa; 3National Research Council (CNR), Neuroscience Institute; 4IRCCS Cnambrle, IRCCS Stella Maris; 5Département d’études cognitives, Ecole normale supérieure, PSL University, Laboratoire des systèmes perceptifs

216 — A0625 Comparing the effect of patching therapy with gaming for amblyopia. Aveen Kudhum1, E. T. Tan1, G. Holtslag2, H. J. Simonsz1, S. E. Loudon1. 1Erasmus Medical Center; 2Optometry and visual science, Cole SchARR, University of Sheffield 1st People’s Hospital of Kunshan Affiliated with Jiangsu University

217 — A0626 Contribution of monocular patching of the amblyopic eye prior to dichoptic movie viewing for the treatment of amblyopia beyond the critical period. Lauren Sauvain1, N. Stolovey2, D. Denis3, F. Matonit1, F. Chavane1, R. Hess2, A. Reaud2. 1CNRS - Aix-Marseille Université; 2Centre Paradis Monticelli; 3McGill University *CR

218 — A0627 Binocular treatment for amblyopia in adults and children with low-pass filtering when occlusion therapy fails. Cindy Ho1, Y. M. Shakiri2, H. Reis3, S. Grenier3, D. Giacheti1. 1Integra Eyecare Centre; 2Department of Ophthalmology and Visual Sciences, University of British Columbia


220 — A0629 Preferred Fixation with the Hyperopic Eye In Children With Anisometropic Amblyopia. Nitza Goldenberg-Cohen1, A. Sternfeld1, R. Segal1, M. Altman1. Ophthalmology, Bnai Zion Medical Center; 2Ophthalmology, Sinai Hospital of Baltimore; 3The Ruth and Bruce Rappaport Faculty of Medicine, Krieger Eye Research Laboratory, Technion; 4Ophthalmology, Rabin Medical Center

221 — A0630 Visuomotor performance on precision grasping and aiming tasks in school-age children with abnormal binocular vision. Ewa Niechwiej-Szwedo1, G. Thal2, L. Christian3. 1Kinesiology, University of Waterloo; 2School of Optometry and Vision Science, University of Waterloo

222 — A0631 Abnormal monococular and dichoptic temporal synchrony in adults with Amblyopia. Chunwen Tao1, Y. Wu1, J. Zhou1, P. Huang1. 1Eye Hospital and School of Optometry and Optometry, Wenzhou Medical University; 2National Cheng Kung University

223 — A0632 Objective Blur Detection — Thresholds in Amblyopic and Fellow Eyes of Children with Amblyopia. Alyssa M. Gehring1, A. Juric1, I. A. Ricker1, T. L. Roberts1. 1Akrion Children’s Hospital; 2Byers Eye Institute, Stanford University


226 — A0635 Roles of Magnocellular and Parvocellular Pathways in interocular suppression of amblyopia patients. Wen Wen, S. Wang, H. Liu. Ophthalmology, EENT Hospital, Fudan University


West Exhibition Hall A0637-A0650

Sunday, April 28, 2019 8:00 AM-9:45 AM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology

111 Strabismus: Surgical management and outcomes

Moderator: E. Eugenie Hartmann

228 — A0637 ‘Restraining the over-achiever’ in incomitant strabismus: Scott's resect-recess procedure re-visited. Sharon Armarnik1, S. Shirke1, E. AliQahiani1, C. Gilligon1, V. Mehta1, C. J. LYONS2, 3. 1Department of Ophthalmology and Visual Sciences, UBC; 2Ophthalmology, BC Children’s Hospital

229 — A0638 Quantitative measurement of retinal vascular diameter changes after strabismus surgery. Jiquiong Zhou, J. Fu, J. Li, X. Wang, W. Wang, B. Zhao, M. Qi. Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University


233 — A0642 Maximal horizontal rectus recession-resection procedure for complete six nerve palsy. zhonghao wang, J. Yan. strabismus and amblyopia department, Zhongshan ophthalmic center

234 — A0643 Early results of a modified vertical rectus transposition versus superior rectus transposition for complete six nerve palsy. Jing Yao1, W. Xia2, C. Zhao3. 1Eye and ENT Hospital of Fudan University; 2First People’s Hospital of Kunshan Affiliated with Jiangsu University


236 — A0645 The effect of Inferior oblique weakening procedure on the resolution of initial overcorrection in exotropia surgery. Hsu-Young Chai1, 2, H. JEOON1. 1Ophthalmology, Pusan National Univ Hosp; 2Biomedical research institute

237 — A0646 Long-term results of slanted recession of bilateral lateral rectus muscle for intermittent exotropia with convergence insufficiency. Ji Min Kwon1, J. Park2, S. Lee1. 1Department of Ophthalmology, Haeundae Paik Hospital, Inje University College of Medicine; 2Department of Ophthalmology, Maryknoll Hospital

238 — A0647 What changes do patients report after strabismus surgery for planned psychosocial benefit? Gemma Arbaster1, H. Davis1, D. Buckley2, S. Barnes. 1Academic Unit of Ophthalmology & Orthoptics, University of Sheffield; 2School of Health and Related Research (ScHARR), University of Sheffield

*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.
247 — B0366 Ocular Disposition of Cationic Antibiotics: Evaluation of Lacrimal Route. Ujjalkumar S. Dass1, M. NATH2, N. Halder2, J. S. Tiwari1, J. B.3, B. S. Singh3, S. Vishnubhatla4, T. Velpandian4. 1Ocular Pharmacology and Pharmacy Division, Dr Rajendra Prasad Centre for Ophthalmic Sciences, AIIMS, All India Institute of Medical Sciences; 2Department of Chemistry, Indian Institute of Technology; 3Department of Ophthalmology, Dr. Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences; 4Department of Biostatistics, All India Institute of Medical Sciences; 5Department of Biostatistics, All India Institute of Medical Sciences


249 — B0368 HL-036 Ophthalmic Solution, a Topical TNF-α Inhibitor, Significantly Improves Signs and Symptoms of Dry Eye in a Phase 2 Clinical Trial. Minju Shin, H. Ahn, E. Bernstone, J. Chae, S. Park, S. Park, G. Torkildsen, G. W. Ouelster1, HanAll BioPharma; 2Andover Eye; 3Dry Eye, Ora, Inc. *CR


251 — B0370 Proportion of subjects achieving zero-trace anterior chamber inflammation with loteprednol etabonate (submicron) gel 0.38% following cataract surgery: Integrated analysis of 3 pivotal trials. Joseph Martel1,2, R. Fong4, M. E. Cavel1, J. Vittiont1. 1California Northstate University; 2Mardel Eye Medical Group; 3Manhattan Eye, Ear and Throat Hospital and Lenox Hill Hospital; 4Bausch + Lomb; 5Bausch + Lomb *CR

252 — B0371 Topical tacrolimus use in inflammatory ocular surface diseases. Kelley Bohm, A. R. Djallilian. Illinois Eye and Ear Infirmary

253 — B0372 Chemical Landscape Analysis in Drug Discovery: Ophthalmic Fluoroquinolones. Anne M. Clark1, C. Baddeley2, M. McBride2. 1California Northstate University; 2Genentech, Inc.; 3Ophthalmology, Regeneron Pharmacology, Aeric Pharmaceuticals

254 — B0373 Novel blockers of the L-VGCC play a protective role in microglia-related ocular inflammation and angiogenesis disorders. Madhu Sudhana Sidda1, A. Lennikov2, A. Mukwawa2, H. Huang2. 1Ophthalmology, University of Missouri; 2Ophthalmology, Johns Hopkins University School of Medicine; 3Ophthalmology, Linköping University


256 — B0375 In vitro eye irritation testing for hazard identification of ocular irritants using cellular capacitance. Manuel Chavez1, N. Vazquez2, S. Berisa3, M. P. Medina4, M. Sanchez5, J. Merayo-Lloves1, A. Meana1. 1Universidad de Oviedo; 2Instituto Oftalmologico Fernandez-Vega; 3Instituto Universitario Fernandez-Vega, Fundacion de Investigacion Oftalmologica & Universidade de Oviedo

257 — B0376 Systemic and intraocular administration of the liposomal formulation of the cyclic GMP analogue CN03: An exploratory safety and tolerability study in non-human primates. Francois Paquet-Durand2, T. Peters3, P. Guillard1, N. Schiper4, P. Strauss5, E. Schwede6, V. Marigo7, P. A. Ekstrom1, C. Sjöholm1. Experimental Ophthalmology, Institute for Ophthalmic Research; 2Comparative Medicine, Karolinska Institute; 3RISE; 4-2-BBB medicines BV; 5Centre for Ophthalmology, University HospitalTuebingen; 6Biolig Life science Institute; 7College of Pharmacy & Health Sciences, Texas Southern University

258 — B0377 Regulation of Cataractogenesis in Cultured Bovine Lenses by ATB 337. Catherine A. Oprea1, L. Maffofo N2, S. Heruye1, N. J. Singh2, Y. Njie-Mbye3, S. Ohia1. 1Pharmacy Sciences, Creighton University; 2Pharmacology, Creighton University; 3College of Pharmacy & Health Sciences, Texas Southern University


261 — B0380 Acute And Subchronic Toxicity Study Of Aqueous Extract Of Pleurotus Tuberrregium On Rabbits Eye. Ghalib A. Akinlabi. Department of Optometry, University of Benin
**Sunday – Posters – 262 – 284**

**Moderators:** Sarah F. Hamm-Alvarez, Humberto Hernandez and Tor P. Utzheim

**West Exhibition Hall B0401-B0450**

**Sunday, April 28, 2019 8:00 AM-9:45 AM**

**Cornea**

**113 Dry Eye**

262 — **B0401** Polyelectrolyte multilayer coating for delivery of IL-4 from contact lenses for dry eye disease. Vishal Jhanji1, A. Nolff2, M. Kulka3, B. Brown4. 1Ophthalmology & Visual Sciences, University of Pittsburgh; 2Department of Bioengineering, University of Pittsburgh; 3McGowan Institute for Regenerative Medicine, University of Pittsburgh


264 — **B0403** Effect of parthenocissus tricuspidata extract living on pine in pre-clinical model of dry eye disease. Kyong Jin Cho1, J. Kim1, Z. Kim1. 1Ophthalmology, Dankook University Hospital; 2Ophthalmology, Dankook University Hospital; 3Physics, College of Natural Science, Dankook University

265 — **B0404** Changes in tears and ocular structures involved in tear film formation in chemotherapy-induced polyneuropathy in mice. Jessica Weiss1, N. Phungchago2, M. Sisignano3, N. Perumal4, F. Grus4, J. Feldt5, E. Lütjen-Drecoll5. 1Anatomy, Friedrich-Alexander Universität; 2Anatomy, Khon Kaen University; 3Goethe-Universität; 4University Medical Center Mainz

266 — **B0405** The Effect of Comprising Natural Extracts in Experimental Dry Eye Rat Model. Soo Youn Choi1, Y. Eom1, J. Kim1, D. Jang2, J. Song2, S. Baek2, H. Kim1. 1Korea University Medical School; 2Medical O Co., Ltd. *CR

267 — **B0406** Up-regulating autoptagy with trehalose: a contribution to osmoprotective properties? Marc Labolette1, E. Hernandez2, O. Haigh1, A. Rousseau3, A. Esclatine4. 1Ophthalmology, Paris-Sud University Hospital, APHP; 2DIMIT, CEA, Paris Sud University; 3Institute for Integrative Biology of the Cell (I2BC), CEA, CNRS, Paris Sud University *CR

268 — **B0407** Expression and Role of Nucleotide-binding Oligomerization Domain 2 (NOD2) in the Ocular Surface of Murine Dry Eye. Ying Li1, R. Jiu2, L. Li3, H. YOON4, I. You5, K. Yoon5. 1Department of ophthalmology, Chonnam National University Medical School & Hosp.; 2Department of Ophthalmology, Research Institute of Clinical Medicine of Chonbuk National University-Biomedical Research Institute of Chonbuk National University Hospital

269 — **B0408** Inhibitory Effect of Topical Thymosin beta 4 against Ocular Surface Inflammation in a Mouse Model of Experimental Dry Eye. Rujun Jin1, Y. Li1, L. Li1, H. YOON4, I. You5, K. Yoon5. 1Ophthalmology, Chonnam National University Medical School & Hospital; 2Ophthalmology, Chonbuk National University Hospital; 3Biomedical Sciences Graduate School, Chonnam National University

270 — **B0409** NRF2 activator RS9 protects corneal epithelium from cell damage in dry eye models. Yuka Matsuda1, M. Machida1, Y. Nakagami2, T. Nakajima1, M. Azuma1. 1Senju Laboratory, Senju Pharmaceutical Co., Ltd.; 2Pain & Neuroscience Laboratories, Daiichi Sankyo Co., Ltd. *CR


272 — **B0411** Sjögren-Syndrome Microbiota Colonization in Germ-Free Mice induces Antigen-Presenting Cell Activation and Production of IL-12. Laura Schaefer1, C. Intigna2, C. M. Trajillo-Vargas3, S. C. Pflugfelder3, R. A. Britton4, C. S. De Paiva5. 1Molecular Virology and Microbiology, Baylor College of Medicine; 2Grupo de Inmunodeficiencias Primarias, Universidad de Antioquia; 3Ophthalmology, Baylor College of Medicine *CR

273 — **B0412** Application of a Cannabinoid-Receptor Agonist in a Mouse Model of Desiccating Stress. Philipp Steven1, D. Heß2, H. Jens3, F. M. Dautzenberg3, M. E. Stern4, U. Gehlsen5. 1Ophthalmology, University of Cologne; 2Division of Dry Eye and ocular GVHD, University of Cologne; 3Novalig GmbH; 4ImmuneEye LLC. *CR


276 — **B0415** Changes in Murine Subbasal Corneal Nerves After Scopolamine Induced Dry Eye Stress Exposure. Cem Simsek, T. Kojima, T. Nagata, M. Dogru, K. Tsubota. Keio University

277 — **B0416** Selective serotonin reuptake inhibitors aggravate depression-associated dry eye via activating the NF-κB pathway. Xiaozhao Zhang, Y. Yin, L. Gong. The Eye & ENT Hospital of Fudan University

278 — **B0417** Calcitriol Inhibits ROS-NLRP3-IL-1β Signaling Axis via Activation of Nrf2-Antioxidant Signaling in Hesperidin-stimulated Human Corneal Epithelial Cells. Zhang Jing, Y. Dai, J. Xu. Ophthalmology, Eye & ENT Hospital of Fudan University

279 — **B0418** Analysis of CD4+ T cell populations in male NOD mice highlights the potential of local administration of cyclosporine A in the treatment of Sjögren’s syndrome. Hao Guo, J. A. Mackay, S. F. Hamm-Alvarez. University of Southern California


281 — **B0420** Eicosapentaenoic acid activates PPARγ signaling leading to lipid synthesis and autophagy in hMGEC. Sun Woong Kim2, 1, X. Yilu1, D. Brown1, J. F. Jester2. 1Gavin Herbert Eye Institute, UC Irvine; 2Ophthalmology, Yonsei University


283 — **B0422** Comparison of the lipidome produced by human meibomian gland epithelial cells treated with rosiglitazone to normal human meibum. Jillian F. Ziemanski, K. K. Nichols. The School of Optometry, The University of Alabama at Birmingham

284 — **B0423** Glutathione Supplementation May Enhance Buthionine Sulfoximine-Induced Cell Death in Immortalized Human Meibomian Gland Epithelial Cells. William Ngo, J. J. Nichols. The University of Alabama at Birmingham

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


287 — B0426 Enhanced Ocular Delivery Using Biocompatible Nanomaterials, David L. Kent1, G. Behl2, S. Kumari1, N. O’Reilly2, P. McLoughlin2, B. O’Donovan2, L. Fitzhenny1. The Vision Clinic; *Department of Science, Waterford Institute of Technology

288 — B0427 Protective effects of Riuateganib against inflammation and oxidative stress on a Dry Eye Disease experimental model on C57BL/6J mice. Higo Quiroz-Mercado1, 2, L. Hernandez1, 2, I. Ramos-Martinez1, R. Zamora-Alvarado1, 2, L. Ochoa-de la Paz1, 2, A. Perez-Nakano1, R. Gonzalez-Salinas1. 1Research Department, Asociación para Evitar la Ceguera en Mexico; 2Laboratorio Nacional de Optica de la Secretaría de Salud, Asociación para Evitar la Ceguera


290 — B0429 Therapeutic effect of STAT3 inhibition on experimental murine dry eye. Mingli Qu, X. Qi, Q. Wang, L. Wan, Q. Zhou. Shandong Eye Institute

291 — B0430 Dry Eye: Efficacy evaluation of three synthetic peptides from Chondrocyte-Derived ExtraCellular Matrix (CDEM) in comparison to liiltigarest, cyclosporine A, diquafosol sodium and sodium hyaluronate in a mouse model. Tiegon Baik1, J. Choi1, K. Min1, L. Ferraile1, E. Raymond2, E. Pierre-Paule3. Yuyu Pharma; *IRIS PHARMA *CR

292 — B0431 Efficacy of preservative-free cyclosporine emulsion eye drops in a mouse model of dry eye. Philippe Daill1; T. Nagano2, S. Okada2, E. Gros1, L. Ferraile1, J. Garrigue1; Sanant SAS; *Sanent Ltd; *Iriss Pharma *CR

293 — B0432 The discovery of novel LFA-1 antagonist VV001 to treat Dry Eye Disease (DED). Yong Li, E. Xia, W. Shen. VivaVision Biotech Inc

294 — B0433 Evaluation Of The Dry Eye In The Experimental Model Of Sjogren Syndrome (SJS). Lucimeire N. Carvalho, P. C. Cristovam, A. Nasare, L. R. Rosa, J. P. Gomes. Oftalmologia e Ciências Visuais, Universidade Federal de São Paulo

295 — B0434 TLR4 is responsible for NLRC4 inflammasome activation in human corneal epithelial cells exposed to hyperosmotic stress. Hui Chen, W. Chi. Zhongshan Ophthalmic Center, China

296 — B0435 Lymphoid gland acinar TRAIL (CD253) expression is essential for inhibiting bone marrow-derived CD45+ inflammatory cell infiltration in dry eye disease. Hyung Keun Lee, Y. Ji, E. Choi, A. Ye. Ophthalmology, Yonsei University College of Medicine

297 — B0436 Analysis of the tear MicroRNA levels in primary sjogren’s syndrome. Yu Jeong Kim1, Y. Yeon1, J. Kim2, Y. Shin1, H. Cho1, H. Lim1, M. Kang1. 1Hanyang University Hospital; 2Seoul Paik Hospital

298 — B0437 A Newly Thermo-Responsive Artificial Tear Formulation, AT-1401: Its Retentivity and Efficacy on Ocular Surface. Mitsuya Takashima1, M. Kimura2, T. Yamamura2, T. Taketani1, 2, T. Dohlman1, 2, Y. Chen1, R. Dana1, 2. 1International Business Development Department, Otsuka2, Y. Takahashi2, A. Suzuki1, A. Yamamuro2, S. Watanabe1, K. Masubuchi1, R. Arakawa1, A. Naito1; 2IRIS PHARMA Research Laboratories, Wakamoto Pharmaceutical Co., Ltd.; *Sagami Research Laboratories, Wakamoto Pharmaceutical Co., Ltd. *CR


300 — B0439 Effect of cevimeline in ocular surface of dry eye mouse model. Chae Eun Kim1, Y. Kim1, Y. Park1, Y. Lee1, B. Ahn1, J. Yang2. 1TIB infrastructure Center for Ocular Disease, Inje University Busan Paik Hospital; 2Department of Ophthalmology, Inje University College of Medicine, Inje University Busan Paik Hospital; 2College of Pharmacy, Ajou University

301 — B0440 The effect of an ocular surface modulator in an in vitro model of inflammatory dry eye. Stefano Barabino1, F. Carriero2, S. Balzarretti1, D. Manenti3, M. Meloni2. 1International Business Development Department, Otsuka2, Y. Takahashi2, A. Suzuki1, A. Yamamuro2, S. Watanabe1, K. Masubuchi1, R. Arakawa1, A. Naito1; 2IRIS PHARMA Research Laboratories, Wakamoto Pharmaceutical Co., Ltd.; *Sagami Research Laboratories, Wakamoto Pharmaceutical Co., Ltd. *CR

302 — B0441 Mucoadhesive micelles for anterior segment ocular drug delivery. Emily Anne Hicks, B. B. Muirhead, T. Rambharran, N. Yasin, L. Liu, F. Lasowski, H. Shepard. Chemical Engineering, McMaster University

303 — B0442 Characterization of a New Phospholipid Containing Nanoemulsion Lubricant Eye Drop for Dry Eye. Retha Rangarajani2, R. Doer, D. McCanna2, A. Suko1, D. Enstone1, L. Subbabaram2, L. W. Jones2, A. Meyer3. 1Alcon Laboratories Inc.; 2Center for Ocular Research and Education, School of Optometry and Vision Science, University of Waterloo; 3Industry/University Center for Biosurfaces, University at Buffalo *CR

304 — B0443 Effectiveness of 3% trehalose and 0.15% sodium hyaluronate eye drop in an adverse dry environment. Hamad Alzamil, L. Madden, E. Pearce. Vision Sciences, Glasgow Caledonian University *CR

305 — B0444 Effects of ALY688 on Atropine-Induced Dry Eye in Rabbits. Kathryn S. Crawford1, C. Schulte1, H. Hsue1. 1PharmOcu; 2Allysa Pharmaceuticals *CR

306 — B0445 Restoration of regulatory T cell function in dry eye disease by targeting substance P/neurokinin 1 receptor. Yukako Taketani1, T. Dokhman1, Y. Chen1, R. Dana2. 1Sephens Eye Research Institute; 2Mass Eye and Ear *CR


310 — B0449 Ability of liiltigarest to block immunological synapse formation and downstream T cell function. Galen Carey1, L. Brackenbury2, A. Savinainen1, S. Hunt1. 1Shire; 2Charles River *CR

311 — B0450 Inhibition of corneal nociceptors reduces persistent, ongoing dry eye-induced pain. Neal Mecum1, 2, R. Russell1, J. Havelin1, 2, I. Balzaretti2, D. Manenti3, M. Meloni2. 1International Business Development Department, Otsuka2, Y. Takahashi2, A. Suzuki1, A. Yamamuro2, S. Watanabe1, K. Masubuchi1, R. Arakawa1, A. Naito1; 2IRIS PHARMA Research Laboratories, Wakamoto Pharmaceutical Co., Ltd.; *Sagami Research Laboratories, Wakamoto Pharmaceutical Co., Ltd. *CR
114 Keratoconus and corneal crosslinking

Moderators: Rachel Bishop and Edgar M. Espona

312 — B0504 One Year Outcomes of Pulsed, Accelerated, Epithelial-on Crosslinking for Keratoconus. Sangeethabalarasi Pagazhendi1, S. Konda1, S. A. Cherne1, B. K. Ambati1. 1PSG Institute of Medical Sciences and Research; 2Texas A&M College of Medicine; 3Pacific Clear Vision Institute

313 — B0505 Five Year Outcomes of Corneal Collagen Crosslinking: Accelerated Crosslinking Induces Less Corneal Haze and Less Continuous Corneal Flattening Compared to Conventional Crosslinking. Naoko Kato1, K. Negishi1, C. Sakai1, I. Toda1, T. Ide1, K. Tsubota1. 1Minamiaoyama Eye Clinic; 2Keio University School of Medicine; 3Tokyo Vision Eye Clinic Asagaya

314 — B0506 Exosomes and their miRNA/protein contents in Keratoconus. Rabab Sharif1, Konda2, S. A. Cherne3, B. K. Ambati3. 1The Cornea & Laser Eye Institute - Hersh

315 — B0507 Corneal Response to Transepithelial Corneal Collagen Crosslinking for Keratoconus. Michael Lai1, S. Greenstein1, 2, P. Hersh1, 2. 1The Cornea & Laser Eye Institute - Hersh Vision Group; 2Ophthalmology, Rutgers New Jersey Medical School

316 — B0508 Oxygen uptake into porcine cornea with topical administration of ozonated water. Koji Kakisu. Toho University

317 — B0509 Biomechanical Impact of Drug Formulation, Supplemental Oxygen, and UV Delivery on Epi-On CXL. Desmond C. Adler1, J. Hill1, C. Liu1, P. Deardorff1, M. Raizman2, R. Rajpal4. 1Research and Development, Avedro, Inc.; 2Ophthalmic Consultants of Boston; 3Avedro, Inc.; 4See Clearly Vision Group

318 — B0510 Clinical Outcomes of KeraVio using Violet Light Emitting Glasses and Riboflavin for Corneal Ectasia: A Pilot Study. Hidenaga Kobashi1, 2, H. Torii1, 2, I. Toda1, 2, K. Tsubota1, 2. 1Department of Ophthalmology, Keio University; 2Minamiaoyama Eye Clinic


320 — B0512 Ocular surface disease index and ocular thermography in keratoconus and in normal subjects. Orsolya Németh1, 2, S. Lepper1, G. Milioti1, A. Abdin1, B. Seitz1, T. Eppig3, Z. Z. Nagy3, A. Langenbucher4, N. Sznitnyáry1, 2. 1Department Of Ophthalmology, Saarland University Medical Center; 2Department Of Ophthalmology, Semmelweis University; 3Experimental Ophthalmology, Saarland University Medical Center

321 — B0513 Assessment of clinical parameters by ethnicity in patients with keratoconus: a multi-country study. Srujana Sahebjada1, 2, E. Chan1, 2, M. McGuinness1, C. Hodge1, 2, C. C. Pang1, G. Kumaramanickavel1, G. Sutton1, 2, M. Danielli1, 2, 3. 1VIOBIO, 3University of Bari

322 — B0514 The KERALINK trial of corneal crosslinking for progressive keratoconus in children. Methodology and baseline patient characteristics. Frank Larkin1, A. Quartillo2, K. Chowdhury1, C. Core2, J. Burr2, C. Bunce3. 3Experimental Ophthalmology, Centre for Eye Research Australia; 2The University of Melbourne; 3Royal Victorian Eye and Ear Hospital; 3University of Sydney; 4Chinese University of Hong Kong; 5Narayana Nethralaya; 6Lions NSW Eye Bank

323 — B0515 Altered regulation of arginine metabolism during hypoxia in keratoconus human corneal fibroblasts. Tanja Stachon1, L. Latta1, B. Seitz1, N. Sznitnyáry2, 3. 1Department of Ophthalmology, Saarland University Medical Center; 2Department of Ophthalmology, Semmelweis University

324 — B0516 Patient Satisfaction and Functional Improvement after combination Intracorneal Ring Segments and Corneal Collagen Crosslinking. Daniel Chung1, S. Greenstein1, 2, P. Hersh1, 2. 1Cornea and Laser Eye Institute; 2Ophthalmology, Rutgers - New Jersey Medical School

325 — B0517 Stromal Oxygen Dynamics During High-Irradiance Epi-On Corneal Crosslinking. Jason m. hill1, C. Liu1, P. Deardorff2, D. C. Adler1, V. Thompson1, D. Gore2. 1R&D, Avedro Inc; 2Avedro Inc

326 — B0518 Depth-resolved collagen order after in vivo rabbit corneal crosslinking. James A. Germann1, E. Martinez-Enriquez1, C. Martinez-García2, J. E. Kocheva1, S. Marcios1. 1VIOBIO, 2IO-CSIC; 3Department of Cell Biology, Histology, and Pharmacology, Universidad de Valladolid; 4Wellman Center for Photomedicine, Massachusetts General Hospital


329 — B0521 Depth-dependent analysis of contact lens-assisted corneal cross-linking by Brillouin microscopy. Hongyan Zhang1, 2, L. PICCININI1, 2, m. rozzbahani1, O. Golani1, 2, G. Scarcelli2, 3, J. B. Randleman1. 1University of Southern California; 2University of Maryland; 3Tel Aviv Sourasky Medical Center; 4Sadalla Amin Ghanem Eye Hospital

330 — B0522 Depth dependent measurements of the concentration of riboflavin to make the crosslinking (CXL) treatment safer. Maximilian Franke1, T. Landes1, T. Seiler1, A. Heisterkamp1, D. Heinemann1, T. Ripken1. 1Laser Zentrum Hannover; 2Inselspital Bern; 3Leibniz Universität Hannover

331 — B0523 In-vivo evaluation of corneal collagen fibrils pattern to detect keratoconus. Vito Romano1, 2, D. Borroni1, 2, B. Geraghty1, E. Lipari1, A. Sorgia1, Y. Zheng1, S. B. Kaye1, 2, B. Williams1. 1Department of Eye and Vision Science, University of Liverpool; 2Ophthalmology, Royal Liverpool University Hospital; 3Phronema sr; 4University of Bari


333 — B0525 Gene expression in the corneal epithelium of progressive keratoconus patients. Uri Soiberman. Wilmer Eye Institute, Johns Hopkins University School of Medicine

334 — B0526 In-vivo and in-vitro corneal epithelial and stromal thickness in Keratoconus. Nicole Hallett1, 2, V. K. Masedeupaly1, M. Markouli2, N. Jeyakumar2, C. Hodge1, 2, G. Sutton1, 2, J. You1, 2. 1Discipline of Ophthalmology, Sydney Medical School; 2University of Sydney; 3Save Sight Institute; 4School of Optometry and Vision Sciences, University of New South Wales; 5Vision Eye Institute; 6NSW Tissue Bank; 7School of Medical Sciences, Faculty of Medicine, University of New South Wales


338 — B0530  Spectrum of Binocular Vision Function in Keratoconus Patients. Premya Padmanabhan1, S. Dandapani2, J. R. Hussaindeen2. 1Department of Cornea and Refractive Surgery, Medical Research Foundation; 2Department of Binocular Vision, Medical Research Foundation


340 — B0532  Improving precision for determining change in patients with keratoconus. Carlos Rocha de lossald1, M. Brunner, D. Borroni2, A. E. Arbabi3, S. B. Kaye3, V. Romano4, G. Czanner3. 1Ophthalmology, Hospital Regional Universitario de Malaga; 2University of Liverpool; 3Ophthalmology, Riga Stradins University; 4Department of Eye and Vision Science, Royal Liverpool and Broadgreen University Hospital NHS Trust; 5Department of Eye and Vision Science, Royal Liverpool and Broadgreen University Hospital NHS Trust

341 — B0533  Main corneal tomographic findings, tear film cytokine profile and proteomic analysis in keratoconus families. Daniel Borges1, B. Duarte2, H. B. Assalini3, D. Guadagnini3, M. A. Saud1, C. L. Arieta1, M. Alves3. 1Department of Ophthalmology, University of Campinas; 2University of Campinas

342 — B0534  In vivo Brillouin microscopy in crosslinked Keratoconus corneas. Theo G. G. Seiler1,2, P. Shao3, A. M. Eltony3, T. Seiler3, S. Yun3. 1Inselspital Bern, Universitätsspital für Augenheilkunde; 2Wellman Center for Photomedicine, Harvard Medical School; 3IROC *CR

343 — B0535  Riboflavin Concentrations at the Endothelium during Corneal Crosslinking (CXL). Beatrice E. Fruel1, A. Battista2, K. Koenig2, T. G. Seiler3. 1Ophthalmology, Univ of Bern Inselspital; 2Universität des Saarlandes *CR


345 — B0537  Safety and efficacy of accelerated cornea cross-linking to arrest progression of corneal ectasia in a tertiary referral center in the UK. Borja Salvador Culla1, A. Ahmmed2, N. Roper1, J. Mulroy1, D. Tabibian1, F. Figueiredo2,3. 1Ophthalmology, Royal Victoria Infirmary; 2Institute of Genetic Medicine, Newcastle University,

346 — B0538  Barbatimâo (Stryphnodendron adstringens) extract as a potent corneal crosslinking agent: Laboratory characterization by differential scanning calorimetry (DSC). Paulo Scho1, A. Reis1, T. Carvalho1, A. Marquini1, A. Morandim-Giannetti2, P. A. Bersanetti1. 1Ophthalmology, UNIFESP; 2Chemical Engineering, FEI *CR

347 — B0539  Early evidence of visual and topographic improvements following crosslinking procedure in eyes with keratoconus. Dian Yu, J. M. Lustbader. Ophthalmology, Georgetown University Hospital


351 — B0543  Correlation between basal keratometric readings and the keratometric change at 12 months in two pulsed accelerated crosslinking protocols. Julio C. Hernandez, R. Ruiz1, D. Loya1, J. Valdez-Garcia1. 1Cornea and Refractive Surgery, Tecnologico de Monterrey, Escuela de Medicina y Ciencias de la Salud; 2Escuela de Medicina y Ciencias de la Salud, Tecnologico de Monterrey, Escuela de Medicina y Ciencias de Salud
Dr. Schekman’s has studied how cells transport proteins from their site of synthesis in the endoplasmic reticulum to their various ultimate destinations inside or outside the cell, using membrane vesicles as a vehicle. His research has involved yeast as a model organism. Additionally, Dr. Geave’s work has harnessed the power of yeast genetics to understand this fundamental biological process of intracellular vesicular trafficking.

— How cells export proteins and RNA - applications to the treatment of disease: Randy W. Schekman, PhD, Howard Hughes Medical Institute
Many immune responses are profoundly reduced in the eye – a condition known as “immune privilege”. Ocular immune privilege relies on the generation of regulatory T lymphocytes, which suppress immune-mediated inflammation. Severing nerves during corneal transplantation in one eye abolishes immune privilege in both eyes by disabling T regulatory cells - a phenomenon known as “sympathetic loss of immune privilege” (SLIP). A corneal infection in one eye also abolishes immune privilege in both eyes. This presentation will discuss the role of neuropeptides in SLIP and how SLIP jeopardizes the survival of corneal transplants. However, SLIP’s main importance may be to protect the host from life-threatening infections originating in the eye.

— 12:00  Introduction: James P. McCulley, M.D

— 12:05 — The Eye Sees Eye to Eye with the Immune System - Jerry Niederkorn, PhD, FARVO
One of the hallmarks of age-related macular degeneration (AMD) is the accumulation of sub-retinal pigment epithelial deposits (sub-RPE deposits), including drusen, basal laminar and linear deposits. In this SIG we will discuss how improving clinical imaging modalities and better understanding of the molecular events underlying sub-RPE deposit formation helped and continues to help us to develop more refined phenotyping of disease progression and started to increase the prospect for earlier and more precise intervention in our battle to alleviate irreversible visual loss at late stage of a disease like AMD.

Moderator: Srinivas R. Sadda

The role of hydroxyapatite formation in AMD. Imre Lengyel. Wellcome Wolfson Institute for Experimental Medicine, The Queen’s University Belfast, Belfast, United Kingdom *CR

How single cell sequencing can help to understand sub-RPE deposit formation. David A. Simpson. Wellcome Wolfson Institute for Experimental Medicine, The Queen’s University Belfast, Belfast, United Kingdom

Detection of the initiation and progression of sub-RPE deposit formation using fluorescence lifetime imaging of hydroxyapatite. Richard Thompson. University of Maryland Baltimore, WA

Uncovering the contribution of blood components to sub-RPE deposit formation. Arthur A. Bergen. Amsterdam Medical Center, Amsterdam, Netherlands

Refinement of clinical image grading of sub-RPE deposit. Srinivas R. Sadda. Doheny Eye Institute, CA

Why is this SIG timely? Imre Lengyel. Wellcome Wolfson Institute for Experimental Medicine, The Queen’s University Belfast, Belfast, United Kingdom

There are continuing advances in treatment approaches for inherited retinal degenerations (IRDs) with multiple clinical trials for a variety of treatment approaches including gene therapies, cell therapies, drug, neuroprotective and prosthetic devices. We are now seeing combinations of therapies being used in rare and common disease with gene correction combined with cell therapy being one example. In the field of IRD therapy development there are opportunities for gene mutation specific therapies as well as non gene specific approaches that could benefit multiple IRD genotypes. This Special Interest Group Session will bring together a panel and audience of experts in the field to identify and debate the various avenues for treatment of IRDs and the potential for those to be used in combination therapies to arrest and possibly reverse vision loss. Inherited retinal degenerative disease genotypes and phenotypes are highly heterogeneous, however commonalities exist between some of these unique diseases that could benefit from similar treatment approaches. In other rare, and non-rare diseases combination therapies are becoming standards of care.

Moderator: Paul A. Sieving

Panelist Discussion Organizer. Randy M. Wheelock. The Choroideremia Research Foundation, Inc., Johnson City, TN *CR

Panelist Discussion. Tomas S. Aleman. 1 Scheie Eye Institute, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; 2 Center for Advanced Retinal and Ocular Therapeutics, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA


Panelist Discussion. Ian M. MacDonald. Ophthalmology and Visual Sciences, The University of Alberta, Edmonton, Alberta, Canada

Panelist Discussion. Mark E. Pennesi. Casey Eye Institute, Oregon Health and Science University, Portland, OR *CR


The close physical contact between photoreceptors and Müller (glial) cells is reflected in ‘metabolic symbiosis’ involving a multitude of functional interactions that include metabolite exchange, ionic homeostasis and retinoid cycling. The proposed SIG will focus on recent advances in understanding metabolic relationships between Müller cells and photoreceptors, and explore some controversies in the field. The SIG will have three speakers who will make short presentations. Dr. James Hurley will speak on intermediary metabolism in Müller cells and photoreceptors, with an emphasis on the differences between intermediary metabolite exchange in retina and brain. Dr. Gabriel Travis will describe recent progress in elucidating the contribution of Müller cell-derived-retinoids in the cone visual cycle. Dr. Cagri Besirli will present studies that attempt to rescue photoreceptor loss by metabolic reprogramming, a potentially novel therapeutic strategy for photoreceptor neuroprotection during acute stress. The presentations will be followed by an open discussion that includes: (1) Specific questions remaining to be addressed in the field of metabolic relationships between retinal neurons and Müller cells; (2) Metabolic changes that occur in diseased retinas; and (3) Development of imaging technologies to study metabolic interactions in vivo.

Metabolic roles of Müller cells: An Introduction. Vijay P. Sarthy. Ophthal-Feinberg Med Sch, Northwestern University, Chicago, IL

Energy metabolism in photoreceptors, Müller cells and RPE. James Hurley. Biochemistry, University of Washington, Seattle, WA

The role of Müller cells in the regeneration of cone visual pigments. Gabriel H. Travis. Ophthalmology, University of California Los Angeles, Los Angeles, CA

Metabolic reprogramming for photoreceptor rescue. Cagri Besirli. Ophthalmology and Visual Sciences, University of Michigan Medical School, Ann Arbor, MI *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.
### 120 Diabetic Keratopathy: An Understudied Corneal Disease - SIG

Diabetes (DM) is the leading cause of blindness in working age adults worldwide. Approximately 23 million people in USA currently have diabetes and another 57 million have pre-diabetes. The long-term effects of both Type I and II DM include heart disease, stroke, neuropathy, and kidney failure. In ocular health, all eye tissues are affected, including the cornea. A significant minority of patients with DM are at high risk of developing corneal erosions, persistent epithelial defects, punctate keratitis, and corneal endothelial damage. A variety of animal models for T1DM and T2DM have been developed to explore these abnormalities and in particular delayed wound healing. This SIG will discuss the latest translational research for the early diagnosis of neuropathy in patients with pre-diabetes and diabetes and highlight the developed animal models of diabetes to better understand the pathophysiology, diagnosis and treatment of diabetic complications.

**The Intriguing Role of PPARa in the Diabetic Cornea. Dimitrios Karamichos. Ophthalmology & Cell Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK**

**Dysfunction of Neuroimmune communication in the diabetic cornea. Fushin X. Yu. Wayne State University School of Medicine, MI**

**The influence of Vitamin D on Corneal Epithelial Wound Healing in the Diabetic Cornea. Mitchell A. Watsky. Augusta University, GA**

**Emerging targeted therapies for diabetic corneal epithelial disease. Alexander V. Ljubimov. University of California Los Angeles, CA**

### East Ballroom A

#### Saturday, April 28, 2019 1:00 PM-2:30 PM

#### Cornea / Immunology/Microbiology

#### 121 Tear film, inflammation and the nervous system—the three pillars of dry eye disease resulting in symptoms of discomfort - SIG

Dry eye syndrome is a chronic disease that affects tens of millions of people worldwide, representing one of the most common ocular pathologies. The traditional approach to treat dry eye focuses on tear replacement with artificial tears or on conserving the patients’ tears through occlusion of the tear drainage system, but these therapies can be considered palliative in that they do not control symptoms of discomfort because they do not address the pathogenic process that underlines the disease. This SIG will discuss the recent major advances in better understanding the role of the tear film, ocular surface inflammation, and the nervous system in determining the different forms of dry eye, including new technologies that can help in diagnosing and treating the disease.

**Moderators: Stefano Barabino and Pedram Hamrah**

**Organizer. Stefano Barabino. Ospedale L. Sacco, University of Milan, Ocular Surface & Dry eye Center, Italy**

**Diagnosis and management of neuropathic corneal pain. Pedram Hamrah. Tufts Medical Center, MA**

**Neurostimulation in dry eye disease. Gabriela Dieckman. Tufts Medical Center, MA**

**Causes and consequences of tear film break up. Kazuo Tsubota. Keio University Hospital, Dept. of Ophthalmology, Japan**

**A new way to control ocular surface inflammation in dry eye syndrome. Claudio Bucolo. University of Catania, Italy**

### East Ballroom B

#### Saturday, April 28, 2019 1:00 PM-2:30 PM

#### Visual Neuroscience / Biochemistry/Molecular Biology / Genetics / Glaucoma / Immunology/ Microbiology / Physiology/Pharmacology / Retinal Cell Biology / Visual Neuroscience

#### 122 Biomechanical Injury and Inflammatory Signaling in the Eye - SIG

The vertebrate eye is a biomechanically dynamic environment in which cells and tissues experience continuous tensile, compressive and osmotic forces. Specialized mechanotransducers sense and mediate responses to these forces but when excessive can result in tissue damage and blindness. It is becoming clear that an integral feature of biomechanical pathologies of the eye involves inflammatory signaling that is mediated by innate mechanisms expressed in the anterior and posterior eye. These mechanisms include mechanosensitive ion channels and receptors, which are coupled to downstream signaling pathways and release of inflammation-promoting molecules such as purines and cytokines. Presentations in this SIG will cover mechanosensitive mechanisms in front of the eye (cornea, ciliary body and trabecular meshwork) and back of the eye (retinal neurons and glia) with the aim to discern unifying principles that govern the transduction of mechanical stressors together with the molecular signatures that are specific for ocular cell types.

**Neuronal and glial mechanotransduction in glaucoma. David Krizaj. 1Ophthalmology & Visual Sciences, Univ of Utah School of Med, Salt Lake City, UT; 2Neurobiology & Anatomy, University of Utah, Salt Lake City, UT**

**Inflammatory cell death mechanisms induced by ocular hypertension injury. Valery Shestopalov. Bascom Palmer Eye Institute, University of Miami, Miami, FL**

**Modulation of corneal inflammation by TRPV/A signals. Shizuya Saika. Wakayama University, Japan**

**Astrogliosis in hypertensive glaucoma. Daniel Sun. Pathology, Harvard University, Boston, MA**

**Linking mechanical strain to inflammatory signals through microglia, astrocytes and neurons. Claire H. Mitchell. University of Pennsylvania, PA**

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The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
123 Findings of the International Myopia Institute White Paper Reports - SIG

Understanding myopia control in the context of public health is important since the recent rapid rise in the prevalence of myopia globally with projections of myopia revealing that there will be 4.5 billion myopic in 2050. Vision impairment and blindness through myopic macular degeneration and ocular diseases are already a frequent cause of blindness in China and Japan and emerging elsewhere with the growing prevalence of myopia and high myopia predicted. However, there remains a lack of consensus for defining and classifying myopia and associated ocular conditions, little standardization of clinical trials and instrumentation, a wide range of experimental models of emmetropization and myopia, and an ever increasing list of genes linked to myopia. These issues were the specific focuses of four of the International Myopia Institute (IMI) White Papers. The committee chairs will report evidence-based findings and gaps in knowledge and lead a discussion on the implications for research, clinical trials, management, and public health. This is the first opportunity for an open discussion on the findings and recommendations of the White Papers following their recent publication in IOVS.

Moderator: Padmaja Sankaridurg

N/A. Monica Jong, 1Translational Research, Brien Holden Vision Institute, Sydney, New South Wales, Australia; 1School of Optometry and Vision Science, UNSW Australia, Sydney, New South Wales, Australia

Defining and classifying myopia. Ian Flitcroft.
1Ophthalmology, Children’s University Hospital, Dublin, Ireland; 2Vision Science, Dublin Institute of Technology, Dublin, Ireland

Experimental models of myopia and emmetropization. David Troilo. College of Optometry, SUNY, New York City, NY

Clinical myopia control trials and instrumentation. James S. Wolffsohn. Ophthalmic Research Group, Aston University, Birmingham, United Kingdom

Genetics of myopia. Caroline C. Klaver.
1Ophthalmology, Erasmus Medical Center, Rotterdam, Netherlands; 2Ophthalmology, Radboud University Medical Center, Nijmegen, Netherlands

West 211

Sunday, April 28, 2019 1:00 PM-2:30 PM

123a Functional Imaging Technologies for Regenerative Medicine

The five teams from the first NEI Audacious Goals Initiative for Regenerative Medicine consortium will give brief updates on their projects and will address how the imaging technology they are developing could be used in regenerative medicine studies. A discussion panel will be moderated by Len Levin, MD, PhD.

West 217-219

Sunday, April 28, 2019 1:00 PM-2:30 PM

124 Grant writing: Early career funding opportunities

This workshop focuses on providing ARVO trainees with advice on strategies to prepare a successful early-career grant application. A panel of experts from government, non-governmental funding agencies and industry, as well as current K99/R00 awardees will provide advice on application preparation and in career development.

Moderators: Wenlin Zhang, Nawajes A. Mandal and Mehrnoosh Saghizadeh

— 1:00 Introduction
— 1:05 Pathway to Independence Award (K99/R00) at NEI. Neeraj Agarwal. National Eye Institute/NHLBI
— 1:20 KTEF Career-development award in pediatric ophthalmology. John S. Penn2. 1Ophthalmology and Visual Sciences, Vanderbilt University School of Medicine; 2Associate Dean, Faculty Affairs, Vanderbilt University School of Medicine

— 1:50 My K99 journey: insights from an NEI award recipient. Elizabeth Zuniga-Sanchez. The University of California at Los Angeles
— 2:05 Questions and panel discussion

125 Win-win collaborations between academia and industry

In this time of excess pressure for accelerated growth, corporations are downsizing internal research capabilities and looking to external research contracts and academic partnerships. Thus, academic-Industry collaborations are an increasing source of basic science and technology development funding, fueling high impact innovations across the spectrum of sectors. This workshop will explore the potential impact that these win-win collaborations can provide for research and development programs.

Moderator: Derek Nankivil

— 1:00 Opening Remarks
— 1:20 The synergistic relationship between industry and academia. Billy R. Hammond. University of Georgia Library
— 2:05 Q & A
— 2:15 Panel 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.
126 The importance of animal research in the bench to bedside pipeline

Animal research has many roles in developing treatments for human disease. It is critical for basic science research aimed at identifying potential therapeutic targets. Also, new treatment paradigms utilizing novel technologies, including viral gene delivery, stem cell mediated therapies, and nanoparticles all rely on animal models for development. Furthermore, animal models are used to determine the feasibility, safety and long-term stability of potential therapeutic interventions. It is important to note that animal models are crucial to unraveling and modeling findings from human patients. For instance, animal models have and will play a large role in understanding complex genomic studies and studies exploring the environmental influence in human disease. Thus, not only are animal models important for bringing treatments into the clinic they are also important in a reiterative process that is critical for understanding human disease and personalizing treatments. In this symposium we discuss areas were animal research has driven and will drive the development of treatments and regenerative therapies for blinding diseases.

Moderators: Malia M. Edwards, Andras M. Komaromy and Richard T. Llippy


— 1:15 Allelic and mechanistic heterogeneity underlie variable expressivity and pleiotropism – a case study in mouse genetics. Douglas B. Gould1, 2. 1Ophthalmology, University of California, San Francisco; 2Anatomy, UCSF School of Medicine

— 1:30 Bidirectional Studies in Vision Research: Accelerating the Pace Toward Novel Therapies. Monica M. Jablonski1, 2. 1Hamilton Eye Institute, Univ Tennessee Health Sci Ctr; 2OculoTherapy, LLC *CR

— 1:45 A transgenic biosensor mouse model for monitoring ocular-surface health, disease and therapeutic outcome. Nick Di Girolamo. School of Medical Sciences - Pathology, University of New South Wales

— 2:00 Using animal models to discover therapeutic targets. Cynthia L. Grosskreutz1, 2. 1Ophthalmology, Novartis Inst for Biomedical Research; 2Ophthalmology, Massachusetts Eye & Ear Infirmary *CR

— 2:15 Q&A

127 Low Vision Group - The effects of mesopic light levels on vision and functional activities

This session will include an overview of how mesopic light levels affect visual processing. In addition, it will include presentations on measures of Patient Reported Outcomes, visual function and mobility and falls under low light levels for patients with and without eye disease.

Moderators: Joanne M. Wood, Nicole C. Ross and Walter Wittich

— 1:00 A mini-review of how mesonic light levels affect visual processing. Aaron Johnson. Psychology, Concordia University

— 1:18 Mesopic microperimetry and age-related macular degeneration. Lauren N. Ayton1, 2. 1Bionic Eye Technologies; 2Surgery (Ophthalmology), University of Melbourne *CR


— 1:54 Mobility and falls under low light levels. Bonnierien K. Swenor1, 2. 1Ophthalmology, Johns Hopkins Wilmer Eye Institute; 2Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health

— 2:12 Impact of mesopic test conditions on visual function measures in retinitis pigmentosa versus normals. Ava K. Bitner1. 1Optometry, Nova Southeastern University, College of Optometry; 2Stein Eye Institute, UCLA *CR, *CR

128 China-ARVO networking forum

This is the 14th annual China – ARVO Networking Forum. The purpose of this event is to provide a platform for vision researchers from China, the USA and other countries to interact, discuss and exchange knowledge in the field of vision research & ophthalmology and to promote collaboration among the scientists. Speakers include leading ophthalmic researchers from China, the USA and other country. At the upcoming meeting, topics will align with the 2019 ARVO “Bench to Bedside and Back” theme that will show the advanced researches in major blindness eye diseases. Everyone is welcome to attend the meeting; a limited lunch will be provided.

Moderators: Ningli Wang, Wei Li and Hossein Ameri

— 1:00 Opening Remarks

— 1:05 OCAVER Award


— 1:35 Microvasculature and Microcirculation analysis in ocular diseases. Jin Yuan1, 2. 1cornea, Zhong Shan Ophthalmic Center; 2Sun Yat-sen University *CR

— 1:45 A Bioengineered Cornea: Just around the corner? Gerard Sutton1, 2. 1Save Sight Institute, Sydney University; 2Lions NSW Eye Bank

— 1:55 Sampling, Measurement, and Management Methods of the Shanghai Diabetic Eye Study (SDES). Haidong Zou1, 2. 1Shanghai General Hospital, Shanghai Jiao Tong University; 2Shanghai Eye Diseases Prevention & Treatment Center/ Shanghai Eye Hospital

— 2:05 CRISPR-Cas9 gene editing in the treatment of autosomal dominant retinitis pigmentosa. Hossein Ameri. USC Roski Eye Institute, Keck School of Medici, USC Roski Eye Institute, Univ. Southern California *CR

— 2:15 Q&A

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
**129 AMD therapies (excluding anti-VEGF)**

**Moderator:** Scott. H. Greenwald


Chemistry, Northwestern University; Ophthalmology & Visual Sciences, University of Wisconsin School of Medicine; ‘Casey Eye Institute, Oregon Health Sciences University; ‘Thoracic & Cardiovascular Surgery, MD Anderson Cancer Center; Cancer Biology, MD Anderson Cancer Center; ‘Pediatrics, University of Wisconsin School of Medicine

**356 — A0233** Short Term Effects of Carbidopa-Levodopa in Neovascular AMD. Brennan M. Boyd1, T. Fagan2, A. G. Figueroa3, B. S. McKay1, R. W. Snyder2. College of Medicine, University of Arizona; ‘SnyderBiomedical; ‘Ophthalmology and Vision Science, University of Arizona

**357 — A0234** Kaempferol protects retinal function in a mouse model of light-induced retinal damage. Jonathan Noguchi1, Z. Tan, J. F. McDunnell1, J. I. Perlman1, P. Bu1. Ophthalmology, Loyola University Medical Center; ‘Ophthalmology, University of California, Irvine


**359 — A0236** Does Brimonidine DDS Reduce the Geographic Atrophy Lesion Perimeter Hyperautofluorescence Over Time? Amber Lewis1, I. Kravtsova1, K. Kerr1, Y. Li1, W. Schmidt1, F. Lopez1. School of Pharmacy, USC; ‘Keck Graduate Institute of Pharmacology and Health Sciences; ‘Allergan

**360 — A0237** Robust Generation of Photoreceptor Precursors from Human Pluripotent Stem Cells Using a Scalable 3D Bioreactor System. Qiang Feng, C. Chen, J. Zhang, S. Lu. Hebecell Corp

**361 — A0238** Elamipretide, a Mitochondrial-Targeted Drug, for the Treatment of Vision Loss in Dry AMD with High Risk Drusen: Results of the Phase 1 ReCLAIM Study. Michael J. Allingham, P. S. Mettu, S. W. Cousins. Ophthalmology, Duke Eye Center


**363 — A0240** The Use of Photodynamic Therapy in Exudative Age Related Macular Degeneration for Subretinal Fluid Refractory to Anti-VEGF Treatment. Michelle Peng1, R. Johnson2, 3. West Coast retina; ‘California Pacific Medical Center

**364 — A0241** The local and systemic effects following subthreshold nanosecond laser treatment to the posterior retina. Quan Findlay1, A. I. Jobling1, K. A. Vessey1, U. Grefeath1, P. Avula1, B. Gai1, R. H. Guymer1, E. L. Fletcher1. Anatomy and Neuroscience, University of Melbourne; ‘Centre for Eye Research Australia; ‘Florey institute of Neuroscience and Mental Health; ‘Surgery, University of Melbourne

**365 — A0242** The Notch and TGF-β signaling pathways interact and contribute to retinal fibrosis-results from an in vitro study. Jiawen Fan1, M. C. Gillies1, L. Zhu1, T. Zhang1, G. Xu1, W. Shen1. Department of Ophthalmology and Vision Sciences, Eye and ENT Hospital, Fudan University; ‘Discipline of Ophthalmology, Sydney Medical School, The University of Sydney, Save Sight Institute

**366 — A0243** Stabilization and supporting blood vessel growth as a new concept to treat wet AMD. Sylvie Julien1,2, A. Tschulakov1,2, H. Thakkar1,2, S. Liu1, B. Illing1, U. Schaermeyer1,2. Center for Ophthalmology, Institute for Ophthalmic Research Tuebingen; ‘STZ OcuTox (www.ocutox.com)

**367 — A0244** IDB0062, a dual targeting protein for enhanced anti-angiogenic effect for several ocular diseases. Seongbeom Kim1, S. Yang1, K. Min1, B. Kim1, J. Kim1, H. Kwon1, S. Choi1. Ildong pharmaceutical, Republic of Korea; ‘FARB(Fight against Angiogenesis-Related Blindness) Laboratory, Clinical Research Institute, Seoul National University Hospital

**368 — A0245** P2X7 antagonist attenuates retinal inflammation and neovascularization induced by oxidized low density lipoprotein in mice. Mingzhu Yang. Henan Eye Hospital, Henan Provincial People’s Hospital

**369 — A0246** Inhibition of Microfibrillar-associated Protein 4 as a Potential Therapy Targeting Choroidal Neovascularisation in Age-related Macular Degeneration. Andrew Benest1, A. P. Lynch1, A. Schlosser2, U. Holmskov2, G. L. Sorensen2, D. O. Bate1. Division of Cancer and Stem Cells, University of Nottingham; ‘University of Southern Denmark

**370 — A0247** Vitrectomy With or Without Drainage of Subretinal Hemorrhage for Breakthrough Vitreous Hemorrhage Secondary to Polypoidal Choroidal Vasculopathy. PENG SUN, F. Gie, H. Zhang, Z. Liu. Ophthalmology, 1st Affiliated Hospital of China Medical University

**371 — A0248** The effect of varying dosage and fluence setting of Verteporfin on choroidal vasculature in a rodent model. PENG QIN1, I. Wool1. Ophthalmology, Chongqing Medical University; ‘The University of Hong Kong

**372 — A0249** Efficacy & Tolerability of OTX-TKI, a Sustained Hydrogel Delivery System for a Tyrosine Kinase Inhibitor, in a VEGF Induced Retinal Leakage Model: 1 Year Results. Peter K. Jarrett, R. F. Elhayek, E. Kahn, S. Takach, J. Metzinger, M. H. Goldberg. Ocular Therapeutix


**375 — A0252** Taurocholic acid prevents progression of age-related macular degeneration in in vitro models. Joshua M. Barnett, C. Warden, M. A. Brantley. Vanderbilt Eye Institute, Vanderbilt University Medical Center

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

383 — A0374 Analysis of Irish Inherited Retinal Degeneration Patients with ABCA4 Gene Mutations. Niamh Wynne1, K. Collins*, H. Denspey*, K. Stephenson*, D. J. Keegan*, G. Silvestri*, A. Dockery*, G. Farrar*, P. F. Kennett*. 1Research Foundation, Royal Victoria Eye and Ear Hospital; 2Ophthalmology, Mater Misericordiae University Hospital, Dublin, Ireland; 3Ophthalmics, Department of Ophthalomy, The Royal Victorian Hospital, Belfast, Ireland; 4Ocular genetics unit, Trinity College Dublin

384 — A0375 Mutational analysis of the PABPN1 gene in oculopharyngoucular muscular dystrophy, Cristina Plata, H. Perez, H. Lopez, G. Graue Moreno, M. Astiazaran. Hospital Nuestra Señora de la Luz IAP

385 — A0376 Whole exome sequencing-based copy number variant detection in inherited retinal disease. Frauke Coppeters1, S. Van de Sompele1, K. Van Schil2, T. Van Laethem3, R. Six4, S. De Jaeger1, F. Meire3, M. De Vos3, I. Balikova4, J. De Zeytijd1, B. P. Leroy1, F. Rosseel1, E. De Baere2, Y. De Baere2. 1Center for Medical Genetics Ghent, Ghent University Hospital; 2Center for Medical Genetics Ghent, Ghent University Hospital; 3Department of Ophthalmology, Hôpital Universitaire des Enfants Reine Fabiola; 4Department of Ophthalmology, Ghent University Hospital


The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
400 — A0391 Prevalence and genetic characteristics of RPE65-associated retinal disease. Tero-Pekka Alastalo1, K. Kämpäjärvi1, L. Gaidigli1, K. Jänskäsiö1, K. Wells1, H. Viisäsalu1, L. Sarantaas2, P. Salmenperä1, S. Myllýkangas1, E. K. Sankile1, J. Koskenvuo1, S. Tuapanen1. 1Blueprint Genetics; 2University of Helsinki

401 — A0392 Genetic basis of inherited retinal disease in a UK cohort of over 2900 families. Omar A. Mahroof1, N. PONTIKOS2, G. Arno1, R. Ba-Abbad1, S. Malka1, G. Wright1, M. Armengol1, K. Katz1, A. Moore1, M. Michaelides1, 2, A. Webster1, 2. 1Ophthalmology, UCL Institute of Ophthalmology; 2Blueprint Genetics

402 — A0393 Pathogenicity of five new variants of BEST-1 gene among an Italian cohort: a multicentric study. Giulia Delledonne1, A. Salveti1, M. Oldani1, P. Maltese2, M. Bertelli3, L. Ziccardi1, B. Falsini1, V. Freccer1, G. Staurenghi1. 1Department of Biomedical and Clinical Science “Luigi Sacco”; 2MAGI’S LAB - Medical Genetics Laboratory, MAGI; 3IRCCS Fondazione G.B. Bietti; 4Dipartimento per l’assistenza sanitaria di Scienze Oftalmologiche e Otorinolaringoiatriche, Policlinico Universitario “A. Gemelli”; 5Department of Physical Chemistry of Drugs, Faculty of Pharmacy, Comenius University in Bratislava

403 — A0394 Detection of clinically relevant genetic variants in nanoparticles by whole genome sequencing. Zhigang Fan1, C. Guo1, Z. Zhao1, D. Chen1, S. He1, N. Sun1, Z. Li1, J. Liu1, D. Zhang1, J. Zhang1, J. Li1, M. Zhang1, S. Yu1, W. Zhao1, J. Liu1, X. Zhang1, 2. 1Zhongshan Ophthalmic Center; 2Section of Medical Genetics, Department of Medicine, Boston University School of Medicine; 3Department of Biostatistics, Boston University School of Public Health; 4Guangzhou KingMed Diagnostics

404 — A0395 Clinical and genetic characterization of Pseudoxanthoma Elasticum patients. Iyar Sheps1, 2, C. Weiner1, N. Shoshany1, 2, E. Pras1, 2. 1Ophthalmology, Assaf Harofeh Hospital; 2Matlow’s Ophthalmogenetic laboratory, Assaf Harofeh Medical Center

405 — A0396 TTR mutations and clinical characteristics of patients with vitreous amyloidosis. Xiaohui Zhang1, X. Xu1, X. Xu1, Y. Li. 1Beijing Institute of Ophthalmology, Beijing Tongren Hospital


407 — A0398 Worldwide Carrier Frequency Analysis of Mutations Causing Autosomal Recessive Inherited Retinal Diseases. Mor Hanany1, S. Meyer1, C. Rivolta1, 2, D. Sharon1. 1Department of Ophthalmology, Hadassah-Hebrew University Medical Center; 2Department of Computational Biology, Unit of Medical Genetics, University of Lausanne; 3Department of Genetics and Genome Biology, University of Leicester

408 — A0399 Retinal phenotypic characterization of a Brazilian cohort of patients with homonymous ABCA4 alleles. Fernanda B. Porto1, S. A. Sampaio1, S. T. Renata1, R. Chen1, J. Chiang1. 1Baylor College of Medicine; 2Molecular Vision Laboratory; 3INRET Clinica e Centro de Pesquisa; 4Instituto de Ensino e Pesquisa Santa Casa Belo Horizonte

409 — A0400 Genome-wide screening of gene-gene interaction between HLA risk factors and other genes in Behçet’s disease. Akira Morozu1, T. Yamane1, M. Takeuchi1, M. Ota1, 2, N. Mizuki1, 2. 1Department of Ophthalmology, Yokohama City University School of Medicine; 2Department of Medicine, Division of Hepatology and Gastroenterology, Shinshu University School of Medicine


411 — A0402 The Librerafb syndrome, a multisystem disorder including early-onset retinal degeneration, is caused by a founder mutation in the PISD gene in patients from Portugal, Brazil, and the Azores islands. Virginie G. Peter1, M. Quinodoz1, J. Pinto-Basto1, S. De Sousa1, 2, S. Di Gioia1, G. Soares1, G. Ferraz Leaf1, E. Silva1, E. Engle1, 2, N. Miyake1, 2, N. Matsumoto1, 2, S. Unger1, 2, F. Shapiro1, 2, B. Campos-Xavier1, 2, A. Superti-Furga1, 2, C. Rivolta1, 2. 1Department of Computational Biology, University of Lausanne; 2Department of Human Genetics and Genome Biology, University of Lausanne; 3CGC Genetics; 4Medical Genetics Unit, Hospital Pediatrico, Centro Hospitalar e Universitário de Coimbra; 5University Clinic of Genetics, Faculty of Medicine, University of Coimbra; 6Center for Medical Genetics, University of Leuven; 7Laboratoire de Génétique Chromosomique; 8Institut de la Vision; 9Centre National de Séquençage; 10Regione Autonoma della Sardegna; 11Department of Biomedical and Neuromotor Sciences, University of Bologna; 12IRCCS Institute of Neurological Sciences of Bologna, Bellaria Hospital; 13Studio Uclistico D’Azezglio, Bologna

412 — A0403 A novel SVA retrotransposon insertion in CHM results in loss of REP-1 protein causing choroideremia. Kaylie Webb-Jones1, a. radziwoni1, D. G. Birch1, 2, I. M. MacDonald1. 1Retina Foundation of the Southwest; 2Dept. of Ophthalmology, UT Southwestern Medical Center; 3Department of Ophthalmology and Visual Sciences, University of Alberta

413 — A0404 Non-penetrance in a family with PAX6-related autosomal dominant nyctagmus. Vijay Tailor1, 2, C. Way1, N. Owen1, M. Theodorou1, M. Moosajee1. 1Moorefields Eye Hospital; 2UCL Institute of Ophthalmology

414 — A0405 Mutation Screening of OPA1 in a cohort Chinese patients with Suspected Autosomal Dominant Optic Atrophy. Yue Xie1, T. Xiao1, K. Xu1, X. Zhang1, Y. Li. 1Beijing institute of Ophthalmology, Beijing tongren hospital

415 — A0406 A CDC51 frameshift variant as a candidate gene defect for autosomal recessive rod-cone dystrophy. Christina Zeitz1, C. Mélécase2, S. Mohand-Saïd1, 2, L. Emmengger1, A. Schalk1, M. Neullié1, E. Orhan1, F. Blond1, C. Prévot1, 2, S. Sandra Chantot-Basturc1, 2, T. D. Leveillard1, J. A. Sahel1, 2, I. S. Aud1. 1CHNO des Quinze-Vingts, DHU Sight Restore, INSERM-DGOS CIC1423; 2Sorbonne Université, INSERM, CNRS, Institut de la Vision; 3Fondation Ophthalmologique Adolphe de Rothschild; 4APHP Hôpital Armand-Trousseau, Département de Génétique, UF de Génétique Chromosomique; 5Sorbonne Université, GRC n°19, Pathologies Congénitales du Cervelet-LeucoDystrophies, APHP, Hôpital Armand Trousseau

416 — A0407 Retina Has Significant Protective Mechanisms to Eliminate Mitochondria DNA Heteroplasmy SNPs Compared to Blood. Cristina Kenney1, 2, M. Chwa1, A. Stilano1. 1Ophthalmology, Gavin Herbert Eye Institute, UC Irvine; 2Department of Pathology and Laboratory Medicine, University of California Irvine

417 — A0408 Dominant optic atrophy (DOA): not only OPA1. Giulia Amore1, C. La Morgia2, M. Carbonelli1, 2, L. Caporalì1, F. Tagliavini1, P. Flavio1, V. Cavalli1, 2. 1Department of Biomedical and Neuromotor Sciences, University of Bologna; 2IRCCS Institute of Neurological Sciences of Bologna, Bellaria Hospital; 3Studio Oculistico D’Azezglio, Bologna

418 — A0409 Pathognomonic clinical features of non-typical cone dystrophy with hearing impairment caused by loss-of-function variants in CEP250. Suzanne E. de Bruijn1, 2, L. Haer-Wignan1, 2, M. J. Tou-Fo-Sang1, H. Kremer1, 2, F. P. Cremer1, 2, S. Roos1, 2, L. van den Bor1. 1Department of Human Genetics, Radboud university medical center; 2Donders Institute for Brain Cognition and Behaviour; 3The Rotterdam Eye Hospital; 4Department of Human Genetics and Otohinoaryngology, Radboud University Medical Center

* 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.
419 — A0410  Digenic triallelic inheritance in cone photoreceptor cyclic nucleotide gated channel associated retinopathies, Susanne Kohl1, M. Burkard1, T. Kraetzig2, N. Tanimoto1, B. Baumann1, M. Bier1 3, R. Lukowski1, M. W. Seelig1, S. Michalakis1, 4, B. Wissinger1, P. Ruth1. 1Centre for Ophthalmology, Inst for Ophthalmic Research Tuebingen; 2Department of Pharmacology, Toxicology and Clinical Pharmacy, Institute of Pharmacy, University of Tuebingen; 3Department of Vegetative and Clinical Physiology, University of Tuebingen; 4Center for Integrated Protein Science Munich CIPSM and Department of Pharmacy - Center for Drug Research, Ludwig-Maximilians-University Munich

420 — A0411  Identification of splicing defects due to deep-intronic or non-canonical splice site variants in ABCA4. Zeinab Fadalei1,2, M. Khan1, F. P. Cremers1,3, S. Roosing1,2. 1Department of Human Genetics, Radboud University Medical Center; 2Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Center

421 — A0412  A whole exome sequencing-based panel assay with boosted clinical content generates a high diagnostic yield in patients with inherited eye diseases, Kati Kämpfjärv1, K. Wells1, M. Mehine1, J. Käänsäkoski1, S. Sarantaus1, H. Västinsalo1, J. Schleif1, I. Saarinen1, M. Muorda1, S. Myllýkangas1, T. Alatalo1, J. Koskenniemi1, J. Paananen1, S. Tuupanen1, 1Blueprint Genetics; 2Blueprint Genetics *CR

422 — A0413  NMNAT1 is the most frequently mutated gene in Leber congenital amaurosis in South Korea. Dongheon Surl1, J. Lee, S. Byeon, C. S. Lee, J. Han. Ophthalmology, Severance Hospital

423 — A0414  The identification of a RNA splice variant in TULP1 in two siblings with early-onset photoreceptor dystrophy. Susanne Roosing1, S. K. Verbakel1, Z. Fadalei1, J. Klevering1, M. M. van Genderen1, L. F. eensstra1, F. P. Cremers1,2, C. C. Hoyn1,2. 1Department of Human Genetics, Radboud University Medical Center; 2Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Center; 3Department of Ophthalmology, Radboud University Medical Center; 4Barthiméus Diagnostic Center for Complex Visual Disorders; 5Department of Ophthalmology, University Medical Center Utrecht

424 — A0415  Modelling Sorsby’s Fundus Dystrophy using patient-derived iPSC-RPE. Jennifer Dewing1, D. R. Christensen1, H. Hongisto1, J. Scott1, B. Jenkins1, A. J. Cree1, H. Skottman1, J. Rautanayaka2, A. Lotery1. 1Clinical Neurosciences, University of Southampton; 2University of Tampere

425 — A0416  High myopia and strabismus induced by a deep intronic mutation in COL2A1. Shirel Weiss1, N. Orenstein1, A. Zahavi1, N. Goldenberg-Cohen1. 1the Krieger eye research laboratory, Tel Aviv University; 2Genetics, Schneider Children’s medical center; 3Ophthalmology, Rabin Medical Center; 4Rapport faculty of medicine, Technion

426 — A0417  A frequent variant in the Japanese population determines quasi-Mendelian inheritance of rare retinal ellipsoidopathy, Carlo Rivolta1,2. 1Department of Computational Biology, University of Lusanne; 2Department of Genetics and Genome Biology, University of Leicester

427 — A0418  microRNAs expression profiling in retinal and choroidal tissue in an oxygen-induced retinopathy (OIR) model, michel desjarlais1, J. Rivera, i. lahaie, S. Chemtob. ophthalmology, centre de recherche hopital maisonneuve rosemont (CRHMR)

428 — A0419  Transcriptional profiling of pterygium related genes and pathways, Yaping Jiang1, Y. Chen1, C. Yang1, Q. Wang1. 1Yangpu District Central Hospital; 2Southeast University-Nanjing-210009-China; 3CAS Key Laboratory of Computational Biology, Collaborative Innovation Center for Genetics and Developmental Biology, CAS-MPG Partner Institute for Computational Biology, Shanghai Institutes for Biological Sciences, University of Chinese Academy of Sciences, Chinese Academy of Sciences, Shanghai 200031, China.

429 — A0420  A functional polymorphism in the promoter of CRYAA increases the risk of nAMD. Hui Xu, h. luang. ophthalmology, Peking University People’s Hospital

West Exhibition Hall A0421-A0458
Sunday, April 28, 2019 1:00 PM-2:45 PM
Retinal Cell Biology
131 Retinal Degeneration: Animal Models

Moderators: Chloe N. Thomas and Jun Yang

430 — A0421  Cyclooxygenase-1 (COX-1) modulates neuroinflammation in the rd10 mouse model of retinitis pigmentosa. Bin Lin, W. Yang, M. Cheng, R. Li. School of Optometry, The Hong Kong Polytechnic University

431 — A0422  Mitochondria Defects Constitute an Early Step in Retinal Degeneration. Ke Jiang1, A. Mondal1, Y. Adakha1, M. Brooks1, L. Gieser1, J. Gunerson1, K. Jung-Woong1, R. Covian Garcia1, A. Svarog1. 1National Eye Institute, National Institutes of Health; 2National Heart, Lung, and Blood Institute, National Institutes of Health


433 — A0424  Fundus autofluorescence abnormalities and microglia/macrophage activation in the Rpgr-deficient mouse. Federica Staurenghi1, C. Martinez-Fernandez dela Camara1, A. R. Barnard2, R. E. MacLaren2. 1Nuffield Laboratory of Ophthalmology, University of Oxford; 2Oxford Eye Hospital, Oxford University Hospitals NHS Trust *CR


436 — A0427  Effects of Ca2+-channel blockers on photoreceptor Ca2+-levels and activity of calpains. Soumyaparna Das1, M. Power2, L. Rogerson1, T. Euler1, F. Paquet-Durand1. 1Institute for Ophthalmic Research, University of Tuebingen; 2Graduate School of Cellular and Molecular Neuroscience; 3Werner Reichardt Centre for Integrative Neuroscience


439 — A0430  Bright light-induced retinal damage in domestic chicks: the role of iron regulatory proteins, Meenakshi Maurya, T. Nag, R. Roy. Anatomy, All India Institute of Medical Science; Anatomy, All India Institute of Medical Science


441 — A0432  Development of knock in (KI) mouse models of rhodopsin retinitis pigmentosa. Kelly Ziaka1, K. Hau1, D. Athanasiou1, R. Guarascio1, M. Aguilá1, J. Bellingham1, S. Agrawal1, Y. Li1, R. Chen1, M. E. Chetwood1. 1UCL-Institute of Ophthalmology, 2Baylor College of Medicine One Baylor Plaza
442 — A0433 Transplanted photoreceptors exchange proteins to host photoreceptors via neurites. Arturo Ortin-Martinez1, E. Tsai1, L. Comanita1, N. Yan1, N. Tachibana1, A. Gurdita1, Z. Liu1, P. Nickerson1, S. Lu1, R. Brenner1, V. Wallace2, 3. 1Donald K Johnson Institute, Krembil Research Institute, University Health Network; 2Laboratory of Medicine and Pathobiology, University of Toronto; 3Ophthalmology and Vision Science, University of Toronto; 4Lunenfeld-Tanenbaum Research Institute Mount Sinai Hospital


444 — A0435 The phagocytic function of Müller glia in a mouse model of retinitis pigmentosa. Sanee Sakami, Y. Imonishi, K. Palczewski. Pharmacology, Case Western Reserve University


447 — A0438 Development of a Pde6b Gene Knockout Rat Model for Studies of Degenerative Retinal Diseases. Joonhyung Yeo1, B. Jung1, Y. Sung1, J. Baek1, J. Lee1. 1Department of Ophthalmology, Asan Medical Center, Seoul, Korea; 2Department of Convergence Medicine, Asan Institute for Life Sciences, Asan Medical Center

448 — A0439 Steroids and photoreceptor survival in two models of retinal degeneration. Melissa Daniela Marquioni Ramella, F. Tute, M. Marzita, A. M. Subaro. IIMT, CONICET-Argentina

449 — A0440 REEP6 regulates expression of phototransduction proteins and modulates metabolism in rod photoreceptors. Tongdan Zou, H. Zhang. School of Medicine, University of Electronic Science and Technology of China

450 — A0441 Lack of overt pathology in a K42E knock-in mouse model of retinitis pigmentosa (RP59). Steven J. Fliesler1, 2, P. Kotla1, S. Ramachandra Rao1, 2, S. J. Pittler3. 1Research Service, VA Western NY Healthcare System; 2Ophthalmology, Biochemistry and Neuroscience Program, SUNY-University at Buffalo; 3Optometry and Vision Science, UAB School of Optometry

451 — A0442 Screening tools in zebrafish for modifiers of inherited rod degeneration. James M. Fadool. Florida State University

452 — A0443 Stannioalcine-1 enhances ellipsoid zone intensity and cone function in the P23H rhodopsin transgenic pig. Wankan Xie1, M. Zhao1, S. Tsai1, M. Xu1, T. W. Heim1, 2. 1University of Minnesota; 2Biomedical Engineering, Case Western Reserve University

453 — A0444 Early Treatment with Mycophenolate Reduces Microglial Migration in rd10 mice. Paul Yang1, H. Titus1, K. Weller2, R. Duvoisin3, 4, R. Weber2, 5, C. W. Morgans2, M. E. Pennesi3. 1Ophthalmology, Casey Eye Inst, Oregon Hlth & Science Univ; 2Physiology and Pharmacology, Oregon Health and Science University

454 — A0445 Conditional ablation of NMIT1 in the murine retina leads to rapid and severe retinal degeneration likely associated with distinct changes in the retinal metabolome. David Sokolov1, 2, E. Sechrist3, 4, J. Murphy3, 4, Y. Wang3, 4, J. Du1, 4, S. Kolanadavel1, 4. 1Biology, West Virginia University; 2Pharmaceutical Sciences, West Virginia University; 3Ophthalmology, West Virginia University; 4Biochemistry, West Virginia University

455 — A0446 CRISPR/Cas9 mutagenesis of the mtnr1a melatonin receptor gene causes rod photoreceptor dystrophy in premetamorphic Xenopus tropicalis. Allan F. Wiechmann1, 2, T. Martin1, M. E. Horb1, D. M. Sherry1. 1Cell Biology, University of Oklahoma Health Sciences Center; 2Ophthalmology, University of Oklahoma Health Sciences Center; 3National Xenopus Resource, Marine Biological Laboratory

456 — A0447 Photoreceptor damage caused by human mutant T8993G ATP6 in a transgenic mouse model of Leigh syndrome and NARP. Haijun Yuan, J. Guy. Bascom Palmer Eye Institute, University of Miami

457 — A0448 Pathophysiology of voltage-gated potassium channels in a mouse model of cone-rod dystrophy. Xiaotian Jiang1, 2, D. M. Hunt1, 2, L. S. Carvalho1, 2. 1University of Western Australia; 2Lions Eye Institute

458 — A0449 New large animal model for RDH5-associated retinopathies. Simon M. Petersen-Jones1, L. Occoli1, P. Winkler1, A. Minella1, K. Sun1, L. Lyons1, A. Daruwalla1, P. Kiser1, K. Palczewski2. 1Department of Small Animal Clinical Sciences, Michigan State University; 2Department of Ophthalmology, University of California, Irvine; 3Department of Veterinary Medicine & Surgery, University of Missouri - Columbia


460 — A0451 Novel Zebrafish Autosomal Recessive Retinitis Pigmentosa Disease Models Created by CRISPR/Cas9 Gene Editing. Liyun Zhang1, 2, A. Unal Ergoeth1, T. Mulligan1, J. Dong1, E. Cheng1, N. Murugan2, W. Peir1, L. Xu1, S. Burgess2, M. Saxene1, J. J. S. Mumm1. 1Wilmer Eye Inst-Smith Bldg Rm 4001, Johns Hopkins School of Medicine; 2National Human Genome Research Institute

461 — A0452 Monocyte-derived macrophages exacerbate cone degeneration in a mouse model of retinitis pigmentosa. Jun Funatsu1, Y. Murakami1, S. Shimokava1, S. Nakatake1, K. Fujivara1, T. Hisatomi1, K. Shibata2, 4, Y. Ikeda1, K. Sonoda1. 1Ophthalmology, Kyusyu University; 2Genomics and Molecular Analysis, Yamaguchi University

462 — A0453 Isoform-specific Rpn4/mutant mice depict distinct roles of the RPGR isofoms in photoreceptors. Wei Zhang1, L. li1, R. Periasamy1, L. Moreno Leon1, M. Anand1, M. Brodsky1, H. Khanna1. 1Ophthalmology, University of Massachusetts Medical School; 2Department of Molecular, Cell, and Cancer Biology, University of Massachusetts Medical School

463 — A0454 In depth characterization of a pig model of photoreceptor degeneration. Francesca BARONE1, L. Muscattelo1, D. Ventrella1, A. Elmi1, L. Laghi1, F. Benfenati4, G. Pertile1, M. Bacci1. 1Ocular and Stem Cell Translational Research Unit, National Eye Institute, NIH; 2Ophthalmology, Ospedale Sacro Cuore Negrar; 3Department of Veterinary Medicine, University of Bologna; 4Department of Agricultural and Food Sciences, University of Bologna; 5Center for Synaptic Neuroscience and Technology, Italian Institute of Technology


465 — A0456 Autosomal recessive night blindness with progressive photoreceptor degeneration in a dog model. Luis L. Marinho1, L. Occelli1, N. Pasmanr1, A. T. Somma1, F. Montianni-Ferreira1, S. M. Petersen-Jones1. 1Small Animal Clinical Science, Michigan State University; 2Universidade Federal do Parana

466 — A0457 STATA3 is a potential genetic modifier of photoreceptor gene expression during stress. Casey Keuthan1, C. Santiago1, J. D. Ash1. 1University of Florida; 2Neuroscience, Johns Hopkins University School of Medicine

467 — A0458 Mouse proteomic analysis demonstrates a critical role for phototransduction in an RST7 mouse model. Lucia Ambrost1, 2, J. Akula1, 2, S. Rockowit1, R. M. Hansen1, 2, A. B. Fulton1, 2. 1Boston Children Hospital; 2Ophthalmology, Harvard Medical School

* 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.
132 Cataract Surgery I

Moderators: Paul Ursell and Hiroshi Sasaki


132.2 — A0460 Lower Capsular Complication Rates in Pop and Prechop than Divide and Conquer and Pop and Chop in Novice Resident Cataract Surgeons. Lawrence D. Flanders1, F. J. Gross1, K. Agarwal1, J. Strawn1, A. Chebolu1. 1Eastern Virginia Medical School; 2Ophthalmology, Eastern Virginia Medical School; 3Ophthalmology, Hampton VA Hospital


132.4 — A0462 Comparison of Delivery Forces and Wound Dimensions of New Smaller Incision Injector for Plate-Haptic Intraocular Lens, George Lau1, S. Muchaladi1, A. Pilon1, V. Kolesnichenko1, E. Sadri1. 1Medical Affairs, Bausch and Lomb; 2R&D, Bausch and Lomb; 3Marketing, Bausch and Lomb; 4Clinical Research, Atlantis Eyecare *CR

132.5 — A0463 Australian Experience with Intraocular Lens Product Flaws. Zixin Hong1, 2, E. Chong1, 3, A. Ioannidis1, M. Daniell3, R. C. Symons1. 1Medical Affairs, Bausch and Lomb; 2R&D, Bausch and Lomb; 3Department of Ophthalmology, University Medical Center; 4Department of Ophthalmology, Shiga University of Medical Science

132.6 — A0464 Analysis of Ocular Surface Situation in Meibomian Gland Dysfunction Patients After Cataract Surgery. Dongju QIN. Ophthalmology, Shanghai Aier Eye Hospital

132.7 — A0465 Comparison of Ocular Biometry and Refractive Outcomes Using 3 Different Devices: IOL Master 500, IOL Master 700 and Lenstar LS900, Jae Shin Song, D. Yoon, J. Hyon, H. Jeon. Department of Ophthalmology, Seoul National University College of Medicine, Seoul National University Bundang Hospital


132.9 — A0467 Sutureless Intrascleral Fixation of Intraocular Lenses: Three-Year Clinical Outcome Review. Nathan Farley1, E. Marlone1, M. Guppy2, 3, H. Omar2, 3, J. Wolfe1. 1Associated Retinal Consultants - William Beaumont Hospital; 2Oakland University William Beaumont School of Medicine


132.11 — A0469 Expression profile of inflammatory cytokines in congenital cataract after Lensectomy and Anterior Vitrectomy. Yining Zhao, Y. Zhao, Z. Li, P. Chang. The Eye Hospital Affiliated Wenzhou Medical University

132.12 — A0470 Optimizing prediction of refractive outcomes after cataract surgery using a biometry-based scoring rubric. Diane Haeji Jang1, A. Luo1, J. Quillen2, T. O’Rourke3, I. U. Scott3, 4, S. Pantanelli1. 1Penn State College of Medicine; 2Ophthalmology, Penn State Milton S. Hershey Medical Center; 3Public Health Sciences, Penn State College of Medicine *CR

132.13 — A0471 Preoperative topical prostaglandin use and the incidence of postoperative cystoid macular edema and persistent inflammation after cataract surgery. Alina Lou1, D. Vollman2, 3, M. K. Daly4, Q. Chen2, A. Chomskey5, 6. 1Vanderbilt Eye Institute; 2Department of Ophthalmology and Visual Sciences, Washington University School of Medicine; 3Department of Ophthalmology, St. Louis VA Healthcare System; 4Department of Ophthalmology, VA Boston Healthcare System; 5Department of Biostatistics, Vanderbilt University; 6Department of Ophthalmology, VA Tennessee Valley Healthcare System


132.16 — A0474 Outcomes of resident performed cataract surgery with toric intraocular lens implantation. Kari Fossum1, N. Farivari2, E. N. Brown1, 2, J. Lindsey1, 2. 1Vanderbilt University School of Medicine; 2Ophthalmology, Vanderbilt University Medical Center; 3Ophthalmology, VA Tennessee Valley Healthcare System

132.17 — A0475 Axial Length Measurement by Immersion B-Scan. Suzanne Daly, D. Coleman, D. Trief, R. H. Silverman. Ophthalmology, Columbia University Medical Center

132.18 — A0476 Three Cases of Scleral Sutured EnVista Intraocular Lens Dislocation and Determination of the EnVista Eyeteal Tensile Strength Under Two Different Suturing Methods. John Lippincott, B. Tieu. Ophthalmology, University of Mississippi Medical Center


132.22 — A0480 Impact of Video Coaching on Ophthalmology Resident Capsulorhexis Performance in Cataract Surgery. Danielle Lo, M. Main, P. Patel, H. Ahmad. NYU School of Medicine

132.23 — A0481 Intraocular Lens Implantation Performed First to Protect The Posterior Capsule in Morgagnian Cataracts during Phacoemulsification. Dong YongXiao1, X. Hua2, J. Du1, X. Yuan3. 1Ophthalmology, the First People’s Hospital of Xianyang; 2Second Hospital of Tianjin Medical University; 3Tianjin Eye Hospital

132.24 — A0482 Complications in resident-performed phacoemulsification cataract surgery at an ophthalmology center in Mexico City: Results of 7 years. Ruben Expino Izacbalceta, D. PULIDO LONDON, D. Alanis Cabrera, F. SOLORIO, E. CHAVEZ MONDRAGON, Instituto de Oftalmolog a Conde de Valenciana

132.25 — A0483 Preoperative factors causing refractive errors after cataract surgery. Kwang Hyun Kim. ophthalmology, Hallym sacred heart hospital


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


506 — A0497 Impact of tear osmolarity in the biometric pre-assessment for phacoemulsification surgery. Laura A. Gonzales Dibildox, G. Cervantes Costé, M. Cantu Treviño, A. Avendaño Domínguez, C. Corredera Ortega, C. Velasco Barona, J. Villaseñor Diez, R. González-Salinas. 1cornea, Asociación para Evitar la Ceguera en Mexico; 2Anterior segment, Asociación para Evitar la Ceguera en Mexico


508 — A0499 A Cost Analysis of an Expedited Pre-operative Anesthesia Pathway for Cataract Surgery. Cory Hoeferlin1, J. Park1, L. Daskivich1, P. Prasad2. 1Harbor UCLA Medical Center; 2Jules Stein - UCLA


510 — A0501 Measuring resident competency in cataract surgery using phacoemulsification unit generated output parameters. Parker Faith1, J. Lee2, H. C. Jung1. 1University of Washington; 2Penn State


512 — A0503 Visual Outcomes of Patients with Posterior Capsule Complications In Early Resident Cataract Surgery. Kanika Agarwal1, L. D. Flanders2, J. Straw1, S. Tyson1, F. J. Gross2. 1Ophthalmology, Eastern Virginia Medical School; 2Ophthalmology, Hampton Veterans Affairs Medical Center

513 — A0504 Comparison of Different Methods for Photopic and Scotopic Pupil Diameter Measurement and Clinical Analysis on the Pupil diameter changes of cataract patients. Yong Wang, Aier Eye Hospital, CSU

514 — A0505 Predictive Factors of Cystoid Macular Edema After Sutured Lens Implants. Mark Barakat, Retinal Consultants of Arizona *CR

515 — A0506 The Cataract Quality Outcome Initiative: assessing visual acuity and vision function before and after cataract surgery in Ontario, Canada. Wendy Hatch, V. Leung, N. Omali, K. McReeis, K. Pope, I. Ahmed, M. Schlenker, S. El Defrawy. 1Kensington Eye Institute, University of Toronto; 2Ophthalmology, University of Toronto; 3Applied Health Research Centre, St Michael’s Hospital; 4Ophthalmology, Peterborough Regional Health Centre *CR

516 — A0507 Angle Kappa In Myopes And Hyperopes And Its Role In Multifocal Lens Implantations. Sarsawati Sivakumar1, R. Sivakumar2. 1ophthalmology, private office; 2student

517 — A0508 Pilot study of aspheric, hydrophobic, acrylic intraocular lens (IOL) design with unique optic holes. Shruti Mahajan, R. Om Parkash, t. om parkash. Dr Om Parkash Eye Institute, Amritsar

West Exhibition Hall A0651-A0671

Sunday, April 28, 2019 1:00 PM-2:45 PM

Eye Movements/Strabismus/Amblyopia/Neuro-ophthalmology

133 Eye Movements and Nystagmus

Moderator: Vallabh E. Das

518 — A0651 To look or not to look: study of reflexive eye movements. PremNandhini Satgunam, E. Kurni. L V Prasad Eye Institute

519 — A0652 Characteristics of saccades when testing the near point of convergence. Clara Mestre1, J. Gautier2, H. E. Bedell1, F. Diaz Douton1, J. Pujol1. 1Centre for Sensors, Instruments and Systems Development (CD6), Universitat Politècnica de Catalunya; 2School of Optometry, University of California; 3College of Optometry, University of Houston

520 — A0653 Microvergence fixation eye movements. Darja Ivanchenko1, F. Schaeffel1, Z. Hafez1. 1Neurobiology of the Eye, Ophthalmic Research Institute; 2Physiology of Active Vision, Werner Reichardt Centre for Integrative Neuroscience

*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.
521 – 545 – Sunday – Posters

521 — A0654  Reliability of oculomotor kinematics, visual attention, and vehicle operation in driving simulation. Hayden M. Green1, F. M. Borges2, C. W. Connell3, D. Newcombe1, B. Thompson1, N. Gant1. 1The University of Auckland; 2University of Waterloo *CR

522 — A0655  Validation of a novel gaze-contingent perimeter with high-speed eye tracking. Nikita Thomas, J. H. Acton, J. T. Erichsen, M. J. Dunn, School of Optometry and Vision Sciences, Cardiff University

523 — A0656  Saccades in Parkinson’s disease: hypometric, slow, or maladaptive? Aasef Shaikh1, F. F. Ghasia2, 1Department of Cognitive Neuroscience, Donders Institute for Brain, Cognition and Behaviour; 2Royal Dutch Visio


525 — A0658  Age-related inhibitory deficits in cognitive control of eye movements. Rui Jin, L. A. Abel, Department of Optometry & Vision Science, University of Melbourne

526 — A0659  Student eye movements to optic nerves. Amanda Douglass1, L. A. Abel2, J. Armitage3, 1Deakin University; 2The University of Melbourne

527 — A0660  Decrease in task performance associated with changes in fixations in optically misaligned binocular near vision systems. Larry A. Abel1, A. Douglass2, R. Karas3, M. Gavrilescu4, P. Gibbes5, 1Optometry & Vision Sciences, University of Melbourne; 2Department of Optometry & Vision Sciences, Deakin University; 3Aerospace Division, Defence Science and Technology Group *CR

528 — A0661  The Effect of Modified Anderson Procedure for Abnormal Head Position in Infantile Nystagmus. SangCheol Yang, H. JEON, H. Choi, Ophthalmology, Pusan National Univ Hospital, Busan, Korea(there the Republic of)

529 — A0662  Characterization of the retinal phenotype of the C57BL/6-c2J mouse model of human oclocutaneous albinism: implications for treatment development. Jennifer A. Scott, A. Sanchez-Bretano1, H. Griffiths, J. Ward, C. Dibigou1, F. Soubigou1, J. E. Self, A. Lotery, J. Ratnayaka, H. Lee, Medicine, University of Southampton

530 — A0663  Proof of concept for oral Levodopa treatment in rescuing retinal morphology and visual function in a murine model of human albinism. Helena Lee, J. Scott, H. Griffiths, J. E. Self, A. Lotery, Clinical and Experimental Sciences, University of Southampton

531 — A0664  Intelligentized functional electrical stimulation can treat congenital nystagmus. Lejin Wang, Z. Miao, Peking University People’s Hospital

532 — A0665  Repeatability of Contrast Sensitivity in Patients with Infantile Nystagmus Syndrome Using the CSV-1000®. ABIGAIL R. KRAFT1, A. M. Gehring2, R. W. Herle1, T. L. Roberts1, 1Ophthalmology, Akron Children’s Hospital; 2Byers Eye Institute, Stanford University

533 — A0666  Two surgical techniques for correction of vertical abnormal head position in infantile nystagmus syndrome – clinical characteristics and outcomes. James J. Law1, D. Holt2, Y. Zheng3, D. Morrison1, S. Donahue1, 1School of Medicine, Vanderbilt University; 2Vision Care Center; 3Department of Ophthalmology and Visual Sciences, Vanderbilt University Medical Center

534 — A0667  Feasibility of a home-based visual training app for youth with infantile nystagmus. Steven Lightner1, J. Goossens2, B. Huer nemann3. 1Department of Cognitive Neuroscience, Donders Institute for Brain, Cognition and Behaviour; 2Royal Dutch Visio

535 — A0668  Torsional nystagmus in pediatric patients with cerebellar hypoplasia. James Phillips1, 2, A. H. Weiss1, 3, M. Brodsky4, J. P. Kelly5, 2, 3. 1Otolaryngology-HNS, University of Washington; 2Ophthalmology - Roger Johnson Lab, Seattle Children’s Hospital; 3Ophthalmology, Mayo Clinic; 4Neurology, Mayo Clinic; 5Ophthalmology, University of Washington

536 — A0669  In search of an objective measure of visual vertigo - eye movement responses to balance provoking stimulation. Tobias Wibble, T. Pansell, Clinical Neuroscience, Karolinska Institutet

537 — A0670  The sensory specific effects of prescription-free motion sickness medication - eye movement responses to balance provoking stimulation. Tony Pansell1, 2, J. Engström1, T. Wibble1. 1Clinical Neuroscience, Karolinska Institutet; 2Neuro Ophthalmology, St Erik Eye Hospital

538 — A0671  Measurement of visual acuity using optokinetic nystagmus elicited by a vanishing disk optotype. Jason Turuwhenua1, 2, B. Thompson1, M. Sanni3, P. Guo1, L. Chang1, 1Auckland Bioengineering Institute, University of Auckland; 2School of Optometry and Vision Science, University of Auckland; 3University of Waterloo *CR

539 — B0001  The distribution of nNOS amacrine cells in the guinea pig retina. Sally A. McFaddel1, 2, J. M. Hombrebueno1, 3, G. Zeng1, 3, D. Fuchs1, E. Lee1. 1Faculty of Science, University of Newcastle; 2Hunter Medical Research Institute; 3Centre for Experimental Medicine, Queen’s University Belfast; 4Department of Ophthalmology, General Hospital of Daqing Oilfield; 5MDA Vision Research, USC Roski Eye Institute, Department of Ophthalmology, Keck School of Medicine, University of Southern California *CR

540 — B0002  Anatomical and molecular characterization of CRH (corticotropin-releasing hormone) receptor 1-expressing cell populations in the mouse retina. Hannah Walsh1, P. Rahman1, K. Zhang2, I. Kim1, 1, N. J. Justice3, B. D. Dember1, 3, J. Potockal. 1Department of Ophthalmology and Visual Science, Yale University; 2Interdepartmental Neuroscience Program, Yale University; 3Department of Neuroscience, Yale University; 4Institute of Molecular Medicine, University of Texas Health Science Center; 5Department of Cellular and Molecular Physiology, Yale University

541 — B0003  Gbx2 identifies and regulates the development of an atypical amacrine cell in the mouse retina. Patrick C. Kerstein1, J. Leffler2, 3, B. Siyver4, 1, W. R. Taylor1, 2, K. M. Wright1. 1Vollum Institute, Oregon Health and Science University; 2School of Optometry, University of California-Berkeley; 3Helens Wills Neuroscience Institute, University of California-Berkeley; 4Ophthalmology, Oregon Health and Science University; 5Casey Eye Institute, Oregon Health and Science University

542 — B0004  Axon-bearing amacrine cells labelled in transgenic GlyT2 mice. Ben Siyver1, 2, M. A. Meadows2, P. C. Kerstein1, K. M. Wright1, H. Von Gersdorff2, 1. 1Ophthalmology, Casey Eye Institute, Oregon Health & Sciences Univ; 2Vollum Institute, Oregon Health & Science University

543 — B0005  Modulation Of VIP-1 Amacrine Cell Coupling By Dopamine In The Mouse Retina. Luis Perez de Sevilla Muller, J. de las Santos, N. Brecha. Neurobiology, UCLA

544 — B0006  The presence of recombinase activity in just one type of wide-field ON-OFF amacrine cells in a DAT-Cre mouse line. Yu-Jian Chen, H. Tu, Y. Chen, A. Shay, A. Zhang, C. J. Chen. Ophthalmology, Baylor College of Medicine

545 — B0007  Glycinergic inhibition tunes direction selectivity in the mammalian retina. Varsha Jain, L. Hanson, G. B. Awatramani. University of Victoria
546 — B0008  Synaptic mechanisms underlying direction selectivity in starburst amacrine cell dendrites. Laura Hanson, G. B. Awatramani. University of Victoria

547 — B0009  Regulation of neurotransmitter release during crossover inhibition. Marc A. Meadows, V. Balakrishnan, X. Wang, H. Von Gersdorff. Volum Institute, Oregon Health and Science University


549 — B0011  Proton-mediated inhibition of L-type Ca²⁺ currents in AII amacrine cells. Katherine Thanayamongkhonsawat, M. A. Meadows, H. Von Gersdorff. Volum Institute

550 — B0012  CaBP5 and Munc13-2 regulate rod bipolar cell to AII amacrine cell synaptic transmission. Maxim Kozhemyakin, R. Marc1, B. W. Jones1. Ophthamology, Northwestern University; 2Department of Neurobiology and Anatomy, Arizona State University

551 — B0013  Aii Amacrine Cell Connectivity in Degenerating Retina. Joebka Dahal, R. L. Pfeiffer1, C. Sigulinsky, J. Anderson, D. Enrich, H. Morrison1, J. Garcia, K. Rapp1, J. Yang1, C. Watt1, M. Kondo1, H. Terasaki1, R. Marc1, B. W. Jones1. Ophthalmology, Moran Eye Center University of Utah; 2Ophthalmology, School of Medicine Nagoya University; 3Ophthalmology, Graduate School of Med Mic University *CR

552 — B0014  Functional divergence at the mouse type 6 bipolar cell terminal. David I. Swygart1, G. Schwartz2, R. O. Wong1, W. Yu1. Ophthalmology, Northwestern University; 2Biological Structure, University of Washington

553 — B0015  AMPA receptor plasticity of ON a RGCs revealed by optogenetic stimulation of inputs. Scott A. Nawy, A. L. Cahill. Ophthalmology and Visual Sciences, University of Nebraska Medical Center

554 — B0016  Changes in Inhibitory Retinal Circuits Following Partial Cone Loss. Joo Yeun Lee1, R. Carey2, F. Dunn1. 1Department of Ophthalmology, University of California San Francisco; 2Graduate Program in Neuroscience, University of California San Francisco

555 — B0017  OFF-layer Branches of ON Cone Bipolar Cells in Early Retinal Degeneration. Jessica Garcia1, R. L. Pfeiffer1, C. Sigulinsky1, J. Anderson1, D. Enrich1, J. Dahal1, H. Morrison1, K. Rapp1, J. Yang1, C. Watt1, M. Kondo1, H. Terasaki1, R. Marc1, B. W. Jones1. Ophthalmology, Moran Eye Center University of Utah; 2Mie University, Graduate School of Med; 3Nagoya University, School of Medicine *CR


557 — B0019  Dopamine decreases excitatory inputs to ON sustained ganglion cells via both D1 and D4 receptor-dependent pathways. Michael Flood1, E. D. Eggers1-2. 1Physiological Sciences, University of Arizona; 2Physiology, University of Arizona; 3Biomedical Engineering, University of Arizona

West Exhibition Hall B0020-B0050

Sunday, April 28, 2019 1:00 PM-2:45 PM

Visual Neuroscience

135 Outer Retinal Function

Moderators: Stuart C. Mangel and Vickie H. Wong


559 — B0021  Divergent conformations of the arrestin-rodhospin complex in solution. Sergey A. Vishnivetskiy1, M. Elgeti1, N. Van Eps1, N. A. Perry1, W. Hubbell1, V. V. Gurevich1. Pharmacology, Vanderbilt University; 2Chemistry and Biochemistry, Jules Stein Eye Institute, University of California; 3Biochemistry, University of Toronto

560 — B0022  Arrestin-1 in rod synaptic terminals. Eugenia V. Gurevich, S. A. Samaranayake, S. A. Vishnivetskiy, V. V. Gurevich. Pharmacology, Vanderbilt University

561 — B0023  Thyroid hormone receptor beta mutations alter or eliminate the signals of long-wavelength cones in zebrafish retina. Ciana Deveaux1, A. Krishnakumar1, X. Jiao2, S. Suzuki3. 1Physiological Sciences, University of California; 2Mie University, Japan; 3School of Mathematical & Natural Sciences, Arizona State University

562 — B0024  Cone sensitivity is diminished, but not absent, in CfPβ mice. Natalie S. Chen1, N. T. Ingram2, G. L. Fain1, J. Chen1. 1Department of Physiology and Neuroscience, Zilka Neurogenetic Institute, Keck School of Medicine, University of Southern California; 2Department of Ophthalmology, Stein Eye Institute, David Geffen School of Medicine at UCLA; 3Department of Integrative Biology and Physiology, UCLA


564 — B0026  Ablation of cAMP-dependent GRK1 phosphorylation suppresses dark adaptation of rod photoreceptors. Alexander V. Kolesnikov1, J. Christrell2, V. Kefalov1, E. R. Weiss2. 1Ophthalmology and Visual Sciences, Washington University in St Louis; 2Cell Biology and Physiology, The University of North Carolina at Chapel Hill

565 — B0027  Cone mitochondria shape cytosolic Ca²⁺ transients and recovery of the photoresponse. Rachel Hutto1, F. Abbas1, C. Bischach1, J. Hurley1, F. Vinberg1, S. Brockerhoff1. 1Biochemistry, University of Washington; 2John A. Moran Eye Center, University of Utah

566 — B0028  Mitochondrial Biogenesis in Zebrafish Cone Photoreceptors. Daniel C. Brock1, M. Giarmarco2, W. Cieglhorn1, K. Tsantilas1, W. Ge1, S. Brockerhoff1. 1Biochemistry, University of Washington; 2Ophthalmology, University of Washington

567 — B0029  Modeling Cone Acetic Glycolysis. Erika T. Camacho1, D. Brager1, G. Elachouri1, T. Korneyeva1, G. Millet-Puel1, J. A. Sahel1, T. D. Leveillard1. 1School of Mathematical & Natural Sciences, Arizona State University; 2School of Mathematical & Statistical Sciences, Arizona State University; 3Genetics, Instituto de la Vision

568 — B0030  Modulation of mouse rod signaling by llama-derived transducin nanobody. Guhan Iyer1, S. Gulati1, K. Pulczewski1, V. Kefalov1. 1Department of Ophthalmology and Visual Sciences, Washington University School of Medicine; 2Department of Ophthalmology, Gavin Herbert Eye Institute, University of California Irvine

569 — B0031  Mathematically Assessing the Contributions of Key Processes in Cone Acetic Glycolysis. Danielle Brager1, E. T. Camacho2, G. Elachouri1, T. Korneyeva1, G. Millet-Puel1, J. A. Sahel1, T. D. Leveillard1. 1School of Mathematical and Statistical Sciences, Arizona State University; 2School of Mathematical & Natural Sciences, Arizona State University; 3Genetics, Instituto de la Vision

570 — B0032  The role of constitutively active RAC1 in rod out segment formation in mouse rhodopsin-null rods. Hongman Song1, Y. Zeng1, R. Bush1, R. Petralia1, Y. Wang1, R. Farris2, C. Vijaysarathy1, P. Sieving1. 1NIDCD, NIH; 2NEI, NIH; 3NEI and NIDCD, NIH

571 — B0033  Multiquantal release from rod ribbons is facilitated by syntaxin3B. Cassandra Hays1, J. J. Grassmeyer1-4, R. Janz1, R. Heidelberger1, W. B. Thoreson1-4. 1Ophthalmology and Visual Sciences, University of Nebraska Medical Center; 2Cellular & Integrative Physiology, University of Nebraska Medical Center; 3Pharmacology & Experimental Neuroscience, University of Nebraska Medical Center; 4Neurobiology and Anatomy, McGovern Medical School, University of Texas Health Science Center

*CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
572 — B0034 EML1 modulates phototransduction in mouse rod photoreceptors. Deepak Poria1, O. G. Kisselov2, V. Vekariova1.
1Washington University in Saint Louis; 2Department of Ophthalmology, Saint Louis University

573 — B0035 Peripherin-2/rrds functions for photoreceptor disk morphology by bending membranes. Andrew F. Goldberg1, M. L. Milstein1, B. L. Cavanaugh1, S. Volland2, D. S. Williams2. 1Eye Research Institute, Oakland University; 2Stein Eye Institute, UCLA School of Medicine

574 — B0036 Dendritic voltage-gated K+ currents stabilize response amplitude and speed on a computational model of the rod-driven ON bipolar cell. Kei Leopoldo1, 3, M. Kamermans2, C.Joselevitch1. 1Psicologia Experimental, Instituto de Psicologia da Universidade de São Paulo; 2Research Institute, Marine Biological Laboratory; 3Cellular and Integrative Physiology, University of Texas Medical Branch; 4Department of Biology, Friedrich Schiller University Jena.

575 — B0037 Vesicular Ca2+ sensor Synaptotagmin-1 mediates neurotransmission from mammalian rods and cones. Wallace B. Thoreson1, J. J. Grassmeyer2, C. L. Hays1, A. L. Cahill1, N. Babai2. 1Ophthalmology and Visual Sciences, Univ of Nebraska Medical Ctr; 2Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center; 3Cellular and Integrative Physiology, University of Texas Medical Branch; 4Department of Biology, Friedrich Alexander University Erlangen-Nürnberg

576 — B0038 AMPA-DART silencing of horizontal cells in mouse retinal slices. Nicholas Brecha1, S. Purohit1, J. C. Grove1, J. de los Santos1, A. A. Hirano2, M. R. Tidross3, S. A. Barnes4. 1Neurobiology, Univ of California-Los Angeles; 2Veterans Administration, VAGLAHS; 3Neurobiology Graduate Program, UCSF; 4Doheny Eye Institute; 5Ophthalmology, UCLA; 6Biomedical Engineering, Duke University

577 — B0039 AAV2/6 transduce to cone photoreceptors. Tesshu Hori1, M. Fukumoto2, C. Maejima2, S. Moritoh1, K. Kobayashi1, C. Koike1. 1Pharmaceutical sciences, Ritsumeikan University; 2Life Sciences, Ritsumeikan University; 3National Institute for Physiological Sciences; 4Center for Systems Vision Science, Organization of Science and Technology

578 — B0040 Identification of PKCa-dependent phosphoproteins in mouse retina. Catherine W. Morgans1, C. M. Wakeham1, P. A. Wilmarth2, G. Ren3, J. E. Klimek2, J. M. Cunliiffe2, L. L. David1. 1Physiology & Pharmacology, Oregon Health & Science University; 2Proteomics Shared Resource, Oregon Health & Science University; 3Biochemistry & Molecular Biology, Oregon Health & Science University


580 — B0042 Contributions of cones to retinal adaptation to naturalistic visual inputs. Fred Rieke, J. Freedland, P. Mardoum, University of Washington

581 — B0043 A dark decrement for enhancement of incremental sensitivity in vertebrate photoreceptors. Richard L. Chappell1, S. Hu1, M. Slaughter1. 1Physiology and Biophysics, State University of New York at Buffalo; 2Bell Center, Marine Biological Laboratory; 3Neuroscience Program, State University of New York at Buffalo; 4Physiology and Biophysics, State University of New York at Buffalo

582 — B0044 Structural and Functional Alterations in Tuberous Sclerosis Complex 1 (Tsc1-Deficient) Mouse Retina. SHARON JIYOON JUNG1, J. Choi1, S. Lee1, S. Paik1, H. Kim1, J. Kim1, J. KIM1, 2, J. KIM1, 2. 1Dept.of anatomy, College of Medicine, The Catholic University of Korea; 2Catholic Neuroscience Institute, College of Medicine, The Catholic University of Korea; 3Department of Biological Sciences, Korea Advanced Institute of Science and Technology (Kaist); 4Catholic Integrative Research Support Center, College of Medicine, The Catholic University of Korea

583 — B0045 Age-related changes in flicker sensitivity with rod- and cone-enhanced stimuli. Amirthakrishnan R. Hathibelagala1, S. R. Bharadwaj2, A. Subramanian1, J. Sadler4, J. L. Barbur3. 1Brien Holden Institute of Optometry and Vision Science, L V Prasad Eye Institute; 2Prof. Brien Holden Eye Research Center, L V Prasad Eye Institute; 3Centre for Applied Vision Research, School of Health Sciences, City University of London; 4Human Performance, QinetiQ, Cody

584 — B0046 Isolation of pure S-cone responses in the ultraviolet-elicited photopic electroretinograms under a bright middle-wave background. Rumi Kawashima1, K. Matsushita1, K. Kae Leopoldo1, 2, M. Kamermans2, C. Joelevitch1. 1Physiology and Biophysics, Osaka University Hospital; 2Institute for Ophthalmic Research, University of Tübingen


586 — B0048 UV-cones differentially encode contrast in vivo to support distinct visual functions across visual space. Takeshi Yoshimatsu1, C. Schröder2, P. Berens1, T. Baden4, 5. 1Neuroscience, University of Susse; 2Bernstein Centre for Computational Neuroscience; 3Institute for Ophthalmic Research, University of Tübingen

587 — B0049 Rod and cone photoresponsivity in the developing mouse retina. Paul Bonezzi1, M. Tarchick1, M. Stabio2, J. M. Renna3. 1Biology, The University of Akron; 2Cell and Developmental Biology, University of Colorado School of Medicine

588 — B0050 Light induced changes of the outer temporal retina observed with optical coherence tomography. Alina Messner1, R. M. Werkmeister1, G. Seidel1, H. Stegmann1, L. Schmetterer1, V. Arana dos Santos. 1Center for Medical Physics and Biomedical Engineering, Medical University of Vienna; 2Singapore Eye Research Institute, Singapore National Eye Centre; 3Department of Ophthalmology, Medical University of Graz

West Exhibition Hall B0067-B0090
Sunday, April 28, 2019 1:00 PM-2:45 PM
Visual Psychophysics/Physiological Optics

136 Abberrations, Ocular Optics, and Retinal Image Quality

Moderator: Juan Tabernero

589 — B0067 Computational model of sclerotic scatter. Fiona Johnston1, A. Ho1, M. T. Coroneo1. 1Department of Ophthalmology, University of New South Wales; 2School of Optometry & Vision Science, University of New South Wales

590 — B0068 A Novel 3D-Printed Eye Model for Practicing Indirect Ophthalmoscopy and Retinal Laser Photocoagulation. Danny Diaz, M. D. Dahrouj, T. Begaj, J. A. Kyllä, Ophthalmology, Massachusetts Eye and Ear Infirmary


592 — B0070 Optical performance of phase-step contact lenses in the Arizona model eye. Karen Lahav-Yacovel1, A. Ho1, R. C. Bakaraju2. 1Brien Holden Vision Institute; 2School of Optometry & Vision Science, University of New South Wales

593 — B0071 Clinical Measurement of Posterior Corneal Astigmatism in Normal Corneas. George Asimellis, Kentucky College of Optometry, University of Pikeville


595 — B0073 A comparison of refraction data from Hartmann-Shack wavefront and adaptive optics visual simulator to other established methods of refraction. Carles Otero, J. Tabernero, J. Kidd, S. Pardhan, Anglia Ruskin University
596 — B0074 Influence of Wavefront Aberration Order on Vision Prediction and Correction. Katheryn L. Kosteva1, R. A. Lilienthal2, J. J. Rozema3, C. Taylor4, D. Rio5. 1New England College of Optometry; 2Volantis, Department of Ophthalmology, Antwerp University Hospital; 3Faculty of Medicine and Health Sciences, University of Antwerp

597 — B0075 Optical adaptation to spherical aberration. Fan Yi, M. J. Collins, B. A. Davis. School of Optometry and Vision Science, Queensland Univ of Technology

598 — B0076 Isolated human crystalline lens spherical aberration: Experimental measurements and predictions from OCT-based geometry. Ashik Mohamed1, S. Williams2, E. Martinez-Enriquez1, A. De Castro1, M. Ruggeri1, B. Maceo Heilman4, Y. Chang1, N. Sruvani1, C. Rowaan1, A. Gonzalez2, S. S. Durgam1, A. Ho5, R. C. Augusteyn2, J. Parel4, S. Marcos5, F. Manns4, 1Ophthalmic Biophysics, I. V Prasad Eye Institute; 2School of Optometry and Vision Science, The University of New South Wales; 3Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine; 4Department of Biomedical Engineering, University of Miami College of Engineering; 5Visual Optics and Biophotonics Lab, Institute of Optics, Consejo Superior de Investigaciones Científicas; 6Brien Holden Vision Institute *CR

599 — B0077 Comparison of curvature-based and biometry-based methods for in vivo crystalline lens power calculation. Gabrielle Monterano Mesquita1, Y. Chang2, F. Cabor1, S. Williams2, G. Gregori1, A. Ho4, M. Ruggeri1, S. H. Yoo1, J. Parel4, F. Manns4. 1Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine; 2School of Optometry and Vision Science, The University of New South Wales; 3Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine; 4Department of Biomedical Engineering, University of Miami College of Engineering; 5Anne Bates Leach Eye Hospital, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine; 6Brien Holden Vision Institute; 7Quantitative Imaging Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine *CR

600 — B0078 Inter-subject variability of through-focus visual acuity with induced spherical aberration. Eloy A. Villegas1, L. Hervella1, P. Artal1. 1Laboratorio de Óptica, Universidad de Murcia; 2Voptica, SL *CR

601 — B0079 Testing the effect of ocular aberrations on perceived Transverse Chromatic Aberration. SARA AISSATI, M. Vinas, C. Benedi-Garcia, C. Dorronsoro, S. Marcos, Visual Optics & Biophotonics Lab, Instituto de Optica, CSIC

602 — B0080 Towards better visual image quality metrics for real world conditions. Gareth Hastings, J. D. Marsack, R. A. Applegate. College of Optometry, University of Houston, College of Optometry *CR

603 — B0081 Extremely high resolution ocular aberrometry up to 2.4 million points. Sergio Bonaque-Gonzalez1, J. M. Rodriguez-Ramos2, J. M. Trujillo-Sevilla3, O. Casanova-Gonzalez1, D. Carmona-Ballester1, M. J. Sicilia-Cabrera1. 1Wooptix S.L.; 2Departamento de Ingenieria Industrial, Universidad de La Laguna *CR


606 — B0084 Phase perception altered by long-term neural adaptation to habitual optics reduces neural binocular summation. Gennyoung Yoon1, C. J. Ng1, D. Tadin1, R. Blake1, M. Banks1. 1Flaum Eye Institute, University of Rochester; 2Center for Visual Sciene, University of Rochester; 3School of Optometry, UC Berkeley; 4Department of Psychology, Vanderbilt University

607 — B0085 Aberration estimation by computational adaptive optics to improve the quality of images containing structured illumination. Jyoti Paul, A. Lambert. School of Engineering and IT, The University of New South Wales


609 — B0087 The rabbit lens – a bionic extended depth of focus device? Thomas Stahnke3, S. Bohr1, H. Stolz1, R. F. Guthoff1, O. Stach1, K. Sperllicht1. 1Department of Ophthalmology, Rostock University Medical Center; 2Department of Ophthalmology, Rostock University Medical Center; 3Department of Ophthalmology, Rostock University Medical Center; 4Department of Psychology, University Rostock; 5Department of Life, Light & Matter, University Rostock; 1Institute of Physics, University Rostock

610 — B0088 Crystalline lens Gradient Index Profile in the guinea pig myopia model. Susana Marcos1, A. De Castro1, E. Martinez-Enriquez3, P. Perez-Merino1, M. Velasco-Ocana1, L. Revuelta1, S. A. McFadden1. 1Instituto de Optica, CSIC; 2Facultad de Veterinaria, Universidad Complutense de Madrid; 3University of Newcastle *CR

611 — B0089 Applying Retinal Image Simulations to the Marmoset Eye for Emmetropization Studies. Matuszcz T. Jaskulski1, R. Niesz1, X. Zhu1, A. Benavente-Perez1. 1School of Optometry, Indiana University; 2College of Optometry, SUNY

612 — B0090 Preliminary Analysis of a Novel Software-Based Method of Quantifying Metamorphopsia: A Pilot Study. Jacob Lijon1, A. Moshfeghi1. 1Keck School of Medicine of USC; 2Ophthalmology, USC Roski Eye Institute

West Exhibition Hall B0091-B0124
Sunday, April 28, 2019 1:00 PM-2:45 PM
Glaucoma
I37 Neuroprotection

Moderator: Daniel Sun

613 — B0091 Enhanced Retinal Ganglion Cell Axon Sparing in Mouse Ocular Hypertension Through RNA 3' -terminal Phosphate Cyclase (Rtica) Suppression. David Sretnavan1, Y. Song2, J. Du3. 1University of California San Francisco; 2Pathology & Laboratory Medicine, Children’s Hospital of Philadelphia

614 — B0092 Protection of retinal ganglion cells by kynurenic acid. Rooban Nahomi1, M. Nami2, J. Rankenberg2, S. Rake2, M. B. Pancheva1, D. L. Stankowski1, J. Houck1, G. Johnson1, P. MacLean1, R. H. Nagaraj1. 1Ophthalmology, University of Colorado; 2Social and Environmental Medicine, University Hospital LMU Munich; 3Division of Endocrinology, Metabolism and Diabetes, University of Colorado; 4Department of Pharmacology and Neuroscience, University of North Texas Health Science Center

615 — B0093 IGFBP1L1 protects against the neuronal and vision loss in IGFBP1L1- mice with ocular hypertension. Kin-Sang Cho1, X. Wei1, D. F. Chen1. 1Ophthalmology, Schepens Eye Research Institute, Massachusetts Eye and Ear; 2Geriatric Research Education and Clinical Center, Office of Research and Development, Edith Nourse Rogers Memorial Veterans Hospital; 3Ophthalmology, West China Hospital, Sichuan University *CR

616 — B0094 Upregulation of retinal gap junction protein Cx36 expression in glaucoma is mediated by reducing LNX2 degradation of Cx36. Xinbo Li1, Y. Wang1, X. Zhao1. 1Ophthalmology, Casey Eye Institute, OHSU; 2Institute of Pharmacology, Taishan Medical University; 3School of Optometry, Taishan Medical University

617 — B0095 Conditional TRPV4 ablation inhibits pressure-induced retinal inflammation in mouse glaucoma. Monika Lakhi, F. Vazquez-Chona, O. Yarishkin, D. Kriazj, John A. Moran Eye Institute, University of Utah

618 — B0096 Treatment with p38 Inhibitor BIRB 796 is Neuroprotective in Models of Glaucoma. Wendi S. Lambert, S. Pasini, C. R. Formichella, P. Ghose, V. Vest, B. Carlson, V. Yao, D. J. Calkins. Vanderbilt Eye Institute, Vanderbilt University Med Center *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.
619 — B0097 PKA inhibition protects optic nerve head astrocytes by modulating Akt/Bax phosphorylation and Mfn1/2 oligomerization against oxidative stress. Wonkyu Ju1, M. Shim1, K. Kim1. 1Hamilton Glaucoma Center/Ophthalmology, Univ of California San Diego; 2Ophthalmology, Duke University; 3Neuroscience, University of California San Diego

620 — B0098 The Lipoxin LXB, Reduces Mitochondrial Oxidative Stress in Retinal Ganglion Cells. izhar Livne-bar1, J. G. Flanagan1, K. Gronert1, J. M. Sivak1. 1University Health Network-Krembil Discovery Inst.; 2School of Optometry, University of California at Berkeley

621 — B0099 Analysis of extracellular vesicles released by Müller glial cells in vitro, William Lamb2, K. Eastlake2, G. Williams3, P. F. Khaw3, G. Limb3. 1University College London; 2NIHR Biomedical Research Centre for Ophthalmology; 3School of Pharmacy, UCL

622 — B0100 Upregulation of monocarboxylate transporter 2 protects retinal ganglion cells in glaucoma. Nata Pappenhaegen1, M. Harun-Or-Rashid1, A. Jassim Jaboori1, D. M. Inman1. 1College of Biomedical Sciences, Kent State University; 2College of Pharmacy, Northeast Ohio Medical University; 3Case Western Reserve University

623 — B0101 Effect of ripasudil on NMDA-induced retinal damage in mouse eye. Reiko Yamagishi2, M. Honjo2, M. Aihara2, C. Kii1. 1Dept of Ophthalmology Sch of Med, University of Tokyo; 2Southern Specialist Eye Centre


625 — B0103 Adenosine A3 receptor agonist prevents the loss of retinal ganglion cells in a glaucoma model. Raquel Botia1, M. Salinas-Navarro1, A. Gallego-Ortega1, C. Galaido-Romero1, M. Agudo-Barriuso1, A. F. Ambrosio1, M. Vidal-Sanz2, A. Santiago2, 1Coimbra Institute for Clinical and Biomedical Research (ICBR), Faculty of Medicine, University of Coimbra; 2CNC.IBILI Consortium, University of Coimbra; 3Departamento de Oftalmología, Facultad de Medicina, Universidad de Murcia; 4Instituto Murciano de Investigación Biosanitaria-Virgen de la Arrixaca (IMIB-Arrixaca), Murcia, Spain

626 — B0104 Donepezil, an anti-Alzheimer’s disease drug has the neuroprotective effect on RGCs derived from familial glaucoma patients’ iPS cells. Satoshi Inagaki1, M. Funato1, S. Nakamura1, M. Shimazawa1, H. Kaneko1, H. Hara1. 1Gifu Pharmaceutical University; 2Department of Clinical Research, National Hospital Organization, Nagara Medical Center

627 — B0105 Telmisartan, an angiotensin II type 1 receptor blocker, reduces IOP and prevents axon loss in mice with experimental glaucoma. Ralph J. Hazlewood1, J. Kuchtey1, R. W. Kuchtey2. 1Ophthalmology and Visual Sciences, Vanderbilt University Medical Center; 2Molecular Physiology and Biophysics, Vanderbilt University

628 — B0106 FK506 treatment promotes neuroprotection in organ transplanted glaucoma patients: a retrospective chart review. Valentina Reffatto, T. Williams, M. Schmitz-Brown, P. Gupta, G. Vizzeri, Ophthalmology and Visual Sciences, The University of Texas Medical Branch

629 — B0107 Proteomic Approaches to Study Cell Death Mechanisms in Human Stem Cell-Derived Retinal Ganglion Cells. Joseph L. Mertz1, X. Chamilong1, D. J. Clark1, K. C. Choi1, C. Berlinicke1, H. Zhang1, D. J. Zack1. 1Wilmer Eye Institute, Johns Hopkins Medical School; 2Department of Pathology, Johns Hopkins University

630 — B0108 The effect of mobile zinc on retinal ganglion cells death after glaucomatous optic nerve injury. zhe liu, L. Yangjiani, Y. Wei, J. Xue, Y. Zho, Y. Li. Zhongshan Ophthalmic Center, SYSU

631 — B0109 Evaluating iron chelation for retinal ganglion cell protection in mouse models of glaucoma. Albert Bargoud, Q. Cui, A. G. Ross, Y. Song, J. L. Duniaef, F.M. Kirby Center for Molecular Ophthalmology, Scheie Eye Institute, Perelman School of Medicine, University of Pennsylvania

632 — B0110 Sub-lethal hypoxic damage promotes primary retinal ganglion cell survival and VEGF may play an essential role. Wangrak Cha1, A. Hwang1, H. Bae1, J. Lee2, G. Sung3, C. Y. Kim3. 1Ophthalmology, Institute of Vision Research, Department of Ophthalmology, Yonsei University College of Medicine, Seoul, Korea; 2Siloam Eye Hospital, Seoul, Korea

633 — B0111 Deficiency of ALX/FPR2 Detersiorates Inner Retinal Injury in Experimental Chronic Ocular Hypertension. John G. Flanagan1, K. Gronert1, J. M. Sivak1, P. Cullen1, H. Liu2. 1Vision Science, School of Optometry, University of California Berkeley; 2Centre for Eye Research Australia, Royal Victorian Eye and Ear Hospital; 3Department of Vision Science, University Health Network, Krembil Research Institute; 4Ophthalmology and Vision Science, University of Toronto, Vision Science Research Program

634 — B0112 Human Umbilical Cord Mesenchymal Stem Cells protect against ocular hypertension induced retinal injury via toll-like receptor 4 (TLR4) pathway. Shangli Ji1, J. Xiao1, Z. Li1, S. Tang2. 1Aier Eye Institute; 2Aier School of Ophthalmology, central south university; 3central south university

635 — B0113 Novel Modulation of Endogenous Tau protein by Shp2 tyrosine Phosphatase in the Retina. Vivek Kumar Gupta1, N. Chitranshi, K. Pushpitha1, M. Mirzaei1, 2, S. L. Graham1. 1Faculty of Medicine and Health Sciences, Macquarie University; 2Faculty of Science and Engineering, Macquarie University

636 — B0114 siRNA Downregulation of RhoA Expression Reduces Apoptosis of Oxidative Retinal Ganglion Cells. Qian Liu, H. Li, C. Liu, Henan Eye Institute; Henan Eye Hospital; Henan Provincial People’s Hospital

637 — B0115 Creating Gene Therapy With SIRT1 Signaling for Neuro-protection in Optic Nerve Disease. Ahmara G. Ross1, 2, D. McDougald3, R. Sulaimankutty1, K. Dine1, K. S. Shindler1. 1Ophthalmology, University of Pennsylvania; 2Neurology, Hospital of University of Pennsylvania

638 — B0116 Ocular Hypertension Model Induced by Episcleral Vein Cauterization for Screening Retinal Ganglion Cells Neuroprotection Therapies in Brown Norway Rats. Lichun Zhong, Ocular Science Department, Toxikon Corporation

639 — B0117 A novel model of experimental glaucoma in the marmoset. Stewart A. Bloomfield, S. Kumar, A. Benavente-Perez, S. Viswanathan, A. Akopian, Graduate Center for Vision Research, State University of New York College of Optometry *CR

640 — B0118 Highly Accurate, Fully-Automated Batch Processing of Retinal Ganglion Cell Counts from Retinal Flattmounts. Robert J. Casson1, C. Guymer1, G. Chadlow1, J. P. Wood1, L. Demp1. 1Ophthalmic Research Laboratories, University of Adelaide; 2Southern Launch

641 — B0119 Melanopsin-Containing Subpopulation Analysis of Retinal Ganglion Cells in Culture. Suqian Wu, X. Chen, X. Mo, Eye, Ear, Nose & Throat Hospital, Fudan University

642 — B0120 Protects effects of edible plant, Lithospermum erythrorhizon on oxidative stress-induced retinal degeneration in vitro and in vivo. Sang Hoon Jung1, 2, T. Kang1, K. Kim2, W. Lee1, Y. Kim1, J. Jung1, S. Yang1, T. Kim1. 1Natural Products Research Center, Korea Inst of Sci & Tech; 2Division of Bio-Medical Science &Technology, KIST School, Korea University of Science and Technology; 3J’s Retina Clinic; 4Department of Biological Sciences, Pusan National University

643 — B0121 The Effects of KR-67607 on Intraocular Pressure and Glaucomatous Optic Neuropathy. Jee Young Kim1, Y. Kang2, Y. Shin2, E. Park2, J. Lee1, J. Yang1, 2. 1BIONETIX, INC; 2T2B infrastructure Center for Ocular Disease, Inje University Busan Paik Hospital; 3Department of Ophthalmology, Inje University College of Medicine
644 — B0122 Electrical Fields Direct Retinal Ganglion Cell Axon Growth. Kimberly Gokofski1, M. Zhao1. 1University of Southern California; 2Ophthalmology and Dermatology, University of California Davis


646 — B0124 Activity-dependent molecular programs for optic nerve regeneration. Qing Wang1, I. Harathyunyan1, S. Carmichael1. 1Ophthalmology, UCLA Stein Eye Institute; 2Neurology, UCLA

West Exhibition Hall B0125-B0161

Sunday, April 28, 2019 1:00 PM-2:45 PM

Glucoma

138 Neurodegeneration

Moderator: Alejandra Bosco

647 — B0125 Survival of aRGC and ipRGC in a mouse model of glaucoma. Sari Miyachi1,2, K. Namekata1, A. Kimura1, X. Guo1, A. Matsuda2, A. Murakami1, T. Harada1. 1The Visual Research Project, Tokyo Metropolitan Institute of Medical Science; 2Department of Ophthalmology, Juntendo University School of Medicine *CR

648 — B0126 All classes of melanopsin-expressing retinal ganglion cells are protected from degeneration in early ocular hypertension. Yang Zhang1, A. Bhandari2, A. Stothert1, J. C. Smith1, M. J. Van Hook1. 1Creighton University School of Medicine; 2Department of Ophthalmology & Visual Sciences, University of Nebraska Medical Center, 3Truhslen Eye Institute

649 — B0127 Timeline of retinal ganglion cell loss and complement response in β1b-CTGF glaucoma mice. Sabrina Reinehr1, J. Dörner2, D. Koch1, C. Voss1, R. Fuchshofber1, B. Dick1, S. C. Joachim1. 1Experimental Eye Research Institute, Eye Hospital; 2Institute of human anatomy and embryology, University of Regensburg

650 — B0128 POU6f2 modulates corneal thickness and susceptibility to injury in directionally selective off-retinal ganglion cells. Eldon E. Geisert, R. King, Y. Li, J. Wang, Ophthalmology, Emory University


652 — B0130 Methods to improve and quantify retinal integration of transplanted stem cell-derived retinal ganglion cells for optic nerve regeneration. Thomas V. Johnson, C. Tuffy, J. L. Mertz, H. A. Quigley, D. J. Zuck, Wilmer Eye Institute, Johns Hopkins University

653 — B0131 mTOR Signaling and Human Retinal Ganglion Cell Development and Function. Pooja Teotia, M. J. Van Hook, I. Ahmad, Ophthalmology & Visual Sciences, University of Nebraska Medical Center

654 — B0132 Switching from the protoxosomal to the lysosomal pathway for MQC during human RGC differentiation is essential for RGC survival. Arupranat Das1, C. Wenger1, C. Berlinicke2, N. Marsh-Armstrong2, D. J. Zuck1. 1Ophthalmology, Johns Hopkins School of Medicine; 2Ophthalmology and Vision Sciences, University of California

655 — B0133 Deletion of App9 in mice enhances retinal ganglion cell death after optic nerve injury. Sotaro Mori, T. Kurimoto, A. Miki, S. Kusuhara, M. Nakamura, Ophthalmology, Kobe University Graduate School of Medicine *CR

656 — B0134 Downstream transcriptional control of retinal ganglion cell apoptosis after axonal injury. Stephanie B. Syc-Mazurek1, H. Yang2, G. R. Howell2, R. T. Libby1. 1Ophthalmology, University of Rochester; 2The Jackson Laboratory

657 — B0135 Neuronal Nogo-A upregulation promotes retinal ganglion cell axon dystrophy: a new mechanism underlying glaucoma-induced optic nerve axonopathy? Léa Rodrigues1, S. Joly1, J. B. Mdzomba1, D. Dalkara1, V. Pernet1. 1Ophthalmology, Université Laval - CHUL; 2Institut de la vision

658 — B0136 Wildtype gene protects against deficits in visual acuity and axonal transport caused by ocular hypertension. Silvia Pastini, M. L. Risner, M. Cooper, W. S. Lambert, K. B. D’Alessandro, D. J. Calkins, Ophthalmology and visual sciences, Vanderbilt University Medical Center

659 — B0137 Loss of mature oligodendrocytes after chronic intraocular pressure elevation in the PTP-Meg2 glaucoma mouse model. Jacqueline Reinhard1, S. Wiemann1, M. Wulf1, S. C. Joachim1, A. Faisner1. 1Cell Morphology and Molecular Neurobiology, Ruhr-University Bochum; 2Experimental Eye Research Institute, University Eye Hospital, Ruhr-University Bochum

660 — B0138 Mechanisms underlying early-stage changes in cellular function of optic nerve head astrocytes and retinal ganglion cells during oxidative stress as novel targets for neuro- and gliprotection. Peter Koilen1, J. Means2, R. Duncan3. 1Biomedical Sciences, University of Missouri-Kansas City, School of Medicine; 2Ophthalmology/Vision Research Center, University of Missouri-Kansas City, School of Medicine

661 — B0139 Endothelin Signaling in Glaucomatous Neurodegeneration. Olivia J. Marola1, S. B. Y. Mazurek2, G. R. Howell2, R. T. Libby1. 1Ophthalmology, University of Rochester; 2The Jackson Laboratories

662 — B0140 Extracellular Matrix Tissue Content of the Neuroretinal Rim differs in Healthy and Glaucomatous Eyes. Nimesh B. Patel, L. Carter-Dawson, R. S. Harwerth, University of Houston

663 — B0141 Loss of opticin disrupts mitochondrial networks and morphology. Henry Tseng2, E. Sun1, J. Powers, C. Chen, Duke Eye Center

664 — B0142 Developmental Regulation of Mitochondrial Axonal Transport in Rat Retinal Ganglion Cells. Satoshi Yokota1, S. Shah2, J. L. Goldberg1. 1Byers Eye Institute, Stanford University; 2School of Medicine, University of California, San Diego

665 — B0143 Mice with mutation of the mitochondrial gene cytochrome c oxidase 1 have impaired visual function and retinal ganglion cell loss. Qi N. Cui1, A. Bargoud1, Y. Song1, K. N. Keller2, D. G. Murdock2, J. L. Duniaiev1, D. C. Wallace1. 1University of Pennsylvania; 2Children’s Hospital of Philadelphia

666 — B0144 Short-term Cerebrospinal Fluid Pressure Reduction Model Mimic Optic Neuropathy Disease —— Beijing Intracranial and Intraocular Pressure (iCOP) Study. Ningli Wang1, X. Li2. 1Ophthalmology, Beijing Tongren Eye Center; 2Department of Ophthalmology, Beijing Shijitan Hospital, Capital Medical University


668 — B0146 Human primary retinal cells as an in-vitro cell culture model for investigating defective signalling caused by OPTN mutants associated with glaucoma. Zubervasim Sayyad1, S. Vishwakarma1, T. V. Dave2, I. Kaur2, R. Vegesna1, G. Sivarup1. 1CSIR-Centre for Cellular and Molecular Biology; 2L. V. Prasad Eye Institute

669 — B0147 Pre-degenerative Accumulation of Superoxide and Hydroxide in a Chronic Mouse Model of Glaucoma. Assra H. Jassim1, D. M. Innan2. Pharmaceutical Sciences, Northeast Ohio Medical University

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660 — B0148 Frequent non-intact axons and extensive extracellular debris in the optic nerve head at very early stages of non-human primate experimental glaucoma. Nicholas Marsh-Armstrong, C. Hou, C. Stowell, I. Williams, E. Bashong, H. Lockwood, J. Reynaud, M. Ellisman, C. F. Burgoyne, Ophthalmology, University of California Davis; 2Optic Nerve Head Research Laboratory, Devers Eye Institute; 3Legacy Research Institute; 4National Center for Microscopy and Imaging Research, University of California San Diego

661 — B0149 Live imaging of debris clearance in the optic nerve of Xenopus laevis. Lindsay Fague, A. Mikhaliova, N. Marsh-Armstrong, Ophthalmology, University of California, Davis

662 — B0150 Microglial activation and interaction at synaptic sites in experimental glaucoma. Alfred K. Yu, K. Mai, E. Choe, A. Tran, L. Della Santina, Y. Ou, Ophthalmology, University of California, San Francisco

663 — B0151 Neuro-inflammation and degeneration in the Optic Nerve Head (ONH) in a Genetic Feline Model of Glaucoma. Kazuya Oikawa, J. A. Kilian, N. Ellinwood, G. J. McLellan, 1, 2Ophthalmology and Visual Sciences, University of Wisconsin-Madison; 3Surgical Sciences, University of Wisconsin-Madison; 4Animal Sciences, Iowa State University

664 — B0152 Increased infiltration of immune cell subsets and altered soluble factor profile in aqueous humor of glaucoma patients correlates with disease severity. Archana P. Nair, G. R. Sahul, S. Tejwani, A. Ghosh, S. Sethu, 1, 2GROW Research Laboratory, Narayana Nethralaya Foundation; 3Manipal Academy of Higher Education; 4Glaucoma Services, Narayana Nethralaya

665 — B0153 Elevated Intraocular Pressure (IOP) Induced Optic Nerve Head (ONH) Gene Expression Responses: Two Experimental Models and Two Analysis Platforms. Diana C. Lozano, H. Jayaram, T. Choe, W. Cepurna, S. Tehrani, E. Johnson, J. C. Morrison, 1, 2Ophthalmology, Oregon Health & Science University; 3NIHR Moorfields Biomedical Research Centre

666 — B0154 Correlation between RGC loss and optic nerve crush force impulse in mice established with an instrumented forceps. Xiaorong Liu, L. Feng, I. Shindli, J. B. Troy, L. Saggere, 1, 3Biological Engineering, Northwestern University; 2Mechanical and Industrial Engineering, University of Illinois at Chicago; 3Ophthalmology, Northwestern University

667 — B0155 A novel inducible and reversible mouse glaucoma model: Silicone Oil-Induced Ocular Hypertension Under-detected (SOUH). Jie Zhang, L. Li, H. Huang, H. Webber, S. Li, P. H. Tang, V. B. Mahajan, Y. Sun, M. Zhang, Y. Hu, 1Ophthalmology, Stanford School of Medicine; 2Ophthalmology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology


679 — B0157 Automated analysis of axons and glia in a Brown Norway rat model of glaucoma, comparison of QuPath to AxonJ. Barbara A. Mysona, S. Segar, J. Zhao, K. E. Bollinger, 1, 2Cell Biology and Anatomy, Augusta University; 3Ophthalmology, Medical College of Georgia; 4James and Jean Culver Vision Discovery Institute

680 — B0158 Serum autointerbody biomarkers of neuroinflammation and neurodegeneration in glaucoma. Daniel M. Yu, M. V. Brahmanathi, M. B. Abou-Donia, H. Tseng, 1Department of Ophthalmology, Duke University Eye Center; 2Department of Pharmacology and Cancer Biology, Duke University School of Medicine

681 — B0159 Drebirin plasma levels elevated with RGCs axonopathy in glaucoma patients. GAN YIJING, Z. CHI, J. QU, Wenzhou Medical University

682 — B0160 Role of Central Insulin Resistance in Glaucoma. Muneeb A. Faqi, T. Dadar, T. Sengupta, M. Nath, T. Velpandian, K. Chari, 1, 2Department of Ophthalmology, New York University School of Medicine; 3Dr. Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences; 4Department of Physiology, All India Institute of Medical Sciences; 5Department of Ocular Pharmacology, Dr. Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences; 6Department of Radiology, New York University School of Medicine

683 — B0161 Glucocorticoid-induced glaucomatous neurodegeneration is associated with demyelination of optic nerve axons and infiltration of immune cells, prathbhavathi maddineni, R. Kasetti, C. X. Zheng, M. Lin, S. J. Moster, C. Schmidt, M. Moster, M. J. Pro, 1Glaucoma, Wills Eye Hospital, China Academy of Chinese Medical Sciences

684 — B0162 Prediction for Effectiveness of Unilateral Selective Laser Trabeculoplasty for the Untreated Fellow Eye of Primary Open-angle Glaucoma Patients. Xiang Fan, L. Wu, Peking University Eye Center, Peking University Third Hospital

685 — B0163 Do Concurrent Topical Medications Influence the Extent of IOP Reduction with SLT? Madeleine Puig, M. Montelongo, W. E. Sponek, 1University of Texas Health Science Center San Antonio; 2School of Medicine, Universidad Autonoma de Guadalajara; 3International Fellow, Sponek Foundation; 4Glaucoma, WESMIDPA; 5Vision Sciences/Biomedical Engineering, UIW/UTSA

686 — B0164 Withdrawal Control efficacy on 24-hour intraocular pressure in primary open-angle glaucoma using selective laser trabeculoplasty and prostaglandin analogue. Xiaobin Xie, J. Feng, M. Wang, Eye Hospital, China Academy of Chinese Medical Sciences


688 — B0166 West Indies Glaucoma Laser Study (WIGLS). 6 Factors Associated With 3-Year Treatment Success Using Selective Laser Trabeculoplasty in Afro-Caribbean Patients with Open-Angle Glaucoma. Balamuruganam K. Goundappan, D. Burt, H. Shillingford-Ricketts, T. Reali, 1University of Pittsburgh; 2Eye Care St. Lucia; 3Harlsbro Medical Center; 4Ophthalmology and Visual Sciences, West Virginia University Eye Institute


690 — B0168 Is Capacity for Normalization of Optic Nerve Function After Selective Laser Trabeculoplasty Dependent on Degree of Retinal Nerve Fiber Layer thinning, Optic Nerve Head Cupping, or Hypertension? Sabrina Chen, L. Nguyen, A. Brahmbhatt, K. Narain, 1South Bay Retina; 2Johns Hopkins University

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691 — B0169  Is Severity of Glaucomatous Visual Field Loss Associated with Short-term IOP Lowering Effect of SLT? Mario Montelongo1, R. Trevino2, W. E. Sponsel1, 2 1School of Medicine, Universidad Autonoma de Guadalajara; 2UIW Rosenberg School of Optometry, Biomedical Engineering, UTSA; 3Vision Sciences, University of the Incarnate Word

692 — B0170  A Retrospective Chart Review Comparing Efficacy of Selective Laser Trabeculoplasty applied to 360 degrees vs 180 degrees of the angle. Abraham Nirappel1, D. Sola-Valle2,3 1Glaucoma, Mass Eye & Ear; 2University of Illinois; 3Consulta de Especialidad, Fundación Hospital Nuestra Señora de Guadalajara

693 — B0171  Comparison between nasal and temporal 180-degree selective laser trabeculoplasty in open-angle glaucoma: short-term results. Jayser S. Fauld1, C. Senger2, C. De Moraes3, M. Rodrigues4 1Ophthalmology, Ribeirão Preto Medical School - University of São Paulo; 2Ophthalmology, Edward S. Harkness Eye Institute, Department of Ophthalmology, Columbia University Medical Center, New York

694 — B0172  Laser in Glaucoma and Ocular Hypertension Trial (LIGHT) in China - An Unmasked, Pragmatic Randomized Controlled Trial: Design and Baseline Characteristics. Yangfan Yang1, Y. Jiang1, M. Lin1, X. Liu2, Y. Fan1, N. Nathwani3, P. Liu1, J. Huang1, Y. Ling1, Y. Zhong1, X. Zhang2, Y. Zhuo2, G. Gazzard2, M. Yu1 1Zhongshan Ophthalmic Center, Sun Yat-sen U.; 2School of Medicine, University of Hong Kong; 3University of Hong Kong


696 — B0174  Efficacy of Micropulse Laser Trabeculoplasty in Open Angle Glaucoma. Antonella Clemente1, C. Tomà1, S. Vujosevic1, c. padovani2, d. cillà1, 2Eye Unit, University Hospital Maggiore della Carità, Novara; 3Science of health, Università del Piemonte Orientale

697 — B0175  Post-operative one hour intraocular pressure spikes and long term pressure efficacy in micropulse laser trabeculoplasty (MLT) vs selective transcleral trabeculoplasty (SLT). Catherine Thomas1, D. Darwish2, M. Giovingo1, A. Mannina1 1Ophthalmology, Cook County Hospital; 2University of Illinois

698 — B0176  Efficacy and safety of transcleral micropulse laser in the treatment of glaucoma refractory to treatment. Lucia Delgadillo1, G. Diez1, J. Ortega1 1Consulta de Especialidad, Fundación Hospital Nuestra Señora de la Luz; 2Glucoma, Fundación Hospital Nuestra Señora de la Luz

699 — B0177  Short-term outcomes of MicroPulse Trans-scleral Cyclophotocoagulation in Korean patients. Jaekeun Chung, J. Jung, Y. Yoo, Department of Ophthalmology, Kim’s Eye Hospital

700 — B0178  Micropulse Transcleral Cyclophotocoagulation in Refractory Glaucoma. 6 month follow-up. Clarisa Del Hierro, D. Alvarez Ascencio, C. Prado Larrea, J. Jiménez Román, Asociacion Para Evitar la Ceguera en Mexico

701 — B0179  Pilot Study Comparing Transcleral Cyclophotocoagulation in Chinese using Short and Long Duration Protocol. Jonathan Chan1, I. Chow1 1Department of Ophthalmology, University of Hong Kong; 2University of Hong Kong

702 — B0180  Outcomes of Micropulse Cyclophotocoagulation in Adult Glaucoma Patients. Eric Grishani1, S. Hooshmand1, J. A. An1, 2 1University of Missouri; 2Ophthalmology, Mason Eye Institute


704 — B0182  Three-Year Retrospective Study of Treatment with Micropulse Cyclophotocoagulation as a Primary Procedure for Neovascular Glaucoma. Brett Breshears1, T. D. Patrianakos2, M. Giovingo2 1Midwestern University; 2University of Missouri; 3University of Illinois

705 — B0183  Intraocular pressure reduction profile in patients with refractory glaucoma submitted to micropulse transscleral cyclophotocoagulation. Larissa Ibrahim1, A. Chaves2, T. Kanadani3, S. Dorairaj4, T. Prata1, F. Kanadani1 1Hospital Medicina dos Olhos; 2Instituto de Olhos Ciências Médicas; 3Mayo Clinic

706 — B0184  Pars plicata versus pars plana application of micropulse transscleral cyclophotocoagulation. Sören Waiibel, R. Herber, L. E. Pillunat, K. R. Pillunat, Universitätsaugenklinik Dresden

707 — B0185  Efficacy of Transcleral Diode Cyclophotocoagulation in a sub-Saharan Rural Population with Severe Glaucomatous Ocular Hypertension. vincent m. sakà1, 2, R. Chitete1, S. Sullivan1, A. Amin1, M. Montelongo1, W. E. Sponsel1 1Sponsor Foundation/Child Legacy International; 2Ophthalmology, Eyes of Africa Clinic, Child Legacy Hospital; 3Ophthalmology, New York Medical College; 4School of Medicine, Universidad de Guadalajara; 5Vision Sciences/Biomedical Engineering, UIW/UTSA

708 — B0186  Effectiveness of Laser Goniopuncture as an Adjuvant Therapy to Non-Penetrating Deep Sclerectomy for Lowering Intraocular Pressure. Scott Sullivan1, A. Amin1, M. Montelongo1, W. E. Sponsel1 1Ophthalmology, New York Medical College; 2School of Medicine, Universidad Autonoma de Guadalajara; 3Glucoma, WESMDPA; 4Vision Sciences/Biomedical Engineering, UIW/UTSA

709 — B0187  Bubble-Free Gonioscopy II. Frederick M. Kapetansky, N. B. Dusseau, Ophthalmology, The Ohio State University

West Exhibition Hall B0188-B0206

Sunday, April 28, 2019 1:00 PM-2:45 PM
Anatomy and Pathology/Oncology

140 Clinical Melanoma. Therapy and Complications

Moderator: Dan Gombos

710 — B0188  Incidence and features of uveal melanoma in a closed, managed care USA population. Gena Damento1, R. B. Melles2, I. Pan1, M. J. Seider1 1Ophthalmology, California Pacific Medical Center; 2Kaiser Permanente Northern California

711 — B0189  Scope of Retinal Disease-Related Inpatient Ophthalmology Consultations at a National Cancer Institute Designated Comprehensive Cancer Center. M. Ali Khan1, P. P. Le1, A. Huang1, O. L. Lee1, J. A. Irvine1, Ophthalmology, Doheny Eye Institute / UCLA

712 — B0190  Clinicopathologic Features of Rare Non-Pigmented Ciliary Body Adenomas: a case series and literature review. Richard K. Lee1, E. Han1, P. Liu2, J. Ma2, P. Monsalve1, S. Dubovy1 1Bascom Palmer Eye Institute; 2Lanchozu University Second Hospital


714 — B0192  A numerical model to calculate the role of the vitreous humor viscosity in laser-induced thermal damage in choroidal melanomas. Alcides Fernandez1, O. P. Garcia1, V. L. Torres2, P. R. Lyra1, R. F. Lima1 1Ophthalmology, Emory University; 2DEMEC, UFPE

715 — B0193  Fractionated Stereotactic Radiosurgery for Very Large (T4) Posterior Uveal Melanoma(UUM): 1-year and 2-year Results, Alexander de Castro-Abeger1, D. Ayala-Peacock1, G. Luo2, G. Twork1, A. Daniels1 2 1Vanderbilt Eye Institute; 2Vanderbilt University Medical Center

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717 — B0195 “Doughnut” shaped brachytherapy plaque for the treatment of iris melanoma. Vidal Soberón1, Y. Yang, J. Lambi1, P. E. Chow1, T. A. McCannel2. Retina, Asociacion para evitar la ceguera en Mexico; 2Retina/Oncology, Jules Stein Eye Institute; 3Radiation Oncology, UCLA

718 — B0196 Risk factors for chronic pain following plaque brachytherapy for uveal melanoma and impact of chronic postoperative pain on quality of life. David A. Edwards1, J. Burriss2, A. Daniels2, 3. Anesthesiology, Vanderbilt; 4Ophthalmology & Visual Sciences, Vanderbilt; 5Vanderbilt-Ingram Cancer Center; Vanderbilt *CR

719 — B0197 Two year results of a phase 1b/2 open-label clinical trial of AU-011 for the treatment of small to medium choroidal melanomas. Tara A. McCannel1, A. Bhavsar2, A. Capone1, H. Demirici1, I. K. Kim1, B. Marr2, C. Rich1, A. C. Scheffer2, C. L. Shields2. 1Ophthalmology, Stein Eye and Doheny Eye Institutes; 2The Retina Center; 3Beaumont Hospital; 4Kellogg Eye Center; 5Massachusetts Eye and Ear Infirmary; 6Columbia; 7Wills Eye; 8Texas Retina; 9Aura Biosciences *CR

720 — B0198 Blue wave fundus autofluorescence imaging following ruthenium-106 brachytherapy for choroidal melanoma. Almut Bindevwald-Wittich1, 2, T. Swenshon1, E. Carasco1, G. D. Willersding1. 1AugenAllianz-Zentren Heidenheim; 2Department of Ophthalmology, University of Bonn; 3Department of Ophthalmology, DRK Kliniken Berlin Westend

721 — B0199 Prophylactic Intravitreal Bevacizumab after Plaque Radiotherapy for Uveal Melanoma: Analysis of 1311 Eyes of 1310 Patients by Age. Michael Chang1, L. A. Daulvir2, L. S. Lim1, M. Mazloumi1, A. Yaghy1, A. Mashayekhi1, C. L. Shields1. 1Ocular Oncology, Wills Eye Hospital; 2Ophthalmology, Mayo Clinic

722 — B0200 Randomized Trial of Monthly versus PRN intravitreal injection of ranibizumab with and without PRN targeted panretinal photocoagulation (TRP) for radiation-induced macular edema: RRR 2-year Anatomic Outcomes. Amy C. Scheffer1, 2, R. Anand1, T. Fuller1, D. Fuller1, R. S. Kim1, 2. 1Ophthalmology, Retina Consultants of Houston; 2Ophthalmology, Blanton Eye Institute; 3Texas Retina Associates; 4University of Texas Health Science Center at Houston *CR

723 — B0201 Randomized Trial of Monthly versus PRN intravitreal injection of ranibizumab with and without PRN targeted panretinal photocoagulation (TRP) for radiation-induced macular edema: RRR 2-year Visual Acuity Outcomes. Ryan Kim1, 2, R. Anand1, D. Fuller1, T. Fuller1, M. Bretiana1, A. C. Scheffer2, 3. 1McGovern Medical School, University of Texas Health Science Center; 2Retina Consultants of Houston; 3Texas Retina Associates; 4Blanton Eye Institute, Houston Methodist Hospital *CR

724 — B0202 Serious Pigment Epithelial Detachments Associated with Choroidal Nevi. Kirk K. Hou, V. Soberon, T. A. McCannel, Jules Stein Eye Institute

725 — B0203 Photoreceptor Morphology and Correlation with Subretinal Fluid Chronicity Associated with Choroidal Neovus. Antonio Yaghy1, L. A. Daulvir1, 2, M. Yu1, M. Mazloumi1, C. L. Shields1. 1Ocular Oncology Service, Wills Eye Hospital; 2Ophthalmology, Mayo Clinic

726 — B0204 Decreased retinal sensitivity overlying melanocytic choroidal lesions evaluated by microperimetry. Rodrigo Jorge1, M. Labarrere1, A. Messia1, Z. Correa1. 1Ophthalmology, Ribeirao Preto Medical School, University of Sao Paulo; 2Ophthalmology, Wilmer Eye Institute, Johns Hopkins Medicine

727 — B0205 Quantitative autofluorescence characteristics of choroidal nevi. Marco Mazzola1, 2, E. Semenova1, W. Wei1, R. Smith1, P. T. Finger1. 1Department of Medicine and Surgery, University of Insubria Varese-Como; 2New York Eye and Ear Infirmary of Mount Sinai; 3Ichan School of Medicine at Mount Sinai

728 — B0206 The SON Study: preliminary results from the Italian series. Veronica Forlani1, C. Preziosa1, A. T. Fung2, 3, G. Staurenghi1, A. Invernizzi1, M. Pellegrini1. 1Eye Clinic, Department of Ophthalmology, Luigi Sacco Hospital; 2Ophthalmology, Westmead Hospital; 3Faculty of Medicine and Health Sciences, Macquarie University Hospital *CR

729 — B0207 Phenotypic plasticity in uveal melanoma spheroids. Helen Kalirai, L. Djirackor, S. E. Coupland. Molecular and Clinical Cancer Medicine, University of Liverpool

730 — B0208 A 3D spheroid model of Uveal Melanoma (UM), Luna Djirackor1, H. Shahaldour1, S. E. Coupland2, H. Kalirai2. 1Molecular and Clinical Cancer Medicine, University of Liverpool; 2School of Medicine, Western Sydney University

731 — B0209 Characterization of uveal melanoma cell lines grown in three-dimensional culture systems. Alicia A. Goyeneche, J. Lasiste, P. Bustamante, J. Burnier; M. N. Burnier, The MUHC-McGill University Ocular Pathology & Translational Research Laboratory

732 — B0210 The effect of spliceosome inhibitor E7107 on SF3B1+ uveal melanoma cell lines. Wojtek Drabarek1, J. van Riet1, F. H. van de Werken1, A. de Kleijn1, E. Klic1. 1Clinical genetics/ Ophthalmology, Erasmus Medical Center; 2Urology, Erasmus Medical Center; 3Cancer Computational Biology Center, Erasmus Medical Center; 4Clinical Genetics, Erasmus Medical Center; 5Ophthalmology, Erasmus Medical Center

733 — B0211 Blockade of MDM2 Nuclear Localization Signal as a Novel Anti-Metastatic Therapeutic Approach. Andrew Irvine1, Z. K. Goldsmith1, C. Ahwl, V. M. Morales2, 3, M. W. Wilson1. 1Hamilton Eye Institute, Ophthalmology, UTHSC; 2Microbiology, Immunology, and Biochemistry, UTHSC; 3Surgery, St. Jude Children’s Research Hospital

734 — B0212 Infectious knockdown of CREB and HIF-1 for the treatment of metastatic uveal melanoma. Shahar Frenkel1, A. Voropaev2, 3, M. Gimelshein1, 4, D. Sheeroi1, 2, A. Honigman1. 1Ophthalmology, Hadassah-Hebrew Univ Med Ctr; 2Biochemistry and Molecular Biology, IMRIC, The Hebrew University-Hadassah Medical School *CR

735 — B0213 Cell population having a resistance to melanoma antigen specific T cell in uveal melanoma. Kinya Tsabota, Y. Usu, H. Goto, opthalmology, Tokyo Medical University

736 — B0214 Inflammatory profile of human choroidal nevi. Melissa T. Wegkamp1, 2, M. J. Jager1, M. Vader1, M. C. Madigan1, 3. 1Ophthalmology, Leiden University Medical Centre; 2Save Sight Institute, Uni Sydney; 3Optometry and Vision Science, UNSW

737 — B0215 Clinical relevance of c-Rel/p50 heterodimer in the tumour microenvironment of uveal melanoma. Seema Kashyap1, M. K. Singh1, L. SINGH2, N. PUSHKHER1, S. Sen1, S. Bakhri1, R. Meel1, B. Chawla1, K. Chosodi1. 1Ophthalmology, Dr.R.P. Centre for Ophthalmic Sciences, All India Institute of Medical Sciences; 2BioSciences, Jamia Millia Islamia; 3Ophthalmology, Dr.R.P.Centre for Ophthalmic Sciences; 4Medical Oncology, All India Institute of Medical Sciences; 5Biochemistry, All India Institute of Medical Sciences

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738 — B0216 Co-expression of p65 and p50 proteins with the inflammatory parameters and its association with patient outcome in Uveal Melanoma. Mithalekh K. Singh1, S. Kashyap2, L. Singh3, N. PUSHKER1, S. Sen4, R. Meel2, K. Chosdol5, S. Bakshi3, J. Kaur6, B. Chawla1. 1Ocular Pathology, Dr.R.P.Centre for Ophthalmic Sciences, AIIMS; 2Biosciences, Jamia Millia Islamia; 3Ophthalmology, Dr.R.P.Centre for Ophthalmic Sciences, AIIMS; 4Biochemistry, All India Institute of Medical Sciences; 5Medical Oncology, IRCI, All India Institute of Medical Sciences; 6Ocular Biochemistry, Dr.R.P.Centre for Ophthalmic Sciences, AIIMS

739 — B0217 Influence of GNAQ or GNA11 mutations on HLA expression in Uveal Melanoma. Christiaan Weeghel1, A. P. Wierenga2, M. Versluis3, G. P. Luyn4, M. J. Jager5, Ophthalmology, Leiden University Medical Center

740 — B0218 Soluble HLA in the aqueous humour as risk factor or a marker of inflammation in uveal melanoma. Annemijn P. Wierenga1, G. Gezzin2, G. van Beelen3, M. Ekman4, M. Versluis3, R. M. Verdijk5, S. van Duinen6, M. Marinkovic7, G. P. Luyn4, M. J. Jager5. 1Ophthalmology, Leiden University Medical Center; 2Department of Immunohematology and Blood Transfusion, Leiden University Medical Center

741 — B0219 Regulation of PD-L1 in uveal melanoma. Zahra Sour1, A. P. Wierenga2, M. Spruyt-Gerrisette3, M. Ekman4, M. J. Jager5. 1Ophthalmology, Leiden University Medical Center; 2Department of Immunohematology and Blood Transfusion, Leiden University Medical Center

742 — B0220 Efficacy of immune checkpoint inhibitors for treating uveal melanoma metastases. Monica Osenreiter1, A. Lane2, J. V. Cohen1, R. J. Sullivan1, I. K. Kim3, E. S. Gragoudas4. 1Massachusetts Eye and Ear Infirmary; 2Massachusetts General Hospital *CR


744 — B0222 Beta-blocker: a potential adjuvant therapy for Uveal Melanoma. Eva Jin1, P. Bastamante2, D. Miyamoto3, J. Lassite4, A. A. Goyeneche5, M. N. Burnier6, J. Burnier6. 1Cancer Research Program, McGill University; 2Medical school Dermatology, Sao Paulo University; 3MUHC McGill University Ocular Pathology & Translational Research Laboratory, McGill University; 4Pathology, McGill University

745 — B0223 The Role of Cytosine-5 RNA Methylation in Regulating Uveal Melanoma Cell Proliferation and Migration. Dongsheng Yan1, G. Luo2, Y. Zhao3, D. Hu4, School of Ophthalmology and Optometry, Wenzhou Medical University; 2The New York Eye and Ear Infirmary, New York Medical College

746 — B0224 Cancer stem cells markers in primary uveal melanoma. Isabela V. Valle1, M. Kondoff2, A. Laskaris3, T. Ferrier4, S. Parent4, J. Burnier5, M. N. Burnier6. The MUHC-McGill University Ocular Pathology & Translational Research Laboratory

747 — B0225 Validation of Choroid from Uveal Melanoma Eyes as Control Tissue for Proteomic Studies. Geong-Fu Jang1, J. S. Crabbi2, B. Hu3, B. Willard2, H. Kalirai4, A. D. Singh5, S. E. Coupland5, J. W. Crabbi6. 1Department of Ophthalmic Research, Cole Eye Institute, Cleveland Clinic; 2Lerner Research Institute, Cleveland Clinic; 3Medical Oncology, University of Virginia; 4Ophthalmology and Cancer Medicine, University of Pittsburgh; 5Quantitative Health Sciences, Lerner Research Institute, Cleveland Clinic; 6Department of Ophthalmology, Cole Eye Institute, Cleveland Clinic; 7Cancer of Ophthalmology and Molecular Medicine, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University

748 — B0226 Using Mass-Cytometry approach for the characterisation of the microenvironment of primary uveal melanoma. Carlos R. De Figueiredo1, H. Kalirai2, J. Sacco3, J. Coulson4, S. E. Coupland1. 1Ophthalmology, Leiden University Medical Center; 2pathology, Leiden University Medical Center; 3Immunohematology, Leiden University Medical Center

749 — B0227 Prognostication of uveal melanoma patients: are exosomes the solution? Emine Kicil1, K. Smit2, N. van Poppelenn3, T. Lunavat1, J. Vaarwater1, S. Jang2, R. M. Verdijk5, J. Lottvall4, A. de Klein1. 1Dept of Ophthalmology, Erasmus Medical Center; 2Krefting Research Centre, Institute of Medicine, University of Gothenburg; 3Clinical Genetics, Erasmus MC


751 — B0229 Digital image analysis of BAP-1 accurately predicts uveal melanoma metastasis. Gustav Stahlhammer1, T. See2, S. S. Phillips3, H. E. Grossniklaus4. 1Oncology and Pathology service, St. Erik Eye Hospital; 2Department of Clinical Neuroscience, Karolinska Institutet; 3Department of Ophthalmology and Pathology, Emory University School of Medicine

752 — B0230 Next-generation sequencing of uveal melanoma for detection of genetic alterations predicting metastasis. Armin R. Afshar1, B. E. Damato2, J. M. Stewart2, R. Roy3, A. Olshen4, B. Bastian2. 1Ophthalmology, University of California, San Francisco; 2Helen Diller Family Comprehensive Cancer Center, University of California, San Francisco; 3Oxford Eye Hospital and the Nuffield Department of Clinical Neurosciences, University of Oxford; 4Epidemiology & Biostatistics, University of California, San Francisco; 5Dermatopathology, University of California, San Francisco *CR

753 — B0231 Transcriptomic analysis reveals genes and miRNAs dysregulated in high risk primary uveal melanoma. Karen Aughton1, S. L. Lake2, L. Takeshita2, F. Falcioni3, H. Kalirai4, S. E. Coupland5. 1Molecular and Clinical Cancer Medicine, University of Liverpool; 2Functional and Comparative Genomics, University of Liverpool

754 — B0232 MIR-34a regulates the migration and invasion of Uveal Melanoma cells through modulating LGR4. Qiang Hou1, L. Tu2. Wenzhou Medical University

755 — B0233 Promoter methylation of RASSF1 is common in non-tumor choroid tissue. Sabrina Y. Bulas1, S. Panchofi2, J. Massengill3, F. Davidoff4, C. M. Cebulla2, M. H. Abdel-Rahman4. 1The Ohio State University Wexner Medical Center; 2Department of Ophthalmology and Visual Science, Havener Eye Institute; 3Department of Molecular Genetics, The Ohio State University; 4Department of Ophthalmology and Visual Science; Division of Human Genetics, Havener Eye Institute

756 — B0234 Methylation Clustering in Uveal Melanoma. Tadgh Ferrier1, P. Bastamante2, T. Tsering2, E. Jin3, P. Garcia de Alba Graue2, J. Burnier3. 1MUHC Ocular Pathology Laboratory; 2Cancer Research Program, RI-MUHC

757 — B0235 Expression of cysteine leukotriene receptors 1 and 2 in uveal melanoma. Paulina Garcia de Alba Graue1, A. Goyeneche2, J. Coblenz3, T. Ferrier4, M. N. Burnier5. The MUHC-McGill University Ocular Pathology & Translational Research Laboratory

758 — B0236 Addressing Disparities in Hispanic Patients with Uveal Melanoma Using Global and Local Ancestry Analysis. Daniel Rodriguez1, M. I. Sanchez2, C. Decatur3, J. Harbour4. Bascom Palmer Eye Institute, Sylvester Comprehensive Cancer Center and Interdisciplinary Stem Cell Institute, University of Miami Miller School of Medicine *CR

759 — B0237 Clinical, tumour, and family characteristics of uveal melanoma patients referred for analysis of potential underlying BAP1-tumour predisposition syndrome. Cindy Chau1, K. Afanasieva2, M. J. Jager3, G. P. Luyten4. 1Ophthalmology, Leiden University Medical Center

760 — B0238 Does BAP1 and DNA damage response pathway play a synergistic role in uveal melanoma? Jayanti Jha1, S. Kashyap2, M. K. Singh3, S. Sen4, L. Singh2, N. PUSHKER2, J. Kaur5. 1Department of Ocular Pathology, All India Institute of Medical Sciences; 2Department of Biosciences, Jamia Millia Islamia; 3Department of Ophthalmology, All India Institute of Medical Sciences; 4Ocular Biochemistry, Dr.R.P.Centre for Ophthalmic Sciences, AIIMS

* 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.
761 — B0239 Frequency of Mismatch Repair Gene Mutations in Uveal Melanoma. Christopher B. Toomer1, S. Phou2, K. Fraser2, M. Bakhoun3, J. A. Thorson1, B. S. Korn1, D. O. Kikkawa1, M. H. Goldbaum1, J. H. Liu1, 1*Shiley Eye Institute, UC, San Diego; 2Pathology, University of California, San Diego

762 — B0240 Secondary primary cancers in patients with uveal melanoma. Jens F. Kjilgaard1, V. Albirol, 2K. Wad2, K. K. Andersen1, M. M. Bagger1. 1Dept of Ophthalmology, Rigshospitalet; 2Department of Clinical Genetics, Rigshospitalet; 3Statistics and Pharmaco-Epidemiology, Danish Cancer Society Research Center

West Exhibition Hall B0241-B0300 Sunday, April 28, 2019 1:00 PM-2:45 PM Immunology/Microbiology

142 Mechanistic and translational studies of retinal degeneration and uveitis

Moderators: Kathryn L. Pepple and Elisabeth Andriessen

763 — B0241 cGAS-STING pathway activation in murine retina. Miao Tang, S. Pavlou, H. Xu, M. Chen. Queen’s University Belfast, Centre for Experimental Medicine, WWIEM


766 — B0244 Elevation of miR-155 induces a non-canonical inflammasome activation pathway in human retinal pigment epithelium (hRPE). Congxiao Zhang1, A. Manininishkis1, K. miyagishima1, G. Liang1, F. Ruch1, S. S. Miller4. 1OGVFB/SERPD, NEI; 2OGVFB/OSCTRU, NEI

767 — B0245 Nod2 limits autoimmunity to the neuroretina through a T cell-intrinsic mechanism. Ellen J. Lee1, R. Napier1, E. Vance1, K. Samson1, S. Lushley1, M. J. Mattapalli2, J. R. Smith1, R. R. Caspi2, H. L. Rosenzweig1. 1Molecular Microbiology & Immunology, Oregon Health & Science University; 2VA Portland Health Care System; 3Laboratory of Immunology, NEI, NIH; 4College of Medicine and Public Health, Flinders University

768 — B0246 The inflammasome pathway is activated in the retina of type 2 but not type 1 diabetic mice. Kevin Harkin, M. Chen, H. Xu, S. Pavlou. Queen’s University Belfast

769 — B0247 Application of the anti-inflammatory ocular peptide alpha-melanocytet stimulating hormone (α-MSH) suppresses damage in retinas with ischemia/reperfusion. Andreas A. Towers1, N. Sanjiv, T. Ng2, A. C. Lo1, A. W. Taylor1. 1Boston University School of Medicine; 2University of Hong Kong *CR

770 — B0248 miRNA profiles in exosomes from activated microglia – implication in retinal neuroinflammation. Chang Luo1, X. Tang1, J. Liu1, S. Tang1, H. Xie1. 1AIER Eye Institute; 2Aer School of Ophthalmology, Central South University; 3Centre for Experimental Medicine, School of Medicine, Dentistry & Biological Sciences, Queen’s University Belfast

771 — B0249 Kinetics of the retinal microglial response to optic nerve injury. James Walsh, R. N. Weinreb, D. Skowronska-Krawczyk, Ophthalmology, University of California San Diego

772 — B0250 Evaluation of the immune-microenviroment in retinal degeneration disease of RCS rat. Tian Gao, Z. Yin, School of Optometry, Southwest Eye Hospital, Third Military Medical Sch

773 — B0251 Programmed Death Ligand 1 Protects Against Experimental Laser-Induced Choroidal Neovascularization in Mice. Xiaohong Wang, H. Yan, Y. Huang. Tianjin Medical University


775 — B0253 Age-related macular degeneration (AMD) like pathology in murine cytomegalovirus (MCMV) latently infected eyes of BALB/c mice following systemic neonatal infection. Ming Zhang, X. Liu, J. Xu, B. Marshall, Z. Dong. Augusta University

776 — B0254 Changes of cytokine patterns in the aqueous humor of neovascular age-related macular degeneration after 2 months of aflibercept treatment. Tomohito Sato1, M. Takesuchi1, Y. Karasawa1, A. Tanaka2, T. Enoki2. 1National Defense Medical College; 2Enoki Eye Clinic

777 — B0255 Complement activation product levels in aqueous humor of patients with age-related macular degeneration. Yutaka Kato1, T. Sekiyu1, Y. Oguchi1, T. Omori1, T. Machida2, H. Sekine1. 1Ophthalmology, Fukushima Medical University; 2Immunology, Fukushima Medical University *CR

778 — B0256 Exploring the Role of the Gut Microbiome in Multiple Models of RP. Victoria Woytowicz1, Z. Yin2, L. Cox3, H. Weiner3, O. Butovsky4, M. M. DeAngelis1, N. B. Haider5. 1Ophthalmology, Harvard Medical School; 2Massachusetts Eye and Ear, Scheepens Eye Research Institute; 3Neuroscience, Harvard Medical School; 4Microbiology, Harvard Medical School; 5Ophthalmology, University of Utah School of Medicine; 6Brigham and Women’s Hospital

779 — B0257 Novel epitopes for antibestrophin autoantibodies in vitelliform macular dystrophy. Grazyna Adamas1, S. Yang2, S. Andrea1son3, E. Wittstrom1. 1Ophthalm-Casey Eye Inst, Oregon Health Sciences University; 2Ophthalmology, University of Lund

780 — B0258 Beclin-1 is Not Stimulated During Development of Experimental Murine Cytomegalovirus (MCMV) Retinitis in Mice with Retrovirus-Induced Immunosuppression (MAIDS). Jude Grace Neme1o, J. Carter1, R. D. Dix2. 1Georgia State University; 2Ophthalmology, Emory University

781 — B0259 Uveitic Retinal Pigment Epithelial cells do not suppress the phagocytic antigen processing pathways in antigen presenting cells. Tat Fong Ng1, I. J. Bengue2, B. S. Lee1, J. Muus1, A. W. Taylor4. 1Department of Ophthalmology, Boston University School of Medicine; 2The Medical University of South Carolina

782 — B0260 Increased Sodium Iodate-Induced Retinal Degeneration in the Presence of Systemic Inflammation Caused by Collagen-Induced Arthritis. Gloriane Schnabl1, E. Oberti1, N. Banda1, B. Robre2. 1Department of Ophthalmology, Medical University of South Carolina; 2Division of Rheumatology, Department of Medicine, University of Colorado Anschutz Medical Campus; 3Division of Research, Ralph H. Johnson VA Medical Center

783 — B0261 The upregulation of GPR3 during experimental autoimmune uveitis (EAU) and inhibition of pathogenic uvetogenic T cells by GPR3 ligand cannabidiol (CBD), Zhao-Hui Song1, J. Wang2, A. S. Laun1, D. Sun1, H. J. Kaplan1, H. Shao1. 1Pharmacology and Toxicology, University of Louisville; 2Ophthalmology and Visual Sciences, University of Louisville; 3Doheny Eye Institute, University of California Los Angeles

784 — B0262 Upregulation of CX3CR1 on CD4+ T cells during Experimental Autoimmune Uveoretinitis. Amy Ward1, O. H. Bell1, L. Scott2, D. Copland3, A. D. Dick2, L. B. Nicholson4. 1Academic Unit of Ophthalmology, University of Bristol; 2Institute of Ophthalmology, University College London

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
785 — B0263 A role of TH1/TH17 cells migrating across the blood-retinal barrier in experimental autoimmune uveitis. Yihsing Chen1,2; M. Eskandarpour1, M. Chaudhry1, X. Zhang1, S. Lightman1, L. Calder1. 1Ophthalmology Department, Institute of Ophthalmology, UCL; 2Department of Ophthalmology, Chang Gung Memorial Hospital

786 — B0264 Parabiosis Shows That Interplay of Donor Effector and Regulatory T Cells Influences the Outcome of Disease Induction in the Partner Mouse. Scott W. McPherson, N. D. Heuss, M. Abedin, M. Pierson, D. S. Gregerson. Department of Ophthalmology, University of Minnesota

787 — B0265 Fecal microbiota transplantation from Behcet’s disease patients exacerbates experimental autoimmune uveitis activity. Qingfeng Wang, S. Yi, Z. Du, P. Yang, Chongqing Key Laboratory of Ophthalmology, The First Affiliated Hospital of Chongqing Medical University

788 — B0266 Metagene sequencing identifies unique microbiome associated with post fever reinitis in the vitreous body. Arunasri K1, M. Malleshkwarapu1, S. Gumpili1, M. Tyagi2, R. Pappurare1, S. Sharma1, S. Sisinthy1. 1Prof. Brien Holden Eye Research Centre, LV Prasad Eye Institute; 2Smt. Kanuri Santhamma Center for Vitreoretinal Diseases, LV Prasad Eye Institute

789 — B0267 Effects of growth hormone-releasing hormone receptor antagonist in experimental autoimmune intraocular inflammation. WAI KIT CHU1, J. Li1, J. He1, W. Yip1, L. Guo1, O. Wong1, C. C. Pang1. 1Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Hong Kong; 2The Chinese University of Hong Kong; 3Hong Kong Eye Hospital


791 — B0269 A specific IKKβ inhibitor suppresses experimental autoimmune uveoretinitis in mice. Ye Liu1, N. Kitaichi1, D. Wu1, K. Hase1, D. Iwata1, K. Namba1, A. Kanda1, K. Noda1, S. Ishida1. 1Laboratory of Ocular Cell Biology and Visual Science, Department of Ophthalmology Hokkaido University, Faculty of Medicine and Graduate School of Medicine, Hokkaido University; 2Department of Ophthalmology, Health Sciences University of Hokkaido


793 — B0271 Tofacitinibhas preventive and therapeutic effects for uveitis in mice model. YICHEN XIAO, W. Su. 1. Zhongshan Ophthalmic Center at Sun Yat-sen University, The State Key Laboratory of Ophthalmology–People’s Republic of China

794 — B0272 Targeting PDE5 for the treatment of experimental autoimmune uveitis. Xiaomin Zhang1, Z. Zhang1, S. Chen1, N. Chen1, J. Ma1, X. Li1. 1Uveitis & Ocular Immunology, Tianjin Medical University Eye Hospital, Eye Institute & School of Optometry and Ophthalmology; 2Department of Cell Biology, University of Oklahoma Health Sciences Center; 3Retina, Tianjin Medical University Eye Hospital, Eye Institute & School of Optometry and Ophthalmology

795 — B0273 Induced pluripotent stem cells-derived suppressor cells ameliorate experimental autoimmune uveoretinitis in mice. Keitaro Hase1, K. Namba1, N. Kitaichi1, D. Iwata1, H. Taji1, H. Wada1, K. Seino1, S. Ishida1. 1Department of Ophthalmology, Faculty of Medicine and Graduate School of Medicine, Hokkaido University; 2Department of Ophthalmology, Health Sciences University of Hokkaido; 3Division of Immunobiology, Institute for Genetic Medicine *CR

796 — B0274 The Anti-inflammatory Effect of Tectorigenin in a Mouse Experimental Autoimmune Uveitis (EAU) Model. Hyungbin Hwang1, S. Kim1, K. Kang1. 1Ophthalmology, The Catholic University of Korea; 2Ophthalmology, YongSci Eye Hospital

797 — B0275 Targeting the leukotriene B4 pathway and/or complement C5 via dual-functional recombinant rVAS76 (Coversin) in Experimental Autoimmune Uveitis (EAU). Mali Eskandarpour1, X. Zhang1, G. Galatowics1, M. Nunn2, W. Weston-Davies1, V. L. Calder1. 1Ocular Immunology, UCL Institute of Ophthalmology; 2Akari Therapeutics plc *CR

798 — B0276 Vitreal cytokine profile in rats inoculated with bovine insoluble Melanin Associated Antigen, type 1 collagen, and type 2 collagen, and the influence of age and sex on uveitis. Stephanie Osinchuk1,2, T. Wilson-Gerwing1, A. Rosenberg1, B. Grauer1. 1Pediatrics, University of Saskatchewan; 2Small Animal Clinical Sciences, University of Saskatchewan

799 — B0277 The protective effect of low dose of lipopolysaccharide pretreatment on EIU rats was related to down-regulation of CSF-1 and up-regulation of LRR-1. Hong Lu, Y. Ling. Department of Ophthalmology, Beijing Chao-Yang Hospital, Capital Medical University

800 — B0278 Chronic model of uveitis in rabbit - Efficacy of Triamcinolone Acetonide. Yann Quentin, S. Antonelli, V. Mauro, N. Cimolino, L. Feraillé, E. Pierre-Paul, Iris Pharma *CR

801 — B0279 Characterization of a Chronic Panuveitis Model in the Rabbit. David Culp1, J. Prater4, A. Moser1, B. C. Gilger1. 1Powered Research, LLC; 2Clinical Sciences, North Carolina State University *CR


803 — B0281 P-glycoprotein expression in patients with non-infectious uveitis on non-steroidal immunosuppressive therapy. Soumyava Basse, R. Tagirasa, K. Rana. LV Prasad Eye Institute

804 — B0282 MicroRNAs as biomarkers for ocular involvement in juvenile idiopathic arthritis. Michal Kramer1,2, S. Pillar3,2, N. Pillar1, G. Amarillo2, L. Harel1, N. Shomron1. 1Ophthalmology, Rabin medical center; 2Sacker Faculty of Medicine, Tel Aviv University; 3Ophthalmology, Meir medical center; 4Pediatric Rheumatology, Rabin medical center

805 — B0283 Single cell molecular analysis of remnant vitreous from cytology-proven vitreoretinal lymphoma allows additional genetic information for diagnosis and prognostication. Anita S. Chan1,2, W. Tan3,2, M. M. Wang4, S. Chee1, P. Castagnoli1, T. Lim1. 1Ophthalmology, Singapore National Eye Center/ SERI; 2Translational Ophthalmic Pathology, SERI; 3Menarini biomarkers Pte Ltd *CR


807 — B0285 Effects of lipopolysaccharides (LPS) on cytokines excreted by PBMC in uveitis associated with juvenile idiopathic arthritis. Huiru Wu1, J. Wang1, H. Jia1, H. Li1. 1The First Clinical Medical College of Lanzhou University; 2Chaoyang Hospital,Capital Medical University

808 — B0286 Phenotype of innate immune cells in uveitis associated with axial spondyloarthritis- versus juvenile idiopathic arthritis-associated uveitis. Maren Kasper1, K. Walscheid2, B. Laffer1, D. Bauer1, M. Busch1, K. Loser3, T. Vogl1, T. Langmann1, G. Ganser1, T. Rath1, A. Heiligens1, A. Department of Ophthalmology and Ophthalm-Lab at St. Franziskus Hospital; 2Department of Ophthalmology, University Hospital Essen; 3Department of Dermatology - Experimental Dermatology and Immunobiology of the Skin, University Münster; 4Institute of Immunology, University of Münster; 5Experimental Immunology of the Department of Ophthalmology, University of Cologne; 6Department of Pediatric Rheumatology, St. Josef Stift; 7Department of Nephrology, Immunology and Osteology, St. Franziskus Hospital; 8University of Duisburg-Essen

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817 — B0295 How the genetic evolution happened in Bechet’s diseases along the Silk Route: China, Turkery and United Kingdom? 
Yuan Tian1, 2, A. P. Gallego1, 3, M. Shandass4, H. Javidi1, S. Raz2, P. I. Murray1, 2, P. Yang2, G. R. Wallace2. 
1Academic Unit of Ophthalmology, Institute of Inflammation and ageing, University of Birmingham, UK; 2Ophthalmology department, The First Affiliated Hospital of Chongqing Medical University; 3School of Dentistry, University of Birmingham

Tokyo Medical & Dental Univ

819 — B0297 Outcomes of diagnostic anterior chamber tap in uveitis patients. Sofia Arfeen1, P. Bhat2, A. Lober2. Ram University of Illinois at Chicago


821 — B0299 High-dimensional immune cell profiling characterizes features of peripheral NK cell repertoires in CMV anterior uveitis. Nobuyo Tawata, J. Siak1, 2, K. Woon1, X. Lim1, S. Chee, M. Tawata, Y. Kawano1, K. Sonoda1. 
1Fukuoka Dental College; 2Singapore National Eye Centre; 3National University of Singapore; 4Kyushu University; 5Singapore Eye Research Institute

822 — B0300 Human Leukocyte Antigen B*51:01 and C*14:02 Indicates Susceptibility towards Recurrent Cytomegalovirus Anterior Uveitis. Owen Png1, 2, N. Tawata1, 3, X. Lim1, 2, K. Woon1, A. Jansen1, 3, S. Waduthantri1, 3, S. Chee2, 4, J. Siak1, 2, Singapore National Eye Centre; 3Ocular Inflammation and Immunology, Singapore Eye Research Institute; 4Department of Ophthalmology, Yong Loo Lin School of Medicine, National University of Singapore; 5Laboratory of Immunology, National Eye Institute, National Institutes of Health

824 — B0302 Polymerase Chain Reaction in the Diagnosis of Toxoplasma gondii Chorioretinitis. JOHN W. HINKLE, S. Alhumaid, D. Miller, J. L. Davis, T. A. Alhaimd. 
Bascom Palmer Eye Institute

825 — B0303 Nanopore Sequencing for Rapid Diagnosis of Microbial Keratitis. Living Low1, 2, R. Patel1, G. Begum1, P. Fuentes-Urrutia1, G. R. Wallace1, P. I. Murray1, 2, S. Raz2, 3, Academic Unit of Ophthalmology, Institute of Inflammation and ageing, University of Birmingham; 3Inflammatory Eye Disease Service, Birmingham & Midland Eye Centre; 4MicrobesNG, School of Biosciences, University of Birmingham

826 — B0304 T2 magnetic resonance assay and detection of ocular candidiasis. SHRAVANI MIKKILINI1, R. Komati2, N. Shah3, H. Guo2. 
1Ophthalmology, Henry Ford Hospital; 2Medical School, Wayne State University

827 — B0305 Mycobacterium tuberculosis (M.tb) antibody and antigen biomarkers for rapid diagnosis of intra-ocular tuberculosis. Kamaljit Kaur1, M. B. Ryndak2, A. Agarwal3, I. Verna1, Y. Gupta1, S. Lala2. 
1Ophthalmology, Postgraduate Institute of Medical Education and Research; 2Pathology, New York University School of Medicine; 3Biochemistry, Postgraduate Institute of Medical Education and Research

Ophthalmology, University of Pittsburgh

829 — B0307 High Throughput Sequencing reveals predominantly fungal pathogens in the vitreous of patients with presumed infectious, culture negative endophthalmitis in Southern India with implication for diagnostics. Joveeta Joseph Ruben1, R. Jayasudha1, J. Gandhi2, S. Sharma1, V. P. Dave3. 
1Javeri Microbiology Centre, L V Prasad Eye Institute; 3Smt. Kannuri Santhamma Centre for vitreoretinal diseases, L V Prasad Eye Institute

830 — B0308 Interest of QuantiFERON®-TB Gold Plus as a diagnostic test in patients with ocular inflammation (OI). amelie Amaia1, A. Guibot1, C. Trad1, C. Fardeau1, P. Lehoang1, V. Tsoutou2, B. Bodaghi1. 
1Ophthalmology, la pitie salpetrière hospital; 2Immunology, Pitie-Salpetriere Hospital; 3Internal Medicine, Ambroise-Paré Hospital

1, 2Department of Ophthalmology, Nassau University Medical Center; 3Ophthalmic Consultants of Long Island; 4Department of Cell Biology, University of Pittsburgh
832 — B0310 Clinical Utility of beta-D-glucan Testing for Detecting Fungal Choriorretinitis and/or Endophthalmitis. Michael Ammar1, R. Carroll1, A. M. Kolomeyer1, G. Ying1, G. Whitehead1, A. J. Brucker1, B. J. Kim1. Scheie Eye Institute, University of Pennsylvania; 2Center for Preventative Ophthalmology and Biostatistics

833 — B0311 Non-liquefaciens and olesoons the Predominant Moraxella species of Ocular Infections as Determined by DNA sequencing, MALDI-TOF MS, and Biolog ID System. Regis P. Kowalski1, S. LaCroce1, M. Wilson1, J. Romanowski1, J. Newman1, R. M. Shanks1, V. Jhanji1. 1Ophthalmology/Microbiology, Univ of Pittsburgh; 2Microbiology, University of Pittsburgh Medical Center; 3Biology, Lycoming College


836 — B0314 In vitro susceptibility of Staphylococcus aureus and Pseudomonas aeruginosa to a novel fluoroquinolone. Alejandro Arboleda1, H. Durkee2, J. Maestre-Mesa3, M. Hernandez3, M. Aguilar3, H. Flynn4, J. Pare1,2, D. Miller1,2. 1Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, Department of Ophthalmology, University of Miami Miller School of Medicine; 2Ocular Microbiology Laboratory, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine; 3Anne Bates Leach Eye Hospital, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine

837 — B0315 In Vitro Susceptibilities of Methicillin-Susceptible and Resistant Staphylococci to Traditional Agents Compared to a Novel Fluoroquinolone. James Lin1, K. Fan1, N. Piraktikes1, D. Miller2, H. Flynn2. Ophthalmology, University of Miami

838 — B0316 Changes in Staphylococcus aureus Virulence Factors and Host Immune Response Following Rose Bengal Photodynamic Antimicrobial Therapy. Heather Durkee1, A. Arboleda1, J. Maestre-Mesa2, M. Aguilar1, G. Amescua1, J. Pare1, D. Miller2. 1Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine; 2Ocular Microbiology Laboratory, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine; 3Anne Bates Leach Eye Hospital, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine


840 — B0318 Rock-Scissor-Paper-Rules of Engagement in Interspecies Interactions and Outcomes in Contact Lens Associated Microbial Communities. Darlene Miller1, J. Maestre-Mesa2, E. Alfonso2. Ophthalmology, Bascom Palmer Eye Institute


842 — B0320 Eximer-Laser and mitomycin C 0.02% to treatment acanthamoeba keratitis. Navid Ardjomand1,2, L. Duas1, J. Walochnik1, K. Kaiser1, M. Antic1, B. Seitz1, Y. Paris-Shabrov1. 1FA fuer Augenheilkunde, Sehzentrum fur Augenlaser; 2Department of Ophthalmology, Medical University Graz; 3Department of Ophthalmology, University of Saarland; 4Institut fur Spezifische Prophylaxe und Tropenmedizin, Medical University Vienna *CR


845 — B0323 Clinical Findings and Outcome of Nocardia Keratitis. Khalid F. Tabbara1,2, L. M. Aljurf1, F. Aljassar1, S. Shougy1. 1Ophthalmology, The Eye Center and The Eye Foundation For Research in Ophthalmology; 2Department of Ophthalmology, College of Medicine, King Saud University

846 — B0324 Gram-negative endophthalmitis; microbiology, clinical associations and visual outcomes in Victoria, Australia. Louis Stevenson1, R. C. Dawkins2, H. Sheorey1, A. Hurley3, P. J. Allen2. 1Royal Victorian Eye and Ear Hospital; 2Centre for Eye Research Australia; 3Department of Pathology, St Vincent’s Hospital Melbourne

847 — B0325 The German keratocymosis registry - results of a multi-center study. Gerd Geering1, University Eye Clinic Düsseldorf

848 — B0326 Microbial keratitis following corneal transplantation. Pauline Khoo1, M. P. Cabrera Aguas2, S. L. Watson1. 1The University of Sydney, Save Sight Institute; 2Ophthalmology, Sydney Eye Hospital

849 — B0327 Microbial keratitis resulting in evisceration and enucleation in Sydney, Australia. Maria P. Cabrera Aguas1,2, P. Khoo1,2, S. L. Watson1,2. 1University of Sydney, Save Sight Institute; 2Sydney Eye Hospital

850 — B0328 Colistin resistance in gram negative ocular infections: prevalence, clinical outcome and antibiotic susceptibility patterns. Sanchita Mitra1,2, S. Basi3, S. Rathi4, S. K. Sahu5. 1Ocular Microbiology, L V Prasad Eye Institute; 2L V Prasad Eye Institute

851 — B0329 Clinical presentations, microbiology, management outcomes of endogenous endophthalmitis and a comparison with similar cohorts worldwide. Avinash Pathengay1, V. Dave1, T. Das1, B. Panchal1, S. Sharma1, R. R. Pappuru1. 1Vitreoretina, LV Prasad Eye Institute; 2Jhaveri Microbiology Center, LV Prasad Eye Institute

852 — B0330 Lesions of the Vitreous, Choroid, and Retina in Injection Drug Users (IDUs) Hospitalized with Bloodstream Infections. Kathy Tsamis1, J. Weinstein1, E. Barnes2, J. Peacock2, M. Greven2. 1Ophthalmology, Wake Forest; 2Infectious Disease, Wake Forest

853 — B0331 Longitudinal Trends in Antibiotic Resistance Among Staphylococci Collected in the ARMOR Study. Penny A. Ashell1, C. M. Sanfilippo1, H. H. DeCory2. 1Ophthalmology, University of Tennessee Health Science Center; 2Medical Affairs, Bausch + Lomb *CR

854 — B0332 Asia Cornea Society Infectious Keratitis Study: Pseudomonas aeruginosa infections keratitis. Roger W. Beuerman1,2, A. Mishra1, A. Tan1, M. Periyath1, X. Lian1, R. Sulhana1, S. Saffari1, W. Khor1, J. Mehta1, D. Tan1. 1AMOP, Singapore Eye Research Institute; 2AMOP, Singapore Eye Research Institute; 3Neuroscience, Duke-NUS; 4Singapore National Eye Center; 5Microbiology, Singapore General Hospital; 6Duke-NUS Medical School *CR, CR

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856 — **B0334** The Resurgence of Ocular Syphilis in British Columbia: 2013-2016 A Retrospective Chart Review. Maryam Eslami1, G. Noureddin1, S. Warner1, T. Grennan3, 2

1Ophthalmology and Visual Sciences, University of British Columbia; 2Infectious Disease, University of British Columbia; 3BC Centre for Disease Control

857 — **B0335** Ocular syphils: clinical manifestations and visual outcomes. Merav Koschitzky, K. Xu, S. Kiss. Ophthalmology, Weill Cornell Medicine

858 — **B0336** Candida keratitis: epidemiology, management, and clinical outcomes. Grace L. Qiao1, J. Ling1, T. Wong1, S. Yeung1, A. Iovieno1.

1Ophthalmology & Visual Sciences, University of British Columbia; 2Pathology, University of British Columbia

859 — **B0337** Singapore Ocular Tuberculosis Immunity Study (SPOTIS). Ae Ra Kee1, P. E. Hutchinson1, J. E. Connolly1, N. Yawat1, J. Siak1, R. V. Agrawal1.

1Ophthalmology, Tan Tock Seng Hospital, National Healthcare Group; 2Microbiology and Immunology, National University of Singapore; 3Translational Immunology, Institute of Molecular and Cellular Biology; 4Ocular Inflammation & Immunology, Singapore Eye Research Institute; 5Singapore National Eye Centre

860 — **B0338** Collaborative Ocular Tuberculosis Study (COTS) Consensus guidelines on initiating antitubercular therapy in presumed tubercular choroiditis. Vishali Gupta1, R. V. Agrawal1, I. Testi1, S. Mahajan1, D. Raj1, A. Agarwal1, D. Gunasekaran1, J. H. Kempen1, Q. D. Nguyen1, C. Pavesio1, P. O’Neil1.

1Post Graduate Institute of Medical Education and Research; 2University of Alberta; 3Department of Ophthalmology, University of Padova; 4Byers Eye Institute, Stanford Medical School; 5MDS Bioanalytics; 6Post Graduate Institute of Medical Education & Research; 7Massachusetts Eye and Ear Harvard Medical School; 8MOOFIELDS Eye Hospital

861 — **B0339** Collaborative Ocular Tuberculosis Study (COTS) consensus guidelines on initiating antitubercular therapy in presumed tubercular retinal vasculitis. Rupesh V. Agrawal1, I. Testi1, S. Mahajan1, D. Raj1, A. Agarwal1, D. Gunasekaran1, J. H. Kempen1, Q. D. Nguyen1, C. Pavesio1, V. Gupta1. 1Ophthalmology, Tan Tock Seng Hospital; 2Nanyang Technological University; 3University of Padova; 4Byers Eye Institute, Stanford Medical School; 5MDS Bioanalytics; 6Post Graduate Institute of Medical Education and Research; 7Tan Tock Seng Hospital; 8MOOFIELDS Eye Hospital; 9Massachusetts Eye and Ear Harvard Medical School

862 — **B0340** Collaborative Ocular Tuberculosis Study (COTS) Consensus guidelines on initiating antitubercular therapy in intermediate uveitis and panuveitis. Hariya Testi1, R. V. Agrawal2, S. Mahajan1, D. Raj1, A. Agarwal1, D. Gunasekaran1, J. H. Kempen1, Q. D. Nguyen1, C. Pavesio1, V. Gupta1.

1Department of Ophthalmology, University of Padova; 2Tan Tock Seng Hospital; 3Nanyang Technological University; 4Byers Eye Institute, Stanford Medical School; 5MDS Bioanalytics; 6Post Graduate Institute of Medical Education and Research; 7Massachusetts Eye and Ear Harvard Medical School; 8MOOFIELDS Eye Hospital


1Ophthalmology, University of Oklahoma Health Sciences Center; 2Microbiology and Immunology, University of Oklahoma Health Sciences Center; 3University of Barcelona; 4Department of Ophthalmology, University of Padova; 5Byers Eye Institute at Stanford University; 6Department of Ophthalmology, Post Graduate Institute of Medical Education & Research

864 — **B0342** Fumagillin in microsporidial keratitis. Faisal Aljassar, S. Shoughy, K. Tabbara. Ophthalmology, The Eye Center

865 — **B0343** Understanding fungal keratitis pathogens through a reverse-translation approach. Kevin K. Fuller1, M. E. Brown1, D. Giacalone1, J. Dunlap1, T. Lietman5, R. Cramer7, K. Koschitzky, K. Xu, S. Kiss. Ophthalmology, Weill Cornell Medicine

866 — **B0344** Tissue eradication and clinical resolution of adult inclusion chlamydia conjunctivitis (AIC) after treatment with one cycle of oral Azithromycin. Ana-Catalina Carrell, C. Baker, University of Alberta

867 — **B0345** Meta-analysis Reveals Multiple Disease Processes Underlying Trachoma. Mohammad A. Tahboob1, C. Castillejo1, S. Sabbagh1, B. Laugier1, J. Aljabbar1, S. McDermott1, S. Frank1, D. Hadley1. 1Central Michigan University College of Medicine; 2Ohio State University College of Medicine; 3University of Michigan Medical School; 4UCSF Medical School

868 — **B0346** Efficacy of voriconazole on Acanthamoeba Keratitis: Prospective Randomized Double masked trial. Bhupesh Bagga1, S. Sharma2, R. guor3, J. Joseph Raber4, A. Mohamed5, L.V.Prasad Eye institute, Hyderabad, 6Jaferi Microbiology centre, L.V.Prasad Eys institute

869 — **B0347** Comparison Study on Aspergillus Patrogenicity of Corneal Clinical Isolates And Standard Strain: The Relationship Between Invasiveness And Growth Characteristics. Yingyu Li1, P. Zhang, Z. Liu, W. Wang, Ophthalmology, Peking University Third Hospital

870 — **B0348** Role of Circumferential Full Thickness Scleral Debridement in Fulminant Infective Ring Scleritis. Samendra Karkhan1, 2

1A. Ser1, P. Shenoy1, M. Hassan1, M. Halim1, M. Hasanresou001, R. Affifi2, Y. Sepahi2, D. V. Do’i3, Q. D. Nguyen1, V. Gupta1. Retina & Uvea Service, Department of Ophthalmology, 4Sadguru Netra Chikitsalaya; 5Department of Vision Research, Byers Eye Institute at Stanford University; 6Department of Ophthalmology, Gazi University; 7Department of Ophthalmology, Post Graduate Institute of Medical Education & Research

871 — **B0349** Limbal Stem Cell Deficiency Associated with Herpetic Keratitis: A Retrospective Study. Jimena T. Carreno-Galeano, T. Dohlman, J. Yin, R. Dana. Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary, Harvard Medical School

872 — **B0350** Undiagnosed Ocular Syphilis Treated with Biologic Immunosuppressive Therapy. Andrew Pettner, P. Merrill, P. Patel. Ophthalmology, Rush University Medical Center


874 — **B0352** Cryptococcal choroiditis in the absence of cryptococcal meningitis: a novel clinical description. Doran Spencer, A. Yarmohammadi, C. B. Toomey, T. Ofstad, W. R. Freeman. Shirley Eye Institute, Univ. of Calif., San Diego

875 — **B0353** Electoretinography and Visual Function among Individuals Infected with Human Immunodeficiency Virus. Davin C. Ashraf1, L. D. Alves2, A. K. Goldberg3, G. N. Holland4, 5, F. Yu1, S. Nusinowitz1. 1Department of Ophthalmology, University of California, San Francisco; 2Department of Ophthalmology, University of Texas Health Science Center of Houston; 3Department of Ophthalmology, UCLA Stein Eye Institute; 4Ocular Inflammation Disease Center, UCLA Stein Eye Institute; 5Department of Ophthalmology, Universidade Federal de Goiás


878 — B0356  Ocular toxoplasmosis: assessment of active and scarred areas of retinochoroiditis. Pierre Duraffour, C. Mehania, F. Hoogewoud, A. Touboul, D. Monnet, A. Brézin, Université Paris Descartes - Service d’ophthalmologie - Hôpital Cochin

879 — B0357  Uncommon Presentations of Ocular Toxoplasmosis. Philip Qi, H. Wafapoor*. 1University of Mississippi School of Medicine; 2Schepens Eye Research Institute, Massachusetts General Hospital; 3Tufts Medical Center

880 — B0358  Autoreactivity against HSP70 and recoverin in patients with congenital and acquired ocular toxoplasmosis. Monica Goldberg*, A. Ibarra, D. Correa. 1Immunology experimental, Instituto Nacional de Pediatría; 2Centro de Investigación de Ciencias de la Salud Anáhuac, Universidad Anáhuac


West Exhibition Hall B0381-B0400
Sunday, April 28, 2019 1:00 PM-2:45 PM
Conrea

144 Corneal Immunology

Moderators: Joy Sarkar and Pedram Hamrah

883 — B0381  Higher Frequencies of Macrophages and IL-12 Expression in the Cornea of Very Young Graft Recipients. Takeshi Nakao1,2, Y. Chen1,3, J. Yin1,3, A. Amouzegar1,2, R. Dana1,2,3. 1Ophthalmology, Osaka University; 2Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary; 3Ophthalmology, Harvard Medical School

884 — B0382  The purinergic receptor antagonist oxidized adenosine triphosphate promotes corneal allograft survival without expanding regulatory T cells. William Foulsham, S. Mittal, T. Nakao, G. Coco, Y. Taketani, S. Chauhan, R. Dana. Massachusetts Eye and Ear/ Harvard Medical School

885 — B0383  Rho-Kinase Inhibitor Ripasudipin suppresses neovascularization and inflammation in murine corneal transplantation. Takenori Inomata1, K. Fujimoto1, Y. Okumura2, M. Okano2, T. Funaki3, A. Murakami3. 1Ophthalmology, Juntendo University Faculty of Medicine; 2Ophthalmology, Juntendo University Faculty of Medicine

886 — B0384  Comparison of the therapeutic effects between topical 8-oxo-2′-deoxyguanosine and steroid in ocular chemical burn experimental model. Dong Hyun Kim1, S. Im1, S. Han1, M. Chung1. 1Department of Ophthalmology, Gachon University College of Medicine; 2Gachon Biomedical & Convergence Institute; 3Ophthalmology, Department of Ophthalmology, Kangwon National University College of Medicine

887 — B0385  CSFR-1 CX3CR1 resident corneal macrophages regulate inflammatory corneal hemangiogenesis. Deniz Hov2, A. Kiesewetter3, C. Cursiefen1, S. A. Eming1. 1Department of Ophthalmology, University of Cologne; 2Center for Molecular Medicine Cologne, University of Cologne; 3Department of Dermatology, University of Cologne

888 — B0386  Development of a novel corneal epithelial dendritic cell morphology grading scale. Zarah Tajbaksh1, C. Chao2, R. Mohsen, B. Golebiowski1, J. Jaberli1, F. Stapleton1. 1School of Optometry and Vision Science, University of New South Wales; 2Tufts Medical Center

889 — B0387  Peripheral neutrophil phenotype and function in Ocular Mucous Membrane Pemphigoid. Mariam Murad1, L. Low1,2, M. Shamdass3, N. Poontit3, P. I. Murray1,2, S. Rau2,3, G. R. Wallace1,2. 1Institute of Inflammation and Ageing, University of Birmingham; 2Birmingham & Midland Eye Centre, Inflammatory Eye Disease Service

890 — B0388  Immuno-modulative effects of corneal endothelium on innate immune-cells as determined by transcriptome analysis. Thabo Lapp, D. Boehringer, A. Hildebrand, P. Kammrath Betancor, J. Fan, T. Reinhard, G. R. Schlunck. Ophthalmology, Eye Center, Faculty of Medicine, University of Freiburg, Germany


892 — B0390  Corneal epithelial dendritic cell density in a healthy population and its relationship with age and sex: A Meta-Analysis of in vivo confocal microscopy data. Rabia Moeen1, C. Chaud1, F. Stapleton1, M. C. Madigan3, B. Golebiowski1. 1School of Optometry and Vision Science, University of New South Wales; 2Tufts Medical Center

893 — B0391  Retinal inflammation after penetrating corneal surgery: the role of TNF-α and IL-1β inhibition. XIAONIAO CHEN1,2, F. Le1, C. Zhou1, E. I. Paschal1, J. Chodosh1, C. H. Dohlman1,2, L. Wang1. 1Ophthalmology, Chinese PLA General Hospital; 2Ophthalmology, Massachusetts eye and Ear Infirmary; 3Ophthalmology, Harvard Medical School

894 — B0392  NLRP3 inflammasome regulates acute corneal allograft rejection through enhanced phosphorylation of STAT3. Chao Wei, D. Xiang, L. Ma, H. Guo, W. Shi. Shandong Eye Institute

895 — B0393  Local VEGF-A blockade modulates the microenvironment of corneal transplantation side. Felix Bock1,2, A. Schneider1, C. Cursiefen1, M. Koch1, R. Reuten1, E. Mahabir1, G. Braun1, M. Heykants3. 1Ophthalmology, University of Cologne; 2CMMC, University of Cologne; 3Biotech Research and Innovation Centre (BRIC), University of Copenhagen; 4Center for Biochemistry, University of Cologne; 5Institute for Dental Research and Oral Musculoskeletal Biology, University of Cologne; 6Comparative Medicine, Center for Molecular Medicine, University of Cologne

896 — B0394  Regulatory T cells Derived from Hosts at High Risk of Corneal Graft Rejection Have Impaired Protective Effect on Corneal Endothelial Cells. Giulia Coco1,2, W. Foulsham1, T. Nakao1, J. Yin1, A. Amouzegar1, Y. Taketani1, S. Chauhan1, R. Dana1. 1Schepens Eye Research Institute / Mass. Eye & Ear / Harvard Medical School; 2Department of clinical sciences and translational medicine, University of Tor Vergata

897 — B0395  Local Adoptive Transfer of Plasmacytoid Dendritic Cells as a Novel Therapeutic Approach for Corneal Neovascularization. Arista Jamali1, M. J. Lopez1, D. L. Harris1, V. G. Sendra1, N. Pondelis1, G. Ortiz1, P. Hamrah1. 1Department of Ophthalmology, Tufts Medical Center; 2Department of Ophthalmology, Cornea Service, New England Eye Center

898 — B0396  Migration rate of presumed immature dendritic cells in the healthy living human cornea as imaged with In vivo corneal confocal microscopy. Luisa H. Colorado1, K. Edwards1, H. R. Chinney2, H. E. Bazarn3. 1School of Optometry and Vision Science, Queensland University of Technology; 2University of Melbourne; 3LSU Health Sciences Center

*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.
899 — B0397 Corneal collagen cross-linking pretreatment mitigates inflammation, hemangiogenesis and lymphangiogenesis in rats. Wei Chen¹, Y. Zhu²,³; P. Reinaç¹, J. Qu¹. ¹School of Ophthalmology and Optometry and Eye Hospital, Wenzhou Medical University; ²Eye Center of the 2nd Affiliated Hospital, Medical College of Zhejiang University

900 — B0398 Corneal Plasmaclayoid Dendritic Cell Depletion Results in Increased Expression of Neurodegenerative Markers in the Trigeminal Ganglion. Brendan Kenyon¹,², A. Jamali¹, Y. Seyedi-Razavi¹, G. Ortiz¹, D. L. Harris¹, P. Hamrah¹.¹ Program in Neuroscience, Tufts University Sackler School of Graduate Biomedical Sciences; ²Center for Translational Ocular Immunology, Department of Ophthalmology, Tufts Medical Center; ³Cornea Service, New England Eye Center *CR

901 — B0399 Post injury mu-opioid receptor (mOR) expression in the oculo-trigeminal axis: Is Less mOR? Nicholas Fowler, R. Albuquerque, J. Cho. University of Kentucky College of Medicine

902 — B0400 β2 adrenoceptor inhibition reduces the severity of Pseudomonas aeruginosa keratitis in mice. Qingian Zhou, l. Xie, X. Ma. Shandong Eye Institute

West Exhibition Hall B0451-B0482
Sunday, April 28, 2019 1:00 PM-2:45 PM

Cornea

145 Corneal Epithelium

Moderators: Anil Tiwari and Vivek Singh


904 — B0452 Influence of punctate superficial keratitis on intraocular pressure measured with Goldmann applanation tonometer and noncontact tonometer. Daikoku Shimizu, S. Yamanoto. Chiba university

905 — B0453 Effect of high glucose on corneal epithelial cellular and barrier functions. Ashley M. Barbarino, S. Alfuraih, K. Shamloo, A. Sharma. School of Pharmacy, Chapman University

906 — B0454 Engineering an electrospun nanofiber to direct corneal epithelial cell proliferation and morphology. Chau Võ, H. J. Lee¹, G. Fernandez-Cunha¹, D. Myung¹.¹ Chemical Engineering, Stanford University; ²Chemical and Biomolecular Engineering, Gachon University; ³Ophthalmology, Byers Eye Institute


908 — B0456 Jagged-1-mediated Notch Signaling Activation Regulates the Differentiation and Stratification of Human Limbal Stem/Progenitor Cells in vitro. Sheyla Gonzalez, M. Halabi, S. X. Deng, Ophthalmology, Stein Eye Institute UCLA

909 — B0457 The effect of near-infrared photobiomodulation on in vitro cornea wound healing. Maud Gorbet¹, P. Hamilton¹, S. Mohammadi¹, D. Choi¹, A. Roeper¹.¹ Systems Design Engineering/Biomedical Engineering, Univ of Waterloo; ²Penta Medical *CR

910 — B0458 Transient mitomycin C treatment of human corneal limbal epithelial cells induces secretion of cytokines. Mary Ann Stepp¹, S. Pal-Ghosh³, G. Tadvalkar¹, A. E. Hutton¹, J. D. Zieske¹, X. Q. Qiu¹. Ophthalmology, GWU Medical School; ²Anatomy and Cell Biology, GWU Medical School; ³Ophthalmology, SERI, Harvard Medical School

911 — B0459 Roles of vasoactive intestinal polypeptide expression in diabetic and nerve degenerated mice corneal epithelial regeneration. Yangyang Zhang¹,², F. YU¹.¹ Shandong Eye Institute; ²Ophthalmology Visual Anatomical Sci, Kresge Eye Institute

912 — B0460 TNFα induces corneal epithelial proteolytic activity in response to ER stress. Ashley Woodward¹, A. Di zazzo², S. Bonini².² Schepens Eye Research Institute/MEE/ HMS; ³University Campus Bio-Medico

913 — B0461 Proteomics profiling to elucidate miR-146a targets in primary limbal epithelial cells. Mehrnoosh Saghizadeh¹,², A. Poe¹, M. Kulkarni¹, A. A. Kramerov¹, A. V. Ljubimov¹,², Y. Jami-Alahmadi¹,², J. Wohlschlegel¹,².¹ Biomedical Sciences, Regenerative Medicine Institute Eye program, Cedars-Sinai Medical Center; ²David Geffen School of Medicine, University of California Los Angeles; ³Department of Biological Chemistry, University of California Los Angeles

914 — B0462 The impact of zinc oxide and vanadium pentoxide nanoparticles on corneal epithelial wound healing in vitro and in vivo. Atsuiko Futakot¹,², S. Kim¹, B. L. Gates¹, L. Van Winke¹, K. E. Pinkerton¹, S. M. Thomas¹.¹ Department of Surgical and Radiological Sciences, School of Veterinary Medicine, University of California, Davis; ²Department of Ophthalmology and Visual Science, Graduate School of Biomedical Sciences, Hiroshima University; ³Center for Health and the Environment, University of California, Davis; ⁴Department of Ophthalmology & Vision Science, School of Medicine, University of California, Davis

915 — B0463 Secreted Ly-6uPAR Related Protein-1 (SLURP1) induces inflammation by moderating epithelial cells response to inflammatory agents. Sudha Swamyathan¹, G. Campbell¹, A. Tiwari¹, J. S. Gnaali², S. K. Swamyathan¹. Ophthalmology, University of Pittsburgh; ³Biological Sciences, University of Pittsburgh *CR

916 — B0464 Corneal mechanotransduction drives TRPV4-dependent release of the transmitter ATP. Luka Lapajne¹,², M. Lakk³, L. Gubeljak¹, O. Yarishkin¹, M. Hawlina¹, D. Krizaj¹.¹ Eye Hospital, University Medical Centre Ljubljana; ²Department of Ophthalmology and Visual Sciences, University of Utah School of Medicine

917 — B0465 Comparison of different methods to isolate mouse limbal epithelial cells for single-cell analysis. Zhenwei Song¹,², H. Mei¹. Ophthalmology, University of North Carolina; ²Medical College, Hunan Normal University

918 — B0466 Corneal epithelial thickness and Bowman’s layer thickness-mapping in patients with unilateral keratoconus using large Field of View Polarization-Sensitive Optical Coherence Tomography. Niklas Pircher, F. Beer, S. Holzer, M. Pircher, C. K. Hitzenberger, G. Schmidtinger, J. Lanning, Ophthalmology, Medical University of Vienna

919 — B0467 Mechanoregulation of the Corneal Epithelium. Sophia Masterton. Trinity College Dublin

920 — B0468 UV light-blocking contact lenses prevent UVB-induced DNA and oxidative damage of the limbal stem cell niche, protect against inflammation and maintain putative stem cell phenotype. Maria Notara¹, S. Behoudjard¹, B. Schumacher¹, C. Cursiefen¹. Ophthalmology, University Hospital of Cologne; ²Institute for Genome Stability in Ageing and Disease, CECAD Research Center *CR

921 — B0469 Barrier strengthening in corneal epithelium by nuclear acid stimulation is a reaction via toll-like receptor 3. Yuriko Bani¹, Y. Azza¹, C. Sotozono¹, S. Kinoshita¹.¹ Kyoto Chubu Medical Center; ²Ophthalmology, Kyoto Prefectural University of Medicine; ³Department of Ophthalmology, Faculty of Medicine, University of Indonesia; ⁴Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
922 — B0470 The characterization of adipose-derived stem cell spheroids as well as their conditioned medium effect on co-culture of dorsal root ganglion and corneal epithelial cells, Shiwei Lau1, C. Wang2, Q. Yu1, J. Zhang1, J. Chen1. 1Department of Ophthalmology, The First Clinical Medical College of Jinan University, Guangzhou, Guangdong, China; 2Key Laboratory for Regenerative Medicine of Ministry of Education, Jinan University, Guangzhou, Guangdong, China.; 3Centric Laboratory, Medical College, Jinan University, Guangzhou, Guangdong, China.; 4Key Laboratory of Optoelectronic Information and Sensing Technologies, Jinan University, Guangzhou, Guangdong, China.; 5Institute of Ophthalmology, Medical College, Jinan University, Guangzhou, Guangdong, China.; Aier Eye Institute, Changsha, Hunan, China

923 — B0471 Sirtuin deficiency suppresses migration during corneal epithelial wound healing, Yong Liu1, L. Li2, Q. Liu2, D. Yar1. 1State Key Laboratory of Ophthalmology, Optometry and Visual Science; 2School of Ophthalmology and Optometry, Eye Hospital, Wenzhou Medical University

924 — B0472 Pediatric Ocular Surface Disease Associated with Suspected Abuse. Christine Shiekh1, M. Aziz2, M. Coroneo3, B. Nicolaissen4, G. Petrovski1, 3, B. Nicolaissen1, 3

925 — B0473 The role of insulin-like growth factor binding protein 3 (IGFBP-3) in mitochondrial homeostasis in human corneal epithelial cells, Whitney Stuard, R. Titone, D. M. Robertson, Ophthalmology, UT Southwestern Medical Center

926 — B0474 Corneal neurotization protects the cornea from epithelial thinning in a rat model of neurotrophic keratopathy, Kira Antonyskyn1, 2, J. Catapano3, T. Gordon4, G. H. Borschel2. 1Institute of Medical Science, University of Toronto; 2Division of Plastic and Reconstructive Surgery, The Hospital for Sick Children; 3Department of Neuroscience and Mental Health, The Hospital for Sick Children; 4Division of Plastic Surgery, University of Toronto

927 — B0475 Effect of tropsyn-EDTA on expression of DNA damage repair enzyme APE1 in human limbal epithelial cells, Yolanda Lorenzo Corrales1, B. Nicolasessen2, G. Nguyen3, K. Beraki1, M. Moe1, G. Petrovskii1, B. Nicolasessen1. 1Center for Eye Research, Department of Ophthalmology, Oslo University Hospital; 2Department of Ophthalmology, Vestre Viken Hospital Trust; 3University Of Oslo

928 — B0476 Optimal magnitude of shear stress for human corneal epithelial cell proliferation in microfluidic culture system. SeongKwang Cha1, J. Kim1, Y. Goo1. 1Physiology, Chungbuk National University; 2Seoul Daebom Eye Center

929 — B0477 The cytotoxic effect of Titanium oxide nanoparticles on cultured human corneal epithelial cells. Chool Yong Park, Ophthalmology, Dongguk University Hospital

930 — B0478 Histatin 5 can reduce apoptosis induced by hyperosmolar conditions in human corneal epithelial cells. Vinay K. Aakalu1, 2, D. Shah3, S. Kalmodia4, M. Ali5, A. Balasubramaniyan6, K. Son7. 1Ophthalmology and Visual Sciences, Illinois Eye and Ear Infirmary; 2Surgery, Jesse Brown Veterans Affairs Hospital

931 — B0479 Histatin-5 Promotes Corneal Epithelial Migration and Wound Healing. Dhara Shah1, K. Son2, S. Kalmodia1, M. Ali1, A. Balasubramaniyan1, V. K. Aakalu2, 3, 2Ophthalmology and Visual sciences, University of Illinois at Chicago; 3Surgery, Jesse Brown Veterans Affairs Medical Center

932 — B0480 Impact of Contact Lens Wear on Epithelial Alterations in Keratoconus. Luigina Sorbara1, M. Gorbel1, K. K. Bizeva2, J. Lamerca Mateu3, J. Pastor4, M. J. Molandano5, D. Hileeto6. 1University of Waterloo; 2Dept of Ophthalmology, University of Valladolid; 3Barracuo Ophthalmology Centre

933 — B0481 Effects of aerosol particulate matter on a reconstructed human corneal epithelial model. Ryota Koi1, M. Hayashi2, E. Uchi3. 1Ophthalmology, Fukuoka University; 2Fukuoka University

934 — B0482 Differential DNA methylation between diabetic and non-diabetic human corneal limbal cells and limbal-derived iPSCs. Ruchi Shah1, 2, T. Spektor3, 4, V. Punj5, 6, S. Turjman5, 2, 3, A. V. Ljubimov1, 2, 4. 1David Geffen School of Medicine, University of California Los Angeles; 2Regenerative Medicine Institute Eye Program, Cedars-Sinai Medical Center; 3Oncotherapeutics; 4Keck School of Medicine, University of Southern California; 5Biomedical Sciences, Cedars-Sinai Medical Center; 6University of California Los Angeles

West Exhibition Hall B0483-B0503

Sunday, April 28, 2019 1:00 PM-2:45 PM

Cornea

146 Corneal neovascularization

Moderator: Paola Bargagna-Mohan


936 — B0484 The influence of mesenchymal stem cells on traumatic corneal neovascularization on an animal model. Demetrios E. Pironou1, 2, K. Boboridis1, A. Komnenou1, N. Papatsoannou2, E. Gounari3, A. Alexandridis2, E. Kofidou2, G. Kolias2, V. Karampatakis4. 1st Department of Ophthalmology, AHEPA; 2Faculty of Veterinary Medicine, Aristotle University of Thessaloniki School of Health Sciences; 3Department of Ophthalmology; 4Laboratory of Biological Chemistry, Faculty of Health Science School of Medicine Aristotle University of Thessaloniki; 5Laboratory of Experimental Ophthalmology, Faculty of Health Sciences School of Medicine Aristotle University of Thessaloniki *CR


938 — B0486 Removal of suture-induced corneal neovascularization in rabbits using concurrently applied nanoparticles laser pulses and ultrasound. Yixin Yu1, 2, X. Xie1, Y. Qiu1, X. Xie1, M. A. Woodward1, X. Yang1, X. Wang2, Y. M. Paul1, 2, 3. 1Department of Ophthalmology and Visual science, University of Michigan; 2Department of Ophthalmology, Xiangya Hospital; 3Mechanical Engineering, University of Kansas; 4Biomedical Engineering, University of Michigan

939 — B0487 Regression of Corneal Neovascularization; Adiponectin versus Bevacizumab eye drops. Alireza Baradar-Rafii, A. Ashnagar, S. Heidari-keshel, Ocular Tissue Engineering Research Center

940 — B0488 IL-21 pre-stimulated MSC derived exosomes suppressing corneal neovascularization. Zi Qi Yang, Y. Liu, T. Zhou, X. Zhu, C. He, X. Liu. Zhongshan Ophthalmic Center, Sun Yat-Sen University

941 — B0489 Comparison of UV-light crosslinking and Fine needle-diathermy to regress pathological corneal lymphatic and blood vessels in vivo. Yanhong Hou, V. Le, F. Bock, C. Cursiefen. Ophthalmology Department, University of Cologne, Germany

942 — B0490 Tyrosinase is a novel endogenous inhibitor of lymphangiogenesis. Thomas Claschen1, C. Bütter1, B. Regenfuss1, T. Gabriel1, F. Bock1, A. Reis2, C. Cursiefen1. 1Department of Ophthalmology University Cologne; 2Department of Human Genetics

943 — B0491 Therapeutic Effect of Topical Apatinib in a Murine Model of Corneal Neovascularization. HYEON JEONG YOON1, Y. Li2, L. Li1, R. Jin1, J. Woo1, K. Joon1. 1Chonnam National University Hospital; 2University of Ulsan College of Medicine

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.
Hyaluronan derived from the limbus is a key Regulator of Corneal Lymphangiogenesis. Vivien J. Coulson-Thomas, M. Sun, S. Puri, K. N. Mutoji, Y. M. COULSON-THOMAS, V. Hascall, D. Jackson, T. F. Gesteira. 1Optometry, University of Houston; 2Biochemistry, Universidade Federal de Sao Paulo; 3Cleveland Clinic; 4University of Oxford


Inhibitory effect of Conbercept on corneal neovascularization in rabbits with alkali burn. Xu, X. Wu. Qilu hospital

Repair Effect of Morphogenetic Protein 4 on Rat Corneal Epithelial Injury. Yan Zhang, S. Wang, Y. He. Eye Center, the Second Hospital of Jilin University

Signals from sphingosine-1-phosphate receptor type 3 involvement in vascular formation by endothelium and in VEGF expression in macrophages in vitro. Shingo Yasuda, T. Sumioka, Y. Okada, M. Miyajima, K. Ichikawa, S. Saika. Wakayama Medical University


Role of Substance P in Promoting Corneal Neovascularization. Lingjia Liu, T. Nakao, R. Dana, J. Yin. Schepens Eye Research Institute/Massachusetts Eye and Ear Infirmary, Harvard Medical School; 2Medical college of Nankai University

Plasmacytoid Dendritic Cells Inhibit Vascular Endothelial Cell Proliferation and Differentiation through the Angiostatic Molecule Platelet Factor-4. Deshea L. Harris, A. Jamali, A. Abou-Slaybi, P. Hamrahi. 1Center for Translational Ocular Immunology and Department of Ophthalmology, Tufts Medical Center and Tufts University School of Medicine; 2Cornea Service, New England Eye Center *CR

Long-term outcome of Prosthetic Replacement of Ocular Surface Ecosystem (PROSE) for delivery of bevacizumab in the treatment of corneal neovascularization. Jia Yin, D. S. Jacobs. 1Massachusetts Eye and Ear Infirmary; 2Ophthalmology, Harvard Medical School

En-face morphometric analysis of the human limbal lymphatic vasculature. Bernhard Steger, C. Palme, V. Romanov, S. Ahmad, C. Seifarth, B. Williams, Y. Zheng, M. Purekh, S. B. Kaye. Department of Ophthalmology, Medical University of Innsbruck; 2Department of Eye and Vision Science, University of Liverpool; 3Moorfields Eye Hospital; 4Institute of Ophthalmology, University College London

Keratocytes promote corneal neovascularization through MMP13 induced by PPARα-inhibition. Xue Wang, L. Tang, W. Li, Y. Chen. 1Aier school of ophthalmology, Central South University; 2Eye Institute of Xiamen University, Medical College of Xiamen University; 3Shanghai Aier Eye Hospital

Effects of Conbercept on Rabbit Corneal Neovascularization after Penetrating Keratoplasty. Xiao-Rong Zhang, H. Liu, L. Zhai, Y. Ma, H. Xu. Ophthalmology, The Third Hospital Hebei Medical University

En-face morphometric analysis of the human limbal lymphatic vasculature. Bernhard Steger, C. Palme, V. Romanov, S. Ahmad, C. Seifarth, B. Williams, Y. Zheng, M. Purekh, S. B. Kaye. Department of Ophthalmology, Medical University of Innsbruck; 2Department of Eye and Vision Science, University of Liverpool; 3Moorfields Eye Hospital; 4Institute of Ophthalmology, University College London

Keratocytes promote corneal neovascularization through MMP13 induced by PPARα-inhibition. Xue Wang, L. Tang, W. Li, Y. Chen. 1Aier school of ophthalmology, Central South University; 2Eye Institute of Xiamen University, Medical College of Xiamen University; 3Shanghai Aier Eye Hospital

Effects of Conbercept on Rabbit Corneal Neovascularization after Penetrating Keratoplasty. Xiao-Rong Zhang, H. Liu, L. Zhai, Y. Ma, H. Xu. Ophthalmology, The Third Hospital Hebei Medical University
Moderators: Martina Angi, Annemij P. Wierenga and Sander R. Dubovy

GNAQ and GNA11 in circulating tumor DNA as a novel liquid biopsy-based biomarker for Uveal Melanoma. Prisca Bustamante, T. Tsering, B. Fan, S. Callejo, M. N. Burnier, J. Burnier. 1MUHC McGill Ocular Pathology & Translational Research Laboratory; 2Research Institute-McGill Health Centre, Cancer Research Program; 3Centre Hospitalier de L’Université de Montréal

Class 2 metastasizing uveal melanomas arise through BAP1 loss and epigenetic reprogramming to a migratory neural crest-like state. Matthew Field, P. Bussies, L. Cai, C. Decatur, J. Kuznetsov, S. Kutrenbach, J. Harbour. University of Miami *CR

Exploratory study of candidate genes other than BAP1 associated with hereditary predisposition to uveal melanoma. Mohamed H. Abdel-Rahman, K. M. Sample, T. Grosel, B. Kelly, D. Gordon, M. Pietrzak, R. Pilarski, F. Davidorf, P. White, C. M. Cebulla. 1Ophthalmology, The Ohio State University; 2Division of Human Genetics, The Ohio State University; 3The Institute for Genomic Medicine, Nationwide Children’s Hospital; 4Biomedical Informatics, The Ohio State University

Subpopulations of uveal melanoma cells have distinct roles and cooperate to promote aggressive dissemination. Stephen S. Phillips, G. Ståhlmanmar, T. See, H. E. Grossniklaus. 1Department of Ophthalmology and Pathology, Emory University School of Medicine; 2Oncology and Pathology service, St. Erik Eye Hospital; 3Department of Clinical Neuroscience, Karolinska Institutet

Proteomics of Metastatic and Non-Metastatic Uveal Melanoma. John W. Crabb, J. S. Crabb, G. Jang, B. Willard, B. Hu, H. Kalirai, A. D. Singh, S. E. Coupland. 1Coe Eye Institute, Cleveland Clinic; 2Ophthalmology, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University; 3Ophthalmic Research, Cleveland Clinic; 4Quantitative Health Sciences, Lerner Research Institute, Cleveland Clinic; 5Lerner Research Institute, Cleveland Clinic; 6Molecular and Clinical Cancer Medicine, University of Liverpool

Retinal oximetry in choroidal melanoma and nevi. Niels J. Brouwer, M. Marinkovic, J. C. Bleeker, E. Stiefansson, G. P. Layten, M. J. Jager. 1Ophthalmology, Leiden University Medical Center; 2Ophthalmology, Landspitali University Hospital, University of Iceland *CR

Use of machine learning for prediction of ocular conservation and visual outcomes after proton beam radiotherapy for choroidal melanoma. Stylianos Sergiou, B. E. Damarot, A. R. Afshar, 1Stanford University School of Medicine; 2Ocular Oncology Service, Department of Ophthalmology, University of California, San Francisco; 3Helen Diller Family Comprehensive Cancer Center, University of California, San Francisco; 4Oxford Eye Hospital and the Nuffield Department of Clinical Neurosciences, University of Oxford

Restoring visual function in models of inherited blindness using selective histone deacetylase 6 inhibitors. Huiveau Sundaramarathi, A. C. Perpetuini, A. Moran, T. Ní Chonghaile, B. N. Kennedy. 1Conway Institute, University College Dublin; 2School of Biomolecular & Biomedical Science, University College Dublin; 3RC SI Physiology & Medical Physics Department, Royal College of Surgeons in Ireland

Vision and OCT Outcomes Following 2018 Al phaBent Brook. 1Ocular plastic and reconstructive surgery, National University Hospital, Singapore; 2Ocular plastic and reconstructive surgery, Stanford University; 3Optometry, Stanford University; 4Optometry, Foundation Rothschild; 5Pixium Vision; 6Optometry, University of Pittsburgh *CR

Temporal properties of dopamine turnover in the mouse retina: a mathematical model. Morven Cameron, V. Perez Fernandez, J. Morley, P. Breen. 1Western Sydney University

Peptin-I for neuroprotection in Glaucoma. Dorota L. Stankowska, M. Nam, R. Nahomi, R. Chaphalkar, R. Fudala, R. R. Krishnamoorthy, R. H. Nagara. 1North Texas Eye Research Institute, University of North Texas Health Science Center; 2Department of Microbiology, Immunology and Genetics, UNT Health Science Center; 3Department of Ophthalmology, University of Colorado School of Medicine


Moderators: William R. Freeman and Karl G. Csaky

Restoration of Sight in Geographic Atrophy using a Photovoltaic Subretinal Prosthesis. Daniel V. Palanker, Y. Le Mer, R. Horning, G. Buc, M. Deterre, V. Bismuth, J. A. Sahel. 1Ophthalmology, Stanford University; 2Ophthalmology, Foundation Rothschild; 3Pixium Vision; 4Optometry, University of Pittsburgh *CR

972 — 3:30 Demographic Analysis of a Randomized, Double Masked, Placebo Controlled Study Evaluating ORACEn in Geographic Atrophy Secondary to Non-Exudative Age-Related Macular Degeneration (TOGA), Surachi B. Blui, E. Lien, A. Leone, J. T. Patric, P. A. Yates, Ophthalmology, University of Virginia

973 — 3:45 Evaluation of Baseline Factors on Progression in a Large Phase-2 Clinical Trial for Geographic Atrophy (FILLY Study), Nathan Steinle, M. Hamdani, California Retina Consultants

974 — 4:00 Elamipretide, a Mitochondria-Targeted Drug, for the Treatment of Vision Loss in Dry AMD with Noncentral Geographic Atrophy: Results of the Phase 1 ReCLAIM Study, Scott W. Cousins, M. J. Allingham, P. S. Metts, Duke Eye Center/Ophthalmology, Duke University School of Medicine

975 — 4:15 Pharmacological antagonism of mineralocorticoid receptor exerts VEGF-independent anti-angiogenic effects: Implication for wet AMD, Francine F. Behar-Cohen, I. Mantel, E. Gelize, C. Rivolta, J. Ganonic, F. Jaissier, M. Zhao, Ophthalmology, Lausanne University, Hospital Coinh, Inserm UMR1138

976 — 4:30 Anti-angiogenic and anti-scarring dual action of an anti-Fibroblast Growth Factor-2 aptamer in animal models of retinal disease, Robert B. Bhisitkul1, Y. Matsuda2, Y. Nonaka3, S. Futakawa, K. Akita4, T. Nishikata, M. Fujiiwara, Y. Ali, Y. Nakamura3. 1Ophthalmology, University California-San Francisco; 2RIBOMIC, Inc.; 3Institute of Medical Science, University of Tokyo

977 — 3:00 Gut microbiota intensifies retinal vascular defects by targeting adherens junction protein p120-catenin in angiotensin converting enzyme 2 (ACE2) deficient type 1 diabetes (T1D), Ram Prasad, Y. Duan, G. Sreejit1, J. L. Floyd, B. Athmanathan1, P. R. Nagareddy, M. B. Grant1. 1Ophthalmology and Visual Science, University of Alabama at Birmingham; 2Department of Ophthalmology, Indiana University; 3Pathology, University of Alabama at Birmingham

978 — 3:15 Dyslipidemia-associated activation of monocyte-derived macrophages in diabetic retinopathy, Guillaume Blot1, L. vignaud, H. Charles-messance1, W. Carpenter2, R. Rivera3, A. Jimenez-corona4, S. Augustin1, A. Couturier1. 2Department of Ophthalmology, Hopital Lariboisiere, Universite Paris 7 - Sorbonne Paris-Cite; 3Department of Clinical medicine, School of Medicine, school of biochemistry and immunology, Trinity Biomedical sciences institute, Trinity College; 4Department of ocular Epidemiology, Institute of Ophthalmology, Conde de Valenciana Foundation; 5Department of Cornea and Refractive Surgery, Institute of Ophthalmology, Conde de Valenciana Foundation; 6Centre de Atencion Integral del Paciente con Diabetes, Instituto Nacional de Ciencias Medicas y Nutricion ‘Salvador Zubiran’; 7Research Unit, Cell and Tissue Biology, Institute of Ophthalmology, Conde de Valenciana Foundation; 8Department of Ophthalmology, University of Pittsburgh School of Medicine; 9Department of Biochemistry, Universidad Nacional Autonoma; 10Cornea & Refractive Unit, Institute of Ophthalmology, Conde de Valenciana Foundation; 11Cornea, Refractive Surgery and External Disease, Universidad Nacional Autonoma de Mexico

979 — 3:30 Protective effects of Intravitreal injection of human CD34+ stem cells from bone marrow on diabetic retinopathy in a murine model, Amirfarbod Yazdanyar, P. Zhang, C. Dolf, W. Cary, M. Pham, J. Nolta, R. J. Zawadzki, N. Marsh-Armstrong, S. S. Park, Department of Ophthalmology, University of California, Davis


982 — 4:15 Rod Visual Transduction is a Determinant of Diabetic Retinopathy. Rithwick Rajagopal1, S. Zhang2, C. Oberlin3, C. F. Semenovkitch4. 1Department of Ophthalmology and Visual Science, Washington University School of Medicine; 2Department of Medicine, Washington University School of Medicine

983 — 4:30 Neurovascular coupling impairment and vasomotor decline in a murine model of diabetic retinopathy, Botir T. Sagdullaev, T. Kovacs-Oliver, E. Ivanova, Burke Neurological Institute, Weill Cornell Medicine

984 — 3:00 Myeloid cell dynamics in the mouse uveal tract during systemic inflammation. Samantha Dando, P. G. McMenamin, Monash Biomedicine Discovery Institute and Department of Anatomy and Developmental Biology, Monash University

985 — 3:15 Inner Plexiform Layer-Specific Microglia Protect the Retinal Pigment Epithelium in Retinal Degeneration. Chen Yu, R. Mathew1, D. R. Saban2. 1Department of Ophthalmology, Duke University; 2Department of Immunology, Duke University

986 — 3:30 Neuripilin-1 Expression on Myeloid Cells Promotes a Pro-inflammatory Pheno type while Inhibiting Choroidal Neovascularization. Elisabeth Andersson1, F. Biner2, N. Beaulieu1, K. Beauchemin1, F. A. Rezende1, A. M. Wilson1, M. Buscarlet1, F. Fourrier1, N. Tétreault2, S. Sapieha1. 1Institut de Montreal; 2Hospital Maisonneuve Rosemont; 3SenaThera Inc; 4Biron Groupe Santé

987 — 3:45 Interleukin-33 attenuates ocular angiogenesis through a mast cell dependent pathway. Sofia Theodoropoulou1, D. Copland2, K. Ou1, J. Liu, N. Millar2, A. D. Dick1. 1Ophthalmology, University of Bristol, Medical School; 2Institute of Infection,Immunity and Inflammation, University of Glasgow

988 — 4:00 A novel protective role of the C-type lectin Mincl in modulating inflammation and lesion size a mouse model of choroidal neovascularization. Matt Rutar, A. Brandli, G. Venables, E. L. Fletcher, C. Wells, The University of Melbourne

989 — 4:15 Systemic Infection Of Low Dose Lps Transiently Improves The Retina Function And Structure Of A Mouse Model Of Geographic Atrophy. Cristian J. Idefonzo, B. M. Young, Ophthalmology, University of Florida College of Medicine

990 — 4:30 Title: Soluble oligomeric Amyloid-β induced retinal pigment epithelial degeneration requires non-canonical inflammatory activation. Siddharth Narendran, D. BANERJEE, I. Apicella, S. Wang, A. Varshney, S. Fukuda, N. Kesar, B. Gelfand, J. Ambati, Department of Ophthalmology, University of Virginia

East Ballroom A
Sunday, April 28, 2019 3:00 PM-4:45 PM
Immunology/Microbiology

151 Myeloid and Innate Immunology of the Retina

Moderators: Samantha Dando, Daniel R. Saban and Florian Senlaub
The goal of this symposium is to introduce and discuss novel and new structural and functional endpoints that could serve as potential end-points in clinical trials. We will discuss existing well validated end-points that are continuing to be important, but also explore new emerging concepts in this field. The use of Artificial intelligence to enrich and screen study populations will also be discussed in the framework of clinical trials.

**Moderators:** Amani A. Fawzi, Richard B. Rosen and Jacque L. Duncan

--- **3:00 Introduction**

991 — 3:02 Biomarkers and endpoints for dry AMD trials. Srinivas R. Sidda1, 2. 1Ophthalmology, University of California - Los Angeles; 2Doheny Eye Institute, National Institutes of Health; *CR


993 — 3:26 Artificial Intelligence approaches to enrich clinical trial populations. Ursula Schmidt-Erfurth. Department of Ophthalmology, Medical University of Vienna *CR

994 — 3:38 Development of Outcome Measurements for Studies of Macular Telangiectasia (Mac Tel) Type 2. Emily Y. Chew. Epidemiology & Clinical Applications, National Eye Inst/NIH

995 — 3:50 Functional (visual fields) and structural (OCT) end points in clinical trials. Donald C. Hood. Psychology and Ophthalmology, Columbia University *CR

996 — 4:02 OCTA promise and challenges in clinical trials endpoint. David Huang. Casey Eye Institute, Oregon Health & Science Univ *CR

997 — 4:14 OCTA and beyond: Qualitative Revelations and Opportunities in Quantitative Imaging. Richard B. Rosen1, 2. 1Ophthalmology, New York Eye & Ear Infirmary; 2Ophthalmology, Icahn School of Medicine at Mount Sinai *CR

--- **4:26 Discussion**

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**1000 — 3:30 De novo transcriptomes built from hundreds of human cornea, retina, and RPE RNA-seq samples identifies thousands of differentially expressed ocular specific gene transcripts and novel eye disease relevant exons. Vinya Swamy, B. P. Brooks, R. B. Hufnagel, D. McGaughey. Ophthalmic Genetics and Visual Function Branch, National Eye Institute, National Institutes of Health.**

**1001 — 3:45 Cis-regulatory basis of sister cell type divergence in the vertebrate retina. Dan P. Murphy, A. Hughes, J. C. Corbo. Pathology and Immunology, Washington University School of Medicine.**

**1002 — 4:00 Optic nerve lipidomics reveal impaired glucosylphosphosphinosine lipids pathway in glaucoma. Sanjoy K. Bhattacharya, M. Z. Chauhan, A. K. Valencia, M. Piqueras, M. E. Algeciras, Bascom Palmer Eye Institute, Univ of Miami Miller Sch of Med.**

**1003 — 4:15 Global RNA metabolic changes associated with a dominant-negative Crx mutation. Inez Oh, S. Chen. Washington University School of Medicine.**

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**1004 — 4:30 Metabolomics in Age-related Macular Degeneration: The EYE-RISK Consortium. Ilhan Erkin Acar1, M. Meester2, L. Lores de Motta1, D. Pauleikhoff3, S. Fauser4, C. C. Hong5, C. DelCourt6, C. C. Klaver2, T. E. Galesloot7, A. L. Den Hollander1. 1Department of Ophthalmology, Donders Institute for Brain, Cognition and Behaviour, Radboud university medical center; 2Department of Ophthalmology, Erasmus University Medical Center; 3Department of Epidemiology, Erasmus University Medical Center; 4Bordeaux Population Health Research Center, Univ. Bordeaux; 5Radboud University Medical Center, Radboud Institute for Health Sciences; 3M Reading Center, Augenzentrum, St. Franziskus Hospital; 4Department of Ophthalmology, University Hospital of Cologne *CR.**
Moderators: Chirag Shah and Rachel Bishop


1013 — 3:15 Visual, Refractive and Anatomic Outcomes of Combined Versus Sequential Phacoemulsiﬁcation and Vitrectomy in Patients with Epiretinal Membrane or Full-thickness Macular Hole. Harrison Dermer3, R. H. Hussain2, J. Tucker1, T. K. Huynh1, M. C. Mehta1. 1University of Minnesota; 2Bascom Palmer Eye Institute; 3Medical University of Vienna. 3


1016 — 4:00 Intraocular Pressure (IOP) effects on self-sealing clear corneal incisions using 3D printed anterior segment model. Yann Bouremel9, C. Henein10, S. Brocchini11, P. T. Khaw12. 1National Institute for Health Research (NIHR) Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology; 2Department of Mechanical Engineering, UCL; 3School of Pharmacy, UCL

Moderator: Sharon A. Bentley

1017 — 3:00 A Qualitative Approach to Understanding Reasons for Non-Participation and Barriers to Participation in School-Based Vision Programs. Harsuwan Vongsachang1, A. Insu2, A. M. Kretz3, R. Mukherjee4, D. S. Friedman5, M. X. Repka6, M. E. Collins7. 1Wilmer Eye Institute, Johns Hopkins University School of Medicine; 2Johns Hopkins University School of Education; 3University of California, San Francisco School of Medicine *CR

1018 — 3:15 The Landscape of Ophthalmologists and Optometrists in Ontario, Canada from 2011 to 2016. Shicheng Jin1, S. El-Defrawy1, J. A. Micieli2, Y. Jin3, P. Yan4. 1Department of Ophthalmology & Vision Sciences, University of Toronto, and Kensington Eye Institute; 2Dalla Lana School of Public Health, University of Toronto


1020 — 3:45 Establishing a collaborative model of glaucoma care in an Australian public hospital setting. Sharon A. Bentley1,2, C. Green3, L. Malesic4, T. Siggins5, C. Escott5, M. O’Keefe6, C. Clarke7. 1Queensland University of Technology; 2Australian College of Optometry; 3Royal Victorian Eye and Ear Hospital; 4Latrobe University

1021 — 4:00 Analysis of vision screening failures in a school-based vision program in Baltimore, MD. Alyssa M. Kretz2, R. Milante1, X. Guo1, A. Insu3, M. Mukherjee4, D. S. Friedman5, M. X. Repka6, M. E. Collins7. 1Wilmer Eye Institute, Johns Hopkins University School of Medicine; 2Dana Center for Preventive Ophthalmology, Johns Hopkins University School of Medicine; 3Center for Research and Reform in Education, Johns Hopkins University School of Education; 4University of California San Francisco School of Medicine *CR

1022 — 4:15 Factors Influencing Patient Adherence to Diabetic Retinopathy Screening and Follow-up: An Exploratory Qualitative Study. Danielle Altman1, J. Jimenez1, C. Hsu2, S. Hudson3, T. Luong4, D. S. Fong5. 1Research & Evaluation, Kaiser Permanente Southern California; 2Children’s Hospital Los Angeles; 3Department of Ophthalmology, Southern California Permanente Medical Group *CR

1023 — 4:30 Understanding barriers to glaucoma treatment adherence among patients in South India. OLIVIA KILLEEN6, M. Pillai7, B. Udayakumar1, S. Shroff8, M. Vimalanathan9, J. Cho1, P. Newman-Casey1. 1Ophthalmology, University of Michigan Kellogg Eye Center; 2Aravind Eye Hospital

MODERATORS: ANNE F. BROWN, RACHEL BISHOP, AND WILLIAM E. MCKINLAY

1024 — 4:30 Correlated noise in extrastriate neurons of amniotic eyes. Bin Zhang1, Y. Wang2, J. M. Wenesuev3, E. L. Smith2, Y. M. Chino4. 1College of Optometry, Nova Southeastern University; 2College of Optometry, University of Houston

1025 — 3:15 Withdrawal_Employing principles of timing-dependent plasticity to treat amblyopia. Kimberly Meier1, M. Sperring1, D. Giaschi1. 1University of Washington; 2Ophthalmology & Visual Sciences, University of British Columbia

1026 — 3:30 Fixation stability is not related to global motion deficits in amblyopia. Simon Grant, M. L. Conway. Optometry & Visual Science, City, University of London


1028 — 4:00 Motor Skills and Self-Perception of 3- to 7-Year-Old Children with Deprivation Amblyopia. Eileen E. Birch2, Y. S. Castañeda1, S. Cheng-Patel1, S. M. Smorale@retinafoundation.org1, K. R. Kelly1, S. Wang2. 1Retina Foundation of the Southwest; 2Ophthalmology, UT Southwestern Medical Center


The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
1036 — 4:30  Saccadic eye movement abnormalities in Parkinson’s disease. Allen M. Cheong1, H. Lam1, L. A. Abel2, P. Lee1, A. Chan1, Y. Cheung1, L. Li1, R. Li1, R. Li1. 1Hong Kong Polytechnic University; 2University of Melbourne; 3Chinese University of Hong Kong; 4Queen Elizabeth Hospital; 5University of Hong Kong; 6Pamela Youde Nethersole Eastern Hospital; 7University of California, Berkeley

ARVO Ballroom

Sunday, April 28, 2019 3:00 PM–4:00 PM

159 Epstein Award Session

This award honors David L. Epstein, MD, who is widely considered to be one of the most influential leaders in the world of glaucoma and glaucoma research over the past 40 years. The award was created by Dr. Epstein’s family to perpetuate and honor his commitment to the scientific understanding and cure of glaucoma through the support of promising clinician-scientists in exceptional research environments. It is the intent of the donors that this award further Dr. Epstein’s long-standing determination and interest in solving the complex issues of glaucoma through well-conceived and executed scientific research focused on finding the causes and new treatments for the disease.

— Structural OCT and OCT angiography to diagnose and monitor glaucoma progression - David Huang, MD, PhD, FARVO Mentee: Liang Liu, MD Oregon Health & Science University

1038 — 3:20  Gene delivery to the trabecular meshwork for target validation, development of disease models, and the treatment of glaucoma. Abbot F. Clark, Cell Biology & Anatomy, University of North Texas HSC *CR

1039 — 3:37  Self-delivery siRNA to prevent corneal scarring. Audrey M. Bernstein, SUNY Upstate Medical University

1040 — 3:54  Gene therapy to prevent corneal scarring. Rajiv R. Mohan1, 2. 1Mason Eye Institute and VMTH, University of Missouri-Columbia; 2Truman VA Hospital

1041 — 4:11  Harnessing the regulatory power of microRNAs to treat diseases of the anterior segment: adventures in nanotechnology. Robert M. Lavker, Northwestern University

1042 — 4:28  Gene therapy for inherited corneal diseases. Tara C. Moore1 2. 1University of Ulster; 2Avellino Labs *CR

Harbour Ballroom

Sunday, April 28, 2019 3:00 PM–4:45 PM

160 Emerging gene-driven therapies for anterior segment disease - Minisymposium

Corneal disease and glaucoma together account for significant ocular morbidity and vision loss. The cornea and the trabecular meshwork for glaucoma are important accessible sites for emerging gene-targeted therapies. The focus of this mini-symposium is novel gene-driven therapies to prevent or reverse anterior chamber disease and pathologies.

Moderators: Alexander V. Ljubimov, Thomas A. Fuchsluger and Gulab Zode

— 3:00  Introduction

1037 — 3:03  Overview of Gene Therapy in Anterior Segment. Alexander V. Ljubimov1 2. 1Regenerative Medicine Institute, Cedars-Sinai Medical Center; 2Medicine, UCLA School of Medicine *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.


1051 – A0009 Effect of Observer Motion on the Visibility of Architectural Features with Simulated Acuity Reduction. Siyun Liu, Q. Lei, B. Carpenter, G. E. Legge, D. Kersten. Psychology, University of Minnesota 

1052 – A0010 Implications of monococular vision for racing drivers, Julien Adriani, J. Le Brun, N. Miller, J. A. Sahel, G. Saillant, B. Bodaghi. Streetlab, Wilmer Eye Institute, Johns Hopkins Hospital; 1FLA; 2Department of Ophthalmology, DHU Vision and Handicaps, Hopital Pitie-Salpetriere; CHNO des Quinze-Vingts, DHU Sight Restore, INSERM-DHOS CIC 1423.; 3Inserrn, U968; UPMC Univ Paris 06, UMR S968, Institut de la Vision; CNRS, UMR 7210; CHNO des Quinze-Vingts, INSERM-DHOS CIC 503 


1055 – A0013 How do simulated central vision loss and distance affect the detection of hazards by older and younger drivers? Ting Zhang, S. Savage, A. R. Bowers. Schepens Eye Research Institute of Mass Eye and Ear, Dept Ophthalmology, Harvard Medical School; 1New England College of Optometry 

1056 – A0014 Pilot study of a tactile hazard warning device for drivers with hemianopia. Alex R. Bowers, R. Hoelzl, L. Stockman, O. Herzog, S. Savage, C. Lehsing. 1Schepens Eye Research Institute of Mass Eye and Ear, Dept Ophthalmology, Harvard Medical School; 2Chair of Ergonomics, Department of Mechanical Engineering, Technical University of Munich 

1057 – A0015 Association between driving avoidance at night and the severity of primary-open angle glaucoma in a Japanese population. Akiko Hanyuda, K. Yuki, S. Tanabe-Awano, T. Ono, D. Shiba, K. Tsubota. Keio University School of Medicine 

1058 – A0016 Pilot study of an auditory scanning reminder system for drivers with hemianopia. Jing Xu, B. Emmermann, O. Herzog, G. Swan, C. Lehsing, A. R. Bowers. Schepens Eye Research Institute of Massachusetts Eye and Ear, Department of Ophthalmology, Harvard Medical School; 1Chair of Ergonomics, Department of Mechanical Engineering, Technical University of Munich 

1059 – A0017 Specificity and retention of perceptual learning in children with visual impairment. Bianca Haurnemann, N. Boonstra, J. Goossens. 1Department of Cognitive Neuroscience, Donders Institute for Brain, Cognition and Behaviour; 1Royal Dutch Visio 

1060 – A0018 Analysis of Visual Outcomes in Children with Primary Congenital Glaucoma. Lei Fang, X. Liu, Y. Hu, Y. Zhong. State Key Laboratory of Ophthalmology 

1061 – A0019 Face perception - can it be improved in age-related macular degeneration and Stargardt disease? Iain R. Wilson, S. L. Hicks, S. M. Downes, R. E. MacLaren. 1Nuffield Dept of Clinical Neurosciences, University of Oxford; 2Oxford Eye Hospital, Oxford University Hospitals NHS Foundation Trust; 3Nuffield Laboratory of Ophthalmology, University of Oxford *CR 

1062 – A0020 Word neighborhood size is not a limiting factor of reading speed with central field loss. Aurelie Calabrese, L. Sauvay, C. Aguilar, E. Caster. 1Aix-Marseille University; 2North Hospital; 3CNRS; 4Nice Sophia-Antipolis University 


1064 – A0022 Independent contributions of letter, word and sentence information to reading speed for people with macular disease. Susana T. Chung, J. Bernard. School of Optometry, University of California

1066 — A0024 Visual Field Loss in Patients with Diabetes in the Absence of Clinically-Detectable Vascular Retinopathy, Yicheng Bao1, M. Kass2, J. McGill, Y. Yan1, R. Rajagopalan1. 1UMKC School of Medicine; 2Department of Ophthalmology and Visual Sciences, Washington University School of Medicine; 3Department of Endocrinology, Metabolism, and Lipid Research, Washington University School of Medicine; 4Department of Surgery, Washington University School of Medicine

1067 — A0025 The Soifua Manuia Telemedicine Eye Screening Program in a High-Risk Population of Samoans with Diabetes. Lauren C. LaMonica1, D. J. Ramsey2, M. K. Bhardwaj1, T. Naseri1, M. S. Reupena2, N. L. Hawley3. 1Department of Ophthalmology, Lahey Hospital & Medical Center; 2Department of Chronic Disease Epidemiology, Yale School of Public Health; 3Ministry of Health; 4Lutia i Puava ae Mapu i Fagalele (LPAMF)

1068 — A0026 Four-year analysis of diabetic retinopathy rates using teleretinal screening shows declining retinopathy rates over time in Central Texas. Kevin F. Elwood, R. L. Gross, J. A. Martinez1, S. D. Ghafoori2, C. Harper3, J. W. Doomer1, M. Levitan4, P. A. Nixon4, R. C. Young1, R. Wong1. 1Department of Ophthalmology, University of Texas at Austin Dell Medical School; 2Austin Retina Associates; 3Southern Eye Group

1069 — A0027 Predictors of Receiving Annual Dilated Eye Examinations Among US Patients with Diabetes, Sarah Eppley1, E. Lowry1, S. L. Mainsberger2, S. Ramanathan1. 1School of Medicine, University of California, San Francisco; 2Legacy Devers Eye Institute; 3Ophthalmology, University of California, San Francisco

1070 — A0028 Discrepancies in the epidemiology of diabetic retinopathy among diabetes clinics, eye clinic, and population-based studies: A Systematic Review, and Meta-Analysis. Golnoush Sadat Mahmoudi Nezhad, H. Molavi Vardanjani4, M. Razeghinejad2, M. Janghorban1. 1Mph, Mph department; 2Wills Eye Hospital, Glaucoma Service; 3Isfahan Endocrine and Metabolism Research Center

1071 — A0029 Rates of Eye Care and Diabetic Eye Disease Among Patients with Newly-diagnosed Type 2 Diabetes and Medicare or Private Health Insurance. William S. Gange2, B. Xu1, S. A. Seabury3. 1Ophthalmology, University of Southern California; 2Keck-Shaefler Initiative for Population Health Policy, Keck School of Medicine, US *CR

1072 — A0030 Anemia and the Risk of Progression From Non-Proliferative Diabetic Retinopathy to Vision Threatening Diabetic Retinopathy. Yafeng Li, Y. Yu, B. L. VanderBeek. Ophthalmology, Scheie Eye Institute

1073 — A0031 Long-term Hba1c variability and the progression of diabetic retinopathy in patients with type 2 diabetes. Sung Pyo Park. Hallym University Medical Center, KangDong Sacred Heart Hospital

1074 — A0032 Trends in eye care use in adults treated for diabetes between 2008 and 2017 in France: a nationwide study. Audrey Cougnard-Gregoire1, J. Korobelnik2, M. Deleyer1, V. Rigalleau1, Y. Daven1, C. Creuzot-Garcher4, C. DelCourt1. 1University of Bordeaux, Inserm, Bordeaux Population Health Research Center, Team LEHA, UMR 1219; 2Department of Ophthalmology, Bordeaux CHU, Pellegrin Hospital; 3Department of Nutrition-Diabetology, Bordeaux CHU, Haut-Lévêque Hospital; 4Department of Ophthalmology, Montpellier University Hospital; 5University of Montpellier, Inserm, U1061; 6Department of Ophthalmology, Dijon University Hospital; 7CSGA, UMR 1324 INRA, Eye and Nutrition Research Group *CR

1075 — A0033 Automated capture of the diluted eye exam for diabetic retinopathy screening in an electronic health record. Michael Ellis1, M. Lim1, N. Hammel1, S. Maharajh2, D. Fujino2, B. Hom2, S. McDonald1. 1UC Davis Medical Center

1076 — A0034 Effect of patient adherence to recommended treatments on functional outcomes following off-label intravitreal bevacizumab injections for diabetic macular edema. John O’Fee, E. Jung, N. Rayess, A. Moshfeghi, USC Roski Eye Institute, Keck School of Medicine of USC *CR

1077 — A0035 Spectrum of Eye disorders in type 2 Diabetes (SPEED) in India. An eye care facility based study. Taraprasad Das1, U. Behera1, H. Bhattacharjee1, C. Gilbert4, G. Marthy3, R. Rajalakshmi3, H. Pant1, R. Shukla2. 1Retina Vitreous Services, LV Prasad Eye Institute; 2Retina Vitreous, L V Prasad Eye Institute; 3Retina Vitreous, Sankara eye Institutions; 4London School of Hygiene and Tropical Medicine; 5Indian Institute of Public Health; 6Ophthalmology, Dr Mohan’s Diabetes Specialty Center

1078 — A0036 A longitudinal study on risk factors of diabetic retinopathy progression. Qiong Li1, Y. Fang2, J. Winters3, D. Ren2, L. Messner1. Ophthalmology, Fujian Provincial Hospital; 4Illinois College of Optometry

1079 — A0037 Clinical characteristics of diabetes and diabetic retinopathy in an ageing population - NICOLA study. Sophia R. Halliday, N. B. Quinn, R. Hogg, U. Chakravarthy, T. Peto, F. Kee, J. Young, B. McGuinness, S. Cruise, D. WRIGHT. Centre for Public Health, Queen’s University Belfast


1081 — A0039 Is Poor Compliance with Diabetic Eye Screening in Young Adults an Indicator of Poor Diabetes Control? Laura N. Cuskey1, A. Bell1, G. Silvestri1, U. Graham2, M. McCance1, N. Quinn1, T. Peto1. ’Centre for Public Health, Queen’s University Belfast; 2Queen’s University Belfast; 3Ophthalmology, Belfast Health and Social Care Trust; 4Endocrinology, Belfast Health and Social Care Trust

1082 — A0040 Ultra-widefield fluorescein angiography time-lapse imaging in diabetic retinopathy. HANGQI SHEN, X. Xu. Shanghai General Hospital

1083 — A0041 Fenofibrate and Statin Use and the Risk of Progression to Vision Threatening Diabetic Retinopathy. Brian L. VanderBeek2, J. C. Bavinger1, Y. Yu1, 2. 1Retina, Scheie Eye Institute University of Pennsylvania; 2Ophthalmology, Center for Preventive Ophthalmology and Biostatistics

1084 — A0042 Risk factors associated with progression to referable diabetic retinopathy(RDR): A Type 2 Diabetes Mellitus(T2D) cohort study in Ireland. John Smith1, N. Lofo1, P. H. Scanlon1, D. Wright1. 1Wellcome-Wolfson Centre For Experimental Medicine, Queens University Belfast; 2Ophthalmology, University Of Glasgow; 3Centre For Public Health, Queens University Belfast

1085 — A0043 Poor control of diabetes is associated with sight threatening retinopathy in patients attending tertiary care eye clinics in Nepal and India. Shamina Pardhan1, T. Upadhyaya1, A. Biswas1, R. Ramam1, R. Sapkota1. 1Anglia Ruskin University; 2Gandaki Medical College and Teaching Hospital; 3Kurseong Sub-divisional Hospital; 4Sanka Nethralaya Eye Hospital

1086 — A0044 Determinants of Poor Follow-up Adherence for Diabetic Retinopathy. Christopher J. Brady1, S. D’Amico1, J. Peavey1, S. Higgins1, B. Kim1. 1Surgery - Ophthalmology, University of Vermont; 2Psychiatry, University of Vermont
**1087 — A0045**
Barriers to Follow-Up Care in an Underserved Community-Based Teleophthalmology Screening Program. Andrew Zolot1, N. Abenoz2, J. E. Kim1, V. Medic1, K. Davis2, J. Roman3, A. Castro4, M. Sosa Pachero4.
1Medical Student, Medical College Of Wisconsin; 2Medical College of Wisconsin; 3City of Milwaukee; 4United Community Center *CR

**1088 — A0046**
Diabetic Retinopathy in the Thessaloniki Eye Study (TES): Prevalence and Risk Factors. Christina Keskini1, A. L. Coleman2, M. R. Wilson1, A. Harris1, F. Yu1, P. Founti3, E. Anastasopoulos1, A. Haaidich1, T. Pappas1, N. Dervenis1, A. Malamas1, P. Kalouda1, V. Kiliantzis1, A. Salonikios1, A. Koskous1, F. Topouzis1.
1Laboratory of Research and Clinical Applications in Ophthalmology (LARCAO), Department of Ophthalmology, School of Medicine, Aristotle University of Thessaloniki; 2Jules Stein Eye Institute,University of California Los Angeles (UCLA); 3School of Medicine, Wayne State University; 4Department of Ophthalmology, Eugene and Marilyn Glick Eye Institute, Indiana University School of Medicine; 5Department of Biostatistics, UCLA Fielding School of Public Health; 6Glaucoma Unit, Moorfields Eye Hospital NHS Foundation Trust; 7Department of Hygiene, Social-Preventive Medicine & Medical Statistics, School of Medicine, Aristotle University of Thessaloniki *CR

**1089 — A0047**
1Preventive Medicine, Univ of Southern California; 2The Southern California Eye Care and Vision Research Institute; 3Ophthalmology, University of Southern California; 4Singapore National Eye Research Institute *CR

**1090 — A0048**
Identifying Factors Associated with Blindness in Patients with Diabetic Retinopathy: Insights from the AAO IRIS® Registry. Charles C. Wykoff9, R. Half10, S. Kelly11, F. Lam1, I. Stoilov1, I. Abbas2, T. To3, A. M. Abolian1, V. Garano1.
1Retina Consultants of Houston; 2American Academy of Ophthalmology; 3Genentech, Inc. *CR

**1091 — A0049**
Interdisciplinary Communication: Ophthalmologists’ letters to secondary diabetes care centers. Lydia Marahrens1, D. Rocek1, A. Fritsche1, F. Ziemen1.
1Center of Ophthalmology, University of Tuebingen; 2German Centre for Diabetes Research (DZD), Institute for Diabetes Research and Metabolic Diseases of the Helmholtz Centre Munich at the University of Tuebingen *CR

**1092 — A0050**
The acceptance of teleophthalmology in community health settings in Milwaukee, Nathalie Abenoz1, A. Zolot1, V. Medic1, J. Roman1, J. E. Kim1, 1Medical College of Wisconsin; 2Milwaukee Health Department *CR

**1093 — A0051**
Low attendance to diabetic retinopathy screening in young people in England. Maria C. Ibanez Bruzon1, 2, A. Solobe1, 2, P. Cameron1, 2, J. Ruhl1, 2.
1Population, Policy and Practice, UCL Great Ormond Street Institute of Child Health; 2Ophthalmology, Pontificia Universidad Catolica de Chile; 3NIHR Moorfields Biomedical Research Centre, Institute of Ophthalmology UCL

**1094 — A0052**
1Technical University of Munich; 2Carl Zeiss Meditec, Inc.; 3Silicon Valley Eyeecare; 4Carl Zeiss Meditec, Inc. *CR

**1095 — A0053**
Prevalence of Diabetic Retinopathy in Chinese Adults With Type 2 Diabetes in the Rural Area of Shanghai. Lilhua Gong1, J. Lin1, W. Xia2, P. Yuan3.
1Qingpu Branch of Zhongshan Hospital; 2Zongshan Hospital

**1096 — A0054**
Ophthalmology, Yale School of Medicine

**1097 — A0055**
Sub-clinical Diabetic Macular Edema in Chinese Diabetic Patients: A Pilot Study. Xia Gong1, W. Huang1, L. Wang1, W. Li1, W. Wang2, Zhongshan Ophthalmic Center

**1098 — A0056**
Epirretinal membrane and their related factors in diabetic patients—a cross-sectional study. Wangting Li1, W. Huang1, Zhongshan Ophthalmic center

**1099 — A0057**
Results of the third and fourth round of Screening from the Irish National Diabetic Retinopathy Screening and Treatment Programme (Diabetic RetinaScreen). David J. Keegan1, 2, R. Pandey1, 2, H. Kavanagh1, 2, J. Keegan1, 2, R. Li1, C. Song1, I. Lam1, J. Hui1, C. Fong1, N. Fong1, C. Lee1.
1Department of Ophthalmology, University of Hong Kong; 2Faculty of Medicine, The Chinese University of Hong Kong; 3Department of Medicine, University of Hong Kong

**1100 — A0058**
Prevalence of Diabetic Retinopathy in Diabetes Mellitus: the Result of a Large Urban Eye Clinic. Daniel Ren1, Y. Pang1, R. Ellis2, Q. Li1, L. Messner1.
1Illinois College of Optometry; 2Applied Mathematics, Illinois Institute of Technology

**1101 — A0059**
Screening for diabetic retinopathy and other retinal diseases: a telemedicine project in Mexico. Dalía Méndez Marin1, R. García Franco2, V. Charles Lansingham1, E. López Star1, A. Arias Gómez3, P. Ramírez Nería1, M. García Roca1, V. Romero Morales1, X. Mira Lorenzo1, M. Vázquez Membrillo1, V. Villalpando Gómez1.
1Dirección General, Instituto Mexicano de ophthalmología I.A.P; 2Retina and Vitreous, Instituto Mexicano de ophthalmología I.A.P; 3Retina and Vitreous, Instituto Mexicano de ophthalmología I.A.P

**1102 — A0060**
Ten-year incidence and progression of diabetic retinopathy in type 1 and type 2 diabetes in France: the OPHDIAT study. Chloé Chamard.
Ophthalmology, Chu Gui De Chauliac

**1103 — A0061**
Association of Socioeconomic Variables with Risk Factors for Diabetic Retinopathy. Oluwemisi O. Olumola1, M. Yosef2, S. KHALAVARI, A. Shakh2.
1University of Michigan Medical School, Michigan Medicine; 2Kellogg Eye Center, Michigan Medicine; 3Michigan Institute for Clinical & Health Research, Michigan Medicine

**1104 — A0062**
Ophthalmology, UC Davis *CR

**1105 — A0063**
Efficacy of an endocrinologist-led specialist care clinic in minimizing burden of vision-threatening retinopathy in Chinese diabetic patients. Kendrick C. Shih1, S. Poons1, S. Yu2, R. Li1, C. Song1, I. Lam1, J. Hui1, C. Fong1, N. Fong1, C. Lee1.
1Department of Ophthalmology, University of Hong Kong; 2Faculty of Medicine, The Chinese University of Hong Kong; 3Department of Medicine, University of Hong Kong

**1106 — A0064**
Physical activity, sedentary behavior, and choroidal thickness in Chinese adults with type 2 diabetes: Guangzhou Diabetes Eye Study. Yuchun Liu1, W. Huang1, M. Jie1, W. Wang1, L. Wang1, X. Gong1, K. Xiong1, Zhongshan Ophthalmic center, Sun Yat-sen University

**1107 — A0065**
1Health Policy, Yale School of Public Health; 2Ophthalmology and Visual Sciences, Yale School of Medicine; 3Biostatistics, Yale School of Public Health

**1108 — A0066**
University of Washington School of Medicine *CR
163 Cataractogenesis, Prevention, and Treatment

Moderator: Juliet A. Moncaster

1109 — A0067 Opacification of Lentoid Bodies Derived from Human Induced Pluripotent Stem Cells Is Accelerated by Hydrogen Peroxide and Involves Protein Aggregation. Lijiang Zhang, Z. Qin, L. Danni, K. Yao, Q. FU. 2nd Affiliated Hospital of Zhejiang University

1110 — A0068 Cataract-inhibitory effects of water chestnut (Trapa bispinosa Roxb) and lutein in Shumiya cataract rats. Hitoteshi Ishida, T. Shibata, S. Shibata, H. Sasaki, E. Kubo, Kanazawa Medical University *CR

1111 — A0069 A New Dexamethasone-Moxifloxacin-Genistein-NLC-Drug Delivery System that Provides Sustainable Release in Infection and Posterior Capsule Opacification. Tingyu Yan, J. Liu, Y. Wang, X. Zhang, Y. Liu, F. Liu, J. Kong, Y. He, China Medical University

1112 — A0070 Metformin Restores Impaired Antioxidant Defense Response In Aging Lens Epithelial Cells By Reactivating Nrf2/ARE/Prdx6 Axis. Bhavana Chhunchha1, E. Kubo2, S. P. Singh1, D. P. Singh1. Ophthalmology & Visual Sciences, University of Nebraska Medical Center; 2Ophthalmology, Kanazawa Medical University; 1Neurology, Creighton University

1113 — A0071 A non-human primate model of congenital heritable cataracts. Sara M. Thomasy1, R. Chen2, L. Garzel, K. J. Olstad, J. Wang3, S. Kim1, Y. Li1, M. Raveendran1, B. L. Gates2, J. T. Stouf1, J. Roberts1, J. Goshir1. 1Department of Surgical & Radiological Gene expression profiling of a Lens-Specific βA3/A1-Crystallin Conditional Gene Expression and Oxidative Responses By Transregulating Prdx6 Expression. Dhirendra P. Singh1, E. Kubo2, S. P. Singh1. 1Ophthalmology and Visual Sciences, University of Nebraska Medical Center; 2Ophthalmology, Kanazawa Medical University; 3Neurology, Creighton University

1114 — A0072 Expected vs. Actual Refractive Error in Patients Presenting with Phacomorphic Glaucoma. Aliahia Khambati, S. Syeda, J. Tannir, Kresge Eye Institute, Wayne State University School of Medicine

1115 — A0073 More than just a reactive oxygen species scavenger: grapes prevent UV-B radiation-induced cataract by upregulating anti-inflammatory protein XIAP. Hongli Wu1, X. Liu1, D. Wang3, L. Aguilera Garcia2, Y. Li1, Yue4, F. Ssentamu1. 1North Texas Eye Research Institute, University of North Texas Health Science Center; 2Department of Pharmaceutical Sciences, University of North Texas Health Science Center; 3Department of Traditional Chinese Medicine, Shangxi Dayi Hospital; 4Department of Obstetrics and Gynecology, The 2nd Hospital of Dalian Medical University; 5College of Pharmacy, University of North Texas Health Science Center

1116 — A0074 Lanosterol treatment of induced cataracts in adult zebrafish shows reduction of cataract severity. Heather Prior, D. Van Gaalen. The King’s University

1117 — A0075 c-Myc mediates Epithelial-to-Mesenchymal Transition in Lens Epithelial Cells. Xiaorong Wang, S. Huang, B. Wang, S. Yan, L. Xiong, Z. Wang, Y. Liu, State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University

1118 — A0076 Rosmarinic Acid Restores Complete Transparency of Human Cataract Ex Vivo and Delays Cataract Formation In Vivo. Michael Minoumi1,2, M. Chemoverson-Glikman1, Y. Dagan1, E. Haj1, I. Vainer2, R. Alon2, E. Blumenthal2,3, L. Adler-Abramovich4, D. Segal5, E. Gazit1, S. Zayit-Soudry1,2. 1Ophthalmology and Ocular Pharmacology, Rambam Health Care Campus; 2Bruce and Ruth Rappaport Faculty of Medicine, Technion-Israel Institute of Technology; 3Department Molecular Microbiology and Biotechnology, Tel-Aviv University; 4Department of Oral Biology, Tel-Aviv University

1119 — A0077 Proliferative status in the aqueous humor of eyes with congenital cataract. Yinglei Zhang, D. Li, Q. Lu, Y. Du, Y. Lu, X. Zhu, Ophthalmology, Eye and ENT Hospital of Fudan University

1120 — A0078 TGFβ-induced EMT leading to cataractogenesis involves Nox4 activity. Shannon Dass2, F. J. Lovicu2. 1Anatomy and Histology, University of Sydney; 2Bosch Institute

1121 — A0079 Gene expression profiling of lens epithelial cells in Shumiya cataract rats. Eri Kubo1, H. Ishida1, S. Shibata1, T. Shibata2, Y. Nakamura1, Y. Ishigaki1, D. P. Singh1, H. Sasaki1. 1Dept of Ophthalmology, Kanazawa Medical University; 2Medical Research Institute, Kanazawa Medical University; 3Department of Ophthalmology and Visual Science, University of Nebraska Medical Center *CR

1122 — A0080 JNK1 Regulates Epithelial-to-Mesenchymal Transition via β-catenin Signaling in Human Lens Epithelial Cells Exposed to Hydrogen Peroxide. Jinyan Li, Y. Chen, L. Luo, State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center

1123 — A0081 Diabetic Cataract in Spontaneously Diabetic Torii Fatty Rats. Kasumi Kikuchi1, K. Noda2, M. Murata1, Y. Tagawa1. 1Arai, S. Kase1, Y. Kageyama1, M. Shinohara1, T. Sasae1, S. Ishida1. 1Laboratory of Ocular Cell Biology and Visual Science, Department of Ophthalmology, Faculty of Medicine and Graduate School of Medicine, Hokkaido University; 2CLEA Japan Inc., Tokyo Animal & Diet Dept.; 3Biological/Pharmacological Research Laboratories, Central Pharmaceutical Research Institute, Japan Tobacco Inc. *CR

1124 — A0082 ROS-mediated Wnt/β-catenin signaling in lens epithelial cells adaptation and posterior capsule opacification. Xingjian Fan1, Z. Wei1, H. Yan1. 1Cellular Biology and Anatomy, Medical College of Georgia, Augusta University; 2Ophthalmology, The First Affiliated Hospital of Chongqing Medical University

1125 — A0083 Involvement of endoplasmic reticulum stress in the development of βB2-crystallin mutant-induced mouse congenital cataract. Xiaoyuan Chen, W. Xiao, W. Yang, Y. Liu. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-Sen University

1126 — A0084 Screening for alpha-crystallin mimetic drugs with chaperone-like activity toward gamma crystallins exposed to oxidative and/or heat shock stress. Vincent M. Monnier1, B. Frank2, P. Ravichandran3, S. Ramkumar4. 1Pathology & Biochemistry, Case Western Reserve Univ; 2Pathology, Case Western Reserve University *CR

1127 — A0085 Core Clock Protein Bmal1 Controls Reactive Oxygen Species Homeostasis And Oxidative Responses By Transregulating Prdx6 Expression. Dhirendra P. Singh1, E. Kubo2, S. P. Singh1. 1Ophthalmology and Visual Sciences, Univ of Neb Med Center; 2Ophthalmology, kanazawa Medical University


1129 — A0087 Cataract Detection And Grading Based On Deep Convolutional Neural Network. Hongyan Zhang1, 2, K. Niu4, Y. Xiong1, W. Yang4, Z. He1,3, H. Song1, 2Beijing Tongren Hospital; 1Beijing Tongren Hospital; 2The First People’s Hospital of Huzhou; 3Key Laboratory of Universal Wireless Communications; 4Beijing University of Posts and Telecommunications

*CR: Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.
1130 — A0088 Sumoylation Regulation of Lens Cataractogenesis. David W. Li1, 2, Y. Liu1, J. Xiang1, 2, x. Gong1, F. Liu1, J. Fiu1, Y. Xiao1, 2, L. Wang1, Y. Liu1. Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University; ‘College of Life Sciences, Hunan Normal University; ‘The Center for Virology, University of Nebraska-Lincoln


1132 — A0090 Oculocerebrorenal Syndrome of Lowe: Characterizations of Ocular Presentation and Management. Xiaowan Ma1, k. ning1, T. Kowal1, Y. San1, 2. ‘Department of Ophthalmology, Stanford University; PALO ALTO,CA,United States; Stanford Ophthalmology; ‘Palo Alto VA medical center

West Exhibition Hall A0147-A0190
Sunday, April 28, 2019 3:00 PM-4:45 PM Retina

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Moderators: Michael S. Ip and Elisabetta Pilotto

1133 — A0147 Correlation between Quality of Life measures and retinal structure and function in patients with age-related macular degeneration. Faran Sabeti1, 2, T. Maddess1, E. M. Rohan1, R. W. Essex3, E. McKone4, J. Lane. 1Neuroscience, Australian National University; 2Optometry, University of Canberra; ‘Research School of Psychology, Australian National University; ‘Medical School, Australian National University

1134 — A0148 Risk factors for Fellow Eye Progression in Patients with Unilateral Exudative Age-Related Macular Degeneration. Julia Lemke1, V. Sinitskis2, C. Gietzelt2, T. Schick1, C. C. Hoyng1, 2. 1Department of Ophthalmology, Radboud University Medical Center; ‘F. Hoffmann-La Roche AG

1135 — A0149 Non-genetic risk factors for age-related macular degeneration in nonagenarians. Vasilena Sinitskis1, 2, T. Schick1, A. I. Den Hollander2, C. C. Hoyng1, S. Fauser1, 2, 3, L. Altay1, 4. 1Department of Ophthalmology, University of Cologne; 2Department of Ophthalmology, Radboud university medical center; ‘F. Hoffmann - La Roche AG

1136 — A0150 Association of a predictor of retinal omega 3 polyunsaturated fatty acids with advanced age-related macular degeneration: the BLISAR project. Cecile DelCourt1, S. Ajana1, O. Berdeaux2, B. M. Merle1, H. Jacqmin-Gadda1, B. Hejblum1, A. M. Bro1, C. Creuzot-Garcher2, 4, J. Korobelnik4, 1, L. Bretillon1, N. Acar1. ‘Inserm UMR1219-Bordeaux Population Health Research Center, University of Bordeaux; ‘Department of Ophthalmology, University Hospital Dijon; ‘Eye and Nutrition Research Group, CSGA, UMR1324 Inra; ‘Service d’Ophthalmologie, CHU de Bordeaux


1138 — A0152 Müller cells and choriocapillaris in the pathogenesis of geographic atrophy secondary to age-related macular degeneration. Elisabeta Pilotto1, L. Frizziero5, T. Torressin6, E. Longhini1, F. Leonardi1, R. Parrazzoni2, E. Midena1. 1Department of Ophthalmology, University of Padova; ‘IRCCS – Fondazione Bietti

1139 — A0153 Cataract Surgery And Neovascular Age-Related Macular Degeneration Development Or Exacerbation: A Retrospective Analysis. Pietro Monaco1, L. Tollot2, M. Del Borrello1, A. Frattolillo1, F. Sperti1, D. Poole1, E. Rapizzi2. 1Ophthalmology, San Martino Hospital; 2Ophthalmology, D’Angelo University

1140 — A0154 Multifocal Electroretinogram Responses Following Subthreshold Nanosecond Laser Intervention In Age-Related Macular Degeneration. Chi D. Liu1, 2, G. Makeyeva1, E. Caruso1, E. Baglin1, P. Sharunzaw1, R. H. Guymer3, 4. 1Macular Research Unit, Centre for Eye Research Australia; ‘Department of Surgery (Ophthalmology), The University of Melbourne

1141 — A0155 Identification of a circulating biomarker highly associated to retinal omega-3 polyunsaturated fatty acid content: the BLISAR project. Niyazi Arcar1, S. Ajana1, O. Berdeaux2, H. Jacqmin-Gadda1, B. Hejblum1, Z. HE1, S. Gregoire1, S. Cabaret2, L. Martine1, B. M. Merle1, L. Bretillon1, C. DelCourt1. ‘Inserm U1219-Bordeaux Population Health Research Center, University of Bordeaux; ‘Department of Ophthalmology, University Hospital Dijon; ‘Eye and Nutrition Research Group, CSGA, UMR1324 Inra; ‘Service d’Ophthalmologie, CHU de Bordeaux

1142 — A0156 Analysing the gut microbiome in relation to early age-related maculopathy (ARM) in a twin cohort. Zakariya Jarrar1, A. Adebayo1, 2, R. Bowyer1, P. Wells1, K. Williams1, 2, C. Steves1, 2, C. J. Hammond1, 2. ‘St. Thomas’ Hospital; ‘Department of Twin Research & Genetic Epidemiology, King’s College London; ‘Moorfields Eye Hospital

1143 — A0157 Participant selection and the diagnostic performance of the handheld Radial Shape Discrimination (rRSD) test. Paul Knox1, N. Pitrelli Vazquez2, 3, J. Ku4, ‘Eye & Vision Science, University of Liverpool; ‘St Pauls Eye Unit, Royal Liverpool Hospital

1144 — A0158 Incidence and Features of Geographic Atrophy in Fellow Eyes in the Comparison of Age-related Macular Degeneration Treatment Trials (CATT). Dela Song1, G. Ying2, J. E. Grunwald1, E. Daniel1, M. G. Maguire1, Y. Li1, D. F. Martin2. ‘Research & Development, Scheie Eye Institute, University of Pennsylvania; ‘Coe Eye Institute

1145 — A0159 Comparison of Therapeutic Effect and Hyperreflective Foci on Optical Coherence Tomography between Bevacizumab and Dexamethasone Implant for Macular Edema in Branch Retinal Vein Occlusion according to the Symptom Duration. Dong Ho Park, J. Do, J. Do, Ophthalmology, Kyungpook National University Hospital

1146 — A0160 Drusen subtypes and choroidal characteristics in Asian eyes with typical neovascular age-related macular degeneration. Junwun Lee, S. Byeon, Yonsei University College of Medicine

1147 — A0161 AMD Drusenoid deposits “L”, Lipid type and “P”, Protein-cellular type, structural analysis, evolution study with Multimodal Imaging and Morphology-Structural software. Corinne Gonzalez1, 2. ‘SELARL CABINET DR GONZALEZ, ‘FUTUROPTHA

1148 — A0162 Novel disease progression biomarkers in non-exudative age-related macular degeneration: an association study between drusen type and morphology and Fundus Autofluorescence. Rita M. Flores1, 3, A. Basilio1, N. Moura-Coelho1, 3, M. Marques1, L. Vieira1, J. Cardigos1, I. Fragaotro1, S. Terreiro1, T. Pereira1, M. Seabra1. ‘OPHTALMOLOGY, CHULC; ‘CEDOC, ‘NOVA Medical School - Universidade Nova de Lisboa

1149 — A0163 Progression of Subclinical Choroidal Neovascularization in Age-Related Macular Degeneration. Michael Heiferman, A. A. Fawzi, Northwestern University

1150 — A0164 Improvement of type 3 neovascularization on OCT-A after combination therapy with bevacizumab and photodynamic therapy. Lisette M. Smid1, K. A. Vermeer1, K. T. Wong2, J. P. Martinez ciriano2, M. E. Van Velthoven1, 2. ‘Rotterdam Opthalmic Institute; ‘Rotterdam Eye Hospital
1151 — A0165  Timing of Complete Absence of Polypoidal Lesions on ICG Angiography Following Albiceterecept Monotherapy in Polypoidal Choroidal Vasculopathy. Voraporn Chaitikmongkol1, P. Upaphong1, D. Patkaulsila2, P. Jirarattanasopa3, J. Choovorhayakorn1, N. Watanachai1, P. Kanavarat1, M. Ratanauskow1, P. Bhurayanontachat1, N. M. Bressler3. 1Department of Ophthalmology, Chiang Mai University, Chiang Mai, Thailand; 2Department of Ophthalmology, Prince of Songkla University; 3Wilmer Eye Institute, Johns Hopkins University School of Medicine  *CR


1153 — A0167  The association of the branching vascular network area progression with the outcomes of combination therapy with intravitreal albiceterecept and verteporfin photodynamic therapy for polypoidal choroidal vasculopathy. Shunichiro Nakai. Kobe University Graduate School of Medicine  

1154 — A0168  Microvascular abnormalities, retinal thickness changes and long-term efficacy after stereotactic radiotherapy under continued intravitreal anti-VEGF treatment for neovascular AMD. Katja Hatz1, F. Zimmermann1, E. Lazaridis1, D. Kardamakis2, M. Guichard3, C. Tuerksever4, C. Prunte5, U. Schmidt-Erfurth3. 1Vista Klinik Binningen; 2Vienna Reading Center, Department of Ophthalmology, Medical University Vienna; 3Department of Radiation Oncology, University Hospital Basel; 4SWISS EyeRAD; 5Department of Radiation Oncology, Medical University Patras; 6Eye clinic, University Hospital Basel  *CR

1155 — A0169  Changes on multimodal imaging after treatment with photodynamic therapy or high-density subthreshold micropulse laser in chronic central serous choriorétinopathy. Thomas J. van Rijssen1, L. C. Hahn1, E. Van Dijk2, P. Schol3, M. Breukink1, E. H. Souied2, R. E. MacLaren1, G. Queurques1, S. Faune3, S. M. Downes3, C. C. Hoyn4, C. Boon5. 1Leiden University Medical Center; 2Ophthalmology, University Hospital of Cologne; 3Ophthalmology, Radboud University Medical Center; 4Centre Hospitalier Intercommunal de Creteil University Paris Est Creteil; 5John Radcliffe Hospital, West Wing, Oxford; 6IRCCS Ospedale San Raffaele, Vita-Salute University; 7F. Hoffmann-La Roche, Basel; 8Amsterdam UMC, Amsterdam  *CR


1157 — A0171  Checkup Mobile App to Monitor Visual Function in Diabetic Retinopathy and Age-related Macular Degeneration: The CLEAR Study. Arshad M. Khanani1, R. N. Khurana2, J. L. Singerman1, C. Hoang. 1Sierra Eye Associates; 2Retina Associates of Cleveland; 3Case Western Reserve University School of Medicine; 4Veraena Health / Digisight Technologies; 5Northern California Retina Vitreous Associates  *CR, X

1158 — A0172  Early middle-aged cholesterol levels and the risk of age-related maculopathy. Fabian Kanaan1, T. Strandberg2, S. Loukovaara3, P. Karesvuori1, J. I. Immonen4. 1Ophthalmology, Örebro University Hospital; 2Helsinki University; 3Geriatrics, Helsinki University Central Hospital; 4Helsinki University; 5Ophthalmology, Helsinki University Central Hospital  

1159 — A0173  Quantitative optical coherence tomography angiography features of choroidal neovascularizations in age related macular degeneration. Rita Servia1, F. Cuccas2, D. Cabral2, G. Cuccas2, E. H. Souied6. 1Università di Cagliari; 2Università di Sassari; 3Department of Ophthalmology, Centre Hospitalier Intercommunal de Creteil University Paris Est Creteil, Creteil, France; 4Instituto de Oftalmologia Dr. Gama Pinto, Lisboa, Portugal

1160 — A0174  Change of baseline visual acuity in eyes with age-related macular degeneration from 2006-2015. Tomoko Sawada1, T. Yasukawa1, H. Imazumi1, H. Mastubara2, K. Kimura1, H. Terasaki1, H. Ishikawa2, T. Murukami3, M. Takeuchi1, Y. Mitamura3, M. Yamashita4, Y. Takamura1, T. Murata1, J. Kogo2, T. Sakamoto3, M. Ohji1. 1Ophthalmology, Shiga University of Medical Science; 2Ophthalmology, Nagoya City University; 3Ophthalmology, Sapporo City General Hospital; 4Ophthalmology, Mie University; 5Ophthalmology, Yamaguchi University; 6Ophthalmology, Kagoshima University; 7Ophthalmology, Hogy College of Medicine; 8Ophthalmology, University of Tsukuba; 9Ophthalmology, National Defense Medical College; 10Ophthalmology, Tokushima University; 11Ophthalmology, Shinshu University; 12Ophthalmology, St. Marianna University School of Medicine; 13Ophthalmology, University of Fukui; 14Nara Medical University  *CR, X

1161 — A0175  Subthreshold Laser Treatment for Drusenoid Pigment Epithelial Detachment in Intermediate AMD, a 12-month interim analysis. Min Seok Kim1, N. Ryoo2, J. Park1, K. Park1. 1Department of Ophthalmology, Seoul National University Bundang Hospital; 2Department of Ophthalmology, Veterans Health Service Medical Center  

1162 — A0176  A Retrospective Study of Real World Data for stable wet AMD treatment with albiceterecept. Maria K. Genemetz1, P. Patell2, S. Anand1, M. Lukic3, S. Degli Esposti4, P. A. Keane5, E. Preston4, R. Hamilton5. 1Moorfields Eye Hospital NHS Foundation Trust; 2NIHR Biomedical Research Centre at Moorfields Eye Hospital, Moorfields Eye Hospital; 3University College London  *CR

1163 — A0177  Age-related Macular Degeneration: a generalised retinal disorder A prospective study of retinal function using full-field electroretinography. Thomas Forshaw1, S. Andrearesson1, T. L. Sorensen2, 1Ophthalmology, Zealand University Hospital; 2Faculty of Health and Medical Sciences, University of Copenhagen; 3Ophthalmology, Lund University  

1164 — A0178  Associations between Perifoveal Drusen Burden and Genetic Risk in Eyes with Early or Intermediate Age-Related Macular Degeneration. Rafael Widjajahakim1, J. Dossert2, B. Rosner1, J. M. Seddon1. 1Ophthalmology and Visual Sciences, Macular Degeneration Center of Excellence, University of Massachusetts Medical School; 2Tufts University School of Medicine; 3Channing Division of Network Medicine, Harvard Medical School  *CR

1165 — A0179  Associations between Macular OCT findings and Peripheral Changes in AMD. Cindy Ung1, I. Lains1, R. L. Woods2,5, D. Park2, R. Mukai1, R. Silverman1, P. Oellers1, I. K. Kim1, D. Vavvas1, J. W. Miller1, J. B. Miller5, D. Husain5. 1Massachusetts Eye and Ear; 2Schepens Eye Research Institute; 3Gunma University Graduate School of Medicine; 4Kyungpook National University; 5SUNY Upstate Medical University  *CR


1167 — A0181  Light sensitivity within areas of geographic atrophy secondary to age-related macular degeneration. Steffen Schmitz-Valckenberg2, M. Fleckenstein3, L. A. von der Emde1, C. Dyllì4, S. Thiele5, P. T. Müller6, M. Lindner4, J. Nadaï7, M. Schmidt, F. G. Holz5, M. Pfau5. 1Ophthalmology, University of Bonn; 2Institute for Medical Biometry, Informatics and Epidemiology, Medical Faculty, University of Bonn; 3Nuffield Department of Clinical Neurosciences, The Nuffield Laboratory of Ophthalmology, Sleep and Circadian Neuroscience Institute, University of Oxford; 4Department of Ophthalmology and Department of Clinical Research, Inselspital, Bern University Hospital and University of Bern; 5GRADE Reading Center  *CR
1168 — A0182  How to set up a successful multicentre randomised controlled trial in the field of neovascular age – related macular degeneration treatment? Lessons from the MATE pilot study. Archana Airody1, 7, J. Seymour3, 8, T. Dorey5, S. Tom7, M. Aleksandra5, K. Balasakri5, R. Mukherjee2, E. Theo1, L. Downey2, S. Malmod5, S. Dhar-munshi7, A. Morland8, 8, H. Baseler8, 8, R. P. Gale8, 8 8Ophthalmology, York Teaching Hospitals NHS Foundation Trust; 7Reader in Sociology, University of Hull; 8Ophthalmology, Manchester Royal Infirmary; 8Ophthalmology, University Hospitals of Leicester NHS trust; 8Ophthalmology, Hull Royal Infirmary; 8Ophthalmology, Kings Mill Hospital; 8University of York; 8Hull York Medical School *CR, B. M. Merle2, L. Martine1, S. Gregoire1, S. Ajana2, J. Korobelnik2, 4, N. Acar1, C. DelCourt2 INRA; 2Inserm U1219- Bordeaux Population Studies; 3National Eye Institute; 2EMMES Corporation

1169 — A0183  Comparable Growth Rates of Bilateral Geographic Atrophy due to Age-related Macular Degeneration. Jeong W. Pak, A. Domalpally, K. McDaniel, B. A. Blodi, Ophthalmology and Visual Sciences, University of Wisconsin - Madison

1170 — A0184  Validation of the use of a circulating biomarker of retinal omega-3 polyunsaturated fatty acids in supplementation conditions: the BLISAR project. Lionel Bretillon1, B. M. Merle2, L. Martine1, S. Gregoire1, S. Ajana2, O. Berdeaux1, A. M. Bron1, 1, C. Creuzot-Garcher1, 1, J. Korbekln1, 2, N. Acar1, C. DelCourt2 UMR CSGA – Eye and Nutrition Research Group, INRA; 1Inserm U1219- Bordeaux Population Studies; 1University of Bordeaux; 2Department of Ophthalmology, University Hospital; 2Department of Ophthalmology, University Hospital *CR, 1

1171 — A0185  Investigating the Effect of Visual Field Eccentricity on Spatial Summation in Mesopic Micropertinometry. Aoife M. Hunter1, R. Evans2, R. N. Evans2, U. Chakravarthy1 1Ophthalmology, Nottingham University Hospital Trust; 1University of Bristol; 2Queens University of Belfast *CR, 1

1172 — A0186  Switching wet AMD patients from PRN to TREX regimen in a tertiary real world setting. Miltiadis K. Tsilimbaris, S. Mplazaki, L. Ioannidi, A. Giarmoukakis, Ophthalmology, University of Crete Medical School *CR

1173 — A0187  Charles Bonnet Syndrome in Participants of the Age-related Eye Disease Study 2 (AREDS2) 10-year Follow-on. Elvira Agros1, E. Y. Chew2, T. D. Keenan3, T. E. Clemons2 1National Eye Institute; 2EMMES Corporation

1174 — A0188  Visit Adherence and Visual Acuity in Exudative Age-Related Macular Degeneration. Meera S. Ramakrishnan, B. L. VanderBeek, Scheie Eye Institute

1175 — A0189  Visual function improvement of Human Fetal Retinal Pigment Epithelium Transplantation in Age-related Macular Degeneration Patients. Songtuo Yuan, H. Shen, W. Fan, Ophthalmology, The first affiliated hospital of Nanjing Medical University

1176 — A0190  Comparison of visual outcome between intravitreal gas injection with t-PA and intravitreal anti-VEGF injection as an initial treatment for submacular hemorrhage associated with ARMD. Kiyu Nam1, 2, J. Kim1, S. Lee1, Y. Shin1, J. Lim1 1Ophthalmology, Gyeongsang National University; 2Ophthalmology, Kosin University College of medicine; 2Ophthalmology, Chungnam National University, College of medicine; 2Ophthalmology, Chungnam National University Hospital; 2Ophthalmology, Kosin University Hospital

West Exhibition Hall A0191-A0231

Sunday, April 28, 2019 3:00 PM-4:45 PM

Retina

165 AMD clinical research II

Moderators: Rosa Dold-Marco and Sebastian M. Waldstein

1177 — A0191  The associations between the original randomized allocations and neovascular lesion morphology with low luminance acuity at the extended follow up visit in the IVAN clinical trial. Alexander Foss1, B. Reeves2, R. N. Evans2, U. Chakravarthy1 1Ophthalmology, Nottingham University Hospital Trust; 2University of Bristol; 2Queens University of Belfast *CR, 1

1178 — A0192  Determinants of reading performance in geographic atrophy secondary to age-related macular degeneration. Sandrine Känkel1, M. Pfau1, 2, M. Linden3, 2, J. Czauellner1, P. T. Möller1, 2, L. A. von der Emde1, C. Dysli1, P. T. Möller1, S. Thiele1 1Department of Ophthalmology, University of Bonn; 2GRADE Reading Center; 2Nuffield Department of Clinical Neurosciences, University of Oxford; 3Institute for Medical Biometry, Informatics and Epidemiology, University of Bonn *CR

1179 — A0193  AI-based prediction of cone-rod function based on retinal microstructure in geographic atrophy secondary to age-related macular degeneration. Maximilian Pfau1, L. A. von der Emde1, C. Dysli1, P. T. Möller1, S. Thiele1, M. Linden3, M. Schmid3, S. Schmitz-Valkenberg2, 2, F. G. Holz3, 2, M. Fleckenstein2, 2 1Department of Ophthalmology, University of Bonn; 2Nuffield Department of Clinical Neurosciences, University of Oxford; 2Institute of Medical Biometry, Medical Informatics, and Epidemiology, University of Bonn *CR, 2

1180 — A0194  Remodeling of macular vortex veins in pachychoroid neovasculopathy. Hidetaka Matsumoto, S. Kishi, R. Mukai, H. Akiyama, Ophthalmology, Gunna University, School of Medicine

1181 — A0195  The Relationship Between Cilio-retinal Arteries and Advanced Age-related Macular Degeneration in the Comparison of Age-related Macular Degeneration Treatments Trials (CATT). Clay Bavinger, G. Ying, E. Daniel, M. G. Maguire, Ophthalmology, Scheie Eye Institute *CR, 1

1182 — A0196  Macular thinning occurs in Non-Advanced Age-related Macular Degeneration (AMD) and varies with AMD Stage and Subretinal Drusenoid Deposit (SDD) Presence. Tsun Kang "Trent" Chiang1, 1, T. D. Keenan1, J. Liao1, B. Klein1, E. Y. Chew1, C. A. Cukras1, W. T. Wong2, 2Case Western Reserve University School of Medicine; 2National Institutes of Health; 2Division of Epidemiology and Clinical Applications, National Eye Institute; 2Pennsylvania State University College of Medicine; 2Georgetown University School of Medicine; 2National Eye Institute, National Institutes of Health; 2National Eye Institute, Unit on Neuron-Glia Interactions

1183 — A0197  Visual Acuity measured by numerized ETDRS charts adapted to intermediate vision (on computer) or to near vision (on electronic tablet), in Exudative AMD Patients; a randomized study comparing numerical tools to conventional VA measurement by 4-meter-ETDRS chart (ATO study). Frederic Queguiner, Ophthalmology, Hospital Saint Joseph Marseille

1184 — A0198  The effect of illumination on mobility performance in patients with Age-related Macular Degeneration: A pilot study. Hannah Dunbar1, 1, A. Zenouda1, S. Mohand-Saïd1, J. A. Sahel1, 1, G. S. Rubin2, 2 1Visual Neuroscience, UCL Institute of Ophthalmology; 2Moorefields Eye Hospital NHS Foundation Trust; 1INSEMM-DHOS CIC 1423, CHNO des Quinze-Vingts; 2Streetlab SAS, Institut de la Vision

1185 — A0199  Subretinal Hyperreflective Material within Regions of Atrophy in Treated Eyes with Neovascular Age-Related Macular Degeneration. Sophiana Lindenberg1, 1, M. E. Fitzgerald1, M. G. Nittala1, A. Verma1, S. R. Saddu1, 1 1DIRRL, Doheny Eye Institute; 1School of Sciences, Christian Brothers University; 1Ophthalmology, University of California, Los Angeles *CR

1186 — A0200  Impact of segmentation density on Spectral Domain Optical Coherence Tomography (SD-OCT) assessments in Geographic Atrophy. Ayesha Karamat1, M. G. Nittala1, S. Srinivas1, s. velaga1, Z. Hu1, M. S. Ip1, 1, S. R. Saddu1, 1, S. R. Saddu1, 1, Doheny Eye Institute; 1Ophthalmology, University of California, Los Angeles *CR

The Commercial Relationships (CR) Index for Disclosures and the Clinical Trial (CT) Registration Index are at arvo.org/program-summary.
1187 — A0201  Metabolomics reveals changes in fatty acid metabolism in age-related macular degeneration patients. Milan A. Brantley1, K. Uppal1, C. Maf2, A. Agarwal1, M. A. Pericak-Vance1, W. K. Scott1, J. L. Haines1, D. Jones1, S. L. Mitchell1. Ophthalmology & Visual Sciences, Vanderbilt University Medical Center; *Medicine, Emory University Medical Center; 1John P. Hussman Institute for Human Genomics, University of Miami Miller School of Medicine; *Population and Quantitative Health Sciences, Case Western Reserve University

1188 — A0202  Characteristics of Reticular Pseudodrusen in the AREDS2. Meghana Agni1, J. W. Pak1, A. Donalpally1, E. Y. Chev1. Fundus Photograph Reading Center, Department of Ophthalmology and Visual Sciences, University of Wisconsin-Madison; *Clinical Trials Branch, Division of Epidemiology and Clinical Applications, National Eye Institute/National Institutes of Health.

1189 — A0203  Change in subfoveal choroidal thickness in subjects with outer retinal tubulation secondary to late, non-exudative age related macular degeneration. Vanessa Lizarraga1, A. H. Hariri1, M. G. Nittal1a, s. velaga1, J. Lei1, S. R. Sadda2, M. S. Ip2, 3. 1Doheny Eye Institute; 2Ophthalmology, University of California, Los Angeles *CR

1190 — A0204  Progression of Outer Retinal Tubulation Volume in Eyes with Geographic Atrophy due to Age-related Macular Degeneration. Chris Okonkwo1, A. H. Hariri1, M. G. Nittal1a, s. velaga1, J. Lei1, S. R. Sadda2, M. S. Ip2, 3. 1Doheny Eye Institute; 2Ophthalmology, University of California, Los Angeles *CR

1191 — A0205  Deep phenotyping of intermediate age-related macular degeneration (AMD) using rod function tests. Manjot K. Grewal1, A. C. Bird2, G. Jeffery2, S. Sivaprasad2, 3. 1Institute of Ophthalmology, University College London; 2Moonfields Eye Hospital NHS Foundation Trust *CR


1193 — A0207  Optical coherence tomography angiography biomarkers of neovascular activity in age-related macular degeneration using a “Treat-Extend-Stop” protocol. Jong Min Kim1, 2, K. Bae1, 2, H. Kim1, Y. Shin1, S. Kang1. 1Ophthalmology, Samsung Medical Center; 2Ophthalmology, Dongguk University Ilsan Hospital; 3Moon’s eye hospital

1194 — A0208  Genetic factors associated with reticular pseudodrusen in participants of the Age-Related Eye Disease Study 2 (AREDS2). Christopher Huang1, E. Agnon1, T. E. Clemons1, T. D. Keenan1, C. A. Cukras1, W. F. Wong1, E. Y. Chew1. National Eye Institute; *The Emmes Corporation

1195 — A0209  The Progression Rate of Geographic Atrophy Varies across Topographic Locations - A Meta-analysis. Samun Khetpal, L. L. Shen, L. V. Del Priore. Yale University School of Medicine


1197 — A0211  Outcomes of Eyes Lost to Follow-Up with Neovascular Age Related Macular Degeneration Receiving Intravitreal Anti-VEGF. Rebecca R. Soares1, P. L. Mellen1, H. Garrygan1, A. Obeid1, T. D. Wibbelsman1, D. S. Borkar1, A. C. Ho1, J. Hau1, Wills Eye Hospital; *Sidney Kimmel Medical College, Thomas Jefferson University

1198 — A0212  Visual Outcomes Following Cataract Surgery in Neovascular Age-Related Macular Degeneration Patients In Routine Clinical Practice. Andrew X. Chen1, A. Haueisen1, C. Rasendran1, G. Hom1, T. Conti2, F. Conti2, K. E. Talcott2, R. P. Singh2. Case Western Reserve University School of Medicine; *Cole Eye Institute, Cleveland Clinic Foundation *CR

1199 — A0213  Systemic capillary abnormalities in age-related macular degeneration. Nicholas M. Pfahler1, I. Bielskus1, M. Giovingo1, L. Pasquale1, N. J. Volpe1, P. A. Knepper1, 4. Ophthalmology and Visual Sciences, University of Illinois at Chicago; *Ophthalmology, John H. Stroger, Jr. Hospital of Cook County; *Ophthalmology, Icahn School of Medicine at Mount Sinai; *Ophthalmology, Northwestern University Feinberg School of Medicine

1200 — A0214  Long-term visual outcomes for a treat-and-extend anti-vascular endothelial growth factor regimen in eyes with neovascular age-related macular degeneration: Up to eight-year follow-up. Simon Javid1, A. Dirani1, 2, F. Antaki1, M. Saab1, G. Cordahi1, 2. Ophthalmology, University de Montréal; *Ophthalmology, Université Laval *CR

1201 — A0215  Long-term compliance to weekly home-monitoring of vision with a tablet perimeter in patients with age-related macular degeneration. Sehyun M. Prea1, Y. Kong1, P. Sharangani1, E. K. Baglin1, A. J. Vingrys1, R. H. Guaymer1, 4. *Optometry and Vision Sciences, The University of Melbourne; *Centre for Eye Research Australia, Royal Victorian Eye and Ear Hospital; *Royal Victorian Eye and Ear Hospital; *Ophthalmology, Department of Surgery, The University of Melbourne *CR

1202 — A0216  Longitudinal AI-based assessment of the association between retinal microstructure with rod and cone function in exudative age related macular degeneration. Leon A. von der Emde1, M. Pfau1, C. Dysli1, S. Thiele1, S. Künzel1, P. T. Müller1, M. Schmidt1, M. Fleckenstein1, F. G. Holz1, S. Schnitz-Valkenberg1. *Universitäts-Augenklinik Bonn; *Department of Ophthalmology and Department of Clinical Research, Inselspital, University Hospital and University of Bern; *Institute for Medical Biometry, Informatics and Epidemiology, Faculty of Medicine, University of Bonn *CR

1203 — A0217  An individually matched virtual ranibizumab treatment arm in neovascular age-related macular degeneration. cheikh diack, N. A. Mazer, D. Schwab. Clinical Pharmacology, F.Hoffman La-Roche *CR

1204 — A0218  Retinal Sensitivity in non-exudative Age-Related Macular Degeneration: Longitudinal analyses using validated automated algorithms. Magdalena Baratiss1, 2, F. G. Schlanti1, 2, S. Saci1, 2, H. Bogunovic1, L. Wassermann1, 2, F. Dollinger1, 2, U. Schmidt-Erfurth1. Department of Ophthalmology, Medical University of Vienna; *Vienna Clinical Trial Center

1205 — A0219  Active Learning of Contrast Sensitivity Function to Assess Visual Outcomes in Age-related macular degeneration. Ying Cui1, 2, R. Silverman1, 3, M. A. Kasety4, 1, J. Chor1, L. A. Lesmes5, I. Lains6, R. Katz7, D. Vavvas8, D. Husain9, J. W. Miller1, J. B. Miller1. Retina Service, Department of Ophthalmology, Massachusetts Eye and Ear, Harvard Medical School; *Department of Ophthalmology, Guangdong Eye Institute, Guangdong General Hospital, Guangdong Academy of Medical Sciences; *Tufts Medical School; *Northeastern University; *Adaptive Sensory Technology *CR


1207 — A0221  Low luminance Tablet Reading Test in Early Dry Age-Related Macular Degeneration. Divya Narayanan1, J. D. Rodriguez1, G. Wallstrom1, D. Welch1, M. J. Chapin1, M. B. Abelson1. *Ora, Inc; *Statistics and Data Corporation *CR

1208 — A0222  Scotopic shape discrimination in AMD patients and healthy volunteers. Oliver J. Flynn1, C. A. Cukras1, L. Huryn1. B. Jeffery1. *Division of Epidemiology and Clinical Applications, National Eye Institute; *Ophthalmic Genetics & Visual Function Branch, National Eye Institute

*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.
1210 — A0228 Magnitude of clinically-meaningful size effect on treatment characteristics in the management of geographic atrophy (GA). Zach Strecker1, K. Kuo2, G. DeBartolomeo1, J. T. Zaremba1, L. Saad3, 1Univ of Wisconsin-Madison; 2EyeKor, Inc.; 3PanOptica, Inc. *CR, $CR

1210 — A0224 Magnitude of clinically-meaningful size effect on treatment characteristics in the management of geographic atrophy (GA). Zach Strecker1, K. Kuo2, G. DeBartolomeo1, J. T. Zaremba1, L. Saad3, 1Univ of Wisconsin-Madison; 2EyeKor, Inc.; 3PanOptica, Inc. *CR, $CR

1210 — A0224 Magnitude of clinically-meaningful size effect on treatment characteristics in the management of geographic atrophy (GA). Zach Strecker1, K. Kuo2, G. DeBartolomeo1, J. T. Zaremba1, L. Saad3, 1Univ of Wisconsin-Madison; 2EyeKor, Inc.; 3PanOptica, Inc. *CR, $CR


1213 — A0227 Macular drusen size and location: The metrics of macular drusen response to curcumin. Indre Bielskus1, L. Dasso1, N. M. Pfahler1, C. Bromi1, S. Amare2, Z. Zaparakas3, N. J. Volpe4, P. A. Knepper5, 1Ophthalmology and Visual Sciences, University of Illinois at Chicago; 2Ophthalmology, Northwestern University Feinberg School of Medicine

1214 — A0228 Long-term clinical management of neovascular AMD and visual acuity outcome in IVAN trial participants. Barney Reeves1, R. Evans1, S. P. Harding3, A. Lotery2, U. Chakravarthy4, 1School of Medicine, University of Bristol; 2Ophthalmology, University Hospital Southampton; 3Department of Eye and Vision Science, University of Liverpool; 4Institute of Clinical Science, The Queen’s University of Belfast, Belfast *CR, $CR


1216 — A0230 Color Vision Outcome Measured as a Functional Endpoint for Patients with Early and Intermediate Dry Age-Related Macular Degeneration. Caroline Frambach1, J. Doan1, C. Yuh1, K. White1, Y. Chen1, C. Kenney1, K. Jameson1, A. Brown1, 1School of Medicine, University of California Irvine; 2School of Medicine, University of Wisconsin; 3Western University

1217 — A0231 Characteristics of initial development of Exudative Age-Related Macular Degeneration in elderly population (over 85 years of age). Na-Kyoung Ryoo, T. Kang, P. Lee, Ophthalmology, Veterans Health Service Medical Center

West Exhibition Hall A0321-A0350
Sunday, April 28, 2019 3:00 PM-4:45 PM
Retinal Cell Biology

166 AMD Pathogenic Mechanisms

Moderators: Robert F. Mullins and Baerbel Rohrer

1218 — A0321 The immunohistochemical identification and localization of homocysteine in the human retina with the features of retinal neurodegenerative diseases. Malgorzata Ozimek1, A. G. Juuenenmann1, T. Choragiewicz2, R. Rejda1, 1Department of General Ophthalmology, Medical University of Lublin; 2Ophthalmology, Eye Surgery Center Professor Zagorski; 3Ophthalmology, Medical University of Rostock

1219 — A0322 Histochemical Characterization of Drusen Related Pathology in Age Related Macular Degeneration. Praveena Gupta, Y. Reffatto1, d. Amaro1, E. Kraft1, M. Afrouzian2, 1ORA; 2University of Southern California; 3Ameropa, Inc.

1220 — A0323 Elucidating the role of photoreceptors in AMD pathogenesis. Shun-Yun Cheng1, J. Cipri1, M. Aghagari, S. Ma1, C. Puizo1, 1Ophthalmology, University of Massachusetts Medical School; 2Ophthalmology, Cell Biology & OCNS, Univ. of Oklahoma Health Sciences Center; 3New England College of Optometry

1221 — A0324 The Neurotoxic Phenotype of Macrophages from Patients with Age-Related Macular Degeneration (AMD). Inay Chowers, S. Hayoun, B. Rinsky, S. Haghi-Levi, M. Grunin, Ophthalmology, Hadassah-Hebrew University Medical Center

1222 — A0325 C-reactive protein potentiates platelet activation. Lily Dasso1, N. M. Pfahler1, I. Bielskus1, M. Giovingo2, P. A. Knepper3, 1Ophthalmology and Visual Sciences, UTMB; 2Ophthalmology, University of Texas Medical Branch

1223 — A0326 Decreased ATP production and mitochondrial respiration activity in induced pluripotent stem cell (iPSC)-derived Retinal Pigment Epithelial (RPE) cells from Age-Related Macular Degeneration (AMD) patients. Jie Gong, H. Cai, M. A. Fields, L. V. Del Priore, Ophthalmology, Yale University

1224 — A0327 iPSC-RPE cells derived from atrophic age-related macular degeneration patients have a typical disease phenotype. Audrey Voisin1, A. Plancheron1, C. Monville2, A. Balbous3, A. Guillard4, N. Leveziel5, 1INSERM U1084 LNEC; 2University hospital of Poitiers; 3INSERM UMR861; 4CECS/I-Stem; 5UEVE-ParisSaclay UMR861; University of Poitiers

1225 — A0328 Altered Focal-adhesion Pathway Gene Expression Pattern in iPSC-derived RPE Cells derived from AMD Patients. Huey Cai, J. Gong, L. V. Del Priore, M. A. Fields, Ophthalmology, Yale School of Medicine

1226 — A0329 Maturation status influences the ability of polarized iESC-RPE to tolerate cellular stress. Tanja Ilmarinen1, T. Viheralia1, H. Hongisto1, T. Hlalainen1, S. Nymark1, H. Skottman1, 1Faculty of Medicine and Health Technology, Tampere University; 2Department of Ophthalmology, University of Eastern Finland

1227 — A0330 Dysregulation of MMP2/MMP9 activity by both local (RPE, vasculature) and systemic (serum) factors promotes macular-degeneration-relevant pathological changes in iPSC-derived model(s) of the disease. Kannan V. Manian, S. Dalvi, C. A. Galloway, L. Winschel, A. Jain, C. Soto, R. Singh, Ophthalmology, University of Rochester Medical Center

1228 — A0331 Abnormal activation of mTORC1 in retinal pigment epithelium (RPE) causes atrophic AMD-like branch. Chen Zhao1, J. Huang2, D. Vollrath2, 1Ophthalmology, Nanjing Med Univ 1st Affiliated Hosp; 2Ophthalmology, Eye Institute, Eye & ENT Hospital, Shanghai Medical College, Fudan University; 3Genetics, Stanford University School of Medicine

1229 — A0332 Mice with RPE-specific CLIC4 deficiency exhibit AMD-like changes in the retina-RPE-choroid complex. Wataru Otsu1, K. Hsu1, J. L. Duniaef2, Y. Li3, S. H. Tsang3, J. Chuang4, C. Sung1, 1Dyson Vision Research Institute, Weil Cornell Medical College; 2Department of Ophthalmology, University of Pennsylvania; 3Department of Ophthalmology, Columbia University

1230 — A0333 A Zebrafish Model for AMD Pathogenesis and Treatment. D. Joshua Cameron, Ophthalmology, Western Univ of Hlth Sciences


1232 — A0335 PAD4: A Potential Target for Gliosis in Age Related Macular Degeneration. Sarah I. Falko1, N. Saha1, M. Rouillard1, P. Bargagna-Mohan1, R. Mohan1, 1Neuroscience, University of Connecticut Health Center; 2Biology, University of Saint Joseph
1233 — A0336 Overexpression of HTRA1 in mice compromises the extracellular matrix integrity in Bruch’s membrane and choroidal/retinal vasculature. Omar Delgado1; e. Imae, N. Buchanan1, H. Li, J. Vrouvliant1, B. Leiby1, C. E. Bigelow1, J. Yang1, J. Galarneau1, E. Meseck1, C. Hayden1, S. H. Poor1, S. Liao1. 1Ophthalmology, Novartis Institutes for BioMedical Research; 2DIS Discov & Invest Pathology, Novartis Institutes for BioMedical Research; 3PCS, Novartis Institutes for BioMedical Research *CR

1234 — A0337 Potential Role of Extracellular Granzyme B in the Pathogenesis of Age-related Macular Degeneration (AMD). Joanne A. Matsubara1, Y. Tian1, J. Z. Cui2, S. Cao2, S. Hiroyasu3, C. Turner4, Y. Shen4, D. J. Granville5. 1Ophthal & Visual Science, University of British Columbia; 2ICORD, University British Columbia *CR

1235 — A0338 Retinal dysfunction and visual impairment in aged Aδ/δ1 knockout mice. S. Sato1, A. Onishi1, Y. Ohigashi1, H. Endoh1, Y. Yonemura4, H. Sakaguchi3, K. Nishida1, M. Takahashi6. 1Ophthalmology, Osaka University Graduate School; 2Laboratory for Retinal Regeneration, RIKEN Center for Biosystems Dynamics Research; 3Advanced Device Medicine, Osaka University Graduate School of Medicine; 4Electron Microscope Laboratory, RIKEN Center for Biosystems Dynamics Research

1236 — A0339 Progranulin knockout mice show the outer retinal abnormalities similar to advanced AMD. Kei Takahashi1, M. Tanaka, S. Nakamura, M. Shimazawa, H. Haru. Molecular Pharmacology, Gifu Pharmaceutical University


1238 — A0341 Targeting TFE3 (transcription factor EB) as a novel approach for AMD therapy. Stacey L. Hose1, S. Ghosh1, N. A. Stepicheva1, S. Jabalamelii1, I. Bhatti1, P. Shang1, M. Yazdankhah1, J. Weiss1, G. A. Lutty1, J. Z. Sigler1, Jr, L. Byrne2, D. Sinha1. 1Ophthalmology, University of Pittsburgh; 2Ophthalmology, The Johns Hopkins University School of Medicine

1239 — A0342 The presence of ADAMs in the eye: Exploring a promising therapeutic target for age-related macular degeneration. Mackenzie A. Campbell1, G. S. Sarothia1, M. Campbell1, J. Z. Cui1, J. A. Matsubara2. 1Faculty of Medicine, University of British Columbia; 2Ophthalmology and Visual Sciences, University of British Columbia

1240 — A0343 Multilamellar bodies: Clues to their role in aging retinal epithelium. Peter Gouara1, K. R. Brown1, J. A. Mattison1, M. Neuringer2, T. Nagasaki1, L. Ivert3. 1Ophthalmology, Columbia University; 2Division of Neuroscience, Oregon National Primate Research Center; 3Clinical Neuroscience, Karolinska Institutet; 4Pathology, Columbia University; 5National Institute on Aging Intramural Research Program

1241 — A0344 Complement factor B is necessary for sub-RPE deposit formation in Efemp1R345W knock-in mice. Maura Crowley1, D. Garland1, R. Fernandez-Godino2, T. Rejtar3, N. Buchanan4, K. Anderson1, H. Seller1, M. Mogi4, Y. K. Wang1, B. Jaffe1, S. H. Poor1, T. Dryja1, E. A. Pierce2, S. Liao4. 1Novartis Institutes for Biomedical Research; 2Massachusetts Eye and Ear *CR

1242 — A0345 Complement factor H (CFH) loss leads to a local complement system activation and impaired cell balance in the RPE cells. Angela Armento1, S. Honisch1, A. Jacob1, D. Trifunovic1, M. Ueffing1. Department for Ophthalmology, Institute for Ophthalmic Research, Collegial University of Frankfurt, Germany

1243 — A0346 Anaphylatoxin Complement Proteins C3a and C5a Induce AMD Cellular Endophenotypes in iPSC-RPE Through Apically Localized C3aR and C5aR Receptors. Malika Ninnmagadda1, F. Ruchi1, A. George1, Z. Quersh1, Q. Wan1, J. Chang1, B. S. Jha1, D. Ortolani1, M. Lal1, M. Ferrer1, J. Amaral1, D. McGaughey1, K. Bharti1. 1National Eye Institute; 2National Center for Advancing Translational Sciences


1245 — A0348 Protective Roles of Chorioidal T Cells in Chronic Models of RPE Degeneration. Jiyang Cai, Y. Chen, V. Stojic, D. J. Mahan. 1Department of Ophthalmology & Visual Sciences, University of California, San Francisco; 2Ophthalmic Surgery & Retina, Children’s Hospital Oakland Research Institute; 3Ophthalmic Surgery & Retina, Oregon Health Sciences University; 4Center for Applied Medical Research, California State University, Chico

1246 — A0349 Modeling lysosomal dysfunction in the retinal pigmented epithelium to study pathogenesis of age-related macular degeneration. Miguel Seabra1,2, M. Cardoso1,2, M. Hall1, A. Falco1, C. Escrevente2, P. Antas1, G. V. Santos1, S. Teixeira1, C. E. Futter1. 1CEDOC, Nova University of Lisbon; 2UCL Institute of Ophthalmology

1247 — A0350 Differential Expression of Desumoylation Enzymes (SENPs) in Normal Ocular Tissues and Mouse Models for Major Ocular Diseases. Jiawen Xiang, D. W. Li, Zhongshan Ophthalmic Center, Sun Yat-sen University

1248 — A0351 Efficacy of Echinomycin in hypoxia-inducible factor-mediated ocular angiogenesis. Flavia Plastino1, A. Santana Garrido1,2, A. P. Kavanu3, H. Andre4, M. Aronsson5, A. Mate Barrero6, C. Vázquez Cueto6. 1Clinical neuroscience, Karolinska Institute; 2Physiology/Pharmacy, University of Seville

1249 — A0352 Role of the Matrix Metalloproteinase 10 (MMP-10) in Choroidal Neovascularization (CNV). Maria Hernandez1, P. Fernandez1, P. Recalde2, J. A. Rodriguez1, J. Orbe1, A. Montoliu1, J. Bezurantear2, I. Belza1, E. Rojas de Miguel1, J. Gonzalez1, M. Moreno2, E. Alonso2, A. Garcia-Layana2. 1Laboratory of Experimental Ophthalmology, University of Navarra; 2IdiSNA, Navarra Institute for Health Research; 3Atherothrombosis Laboratory. Cardiovascular Area, CIMA (Center for Applied Medical Research), Universidad de Navarra; 4University of Navarra

1250 — A0353 Characterization of angiographic features and validation of a chronic wet AMD rabbit model induced by DL-AAA. Vatsala Naqeshwaran, Absorption Systems

1251 — A0354 Intravitreal bevaczimab-loaded nanoparticles reduce choroidal neovascularization in laser-induced animal model. Patricia Fernandez1,2, S. Recalde1,2, M. Hernandez1, J. Bezurantear1,2, J. M. Irache1,2, I. Luis de Redín1, I. Belza1, E. Rojas de Miguel1, M. Moreno2, E. Alonso2, A. Garcia-Layana2. 1Experimental Ophthalmology Laboratory, Clinica Universidad de Navarra; 2IdiSNA, Navarra Institute for Health Research; 3Department of Pharmacy and Pharmaceutical Technology, NANO-VAC Research Group, University of Navarra; 4Department of Pharmacy and Pharmaceutical Technology, NANO-VAC Research Group, University of Navarra; 5Laboratory of Experimental Ophthalmology, University of Navarra

1252 — A0355 Visualization of mouse choroidal and retinal vasculature using fluorescent tomato lectin perfusion. Elliott H. Soh1,2, C. Jiao1,2, X. Liu1,2, W. Sun1,2, R. F. Mullins1,2. 1Dept. Ophthalmology, University of Iowa Hospital & Clinics; 2Institute for Vision Research

* 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.
1263 — A0366 * Two-stage laser induced model of sub-retinal fibrosis. Karis Little, M. Lorian-Salvador, M. Chen, H. Xu, Queen’s University

Belfast

West Exhibition Hall A0509-A0548

Sunday, April 28, 2019 3:00 PM-4:45 PM

Multidisciplinary Ophthalmic Imaging Group

168 OCT - New Biomarkers and Technical Improvements

Moderators: Vivek J. Srinivasan and Xincheng Yao


Singapore Eye Research Institute; *Topcon corporation *CR

1265 — A0510 * Real time dynamic imaging of retinal samples with full field OCT. Jules Scholler1, K. Grouch, J. A. Sahel2, M. Fink, C. Boccara, K. Grieve1, 2Institut Langevin, ESPCI; 2Department of Ophthalmology, University of Pittsburgh School of Medicine;

Vision Institute, Quinze Vingts National Ophthalmology Hospital

1266 — A0511 Ultra-High Resolution Imaging of Cornea In Non-Human Primates. Veluchamy A. Barathi1, K. Devarajan, B. Tan, J. Chua1, R. M. Werkmeister, L. Schmetterer2, 3Translational Pre-Clinical Model Platform, Singapore Eye Research Institute; *Eye-ACP, Duke-NUS Graduate Medical School; *Ocular Imaging, Singapore Eye Research Institute;

Center for Medical Physics and Biomedical Engineering, Medical University of Vienna; *Department of Ophthalmology, Lee Kong Chian School of Medicine, Nanyang Technological University

1267 — A0512 * Automated 2D and 3D assessment of choroidal thickness and vasculature with swept-source OCT. Hao Zhoud, Z. Chu, Q. Zhang, Y. Dai, G. Goretto, P. J. Rosenfeld, R. K. Wang, University of Washington;

*Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine; Shansui Eye Hospital *CR

1268 — A0513 * Roboticly Aligned OCT Scanner for Automated Patient Tracking Retinal Imaging. Mark Dravels1, P. Ortiz1, R. Qian, C. Viehland, K. Hauser, A. N. Kuo, J. A. Izatt, Biomedical Engineering, Duke University;

*Electrical and Computer Engineering, Duke University; *Duke University Medical Center, Ophthalmology *CR

1269 — A0514 Retinal layer volumes and their relationship with white and grey matter volumes. The Rhineland Study. Matthias M. Maaschitz1, J. Kramme1, V. Lohner, F. G. Holz, R. P. Finger, M. M. Breteler1, *Population Health Sciences, German Center for Neurodegenerative Diseases (DZNE); *Department of Ophthalmology, Faculty of Medicine, University of Bonn; *Institute for Medical Biometry, Informatics and Epidemiology, Faculty of Medicine, University of Bonn *CR

1270 — A0515 * In- vivo angle independent Doppler flow calculations using synthetic subapertures in a line field OCT system. Laurin Ginnie1, A. Wartak1, M. Salas1, M. Niederleithner2, L. Warster1, R. A. Leitgeb1, Medical University of Vienna, Center of Biomedical Engineering and Physics; *Massachusetts General Hospital, Wellman Center for Photomedicine

1271 — A0516 Retinal thickness as biomarker in patients with amyloid proven Alzheimer’s disease. Frank D. Verbraak1, J. den Haan, A. van de Kreeke1, F. Barkhof, B. van Berckel, C. Teunissen, P. Scheltens, P. Visser2, F. Bouwman. *Ophthalmology, Amsterdam University Medical Center; *Neurology, Amsterdam University Medical Center; *Ophthalmology, Amsterdam University Medical Center


1273 — A0518 * Deformation Analysis of 3D Optic Cup Surface in Healthy and Glaucoma Patients. Hidemasa Muta1, B. Antony2, K. Halupka1, S. Seda1, H. Ishikawa, G. Wollstein2, J. S. Schuman1, 2IBM Research - Australia; *NYU Langone Health, NYU Eye Center *CR

1275 — A0520 Comprehensive multifunctional retinal imager based on simplified polarization-sensitive Jones matrix OCT. Yoshiaki Yasuno1, 2, S. Azuma2, S. Makita3, T. Mino1, T. Yamaguchi1, M. Miura1. 1Computational Optics Group, Univ. Tsukuba, University of Tsukuba; 2Computational Optics and Ophthalmology Group; 3Topcon Corporation; 4Department of Ophthalmology, Tokyo Medical University Ibaraki Medical Center *CR

1276 — A0521 Automated instrument-tracking using deep-learning-based adaptively-sampled spectrally encoded coherence tomography and reflectometry (SECTR). Eric Tang, M. El-Haddad, J. D. Malone, Y. Tao, Biomedical Engineering, Vanderbilt University *CR

1277 — A0522 B-scan imaging along retinal vessels using OCT with tracking. Sylvia Desissaire1, F. Beer2, M. Salas2, F. Schwarzhans3, M. Sugiya1, B. Baumann1, G. Fischer1, C. Vass1, M. Pircher1, C. K. Hitzenberger1. Center for Medical Physics and Biomedical Engineering, Medical University of Vienna; 1Institute of Medical Information Management, Medical University of Vienna; 2Department of Ophthalmology, Medical University of Vienna *CR

1278 — A0523 Automated Diagnosis of Diabetic Retinopathy using Optical Coherence Tomography and Optical Coherence Tomography Angiography. Harpal S. Sandhu1, N. Eladawi2, A. EI-Tanboly2, M. Elmogy2, N. Eladawi2, A. EI-Tanboly2, M. Elmogy2, A. Artal2, B. Silver2, S. Schaal1. 1Department of Ophthalmology, University Hospital Rostock; 2Department of Pediatrics, University Rostock; 3Institute for Computer Science, University Rostock; 4Department of Ophthalmology, Ruhr University Bochum, Johannes Wesling Hospital Minden; 5Department of Ophthalmology, Heart and Diabetes Center NRW, Ruhr University Bochum

1279 — A0524 Resolving fine layers in the mouse retina with visible light OCT. Aaron M. Kho1, T. Zhang2, S. Leela1, Y. J. Srinivasan1. 1Biomedical Engineering, University of California, Davis; 2Ophthalmology and Vision Science, University of California, Davis *CR

1280 — A0525 Vessel Tortuosity Measurement in Epiretinal Membrane in Optical Coherence Tomography Angiography. Haruka Sekiryu1, S. Nakao1, T. Hayashi1, Y. Kaizu1, I. Wada1, M. Arima1, K. Ishikawa1, N. Higashijima1, K. Morooka1, K. Sonoda1. 1Kyushu University; 2Okanaya University *CR

1281 — A0526 OCT in Unconscious and Systemically Unwell Patients in the Critical Care Unit Using a Mobile OCT Device. Nicholas I. Capewell1, X. Liu1, A. Kaley1, N. Talbot1, T. Veenith1, P. A. Keane1, S. Mollan2, R. J. Blanchez1, A. K. Dennistoun1, 2. 1Queen Elizabeth Hospital Birmingham NHS Foundation Trust; 2University of Birmingham; 3 Moorfields Eye Hospital *CR

1282 — A0527 Choroidal morphological changes at the posterior segment in central serous choroideretinopathy imaged by ultrawide-field optical coherence tomography. Takahiko Izumi1, I. Maruko1, R. Hirose1, T. Kawano1, M. Sakaihara2, T. Iida1. 1Tokyo Women’s Medical University; 2Topcon Corporation *CR

1283 — A0528 Compact dual path-dual focus SS-OCT system for whole anterior segment and retinal imaging. Ana Rodriguez-Aramendia1, 2, F. Diaz Douton1, J. Pujol1, J. Gúell1, I. Grulkowski2. 1Instituto de Microcirugia Ocular; 2Center for Sensors, Instruments and Systems Development, CD6, Universitat Politècnica de Catalunya; 3Faculty of Physics, Nicolaus Copernicus University

1284 — A0529 Motion-free, multi-contrast optical coherence tomography by Lissajous scan. Shuichi Makita1, S. Azuma1, M. Miura1, T. Yamaguchi1, T. Mino2, Y. Yasuno1. 1Computational Optics Group, University of Tsukuba; 2Ophthalmology, Tokyo Medical University Ibaraki Medical Center; 3Topcon Corporation *CR

1285 — A0530 Magnetomotive OCT for specific visualization of ocular surface inflammation. Jens Hörstmann1, 2, A. Sene1, H. Schulz-Hildebrandt1, 2, D. Heß1, 2, U. Gehrskens1, 2, U. Oberheide1, G. Huttmann1, 2, P. Steffen1, 2. 1Department of Ophthalmology, University Hospital Cologne; 2Cluster of Excellence: Cellular Stress Responses in Aging-associated Diseases (CECAD); 3Institute of Applied Optics and Electronics, TH Koeln - University of Applied Sciences Cologne; 4Institute of Biomedical Optics, University of Lübeck; 5Airway Research Center North (ARCN), German Center for Lung Research (DZL)

1286 — A0531 Analysis of vascular changes in Alzheimer’s disease and cerebrovascular accident patients via OCT angiography and MRI imaging. Sahil G. Shah1, S. Leeman1, C. Noone1, C. Vass3, L. C. Castro1, 2. 1Department of Ophthalmology, University of California, Davis; 2Department of Ophthalmology & Visual Sciences, University of Massachusetts Medical School; 3Department of Biomedical Engineering, University of California, Davis

1287 — A0532 Intra- and Inter-Subject Variability of Retinal Oximetry on Healthy Eyes Using Visible-Light OCT. Zeinab Ghassabi1, K. Lucy1, M. Wu1, G. Wolldstein1, J. S. Schuman1, B. Soetinko1, Y. Wang2, R. Karunov3, H. F. Zhang4, H. Ishikawa1. 1Ophthalmology, NYU Langone Health, NYU Eye Center, New York, NY; 2Division of Biostatistics, Departments of Population Health and Environmental Medicine, NYU School of Medicine, New York, NY; 3Opticent Inc. Evanston IL 60208; 4Department of Biomedical Engineering, Northwestern University, Evanston IL 60208 *CR

1288 — A0533 Optical coherence elastography based corneal strain mapping during low-amplitude intraocular pressure modulation. Sabine Kling, K. Khodadadi. Department of Information Technology and Electrical Engineering, Swiss Federal Institute of Technology *CR

1289 — A0534 Repeatability and Reproducibility of Ellipsoid Zone Intensity Measurements on SD-OCT Images. Steven Seto1, A. L. Huckenpahler2, E. Warren3, A. E. Salomon4, J. Carroll5. 1Cell Biology, Neurobiology, & Anatomy, Medical College of Wisconsin; 2Ophthalmology & Visual Sciences, Medical College of Wisconsin

1290 — A0535 Visual Analytics of OCT data: Utility of deviation maps in describing retinal layer thickness changes. Oliver Sacks1, 2, R. Prakash1, D. C. Fischer4, H. Schumann1, A. Matuszewska1, D. Tschöpe1, H. J. Hetlich1, M. Röllig1. 1Department of Ophthalmology, University Rostock; 2Department Life, Light & Matter, University Rostock; 3Department of Pediatrics, University Rostock; 4Institute for Computer Science, University Rostock; 5Department of Ophthalmology, Ruhr University Bochum, Johannes Wesling Hospital Minden; 6Department of Ophthalmology, Heart and Diabetes Center NRW, Ruhr University Bochum

1291 — A0536 Vitreous body imaging with long-range swept-source optical coherence tomography for detection of opacities. Irenjeusz Grulkowski1, A. Rodriguez-Aramendia1, 2, D. Runinski1, S. Manzano2, Y. Chen1, J. Mompeão1, F. Diaz Douton1, J. Pujol1, J. Sebag1, P. Artal1. 1Institute of Physics, Nicolaus Copernicus University; 2Instituto de Microcirugia Ocular; 3Center for Sensors, Instruments and Systems Development (CD6), Universidad Politécnica de Cataluña; 4Laboratorio de Óptica, Universidad de Murcia; 5VMR Institute for Vitreous Macula Retina

1292 — A0537 DRIL thickness and post-ERM peeling visual acuity. Renata J. Moura1, A. Daré1, L. C. Castro1, 2. 1HOIP - Hospital Oftalmológico do Interior Paulista; 2IDECO - Instituto de Diagnostico Especializado e Cirurgia em Oftalmologia; 3CRV - Consultores de Retina e Vitreo

1293 — A0538 Effects of Systemic Profiles on Choroidal Vascularity Index in Eyes with Advanced Diabetic Retinopathy. Jee Taek Kim1, Ophthalmology, Chung-ang university hospital

1294 — A0539 Light induced water movement in the outer retina investigated by Optical Coherence Tomography. Robert J. Zawadzki1, 2, P. Zhang1, R. Meleppat2, S. K. MANNA2, E. N. Pugh1, 2. 1Ophthalmology & Vision Science, University of California Davis; 2EyePod Small Animal Ocular Imaging Laboratory, University of California Davis

1295 — A0540 Hand-held high-speed whole-eye OCT: Simultaneous SSOCT of the anterior segment and retina using a compact probe. Al-Hafeez Dhalla1, 2, R. P. McNabb2, 1, P. Ortiz1, M. Jackson-Atogi1, G. Waterman1, J. A. Izatt1, 2, A. N. Kuo1, 2. 1Biomedical Engineering, Duke University; 2Ophthalmology, Duke University Health System *CR
1929 – 1932 – Sunday – Posters

1296 – A0541 MHz-swept-source optical coherence tomography with a 90 degree field of view. Michael Niederleitner1, M. A. Araven2, H. Ren3, R. Williams3, S. Bello7, L. Ginner3, M. Salas3, J. Straub2, W. Drexler7, R. A. Leitgeb2, T. Schmoll2, 1Center for Medical Physics and Biomedical Engineering, Medical University of Vienna; 2Carl Zeiss Meditec

1297 – A0542 Enhanced imaging of the outer retina layers using speckle-reduced visible-light optical coherence tomography. Roman V. Kuranov1, I. Rubinoff7, Y. Wang7, L. Beckmann1, X. Zhang1, A. A. Fawzi7, H. Ishikawa4, J. Schuman4, D. Akula2, H. De Bruyn2, A. B. Fulton2, Z. Hosseinaee1, E. L. Irving3, D. Hileeto3, C. Miyamoto2, H. Yokota2, K. Omodaka3, K. Hashimoto3, S. Tsuda3, Y. Shigo1, n. takada1, t. kikoda1, T. Nakazawa1, 1R&D, Topcon Corporation; 2Center for Advanced Photonics, RIKEN; 3Graduate School of Medicine, Tohoku University

1298 – A0543 Evaluation of glaucoma diagnosis machine learning models based on color optical coherence tomography and color fundus imaging. Masahiro Akiba1,2, G. An1,2, H. Yokota1, K. Omodaka3, K. Hashimoto3, S. Tsuda3, Y. Shigo1, N. Takada1, T. Kikoda1, T. Nakazawa1, 1R&D, Topcon Corporation; 2Center for Advanced Photonics, RIKEN; 3Graduate School of Medicine, Tohoku University

1300 – A0545 Dual-conjugate SSOT Whole Eye Biometry System (WEBSS). R. D. Ferguson7, Y. Lu1, M. Majaj1, G. N. Magiboni7, N. Itimian4, J. D. Akula2, H. De Bruyn7, A. B. Fulton7, 1Biomedical Optical Technologies, Physical Sciences Inc; 2Ophthalmology, Boston Children’s Hospital, Harvard Medical School


1302 – A0547 Retinal Imaging Findings in PSEN-1-associated Early Onset Familial Alzheimer’s Disease before Onset of Cognitive Symptoms. Jeayoung Park1, G. W. Armstrong2, M. A. Kasey2, R. Silverman2, R. Zeng2, L. A. Kim2, J. Arboleda-Velasquez2, Y. T. Quiroz2, J. B. Miller2, 1Scheepens Eye Research Institute; 2Retina Department, Massachusetts Eye & Ear Infirmary; 3Psychiatry, Massachusetts General Hospital

1303 – A0548 In vivo visualization of inner plexiform layer laminar by visible light OCT with spectral shaping. Tingwei Zhang4, J. Garcia4, V. J. Scrinivasan4, 1Biomedical Engineering Department, University of California, Davis; 2Electrical and Computer Engineering Department, University of California, Davis; 3Ophthalmology and Vision Science, University of California, Davis

1304 – B0051 Loss of color and flicker sensitivity in subjects at risk of developing diabetes. Marisa Rodriguez-Carmona, Q. Bastaki, J. L. Barbar, Centre for Applied Vision Research, City, University of London

1305 – B0052 “Dress sense”: a twin study of colour perceptions of “the dress”. Amanur Yusuf, King’s College London

1306 – B0053 Analysis of the residual signals colour deficient can use to pass the D-15 test. Benjamin E. Evans, M. Rodriguez-Carmona, J. L. Barbar. Centre for Applied Vision Research, School of Health Sciences, City, University of London


1308 – B0055 Evaluation of congenital color vision deficiency using the Robin cone contrast test. Maki Iwasa1, S. Muraki1, S. Yamada2, M. Ojiy2, 1Muraki eye clinic; 2Department of Ophthalmology, Shiga University of Medical Science

1309 – B0056 Evaluation of gene therapy via intravitreal injection for disorders associated with loss of expression or function of L/M cone opsin. adam crain, j. a. kuchenbecker, j. s. rowlan, j. r. chao, j. neitz, m. neitz, university of Washington

1310 – B0057 Examining color discrimination of anomalous trichromats using the Colour Assessment and Diagnosis test and the Rayleigh anomaloscope. Rebecca Masey1, E. J. Patterson1, E. Curran1, J. S. Rowlan1, J. Neitz1, M. Neitz2, J. Carroll1, 1Ophthalmology & Visual Sciences, Medical College of Wisconsin; 2Ophthalmology, University of Washington

1311 – B0058 Generation of mammalian Near-infrared vision by Upconversion nanoparticles. Jin Bao1, Y. Ma2, G. Han2, T. Xue3, 1School of Life Science, University of Science and Technology of China; 2Department of Biochemistry and Molecular Pharmacology, University of Massachusetts Medical School

1312 – B0059 The Rayleigh limit of the parvocellular pathway. Daniel R. Coates1, X. Jiang1, J. A. Kuchenbecker2, R. Sabesan2, 1College of Optometry, University of Houston; 2Department of Ophthalmology, University of Washington

1313 – B0060 Differences in axial eye length and retinal structure between patients with achromatopsia and blue cone monochromacy. Emily J. Patterson1, R. Mastey1, S. Connolly2, M. Georgiou3, A. Kalitzeos4, N. Hirji1, K. M. Litts4, S. C. Langlo4, J. S. Rowlan4, J. Neitz4, M. Michaelides1, M. Neitz1, J. Carroll1, 1Institute of Ophthalmology, University College London; 2Moorefields Eye Hospital; 3Ophthalmology & Visual Sciences, Medical College of Wisconsin; 4Cell Biology, Neurology and Anatomy, Medical College of Wisconsin; 5Ophthalmology, University of Washington


1315 – B0062 Is recovery of visual sensitivity to light affected by wearing “blue blocking lenses”? Maitreyee Roy, H. Alzahrani, S. Khud, The University of New South Wales

1316 – B0063 Predicting the Appearance of Colored Stimuli Viewed through Colored Filters. Thomas Kauk1, J. Dykes2, B. Novar2, R. Singleton1, P. Garcia1, B. Goetf1, L. N. McCl1, 1Engility Corporation; 2711HPWR/RHDO, Air Force Research Laboratory

1317 – B0064 Perception of Motion Transparency: Reverse Phi. Mohana Kuppawamy Purshasharathy, V. Lakshminarayanan. School of Optometry and Vision Science, University of Waterloo


1319 – B0066 Comparing Digital Cone-Contrast Threshold assessment in Healthy Normal Individuals with Conventional Standardized Color Vision Diagnostics. Clara Yuh1, C. Frumbach2, J. Doan3, K. White4, Y. Chen4, C. Kenney5, K. Jameson5, A. Browne5, 1College of Osteopathic Medicine of the Pacific, Western University of Health Sciences; 2University of California Irvine, School of Medicine; 3Medical College of Wisconsin; 4Ophthalmology, Gavin Herbert Eye Institute
West Exhibition Hall
Sunday, April 28, 2019 5:00 PM-6:00 PM

170 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.