



April 29, 2018

1:00 - 2:45pm. *Surgery and Wound Healing I.*

Location: Exhibit Hall.

[Abstract #471](#). [Poster #A0331](#). Do J, Xu B, **Camp A**, Ngai P, **Weinreb RN**

Subconjunctival injection versus direct scleral application of mitomycin-C in trabeculectomy

1:00 - 2:45pm. *New Insights on Retiogenesis from Organoids.*

Location: Exhibit Hall.

[Abstract #574](#). [Poster #B0189](#). Jones MK, Ogata AR, Su F, Chen B, Seid J, **Wahlin K**

Transcriptomic analysis of retinal organoids from human pluripotent stem cells

1:00 - 2:45pm. *Retinal Cell Biology.*

Location: Exhibit Hall.

[Abstract #574 - B0189](#). [Poster #B0189](#). Melissa Jones, Anna Ogata, Fei Su, Bolin Chen, Justin Seid, **Karl Wahlin**

Transcriptomic analysis of retinal organoids from human pluripotent stem cells

1:00 - 2:45pm. *Visual Psychophysics/Physiological Optics.*

Location: Exhibit Hall

[Abstract # 669-C0227](#). [Poster #C0227](#). Rebecca Mastey, Michalis Georgiou, Christopher Langlo, Angelos Kalitzeos, Ajoy Vincent, Anthony Moore, Stephen Tsang, **Jonathan Lin**, Marielle Young, M Elizabeth Hartnett, Elise Heon, Susanne Kohl, Michel Michaelides, Joseph Carroll

Characterization of retinal structure in ATF6-associated achromatopsia

1:00 - 2:45pm. *Gene editing: methods and outcomes in ocular cells.*

Location: Exhibit Hall

[Abstract #376](#). [Poster #A0036](#). Zhu J, Fu X, Ming C, Duan Y, Hoang DA, Zhang R, Rutgard J, Zhang D, Hou R, Xiong W, **Zhang K**

Gene and mutation independent therapy via CRISPR-Cas9 mediated cellular reprogramming in rod photoreceptors

1:00 - 2:45pm. *AO, OCT and imaging techniques and applications.*

Location: Exhibit Hall

[Abstract # 660](#). [Poster #C0218](#). **Bartsch DUG**, Amador M, Meshi A, Dans KC, Lin T, **Freeman WR**

Improvement to manual registration of AOSLO image sequences

3:15 - 5:00pm. *AMD and Anti-VEGF I.*

Location: Exhibit Hall

[Abstract # 802](#). [Poster #A0134](#). Lin T, Dans KC, Meshi A, Amador M, **Freeman WR**

AMD associated peripapillary choroidal neovascularization in the era of anti-VEGF therapy

April 30, 2018

8:15 - 10:00am. *Corneal endothelium.*

Location: Exhibit Hall

[Abstract #1360](#). [Poster #B0120](#). Lian R, Igo RP, Sella R, Li YJ, Iyengar SK, **Afshari NA**
Smoking and annual US regional rate of Fuchs endothelial dystrophy related endothelial keratoplasty

8:15 - 10:00am. *Clinical Imaging Retina.*

Location: Exhibit Hall

[Abstract #1501](#). [Poster #C0342](#). Meshi A, Lin T, Dans K, Amador M, Chen K, Hasenstab K, Muftuoglu I, **Nudleman E, Chao D, Bartsch DUG, Freeman WR**
Comparison of retinal pathology visualization in multi-spectral scanning laser imaging

8:15 - 10:00am. *Clinical Imaging Retina.* Location: Exhibit Hall

[Abstract #1508](#). [Poster #C0349](#). Amador M, Meshi A, Lin T, Dans KC, Chen K, **Freeman WR**
Effect of fasting and food ingestion on quality of oral fluorescein angiography

8:15 - 10:00am. *Clinical Imaging Retina.*

Location: Exhibit Hall

[Abstract #1535](#). [Poster #C0376](#). Hartmann K, Eberlein G, **Freeman WR**, Mueller AJ
Spectral imaging of retinal structure after laser navigated subthreshold and threshold photocoagulation

8:45 - 9:00am. *Gene therapy.*

Location: Room 316A

[Abstract #1192](#). **Cheng L, Freeman WR**, Huffman K, Sun Y
Cytotoxicity and ocular safety of silicic acid, the degradation product of porous silicon

9:15 - 9:30am. *Retina.*

Location: Room 311.

[Abstract #1160](#). Glenn Yiu, Parisa Emami-naeini, Jordan Deaner, Ferhina Ali, Priyanka Gogte, Richard Kaplan, Kevin Chen, **Eric Nudleman**, Dilraj Grewal, Meenakshi Gupta, Jeremy Wolfe, Michael Klufas
Experience and Outcomes of Pneumatic Retinopexy Performed by Vitreoretinal Fellows in the United States

9:30 - 9:45am. *Discoveries in Glaucoma and Associated Endophenotypes.*

Location: Room 314

[Abstract #1182](#). Athanas-Crannell AJ, Christopher M, Choi Y, Chan A, **Zangwill LM**, Rotter JI, Liebmman JM, Girkin CA, Feldman RM, Dubiner H, Chen YI, Taylor K, Guo X, **Ayyagari R, Weinreb RN**, Schork N
Gene-based analysis leveraging whole genome sequencing (WGS) data on individuals with multiple longitudinal glaucoma related phenotypes shows evidence for genetic factors in open angle glaucoma progression

11:15am - 1:00pm. *Genetic and retinal disease epidemiology.*

Location: Exhibit Hall

[Abstract #1846](#). [Poster #B0307](#). Dans KC, **Chao D**, Meshi A, Lin T, Amador M, Borooah S, Chen K, Gomez ML, **Bartsch DUG, Nudleman E, Freeman WR**
Acute symptomatic posterior vitreous detachments do not adversely affect contrast sensitivity

11:15am - 1:00pm. *Diabetic retinopathy: clinical.*

Location: Exhibit Hall

[Abstract #1885](#). [Poster #C0285](#). Chen KC, Meshi A, Li A, You Q, Saunders L, **Nudleman E**, Gomez ML, **Freeman WR**

Visual acuity under lighting conditions with suboptimal contrast and glare in diabetic patients without retinopathy

3:30 - 5:15pm. *Imaging: Posterior Segment I.*

Location: Exhibit Hall

[Abstract #2090](#). [Poster #A0148](#). Christopher M, **Belghith A**, **Bowd C**, **Goldbaum M**, **Weinreb RN**, **Zangwill LM**

Deep learning approaches can detect glaucomatous functional loss better than standard SD-OCT retinal nerve fiber layer thickness

3:30 - 5:15pm. *Neuroprotection.*

Location: Exhibit Hall

[Abstract #2493](#). [Poster #C0197](#). **Welsbie DS**, Schirok H, Mitchell K, Koch M, Kim BJ, Lobell M, Patel AK, Holton S, Hristodorov D, Esteve-Rudd J, Berlinicke C, Terjung C, Hansen BS, Werbeck N, Schubert W, Zack DJ

Identification of a retinal neuroprotective kinase inhibitor with preferential activity against DLK compared to LZK

3:30 - 5:15pm. *Retinal Cell Biology.*

Location: Exhibit Hall

[Abstract #2509 - C0213](#). [Poster #C0213](#). **Dorota Skowronska-Krawczyk**, Viet Anh Nguyen Huu, Lorena Raquel Rocha Jimenez, Mary Jabari

Removal of early senescent cells to protect retinal ganglion cells (RGCs) in glaucoma

3:30 - 5:15pm. *Cataract Surgery - IOLS.*

Location: Exhibit Hall

[Abstract #2204](#). [Poster #A0373](#). Hu JQ, Sarkar R, Murphy J, **Afshari NA**

Cost-effectiveness of multifocal lenses compared to monofocal intraocular lenses in cataract surgery

3:30 - 5:15pm. *Corneal development, cell and molecular biology.*

Location: Exhibit Hall

[Abstract #2245](#). [Poster #B0199](#). **Zhao J**, Hu JQ, **Afshari NA**

Characterization of ocular neural crest stem cells derived from human iPSCs

May 1, 2018

8:15 - 10:00am. *Glaucoma risk factors, progression and management.*

Location: Exhibit Hall

[Abstract #2735](#). [Poster #B0114](#). Hou H, Shoji T, **Zangwill LM**, Moghimi S, Saunders L, Hasenstab K, Ghahari E, Manalastas PIC, Akagi T, Christopher M, Penteadó R, **Weinreb RN**

Progression of primary open angle glaucoma in diabetic and non-diabetic patients

8:15 - 10:00am. *OCT Angiography - Experimental Applications and Technical Improvements.*

Location: Exhibit Hall

[Abstract #2856](#). [Poster #B0274](#). Penteadó R, **Zangwill LM**, Hasenstab K, Manalastas PIC, Fuller NJ, Han J, Yarmohammadi A, **Weinreb RN**

Evaluation of diurnal variation of ocular vasculature in healthy eyes using optical coherence tomography angiography

8:15 - 10:00am. *OCT Angiography - Experimental Applications and Technical Improvements.*

Location: Exhibit Hall.

[Abstract #2857](#). [Poster #B0275](#). Villatoro G, Manalastas PIC, Hasenstab K, Nguyen KD, **Bowd C**, Hou H, Li AJ, Penteadó R, Moghimi S, Ghahari E, **Weinreb RN**, **Zangwill LM**

Impact of pupil dilation on retinal microvasculature in healthy eyes using optical coherence tomography angiography

8:15 - 10:00am. *OCT Angiography - Experimental Applications and Technical Improvements.*

Location: Exhibit Hall

[Abstract #2861](#). [Poster #B0279](#). Nguyen K, Manalastas PI, **Bowd C**, Hasenstab K, Li A, Penteadó R, Hou H, Shoji T, Villatoro G, Ghahari E, Moghimi S, **Weinreb RN**, **Zangwill LM**

Cross-sectional association between OCT angiography-measured optic nerve head and macular vessel densities and age in healthy eyes

8:15 - 10:00am. *OCT Angiography - Experimental Applications and Technical Improvements.*

Location: Exhibit Hall

[Abstract #2875](#). [Poster #B0293](#). Wolfson Y, **Nudleman E**, **Goldbaum MH**, **Zangwill LM**, Tian J, Soules KA, Jang BK, **Weinreb RN**, Zhou Q

Reproducibility of angioanalytics measurements of OCTA retina scans in normal, glaucoma and diabetic retinopathy eyes

8:15 - 10:00am. *OCT Angiography - Experimental Applications and Technical Improvements.*

Location: Exhibit Hall

[Abstract #2877](#). [Poster #B0295](#). Soules KA, **Zangwill LM**, Tian J, Wolfson Y, Jang BK, **Weinreb RN**, Zhou Q

Reproducibility of angioanalytics measurements of OCTA angio disc scans in glaucoma and normal eyes

8:15 - 10:00am. *Retinal Cell Biology.*

Location: Exhibit Hall

[Abstract #2632 - A0137](#). [Poster #A0137](#). Hongjun Du, Tong Wu, Wenqin Xu, **Peter Shaw**

Liver X receptors agonist attenuates experimental choroidal neovascularization stimulated by oxidized low density lipoprotein in mice

8:15 - 10:00am. *Retinal Cell Biology.*

Location: Exhibit Hall

[Abstract #2636 - A0131](#). [Poster #A0141](#). **Peter Shaw**, Victor Lin, Zhigang Lu, Adam May, Briana Che, Kyle Tran

HTRA1 synergizes with oxidized phospholipids in activation of VEGF and inflammatory factors in ARPE-19 cells

9:09 - 9:26am. *Molecular and cellular insights into lens and cornea regeneration - Minisymposium.*

Location: Room 316A

[Abstract #2609](#). **Zhang K**

Lens and cornea regeneration using endogenous stem cells

11:15am - 1:00pm. *Retinal cell and developmental biology.*

Location: Exhibit Hall

[Abstract #3105](#). [Poster #A0113](#). Kallman A, Capowski EE, Kaushik AM, Liu M, Hansen BS, Chen L, Cheng J, **Wahlin K**, Hu MW, Goff LA, Qian J, Berlinicke C, Wang J, Gamm DM, Zack DJ

Single-cell transcriptomic analysis of human and murine NRL-null retinas

11:15am - 1:00pm. *Melanoma: Basic and Translational.*

Location: Exhibit Hall

[Abstract #3187](#). [Poster #A0330](#). Toomey C, Fraser K, DiLoreto C, Edwards W, Thorson J, **Kikka-wa D, Goldbaum M, Lin J**

GNAQ R183Q Mutation Identified in a Young Patient with Uveal Melanoma, Ocular Surface Melanosis, and Nevus of Ota

1:30 - 3:00pm. *Optical coherence tomography angiography of the eye.*

Location: Room 312

[Abstract #SIG](#). Huang D, Rosenfeld PJ, Fawzi A, Jia Y, Fujimoto JG, Burns SA, **Zangwill LM**

Optical coherence tomography angiography of the eye

3:30 - 5:15pm. *Neurodegeneration.*

Location: Exhibit Hall

[Abstract #3695](#). [Poster #B0042](#). Huu VAN, Jimenez LRR, Dvorak R, Jabari M, **Weinreb RN, Skowronska-Krawczyk D**

Effect of single IOP elevation on visual pathway

3:30 - 5:15pm. *Corneal epithelium.*

Location: Exhibit Hall

[Abstract #3876](#). [Poster #C0137](#). Sella R, **Zangwill LM, Weinreb RN**, Soules KA, Wolfson Y, Jang BK, Zhou Q, **Afshari NA**

Variability of epithelial thickness measurements by iVue SD-OCT in dry eye patients and its correlation with disease severity

3:30 - 5:15pm. *Profound Low Vision and Low-vision Clinical Trials.*

Location: Exhibit Hall

[Abstract #3894](#). [Poster #C0360](#). Nguyen B, Kim YJ, Chen S, Van Fossan D, **Chao D**

Assessing quality of life of severely visually impaired individuals after using the Aira system

4:00 - 4:15pm. *Imaging Posterior Segment and Progression.*

Location: Ballroom A

[Abstract #3498](#). Moghimi S, **Zangwill L**, Penteadó R, Hasenstab K, Ghahari E, Hou H, Christopher M, Manalastas PI, **Bowd C, Weinreb R**

Macular and optic nerve head vessel density and progressive retinal nerve fiber layer loss in glaucoma

4:45 - 5:00pm. *Anterior segment, ion channels, IOP.*

Location: Room 316A

[Abstract #3481](#). Phan A, Truong P, **Camp A, Weinreb R**, Talke F

In vivo investigation of an interferometric pressure measurement system for glaucoma management

May 2, 2018

8:15 - 10:00am. *RPE.*

Location: Exhibit Hall

[Abstract #4002](#). [Poster #A0127](#). Sripathi SR, Liu MM, Hu MW, Wan J, Cheng J, Mertz JL, Berlinicke C, Maruotti J, **Wahlin K**, Qian J, Zack DJ

Epithelial to mesenchymal transition of human stem cell-derived retinal pigment epithelium cells modulates expression of axonal guidance molecules

8:15 - 10:00am. *Clinical uveitis and scleritis: epidemiology, diagnosis and outcomes.*

Location: Exhibit Hall

[Abstract #4215](#). [Poster #C0057](#). Spencer D, **Freeman WR**

Investigation of the correlation of anterior chamber cell quantification by OCT and corenal pseudoguttata in the setting of anterior uveitis

8:20 - 8:35am. *Treatment on the horizon for Fuchs endothelial corneal dystrophy-Minisymposium.*

Location: Room 310

[Abstract #3914](#). **Afshari NA**

The genetic basis of Fuchs endothelial corneal dystrophy and stem cell regeneration of corneal endothelium

11:15am - 1:00pm. *Trabecular Meshwork.*

Location: Exhibit Hall

[Abstract #4709](#). [Poster #B0133](#). Saraswathy S, Bogarin T, Brian F, Tan JCH, **Weinreb RN**, Huang A

TGF-beta pathway alternations in high and low flow trabecular meshwork regions as defined by aqueous angiography in human eyes

11:15am - 1:00pm. *Retinal prostheses.*

Location: Exhibit Hall

[Abstract #4560](#). [Poster #A0089](#). Xiao Y, Lin T, Huffman K, Bosse B, Thorogood S, **Freeman WR**,

Cheng L

Acute animal model for subretinal prosthesis implantation

11:15am - 1:00pm. *Imaging Technologies and Applications I.*

Location: Exhibit Hall

[Abstract #4622](#). [Poster #A0264](#). Kim YJ, **Chao D**

Comparison of a portable digital ophthalmoscope to the conventional direct ophthalmoscope as a teaching tool for medical students

11:15am - 11:30am. *Novel genes found through methods old and new.*

Location: Room 316A

[Abstract #4466](#). Chekuri AK, Guru AA, Biswas P, Branham K, Matsui H, Hermida AS, Hicks M, Alapati A, Telenti A, Heckenlively J, Frazer KA, Sieving P, **Ayyagari R**

Mutations in the novel gene IFT88 are involved in causing non-syndromic inherited retinal degeneration (IRD)

11:15am - 1:00pm. *Retinal Cell Biology.*

Location: Exhibit Hall

[Poster #A0176](#). Heike Kroeger, Neil Grimsey, Ryan Paxman, Wei-Chieh Chiang, Lars Plate, Ying Jones, **Peter Shaw**, JoAnn Trejo, Stephen Tsang, Evan Powers, Jeffrey Kelly, R. Luke Wiseman, **Jonathan Lin**

The Photoreceptor Dystrophy and Unfolded Protein Response Regulator Gene, ATF6, Promotes Mesodermal Differentiation in Human Stem Cells

11:45am - 12:00pm. *Novel genes found through methods old and new.*

Location: Room 316A

[Abstract #4468](#). **Ayyagari R**, Biswas P, Hermida AS, Branham KE, Matsui H, Villanueva AL, Telenti A, Alapati A, Guru AA, Huang B, Riazuddin S, Heckenlively J, Sieving P, Duncan JL, Riazuddin SA, Frazer KA

Deciphering the genetic architecture of IRD by integrated analysis of 425 whole genomes

12:00 - 12:15pm. *Capillaries, Blood Flow, OCT Angiography.*

Location: Ballroom A

[Abstract #4476](#). Manalastas PIC, Moghimi S, **Zangwill L**, Christopher M, Hasenstab K, Pentead R, Hou H, Shoji T, Ghahari E, Li A, Nguyen K, Villatoro G, Yarmohammadi A, **Weinreb R**

Comparison of superficial versus deep macula vessel density measurements in normal, glaucoma suspect, and glaucoma eyes

12:30 - 12:45pm. *Drug delivery.*

Location: Room 316A

[Abstract #4458](#). Huffman K, Wang J, Xiao Y, **Freeman WR**, Sailor MJ, **Cheng L**

Luminescent porous silicon particles as a self-reporting intravitreal drug delivery system

1:30 - 3:00pm. *Retina.*

Location: Room 311

[Presentation - SIG](#). Michael Trese, Kimberly Drenser, **Eric Nudleman**, Lois Smith

Regenerative Medicine Wnt Signaling and Retinal vascular Disease

3:30 - 5:15pm. *Human electrophysiology.*

Location: Exhibit Hall

[Abstract #5020](#). [Poster #A0216](#). Goodwill V, **Lin JH**, Sigurdson C, Sanchez H, Geschwind M.

Retinal prion protein deposition in sporadic Creutzfeld-Jakob Disease: a retrospective study of 14 cases

3:30 - 5:15pm. *Capillaries, Blood Flow, OCT Angiography.*

Location: Exhibit Hall

[Abstract #5068](#). [Poster #B0019](#). Rao HL, Venugopal JP, **Weinreb RN**, Pradhan Z, Puttaiah NK, Devi S, Mansouri K, Webers CAB

Repeatability of vessel density measurements of high-density optical coherence tomography angiography scans and their comparability with standard-density scans in normal and glaucoma eyes

3:30 - 5:15pm. *Capillaries, Blood Flow, OCT Angiography.*

Location: Exhibit Hall

[Abstract #5075](#). [Poster #B0026](#). Ghahari E, **Zangwill L**, **Bowd C**, Hasenstab K, Hou H, Penteador R, Manalatas PI, Moghimi S, Shoji T, Li A, Nguyen K, Villatoro G, Yarmohammadi A, **Weinreb R**
Macular and peripapillary vascular dropout are associated with disease severity in advanced glaucoma

3:30 - 5:15pm. *Electrophysiology and Visual Fields.*

Location: Exhibit Hall

[Abstract #5116](#). [Poster #B0105](#). De Guzman E, **Bowd C**, **Goldbaum M**, Mahmoudi Nezhad G, Yousefi S

Gaussian Mixture Model Expectation Maximization for Glaucoma Progression Detection: An open-source R Package

3:30 - 5:15pm. *Genetics of Glaucoma.*

Location: Exhibit Hall

[Abstract #5137](#). [Poster #B0160](#). Taylor K, Guo X, **Zangwill LM**, Liebmann JM, Girkin CA, Feldman RM, Dubiner H, Palmer ND, Freeman BI, Bowden DW, Ng MCY, Chen YI, **Ayyagari R**, Rotter JI, **Weinreb RN**

Genomic architecture of POAG in individuals of African Descent --African Descent and Glaucoma Evaluation Study (ADAGESIII)

3:30 - 5:15pm. *Biochemistry/ Molecular Biology - Hot Topic.*

Location: Room 320

[Paper Session](#). Moderators: **Jonathan H Lin** (Univ of CA San Diego School of Med), Alexander M Dizhoor (Salus

University), Vsevolod V Gurevich (Vanderbilt University)

Biochemistry and Molecular Biology of the Retina

May 3, 2018

8:15 - 10:00am. *Retinal ischemia, angiogenesis and vascular remodeling.*

Location: Exhibit Hall

[Abstract #5470](#). [Poster #A0139](#). Bartakova A, Weiner G, Oldham M, **Ferrara N**, Daneman R, **Nudleman E**

Endothelial cell specific gene expression changes in Oxygen Induced Retinopathy (OIR)

8:15 - 10:00am. *Lymphoma, hemangioma, surface, orbit, and eyelid tumors.*

Location: Exhibit Hall

[Abstract #5594](#). [Poster #A0313](#). Pavan Mann, Scott Diamond, Rangarirai Masanganise, Lovemore Gwanzura, Yu-Tsueng Liu, Robert Schooley, **Jonathan Lin**

HPV16/18 and p16 gene expression in ocular surface squamous neoplasia: a retrospective cross-sectional analysis

8:15 - 10:00am. *Gene variants and regulatio of ocular genes expression in health and disease.*

Location: Exhibit Hall

[Abstract #5383](#). [Poster #A0035](#). Biswas P, Chekuri AK, Ear J, Borooh S, Matsui H, D'Antonio M, Frazer KA, Devalaraja S, Khan SY, Naeem MA, Riazuddin S, Akram J, Hejtmancik JF, Ghosh P, Riazuddin SA, **Ayyagari R**

A homozyguous mutation in the novel gene ARFGAP2 is associated with non-syndromic recessive inherited retinal degeneration (IRD)

8:15 - 10:00am. *Vitreoretinal surgery: novel approaches.*

Location: Exhibit Hall

[Abstract #5916](#). [Poster #C0313](#). **Freeman WR**, Chen K, **Chao D**, **Ferreyra H**, **Nudleman E**, **Bartsch DUG**

Low versus standard latency digital 3D monitor visualization for ophthalmic surgery

11:00am - 12:45pm. *Neuroprotection.*

Location: Exhibit Hall

[Abstract #6152](#). [Poster #C0271](#). Zhang P, Duan Y, Cheng J, Berlinicke C, Patel AK, **Welsbie DS**, Zack DJ

Genetic deletion of DLK and LZK reduce colchicine-induced cell death in human stem cell-derived retinal ganglion cells