



HARVARD
MEDICAL SCHOOL

DEPARTMENT OF
Ophthalmology

ARVO 2016

Abstracts and Presentations

ARVO Imaging in the Eye Conference
April 30

ARVO Annual Meeting
May 1–5

Washington State Convention Center
800 Convention Place, Seattle, WA 98101



Harvard Medical School Department of Ophthalmology

ARVO 2016

Presentations at the ARVO Imaging in the Eye Conference and the ARVO Annual Meeting*

April 30, 2016 (SEPARATE REGISTRATION REQUIRED)

ARVO Imaging in the Eye Conference 1
 ARVO Education Courses 2

MAY 1–5, 2016 (ARVO ANNUAL MEETING)

May 1, 2016 Sunday 3
 May 2, 2016 Monday 7
 May 3, 2016 Tuesday 11
 May 4, 2016 Wednesday 14
 May 5, 2016 Thursday 18

KEY:
SESSION TYPE
Session Time
Session Location
Presentation ID or Time
Abstract Title
Authors

*This collection of presentations was extracted from the complete conference programs.
 Any errors or omissions are inadvertent.

Saturday, April 30, 2016
8:00 AM - 5:30 PM

SESSION TYPE

Session Time

Session Location

Presentation ID or Time

Abstract Title

Authors

POSTER SESSIONS

10:00 AM – 10:30 AM

TCC Tahoma 1/2

P06

The Use of Ultrasound Biomicroscopy in the Evaluation and Management of Ocular Trauma

I. Giese*; K. E. Talcott

P13

A standardized automated method for color balance and contrast of AMD color fundus photographs

I. Lains*; E. Tsikata; J. Gil; M. Marques; J. B. Miller; M. Cachulo; J. Murta; R. Silva; J. Miller; T. C. Chen; D. Husain

P18

An Automated Method to Determine Bruch's Membrane Opening-Minimum Rim from Enhanced Depth Imaging OCT

Z. Choo*; T. Li; D. Li; E. V. Taniguchi; H. Wang; T. Elze; S. Brauner; S. H. Greenstein; A. V. Turalba; L. R. Pasquale; L. Q. Shen

P60

Choroidal thickness in diabetic retinopathy assessed with swept-source optical coherence tomography

K. E. Talcott*; I. Lains; A. Santos; J. H. Marques; P. Gil; D. Husain; I. Kim; J. Miller; R. Silva; J. B. Miller

P62

Change in disorganization of the retinal inner layers (DRIL) is associated with change in current and future color contrast sensitivity (CCS) and electrophysiology in eyes with central-involved diabetic macular edema (ciDME)

M. Lin*; T. Peiris; O. Comyn; L. Nicholson; C. Paraz; C. Pitoc; P. Silva; P. Hykin; S. Sivaprasad; L. P. Aiello; J. Sun

P65

Quantitative Mapping of Geographic Atrophy in Age-Related Macular Degeneration

M. M. Sachdeva*; P. L. Mellen; I. Lains; D. L. Richmond; J. B. Miller; D. Husain; D. M. Wu

P84

Quantifying Positional Variation of Retinal Blood Vessels in Glaucoma

M. Wang*; Q. Jin; H. Wang; L. R. Pasquale; N. Baniyadi; L. Q. Shen; P. Bex; H. Ishikawa; J. Schuman; G. Wollstein; T. Elze

P85

The effect of optic nerve head torsion and position of retinal blood vessels on optical coherence tomography (OCT) retinal nerve fiber layer (RNFL) abnormality patterns in myopic glaucoma patients

N. Baniyadi*; Q. Jin; H. Wang; M. Wang; L. Q. Shen; L. R. Pasquale; P. Bex; H. Ishikawa; J. Schuman; G. Wollstein; T. Elze

PAPER SESSIONS

10:30 AM – 12:00 PM and 3:30 PM – 5:00 PM

TCC Tahoma 3/4

11:15 AM 11:30 AM

Murine Adaptive Optics Imaging

J. D. Akula*; R. D. Ferguson; M. Mujat; G. Maguluri

4:30 PM 4:45 PM

Computational Fluid Dynamics Modeling and Cell Aggregate Visualization of Blood Velocity in Parafoveal Capillaries Using Adaptive Optics Scanning Laser Ophthalmoscopy (AOSLO)

Y. Lu*; M. Bernabeu; C. C. Cai; J. Lammer; L. P. Aiello; J. Sun

ARVO EDUCATION COURSES
(SEPARATE REGISTRATION REQUIRED)

Saturday, April 30, 2016

8:30 AM - 4:30 PM

SESSION TYPE

Session Time

Session Location

Presentation ID or Time

Abstract Title

Authors

Diabetic retinopathy: Current concepts and future directions
8:30 AM – 4:30 PM
Room 6E

3:10 PM – 3:35 PM

Anti-VEGF therapy for Nonproliferative and Proliferative Diabetic Retinopathy

J. K. Sun*

Applying visual electrophysiology for clinical evaluation and vision research

8:30 AM – 4:30 PM

Room 611-614

11:15 AM – 11:45 AM

Clinical electrophysiology -- pediatrics

A. B. Fulton*

Epigenetic and miRNA regulation in normal and diseased retina
1:00 PM – 4:30 PM
Room 615/617

Organizer

Neena Haider

Moderator

Neena Haider

1:10 PM – 1:30 PM

Epigenetic regulation of retinal cell fate determination and homeostasis

D. F. Chen*

3:50 PM – 4:10 PM

miRNA-Epigenetics in Retina Development and Disease

N. B. Haider*

KEY:

SESSION TYPE

Session Time

Session Location

Presentation ID or Time

Abstract Title

Authors

SYMPOSIUM

8:30 AM – 10:30 AM
Room 6E

Moderator

Eric Pierce

9:30 AM – 9:50 AM

Alternative packaging and in vivo mutation correction

E. A. Pierce*

POSTER SESSION

8:30 AM – 10:15 AM
Exhibit/Poster Hall

38 - A0029

Structural changes associated with delayed dark adaptation in age-related macular degeneration

I. Lains*; S. Rahmani; J. B. Miller; S. Davoudi; E. Tsikata; T. C. Chen; I. K. Kim; J. W. Miller; D. Husain

59 - A0050

New benchtop multimodal adaptive optics small animal imager (MAOSI)

R. D. Ferguson*; A. Patel; G. Maguluri; M. Mujat; N. V. Iftimia; J. D. Akula

70 - A0061

Pitfalls of Voronoi Tessellation (VT) in Evaluating Cone Packing

J. D. Akula*; R. J. Munro; T. L. Favazza; E. A. Swanson; A. Moskowitz; R. M. Hansen; A. B. Fulton

134 - A0329

A Biomarker for Disease Course in Patients with Autosomal Dominant Retinitis Pigmentosa due to RHO Mutations

S. Rahmani*; J. Comander; C. W. DiFranco; B. Rosner; M. A. Sandberg

148 - A0343

Quantifying Fundus Autofluorescence Rings in Patients with Retinitis Pigmentosa

K. Schürch*; S. H. Tsang; W. Lee; K. Boudreault; T. Duncker; R. L. Woods; F. C. Delori; J. R. Sparrow

254 - B0260

Feedback Regulation of IRE1 During Unfolded Protein Response in RPE

S. P. Jacobo*; M. J. Gerhardt; A. Khadka; D. Diaz-Aguilar; M. Saint-Geniez

POSTER SESSION

8:30 AM – 10:15 AM
Exhibit/Poster Hall

280 - B0313

Analysis of choroidal effusion fluid using Light's criteria in acute systemic lupus erythematosus (SLE)

J. A. Stefater*; D. Elliott; L. A. Kim

305 - C0119

Reducing nasal and ocular itching with a novel drug in the BioCube® allergy chamber

P. J. Gomes*; J. Villafranca; E. Viirre; E. Lasser; M. B. Abelson

312 - C0126

Superior efficacy of Lastacaft® versus Pataday in grass- and tree-allergic subjects

S. L. Ackerman*; J. B. Ciolino; J. M. Williams; D. A. Hollander

337 - C0151

Interleukine-23, but Not Interleukine-2, Promotes the Generation of Memory Th17 Cells in Dry Eye Disease

Y. Chen*; S. Chauhan; A. Marmalidou; R. Dana

345 - C0159

Adenovirus-induced MUC16 Ectodomain Release Correlates with Decreased Barrier Function and Increased Adenoviral Infection of Corneal Epithelial Cells

B. B. Menon*; X. Zhou; S. Spurr-Michaud; J. Rajaiya; J. Chodosh; I. K. Gipson

413 - D0122

Substance P suppresses Foxp3 expression in regulatory T cells in dry eye disease

A. Marmalidou*; A. Mashaghi-Tabari; T. Inomata; Y. Chen; S. Chauhan; R. Dana

425 - D0134

Galectin-1 ameliorates dry eye disease

P. Kataguirri*; W. Chen; Z. Cao; V. Sendra; P. Hamrah; D. Zoukhri; K. Kenyon; M. Fini; S. Jeong; N. A. Panjwani

WORKSHOP: NEI Audacious Goals Initiative Town Hall

10:40 AM – 11:50 AM
Room 606/607

Regenerative medicine for photoreceptor and retinal ganglion cell disorders

Joan W. Miller, Mass. Eye & Ear - Panelist

Lois Smith, Boston Children's Hospital, Harvard - Panelist

Sunday, May 1, 2016

EVER/ARVO WORKSHOP: Current status of ocular gene therapy for RPE65-related retinal disease
1:30 PM – 3:00 PM
Room 611/612

1:30 PM – 1:48 PM

Viral Vectors for Ocular Gene Therapy

L. H. Vandenberghe*

WORKSHOP: Chinese Ophthalmological Society Workshop: Infection and Immunity
1:30 PM – 3:00 PM
Room Tahoma 1/2, TCC

Discussion

Jim Chodosh, Massachusetts Eye and Ear, Boston, MA

POSTER SESSION
1:30 PM – 3:15 PM
Exhibit/Poster Hall

433 - A0070

OCT-based whole eye biometry system

M. Mujat*; A. Patel; G. Maguluri; N. V. Iftimia; J. D. Akula; A. B. Fulton; R. D. Ferguson

503 - A0140

Phage immunoprecipitation sequencing of autoantigens in autoimmune retinopathy

L. Sobrin*; S. Davoudi; I. Leskov; E. Papavasileiou

504 - A0141

Long-term Complete Remission of Ocular Cicatricial Pemphigoid off Immunomodulatory Therapy

C. You*; L. Ma; S. D. Anesi; C. Foster

630 - B0129

Impact of Natural Blind Spot Location on Perimetry

M. Wang*; L. R. Pasquale; L. Q. Shen; M. V. Boland; S. Wellik; C. De Moraes; J. S. Myers; P. Bex; T. Elze

632 - B0131

Home-Based Self-Assessment of the Contrast Sensitivity Function in Age-Related Macular Degeneration

P. Bex*; M. Dorr; K. Lashkari; L. A. Lesmes; Z. Lu; E. K. Wiecek

645 - B0144

G9a and Ezh2 are important for RGC cell fate determination during development

L. Wong*; Z. Jiang

650 - B0149

NOD2 genetic variants and sarcoidosis-associated uveitis

C. Ung*; S. Davoudi; D. Navarro-Gomez; L. Shen; A. Ren; M. Kwong; M. Janessian; X. Gai; A. Lobo; L. Sobrin; G. Papaliadis

POSTER SESSION
1:30 PM – 3:15 PM
Exhibit/Poster Hall

689 - B0188

Lacrimal tubes in external dacryocystorhinostomy: a method for placement and removal and the incidence of prolapse

S. R. Grob*; M. Yoon

691 - B0190

Clinical presentation and bacteriology of eyebrow infections: the Massachusetts Eye and Ear experience (2008-2015)

A. Carniciu*; I. Leskov; J. Chou; S. K. Freitag

734 - B0346

Detection of Alzheimer's Disease-Linked Changes in the Ocular Lens by Quasi-Elastic Light Scattering Ophthalmoscopy in Young Subjects with Down Syndrome

L. E. Goldstein*; O. Minaeva; S. Sarangi; D. Ledoux; J. A. Moncaster; C. A. Rook; J. I. Clark; D. G. Hunter

735 - B0347

In Vivo Assessment of Molecular Aging by Quasi-Elastic Light Scattering in the Human Lens

O. Minaeva*; S. Sarangi; D. M. Ledoux; J. A. Moncaster; C. A. Rook; M. Ericsson; Y. Tripodis; J. I. Clark; R. E. Tanzi; D. G. Hunter; L. E. Goldstein

750 - B0383

IGFBPL1 regulates axon growth through IGF-binding domain

Y. Li*; K. Cho; C. Guo; T. P. Utheim; D. F. Chen

757 - C0046

Effective delivery of recombinant protein into retinal cells by cationic lipid

Q. Liu*; H. Rees; M. Sousa; M. Leon; J. Zuris; D. Liu; E. A. Pierce

771 - C0060

Characterization of the limitations to gene transfer and associated inflammation following intravitreal AAV injection in nonhuman primates

J. Comander*; L. S. Carvalho; R. Xiao; A. Langsdorf; S. Wassmer; B. Hafler; D. M. Wu; D. Elliott; L. A. Kim; L. H. Vandenberghe

780 - C0069

In Silico reconstructed ancestral adeno-associated viruses transduce mouse anterior segment

R. Xiao*; L. Wang; L. S. Carvalho; S. Wassmer; L. H. Vandenberghe

792 - C0081

Cacna2d1: a novel therapeutic target for lowering IOP

S. R. Chintalapudi*; D. Maria; X. Wang; J. L. Wiggs; R. W. Williams; M. M. Jablonski

799 - C0088

Mutations in a new gene cause glaucoma with variable onset

S. W. Tompson*; T. Souma; O. M. Siggs; S. Maurer-Stroh; K. N. Whisenhunt; J. L. Wiggs; F. Pasutto; J. E. Craig; S. E. Quaggin; T. L. Young

POSTER SESSION
1:30 PM – 3:15 PM
Exhibit/Poster Hall

800 - C0089

Loss of function variants in a new gene increase risk for primary congenital glaucoma with variable expressivity

T. L. Young*; S. W. Tompson; B. R. Thomson; O. M. Siggs; V. Limviphuvadh; K. N. Whisenhunt; J. L. Wiggs; J. E. Craig; S. E. Quaggin; F. Pasutto

809 - C0098

Mice homozygous for a deletion in the glaucoma susceptibility locus INK4 show increased vulnerability of retinal ganglion cells to elevated intraocular pressure

S. Gao*; T. C. Jakobs

815 - C0104

Testosterone pathway polymorphisms in relation to primary open angle glaucoma: an analysis stratified by sex

L. R. Pasquale*; J. Cooke Bailey; J. H. Kang; H. Aschard; M. A. Hauser; R. Allingham; D. A. Sullivan; J. L. Haines; J. L. Wiggs

816 - C0105

Genetic Association and Linkage at Putative Risk Loci for Primary Open-angle Glaucoma

R. P. Igo*; J. Cooke Bailey; W. Scott; R. J. Sardell; M. A. Pericak-Vance; L. R. Pasquale; M. A. Hauser; T. Gaasterland; J. L. Wiggs; J. Haines

817 - C0106

Genome-Wide Pathway Approach to Dissecting Primary Open-Angle Glaucoma

J. Cooke Bailey*; M. Butkiewicz; L. R. Pasquale; J. H. Kang; M. A. Hauser; R. R. Allingham; J. L. Wiggs; J. L. Haines

847 - D0065

Inter-eye Asymmetry in Retinal Nerve Fiber Layer Thinning for Subtypes of Open Angle Glaucoma

N. Baniasadi*; M. Haghzadeh; T. Elze; M. Mahd; T. C. Chen

940 - D0302

Effectiveness of ophthalmic surgical simulation training vs. paper based manual training on physiologic tremor and speed in dominant and non-dominant hands

Y. J. Kim*; A. R. Payal; L. A. Gonzalez; M. K. Daly

MINISYMPOSIUM: Basic and clinical research in chronic ocular graft-versus-host disease
3:15 PM–5:00 PM
Room 606/607

Moderator

Reza Dana, Mass. Eye & Ear Infirmary / Harvard Medical School

Organizer

Ula Jurkunas, Mass. Eye & Ear Infirmary / Harvard Medical School

3:16 PM – 3:31 PM

Overview of Ocular GVHD as Area of Significant Unmet Medical Need

R. Dana*

POSTER SESSION
3:15 PM – 5:00 PM
Exhibit/Poster Hall

1034 - A0205

Surgical outcomes of small gauge pars plana vitrectomy for repair of primary rhegmatogenous retinal detachment performed by vitreoretinal fellows under attending supervision

J. Wang*; R. Joshi; A. Lane; D. Vavvas

1048 - A0219

Characteristics and Outcomes of Simultaneous Bilateral Rhegmatogenous Retinal Detachments

A. Patel*; D. Elliott; L. A. Kim; D. G. Vavvas; J. B. Miller

1116 - B0288

Generation and characterization of CLG561: a fully-human, anti-properdin Fab for the treatment of age-related macular degeneration

L. Johnson*; I. Splawski; L. Baker; A. Carrion; A. Nguyen; M. Twarog; Y. Wang; U. Jager; M. Keating; T. P. Dryja; M. Roguska

1186 - C0036

Overexpression of Nrf2 in the eye protects retinal pigment epithelial cells of Rd1 mice

D. M. Wu*; X. Ji; W. Xiong; C. L. Cepko

1246 - D0194

Characterization of forward scatter from the optical stem of the Boston Keratoprosthesis

M. Moarefi*; M. Abdelaziz; C. H. Dohlman; R. R. Sayegh

1257 - D0205

Transient and Selective Ingrowth of Lymphatic Vessels into the Cornea after Incision Injury

D. Hos*; J. Horstmann; S. E. Siebelmann; F. Bucher; P. Steven; F. Bock; R. Dana; C. Cursiefen

1267 - D0215

Fibroblast-epithelial cell interactions upregulate the expression of galectin-3 in cornea

P. Argueso*; A. Cruzat; J. Mauris

1271 - D0219

Evaluation of a therapeutic anti-TNF- α drug delivery system for ocular alkali burns

C. Zhou*; M. Robert; F. Lei; V. Kapoulea; J. Chodosh; C. H. Dohlman; E. I. Paschalis

SPECIAL SESSION: Outbreaks: The global ophthalmic threat of Ebola, Zika and other viruses
5:15 PM – 7:00 PM
Room 6E

Organizer

James Chodosh

Moderators

James Chodosh, Mass Eye & Ear Infirmary/HMS; Steven Yeh, Emory Eye Center

Todd Margolis, MD, FARVO “ Ecologic Changes and Human Confrontation with Emerging Infectious Diseases

Lee Merrill Jampol, MD, Northwestern University Feinberg School of Medicine - Ophthalmic Disease Spectrum in West Nile, Zika and Others
Steven Yeh, MD, Emory Eye Center - Ebola and the Eye: Challenges, Discovery and the Work Ahead

Ian Crozier, MD, World Health Organization -Systemic and Ocular Sequelae in Ebola Virus Disease Survivors: Individual, Scientific, and Public Health Perspectives

Paul Farmer, MD, Partners in Health, Harvard University Global Health Perspective on Subspecialty Care Delivery in Outbreak Settings: Beyond Ebola and Zika

KEY:

SESSION TYPE

Session Time

Session Location

Presentation ID or Time

Abstract Title

Authors

PAPER SESSION: Diabetic Retinopathy

8:30 AM – 10:15 AM

Room 6C

9:15 AM – 9:30 AM

Changes in Disorganization of Retinal Inner Layers (DRIL) Predict Retinal Sensitivity in Eyes with Diabetic Macular Edema

T. Peiris*; O. Comyn; L. Nicholson; A. Delacruz; M. Ledesma; P. Hykin; S. Sivaprasad; P. S. Silva; L. Aiello; J. K. Sun

PAPER SESSION: Genetic defects of retinopathy

8:30 AM – 10:15 AM

Room Tahoma 4, TCC

9:30 AM – 9:45 AM

Copy number variation - missing inheritance in retinal disorder

K. M. Bujakowska*; R. Fernandez-Godino; E. Place; M. Consugar; D. Navarro-Gomez; J. White; H. Xie; X. Gai; B. P. Leroy; E. A. Pierce

PAPER SESSION: Corneal stroma, treatment and disease

8:30 AM – 10:15 AM

Room 606/607

9:45 AM – 10:00 AM

Potential Approach to Prevent Corneal Fibrosis

X. Q. Guo*; S. Sriram; J. A. Tran; A. E. Hutcheon; J. D. Zieske

POSTER SESSION

8:30 AM – 10:15 AM

Exhibit/Poster Hall

1430 - A0064

Plasmacytoid Dendritic Cells Maintain Corneal Heme-Angiogenic Privilege Through Secretion of Anti-Angiogenic Molecules

A. Jamali*; M. J. Lopez; V. Sendra; D. L. Harris; P. Hamrah

1432 - A0066

In Vivo Confocal Microscopy Demonstrates Increased Immune Cell Densities in the Endothelial and Subbasal Layers During Corneal Graft Rejection that Correlate with Clinical Signs and Symptoms of Rejection

A. Abbouda*; C. Chirapapaisan; A. Jamali; R. Muller; B. Cavalcanti; C. Colon; D. Witkin; R. Dana; A. Cruzat; P. Hamrah

1434 - A0068

Mesenchymal stem cells modulate the differentiation of myeloid progenitor cells in corneal inflammation

A. Amouzegar*; S. Mittal; S. Chauhan

POSTER SESSION

8:30 AM – 10:15 AM

Exhibit/Poster Hall

1438 - A0072

Is Dry Eye Disease in Donors a Risk Factor for Corneal Graft Rejection?

T. Inomata*; J. Hua; T. Shiang; H. Chiang; R. Dana

1439 - A0073

Corneal Transplant Survival in Young Mice

T. Nakao*; T. Inomata; M. Tahvildari; R. Dana

1445 - A0079

Sympathetic Corneal Nerves Mediate Contralateral Immune Responses in Unilateral Inflammation

P. Hamrah*; X. Huang; M. J. Lopez

1448 - A0082

The management and outcomes of Granulomatosis with Polyangiitis associated peripheral ulcerative keratitis: a report of a novel therapy.

K. Abusamra*; N. Ebrahimiadib; C. Foster

1506 - A0300

Useful field of vision for peripheral detection of motorcycles at intersections

L. P. Spano*; F. Zahir; A. R. Bowers

1509 - A0303

Use of a smartphone app for heterophoria measurement

S. Pundlik*; M. Tomasi; K. Houston; G. Luo

1529 - A0354

Binocular vision deficits post-concussion in the adolescent population: a retrospective review

J. Kanji*; S. Gowrisankaran; A. Shah; A. Raghuram

1574 - B0058

The Incidence of Ocular Adverse Bleeding Events in Patients Utilizing Novel Oral Anticoagulant and Antiplatelet Therapy in Routine Clinical Practice

D. M. Sudarshana*; E. Konstantinou; S. Arepalli; A. Schachat; J. P. Ehlers; R. P. Singh

1645 - C0101

Comparison of Retinal Image Sharpness and Visible Retinal Area Between Two Ultrawide Field (UWF) Cameras

A. Gupta*; H. El-Rami; R. Barham; A. Fleming; J. Van Hemert; J. K. Sun; P. S. Silva; L. P. Aiello

POSTER SESSION
8:30 AM – 10:15 AM
Exhibit/Poster Hall

1651 - C0107
Diabetic Retinopathy (DR) Severity and Prevalence of Predominantly Peripheral Lesions (PPL) Identified using Nonmydriatic Ultrawide Field (UWF) Retinal Imaging in the National Indian Health Service Teleophthalmology Program
P. S. Silva*; M. B. Horton; D. Clary; J. K. Sun; J. D. Cavallerano; L. Aiello

1657 - C0113
A Portable, Inexpensive, Non-Mydriatic Fundus Camera Based on the Raspberry Pi® Computer
B. Shen*; S. Mukai

1660 - C0116
Correlation of Hemorrhages and/or Microaneurysms (H/Ma) Severity and Counts Between Ultrawide Field (UWF) Retinal Imaging and Standard ETDRS Color Stereoscopic Retinal Photography (ETDRS Photos)
H. El Rami*; R. Barham; A. Gupta; A. Fleming; J. Van Hemert; J. K. Sun; P. S. Silva; L. Aiello

1662 - C0118
AO-SLO imaging of diseased retina using offset and confocal apertures
T. L. Favazza*; E. A. Swanson; L. Ambrosio; G. Soni; R. M. Hansen; J. D. Akula; A. B. Fulton

1673 - D0034
Magnetic Resonance Angiography of the Choroid in Patients with Age-Related Macular Degeneration
G. Yu*; W. Dai; L. O'Loughlin; L. Zhao; E. Levitt; A. Bassiri; S. Wagley; K. V. Marra; D. Alsop; J. G. Arroyo

1685 - D0046
Open-Source, Ultra-Low-Cost Smartphone Attachment for Non-Mydriatic Fundus Photography - Open Indirect Ophthalmoscope
D. Jain*; T. Swedish; B. Shen; D. Y. Kim; S. Mukai; R. Raskar

1770 - D0166
Dissection of the mechanisms restricting specific progenitor cells to the production of cones and horizontal cells
N. Lonfat*; C. L. Cepko

1775 - D0171
A novel quantitative tool for the analysis of vascular phenotypes via fluorescein angiograms quantifies reduced arterial-venous vessel patterning
A. A. Bigger-Allen*; J. Arboleda-Velasquez; P. A. D'Amore

PAPER SESSION: Vitreomacular Interface Disorders
11:00 AM – 12:45 PM
Room 6C

11:00 AM – 11:15 AM
Macula Society Collaborative Retrospective Study of Ocriplasmin for Vitreomacular Traction
J. I. Lim*; A. R. Glassman; L. P. Aiello; U. Chakravarthy; C. J. Flaxel; L. J. Singerman; R. F. Spaide

PAPER SESSION: Gene editing and gene therapy
11:00 AM—12:45 PM
Room Tahoma 1/2, TCC

11:15 AM—11:30 AM
Antisense oligonucleotide delivery is an effective therapeutic approach for CEP290-associated LCA
A. Garanto*; D. C. Chung; L. Duijkers; J. Corral Serrano; M. Messchaert; R. Xiao; J. Bennett; L. H. Vandenberghe; R. Collin

PAPER SESSION: Corneal Immunology and Infections
11:00 AM—12:45 PM
Room Skagit 4/5, TCC

12:15 PM—12:30 PM
Differential Alterations in Dendritic Cell Density and Morphology in Patients with Central and Peripheral Scars from Herpes Simplex Keratitis: A Longitudinal In Vivo Confocal Microscopy Study
H. Moein*; R. Müller; D. Pavan-Langston; B. Cavalcanti; C. Colon; D. Witkin; A. Jamali; A. Cruzat; P. Hamrah

POSTER SESSION
11:00 AM—12:45 PM
Exhibit/Poster Hall

1862 - A0026
Long-term Outcomes of Rituximab therapy in patients with non-infectious posterior uveitis refractory to conventional immunosuppressive therapy
L. Ma*; A. Lasave; C. You; K. Abusamra; C. Foster ; N. Lamba; M. Navarro

1892 - A0056
Efficacy and Clinical outcomes of intravenous immunoglobulin therapy in refractory uveitis
H. F. Sahawneh*; C. Foster

1928 - A0203
Corneal In Vivo Confocal Microscopy in Ocular Graft versus Host Disease
K. Suri*; A. Kheirkhah; Y. Qazi; M. A. Arnoldner; P. Hamrah; R. Dana

1961 - A0267
Gaze and pedestrian eccentricity explains differences in detection of stationary and approaching pedestrians by drivers with hemianopia
C. F. Alberti*; R. Goldstein; A. R. Bowers

POSTER SESSION
11:00 AM—12:45 PM
Exhibit/Poster Hall

1981 - A0287
Using Rasch analysis with measures of visual ability of people with ultra-low vision
R. Palumbo*; L. N. Ayton; A. Nau; R. L. Woods

2006 - B0086
Visual outcomes and vision-related quality of life in veterans with systemic comorbidities: Results from the Veterans Affairs Ophthalmic Surgery Outcomes Data Project
L. A. Gonzalez*; A. R. Payal; A. Turalba; T. Cakiner-Egilmez; A. Chomsky; D. Vollman; E. Baze; M. G. Lawrence; M. K. Daly

2007 - B0087
Visual outcomes and vision-related quality of life in veterans with dementia or cognitive impairment: Results from the Veterans Affairs Ophthalmic Surgery Outcomes Data Project
A. R. Payal*; T. Cakiner-Egilmez; L. A. Gonzalez; A. Chomsky; D. E. Vollman; E. Baze; M. G. Lawrence; M. K. Daly

2008 - B0088
Visual outcomes and vision-related quality of life in veterans with hearing impairment: Results from the Veterans Affairs Ophthalmic Surgery Outcomes Data Project
T. Cakiner-Egilmez*; A. R. Payal; L. A. Gonzalez; A. Chomsky; D. E. Vollman; E. Baze; M. G. Lawrence; M. K. Daly

2061 - B0266
Acquired Vitelliform Lesions in Age-Related Macular Degeneration
C. Saade*; P. B. Greenberg

2136 - C0043
Multicenter Evaluation of Pediatric Choroidal Neovascular Membrane: Clinical characteristics and treatment outcomes
B. Anderson*; T. R. Padhi; A. Abbey; Y. Yonekawa; K. A. Drenser; A. Capone, Jr.; M. T. Trese; C. G. Besirli

2248 - D0213
NMDA-induced Retinal Excitotoxicity Triggers Inflammation and Inflammasome Activation in Mice.
P. Tsoka*; K. Kataoka; J. W. Miller; D. G. Vavvas

2255 - D0245
Mouse models of NMNAT1-Leber congenital amaurosis recapitulate key features of the human disease
S. H. Greenwald*; J. R. Charette; M. Staniszevska; L. Shi; S. Brown; L. Stone; W. Hicks; M. R. Bowl; M. P. Krebs; P. M. Nishina; E. A. Pierce

CROSS-SECTIONAL GROUP SESSION: NT Group - Large vs Small Animal Models for Eye Research: Matching Models with Translational Research Needs
1:00 PM—2:30 PM
Room 615/617

1:15 PM—1:30 PM
Photoreceptor replacement in the porcine retina
M. J. Young*

SPECIAL INTEREST GROUP (SIG): The role of quality assurance in improving outcomes for ocular telemedicine programs for diabetic retinopathy - SIG
1:00 PM—2:30 PM
Room 618/620

1:00 PM—2:30 PM
The role of quality assurance in improving outcomes for ocular telemedicine programs for diabetic retinopathy
I. E. Zimmer-Galler*; P. S. Silva*; M. B. Horton*; Y. Chu*

WORKSHOP: Clinician-Scientist Forum: How to Become a Successful Clinician-Scientist
1:00 PM—2:30 PM
Room 608

1:34 PM—1:42 PM
Lessons learned in the career path of a clinician-scientist
U. V. Jurkunas*

PAPER SESSION: Tele glaucoma
3:45 PM—5:30 PM
Room 6A

4:30 PM—4:45 PM
Comparison of iPad-Based Visual Function Tests for the Detection of Early Manifest Glaucoma
M. Kim*; A. Ren; P. Bex; M. Gardiner; C. Kloek; P. Chang; L. Shen; A. Turalba; L. R. Pasquale; B. J. Song

PAPER SESSION: Corneal Surgery; non-refractive
3:45 PM—5:30 PM
Room Tahoma 5, TCC

4:00 PM—4:15 PM
Ultraviolet A/Riboflavin Collagen Cross-linking for Conjunctiva
A. Kheirkhah*; V. K. Raju; P. Hamrah; R. Dana

PAPER SESSION: Ocular transcriptomics
3:45 PM—5:30 PM
Room Tahoma 4, TCC

4:45 PM—5:00 PM
Identifying Signature Profiles of Transcription Factors in Human and Mouse Models of Retinal Disease
A. Olivares*; J. Veira; K. Flattery; M. Morrisson; M. M. DeAngelis; N. B. Haider

PAPER SESSION: Diabetic Macular Edema Treatment
3:45 PM—5:30 PM
Room Tahoma 3, TCC

5:00 PM—5:15 PM

Intravitreal Plasma Kallikrein (PK) Inhibition for Diabetic Macular Edema: A Phase 1 Study of the Novel PK Inhibitor KVD001

J. K. Sun*; R. K. Maturi; D. S. Boyer; J. A. Wells; V. H. Gonzalez; R. Tansley; H. Hernandez; L. P. Aiello

POSTER SESSION
3:45 PM—5:30 PM
Exhibit/Poster Hall

2335 - A0002

Differential trafficking of adenovirus in corneal epithelial cells and fibroblasts

J. Rajaiya*; J. Lee; A. M. Ismail; J. Lee; J. Chodosh

2336 - A0003

Differential cytokine expression by ocular surface cells infected with adenovirus

J. Chodosh*; X. Zhou; E. Materne; A. M. Ismail; J. Rajaiya

2355 - A0084

Identifying the role of PDGFR- α in the fibrotic pathway of TGF- β

S. Sriram*; J. A. Tran; X. Q. Guo; H. Lei; A. Kazlauskas; J. D. Zieske

2357 - A0086

p38/TGF β ²-signaling pathway involved in induction of thrombospondin-1 in human corneal fibroblasts

A. E. Hutcheon*; A. E. Hutcheon; X. Q. Guo; S. Sriram; J. A. Tran; J. D. Zieske

2358 - A0087

Comparison of human corneal fibroblasts cultured in human or fetal bovine serum in an in vitro 3D model

W. Wu*; S. Priyadarsini; J. D. Zieske; D. Karamichos

2421 - A0236

Volumetric analysis of metastatic scirrhous breast cancer of the orbit

N. Homer*; F. Jakobiec; A. Stagner; M. K. Yoon

2437 - A0322

Sedated suture adjustment in children undergoing adjustable-suture strabismus surgery

W. Phanphruk*; M. Alkharashi; A. Bilge; D. G. Hunter

2461 - A0346

Disruptions in abducens nerve development can cause Duane's retraction syndrome

J. Park*; A. Nugent; E. Engle

2522 - B0138

Modified model of elevated intraocular pressure causes progressive retinal ganglion cell degeneration in mice

R. Mukai*; E. Hasegawa; Y. Okunuki; G. Klokman; C. Kim; S. Inafuku; D. Husain; K. M. Connor

POSTER SESSION
3:45 PM—5:30 PM
Exhibit/Poster Hall

2552 - B0168

Association between self-reported bupropion use and glaucoma: A population-based study

M. Masis*; C. Kakigi; L. R. Pasquale; K. Singh; S. C. Lin

2629 - B0360

AMD-associated SNPs in the ARMS2/HTRA1 locus influence local gene expression in multiple human tissues

S. Liao*; c. lewis; O. Delgado; M. Crowley; N. Buchanan; W. Zheng; T. P. Dryja; B. D. Jaffe

2637 - B0368

Using protein-protein interaction analysis to understand genetics of heritable ocular disease

E. Rossin*; K. Lage; L. Sobrin; T. Li; M. Daly; H. Horn

2658 - C0009

Factors influencing patient reported visual function in patients with bilateral age-related macular degeneration

M. Roh*; A. Selivanova; J. W. Miller; M. Jackson

2672 - C0023

A first in human study of Intravitreal (IVT) CLG561 in Subjects with Advanced Age-Related Macular Degeneration (AMD)

L. C. Glazer*; J. G. Williams; C. M. Gordon; P. U. Dugel; M. Milton; T. Valencia; U. Klein; S. Kretz; K. Gedif; C. L. Grosskreutz; P. Zamiri

2678 - C0129

Exacerbation of Macular Edema Associated with Hyperbaric Oxygen Therapy

S. M. Hypes*; A. Abbey; Y. Yonekawa; J. D. Wolfe

2701 - C0152

Multimodal Imaging Analysis of Cone Photoreceptors Mosaic in Human Juvenile X-linked Retinoschisis

L. Ambrosio*; J. D. Akula; T. L. Favazza; E. A. Swanson; R. J. Munro; M. Swanson; A. Moskowitz; R. M. Hansen; A. B. Fulton

2733 - D0267

Transpalpebral electrical stimulation protects against progressive degeneration of photoreceptors in Rhodopsin knockout mice.

K. Cho*; H. Yu; S. Guo; D. F. Chen

KEY:

SESSION

Session Time

Session Location

Presentation ID or Time

Abstract Title

Authors

MINISYMPOSIUM: Fluids inside and around the eyes in ocular health and pathologies - Minisymposium
8:30 AM—10:15 AM
Room 6A

9:04 AM—9:21 AM

What has genomics taught us about aqueous humor dynamics, cerebral spinal fluid dynamics and ocular perfusion pressure?

L. R. Pasquale*

PAPER SESSION: Glaucoma Neuroprotection

8:30 AM—10:15 AM

Room 6B

8:45 AM—9:00 AM

Soluble Fas ligand provides long-term protection in a chronic mouse model of glaucoma by inhibiting glial activation, inflammation, and apoptosis

M. S. Gregory-Ksander*; F. Fei; A. Marshak-Rothstein; B. Ksander; A. Krishnan

PAPER SESSION: Cornea Endothelium

8:30 AM—10:15 AM

Room 615/617

9:00 AM—9:15 AM

UV-A Irradiation Induced Mouse Model of Fuchs Endothelial Corneal Dystrophy

C. Liu*; T. Miyai; D. Vojnovic; I. E. Kochevar; U. V. Jurkunas

PAPER SESSION: Ocular Surface Neovascularization, Innervation, and Immunology

8:30 AM—10:15 AM

Room 606/607

9:45 AM—10:00 AM

The ocular surface phenotype of Spdef ^{-/-} mice: Accumulation of debris but lack of infection upon challenge with Pseudomonas aeruginosa

I. K. Gipson*; S. Spurr-Michaud; A. Tisdale; B. B. Menon

POSTER SESSION

8:30 AM—10:15 AM

Exhibit/Poster Hall

2859 - A0068

Clinical findings of Dry Eye Disease in a large Norwegian cohort based on osmolarity measurements

S. Reppe*; X. Chen; S. Ræder; T. P. Utheim; Ø. A. Utheim; A. Stojanovic; N. S. Lagali; D. A. Dartt; B. Tashbayev

2873 - A0082

The effect of TRPM8-agonist menthol eyedrops on tear meniscus area and height

P. Corcoran*; E. Angjeli; K. J. Lane; G. W. Ousler; M. Watson; M. B. Abelson

2885 - A0145

Corneal Collagen Crosslinking and Intracorneal Ring Segments: Simultaneous vs Sequential Surgery

R. Issa*; P. S. Hersh; S. Greenstein

2977 - A0326

Alzheimer's disease and primary open angle glaucoma may share nailfold capillary abnormalities

P. A. Knepper*; C. Cousins; K. Carey; I. Bielskus; M. Patel; N. J. Volpe; T. Patrianakos; M. Giovingo; L. R. Pasquale; R. Stern

3015 - A0364

The multiple hit theory of primary open angle glaucoma

M. Giovingo*; K. Green; K. Carey; I. Bielskus; M. Patel; L. R. Pasquale; T. Patrianakos; J. R. Samples; E. Martin; P. A. Knepper

3028 - A0377

The In Vivo Effect of Preservative Benzalkonium Chloride on Corneal Immune Cells and Clinical Signs in Glaucoma Therapy

Y. Qazi*; A. Cruzat; B. M. Cavalcanti; C. Colon; D. Witkin; T. C. Chen; P. Hamrah

3057 - B0012

Knowledge, Attitudes, and Practices of Eye Safety Among Skilled Manual Workers

R. Rao*; M. Gardiner; M. Hymowitz

3199 - B0299

Investigation of VEGF165 induced retinal vascular inflammation in vitro

A. Mackey*; Y. Ng

POSTER SESSION
8:30 AM—10:15 AM
Exhibit/Poster Hall

3344 - D0147
Variation in Ophthalmologist Use of Anti-VEGF Therapy Among Medicare Beneficiaries
R. Thakore*; P. B. Greenberg; D. French; J. J. Behrens

PAPER SESSION: Glaucoma Visual Fields and Visual Function
11:00 AM—12:45 PM
Room 6A

11:00 AM—11:15 AM
The effect of ametropia on glaucomatous visual field loss
T. Elze*; L. Shen; M. Wang; M. V. Boland; S. Wellik; C. De Moraes; J. S. Myers; P. Bex; L. R. Pasquale

PAPER SESSION: Dry Eye; Clinical and Epidemiology
11:00 AM—12:45 PM
Room 606/607

11:00 AM—11:15 AM
Remote Assessment of Dry Eye Symptoms using two Web-Based Questionnaires
F. Amparo*; R. Dana

PAPER SESSION: Corneal Wound Repair and Regenerative Medicine
11:00 AM—12:45 PM
Room Tahoma 3, TCC

11:15 AM—11:30 AM
Mesenchymal stem cells restore corneal transparency via secretion of hepatocyte growth factor
S. Mittal*; A. Amouzegar; M. Omoto; S. Chauhan

POSTER SESSION
11:00 AM—12:45 PM
Exhibit/Poster Hall

3505 - A0108
Novel Characterization of Resident Plasmacytoid Dendritic Cells in the Conjunctiva
A. Gupta*; A. Jamali; M. J. Lopez; V. Sendra; D. L. Harris; H. Moein; Y. Seyed-Razavi; P. Hamrah

3597 - B0037
Multifocal electroretinogram responses in former preterms with and without history of retinopathy of prematurity (ROP).
P. Altschwager*; R. M. Hansen; A. Moskowitz; J. Bush; A. B. Fulton

3599 - B0039
Intravitreal Bevacizumab and Laser Treatment for Type 1 Retinopathy of Prematurity (ROP): Electroretinographic Responses to Full-Field Stimuli
D. Lepore*; E. A. Swanson; L. Orazi; F. Molle; A. Baldascino; J. D. Akula; R. M. Hansen; A. B. Fulton

POSTER SESSION
11:00 AM—12:45 PM
Exhibit/Poster Hall

3630 - B0302
Nuclear receptor ROR α regulates retinal inflammation and neovascularization in retinopathy through SOCS3
C. Liu*; Y. Sun; J. SanGiovanni; L. Evans; K. Tian; A. Stahl; T. Kamenecka; L. Solt; J. Chen

3637 - B0309
Endomucin inhibits VEGF-induced endothelial cell migration, growth, and morphogenesis by suppressing VEGFR2 signaling
P. A. D'Amore*; C. Park-Windhol; Y. Ng; J. Yang; V. Primo; M. Saint-Geniez

3640 - B0312
Dysregulated autophagy contributes to pathological angiogenesis in a mice model of retinal angiomas proliferation. Heckel E, Pundir S, Patel G, Kim JS, Lacombe MJ, Saba N, Fredrick T, Sun Y, Smith LEH, Joyal JS
E. Heckel*; S. Pundir; G. Patel; J. Kim Suang; L. Marie Josee; N. Saba; T. Fredrick; L. E. Smith; J. Joyal

3644 - B0316
Receptor-independent activation of Wnt Signaling protects retinal vasculature and visual function in a mouse model of familial exudative vitreoretinopathy
Z. Wang*; C. Liu; Y. Sun; Y. Gong; J. D. Akula; J. Chen; T. Favazza; N. Saba; T. Fredrick; P. Morss

3698 - D0109
Expression of VEGF-A, VEGF-C, VEGF-D and soluble receptors in Clinical Age-Related Macular Degeneration
G. C. Teague*; J. Ma; W. Johnson; M. E. Baldwin; K. Lashkari

3710 - D0121
Biofluids NMR metabolomics in Age-related macular degeneration
D. Husain*; I. Laines; A. S. Martins; D. Duarte; A. Barros; R. M. Silva; A. Gil; J. W. Miller

3732 - D0193
Acute Synaptic and Neuronal Anatomical Changes Following Insertion of Sub-Retinal Electrode Array in an Enucleated Human Eye
J. Chen*; G. DeWalt; W. Eldred; M. Gingerich; D. Shire; J. F. Rizzo; H. J. Kaplan

SPECIAL INTEREST GROUP (SIG): Integration in stem cell therapy—a challenge and a hope for vision - SIG
1:00 PM—2:30 PM
Room Tahoma 3, TCC

1:00 PM—2:30 PM
Integration in stem cell therapy—a challenge and a hope for vision
Z. Yin*; J. L. Goldberg*; M. J. Young*; J. Stern*; D. M. Gamm*; W. Li*

PAPER SESSION: A wide view on Glaucoma epidemiology
3:45 PM—5:30 PM
Room Tahoma 3, TCC

4:00 PM—4:15 PM
Sex hormone levels and risk of primary open-angle glaucoma in postmenopausal women
J. H. Kang*; J. L. Wiggs; L. R. Pasquale

PAPER SESSION: Microbiology / Immunology / Translational / Innate immunity
3:45 PM—5:30 PM
Room Skagit 4/5, TCC

4:15 PM—4:30 PM
Identifying the mechanism of NF- κ B activation by Toxoplasma gondii's strain II dense granule GRA15 (GRA15 (II))
E. Konstantinou*; N. Yang; J. P. Saeij; L. H. Young

PAPER SESSION: Glaucoma Imaging I
3:45 PM—5:30 PM
Room 6A

4:45 PM—5:00 PM
Swept-Source OCT Optic Nerve Head Structural Features of Primary Open Angle Glaucoma and Disc Hemorrhage
S. Cai*; M. K. Shoji; E. Taniguchi; D. Li; L. A. Pereira; S. C. Brauner; S. H. Greenstein; A. Turalba; L. R. Pasquale; L. Shen

POSTER SESSION
3:45 PM—5:30 PM
Exhibit/Poster Hall

3868 - A0016
Stimulation of Corneal Nociceptors Results in Pro-inflammatory Molecular and Cellular Responses
Y. Seyed-Razavi*; P. Hamrah

4006 - B0184
Effect of a latanoprost-eluting contact lens on IOP in glaucomatous monkeys
J. B. Serle*; J. B. Serle; J. B. Ciolino; A. Ross; R. Tulsan; R. Wang; D. Kohane

4096 - C0170
Genetic Risk Factors for Radiation Vasculopathy
T. D. Papakostas*; A. Lane; C. Awh; M. Morrison; M. M. DeAngelis; E. S. Gragoudas; I. K. Kim

4109 - C0183
Verteporfin inhibits growth of human ocular glioma in vitro without light activation
A. Al Moujahed*; K. Brodowska; T. Strykowski; J. Cichy; E. S. Gragoudas; D. G. Vavvas

4137 - D0017
Association of Vitamin D Levels with Non-infectious Uveitis
L. Grotting*; S. Davoudi; G. Papaliadis; L. Sobrin

POSTER SESSION
3:45 PM—5:30 PM
Exhibit/Poster Hall

4254 - D0289
Ocular Coherence Tomographic Imaging in Patients with Recurrent Full Thickness Macular Holes
E. Levitt*; G. Yu; A. Bassiri; J. G. Arroyo

4256 - D0291
Spectral-Domain Optical Coherence Tomography Findings in Peters' Anomaly infants
J. Hong*; X. Sun; R. Dana; J. Xu

4257 - D0292
A New Quantitative Approach in Analyzing Polypoidal Choroidal Vasculopathy In Vivo Using En Face Optical Coherence Tomography
J. Chou*; E. Chan; J. Simonett; A. A. Fawzi

4269 - D0304
Monitoring X-Linked Retinoschisis (XLRs) by Optical Coherence Tomography (OCT)
E. A. Swanson*; R. J. Munro; L. Ambrosio; T. S. Bowe; A. Moskowitz; R. M. Hansen; J. D. Akula; A. B. Fulton

ARVO ANNUAL MEETING
Wednesday, May 4, 2016

KEY:

SESSION

Session Time

Session Location

Presentation ID or Time

Abstract Title

Authors

PAPER SESSION: Reticular Pseudodrusen, Atrophy and AMD
8:30 AM—10:15 AM
Room 6C

9:00 AM—9:15 AM

Are Systemic Levels of Amyloid β Altered in Patients with Geographic Atrophy?

K. Lashkari*; F. J. Lopez; G. C. Teague; S. Kumar; M. M. McLaughlin

PAPER SESSION: Vision Performance in Everyday Life Activities
8:30 AM—10:15 AM
Room Tahoma 5, TCC

9:00 AM—9:15 AM

The preferred retinal locus used to watch videos

F. M. Costela*; S. Kajtezovic; R. L. Woods

PAPER SESSION: Corneal refractive surgery I
8:30 AM—10:15 AM
Room 606/607

9:30 AM—9:45 AM

Visual Outcomes After Wavefront-Guided and Conventional Ablation Using the Visx Laser for LASIK Retreatment

Z. Syed*; K. A. Garrett; J. Kruh; B. Huntington; S. Robinson; S. Melki

PAPER SESSION: RPE-Photoreceptor Interface
8:30 AM—10:15 AM
Room Tahoma 1/2, TCC

10:00 AM—10:15 AM

ABC5 identifies RPE progenitor cells required for normal retinal development and aging

B. Ksander*; A. Hertszenberg; R. Y. Lewis; B. Wilson; G. Berg; M. H. Frank; N. Y. Frank

POSTER SESSION
8:30 AM—10:15 AM
Exhibit/Poster Hall

4348 - A0151

Purified in vitro-expanded ABC5-positive limbal stem cells possess corneal regenerative capacity.

A. Hertszenberg*; R. Y. Lewis; N. J. Pondelis; C. Ganss; A. Kluth; N. Y. Frank; B. Ksander; M. H. Frank

POSTER SESSION
8:30 AM—10:15 AM
Exhibit/Poster Hall

4404 - A0275

PPAR α is Essential for Retinal Neuronal Survival and Lipid Metabolism
E. P. Moran*; Y. Takahashi; K. Zhou; S. Vadvalkar; M. H. Greg; T. Fredrick; S. Meng; M. T. Kinter; K. M. Humphries; L. E. Smith; J. Ma

4489 - B0099

Retinal Thickness Analysis following Subretinal Tissue Plasminogen Activator for Displacement of Subretinal Hemorrhage

K. Kogachi*; J. D. Wolfe; A. H. Kashani

4492 - B0102

Acute ocular surface injury causes prompt infiltration of circulating monocytes into the retina

F. Lei*; C. Zhou; V. Kapoulea; J. Chodosh; C. H. Dohlman; E. I. Paschalis

4512 - B0122

Treatment of serpiginous choroiditis with chlorambucil; efficacy and outcome

N. Ebrahimiadib*; B. Modjtahedi; C. Foster

4525 - B0276

Adiponectin protects against hyperglycemia-induced retinal abnormalities in retinopathy of prematurity

Z. Fu*; R. Liegl; N. Saba; P. Morss; T. Fredrick; S. Meng; S. Burnim; J. Chen; A. Hellstrom; L. E. Smith

4526 - B0277

Hyperglycemia-induced aggravation of neovascularization is induced by upregulation of the mTOR pathway

R. Liegl*; Z. Fu; Y. Sun; T. Fredrick; P. Morss; N. Saba; S. Meng; S. Burnim; A. Hellstrom; L. E. Smith

4529 - B0280

Fenofibrate Suppresses Retinal Pathologic Neovascularization via Inhibiting Cytochrome P450 Epoxygenase 2C Activity

Y. Gong*; Z. Fu; M. Edin; N. Saba; T. Fredrick; P. Morss; S. Burnim; S. Meng; D. Zeldin; L. E. Smith

4570 - B0356

Normal development of the oculomotor system in mice

S. Michalak*; M. Whitman; A. Nugent; J. Park; L. Cheng; E. Engle

POSTER SESSION
8:30 AM—10:15 AM
Exhibit/Poster Hall

4631 - C0115
High reliability of cone cell measurements with adaptive optics scanning laser ophthalmoscope in a simulated real-life clinical setting
S. Davoudi*; I. Lains; R. Roohipoor; D. Duriye; C. Yasa; E. Papavasileiou; J. Comander; L. Sobrin

PAPER SESSION: Vitreo-retinal Surgery and Lasers
11:00 AM—12:45 PM
Room 6C

11:15 AM—11:30 AM
Smoking is a risk factor for proliferative vitreoretinopathy after traumatic retinal detachment
T. Stryjewski*; M. Andreoli; C. Andreoli; D. Elliott

12:30 PM—12:45 PM
Characterization of Mitochondrial and Metabolic Changes Following Retinal Detachment
D. Diaz-Aguilar*; Z. Li; Y. Okunuki; a. Khadka; S. P. Jacobo; K. M. Connor; M. Saint-Geniez

PAPER SESSION: Corneal Immunology and Contact Lenses
11:00 AM—12:45 PM
Room 606/607

11:45 AM—12:00 PM
Pathological Conversion of Regulatory T Cells Cause Disruption of Immune Privilege
J. Hua*; T. Inomata; W. Stevenson; T. Shiang; Y. Chen; J. Bluestone; R. Dana

12:30 PM—12:45 PM
Prosthetic replacement of the ocular surface ecosystem in pediatric patients with chronic ocular surface disease after Stevens-Johnson syndrome and toxic epidermal necrolysis
H. N. Saeed*; T. D. Papakostas; H. Le; J. Chodosh; D. S. Jacobs

POSTER SESSION
11:00 AM—12:45 PM
Exhibit/Poster Hall

4788 - A0004
Microbiome Characterization in Retina and Choroid of Patients with Age-related Macular Degeneration
W. Zheng*; S. Pin; S. Dhillon; Z. Zwirko; P. Lingala; P. Skewes-Cox; O. Iartchouk; B. D. Jaffee; T. P. Dryja; K. McAllister

4790 - A0006
RNA-Seq profiling of RNA splicing factor RP mouse models identify global changes in splicing
M. H. Farkas*; E. Au; M. Sousa; E. A. Pierce

POSTER SESSION
11:00 AM—12:45 PM
Exhibit/Poster Hall

4814 - A0030
Regulation of disease gene expression in the retina and retinal pigment epithelium by tissue-specific enhancers.
T. J. Cherry*; M. G. Yang; D. Harmin; M. E. Greenberg

4831 - A0047
Phenome-wide association study (PheWAS) using glaucoma-related ocular quantitative traits supports WNT7B association with central corneal thickness

B. Fan*; P. Ferdina Marie Sharmila; N. Soumittra; S. Sripriya; D. S. Friedman; L. Vijaya; J. L. Haines; R. George; J. L. Wiggs

4899 - A0115
Role of epithelial cell-derived exosomes in corneal wound healing
J. A. Tran*; X. Q. Guo; S. Sriram; A. E. Hutcheon; J. D. Zieske

4917 - A0133
Bilateral Corneal Nerve Regeneration in Herpes Simplex Virus Keratitis is influenced by the Location of Corneal Scarring
N. J. Pondelis*; C. Chirapapaisan; R. Muller; A. Abbouda; A. Cruzat; B. Cavalcanti; A. Jamali; D. Pavan-Langston; P. Hamrah

4986 - A0376
A Proof of Concept Study of Intravitreal (IVT) LFG316 In Patients with Neovascular Age Related Macular Degeneration (nAMD)
R. P. Gallemore*; M. J. Elman; M. Milton; P. Zamiri; C. L. Grosskreutz

4987 - B0193
c-fos promotes retinal angiogenesis in a mouse model of neovascular AMD
Y. Sun*; z. Lin; C. Liu; Y. Gong; R. Liegl; T. Fredrick; S. Meng; N. Saba; S. Burnim; J. Chen; L. E. Smith

5024 - B0230
Inactivation of VEGFR2 using CRISPR/Cas9 provides superior inhibition to the anti-VEGF drugs
X. Huang*; G. Ma; Y. Chee; S. Mukai; P. D'Amore; H. Lei

5043 - B0249
Vitreous cytokine profile immediately following phacoemulsification with posterior chamber intraocular lens placement
S. Wagley*; G. Yu; G. C. Teague; K. Lashkari; J. G. Arroyo

5063 - B0293
Inherited optic atrophy gene discovery using whole exome sequencing.
J. S. Borchert*; I. Nakata; D. Navarro-Gomez; M. Janessian; E. Delbono; J. L. Wiggs

5068 - B0298
Laser-induced optic nerve head injury in mice: challenges in establishing photothrombotic models to study optic neuropathies
P. Bouzika*; J. F. Rizzo; J. W. Miller; D. Vavvas; D. M. Cestari

POSTER SESSION
11:00 AM—12:45 PM
Exhibit/Poster Hall

5078 - B0308
Optic nerve magnetic resonance imaging characteristics in inherited optic neuropathies
E. D. Gaier*; K. Boudreault; I. Nakata; D. M. Cestari; J. L. Wiggs; P. Caruso; J. F. Rizzo

5166 - D0132
Does field-expanding-strabismus in hemianopia improve mobility?
P. M. Bronstad*; E. Peli; A. Doherty; R. Liu; A. B. Fulton

5184 - D0150
Characterizing AMD field loss for contact lens simulating scotomas
N. Kumar*; A. D. Hwang; E. Peli

PAPER SESSION: Glaucoma Imaging II
3:45 PM—5:30 PM
Room 6A

4:45 PM—5:00 PM
Optic Nerve Head Characterization in Chronic Angle Closure Glaucoma Detected by Swept-Source OCT
D. Li*; E. Taniguchi; Z. Choo; T. Li; . Shoji;; . Wang;; S. H. Greenstein; S. C. Brauner; A. Turalba; L. R. Pasquale; L. Q. Shen

Minisymposium: Fixational eye movements – Minisymposium
3:45 PM—5:30 PM
Room 618/620

5:05 PM—5:20 PM
Detecting fixation accuracy/stability using retinal birefringence scanning
D. G. Hunter*

PAPER SESSION: Molecular biology of glaucoma
3:45 PM—5:30 PM
Room Tahoma 4, TCC

5:00 PM—5:15 PM
Exome sequencing in 285 Caucasian high pressure POAG cases enriched for family history reveals over-represented variants in 23 genes
T. Gaasterland*; D. E. Gaasterland; R. N. Weinreb; K. Mansouri; R. Allingham; M. A. Hauser; P. Lichter; S. E. Moroi; J. E. Richards; L. R. Pasquale; J. L. Wiggs

5:15 PM—5:30 PM
Association of miR-182 with High Tension Glaucoma
Y. Liu*; J. Cooke Bailey; I. Helwa; W. D. Stamer; R. W. Kuchtey; R. Allingham; M. A. Hauser; L. R. Pasquale; J. L. Haines; J. L. Wiggs

POSTER SESSION
3:45 PM—5:30 PM
Exhibit/Poster Hall

5272 - A0199
Patients with Dry Eye Disease and Low Subbasal Nerve Density are at High Risk for Progressive Corneal Endothelial Cell Loss
V. Satitpitakul*; A. Kheirkhah; P. Hamrah; R. Dana

5285 - A0212
Analysis of the OXPHOS complex in the corneal endothelium suggests impaired mitochondrial respiration in Fuchs Endothelial Corneal Dystrophy
A. Halilovic*; U. V. Jurkunas

5291 - A0218
Increased Mitochondrial Fragmentation Upregulates Mitophagy in Fuchs Endothelial Corneal Dystrophy
A. Benischke*; T. Miyai; C. Liu; U. V. Jurkunas

5310 - A0237
In vitro study of 3D tissue model of innervated corneal epithelium and stroma
S. Wang*; R. Gomes; C. E. Ghezzi; K. Kenyon; J. L. Funderburgh; D. L. Kaplan

5311 - A0238
In vitro study: Corneal stromal stem cells cultured on cornea ECM blended silk films
R. Gomes*; S. Wang; C. E. Ghezzi; W. Stoppel; J. L. Funderburgh; K. Kenyon; D. L. Kaplan

5367 - B0038
The CRISPR/Cas9-created MDM2 T309G contributes to the vitreous-induced cellular responses intrinsic to proliferative vitreoretinopathy
G. Ma*; Y. Duan; X. Huang; P. A. D'Amore; H. Lei

5373 - B0044
The Role of the Complement System in Photoreceptor Cell Death during Retinal Detachment.
K. M. Connor*; H. Sweigard; H. Matsumoto; L. A. Kim; D. G. Vavvas; D. Husain; J. W. Miller

5379 - B0050
The role of microglial expression of microRNA-155 on a murine model of retinal detachment
Y. Okunuki*; E. Hasegawa; R. Mukai; C. Kim; G. Klokman; S. Inafuku; K. M. Connor

5452 - B0192
Evaluation of Vitreous Factor in Proliferative Diabetic Retinopathy
N. Nandakumar*; G. C. Teague; F. J. Lopez; W. Johnson; K. Lashkari

5515 - D0005
Characterizing monocular and binocular contrast sensitivity in corrected and uncorrected myopia.
H. Wang*; L. A. Lesmes; M. Dorr; Z. Lu; T. Elze; P. Bex

POSTER SESSION
3:45 PM—5:30 PM
Exhibit/Poster Hall

5540 - D0045

Sharp injuries in ophthalmology residency: results of a resident quality improvement project

A. Z. Jiwani*; J. Ricca; C. Kloek

5549 - D0054

Patient Satisfaction in Emergency Eye Care: Yelp Reviews as a first look

B. Jastrzembski*

5576 - D0081

Utility of the Postoperative Week 1 Examination and Postoperative Month 1 Dilated Examination after Cataract Surgery: A Pilot Study

D. S. Borkar*; E. Gross; T. A. van Zyl; S. Chen; C. Kloek

5630 - D0213

Temporal-Spatial Expression of RGC Markers as Indicators of RGC Loss in Experimental Glaucoma

J. Ma*; Y. Sun; G. C. Teague; K. Lashkari

5633 - D0216

PHD inhibitors/HIF stabilizers promote RGC survive and neurite outgrowth: new targets for preventing RGC degeneration

L. Cheng*; C. Guo; S. Tang; S. Ding; M. Xiang; D. F. Chen

AWARD LECTURE: Friedenwald Award and Lecture

6:45 PM—7:30 PM

Room 6B

6:45 PM—6:50 PM

Introduction.

Ilene K. Gipson.

KEY:

SESSION

Session Time

Session Location

Presentation ID or Time

Abstract Title

Authors

Symposium: Dysregulation of autophagy and/or mitophagy leads to mitochondrial dysfunction in ocular disorders
8:00 AM—10:00 AM
Room 615/617

POSTER SESSION
8:00 AM—9:45 AM
Exhibit/Poster Hall

Organizer

Ula Jurkunas

9:45 AM—10:00 AM

Mitophagy in Fuchs Endothelial Corneal Dystrophy

U. V. Jurkunas*

POSTER SESSION
8:00 AM—9:45 AM
Exhibit/Poster Hall

5665 - A0011

Treatment Effects in a Norwegian Cohort of Dry Eye Patients with Meibomian Gland Dysfunction Following Treatment According to Guidelines of The International Workshop on Meibomian Gland Dysfunction (2011): Three and Six Months Follow-up

C. Jackson*; B. Tashbayev; S. Ræder; T. P. Utheim; Ø. A. Utheim; A. Stojanovic; N. S. Lagali; D. A. Dartt; X. Chen

5676 - A0022

Morphological Evaluation of Meibomian Glands in Patients with Dry Eye Disease

M. Adil*; J. Xiao; J. Olafsson; T. P. Utheim; S. Ræder; Ø. A. Utheim; N. S. Lagali; D. A. Dartt; X. Chen

5677 - A0023

Subjective and Objective Assessment of Meibography Images

J. Xiao*; M. Adil; J. Olafsson; T. P. Utheim; S. Ræder; Ø. A. Utheim; N. S. Lagali; D. A. Dartt; X. Chen

5680 - A0026

Daily Warm Compress Therapy Augmented with Manual Lid Expressions vs a Single Thermal Pulsation System Treatment for Evaporative Dry Eye Disease Secondary to Meibomian Gland Dysfunction

A. T. McPherson*; R. Wu; P. Oliver; J. A. Pullen; J. V. Greiner

5693 - A0039

Comparison of Treatment Efficacy of Low-dose Topical Steroid in Dry Eye Disease With and Without Ocular Graft-Versus-Host-Disease

J. Yin*; A. Kheirkhah; T. H. Dohlman; U. S. Saboo; P. Hamrah; R. Dana

5701 - A0047

Dry Eye Disease in a Norwegian-Danish Cohort of Congenital Aniridia

E. S. Landsend*; Ø. A. Utheim; H. R. Pedersen; R. C. Baraas; N. S. Lagali; D. A. Dartt; T. P. Utheim

5705 - A0051

Inhibitory effect of human meibomian gland epithelial cells on the growth rate of *Pseudomonas aeruginosa*.

R. Kelleher Davis*; D. A. Sullivan; Y. Liu

5707 - A0053

Influence of pilocarpine and timolol on human meibomian gland epithelial cells.

Y. Zhang*; W. Kam; D. A. Sullivan

5798 - A0249

Complement C3a causes human RPE cells to make basal deposits in vitro

R. Fernandez-Godino*; D. Garland; E. A. Pierce

5816 - A0267

Complement C5 and basal deposit formation in a mouse model of EFEMP1-associated macular degeneration

D. Garland*; R. Fernandez-Godino; E. A. Pierce

5868 - C0192

Toxigenic *Staphylococcus aureus*-induced mucin secretion by conjunctival goblet cells is dependent upon IL-1 β via Ca²⁺ and ERK1/2 signaling

D. A. Dartt*; D. Li; R. R. Hodges; M. Lippestad; M. S. Gilmore; M. S. Gregory-Ksander

5911 - D0002

Computational Fluid Dynamics Modeling of Diabetic Retinal Microaneurysms (MAs) Based on Adaptive Optics Scanning Laser Ophthalmoscopy (AOSLO)

Y. Lu*; M. O. Bernabeu; C. C. Cai; J. Lammer; L. P. Aiello; J. K. Sun

5913 - D0004

Microaneurysm (MA) Wall Characteristics Associated with MA Size and Perfusion Status on Adaptive Optics Scanning Laser Ophthalmoscopy (AOSLO)

C. C. Cai*; Y. Lu; J. Lammer; L. P. Aiello; J. K. Sun

POSTER SESSION
8:00 AM—9:45 AM
Exhibit/Poster Hall

5948 - D0039

High-throughput Retinal Layer Thickness Quantitation in Retinal Degenerative Diseases.

D. Maidana*; S. Notomi; T. Zhou; T. Ueta; P. Tsoka; H. Matsumoto; K. Kataoka; H. Lin; J. W. Miller; D. G. Vavvas

5991 - D0082

Patterns of visual field changes in thyroid eye disease

C. J. Choi*; S. Oropesa; A. B. Callahan; L. R. Glass; L. Teo; M. Kazim; S. K. Freitag

6040 - D0259

Chloroquine toxicity of the retinal pigment epithelium and retina in vitro and a mouse model of retinal toxicity

D. Amarnani*; L. A. Kim; P. A. D'Amore; L. Wong

POSTER SESSION
11:00 AM—12:45 PM
Exhibit/Poster Hall

6181 - A0084

Does hyperosmolarity induce an irreversible process leading to human corneal epithelial cell death?

W. Kam*; D. A. Sullivan; B. D. Sullivan; M. Venkiteshwar

6193 - A0096

Influence of omega 3 and 6 fatty acids on human meibomian gland epithelial cells

Y. Liu*; W. Kam; D. A. Sullivan

6195 - A0123

The Burden of Dry Eye Disease: Quality of Life, Work, Activity Outcomes, and Healthcare Resource Use

K. F. Farrand*; M. Fridman; D. A. Schaumberg

6197 - A0125

Comorbidities and Concomitant Medications in Dry Eye Disease

D. A. Schaumberg*; M. Fridman; K. F. Farrand

6261 - C0004

Risk Score for Predicting Development of Treatment-Requiring Retinopathy of Prematurity in the Telemedicine Approaches to Evaluating of Acute-Phase ROP (e-ROP) Study

G. Ying*; D. VanderVeen; G. E. Quinn; E. Daniel; A. Baumritter

6297 - C0040

Validating impact of temporal changes of adiponectin in relation to ROP development

C. Lofqvist*; G. Hellgren; S. Najm; E. Engström; L. Stigson; L. E. Smith; A. Hård; K. Sävman; A. Hellstrom

POSTER SESSION
11:00 AM—12:45 PM
Exhibit/Poster Hall

6351 - C0138

Association of Macular Nonperfusion (NP) and Leakage with Disorganization of Retinal Inner Layers (DRIL)

R. Barham*; A. Delacruz; M. Ledesma; A. Gupta; H. El-Rami; J. K. Sun; P. S. Silva; L. P. Aiello

6370 - C0157

Comparison of post-injection endophthalmitis rates and characteristics following intravitreal injections of bevacizumab versus ranibizumab versus aflibercept

J. Hsu*; N. Rayess; E. Rahimy; C. Shah; J. D. Wolfe; E. Chen; F. C. DeCroos; S. Garg

6556 - D0305

CD36-mediated uptake of oxidized LDL induces retinal pigment epithelial cell death through NLRP3 inflammasome activation

G. Gnanaguru*; A. Choi; D. Amarnani; P. A. D'Amore

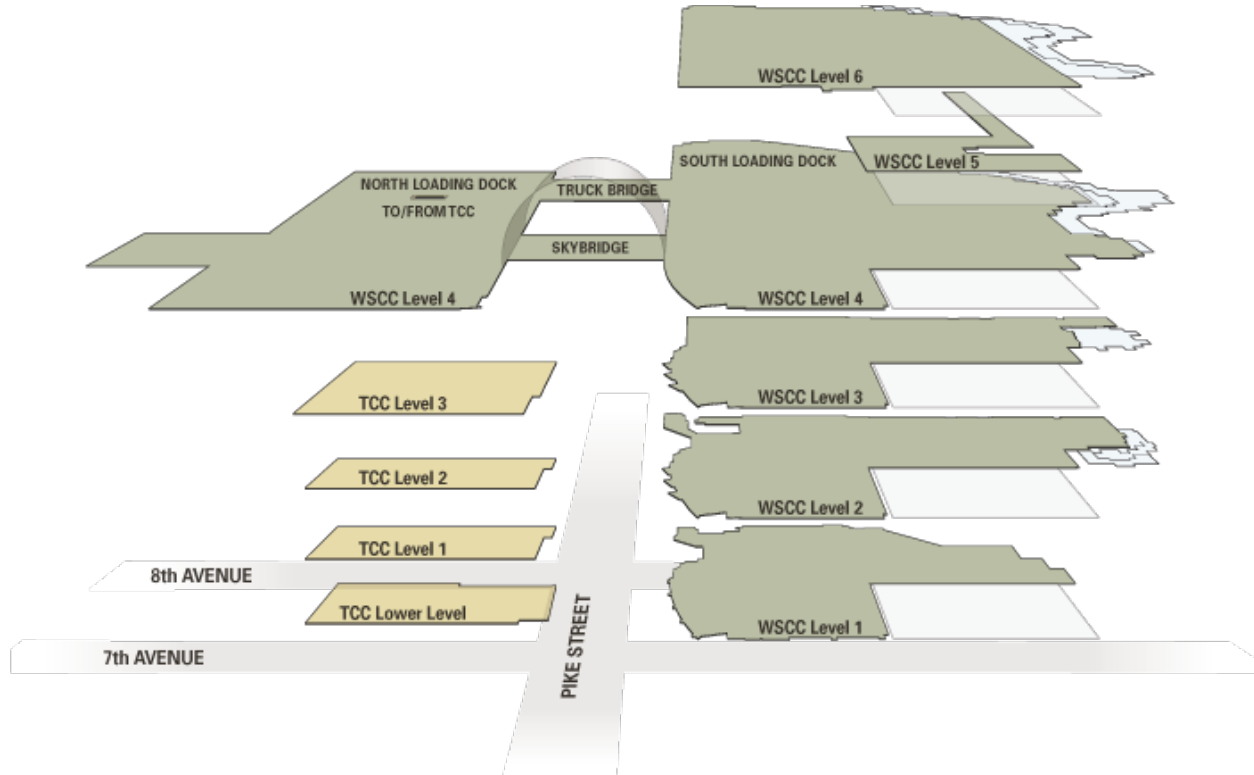
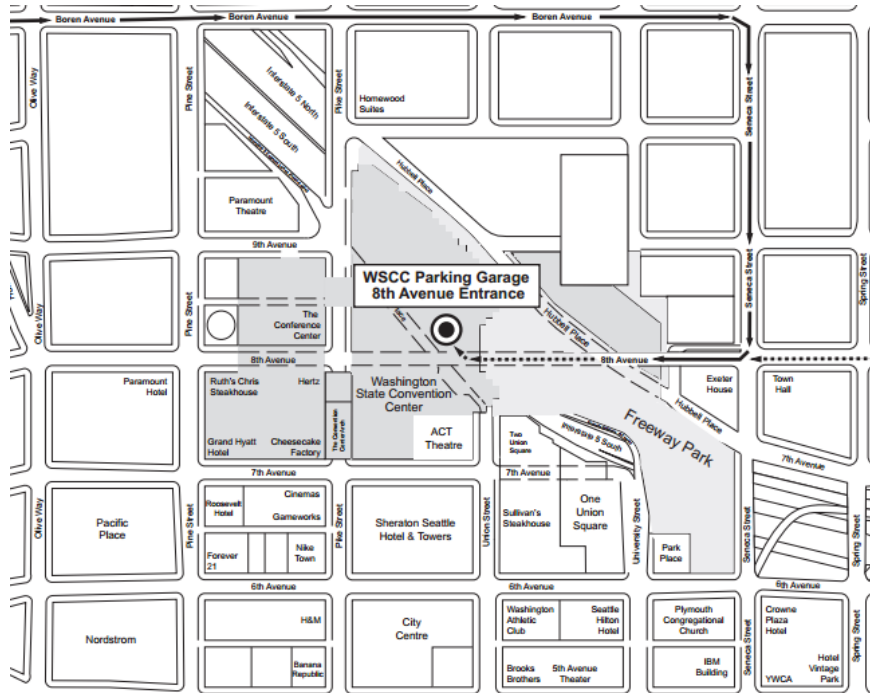
KEYNOTE SESSION: ARVO/Alcon Keynote Series - Human Genetics in Vision and Ophthalmology
2:15 PM—3:30 PM
Room 6B

2:33 PM—2:51 PM

Monogenic Eye Disease

J. L. Wiggs*

Washington State Convention Center 800 Convention Place, Seattle, WA 98101



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