

18th Annual Symposium Visual Sciences Research Center

Schedule

Friday, June 17, 2016

8:00 Continental Breakfast, Poster Setup

8:30 **Irina Pikuleva, Ph.D.**

Carl F. Asseff Professor and Vice Chair for Research, Ophthalmology & Visual Sciences
Director, Visual Sciences Research Center
Case Western Reserve University
Opening Remarks

Anterior Eye Segment – Moderator: Carol Toris, Ph.D.

8:45

Jonathan Lass, M.D.

Charles I Thomas Professor, Ophthalmology & Visual Sciences
Case Western Reserve University
Introduction

Keynote Speaker

Stephen Pflugfelder, M.D.

Professor and James and Margaret Elkins Chair, Ophthalmology
Baylor College of Medicine
Immunomodulatory properties of conjunctival goblet cells

9:45

Robert Igo, Ph.D.

Assistant Professor, Epidemiology and Biostatistics
Sudha Iyengar Lab

Genome wide association analysis identifies novel genetic loci for Fuchs corneal endothelial dystrophy

10:00

Carol Toris, Ph.D.

Professor, Ophthalmology & Visual Sciences

Padmanabhan Pattabiraman, Ph.D.

Research Scientist, Ophthalmology & Visual Sciences

Pubertal changes in aqueous humor dynamics and proteomics in rabbits

10:15

Zongbo Wei, Ph.D.

Postdoctoral Scholar, Pathology

Xingjun Fan Lab

Decreased levels of reduced glutathione in the lens and lens epithelial cells promote epithelial-mesenchymal transition (EMT)

10:30

Break

Visual Sciences Training Program - Moderator: John Mieyal, Ph.D.

- 10:45 **Jeremy Whitson**
Graduate Student
Vincent Monnier Lab
Characterization of the mouse lens glutathione-responsive transcriptome
- 11:00 **Mary Kelly**
Graduate Student
Johannes Von Lintig Lab
Transport of vitamin A across blood-tissue barriers is facilitated by STRA6
- 11:15 **Philip Ropelewski**
Graduate Student
Yoshikazu Imanishi Lab
*Disrupted membrane protein homeostasis in a *Xenopus laevis* model of retinitis pigmentosa caused by Q344ter mutation of rhodopsin*
- 11:30 **Avery Sears**
Graduate Student
Krzysztof Palczewski Lab
Structural analysis of native interphotoreceptor retinoid binding protein isolated from the interphotoreceptor matrix of bovine retinas

11:45 – 1:15 Lunch & Poster Session

Retina and Related Diseases - Moderator: Akiko Maeda, M.D., Ph.D.

- 1:15 **Akiko Maeda, M.D., Ph.D.**
Assistant Professor, Ophthalmology & Visual Sciences
Case Western Reserve University
Introduction

Keynote Speaker
Marco Zarbin, M.D., Ph.D.
Alfonse Cinotti, M.D. Professor and Chair, Ophthalmology & Visual Sciences
Rutgers-New Jersey Medical School
Cell base therapy for degenerative retinal disease
- 2:15 **Subhadip Senapati, Ph.D.**
Postdoctoral Scholar, Ophthalmology & Visual Sciences
Paul Park Lab
Effect of dietary DHA modulation on rhodopsin content and packing in mice disc membranes
- 2:30 **Thomas Sundermeier, Ph.D.**
Research Associate, Pharmacology
Krzysztof Palczewski Lab
Dissecting the miRNA-regulated gene networks governing the survival and function of photoreceptors and the RPE

- 2:45 **Tanu Parmar, Ph.D.**
Postdoctoral Scholar, Ophthalmology & Visual Sciences
Akiko Maeda Lab
Acute stress responses are early molecular events of retinal degeneration in Abca4^{-/-}Rdh8^{-/-} mice after light exposure
- 3:00 Break
- 3:15 **Douglas Rhee, M.D.**
Professor and Chairman, Ophthalmology & Visual Sciences
The role of SPARC in glaucoma pathophysiology
- 3:30 **Carlos Subauste, M.D.**
Associate Professor, Infectious Disease
TCD40 in retinal Müller cells induces P2X₇-dependent cytokine expression in macrophages/microglia in diabetic mice and development of early experimental diabetic retinopathy
- 3:45 **Deoye Tonade**
Graduate Student
Timothy Kern Lab
Photoreceptor cells produce inflammatory mediators that contribute to endothelial cell death in diabetes
- 4:00 **Sarah Lindstrom**
Research Technician
Patricia Taylor Lab
The role of IL-17 in diabetic retinopathy
- 4:15 **Beata Jastrzebska, Ph.D.**
Instructor, Pharmacology
Dimerization of human visual cone opsins and its potential role in spectral tuning
- 4:30 **Tung Dao, M.S.**
Research Assistant
Irina Pikuleva Lab
Investigating the retinal significance of apolipoprotein D and apolipoprotein E in the retina
- 4:45 Announcement of Poster Winner
- Douglas Rhee, M.D.**
Professor and Chairman, Ophthalmology & Visual Sciences
Case Western Reserve University
Closing Remarks

5:00 **Reception** Wolstein Research Building Lobby

Saturday June 18, 2016

7:30 Continental Breakfast

7:55 **Rony Sayegh, M.D.**
Assistant Professor, Ophthalmology & Visual Sciences
Opening Remarks

Retina Session - Moderator: Rony Sayegh

8:00 **Rony Sayegh, M.D.**
Assistant Professor, Ophthalmology & Visual Sciences
Introduction

Keynote Speaker

Marco Zarbin, M.D., Ph.D.

Alfonse Cinotti, M.D. Professor and Chair, Ophthalmology & Visual Sciences
Rutgers-New Jersey Medical School

Challenges in applying the results of clinical trials to clinical practice

8:45 **Daniel Y. Lee, M.D.**
Resident PGY 4, Ophthalmology & Visual Sciences
Pankaj Gupta, M.D., Rony Sayegh, M.D., Baseer Ahmad, M.D., Coauthors
Retinal complications after refractive surgery

8:57 **Mahmoud El-Yassir, M.D.**
Resident PGY 4, Ophthalmology & Visual Sciences
The relationship of prior anti-VEGF injections, and the increased intraoperative risks of posterior capsule rupture, retained lens fragment, and other post-op complications

9:09 **Mahdi Rostamizadeh, M.D.**
Resident PGY 3, Ophthalmology & Visual Sciences
David Miller, M.D., Coauthor
Incidences of endophthalmitis in various anti-VEGF treatments

9:21 **Musa Abdelaziz, M.D.**
Resident PGY 3, Ophthalmology & Visual Sciences
David Miller, M.D., Coauthor
Long-term outcomes of branch retinal vein occlusion treated with intravitreal anti-VEGF therapy

9:33 **Rui Zhang M.D.**
Resident PGY 4, Ophthalmology & Visual Sciences
Faruk Orge, M.D., Coauthor
Recurrence of neovascularization status post intravitreal bevacizumab in a patient with retinopathy of prematurity

9:45 Break

Cornea Session - Moderator: Pankaj Gupta, M.D.

- 10:00 **Keynote Speaker**
Stephen Pflugfelder, M.D.
Professor and James and Margaret Elkins Chair, Ophthalmology
Baylor College of Medicine
Advances in diagnosis and therapy of tear dysfunction
- 10:45 **Rony Sayegh, M.D.**
Assistant Professor, Ophthalmology & Visual Sciences
Jonathan Miller, M.D. Jennifer Sweet, M.D., Salim Hayek, M.D., Coauthors
Electrical stimulation of the trigeminal ganglion and intrathecal drug delivery systems to manage corneal neuropathic pain
- 10:57 **Amir Moarefi, M.D.**
Resident PGY 3, Ophthalmology & Visual Sciences
Rony Sayegh, M.D., Coauthor
Characterization of forward scatter from the optical stem of the Boston keratoprosthesis
- 11:09 **Christina Kytasty**
Resident PGY 3, Ophthalmology & Visual Sciences
Rony Sayegh, M.D., Pankaj Gupta, M.D., Coauthors
Descemet's membrane endothelial keratoplasty in eyes with toxic anterior segment syndrome after cataract surgery
- 11:21 **A.J. Patel, M.D.**
Resident PGY 3, Ophthalmology & Visual Sciences
Majid Moarefi, M.D., Coauthor
Effect of ocular surface lubrication on keratometry values and IOL selection
- 11:33 **Richard Helms**
Medical Student, Case Western Reserve University School of Medicine 2017
Faruk Orge, M.D., Coauthor
Reconstruction of 3D models from 2D ultrasound images
- 11:45 Break

Glaucoma - Moderator: Amy Zhang, M.D.

- 12:00 **Louis Hirsch, M.D.**
Resident PGY 4, Ophthalmology & Visual Sciences
Douglas Rhee M.D., Coauthor
Refractive outcomes in combined phaco-trabectome surgery
- 12:12 **Michael Smit, D.O.**
Resident PGY 3, Ophthalmology & Visual Sciences
Edward Burney, M.D., Coauthor
Does learning curve for IStent placement affect outcomes?
- 12:24 **Emily Ahadizadeh, M.D.**
Resident PGY 3, Ophthalmology & Visual Sciences
Douglas Rhee, M.D., Coauthor
Suppression of integrin-linked kinase in human trabecular meshwork alters SPARC's effect on extracellular matrix and intraocular pressure
- 12:36 **Douglas Rhee, M.D.**
Professor and Chairman, Ophthalmology & Visual Sciences
Case Western Reserve University
Closing Remarks