



20th Annual Symposium Visual Sciences Research Center

Schedule

Friday June 15, 2018

8:00 Continental Breakfast, Poster Setup

8:45 **Irina Pikuleva, Ph.D.**
Professor and Vice Chair of Research, Ophthalmology & Visual Sciences
Case Western Reserve University
Opening Remarks

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

9:00 **Avery Sears**
Graduate Student, Pharmacology
Cryo-EM and structural analysis of interphotoreceptor retinoid binding protein

9:15 **Luciana Lassance Dibben**
Postdoctoral Scholar, Ophthalmology & Visual Sciences
Fibrocytes migrate to the cornea and differentiate into myofibroblasts during the wound healing response to injury

9:30 **Brecken Blackburn**
Graduate Student, Biomedical Engineering
Noncontact assessment of the properties of ocular tissues with phase-decorrelation OCT

9:45 **Christopher Sander**
Graduate Student, Pharmacology
SMALPs aid in the structural characterization of ABCA4

Diabetic Retinopathy – Moderator: Patricia Taylor, Ph.D.

10:00 **Aicha Saadane, Ph.D.**
Research Associate, Pharmacology
Inhibition of calpain inhibits diabetes-induced increase in retinal superoxide but not inflammation

10:15 **Sigrun Sigurdardottir, Ph.D.**
Research Associate, Ophthalmology & Visual Sciences
IL-17A transcellular signaling induces diabetic retinopathy

10:30 Break



Retinal Disease – Moderator: Patricia Taylor, Ph.D.

- 10:45 **Sudha Iyengar**
Professor, Population and Quantitative Health Sciences
Genetics and Genomics of AMD in Multi-Ethnic Populations
- 11:00 **Nicole El-Darzi, M.D.**
Research Assistant, Ophthalmology & Visual Sciences
N, N-Dimethyl-3 β -hydroxycholeamide (DMHCA) reduces retinal cholesterol via partial inhibition of retinal cholesterol biosynthesis rather than its liver X receptor transcriptional activity
- 11:15 **Yu-Shiuan Cheng**
Graduate Student, Chemistry
Light-induced generation and toxicity of docosahexaenoate-derived oxidation products in retinal pigment epithelium cells
- 11:30 **Jonathan Haines, Ph.D.**
Professor, Population and Quantitative Health Sciences
Genetics of age-related macular degeneration in the Amish
- 11:45 **Subhadip Senapati, Ph.D**
Postdoctoral Scholar, Ophthalmology & Visual Sciences
Effect of dietary docosahexaenoic acid on rhodopsin content and packing in photoreceptor cell membranes

12:00 – 1:30 Lunch & Poster Session

Keynote Introduction: Paul Park, Ph.D.

- 1:30 *Keynote Speaker*
Joshua Dunaief, M.D., Ph.D.
Professor, Ophthalmology
Perelman School of Medicine
University of Pennsylvania
A blue protein, a Greek God, and retinal iron regulation

Retinal Biology – Moderator: Paul Park, Ph.D.

- 2:30 **Carlos Subauste, M.D., Ph.D.**
Professor, Infectious Disease
*Epidermal growth factor promotes retinal invasion by *Toxoplasma gondii**
- 2:45 **Sahil Gulati**
Graduate Student, Pharmacology
Structural insights into the missing link of G protein-coupled receptor signaling
- 3:00 Break



Anterior Eye Segment – Moderator: Padmanabhan Pattabiraman, Ph.D.

- 3:15 **Padmanabhan Pattabiraman, Ph.D.**
Research Scientist, Ophthalmology & Visual Sciences
Clusterin regulates intraocular pressure by modulating actin cytoskeleton and extracellular matrix via cofilin signaling
- 3:30 **Xingjun Fan, Ph.D.**
Assistant Professor, Pathology
Lens epithelial cells adaptation and transformation under oxidative stress
- 3:45 **Jessica Hsueh**
Medical Student, Case Western Reserve University School of Medicine
CRISPR-CAS9-mediated gene editing of Secreted Protein Acidic and Rich in Cysteine (SPARC) in the Trabecular Meshwork (TM-1) cell alters the expression profile of Extracellular Matrix (ECM) proteins

Retinal Disease – Moderator: Padmanabhan Pattabiraman, Ph.D.

- 4:00 **Beata Jastrzebska, Ph.D.**
Assistant Professor, Pharmacology
The mechanistic basis of retinitis pigmentosa-linked rhodopsin mutations in transmembrane helix 5
- 4:15 **Philip Ropelewski**
Graduate Student, Pharmacology
Disrupted membrane homeostasis in a model of retinitis pigmentosa
- 4:30 Announcement of Poster Winner
- Douglas Rhee, M.D.**
Professor and Chairman, Ophthalmology & Visual Sciences
Case Western Reserve University
Closing Remarks

4:45 **Reception** Wolstein Research Building Lobby
