SCHOOL OF MEDICINE
CASE WESTERN RESERVE UNIVERSITY

21st Annual Symposium
Visual Sciences Research Center

Schedule

Friday June 14, 2019

8:00 Continental Breakfast, Poster Setup

9:00 **Irina Pikuleva**
Professor and Vice Chair of Research, Ophthalmology & Visual Sciences
Case Western Reserve University
Opening Remarks

Visual Sciences Training Program – Moderator: Paul Park

9:15 **Brecken Blackburn**
Graduate Student, Biomedical Engineering
Dynamic light scattering optical coherence tomography for non-contact mechanical assessment of the cornea

9:30 **Christopher Sander**
Graduate Student, Pharmacology
Protoreceptor transporter ABCA4 co-purified with native lipids via detergent fee purification

9:45 **Yalitz A. Lopez Corcino**
Graduate Student, Pathology
Pharmacological inhibition of epidermal growth factor receptor leads to autophagy-dependent control of ocular toxoplasmosis

10:00 **Adam Majot**
Postdoc, Population of Quantitative Health Sciences
Transcriptome-wide dysregulation and missplicing in Fuchs endothelial corneal dystrophy

Glaucoma – Moderator: Patricia Taylor

10:15 **Nathaniel Fox**
Medical Student, Ophthalmology and Visual Sciences
Glycosylation of SPARC is critical for binding to extracellular matrix proteins and protection from matrix metalloproteinase degradation

10:30 **Haarika Reddy**
Undergraduate Student, Ophthalmology and Visual Sciences
Understanding the role of lysosomal cysteine protease, cathepsin k, as an IOP lowering target

10:45 Break

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Retinal Biology – Moderator: Patricia Taylor

11:00 **Tanu Parma**
Postdoc, Pharmacology
Non-hydrolysable analogs of retinal chromophore prevent light induced retinal degeneration

11:15 **Lana Pollock**
Postdoc, Cole Eye Institute
Retinoic acid signaling is necessary for maintenance of the blood-retinal barrier

11:30 **Artem A. Astafev**
Research Assistant, Ophthalmology and Visual Sciences
Deficiency in cholesterol-related enzymes reveals a new potential mechanism of cholesterol elimination from mouse retina

11:45 **Joseph Fogerty**
Research Associate, Cole Eye Institute
Muller glia proliferation and cone regeneration is triggered by acute damage but not progressive photoreceptor degeneration in zebrafish cep290mutants

12:00 **Subhadip Senapati, Ph.D**
Postdoc, Ophthalmology and Visual Sciences
Differentiating between inactive and active states of rhodopsin by atomic force microscopy in native membranes

12:15 – 1:45 Lunch & Poster Session

Keynote Introduction: Paul Park

1:45 *Keynote Speaker*
David N. Zacks, M.D., Ph.D.
Professor, Ophthalmology and Visual Sciences
Kellogg Eye Center
University of Michigan
"Photoreceptor cell death: Life hanging in the balance."

2:45 Break

Eye diseases – Moderator: Padmanabhan Pattabiraman

3:00 **Matthias Buck, Ph.D.**
Professor, Physiology and Biophysics
Axon guidance receptors and ligands in pathological angiogenesis: a view from structural biology

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3:15 **Airanthi Widjaja-Adhi**
Research Associate, Pharmacology
The loss of Awat2 (MFAT) impairs biosynthesis of wax esters and causes evaporative dry eye phenotype in mice

3:30 **Philip Ropelewski**
Graduate Student, Pharmacology
Disrupted membrane homeostasis in xenopus laevis model of retinitis pigmentosa

3:45 **Thomas Zapadka**
Research Scientist, Ophthalmology & Visual Sciences
TRAF6 therapeutic target for diabetic retinopathy

4:00 **Ramkumar Srinivasagan**
Postdoc, Pharmacology
A protective role of carotenoids for the visual cycle

Closing remarks: Paul Park

4:15 Announcement of Poster Winner

4:30 **Reception** Wolstein Research Building Lobby