60th Annual Ophthalmology Research Day
and
37th Clement McCulloch Lecture
Department of Ophthalmology and Vision Sciences
Li Ka Shing Knowledge Institute

Friday, May 18th, 2018 (7:30 AM – 4:00 PM)

PROGRAM

7:30-8:00  Continental Breakfast

8:00-8:05  Vice - Chairs Research Welcome
           Drs. Rajeev Muni and Valerie Wallace

8:05-8:10  Annual Ophthalmology Research Day Chair Welcome
           Dr. Matthew Schlenker

           R=Resident, S=Student (undergraduate, medical, graduate),
           VS=VSRP (Vision Science Research Program) student, F= Fellow, RF= Research Fellow

8:10 -9:28 AM  Session moderator:  Dr. Valerie Wallace
Format:  5 min. presentation + 2 min. discussion

8:10-8:17  Alaa AlAli (F)
Sequential Pneumatic Retinopexies for the Treatment of Primary Inferior
Rhegmatogenous Retinal Detachments with Inferior Breaks

8:18-8:25  Carolina Francisconi (F)
Vision-Related Functioning in patients undergoing Pneumatic Retinopexy vs.
Vitrectomy for Primary Rhegmatogenous Retinal Detachment: Sub-analysis of
the PIVOT trial
Tina Felfeli (S)
Differences in Metamorphopsia and OCT Changes After Retinal Detachment Repair: Randomized Controlled Trial Comparing Pneumatic Retinopexy to Vitrectomy at 1 Year (PIVOT Trial)

Rachel Trussart (F)
Efficacy of Preoperative Intravitreal Injection of Gas as an adjunct to Pars Plana Vitrectomy for Rhegmatogenous Retinal Detachment Repair

Verena Juncal (F)
Aqueous Cytokines as Predictors of Long-Term Response to Intravitreal Ranibizumab for Treatment of Diabetic Macular Edema

Samih Alqawlaq (VSRP)
What happens when astrocytes talk to neurons? A PI3K interactome in neurons following exposure to astrocyte secretome

Rajiv Dixit (RF)
MRI guided focused ultrasound, a novel strategy to deliver therapeutics across the Blood-Retinal-Barrier to treat retinal diseases

Yacine Touahri (RF)
Zac1 is essential to maintain Müller glia in a quiescent stem cell state in the retina

Maryam Amin Mohammed Amin (S)
Retinal Imaging Detects Retinal Ganglion Cell Pathology in Amyotrophic Lateral Sclerosis

Harleen Bedi (R)
Review of clinical features, practice patterns, and treatment outcomes of idiopathic dacryoadenitis at major Oculoplastic referral clinics in Toronto, Canada

9:30 - 9:55 AM
COFFEE BREAK
9:55-10:02 Jaime C. Sklar (S)
The change in corneal transplantation rates for the treatment of keratoconus after the introduction of corneal crosslinking collagen in Ontario - an Eye Bank Study

10:03-10:10 Marko Popovic (S)
Frequency of Statistical Methods in High-Impact Ophthalmology Articles: A Review

10:11-10:18 Brian Ballios (R)
Identifying gaps in patient access to diabetic screening eye examinations in Ontario: a provincially representative cross-sectional study

10:19-10:26 Austin Pereira (S)
A Retrospective Review of Intraocular Lens Power Formula Accuracy

10:27-10:34 Harrish Nithianandan (S)

10:35-10:42 Shangjun Jiang (S)
Prevalence and impact of eye disease in an urban homeless population

10:43-10:50 Stephanie N. Kletke (R)
Development of a Pediatric Ophthalmology Academic Partnership Between Canada and Ethiopia: A Situational Analysis

10:50-10:55 Introduction to Dr. Paul P. Lee, MD, JD
The 37th Clement McCulloch Lecturer: Dr. Matthew Schlenker

10:55-11:40 The 37th Clement McCulloch Lecture:

“Balanced Scorecards” in Eye Care

Dr. Paul P. Lee, MD, JD
F. Bruce Fralick Professor and Chair of Ophthalmology and Visual Sciences
Director, W.K. Kellogg Eye Center
### 11:45 AM - 12:45 PM  
**LUNCH**

### 12:45-1:40 PM  
**Session moderator:** Dr. Graham Trope  
**Format:** 5 min. presentation + 2 min. discussion

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<th>Time</th>
<th>Speaker(s)</th>
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<td>12:45-12:52</td>
<td>Emily Mathieu (S)</td>
<td>Impaired cerebrospinal fluid flow into the optic nerve in glaucoma</td>
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<td>12:53-1:00</td>
<td>Avner Belkin (F)</td>
<td>Effect of Postural Changes on the Trans Lamina cribrosa pressure difference - A pilot study</td>
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<td>1:01-1:08</td>
<td>Steven Bae (S)</td>
<td>Nomogram to predict graft thickness in Descemet's stripping automated endothelial keratoplasty: an eye bank study</td>
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<td>1:09-1:16</td>
<td>Runjie Bill Shi (S)</td>
<td>Visual Field Testing in a Portable Virtual Reality Environment</td>
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<td>1:17-1:24</td>
<td>Sze Wah Samuel Chan (S)</td>
<td>Lymphatic Vessels Identified in Failed Human Corneal Transplants</td>
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<td>1:25-1:32</td>
<td>Husayn Gulamhusein (RF)</td>
<td>Ab Interno Gelatin Microstent Implantation with MMC and Phacoemulsification Versus Trabeculectomy with MMC and Phacoemulsification</td>
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<td>1:33-1:40</td>
<td>Angela Zhang (R)</td>
<td>Comparison of Dynamic Contour Tonometry and Non-Contact Tonometry</td>
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### 1:41-1:45 PM  
**Closing Remarks Dr. Matthew Schlenker**

### 1:45  
**Refreshment**

### 1:45-4:00 PM  
**POSTER SESSION**

### 4:00  
**Meeting Adjourned**

* The Alumni Award for Best Resident Paper, and John Gaby Prize for Best Fellow Paper will be announced at the Ophthalmology Residents’ Graduation Dinner. The Best Student Paper Award and The Best VSRP Student Paper Award will be given at the Faculty Research Day.
POSTERS (Total of 59)

1) Alexander Van Nynatten (VSRP)
   Compensatory changes to rhodopsin structure and function in species possessing naturally occurring retinitis pigmentosa-associated mutations

2) Nihar Bhattacharya (VSRP)
   In vitro characterization of retinitis pigmentosa mutations in the extracellular loop 2 of rhodopsin

3) Sarah Dungan (VSRP)
   From retinal disease to dim-light vision: A natural rhodopsin variant sheds light on the biochemical mechanism of congenital stationary night-blindness

4) Jeff Stulberg (VSRP)
   Assessing Müller glial cell heterogeneity in the retina with single-cell RNA-sequencing

5) Frances E Hauser (VSRP)
   Comparative genomics of visual system regression reveals insights into the genetic basis of ocular disease and may aid in the discovery of novel disease loci

6) Justin Belair-Hickey (VSRP)
   Simultaneous Inhibition of BMP, TGF-B, and WNT Signalling Reveals Cone Photoreceptors as the Default Fate of Neural Retinal Progenitors

7) Sami Tabbarah (VSRP)
   Investigating the role of COG5 and SRD5A3 gene mutations in inducing ER stress and causing retinal degeneration

8) Tahani Baakdhah (S)
   Expansion of Retinal Stem Cells and their Progeny Using Cell Microcarriers in a Bioreactor

9) Tianwei (Ellen) Zhou (S)
   Novel anti-interleukin-1 rescues retinal integrity: an investigation through OCT imaging and automated segmentation

10) Miriam Bergeret (VSRP)
    Identification of novel cone cell-surface markers during retinal development

11) Alessandra Tuccitto (VSRP)
    MNK1 Inhibition Protects Retinal Ganglion Cells From MAPK Mediated Injury

12) Luke Ajay David (S)
    The Role of the Imprinted Gene Network in Retinal Disease and Regeneration
13) Anjali Vig (VSRP)  
Functional validation of candidate intergenic variants associated to retinitis pigmentosa

14) Shaobo Lei (R)  
Ocular Topical Anesthesia Has no Effect on Photophobia Induced by Red or Blue Light Stimulus

15) Brian Ballios (R)  
Induction of rod and cone photoreceptor-specific progenitors from stem cells

16) Brian Ballios (R)  
New biomaterial for use as a vitreal replacement hydrogel

17) Mohamed Mongy (F)  
Ganglionic cell complex (GCC) changes in wet AMD patients treated with intravitreal injection according to treat and extend protocol in comparison to non-treated dry AMD

18) Samantha Ing Esteves (VSRP)  
Combinatorial effects of alpha- and gamma-protocadherins on retinal neuronal survival and dendritic self-avoidance

19) Motaz Bamakrid (RF)  
Changes in Aqueous Cytokine Levels following treatment with Aflibercept in Treatment Naïve Patients with Diabetic Macular Edema

20) Kirill Zaslavsky (S)  
Optical Coherence Tomography Angiography Reveals Dynamics and Recurrence of Choroidal Neovascularization in Punctate Inner Choroidopathy

21) Mirriam Mikhail (S)  
A novel method of averaging ocular coherence tomography angiography images using Photoshop Software

22) Shangjun Jiang (S)  
Multimodal analysis of hyperautofluorescent ring size in retinitis pigmentosa

23) Shangjun Jiang (S)  
Vascular Perfusion Density Mapping Using Optical Coherence Tomography Angiography Comparing Normal and Optic Disc Pit Eyes

24) Armin Abadeh (S)  
The Effect of Combining Focal Laser Photocoagulation with Subthreshold Micropulse Laser Therapy in Treatment of Chronic Central Serous Chorioretinopathy (CSCR)
25) Marko Popovic (S)
   Higher Order Aberrations in Femtosecond Laser-Assisted Cataract Surgery Compared to Manual Cataract Surgery: A Retrospective Cohort Study

26) Marko Popovic (S)
   Preoperative Fasting for Ambulatory Cataract Surgery: A Systematic Review

27) Marko Popovic (S)
   Cyclodialysis Cleft Repair: A Multi-centered, Retrospective Case Series

28) Shicheng (Tony) Jin (S)
   Recent Trends in Cataract Surgery for Seniors in Communities Across Ontario

29) Austin Pereira (S)
   Biometry Measurements for Cataract Surgery: A Retrospective Comparison of Ultrasound and Optical Biometric Devices

30) Austin Pereira (S)
   A Prospective Comparison of Three Intraocular Pressure Measurement Techniques Using Goldmann Applanation Tonometry

31) Sina Khalili (RF)
   Safety of Intracameral Moxifloxacin in Pediatric Lens Surgery: An Equivalence Study

32) Xiang (Patrick) Ji (VSRP)
   Assessing the Clinical Efficacy of handheld techniques to monitor for retinal toxicity in children undergoing Vigabatrin Therapy

33) Suad Ali (S)
   Mapping Global Retinoblastoma Prevalence, Treatment Capacity and Expertise

34) Sameh E Soliman (F)
   Visualization and Imaging of the Ora Serrata in Retinoblastoma using Contact Wide-Field Digital Retinal Photography

35) Sameh E Soliman (F)
   Spatiotemporal evolution of germline retinoblastoma

36) Arshia Javidan (S)
   Retinoblastoma Pathways of Care: Quality Improvement by Standardization

37) Bashar M Bata (F)
   Visual and Anatomic Outcomes Following Early Surgery for Persistent Fetal Vasculature: A 20-year Retrospective Review
38) Anu Maudgil (F)
The Diagnostic Value of Optical Coherence Tomography in Idiopathic Infantile Nystagmus

39) Saba Samet (S)
Ocular motor control from binocular to monocular viewing in AMD

40) Anna Kabanovski (S)
Mechanisms of Retinal Neurodegeneration and Visual Pathway Axonal Loss in MS Patients on Disease Modifying Therapies: a Protocol for a Prospective Cohort Study

41) Elena Leontieva (RF)
Evaluating Drusen and Spectral Domain Optical Coherence Tomography (SDOCT) Retinal Thickness Parameters in Neurodegenerative Disease

42) Jonathan Chung (VSRP)
Semantic representation of fixation sequences and the classification of Bipolar and Unipolar patients presenting in a depressed state

43) Sze Wah Samuel Chan (S)
New Trends in Corneal Transplants at the University of Toronto

44) Mohammad Kreimei (RF)
Long-term ocular surface stability in conjunctival limbal autograft and allograft donor eyes

45) Harrish Nithianandan (S)
Trauma-induced exacerbation of epithelial-stromal TGFBI lattice corneal dystrophy

46) Joseph Hanna (S)
Does Timolol Affect Lymphatic Drainage from the Eye?

47) Kirsten Cardinell (S)
Lymphatic Drainage from the Eye and In Situ Validation by Near-infrared Imaging

48) Shireen Khattak (VSRP)
Assessing the Link between Conjunctival Melanomas and Lymphatic Drainage by Non-invasive In Vivo Imaging

49) David J. Mathew (F)
Effect of preoperative topical brimonidine tartrate 0.2% on intraocular pressure in patients undergoing robotic-assisted radical laparoscopic prostatectomy in steep Trendelenburg position

50) David J. Mathew (F)
Long-term tube position changes in eyes with Ahmed glaucoma valve implants
51) Avner Belkin (F)
Repair of exposed Ahmed Glaucoma Valve tubes: long-term outcomes

52) Husayn Gulamhusein (RF)
CyPass Micro-Stent Implantation in Glaucomatous Eyes: A Retrospective Analysis

53) Mansoureh Bagheri (F)
The surgical outcome of glaucoma drainage device implants in pediatric glaucoma; a fourteen-year experience

54) Monica Daibert Nido (F)
eQUEST-The eSight Quality of Life and Efficacy Study

55) Lina Chen (F)
Low Vision Rehabilitation Services in China

56) Afua Asare (VSRP)
Access to Vision Health Services amongst Vulnerable Populations in Canada: A Scoping Review

57) Robert Koucheki (S)
Prevalence of Statistical Tests in Canadian Ophthalmology Articles: A Systematic Review

58) Tina Felfeli (S)
Practice Patterns of Ontario Ophthalmologists Over the Past Two Decades

59) Justine Philteos (S)
Canadian Neurosurgery Educators' Views on Stereotactic Radiosurgery in Residency Training