Featuring:

“Why I Do Research”
Robert Hess, PhD
Professor and Director of Research
Director, McGill Vision Research Unit
McGill University, Department of Ophthalmology

AND

Multiple Research Presentations and Posters from
McGill Department of Ophthalmology
LEARNING OBJECTIVES FOR
THE McGill Ophthalmology Research Day

May 20, 2016
McGill McIntyre Medical Building

At the end of the program, participants will be able to:

- Describe the methodology of the research.

- Analyse a scientific publication in relation with eye vision.

- Discuss the recent data of fundamental and clinical research in their environment.

- Interpret the results of recent research work done in diseases of the eye in such subspecialties as glaucoma, retina, cornea, neuro-ophthalmology, uveitis, pediatric ophthalmology, and vision science.

- Discuss the impact these recent developments could have on their practice.
McGill Ophthalmology Research Day  
May 20, 2016  
McIntyre Medical Building  
Room 504, Martin Amphitheatre  

Agenda

8:00 – 9:00 a.m.  
Registration and Breakfast

9:00 a.m.  
Introduction - McGill University, Chair, Department of Ophthalmology  
Leonard Levin MD, PhD

9:05 a.m.  
Introduction - McGill Day 2016 Planning Committee Chair  
Hady Saheb, MD, MPH

9:10 a.m.  
Réseau de Recherche en Santé de la Vision du FRQS  
Erik Cook, PhD, Assistant Director of the Brain and Perception Axis  
Assistant Professor, Department of Physiology, McGill University

**Each presentation will be 12 minutes in length, followed by a 3 minute discussion period.**

Session I – Moderator - Dima Kalache

9:15 a.m.  
Fast Integration of depth from motion parallax and the effect of dynamic perspective cues  
Vanessa Li (Vanessa Li, Athena Buckthought, Curtis L. Baker Jr.)

9:30 a.m.  
Depth perception and segmentation: A common dependence on sparseness and local phase structure  
Athena Buckthought (Athena Buckthought, Curtis L. Baker Jr.)

9:45 a.m.  
Y-cell responses to texture stimuli predicted by a nonlinear receptive field model based on bipolar cell subunits  
Amol Gharat (Amol Gharat, Curtis L. Baker Jr.)

10:00 a.m.  
The Effect of PRL Location on Fixation Stability  
David Nguyen-Tri (David Nguyen-Tri, William Seiple, Jocelyn Faubert, Olga Overbury)

10:15 a.m.  
The Visual Impairment/Cognitive Impairment Co-morbidity  
Caitlin Murphy (Caitlin Murphy, David Nguyen-Tri, Robert Koenekoop, Olga Overbury)

10:30 a.m.  
MORNING BREAK (6th floor lobby)
Session II – Moderator - Kim Le

10:50 a.m.  
**Microperimetry and Fundus Photography in Patients with Drusen and/or Age-related Macular Degeneration**  
*Olga Overbury PhD (Michael Kapusta, Julie-Andree Marinier, Pierre Forcier, David Nguyen-Tri, Caitlin Murphy, Olga Overbury)*

11:05 a.m.  
**The differences in expression of HMB 45, Melan A and COX 2 in canine and human uveal melanoma**  
*Evangelina Esposito (Evangelina Esposito, Paulo Moraes Barros, Eduardo Perlmann, Erin Mayo-Goldberg, Ana Beatriz Toledo Dias, Miguel N. Burnier Jr.)*

11:20 a.m.  
**Programmed cell death ligand 1 expression in uveal melanoma is associated with better patient outcome**  
*Pablo Zoroquiain (Pablo Zoroquiain, Miguel N. Burnier Jr.)*

Session III – Moderator - Katie Li-Liang Peng

11:35 a.m.  
**Why I Do Research**  
*Keynote Speaker: Robert Hess, PhD*

11:55 p.m.  
**Discussion**

12:05 p.m.  
**POSTER VIEWING**  
6th floor lobby

12:45 – 1:35 p.m.  
**LUNCH**  
6th floor lobby

Session IV – Moderator (Mohammed Taha)

1:35 p.m.  
**A novel mutation in PRPH2/RDS gene and its spectrum of phenotypic manifestations in a Syrian family with autosomal dominant retinitis pigmentosa (adRP)**  
*Fares Antaki (Fares Antaki, Razek Georges Coussa, Christina Chakarova, Susan Wakil, Vincent Sun, Ayesha Khan, Irma Lopez, Huanan Ren, Kunka Kamenarova, Shomi S. Bhattacharya, Robert K. Koenekoop)*

1:50 p.m.  
**Expression of SIRT1 in a Uveal Melanoma Animal Model**  
*Debra-Meghan Sanft (Debra-Meghan Sanft, Christina Mastromonaco, Ana Dias, Maria-Silvia Burnier, Shawn Maloney, Miguel N. Burnier Jr.)*

2:05 p.m.  
**Expression of collagen 1A1, fibronectin, and laminin in human corneas**  
*Susan Wakil (Susan Wakil, Marcelo Sobrinho, Rafaela Amade, Christina Bostan, Evangelina Esposito, Miguel N Burnier Jr.)*
2:20 p.m.  Surgical and Clinical Outcomes of 25G+ Pars Plana Vitrectomy for Diabetic Tractional Retinal Detachment Repair  
Mikel Mikhail (Mikel Mikhail, Andre Ali Ridha, Sarah Chorfi, Michael Kapusta)

2:35 p.m.  Lens extraction: an intervention in angle-closure in a Canadian population  
Stanley Dao (Aisha Al-Busaidi, Nawaf Almarzouki, Hady Saheb, Stanley Dao)

2:50 p.m.  **AFTERNOON BREAK**  
6th floor lobby

**Session IV – Moderator (Nima Mohammed-Shahi)**

3:10 p.m.  Retinal scan as a biometric identification system: Putting the age-invariance distribution pattern of the retinal blood vessels hypothesis to test  
Sarina Lalla (Mathieu Gauvin, Olivier Bédard, Cléa Simard, Hadi Chakor, John M. Little, Pierre Lachapelle)

3:25 p.m.  Comparing the RETeval™ Portable ERG Device with a more Traditional ERG System: Normal Subjects and Selected Retinopathies  
Jia Yue You (Jia Yue You, Allison L. Dorfman, Vincent Sun, Mathieu Gauvin, Dylan Vatcher, Robert C. Polomeno, Robert K. Koenekoop, Pierre Lachapelle)

3:40 p.m.  Disorganization of Retinal Inner Layers and Ellipsoid Zone Disruption Predict Vision Outcomes in Central Retinal Vein Occlusion Macular Edema  
Errol Chan (Errol Chan, John Chen)

3:55 p.m.  The 7 to 1 hexagon ratio: A new approach to mfERG analysis  
Dylan Vatcher (Dylan Vatcher, Allison Dorfman, Jia Yue You, Vincent Sun, Ayesha Khan, Robert C. Polomeno, Pierre Lachapelle)

4:10 p.m.  Age and strain modulate the severity of the term neonatal Hypoxic-Ischemic Retinopathy in rodents  
Mina Ghabraie (Mina Ghabraie, Suna Jung, Pia Wintermark, Pierre Lachapelle)

4:25 p.m.  **Awards**

4:30 p.m.  Closing Remarks, Adjourn  
Hady Saheb, MD, MPH
Posters

Residents, Fellows, Medical Students

1. *Besifloxacin Ophthalmic Suspension in Patients with Bacterial Keratitis: A Prospective, Randomized Clinical Study* (Michael Ross, Jean Deschenes)

2. The correlation between peripheral areas of non-perfusion, number of treatments and change in visual acuity in diabetic retinopathy: an 18 months study (Razek Georges Coussa1, Fares Antaki1, Mikel Mikhail1, Cyril Archambault1, David Elliott Lederer1)

3. *Femtosecond Laser-assisted Cataract Surgery in Fuch’s Corneal Dystrophy* (Milad Modabber, Devinder Cheema)

4. *Cytogenetic testing in enucleated uveal melanoma patients* (Lauren French, Sonia Callejo)

5. *Optical Density Analysis of Subretinal Fluid in Proliferative Vitreoretinopathy* (Rayan Alshareef, Andrei Dan, Vincent Sun, Ameer Albahouth, Michael A. Kapusta)

6. Evaluation of effective teaching methods for the proper administration of eye drops following cataract surgery in drop-naïve patients (Jeb Alden Ong, Oscar Kasner)


Research from Labs

10. *Fixation Patterns After Macular Hole Surgery: Structural and Functional Recovery* (Hélène Defalque, OD, Jesse Michaels, MSc, Michael Kapusta, MD, Olga Overbury)

11. *Substantial Individual Differences for Binocular Rivalry and Masking* (Catherine Caldwell, Janine D. Mendola)

12. *Postural Balance in Individuals with Central Vision Loss* (Caitlin Murphy1, David Nguyen-Tri1, Rand Allabade2, Jocelyn Faubert1 & Olga Overbury1,2,3)

13. *Enhancing Visual Function with Fixation Stability and Eye Movement Training* (Rand Allabade1, Caitlin Murphy2, William Seiple3 & Olga Overbury2,4,5)

14. *The Effect of varying intensities of Blue Light on The Proliferation of Human Uveal Melanoma Cell-lines* (Sultan Aldrees, Miguel Burnier)

15. Evidence suggesting that the lactate receptor GPR81 is vital for choroid integrity in Retinopathy of Prematurity (ROP) (Xiaojuan Yang, Christiane Quiniou, José Carlise Rivera, Francois Duhamel, Houda Tahiri, Samy Omri, Raphael Rouget, Baraa Noueihed, Tang Zhu, Xin Hou, Ellen Zhou, Mathieu Nadeau-Vallée, Ankush Madaan, Prabhas Chaudhari, Pierre Lachapelle, Sylvain Chemtob)

16. Investigating the link between age-related macular degeneration and mild cognitive impairment as a function of drusen characteristics (Lorraine Thibault, Caitlin Murphy, Christina Nadon, David Nguyen-Tri, Olga Overbury)
Guest Speaker

Robert F. Hess

Dr. Robert F. Hess graduated in Optometry from the Queensland Institute of Technology in Australia in 1970 and undertook an MSc at the University of Aston in 1971. After returning to Australia, he successfully completed a PhD at the University of Melbourne on Amblyopia in 1976. He obtained an International Rotary award to pursue postdoctoral research at the University of Cambridge at which he later obtained a Meres Fellowship from St Johns College and finally a Wellcome Senior lectureship to join the Faculty in the Department of Physiology. During the 13 years he was at Cambridge, he was awarded the Edridge-Green medal for vision research by the Royal College of Surgeons and the 7th Campness medal by the Worshipful Company of Spectacle Makers.

In 1990, Dr. Hess moved to McGill University in Canada to set up the McGill Vision Research Centre, in 1993 he was awarded the Claire Bobier Award for the University of Waterloo, in 1998 was awarded a DSc from the University of Aston, UK, and in 1998, the distinguished Alumni Award from the Queensland University of Technology in Australia.

He is presently Professor and Director of Research at the McGill Department of Ophthalmology, and Director of the McGill Vision Research Unit. His publications, which number over 350, concern normal visual function and amblyopia. He holds two patents on the treatment of amblyopia and is currently part of new initiative within the MUHC to establish a Brain Trauma Centre, in which Ophthalmology will play a major part.
How did we do?

Please evaluate your experience at today’s McGill Ophthalmology Research Day by completing the survey at https://www.surveymonkey.com/r/TZGMLBZ

Your responses will help us plan for next year.

Applying for CME Credit?

This meeting is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification program of the Royal College of Physicians and Surgeons of Canada. This meeting was approved by the Canadian Ophthalmological Society. Physicians may claim a maximum of 5.5 hours.

Physicians should only claim credit commensurate with the extent of their participation in the learning activity.

Through an agreement between the Royal College of Physicians and Surgeons of Canada and the American Medical Association, physicians may convert Royal College MOC credits to AMA PRA Category 1 Credits™. Information on the process to convert Royal College MOC credit to AMA credit can be found at www.ama-assn.org/go/internationalcme.

***Learning from poster presentations may be claimed as a Scanning Activity under Section 2, as defined by the RCPSC. Physicians may claim 0.5 credits per poster with a documented learning outcome in MAINPORT.

To receive a certificate of attendance in order to claim credits, please complete the survey at https://www.surveymonkey.com/r/TZGMLBZ

We will be pleased to send you a certificate by email upon completion of the survey.
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