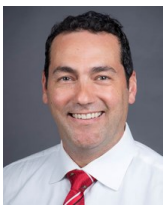
VISION SCIENCES CENTER

Upcoming Colloquium Presentations

March 8, 2017, 4pm



Aaron McGee, PhD
Assistant Professor,
Department of Anatomical Sciences & Neurobiology
"Genetic dissection of plasticity required for recovery in murine amblyopia"

https://louisville.edu/medicine/departments/anatomy/facultylist/aaron-mcgee-phd

April 12, 2017, 4pm

Gregory Field, PhD
Assistant Professor
Department of Neurobiology, Duke University
"Circuitry and Computation in the Mammalian Retina"

https://www.neuro.duke.edu/research/faculty-labs/field-lab

June 14, 2017, 4pm

Bart Borghuis, PhD
Assistant Professor
Department of Anatomical Sciences & Neurobiology

http://louisville.edu/medicine/departments/anatomy/facultylist/bart-borghuis-phd

About the colloquium and newsletter:

We are launching a monthly seminar/workshop series entitled Visual Sciences Center Colloquium in an effort to further strengthen research across the Visual Sciences at UofL. This bi-monthly newsletter serves to highlight both the seminars in Vision Sciences and the research in our laboratories. We shall use both as forums to discuss new research initiatives, strengthen collaborative ties among the Vision group, and bring in outside speakers of interest. Our seminars will meet on the second Wednesday of the month in the DOVS basement conference room of the KY Lions Eye Center. If you know of others that would like to participate please let us know. These events are open to investigators, clinicians, residents, postdocs and students.

If you have research initiatives that you would like to describe please contact us.

Editor: Maureen McCall, Ph.D.
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Visiting Lecturers

Friday, March 10, 2017, 7am-8am
KY Lions Eye Center, Basement Conf. Rm.

Rajendra S. Apte, MD, PhD
Paul A. Cibis Distinguished Professor of Ophthalmology
Washington University School of Medicine
"Mitochondrial Metabolism and Retinal Degeneration"

http://vrcore.wustl.edu/apte_rajendra/LabHome.aspx

Monday, March 13, Noon
Homberger Library HSC-A, Rm 614

Jillian Pearring, PhD
Postdoctoral Scholar
Department of Ophthalmology
Duke University
"The Photoreceptor Outer Segment: How to Build and Populate a Sensory Ciliary Organelle"

http://dukeeyecenter.duke.edu/research/faculty-labs/arshavsky-lab/lab-members

Recent Grant Awards

Peter Campbell, an MD/Ph.D. student in Anatomical Sciences & Neurobiology with his faculty mentor, William Guido. Congratulations to Peter, who just received an F30 grant!

Peter Campbell, BA (Guido Lab)
F30 NEI
"Formation and Maturation of Projections Between Thalamic Reticular Nucleus and Dorsal Lateral Geniculate Nucleus"

Henry Kaplan, MD/Douglas Dean, PhD/Maureen McCall, PhD
NIH R01
"Cone Rescue in Retinitis Pigmentosa"

Maureen McCall, PhD
Harvard Sub-Contract
"Gene Therapy for adRP"
(new MOU 10/2016 – extension of current contract)

Maureen McCall, PhD
UL SOM JHFE Award
"Glycine Subunit Specific Inhibition and Ganglion Cell Visual Responses"

Qiutang Li, PhD
NIH R21
"Yap 1 is Essential to Maintain Adult RPE Differentiation"

Charles Barr, MD
MAKO Ohr-Pharma (Clinical Trial)
"A Phase III Study of the Efficay and Safety of Squalamine Lactate Ophthalmic Solution, 0.2% Twice"

Rahul Bhola, MD
WHAS-Crusade for Children
"63rd Annual WHAS-Crusade for Children Award"
(request for funding from DOVS)"

Douglas Borchman, PhD
North Slope Burrough (contract)
"Lens, Lipids, Oxidation, Lifespan and Bowhead Whales"

Bart Borghuis, PhD
Karl Kirchgessner Foundation for Vision Solutions
"Neural mechanisms of information processing in parallel retinal bipolar cell pathways"

DOVS Grand Rounds

Friday, March 3, 2017, 7am-8am
Hossein Asghari, MD
Assistant Professor
Department of Ophthalmology & Visual Sciences
"Corneal transplant: Types and Case Selection"
http://www.louisvilleeyedocs.com/hossein-asghari-md/

Friday, April 7, 2017, 7am-8am
Douglas Sigford, MD
Assistant Professor
Department of Ophthalmology & Visual Sciences
"Endophthalmitis: Why We Get It and What We Can Do About It"
http://www.louisvilleeyedocs.com/member/doug-sigford-md/clinical-faculty/

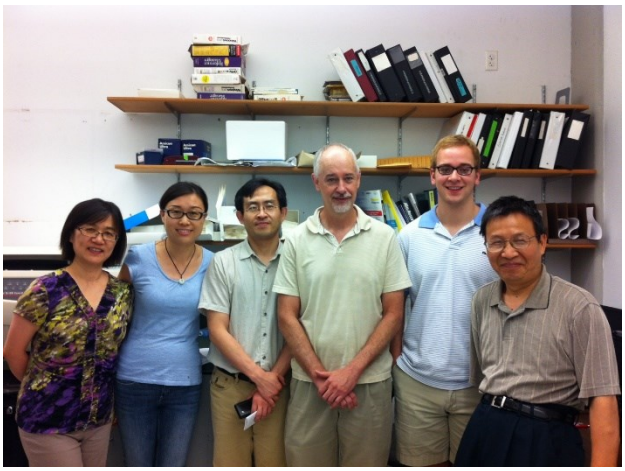
Friday, April 14, 2017, 7am-8am
Maureen McCall, PhD
Professor
Department of Ophthalmology & Visual Sciences
"Retinal ganglion cell function in the normal and diseased retina"
http://www.louisvilleeyedocs.com/member/maureen-mccall-ph-d/research-faculty/

In Case You Missed It!

Douglas Dean, PhD
Professor
Department of Ophthalmology & Visual Sciences
Robert W. Rounsavall Jr. and Gretchen C. Rounsavall Endowed Chair in Ocular Molecular Oncology
"Zeb1/Id2 Axis Induces a Two-Step Gene Expression Signature Driving Amoeboid Migration and Invasion in Uveal Melanoma"

Dean Seminar Synopsis:
In many cancers, the prognosis depends on the invasiveness and metastasis of the tumor cells. Uveal melanomas are comprised of two types of tumor cells that differ in their morphology, their invasion and metastatic properties. In contrast to tumors that have a significant proportion of cells with spindle shapes, uveal melanomas with a preponderance of epithelioid morphology are associated with a poor prognosis. Our goal is to determine what governs the shapes of these cells and if shape is related to invasion and metastasis. If we can understand what causes these properties, we can target them and alter a patient's long term prognosis.

In cutaneous melanoma, two genes are known to drive metastasis: a downregulation of Ppargc1 and its target Id2. In uveal melanoma, Id2 is independent on Ppargc1 and instead Id2 is downregulated by Zeb1 repression. We think that Zeb1 may be a key player in determining tumor cell morphology, invasion and metastasis. We show that Zeb1 is induced in epithelioid cells at the invasive front of uveal melanomas. We provide evidence Zeb1 is required for cell invasion in vivo. We have linked this Zeb1/Id2 axis and invasion to the amoeboid movement of epithelioid cells, which facilitates their rapid migration in suspension through confinement imposed by 3D tumor outgrowth. Our work shows that Zeb1/Id2 drives a two-step amoeboid migration signature that diminishes cell adhesion and induces cytoskeletal changes that propel cells in suspension. Now that we know that Zeb1/Id2 are crucial for this function, our work will determine if alterations to their function can alter metastasis and improve patient outcome.



From left to right: Xiaoqin Lu, Lei Gao, Sang Joon Lee, Douglas Dean, Kevin Dean, Yongqing Liu

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I am grateful for the care and scientific endeavors provided at the University of Louisville Department of Ophthalmology & Visual Sciences!

Enclosed is my gift of: $25 $50 $100 other_____
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_____Please contact me regarding other giving opportunities to benefit UofL Health Sciences