

THE DEPARTMENT OF MICROBIOLOGY & MOLECULAR CELL BIOLOGY

AT EASTERN VIRGINIA MEDICAL SCHOOL

CHAIRMAN'S CORNER: THE ART OF SCIENTIFIC COMMUNICATION

At the recent meeting of Microbiology Chairs, the importance of our ability to communicate science to the public was emphasized. Of course, scientific communication is an essential part of our day to day activities – students, mentors, faculty and postdocs all have to communicate to move the lab forward. We have to interact and develop relationships with our collaborators and present our research in various forums to fellow scientists, on-campus and at conferences. But there is a distinct difference between communication with our peers and that with the general public. Such communication is essential to building public trust

in science and research. In addition, this can be an important way to convince legislators of the need for continued funding in science. This is a different type of scientific communication than that we normally use, and it takes deliberate effort and practice. There are many ways and forums to do this – one potential way that we could take advantage of in Hampton Roads with the proliferation of Micro-breweries is “Science on Tap” events – these have sprung up all over the country and are a relaxed way for scientists and the interested public to interact and discuss science. If anyone is interested in starting a “Science on Tap” in Norfolk – let’s chat! □

FACULTY NOTES: CONFERENCES & PRESENTATIONS

Dr. Woong-Ki Kim gave an invited platform presentation, “Proliferation of Perivascular Macrophages and HIV Infection of the CNS,” at the Cold Spring Harbor Asia conference on Novel Insights into Glia Function & Dysfunction, which was held in Suzhou, China, Dec. 5th - 9th.

Dr. Dianne Daniel served on two review panels for the Florida

Department of Health’s Bankhead-Coley Cancer Research Program in December.

Dr. Woong-Ki Kim presented at the Ragon Institute of MGH, MIT, and Harvard Meeting series “Macrophage Infection by HIV: Implications for Pathogenesis and Cure” in Cambridge on January 6th.

Dr. Julie Kerry attended the

American Medical School Microbiology and Immunology Chairs meeting in Panama City, Panama January 18-22. At the meeting, Dr. Kerry was confirmed as Chair of the AMSMIC Education Committee.

Dr. David Mu has been appointed to Leukemia Lymphoma Society Hampton Roads Executive Committee as of February 14th. □

KUDOSKUDOSKUDOS KUDOSKUDOS KUDOS

Congratulations to Dr. Monicah Njogu Bwayi who has accepted a prestigious Postdoctoral Research Fellow position at St. Jude Children's Research Hospital in the Department of Chemical Biology & Therapeutics! Monicah successfully defended her PhD thesis entitled: "Dissection of siah2 e3 ligase function and molecular targeting mechanism in human cancer cells" on December 5th". □

NOTEWORTHY

With the changes to the MD Curriculum, the Medical Microbiology course was completed for the final time in December 2016. With that the Timothy J. Bos Award, which previously was given to the top Medical Microbiology student for the year, will in the future be awarded to the top Biotechnology Master's graduate – Dr. Bos was a Co-Principle Investigator on the National Science Foundation grant that started the Biotechnology program! □

GRANT SUBMISSIONS

NIH R21 Title: PIC1 inhibition of myeloperoxidase activity. PI: **Kenji Cunnion**, Co-Is: **Neel Krishna**, Frank Lattanzio, Alice Werner.

American Heart Association. Title: Complement inhibition as a neuroprotective strategy in neonatal hypoxic-ischemic encephalopathy. PI: Tushar Shah, Co-Is: **Kenji Cunnion**, **Neel Krishna**, Frank Lattanzio, Richard Britton, Tom Bass.

NIH R21 Title: Executive function evaluation after treatment with peptide inhibitor of complement in a rat model of neonatal hypoxic-ischemic encephalopathy. PI: Tushar Shah, Co-Is: **Kenji Cunnion**, **Neel Krishna**, Frank Lattanzio, Richard Britton, Tom Bass.

NIH R21 Title: Pathway of MCM8 Actions in the Ovary. PI: **Dianne Daniel**, Silvina Bocca, **Edward Johnson**, and Gerard Celia.

CRCE. Title: MicroRNA & Exosome Therapeutics for Aggressive Prostate Cancer. PI: Aurora Kerscher.
CHRB. Title: The role of differentially expressed mitochondrial energy production genes as regulators of amyloid precursor protein processing in Alzheimer's disease. PI: Frank Castora, **Aurora Kerscher**.

American Heart Association Title: B cells in atherosclerosis. PI: **Elena Galkina**.

CHRB. Title: Regulation of the immune response in atherosclerosis. PI: **Elena Galkina**.

NCI Fellowship. Title: Focal adhesion modulation in Drosophila as a model for cancer metastasis PI: **Robert VanSciver**.

Mary Kay Foundation. Title: RAS pathway biomarkers are highly prognostic to quantify therapy efficacy, identify resistant tumor clones, and predict patient survival in metastatic triple negative breast cancer (TNBC) in the clinic. PI: **Amy Tang**.

NIH RO1. Title: Neural regulation of stress, immune, sleep interactions. PI: **Larry Sanford**, Laurie Wellman, **Richard Ciavarra**, **Patric Lundberg**.

JDRF/University of Florida. Title: The JDRF nPOD Viral Work group: nPOD-V. PI: Jerry Nadler, **Julius Nyalwidhe**, Margaret Morris. □

WELCOMES AND FAREWELLS

Welcome **Yayra Asante** who joined **Dr. Julius Nyalwidhe's** Lab in January as Research Associate.

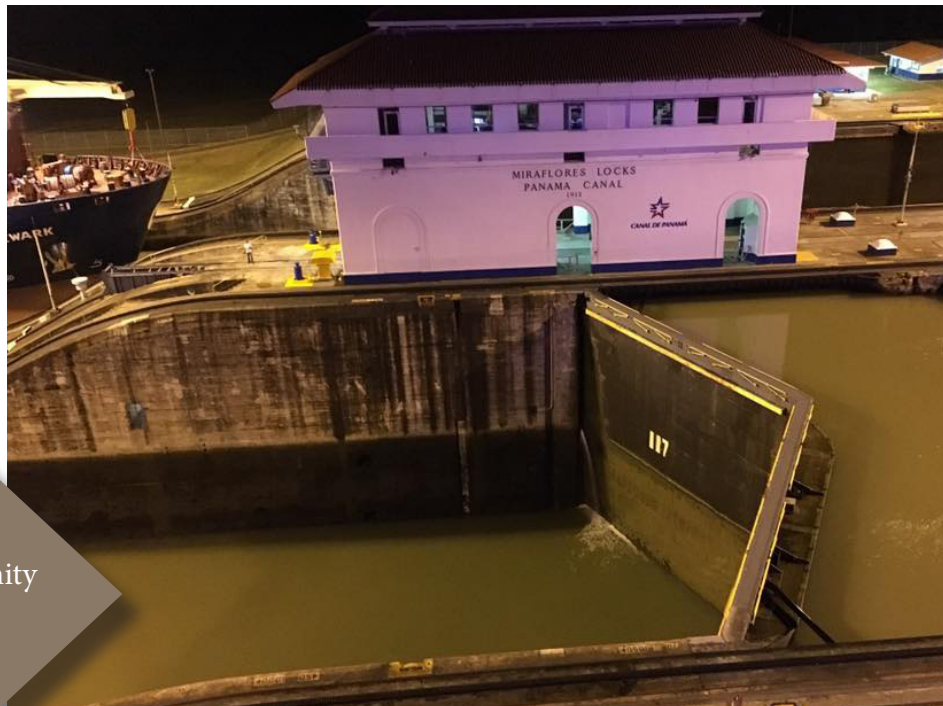
CHALKTALKS

Dr. O. John Semmes – December 6th – Human T-cell Leukemia Virus Oncoprotein Commandeers Ubiquitin Signaling

Dr. David Taylor Fishwick – January 17th – Electron-proofing the Pancreatic Beta Cell □

AMSMIC MEETING

While in Panama at the AMSMIC meeting, Dr. Kerry had the opportunity to visit one of the locks on the canal. Pictured at right. □



PUBLICATIONS PUBLICATIONS PUBLICATIONS

Shah TA, Nejad JE, Pallera HK, Lattanzio FA, Farhat R, Kumar PS, Hair PS, Bass WT, **Krishna NK**. Therapeutic hypothermia modulates complement factor C3a and C5a levels in a rat model of hypoxic ischemic encephalopathy. Pediatric Research. 2017 Feb 1. doi: 10.1038/pr.2016.271.

Hair PS, Sass LA, **Krishna NK**, **Cunnion KM**. Inhibition of myeloperoxidase activity in cystic fibrosis sputum by Peptide Inhibitor of Complement C1 (PIC1). PloS One. 2017 Jan 30;12(1):e0170203. doi: 10.1371/journal.pone.0170203.

Cunnion KM, **Krishna NK**, Pallera HK, Cottler PS, **Gregory Rivera M**, Hair P, Lassiter BP, Huyck R, Clements MA, Hood AF, Rodeheaver GT, Nadler JL, Dobrian AD. Complement activation and STAT4 expression are associated with early inflammation in diabetic wounds. PLoS One. 2017 Jan 20;12(1):e0170500. doi: 10.1371/journal.pone.0170500.

Ciavarra RP, **Lundberg P**, Machida M,

Ambrozewicz MA, Wellman LL, Steel C, Sanford, LD were c “Early gene activation initiates neuroinflammation prior to VSV neuroinvasion: Impact on antiviral responses and sleep. J. Neuroimmunol. 2016 Dec 29. pii: S0165-5728(16)30336-8. doi: 10.1016/j.jneuroim.2016.12.002. [Epub ahead of print]

Woong-Ki Kim co-authored the article “HIV-1 Tat disrupts blood-brain barrier integrity and increases phagocytic perivascular macrophages and microglia in the dorsal striatum of transgenic mice” published in the February issue of Neuroscience Letters.

David A Taylor-Fishwick ,Corresponding Author,” Relationship of NADPH Oxidase-1 expression to beta cell dysfunction induced by inflammatory cytokines” Biochemical and Biophysical Research Communications.

Phelps CA, **Lai S**, **Mu D**. Roles of Thyroid Transcription Factor 1 in Lung Cancer Biology (Chapter Title), Thyroid Hormone (Book Title). Litwack G, Editor. United

Kingtom, Publisher: Elsevier, 2017, Accepted for publication.

Siewertsz van Reesema LL*, Lee MP*, Zheleva V, Winston JS, O’Connor CF, Perry RR, Hofer RA, and **AH Tang**. “RAS pathway biomarkers for breast cancer prognosis”. Clin Lab Intl. 2016 Nov; 41:18-23.

Van Sciver RE*, **Njogu MM***, Isbell AJ, Odanga JJ, **Bian M**, **Svyatova E**, Siewertsz van Reesema LL, Zheleva V, Eisner JL, Bruflat JK, Schmidt RL, Tang-Tan AM, and **AH Tang** (2017) “Blocking SIAH Proteolysis, an Important K-RAS Vulnerability, to Control and Eradicate K-RAS-Driven Metastatic Cancer”. in Conquering RAS: From Biology to Cancer Therapy, pages 213-232. DOI: 10.1016/B978-0-12-803505-4.00012-6.

Hair PS, Sass LA, Vazifedan T, **Shah TA**, **Krishna NK**, **Cunnion KM**. 2017. Complement Effectors, C5a and C3a, in Cystic Fibrosis Lung Fluid Correlate with Disease Severity. PloS One, in press. □

FACULTY AND OFFICE STAFF

Julie A. Kerry, PhD

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Dianne C. Daniel, PhD

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Xin Guo, PhD

Aurora Esquela-Kerscher, PhD

Woong-Ki Kim, PhD

Neel K. Krishna, PhD

Rasjasekaran Koteeswaran, MD

Patric S. J. Lundberg, PhD

David Mu, PhD

Julius O. Nyalwidhe, PhD

Julia Sharp, PhD

Amy H. Tang, PhD

David A. Taylor-Fishwick, PhD

Lifang Yang, PhD

Secondary Appointments

Richard A. Britten, PhD

*Dept. of Radiation Oncology &
Biophysics*

Kenji M. Cunnion, MD

Dept. of Pediatrics

Nancy M. Khardori, MD, PhD

Dept. of Internal Medicine

Tushar Shah, M.D.,

Dept of Pediatrics

Adjunct Faculty

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Norfolk State University Dept. of Biology

Richard Heller, PhD

Old Dominion University

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Edward Oldfield, MD

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