Dear Colleagues

Looking back over 2019, I can readily conclude that we, the people of the Department of Biomedical Sciences, again have done very well. Thank you!

A prime example of our excellent contributions and commitment to the mission of the College is the recent LCME site visit. This took a great deal of individual and team work by many of us, especially over the last year and a half. In fact, as one of our faculty commented, “we started just after the last site visit”, which was eight years ago.

At ETSU, our college and department, people come first. We welcomed Dr. Tyrone Genade as a new faculty member and are looking forward to our latest recruit, Dr. Brooke Schmeichel to join us in February 2020. We are currently in the middle of recruiting three more new faculty and I am grateful to all who gave and are giving of their time. We also welcomed new graduate and undergraduate students, as well as several lab technicians. These new team members will help us to ensure the continued success and momentum in our teaching and research. Sadly, we had to say farewell to long-time faculty member Dr. Yue Zou and grieved the passing of Emerita faculty member Dr. Uta Schambra.

None of our success would be possible without the hard work of our very competent administrative staff. On behalf of the department, I am very grateful and commend you for your personable and professional service to the College and university.

I am confident that we will continue to make progress and, if needed, will adapt well to challenges that may come our way.

Wishing you and yours a well-deserved break during the holidays.

Theo Hagg

Happy Holidays
Nearly 8 years ago, I had a discussion with another scientist in which he detailed his scientific accomplishments. Furthermore, he loudly proclaimed, “No one helped me - I did this by myself”. I was shocked by his indifference to the assistance that his former advisors, chairs, colleagues, students, and staff members had provided. I was first inclined to point out these omissions, but instead chose to ruminate upon his comments. Put simply, I asked myself: Upon whose shoulders have I stood while building my career?

I have not, in the grand scheme, accomplished very much – certainly not what I hoped as an idealistic new PhD student. Despite that, I have identified a long and ever expanding list of people who, through their hard work, kindness, and willingness to help, had made my career possible. Dr. Richard Ortez, my first undergraduate research advisor, was one such person. He was both kind and supportive – but had very high expectations of his students. His courses, of which I took several, were more challenging than any other undergraduate or graduate courses I ever encountered. However, these courses provided an effective springboard into my graduate education. As you might expect, Dr. Ortez was not a favorite of many students and, thus, his course evaluations suffered. As a consequence, he was not awarded tenure – despite the fact that many students, including myself, wrote letters of support on his behalf. After he left my undergraduate institution, Dr. Ortez continued to support my career advancement. Indeed, I suspect that his strong letter of recommendation was the reason I was admitted to my PhD program. He was also the person who first kindled my interest in microbiology and immunology, so in a very concrete sense, I owe my current position at QCOM to him.

Over the last half decade, I have periodically reached out to those on my mental “list”, with emphasis on those with whom I have lost touch. In each communication, I provide a precise accounting of how that person had nurtured, supported and promoted my personal and professional development. I have found this process to be very useful: not only by giving credit where it is due, but also to identify opportunities for improving my interactions with family, friends, colleagues and students.

The following is an excerpt of a letter that my undergraduate research advisor, Dr. Ortez, sent back to me, which reveals the most important lesson of all.

My dear Dr. Schoborg,

Rob, please allow me the joy of addressing you so formally, just this once. I am so happy for you, and congratulate you on the success you have found in life; and, I am honored that you find me some contribution toward it.

It is important that you realize just how significant your letter is to me, in both content and timing. As you probably do not know, I ultimately lost my tenure fight at ***; even after the grievance committee (the one to which you and over 30 other former students sent letters of support) took my side, and recommended to the university president that I should be promoted and tenured.... He chose to ignore that recommendation, a decision that forever changed the course of my career.

The other thing that you could not have realized is that only 3 weeks before your letter arrived something happened that re-opened these wounds, and I was bleeding profusely. You see – a major part of my department’s argument against me was that I was a bad teacher. Your letter had the effect of confirming in me my belief that that was not true. It was a most important confirmation, coming at a most critical time…

This letter reminded me how significantly saying “thank you” may impact the life of another person. In this vein, I encourage everyone in the QCOM family to thank those who have helped make their career and personal development possible. Additionally, to my students and colleagues - if I have failed to thank you enough please accept my apologies. You have my gratitude for all of your kind deeds and my assurance that I will better acknowledge your many contributions in the future.
FUNDING—CONGRATULATIONS!

Principal Investigator: Dr. Qian Xie
Award Years: 9/15/19 – 9/14/21
Total Grant Award: Direct $400,000 Indirect $179,103; Total $579,103
Agency: ideal Award from Department of Defense

Title: Met-Targeting chimeric antigen receptor (MetCAR) T-Cell therapy in hepatocellular carcinoma.

Project Narrative: Hepatocellular carcinoma (HCC) is the most malignant type of liver cancer without effective treatments. Pathologically, hepatitis B or C virus (HBV/HCV) infection induces hepatitis, which triggers the activation of hepatocyte growth factor (HGF) as a repair mechanism, functioning through its receptor Met. However, the rapid growth of hepatocytes in turn facilitates viral replication. The repetitive cycle of liver injury and repair ultimately leads to HGF/MET pathway alteration which is a major cause to HCC. Because Met expression correlates with a short survival in HCC patients, targeting Met is becoming a promising strategy for treating malignant HCC. The objective of this application is to evaluate the therapeutic potential of Met-targeting CAR T cells in advanced HCC. The hypothesis is that Met is a promising tumor associate antigen for developing CAR T cell therapy for targeting HCC with MET overexpression. In aim 1, the team will generate MetCAR T cells using T cells from HCC patients and determine the therapeutic efficacy and specificity against HCC cells in vitro. In aim 2, human HCC orthotopic xenograft models will be used to evaluate the anti-tumor efficacy of MetCAR T cell therapy in vivo and compare the results with a MET inhibitor that is known to prolong survival in advanced HCC patients. The aim 3 will explore the molecular basis of MetCAR T cell activity and regulation using cell-based assays. This is a translational research project in collaboration with several senior faculty members at ETSU. Dr. Joseph Lee (Department of Surgery) will consent HCC patients for blood sample collection and analysis; Dr. Zhiquang Yao (Department of Internal Medicine) will assist with functional analysis of CAR T cell activity; Dr. Krishna Singh will assist in using ultrasound guided imaging as a method to diagnose HCC orthotopic xenograft models; Dr. John Schweitzer (Department of Pathology) will assist in preclinical pathological analysis with animal tumor samples. The project anticipates that MetCAR-T cells may specifically and potently inhibit Met-positive HCC in preclinical models. For long-term, the research outcomes may guild human clinical trials and prolong survival time in HCC patients.

Principal Investigator: Dr. Michelle Chandley (Adjunct Faculty)
Co-I: Dr. Gregory A. Ordway; Dr. Russ Brown
Award years: 4/1/2019 — 3/31/21
Total Grant Award: $444,000
Agency: NIMH R15MH119628-01

Title: Neuroinflammatory mediators of glutamatergic and GABAergic neuropathology in the anterior cingulate cortex of autism spectrum disorder.

Project Narrative: The anterior cingulate cortex of the brain mediates social behavior, disruption of which is a core behavioral manifestation of autism spectrum disorder. This research will employ state-of-the-art research methods to elucidate the molecular and synaptic pathology of two prominent neuronal cell types in the anterior cingulate cortex, using postmortem brain tissue from highly characterized autism spectrum disorder donors and matched control brain donors, and brain tissue from mice of common animal models of autism at two developmental time points. These studies are critical to determining how well animal models recapitulate the molecular pathology of human ASD and will provide a framework for a rational approach to rodent screening of drugs to treat or halt the progression of ASD.
FUNDING—CONGRATULATIONS!

Intramural RDC Major Grant Awards—Funding Period 7/1/2019 to 6/30/2020

Dr. Chad Frasier. Project Title: Determining the effect of Dravet Syndrome on cardiac potassium channels. Total Award: $10,000.

Dr. Jennifer Hall. Project Title: Impact of Candida albicans quorum sensing molecules and B-glucan on Chlamydia trachomatis infections in vitro. Total Award: $10,000.

Dr. Yong Jiang. Project Title: Disable 2, A novel player in chemotherapy resistance and tumor recurrence. Total Award: $10,000.

Dr. Michael Kruppa. Project Title: The role of epigenetic and transcriptional regulation during quorum sensing in the opportunistic pathogen C. albicans. Total Award: $10,000.

Dr. Gregory A. Ordway. Project Title: Design and synthesis of Novel PARP1 inhibitors with properties that permit brain penetration and retention. Total Award: $10,000.

Dr. Aaron Polichnowski. Project Title: Role of urokinase pathway and mitochondrial dysfunction in the etiology of kidney disease and hypertension in the Dahl rat. Total Award: $10,000.

News from the Quillen College of Medicine Advancement Office

The QCOM Advancement Office is pleased to announce that Mona Salyer, Director of Development, will be joining Carol Sloan, Director of Development and Alumni Relations. She comes to us from King University, where she worked for 14 years. Mona’s office is located in Stanton-Gerber B231. She is excited to meet the QCOM faculty/staff/alumni, so feel free to stop by her office or reach out at 423.439.7317 / salyerrd@etsu.edu.

As an advancement team, Carol and Mona are available to help you better understand how you can give and positively impact our students now and in the future. We want to encourage you to visit the QCOM Giving page and make your gift to the project for which you are passionate. This can be general to the college or specific to your department. You may also feel led to give to an ETSU project in another area of campus. If you don’t see what you are looking for or if you have an idea, please contact us to talk about it. Wherever you decide to give, it will ultimately serve our mission, benefit our students and enhance their educational experience.

Currently, we have a unique opportunity for a $25,000 match! You could easily turn your gift into a $50,000 one and double your impact! The opportunity is offered on a first come, first serve basis, so let us know as soon as possible if you are interested.

Reminder . . . For those age 70 1/2, IRA Charitable Rollovers must be made by December 31 for the tax benefit for 2019. This is a great way to support QCOM with your gift!

GO BUCS! Please join us the QCOM tailgates this fall! Contact Carol Sloan with questions at sloanc@mail.etsu.edu / 423.439.6142 or Pat Elledge ELLEDGE@mail.etsu.edu / 423.439.6316.

In Remembrance...

Dr. Uta Schambra passed away after a long struggle with kidney and heart failure. She was at home, in the company of her children and with a view of the well-loved garden of her lakefront home. The family bid her farewell in a private ceremony.

Dr. Schambra joined the Department of Anatomy & Cell Biology in 1993. She retired from the Department of Biomedical Sciences January 5, 2016. Upon her retirement she was awarded Professor Emerita appointment February 2016.
Academic Journal /Publications


Academic Journal/Publications (Cont'd)


**Gregory A. Ordway, PhD, Appointed Associate Dean for Research and Graduate Education**

Dr. Gregory Ordway has accepted the appointment of Associate Dean for Research and Graduate Education for the College of Medicine, effective November 1, 2019.

Dr. Ordway has had a strong and successful career in research and teaching. He was Chair of Pharmacology (nearly 7 years), Interim Chair of Biomedical Sciences (2 years), and Senior Advisor to the Dean for Research (5 years). As a researcher he has maintained strong grant funding throughout his career. He has been instrumental in training postdoctoral, graduate, and undergraduate students. Prior to ETSU he served as Assistant Vice Chancellor for Research at the University of Mississippi.

Our congratulations are extended to Dr. Ordway on this promotion. Dr. Ordway remarks, “that he is excited to have the opportunity to work with all faculty, staff, and students to enhance the research mission of the College of Medicine, and likewise to facilitate the college’s educational mission through research.”

**Priscilla B. Wyrick, PhD, Professor Emerita, among the Marquis Who’s Who Lifetime Achievement Awardees for 2018.**

“Marquis Who’s Who, the world’s premier publisher of biographical profiles, is proud to present Priscilla B. Wyrick with the Albert Nelson Marquis Lifetime Achievement Award. An accomplished listee, Priscilla Wyrick celebrates many years' experience in her professional network, and has been noted for achievements, leadership qualities, and the credentials and successes she has accrued in her field. As in all Marquis Who's Who biographical volumes, individuals profiled are selected on the basis of current reference value. Factors such as position, noteworthy accomplishments, visibility, and prominence in a field are all taken into account during the selection process.” [Chapel Hill NC, August 28, 2018/24-7PressRelease]

“Dr. Wyrick remained active and engaged in her professional circles as a member of the American Society for Microbiology, the Society for Infectious Diseases, and was elected the 2nd President of the Chlamydia Basic Research Society. For her many accomplishments, she was an elected Fellow of the American Academy for Microbiology and the American Association for the Advancement of Science.” [The Wall Street Journal, November 20, 2018 Edition]

Dr. Wyrick retired from the College of Medicine July 31, 2012, after 12 years as Chair of the Department of Microbiology. Upon retirement she was awarded Professor Emeritus status on July 2, 2012.

Many thanks to Dr. Jennifer Hall for bringing our attention to Dr. Wyrick’s Lifetime Achievement award. We are extremely proud that Dr. Wyrick received this well-deserved and prestigious award.
Scientific Meetings/Presentations

Dr. Michelle Duffourc was invited to submit a symposium session proposal for the International Association of Medical Science Educators (IAMSE) Annual Meeting to be held in Denver, CO in June 2020. The theme of the meeting is “Scaling New Heights: Envisioning the Future of Health Sciences Education”. Dr. Duffourc will co-chair the session entitled “Scaling Barriers: Tools to vertically integrate foundational sciences into clerkship years.” She will collaborate with Drs. Laurel Gorman of the University of Central Florida and Robert Theobald from ATSU-KCOM.

Dr. Gregory Ordway presented at the International Summit on Suicide Research.
Title: Potential role of brain poly (ADP-ribose) Polymerase 1 (PARP1) in the pathology of major depressive disorder and suicide. October 27-30, 2019, Miami, FL.

Dr. Don Hoover gave an invited presentation titled “Neurochemical Anatomy of Cardiac Regulation” on May 13 for the Laboratory of Cardiovascular Science at the National Institute on Aging in Baltimore, MD. His host for the visit was Ed Lakatta, MD, Senior Investigator and Laboratory Chief.

Dr. Aaron Polichnowski will be giving an invited presentation at the American Society of Nephrology meeting. Title of the session: Basic/Clinical Science Session, AKI Repair, Nonrecovery, and Transition to CKD. Title of Talk: Hemodynamic Mechanisms of Progression from AKI to CKD. November 7, 2019, Washington, DC.

Dr. Qian Xie supported by an American Brain Tumor Association Travel Award attended the 1st Annual Symposium on Big Data and Precision Health at Woo Center for Big DATA and Precision Health (DAP). October 24, 2019, Duke University, Durham, NC.

Dr. Jiang Yong attended the FASEB Science Research Conference (SRC). The TGF-β Superfamily Conference: Signaling in Development and Disease, held July 28-August 2019, West Palm Beach, FL.

Dr. Valentin Yakubenko presented two posters at the Shock Society meeting held June 2019, San Diego, CA:
Title: The anti-sepsis mechanism of macrophage integrin αDβ2 Is mediated via regulation of macrophage migration and bacterial phagocytosis. [Christopher L. Ardell, Tammy R. Ozment, Kui Cui, William P. Bailey, David L. Williams, Valentin P. Yakubenko].
Title: A new role for the α7 nicotinic acetylcholine receptor in macrophage migratin to liver, lung, and spleen during murine endotoxemia. [Valentin P. Yakubenko, Kui Cui1, Meghan Addorisio, David L. Williams, Valentin A. Pavlov].

Dr. Valentin Yakubenko, and his graduate student, Cui Kui, presented a poster at the Atherosclerosis Gordon Research Conference. Title: Blockade of macrophage adhesion to end-product of dha oxidation prevents macrophage accumulation during chronic inflammation. [Kui Cui, Christopher Ardell, Nataly Podolnikova, Tatiana Ugarova, Eugene Podrez, Tatiana Byzova, Valentin Yakubenko]June 2019, Newry, ME.

Dr. Valentin Yakubenko’s work was also presented at the Neuroscience Society meeting. Title: New insight into the role of the α7 nicotinic acetylcholine receptor in the neuro-immune dialogue and in mediating tissue macrophage migration in murine endotoxemia [Valentin Yakubenko, Kui Cui, Meghan Addorisio, David L. Williams, Valentin A. Pavlov], October 2019, Chicago, IL.

Review Study Sections

Dr. Alok Agrawal served on the NIH “Innate Immunity and Inflammation” Study Section grants review committee, June 6-7, 2019, Alexandria, VA.

Dr. Valentin Yakubenko served on the “Surgical Sciences, Biomedical Imaging and Bioengineering” Study Section review committee, National Institute of Health, October 29, 2019, Bethesda, MD.

Dr. Theo Hagg served on the “Clinical Neuroplasticity and Neurotransmitters” NIH Study Section, October 1-2, 2019.
Dr. Alok Agrawal received ETSU’s Distinguished Faculty Award for Research. “The Distinguished Faculty Awards are the highest honors bestowed by ETSU upon faculty in the areas of teaching, research and service, with winners nominated and selected by their faculty peers.” (ETSU Accent 8/5/19).

Dr. Alok Agrawal received the 2018-2019 Biomedical Sciences Graduate Students’ “Professor of the Year Award.”

Dr. Alok Agrawal received the 2018-2019 Biomedical Sciences Graduate Students’ “Outstanding Faculty Mentorship Award.”

This year Crystal Maupin began her fourth year as a member of the Staff Senate. Her senate term is for three more years and will end August 2022, unless she is re-elected. Crystal was elected as Treasurer for the Staff Senate Executive Board this senate year. This term will end August 2020. Congratulations are extended to Crystal on this appointment. (Photo from ETSU Accent). Crystal was Co-Chair of the Picnic Committee one previous year. Last year she was Chair of the Picnic Committee, and she will Chair the Picnic Committee again in May 2020. Her enthusiasm for ETSU Pride is evidenced particularly through her participation in ETSU Pride Week. Crystal has won 1st Place twice in the Pride Week Door Decorating Competition. She has placed every year except one.

Dr. Doug Thewke, Professor, was recipient of the First Annual Faculty Award for Teaching Excellence and Innovation (2018-19).

Jerry Keplinger, Coordinator, was recipient of the First Annual Staff Award for Teaching Excellence and Innovation (2018-19).

Dr. Alok Agrawal received ETSU’s Distinguished Faculty Award for Research. “The Distinguished Faculty Awards are the highest honors bestowed by ETSU upon faculty in the areas of teaching, research and service, with winners nominated and selected by their faculty peers.” (ETSU Accent 8/5/19).

Dr. Alok Agrawal received the 2018-2019 Biomedical Sciences Graduate Students’ “Professor of the Year Award.”

Dr. Alok Agrawal received the 2018-2019 Biomedical Sciences Graduate Students’ “Outstanding Faculty Mentorship Award.”

Michael Cartwright, PhD, has been accepted into the Quillen College of Medicine Medical School Class of 2023. Michael was a graduate student with the laboratory of Dr. Yue Zou. Congratulations are extended to Michael on his accomplishments.

Kui Cui, completed his dissertation defense June 26, 2019. A graduate student from Dr. Yakubenko’s lab, Kui Cui (Frank) graduated August 2019. Upon graduation, he accepted a postdoctoral position at the Harvard Medical School, Boston, Massachusetts, in Dr. Hong Chen’s laboratory.
Anna Musket was among the finalist in the 3MT Three Minute Thesis Competition held on November 13th at ETSU. Anna was awarded Second Place. In the event that the First Place winner cannot attend the national competition, Anna would then represent ETSU. The event was created to “provide graduate students an opportunity to develop their professional presentation and research communication skills...the objective of the event is to distill projects into an engaging three-minute presentation designed for a general (non-specialist) audience using just one slide.” Anna is a Biomedical Science graduate student and works with Dr. Qian Xie.

DR. YUE ZOU RETIRES

Dr. Yue Zou, Professor, retired from the Department of Biomedical Sciences on August 1, 2019. Upon his retirement he accepted a faculty position with the University of Toledo, Ohio. He remains an Adjunct Faculty member with ETSU. Dr. Zou joined the Department of Biochemistry & Molecular Biology in 2001 as Associate Professor. In 2007 he was promoted to Professor. The retirement reception for Dr. Zou was a time of reconnecting and remembrance with former retired Biochemistry faculty and staff.
Crystal Maupin is anchored in ETSU pride! She went “anchors away” in office decorations and won First Place in the Pride Week Decorating Contest for 2019!

Rebecca Steele also participated in Pride Week with a door display. Many thanks to Rebecca for her participation. Nice

Crystal Maupin won Best Character for her Ronald McDonald Costume.

Tonya Ward and Baby Ellen won 7th Place in the Costume Contest.

Dr. Eric Beaumont won 3rd Place in the Pumpkin Carving Contest.

The Department of Biomedical Sciences will host the Annual Holiday Gathering, December 13, 2019, from 6 pm until 9 pm at Blackthorn Club at the Ridges. More information forthcoming soon.
Dr. Michelle Duffourc has been selected to co-chair a focused group workshop at the International Association of Medical Science Educators (IAMSE) meeting to be held in Denver, Colorado June 13 – 16, 2020. The theme of the conference is “Scaling New Heights: Envisioning the Future of Health Sciences Education”. The session, which was chosen via a competitive proposal mechanism, will be entitled “Scaling Barriers: Tools to vertically integrate foundational sciences into clerkship years”. It will briefly outline specific tools which can be used by institutions to revisit basic science content in the clerkship years followed by a facilitated discussion to address questions related to the participants’ perspectives of what topics should be revisited in clerkship, what methods have been attempted/have been successful at their own institutions (including discussion on reasons for effectiveness or lesson learned). Participants will also identify barriers to effective vertical integration and will propose mechanisms to overcome obstacles identified. Dr. Duffourc will share co-chair responsibilities with Drs. Laurel Gorman of the University of Central Florida and Robert Theobald of AT Still University.

The 2019 Medical Student Research Symposium was held on September 26th, VA Bldg. #178. Those M2 students listed below that participated in research this past summer gave poster presentations summarizing their work. Student support provided by the COM Dean and COM Departments. Dr. Aaron Polichnowski is the departmental coordinator for this program.

**Abigail Holt**—Title: “Host cell integrin signaling activation in microsporidia Encephalitozoon intestinalis adherence and infection.”  **Mentor: Dr. Russell Hayman**

**Britton Huskey**—Title: “Inhibiting bacterial exit from host cells affects chlamydial infectious progeny production.”  **Mentor: Dr. Jennifer Hall**

**Mayuri Jagadish**—Title: “Elevated poly(ADP-ribose) polymerase-1 (PARP1) immunoreactivity in major depressive disorder.”  **Mentor: Dr. Gregory Ordway**

**Paul Kirby**—“Nuclear localization of NF-κB proteins in human postmortem brain samples from psychiatrically characterized donors.”  **Mentor: Dr. Greg Ordway**

**Caleb Knisley**—Title: “Examining the impact of two NAD kinases on oxidative stress in C. elegans.”  **Mentor: Dr. Patrick Bradshaw**

**Allee Maxwell**—Title: “Inhibition of Poly(ADP-ribose) polymerase-1 alleviates anhedonia and behavioral despair in a treatment resistant model of depression.”  **Mentor: Dr. Russell Brown**

**Connor Ryon**—Title: “Renal immune cell profile in Dahl salt-sensitive and consomic salt-resistant rats.”  **Mentor: Dr. Aaron Polichnowski**

**Haley Scarbrough**—Title: “The evaluation of extracellular matrix proteins as potential substrate for macrophage migration to the site of inflammation.”  **Mentor: Dr. Valentin Yakubenko**
Internal Seminar Speakers

- **Tuqa Alkhateeb, Graduate Student.** Title: Sepsis-induced immune suppression and dysregulation of myeloid cell development. Date: August 2, 2019.

- **Russell Brown, PhD, Professor.** Title: The role of adenosine A(2A) receptors in the behavioral and plasticity response to nicotine in the neonatal quinpirole model. Date: August 16, 2019.

- **Siva Digavalli, B.Pharm, PhD, Associate Professor. College of Pharmacy.** Title: Timing is of the essence: Neural oscillatory deficits in schizophrenia and an opportunity for rational drug development. Date: August 30, 2019.

- **Fei Tu, Graduate Student.** Enhanced glycolysis contributes to cardiac dysfunction in polymicrobial sepsis Date: September 13, 2019.

- **Amy Berry, Graduate Student.** Chlamydial interactions with the female sex hormones estrogen and progesterone and their receptors. Date: September 27, 2019.

- **Ashana Puri, PhD, Assistant Professor.** Department of Pharmaceutical Sciences. Surmounting the skin barrier for drug delivery: Challenges and opportunities. Date: October 11, 2019.

- **Erik Petersen, PhD, Assistant Professor.** Department of Health Sciences. Second messenger regulation of intracellular salmonella survival, Date: October 25, 2019.

- **Cuihong Jia, PhD, Assistant Professor.** CNTF, Olfactory neuroplasticity and smell function. Date: November 8, 2019.

- **Gregory Ordway, PhD, Associate Dean for Research and Graduate Education.** PARP1 as a novel target for the treatment and/or prevention of stress-related disorders. Date: November 22, 2019.

External Seminar Speakers

Lin Zhang, PhD, Professor
UPMC Hillman Cancer Center
Dept. of Pharmacology & Chemical Biology
University of Pittsburgh School of Medicine, Pittsburgh, PA
**Cell Death Regulation in the Precision Treatment of Colorectal Cancer**
October 7, 2019

Aleksey V. Zima, PhD, Associate Professor
Dept. of Cell and Molecular Biology
Loyola University Chicago, Stritch School of Medicine, Maywood, IL
**Calcium release channel dysfunction during oxidative stress: Implications in Heart Diseases**
October 21, 2019

Zixi Cheng, Ph.D.
Associate Professor
Division of Neuroscience & Division of Metabolic and Cardiovascular Sciences
Burnett School of Biomedical Sciences
College of Medicine, University of Central Florida, Orlando, FL
**Structural and functional mapping of brain-heart connection and remodeling**
November 4, 2019

Liwu Li, Ph.D., Professor
Dept. of Biological Sciences
Virginia Polytechnic Institute and State University, Blacksburg VA
**Innate immune memory dynamics in health and disease**
November 19, 2019