Colleagues,

Please enjoy the October 2020 VTPP Success. I truly appreciate all of your continued efforts striving for excellence that ensure VTPP continues to lead in the CVMBS.

Congratulations everyone, we have made it beyond the 10th week of classes this semester. Faculty, staff and students have made an enormous effort, so thank you. However, please remember to wear a mask everywhere on campus, wash your hands and socially distance. These public health practices are critical if we want to deliver the best possible hands-on education and are equally required from students, that want to be successful. As COVID-19 cases continue to rise around the country, I urge everyone to remain diligent. Please continue to wear face coverings, wash your hands, stay home if you are ill, get tested, and quarantine if you are exposed. Texas A&M University has three kiosks located around campus where anyone can get a test. There is also frequent testing available through the CVMBS. I also encourage everyone to utilize the very informative Hopkins COVID19 dashboard https://coronavirus.jhu.edu/map.html.

The disruption of everything due to the pandemic has highlighted the change we are experiencing. VTPP and the CVMBS remain fully committed to a climate where all faculty, students, staff, and administrators feel that they are treated respectfully, and are fully accepted and valued for who they are. As we navigate our way through our new dynamic, please recognize that now, more than ever, how important it is for all of us to work together and embrace our combined future. VTPP must remain vigilant and recognize that our words and actions directly impact the sense of community and belonging that individuals feel within our department and college. Our words matter. Please continue to be mindful of them.

Please recall that at Texas A&M University, we have voting leave that allows Time Off for Early Voting. Eligible employees are entitled to take paid time off to vote in state or national elections, including early voting, with supervisory approval. Eligible employees may use this time off in those instances where they are not able to vote before or after their scheduled work shift. Voting leave is a category in Workday for Leave of Absence with Pay (I think it is the last choice in the pull-down menu). Details can be found at: https://employees.tamu.edu/benefits/leave/paid/other.html.

This month we introduce a new section in the VTPP Success. VTPP ACROSS TEXAS A&M UNIVERSITY. VTPP is a role model for research, teaching and training collaborations with faculty and students across multiple colleges at Texas A&M University. This section is designed to highlight the many connections VTPP across the Texas A&M University campus.
Please join me in welcoming Ms. Mille Mattox back to VTPP and Texas A&M University. Millie is a new Research Specialist IV who we were fortunate to recruited back in a collaboration between VTPP and CMP.

The dynamic Texas A&M University COVID-19 work plan can be found at: https://employees.tamu.edu/covid-19/vp-memo/ For more updates and guidance from Texas A&M University in the current COVID-19 scenario go to: https://www.tamu.edu/coronavirus/index.html

Don’t forget to utilize the VTPP website. Please keep your personal information and webpage current as this is our first line of access for perspective students and others. For any revisions/additions that you would like or suggestions for other items to be added to the VTPP website, please let Ms. Julie Austin and I know. There is a lot there already and we are always looking to update and improve it. https://physiology.tamu.edu/

Thank you everyone in VTPP for leading the way. Your efforts make us better every day. It is my privilege to work with all of you.

Larry
VTTP STUDENTS & trainees

Colleagues, a terrific opportunity in early 2021 for students and trainees. The DABE virtual preconference is designed to provide information regarding extracellular vesicles in biomedical embryology. Really exciting presentations, including a presentation by Dr. Randy Schekman, 2013 Noble laureate for the discovery of regulatory mechanisms driving vesicle trafficking. More information is available at: https://www.iets.org/2021

Congratulations to Trevor Self (VTTP PhD student) (Dr. Heaps, mentor) on his first-author publication and VTPP Science in Action paper for October 2020

Congratulations to Dr. Colleen Lambo (Dr. Shannon Washburn mentor), for completing the oral defense of her PhD dissertation. More efforts are ongoing to complete the written thesis, looking forward to its successful completion and the next steps!

Congratulations to Dr. Keshav Karki (Dr. Safe, PhD advisor/mentor) who has accepted a position as Scientist I Molecular Biologist at Vikor Scientific in Charleston, SC. We will miss you Keshav, but are confident you will be successful in SC! Check out the company (major interest in pathogen identification and genotyping) in particular with regard to COVID19. https://www.vikorscientific.com

VTTP EDUCATION CHRONICLES

VTTP Education Chronicles is an opportunity to share specific ideas and information regarding higher education. VTTP continued excellence in education is a major departmental strength and the information is provided to support all educational pursuits.

Highlights from BIMS125 (Animals in Society) a new class in the Aggie ACHIEVE program at Texas A&M University. The class continues to make waves and introduce these new Aggies to the world around them. Kudos to Dr Herman and Mandy and Lisa for their continued efforts. More information can be found at https://aggieachieve.tamu.edu/

November is the time for the first ever Texas A&M University virtual celebration of First-Generation students! Events happen the week of November 2nd. These students exemplify excellence and leadership as trailblazers in their families, and we are excited to honor them as part of the Texas A&M community. Details of the important celebration can be found at: http://studentsuccess.tamu.edu/Routh-First-Generation-Center/Student-Programs/First-Gen-Celebration-2020
VTPP Research Forecast

Identifying upcoming seminars, workshops, funding announcements, events, and conferences of interest to VTPP. I hope it serves as an accessible archive and reference for upcoming research events and deadlines, and sources of information to support our next generation of high impact discoveries.

VTPP Science Friday conversations continue to be stimulating and helping develop more interactions. All faculty are encouraged to attend these important VTPP research- and mission-focused discussions. The next Science Friday discussions are scheduled via Zoom for Thursday 8:30 AM, November 5 and November 19. Faculty are encouraged to step up and initiate similar interactions and discussions. If you have specific interests in leading any Science Friday discussion/topic or have specific aims to outline or develop, just let Dr. Suva know and come present and stimulate the conversation.

VTPP Seminar Series

The Fall seminar series is here and Dr. Clement has assembled some terrific speakers. The first three VTPP Seminars (Drs. Gomer, Suva, Heaps) have been terrific. Please let Dr. Clement know of other speakers you would like to hear. Seminars are held via Zoom Fridays, 2-3 PM. As always, please push, encourage and direct your graduate students and trainees to attend seminar. The Fall 2020 seminar series schedule is attached to this VTPP Success!

Research in the COVID19 era at Texas A&M University

Much is still happening with ongoing research. With research activities nearing full swing, protective measures remain essential. Please continue to monitor the VPR website regarding the latest information available regarding changes to research related to dynamic COVID-19 conditions. [https://vpr.tamu.edu/covid-19](https://vpr.tamu.edu/covid-19)

Please remember to wear masks in all TAMU locations and minimize occupancy of elevators in all buildings, including all of the research buildings.

Upcoming NIH Grant Deadlines and Opportunities

- **November 5:** R01 renewal, resubmission, revision
- **November 15:** R21 renewal, resubmission, revision
- **December 8:** New, renewal, resubmission F Series Fellowships (including F31 Diversity – NOT-OD-17-029)

For more details and upcoming submission dates go to: [https://grants.nih.gov/grants/how-to-apply-application-guide/due-dates-and-submission-policies/due-dates.htm](https://grants.nih.gov/grants/how-to-apply-application-guide/due-dates-and-submission-policies/due-dates.htm)

Upcoming NSF Grant Deadlines and Opportunities

- **January 1-January 19, 2021:** Major Research Instrumentation Program (MRI)
VTPP Research Infrastructure
VTPP continues collecting details of the major equipment and technical capabilities that exist in VTPP research laboratories. This effort will develop a framework to support VTPP investigators identify skills and equipment resources in VTPP. By identifying VTPP resources these can be leveraged multi-investigator grant applications, but also help identify where we may lack important equipment. Current resources information is available on our VTPP website. If you have not done so, please send DH your most recent grant resources page so we can continue to compile the information.

Texas A&M Research Cores
VTPP Success provides links to TAMU research core that may help VTPP researchers and identify research resources in VTPP and across the Texas A&M system.

This month we highlight the IBT Antibody and Biopharmaceutics Core (ABC) (contact: Dr. Praveen Rajendran, prajendran@tamu.edu; Ph (713) 677-7803). The core can generate customized polyclonal and monoclonal antibodies in mouse or rat hosts tailored to meet the specific needs of individual research programs. The core also provides tailored engineering of monoclonal antibodies with specialization in affinity maturation and humanization. As part of the Texas A&M Center for Epigenetics and Disease Prevention, the ABC has unique expertise generating antibodies against epigenetic targets. The ABC is open Monday to Friday 9 AM to 5 PM and is situated at 2121 W. Holcombe Blvd, Room 413 Houston, TX, 77030. Details of the available resources can be found at:

https://ibt.tamu.edu/cores/abcore/index.html
“VTPP, where innovation shapes the future of veterinary research and education”

**VTPP SCIENCE IN ACTION**

Identifying and highlighting the impactful VTPP publications of each month. The goal is to capture these articles for annual VTPP research highlights. I hope the articles serve as an accessible archive and reference of our very best VTPP Science!

The October 2020 “VTPP Science in action” article is for the first time two articles! One comes from the laboratory of Dr. Cris Heaps published in *Atherosclerosis*. The studies performed by graduate student Trevor Self (Dr. Heaps mentor) and in collaboration with Dr Newell-Fugate and Dr. Weeks were designed to evaluate a novel, non-destructive method for the visualization and characterization of atherosclerotic lesions as an alternative to or complementary to conventional histology. The data provide the first that micro-computed tomography (microCT) in conjunction with an iodine-based radiopaque agent effectively characterizes atherosclerotic plaques comparable to routine histology. The extremely interesting article that provides a potential new mechanistic paradigm (PDF attached to this email) can be found at: https://www.sciencedirect.com/science/article/pii/S0021915020305311?via%3Dihub

The second “VTPP Science in action” article comes from the work of Dr. Mahsa Zarei published in *Oncogene*. Dr. Zarei’s study continues her focus on Tuberous sclerosis complex (TSC), an autosomal dominant tumor suppressor syndrome, characterized by tumor development in multiple organs, including the kidney. TSC is caused by germline loss of function mutations in either the TSC1 or TSC2 genes. The studies reported revealed that the MITF gene (MITF-A) was consistently highly expressed in renal tumors and functions as critical driver gene of renal tumor development. As such, inhibition of MITF-A expression is a new therapeutic opportunity for this tumor. The extremely interesting article that provides a potential new mechanistic paradigm (PDF attached to this email) can be found at: https://www.nature.com/articles/s41388-020-01504-8

**VTPP STAFF**

VTPP always celebrates departmental birthdays, October 2020 birthday congratulations go to Mingquan Yan, Gracie Cooper (OMG 21!!), Rebecca Harlow, Rupesh Shrestha and Drs. Glen Laine, JeHoon Lee and Duane Kraemer. We are obviously missing another great VTPP cake celebration. Hopefully we will be able to celebrate soon. Happy birthday and congratulations everyone celebrating this month!

Thank you to all our fabulous VTPP staff. The faculty and students are appreciative of everything you do to ensure VTPP remains a great department. You make us better every day!

**VTPP ACROSS TEXAS A&M UNIVERSITY**

Identifying and highlighting the impact of VTPP across campus. I hope it serves as an accessible archive to track the extent to which our faculty, staff and students work to bring down barriers to VTPP success! This new addition is part of an ongoing description of existing VTPP interactions with the goal to generate questions about multidisciplinary opportunities and to help identify common themes that may expand future VTPP collaborations.
The Aggie Research Program (ARP) and the DeBakey Research Leadership Program engages 13 different colleges at Texas A&M University. Each college contributes to these Academic Development Programs focused on graduate students, postdoctoral fellows and junior faculty members (team leaders) overseeing undergraduate research teams. Participants oversee one of the largest undergraduate research programs in the United States (approximately 1100 undergraduate researchers in the 13 participating colleges). 26% of the 572 undergraduate presentations during Student Research week (SRW), the largest student run research program in the country, at A&M stemmed from research overseen by “team leaders” in the ARP or DeBakey Research Leadership Programs. The student-led ARP and DeBakey Leadership teams collected 40% of all the research awards earned at Student Research Week.

VTPP IN THE COMMUNITY

October was Down Syndrome Awareness Month, an opportunity to spread awareness and enhance understanding of Down syndrome, a congenital disorder in people who have an extra 21st chromosome. In recent decades, life expectancy for people with Down syndrome has more than doubled, from 25 years in 1983 to 60 years today, leading to new priorities for medical care, advocacy, and research.

October 20 marks world osteoporosis awareness day. The day identifies a year-long campaign dedicated to raising global awareness of the prevention, diagnosis and treatment of osteoporosis. Check out the details of the year long events at https://www.nof.org/world-osteoaporosis-day/

There's still time to get involved in many important ways. No matter how large or small, everyone can take part in the effort to spread awareness and support those living with this rare bone disease that is the focus of ongoing VTPP research efforts! October 30 is World HPP Day. https://www.worldhppday.org/
## Upcoming Seminars, Fall 2020 VTPP Series

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Title and Details</th>
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<tbody>
<tr>
<td>Oct 16</td>
<td>Richard Gomer, PhD University Distinguished Professor, Biology, TAMU</td>
<td>“Efficacy of potential antibiotics in a BSL-1 model of COVID-19 lung damage and cytokine storm” <a href="https://www.bio.tamu.edu/faculty-page-richard-gomer/">Link</a></td>
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<td>Oct 23</td>
<td>Larry J. Suva, PhD Professor and Department Head, VTPP</td>
<td>“Osteoblast and Osteocyte Control of Multiple Myeloma Bone Disease” <a href="https://physiology.tamu.edu/faculty/larry-j-suva/#about">Link</a></td>
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<td>Oct 30</td>
<td>Cris Heaps, PhD Associate Professor, VTPP</td>
<td>“Exercise-induced adaptations of the coronary microcirculation in ischemic heart disease” <a href="https://physiology.tamu.edu/faculty/cristine-heaps/#research">Link</a></td>
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<td>Nov 6</td>
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<td>Nov 13</td>
<td>Beverly Rothermel, PhD Associate Professor, UT Southwestern Medical School</td>
<td>Topic: Regulators of Calcineurin, mitochondria and down syndrome <a href="https://www.utsouthwestern.edu/labs/rothermel/">Link</a></td>
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<td>Nov 20</td>
<td>Arum Han, PhD Professor, Electrical and Computer Engineering &amp; Biomedical Engineering, TAMU</td>
<td>“Microfluidics and Organ-on-chip Systems for Host Pathogen Interactions and Infectious Disease” <a href="http://nanobio.tamu.edu">Link</a></td>
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<td>Nov 27</td>
<td>Thanksgiving break</td>
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<td>Dec 4</td>
<td>Mariappan Muthuchamy, PhD Professor, Medical Physiology, College of Medicine, TAMU</td>
<td>Topic: Molecular mechanisms of cardiac muscle dynamics, focus on the relationships between thin filament activation and crossbridge kinetics, and how the actin-myosin interaction signaling transmits to myofilament activation <a href="https://medicine.tamu.edu/faculty/muthuchamy.html">Link</a></td>
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<td>Dec 11</td>
<td>Fadi Khasawneh, PhD Associate Professor and Department Head, Pharmaceutical Sciences, TAMU</td>
<td>“Discovery of New Targets and/or Agents for the Therapeutic Management of Thrombosis-Based Disease States” <a href="https://pharmacy.tamu.edu/directory/khasawneh.html">Link</a> Also has project on Hypercoagulable state of COVID-19 infected ind.- mechanism and effects of COVID-19 on platelets and thrombosis markers.</td>
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<td>Monday</td>
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<td>Dec 14</td>
<td>Larry J. Suva, PhD Professor and Department Head, VTPP</td>
<td>“Annual State of the Department Address” <a href="https://physiology.tamu.edu/">Link</a></td>
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