

# *7th Annual* **Postdoctoral Research Symposium**

Monday, Sept. 18, 2023 | 1–5 p.m. | Memorial Student Center | 2400

## AGENDA

### WELCOME & OPENING REMARKS

1:00 PM – 1:15 PM

#### Welcome:

**Andreea Trache**, Associate Professor and Faculty Fellow, Office of Postdoctoral Affairs

#### Opening address:

**Gerianne Alexander**, Associate Vice President for Research and Research Integrity Officer

#### Introductory remarks:

**Ping Yang**, Professor and Senior Associate Dean for Research, College of Arts and Sciences

**Allison Ficht**, Professor and Senior Associate Dean for Research, School of Medicine

**Prabhakar Pagilla**, Professor and Associate Dean for Research, College of Engineering

### FLASH TALKS

1:15 – 2:15 PM

1	1:15 p.m.	<b>Naushad Ahmed</b> Chemistry	Synthesis and properties of degradable CO <sub>2</sub> /COS and epoxide- derived co-polymers
2	1:18 p.m.	<b>Osama Atallah</b> Plant Pathology & Microbiology	Hop latent viroid; a billion dollars hit to cannabis industry!
3	1:21 p.m.	<b>Sudip Biswas</b> Soil & Crop Sciences	Increasing the level of resistance starch in rice through multiplex genome editing by targeting starch branching genes
4	1:24 p.m.	<b>Djamal Brahim Belhaouari</b> Veterinary Pathobiology	Poxvirus decapping enzyme and mitochondria: A surprise marriage!
5	1:27 p.m.	<b>Mayank Garg</b> Biomedical Engineering	A molecularly imprinted wearable sensor with paper microfluidics for real time sweat biomarker analysis
6	1:30 p.m.	<b>Priscilla Glenn</b> Biology	The fitness of the rare sex is destined to decline
7	1:33 p.m.	<b>Alexandra Howard</b> Ecology & Conservation Biology	History repeats itself: Using the fossil record to examine species response to climate change
8	1:36 p.m.	<b>Gabriel Larios Plaza</b> Physics & Astronomy	String Theory and the Stability of Spacetime

9	1:39 p.m.	<b>Withdrawn</b>	
10	1:42 p.m.	<b>Hillary Merzdorf</b> Engineering Academic & Student Affairs	Accessible and Intelligent Engineering Makerspaces
11	1:45 p.m.	<b>Sayak Mukhopadhyay</b> Chemical Engineering	Cellular Energy and Phenotypic Tolerance: Investigating Antibiotic Resistance Mechanisms in Motile E.coli using Microfluidics
12	1:48 p.m.	<b>Shayan Niknezhad</b> Texas A&M Energy Institute	Revolutionary Natural gas reforming via plasma
13	1:51 p.m.	<b>Efrain Noa-Yarasca</b> Texas A&M AgriLife Research	Effectiveness of Multioutput Approaches for Limited-size Biomass Time Series Forecasting Using Convolutional Neural Network
14	1:54 p.m.	<b>Anil Pant</b> Veterinary Pathobiology	Developing mpox (monkeypox) virus inhibitors
15	1:57 p.m.	<b>Sayantana Sarkar</b> Texas A&M AgriLife Research	APEX simulation of peanut growth and yield in response to drought stress
16	2:00 p.m.	<b>Withdrawn</b>	
17	2:03 p.m.	<b>Garhett Wyatt</b> Veterinary Physiology & Pharmacology	Loss of single minded 2s results in a PI3K subunit switch which drives therapeutic resistance in estrogen receptor positive breast cancer

## BREAK

2:15 – 2:30 PM

## POSTER SESSIONS

2:30 – 3:45 PM

1	<b>Priyanka Banerjee</b> Medical Physiology	SARS-CoV-2 spike protein triggers endothelial to mesenchymal transition in lymphatic endothelial cells and accelerates pre-mature senescence in liver cancer via the TGFβ-CXCL5-CXCR2 axis
2	<b>Oscar Benavides</b> Biomedical Engineering	PLUTO: A Polarized Light-Sheet Microscopy and Tomography System for Versatile Multi-Scale and High-Throughput Cellular Resolution Imaging
3	<b>Promita Biswas</b> Chemistry	Amino Hydroxylation of Olefin via Reductive Synthesis of N-Centered Aziridiny Radical
4	<b>Deon Brown</b> Psychological & Brain Sciences	Longitudinal Associations between African American Fathers' Parenting Role Beliefs and Relationship Quality with Adolescents
5	<b>Lyuba Chechik</b> Entomology	Gene drive performance optimization
6	<b>Bruna Correa Lopes</b> Small Animal Clinical Sciences	Assessing the Impact of Diverse Storage Conditions on Clostridium hiranonis Viability in Fecal Microbiota Transplantation Preparations
7	<b>Lopamudra DaGhosh</b> Biomedical Engineering	Modeling angiogenesis-on-chip and elucidating pathophysiologic effect of platelets in anti-angiogenic therapy evasion
8	<b>Jiaxin Feng</b> Chemistry	In Situ Accurate Quantitative Mass Spectrometry Profiling of Isomeric Lipids via Aziridine-based Isobaric Tags Reveals Distinct Spatial Change in Medulloblastoma Mice

9	<b>Susheel Kuma Gunasekar</b> Pharmacy	Differential Expression of Long Noncoding RNA DLEU2 in Siblings Influence Hepatic Insulin Signaling and Lipogenesis Program in a Murine Transgenerational Study
10	<b>Saranya Kannan</b> Medical Physiology	Impact of VEGFR-3 signaling on macrophage polarization in kidney injury
11	<b>Tennille Lamon</b> Veterinary Integrative Biosciences	Assessing chronic stress in cats: analytic validation of an assay to measure hair cortisol
12	<b>Rebecca Legere</b> Large Animal Clinical Sciences	mRNA-Encoded Anti-VapA Monoclonal IgG1 for Passive Immunization of Foals Against <i>Rhodococcus equi</i>
13	<b>Marluci Muller Rebelato</b> Biochemistry & Biophysics	Using non-canonical tyrosine and tryptophan residues to study amino-acid based protein redox chemistry
14	<b>Thu-Thuy Nguyen</b> Veterinary Pathobiology	Functional characterization of a tick saliva protein as potential target for tick and Lyme disease control
15	<b>Bibiana Petri da Silveira</b> Large Animal Clinical Sciences	Impact of TLR2, CR3, and FcγRIII on <i>Rhodococcus equi</i> Phagocytosis and Intracellular Replication in Macrophages
16	<b>Angel Renteria Gomez</b> Chemistry	Fe-Catalyzed Dicarbofunctionalization of Enamides
17	<b>Sayantan Samanta</b> Texas A&M AgriLife Research	Can No-Tillage Limit the Negative Effects on Climate Change on Downstream Runoff and Sediment loss?
18	<b>Dinabandhu Sar</b> Chemistry	Fe-Catalyzed Dicarbofunctionalization of Enol Silyl Ether
19	<b>Nupur Sarkar</b> Entomology	Investigating the efficacy of <i>Chromobacterium Csp P</i> biopesticide against key agricultural insect pests
20	<b>Shannon Schmidt-Combest</b> Food Science & Technology	Differential Effects of Mango ( <i>Mangifera indica</i> L.) Supplemented with Probiotics on Inflammation and Cognitive Function in Lean and Obese Individuals: A Randomized, Double-Blind, Placebo-Controlled Trial
21	<b>Mani Sengoden</b> Chemistry	Sustainable Synthesis of CO <sub>2</sub> -derived Polycarbonates from the Natural Product, Eugenol: Terpolymerization with Propylene Oxide
22	<b>Milind Sharma</b> Atmospheric Sciences	Spatiotemporal variability in convective cells and their thermodynamic and aerosol environments during TAMU TRACER
23	<b>Vikki Shinde</b> Chemistry	Desi Design and synthesis of defect-free, rigid, thermodynamically driven benzobisimidazole (bbi) ladder polymer
24	<b>Nitya Shree</b> Pharmaceutical Sciences	High Fat-High Fructose Diet Elicits Brown Adipocyte Dysfunction by Blocking miRNA Biogenesis Machinery via miR-103
25	<b>Bhupinder Singh</b> Texas A&M AgriLife Research	Projected Climate Change Impacts on Cotton Phenology and Production in the Texas High Plains
26	<b>Brandee Stone</b> Microbial Pathogenesis & Immunology	The inner membrane transporters, BB0637 and BB0638, contribute to fitness of <i>Borrelia burgdorferi</i> during murine infection
27	<b>Chi-Hsuan Sung</b> Small Animal Clinical Sciences	Correlation between Targeted qPCR Assays and Untargeted DNA Shotgun Metagenomic Sequencing for Assessing the Fecal Microbiota in Dogs

28	<b>Mohammad Syed</b> Civil & Environmental Engineering	3D printed hempcrete buildings - a viable alternative to conventional concrete structures
29	<b>Yuexun Tian</b> Entomology	Tick population and composition in pasture and forest habitats during the summer season in Texas
30	<b>Mohit Vashishta</b> Pharmacy	MTF1 mediated GLI1 activation drives cadmium induced prostate carcinogenesis
31	<b>Sunil Venkategowda</b> Political Science	Saving Babies in the Heart of Texas: An Interdisciplinary Translational Approach
32	<b>Meichen Wang</b> Veterinary Physiology & Pharmacology	New Sunscreens That Act as Barriers Against Hazardous Environmental Chemicals And Microbes In Polluted Water
33	<b>Kyung Seok Woo</b> Electrical & Computer Engineering	Probabilistic computing using memristors
34	<b>Mohammad Zulkifli</b> Biochemistry & Biophysics	FDX1 is essential for the biogenesis of mitochondrial cytochrome c oxidase

## RESOURCE TABLES

### Career Center

Marilyn Yeager, Associate Director

### Core Facilities

Ashlyn Montgomery, Research Infrastructure Manager

### High-Performance Research Computing

Lisa Perez, Director for Advanced Computing Enablement

### International Student & Scholar Services

Maria Khmelenko, Program Coordinator II

### Office of Postdoctoral Affairs

Maxine Martinez, Student Assistant

### Office of Export Controls, Conflict of Interest, and Responsible Conduct of Research

Laura Cajiao-Wingenbach, Senior Research Compliance Coordinator

### Human Resources & Organizational Effectiveness

Martha Alexander, Assistant Director

### University Libraries

Sheila Green, Associate Librarian

### Postdoctoral Association

Ishaq Khan, Postdoctoral Research Associate

### Health Postdoctoral Association

Bhuvaneshwaran Subramanian, Postdoctoral Research Associate

### Veterinary Medicine & Biomedical Sciences Postdoctoral Association

Alhussien Gaber, Postdoctoral Research Associate

### Innovation

Megan Brown, Director of Operations

### Center for Teaching Excellence-English Language Proficiency Program

Guinessa Payne, Senior Instructional Consultant

### Microscopy and Imaging Center

Holly Gibbs, Research Scientist

## **KEYNOTE ADDRESS**

3:45 PM – 4:45 PM

### ***Being Van Gogh – Creating a Self-Portrait for you Career***

Dr. Lori Conlan, PhD, Deputy Director, Office of Intramural Training, National Institute of Health  
Director, Office of Postdoctoral Services, National Institute of Health

## **CLOSING REMARKS AND AWARDS**

4:45 PM – 5:00 PM



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