

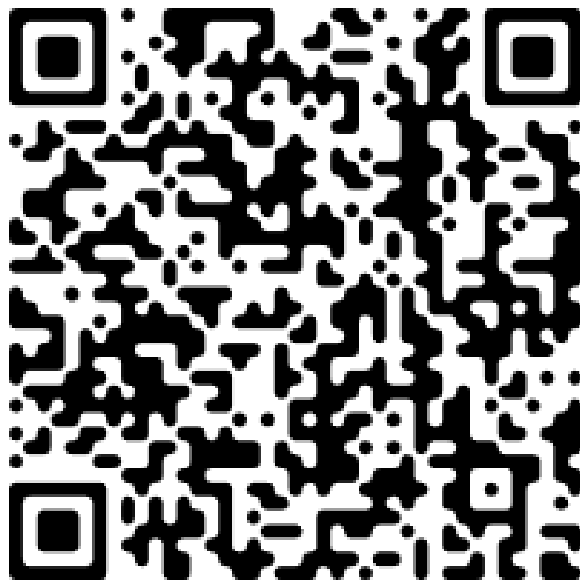


# Graduate Student Research Day

June 23, 2022

# Participate in the Digital Scavenger Hunt!

- ▶ Scan the below QR code to access the scavenger hunt or visit [go.uth.edu/GSRDscavengerhunt2022](http://go.uth.edu/GSRDscavengerhunt2022).
- ▶ If you want to preview all the questions, check out the [GSRD website](#).
- ▶ Submissions are due by 11:59pm today.



# Agenda

- |                 |  |
|-----------------|--|
| 8:00-9:00am     | Check-In   |
| 9:00-10:00am    | Oral Presentations:<br>Pre-Candidacy & MS  |
| 10:15-11:15am   | Oral Presentations:<br>Post-Candidacy  |
| 11:30am-12:45pm | Poster Session A and Lunch   |
| 1:00-2:15pm     | Poster Session B and Lunch   |
| 2:30-4:30pm     | Elevator Speech Contest  |
| 3:30-4:30pm     | Keynote Seminar with Q & A<br><br>“Without Each Other, We Are<br>Nothing” by Enrique De La Cruz, PhD |
| 4:30-5:00pm     | Awards   |
| 5:00-6:00pm     | Reception  |

# Keynote:

# *Without Each Other, We Are Nothing*

## Enrique De La Cruz, PhD

Professor and Chair of Molecular  
Biophysics & Biochemistry  
Head, Branford College, Yale School  
of Medicine



Enrique M. De La Cruz, PhD is a Professor and the Chair of the Department of Molecular Biophysics and Biochemistry and Head of Branford College at Yale University. He is a first-generation Cuban-American who was raised in Newark, NJ. Dr. De La Cruz received his undergraduate degree in Biology with a minor in Chemistry from Rutgers University, Newark College of Arts and Sciences, where he was inducted into Phi Beta Kappa and Beta Beta Beta Honor Societies. He earned his Ph.D. degree in Biochemistry, Cell & Molecular Biology (BCMB) at Johns Hopkins University School of Medicine and received postdoctoral training at the University of Pennsylvania School of Medicine. Dr. De La Cruz's research focuses on the actin cytoskeleton, molecular motor proteins, and nucleotide signaling enzymes. Dr. De La Cruz is actively involved with various scientific societies, journals, and peer review committees, and actively participates in outreach activities focused on enhancing minority participation, career development and retention in the sciences.

# Oral Presentations

## Pre-Candidacy and MS

### Shannon Erhardt

Genetics and Epigenetics, MS

Advisor: Jun Wang, PhD

“*Yap* and *Taz* are required for proper neural crest-derived cardiac development”

### Andrew Gillard

Cancer Biology, 1<sup>st</sup> year PhD

Advisor: Candelaria Gomez-Manzano, PhD

“Generation of New Nono-Resistant Oncolytic Adenoviruses for Cancer Therapy”

### Clarissa Hoffman

Quantitative Sciences, Pre-Candidacy PhD

Advisor: Yuri Dabaghian, PhD

“Alzheimer’s Disease Changes Brain Wave Pattern Dynamics”

### Hunter Mehrens

Medical Physics, Pre-Candidacy PhD

Advisor: Stephen Kry, PhD

“Understanding the role of anthropomorphic phantoms in radiation therapy using artificial intelligence (AI).”

### Jayanta Mondal

Cancer Biology, Pre-Candidacy PhD

Advisor: Jason Huse, MD, PhD

“An epigenetic screen reveals the role of BRD7 in suppressing the metastatic reactivation of dormant breast cancer cells by modulating the tumor immune microenvironment”

# Oral Presentations

## Post-Candidacy

### Sharvari Dharmaiah

Cancer Biology

Advisor: Jason Huse, MD, PhD

“Characterizing the genomic consequences of G-quadruplex stabilization in ATRX-deficient high-grade Glioma”

### Mary Gronberg

Medical Physics

Advisor: Laurence Court, PhD

“Deep learning-based dose prediction for automated, individualized quality assurance of head and neck radiotherapy plans”

### Soleil Hernandez

Medical Physics,

Advisor: Laurence Court, PhD

“Automating the Treatment Planning Process for 3D-Conformal Pediatric Craniospinal Irradiation Therapy”

### Janani Subramaniam

Biochemistry & Cell Biology

Advisor: Shane Cunha, PhD

“How to Stop the Ca<sup>(2+)</sup>IMAMity! Ankyrin Regulation of Protein Complex Formation at Mitochondria Associated ER/SR Membranes (MAMs) in the Heart”

### Xu Zhang

Neuroscience

Advisor: Fabricio Do Monte, DVM, PhD

“Identification of Prelimbic Cortex Circuits Regulating Food Seeking Behavior under Distinct Internal States”

# Poster Presentations

## Session A- odd numbered posters

### 1. Stephen Farmer

Biochemistry & Cell Biology, Advisor: Sheng Zhang, PhD  
“Structure-function analysis of non-pathogenic human and Drosophila Huntingtin/HAP40 in the endosomal pathway”

### 3. Pahul Hanjra

Cancer Biology, Advisor: Anil Sood, MD  
“Chronic Stress Reduces Effectiveness of Chemotherapy in Ovarian Cancer”

### 5. Collin Harlan

Medical Physics, Advisor: James Bankson, PhD  
“Quantitative Evaluation of Pyruvate Uptake and Metabolism in Cells using Mass Spectrometry and Hyperpolarized  $^{13}\text{C}$  NMR”

### 7. Andrea Hernandez

Immunology, Advisor: Simon Young, DDS, MD, PhD  
“Establishing preclinical models of oral cancer to understand location-based differences in tumor immune microenvironment (TIME)”

### 9. Chase Hutchins

Biochemistry & Cell Biology  
“Examining Membrane Motion of KRAS with Molecular Dynamics Simulation”

### 11. Pragya Sinha

Immunology, Advisor: Jagannadha K Sastry, PhD  
“Aurora kinase inhibition induces immunogenic cell death in HPV+ cancers and enhances immune responses in vitro and ex vivo”

### 13. Brianne Wharton

Biochemistry & Cell Biology, Advisor: Burton Dickey, MD  
“Syntaxin-3 mediates baseline and stimulated mucin secretion”

### 15. Khondakar Sayef Ahammed

Microbiology & Infectious Diseases, Advisor: Ambro van Hoof, PhD  
“Pontocerebellar hypoplasia (PCH) linked mutations in the cap component Csl4 impair RNA exosome function.”

### 17. Hana Baroudi

Medical Physics, Advisor: Laurence Court, PhD  
“A Breast Auto-Contouring Model for Contour Verification in a Breast Radiotherapy Clinical Trial”

# Poster Presentations

## Session A- odd numbered posters

### 19. Pujun Guan

Quantitative Sciences, Advisor: Dianna Milewicz, MD, PhD

“Preventing cholesterol-induced Perk signaling in smooth muscle cells blocks atherosclerotic plaque formation”

### 21. Lea Stitzlein

Therapeutics & Pharmacology, Advisor: Joya Chandra, PhD

“Investigating the interplay between kinase signaling and lysine-specific demethylase 1 in high-grade gliomas”

### 23. Takese McKenzie

Neuroscience, Advisor: Jian Hu, PhD

“Prostaglandin synthesizing enzyme, L-PGDS, is important for CNS myelination”

### 25. Joshua Morse

Therapeutics & Pharmacology, Advisor: Zhiqiang An, PhD

“Fc $\gamma$ R Promotion of Antibody-Induced LILRB4 Internalization and Immunoregulation of Acute Monocytic Leukemia”

### 29. Vivian Salama

Cancer Biology, Advisor: Clifton Fuller, MD, PhD

“Temporal Characterization of Longitudinal Sequelae Including Acute Pain, Physiologic Status, and Toxicity Kinetics in Head and Neck Cancer Patients Receiving Radiotherapy: A Prospective Electronic Health Record Embedded Registry Study”

### 31. Sabona Simbassa

Microbiology & Infectious Diseases, Advisor: Anne-Marie Krachler, PhD

“Enterohemorrhagic Escherichia coli Shiga-like toxins (Stx) enhance colonization of the zebrafish gastrointestinal tract”

### 33. Heather Tsong

Genetics & Epigenetics, Advisor: Andrea Stavoe, PhD

“The post-translational regulation of WIPI2B/ATG-18 in neuronal autophagosome biogenesis”

### 35. Benjamin Whitfield

Immunology, Advisor: Jason Huse, MD, PhD

“Exploring the immunologic consequences of ATRX deficiency in glioma.”

### 37. Yao Zhao

Medical Physics, Advisor: Jinzhong Yang, PhD

“Automated deformable registration using patch-based ViT-Morph for MR-guided adaptive radiotherapy”



# Poster Presentations

## Session B- even numbered posters

### 2. Emily Caggiano

Cancer Biology, Advisor: Cullen Taniguchi, MD, PhD

“Uncoupling protein 2 (UCP2) loss of function mediates PDAC tumor suppression by mitochondrial fusion

### 4. Ko-Chien Chen

Cancer Biology, Advisor: Ronald DePinho, MD

Targeting Collateral Lethal Targets in PTEN-null Prostate Cancer

### 6. Taylor Halsey

Microbiology & Infectious Diseases, Advisor: Rob Jenq, MD

“Differential bacterial taxa abundances associated with immune checkpoint inhibitor-mediated colitis risk”

### 8. Dalia Hassan

Genetics & Epigenetics, Advisor: Jichao Chen, PhD

“Function of CEBPA during alveolar type 2 cell development and maintenance”

### 10. Kai Huang

Medical Physics, Advisor: Laurence Court, PhD

“Automate Rectal Cancer Radiotherapy”

### Jennifer Hurtig

Microbiology & Infectious Diseases, Advisor: Ambro van Hoof, PhD

“The tRNA independent essential function of the TSEN is linked to the integrated stress response and intron debranching”

### 14. Swaminathan Kumar

Quantitative Sciences, Advisor: Michael Davies, MD, PhD

“Molecular and immune features associated with overall survival (OS) in patients (pts) with melanoma brain metastases (MBMs)”

### 16. Ye Li

Immunology, Advisor: Katy Rezvani, MBBS, PhD

“KIR-based inhibitory CARs overcome CAR-NK cell trogocytosis-mediated fratricide and tumor escape”

### 18. Rhiannon Morrissey

Genetics & Epigenetics, Advisor: Guillermina Lozano, PhD

“Identifying cooperating mutations contributing to disease progression in mutant p53-driven breast cancer”

### 20. Sonia Patel

Cancer Biology, Advisor: John Heymach, MD, PhD

“IL-6 Contributes to the Suppression of T and NK cell Anti-Tumor Activity in EGFR-mutant NSCLC”

# Poster Presentations

## Session B-even numbered posters

### 22. Lan Phi

Cancer Biology, Advisor: Naoto Ueno, MD, PhD

“TBK1 inhibition potentiates the efficacy of AXL-targeted therapy in aggressive breast cancer preclinical models”

### 24. Jing Qian

Cancer Biology, Advisor: Powel Brown, MD, PhD

“NUDT5 is a Critical Regulator of Triple-negative Breast Cancer Growth”

### 26. Raisa Reyes

Genetics & Epigenetics, Advisor: Swathi Arur, PhD

“The role of phosphorylated DICER1 in tumor progression in-vivo”

### 28. Alec Santiago

Microbiology & Infectious Diseases, Advisor: Kevin Morano, PhD

“Redox regulation of yeast Hsp70 modulates protein quality control while directly triggering an Hsf1-dependent cytoprotective response”

### 30. Rutvi Shah

Cancer Biology, Advisor: Andrea Viale, MD

“Pharmacological modulation of metaplastic lesions to cure pancreatitis and prevent pancreatic cancer”

### 32. Runze Shen

Biochemistry & Cell Biology, Advisor: John Tainer, PhD

“Structure elucidation of structure-specific nuclease EEPD1 and its role in homologous recombination repair pathways”

### 34. Shun-Ming Ting

Neuroscience, Advisor: Jaroslaw Aronowski, PhD

“RXR activation rejuvenated microglia in aged brains and improved cognitive functions after ischemic stroke”

### 36. Xiaojie Yang

Cancer Biology, Advisor: Pawel Mazur, PhD

“The role of methyltransferase like 21a (METTL21a) in pancreatic ductal adenocarcinoma”

### 38. Er-Yen Yen

Cancer Biology, Advisor: Giulio Draetta, MD, PhD

“Uncovering key microenvironmental features for immune evasion at the subclonal level in pancreatic cancer”

# Elevator Speech

## Contestants

Pre-Candidacy PhD, MS, SMS

### **Mo-Fan Huang**

Genetics & Epigenetics, Advisor: Duang-Fang Lee, PhD  
“Pretty Curry”

### **Amanda Lanier**

Cancer Biology, Advisor: Powel Brown, MD, PhD  
“Finding the Achilles heel of TP53 mutant TNBC”

### **Haoyue Liu**

Immunology, Advisor: Florencia McAllister, MD  
“Microbiota to pancreatic cancer, a Blade Runner or an Ally?”

### **Mekenzie Peshoff**

Neuroscience, Advisor: Kristna Bhat, PhD  
“Tiny but mighty: what role do microglia play in glioblastoma?”

### **Thomaia Pamplin**

Cancer Biology, Advisor: Curtis Pickering, PhD  
“The search for drugs that help radiation treatment destroy cancer cells and not healthy ones”

### **Xin Ru Jiang**

Immunology, Advisor: Katy Rezvani, MBBS, PhD  
“Adoptive NK cells activated by an oncolytic virus for the treatment of aggressive solid tumors.

### **Barbara Marquez**

Medical Physics, Advisor: Laurence Court, PhD  
“An automated system for quality assurance of radiotherapy plans”

### **Danny Perez Sierra**

Neuroscience, Advisor: Anilkumar Pillai, PhD  
“Role of complement system in neurobehavior”

### **Sabona Simbassa**

Microbiology & Infectious Disease, Advisor: Jayhun Lee, PhD  
“Unraveling Schistosomes immune evasion by exploring intrammalian”

### **Marvin Wirianto**

Biochemistry & Cell Biology, Advisor: Seung-Hee Yoo, PhD  
“Nobiletin (NOB) mitigates AD hallmarks by modulating the circadian clock”

# Elevator Speech Contestants

## Post-Candidacy PhD Candidates

### **Mary Adeyeye**

Genetics & Epigenetics, Advisors: Brendan Lee, MD, PhD and Xiangli Elefteriou, PhD

“Paradoxical Effect of Frizzled2-Fc on Bone Mass for the Treatment of Osteogenesis Imperfecta”

### **Mary Esmeralda Fuentes**

Cancer Biology, Advisor Pawel Mazur, PhD

“Nothing but NET: Targeting epigenetic vulnerabilities in Pancreatic Neuroendocrine Tumors”

### **Cuahtemoc Gonzalez**

Biochemistry & Cell Biology, Advisor: Vasanthi Jayaraman, PhD

“The Delta Receptor: The ugly duckling of the ionotropic glutamate receptors”

### **Joan Jacob**

Biochemistry & Cell Biology, Advisor: Kendra Carmon, PhD

“Don't bleach the tumors: ADC's for targeted drug delivery”

### **Alaa Mohamed**

Cancer Biology, Advisor: Giulio Draetta, MD, PhD

“Minimal residual disease treatment hopes”

### **Visal Tanvi**

Cancer Biology, Advisor: Sendurai Mani, PhD

“Cancer Dormancy: Uncovering the mystery of unlabeled packages!”

### **Ruoyu Wang**

Genetics & Epigenetics, Advisor: Wenbo Li, PhD

“Untangling DNA misfolding in human Down syndrome”

# Join us for the awards ceremony and reception!



Thank you to our sponsors:

**John P. McGovern Foundation  
and Logan & Sue Brown**



# Thank you to today's judges:

Neha Arora  
Bharat Bhushan Singh  
Manisha Deogharia  
Bhanu Priya Ganesh  
Ananya Tupaki Sreepurna  
Andrew Peters  
Devin McBride  
John Horton  
Michael Beierlein  
Melvin Klegerman  
Eun Young Han  
Gabriel Fries  
Xiao Ni  
Nancy Gordon  
Dung-Fang Lee  
C. Cameron Yin  
Abhinav Jain  
Jayhun Lee  
Suyu Liu  
Kathryn Gunther  
Ba-Bie Teng

Sylvester Jusu  
Danh Truong  
Van Ngu Trinh  
Siddharth Prakash  
Abdelrahman Yousef  
Bhakti Patel  
Pravesa Gupta  
Liuqing Yang  
Paolo Mangahas  
Ryan Udon  
Noriaki Ono  
Danielle Wu  
Emily Thompson  
Brian Anderson  
Jackie Peltier-Horn  
Samantha Debes  
Erin Lopez  
Sonia Patel  
Meredith Frank  
Jeffrey Actor  
Tamara Laskowski

