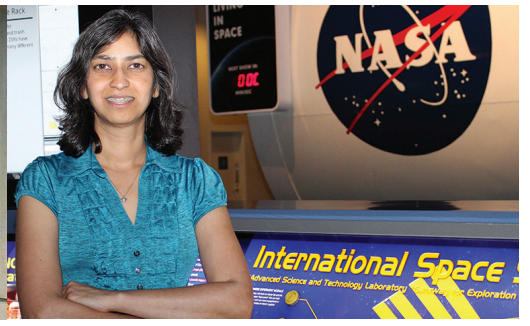
YEAR IN REVIEW

RESEARCH & TRAINING @ THE UNIVERSITY OF TEXAS MD ANDERSON CANCER CENTER UTHEALTH HOUSTON GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

60 YEARS



THE UNIVERSITY OF TEXAS MD Anderson Cancer Center® | UTHealth® Houston

Graduate School of Biomedical Sciences

ON THE COVER

The Graduate School marked 60 years on Sept. 28, 2023. The images on the cover were featured in the Graduate School's "60 facts for 60 years" social media campaign, which ran from July 11, 2023, through Sept. 28, 2023, the school's 60th anniversary date! Festivites celebrating this milestone will be held through July 2024.

Check out all the posts across our social media platforms by searching for #GSBS60.

Note: This publication will be the last printed annual report. Future annual reports will only be sent digitally.

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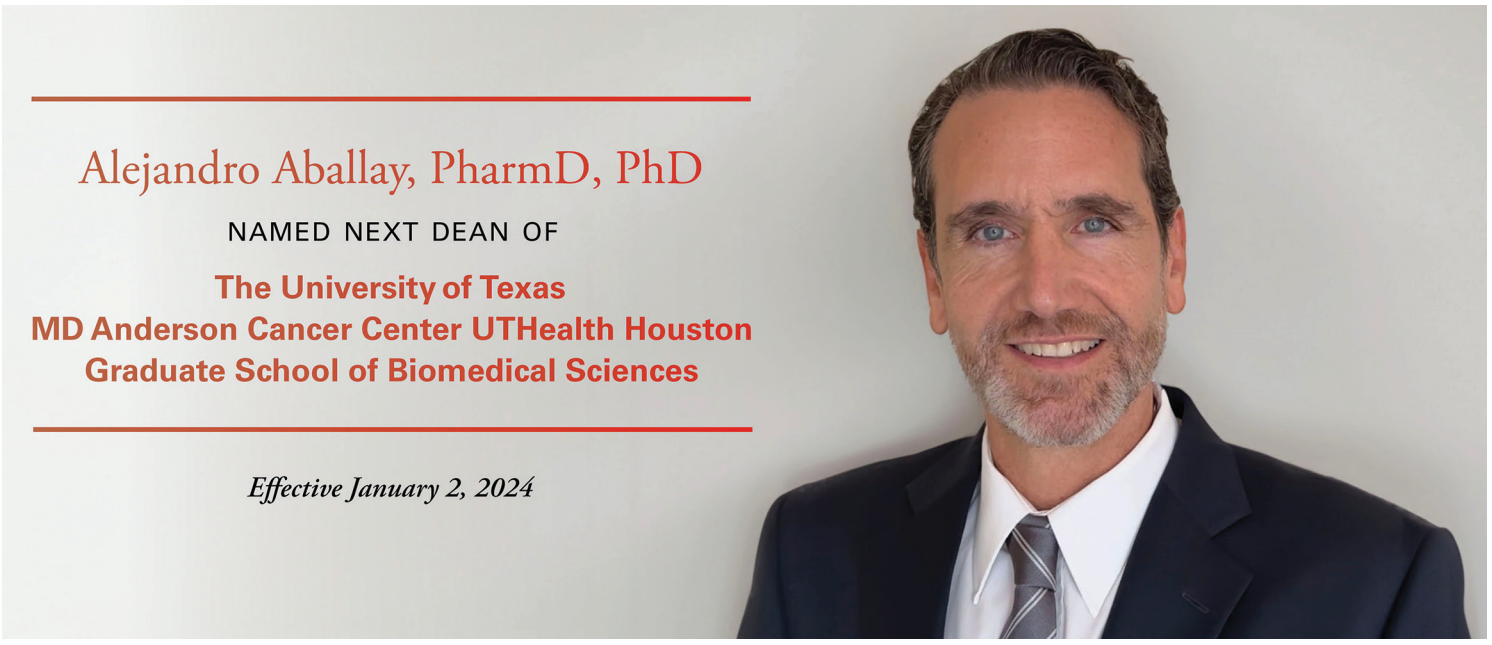


MESSAGE FROM THE INTERIM DEAN

What an exciting time for our Graduate School. As we celebrate our 60th anniversary of training the next generation of biomedical scientists, it is perhaps appropriate to look back at our accomplishments and to look forward to our future goals.

If you walk through the school's office suite, you will notice a timeline on one wall that describes major events that occurred in our school over its first 50 years—from 1963 to 2013. Although we need to update the timeline to include newer events, it is interesting to note that the first class of 24 total MS and PhD students in 1963 were aligned with three broad areas of research: biology, biochemistry, and physics. In contrast, our most recent class of 114 students, including 25 MS students, 12 Specialized MS students (in Medical Physics and Genetic Counseling), 71 PhD students and six MD/PhD students, now have 10 major programs of study to choose from. As the old saying goes, we've come a long way, baby.

Some things, though, remain constant over time. From the beginning, the school has been focused on excellence. We always aim to recruit the best students and to equip them to perform cutting edge biomedical science. Stories on pages 6-16 highlight student successes such s a story about Fulbright Scholar Rachel Van Drunen to a piece on Andrea Hernandez earning a NIDCR supplement. Impactful discoveries by our students are exemplified by a recent publication by Jing Cai (page 7). Our faculty is outstanding as well, and we celebrate the election of Helen Piwnica-Worms, PhD, Jennifer Wargo, PhD, Richard Wood, PhD, and to the National Academy of Sciences (page 26), the success of faculty in competing for funds from CPRIT (page 30), and extraordinary mentorships of our 2022 and 2023 McGovern Teaching awardees (page 28-29).

We also have a long history of inclusiveness. Of the 14 PhD students in the 1963 class, two (14%) were female. That may not seem like much, but consider the historical perspective. If someone asked me "what do you want to be?" as a child in the 60s, the question was always couched around three possibilities: teaching, nursing, or retail. Women scientists were rare during that time, so inclusion of two female students in our first class is remarkable to me. Over the years, the diversity of our students and faculty has continued to grow, and inclusion remains a high priority for our school. We welcome students from all walks of life because we recognize that a variety of experiences and perspectives fosters new ideas and innovations that are needed to move science forward and drive discovery.

Another constant at our school is that we care deeply about the well-being of our students. The past three years have been especially rough due to the COVID-19 pandemic, social unrest, and economic challenges. We have resources in place at the Graduate School and at both of our parent institutions to help our students navigate difficulties. Please reach out to us if you ever need help of any kind.

In spite of recent challenges, I am excited about the opportunities that await our students while they are here with us and as they venture out to start their next chapters. Science has never been more important to our society, and so many possible careers await our graduates in academia, government, industry, law, and more. "What do you want to be?" now has a lot more possible answers.

When I am invited to present my research at other institutions, my visit often includes a lunch with students. They usually want to know about my career progression, and I describe to them some of the changes in science that have occurred since I was in graduate school in the early 1980s. Recombinant DNA was still relatively new at that time, and few commercial sources of restriction enzymes were yet available. A common rotation project was to biochemically purify a restriction enzyme that would then be the lab stock for the next several months to years. Pressure was onto do a good job! Also, PCR would not come along until the late 1980s, so cloning genes from eukaryotic cells was much more challenging back then. It was also technically challenging to sequence a single gene, let alone a whole genome. After a few more such examples, I turn the question around: what do the students think the world will be like when they are in their 60s? How will artificial intelligence impact their science and their lives? If they could invent one thing that would make a real difference in their research or in society, what would it be? As we celebrate our 60th anniversary, I ask all of you—what will, what should, the GSBS be like on its 100th anniversary? Its 150th?

I have truly enjoyed serving as the dean *ad interim* of the school for the last couple years. I am so excited about our future, and I hope to join you in welcoming a new permanent dean in the coming year to set the vision for our next chapter (page 36).

2023 GSRD

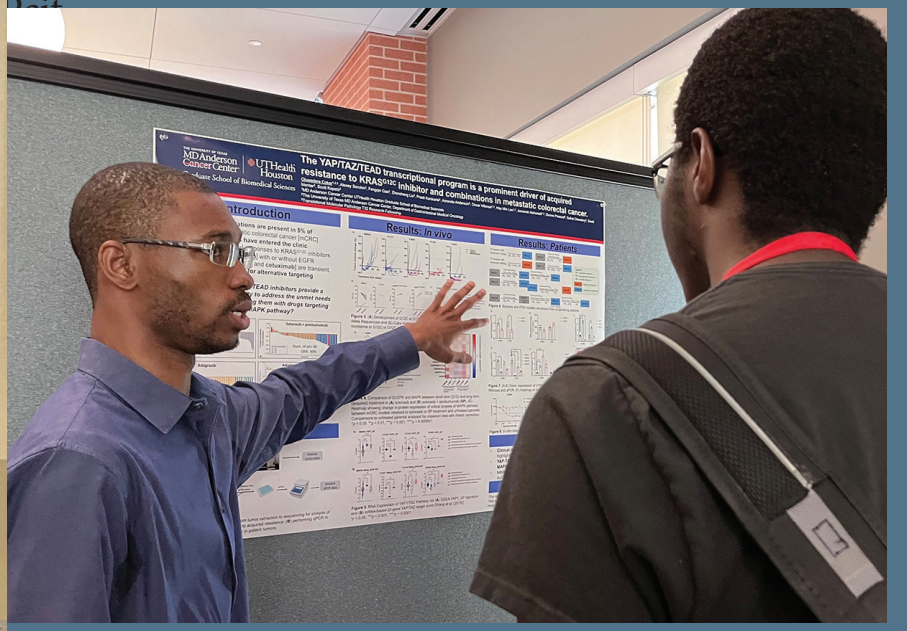
The Graduate School held its annual Graduate Student Research Day at the Cooley Life Center on June 22. More than 350 alumni, students, and faculty participated in the event, which featured a full day of competitions for Graduate School students, including oral and poster presentations, and elevator speeches.

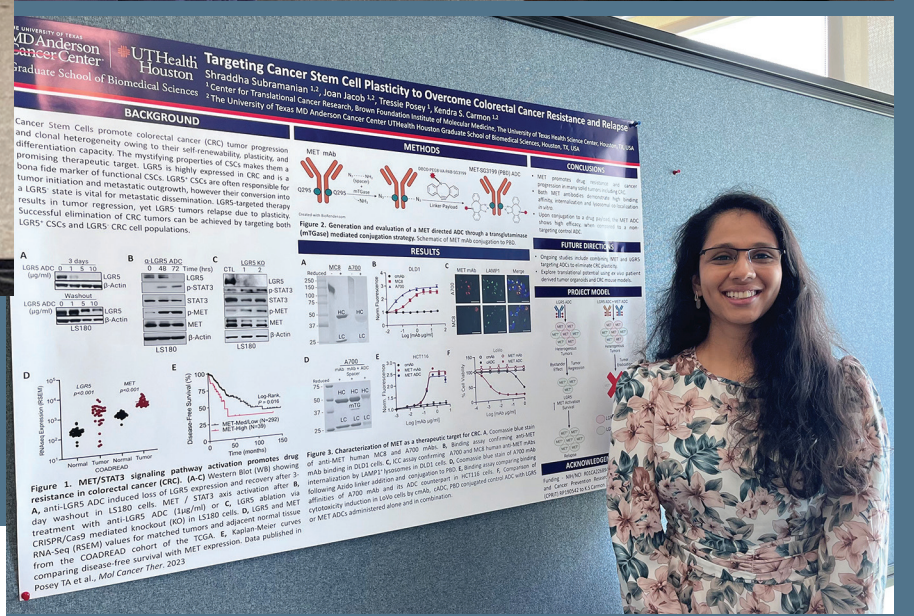
The keynote speech, "Rethinking Endocrine Therapies in Breast and Prostate Cancer," was presented by Donald Patrick McDonnell, PhD, the Glaxo-Wellcome Distinguished Professor of Molecular Cancer Biology, Department of Pharmacology and Cancer Biology, Duke University School of Medicine. In January 2022, the Food and Drug Administration approved a new targeted therapy for hard-to-treat advanced breast cancers called elacestrant that was developed from research conducted in McDonnell's lab. It is the first and only treatment approved specifically to fight breast cancers with mutations in ESR1, an estrogen receptor that may increase resistance to standard endocrine therapy.

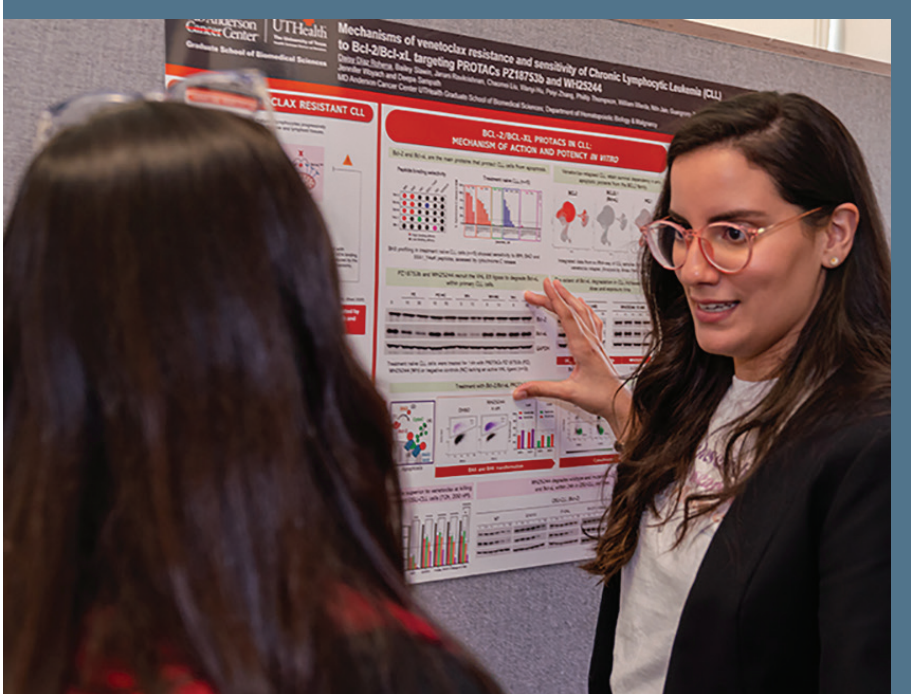
Alumni Chandra Bartholomeusz, PhD '04; Merve Dede, PhD '21; Rachel Dittmar, PhD '21; Estefania Labanca, PhD '19; Dung-Fang Lee, PhD '08; Kimberly Mankiewicz, PhD '08; Vinay Nair, PhD '22; and Janani Subramaniam, PhD '22; were judges for the competitions. Tamara Laskowski, PhD '14, led workshops and emceed the elevator speech contests during GSRD.

Alumnus and supporter John J. Kopchick, PhD '80, was also in attendance to meet the 2023 Kopchick Fellows and observe those who competed in the day's contests.

The event closed with an award ceremony, which also introduced the inaugural recipient of the Michael R. Blackburn Outstanding Dissertation Award, Russell Milton, PhD. Formerly known as the UTHealth Houston Outstanding Dissertation Award, this accolade was renamed in honor of former Dean Blackburn and his contributions to the Graduate School.







From top to bottom: PhD students Oluwadara Coker, Shraddha Subramanian, and Daisy Diaz-Rohena participate in the GSRD poster competitions. See event photos at go.uth.edu/GSBS-GSRD23Gallery.

2023 GSRD CONTESTS WINNERS

(Pictured on page 4)

Oral Presentation Skills

Pre-Candidacy PhD, MS & SMS, 1st Year

- 1st: Llaran Turner (Advisor: George Eisenhoffer, PhD)
- 2nd (tie): Peyton High (Advisor: Kendra Carmon, PhD) & Erin Snoddy (Advisor: Kristy Brock, PhD)
- 1st-Year Student Award: Peyton High (Advisor: Kendra Carmon, PhD)

Post-Candidacy PhD

- 1st: Xin Ru (Cheryl) Jiang (Advisor: Katy Rezvani, MBBS, PhD)
- 2nd: Heather Tsong (Andrea Stavoe, PhD)

Poster Competitions

Pre-Candidacy PhD, MS & SMS, 1st Year

- 1st: Kenzie Peshoff (Advisor: Krishna Bhat, PhD)
- 2nd & 1st Year Student Award: Morgan Riba (Advisors: Stephanie Watowich, PhD & Cassian Yee, MD)

Post-Candidacy PhD

- 1st: Sharvari Dharmaiah (Advisor:Jason Huse, MD, PhD)
- 2nd: Olu Coker (Advisor: E. Scott Kopetz, MD, PhD)

Elevator Speech Contests

Pre-Candidacy PhD, MS & SMS, 1st Year

- 1st: Bhargavi Brahmendra Barathi (Advisor: Jason Huse, MD, PhD)
- 2nd: Hayden Scott (Advisor: Stephen Kry, PhD)
- People's Choice Award: Aashish Gupta (Advisor: Kristy Brock, PhD)

Post-Candidacy PhD

- 1st: Hunter Mehrens (Advisor: Stephen Kry, PhD)
- 2nd & People's Choice Award: Barbara Marquez (Advisor: Laurence Court, PhD)

Q&A WITH FULBRIGHT SCHOLAR VAN DRUNEN

RACHEL VAN DRUNEN has always had a fascination with science, but when she was a novice summer intern working in a regenerative medicine lab at the Texas Heart Institute, she felt more like MacGyver than a full-fledged scientist. Trying to take a jumble of information; a mixture of new tools, methods, and resources; and use them together to develop a hypothesis was a challenge due to her lack of research acumen. But the freedom to experiment in the lab gave her the confidence and expertise that solidified her passion for science and her career path as a researcher. In March, Van Drunen, who is affiliated with the Neuroscience and Biochemistry and Cell Biology programs and works in the lab of Kristin Eckel-Mahan, PhD, was named a Fulbright Scholar. In this Q&A, she discusses her research project and why she selected MD Anderson UTHealth Houston Graduate School for her studies.

As a graduate student, what ignited your passion for science?

I've always held a fascination for science, but it wasn't until the summer after high school that I had my first foray into research. I worked for two summers as an intern in a regenerative medicine lab at the Texas Heart Institute. I really enjoyed my time there, I worked with others on a project to develop a biocompatible ventricle from decellularized porcine tissue. Despite being a summer intern, I was given a lot of freedom to "experiment," which at my experience level, was more along the lines of hypothesis–directed MacGyvering. These summers truly ignited my passion for science, as I delighted in being able to pose a hypothesis and then to test the hypothesis in a variety of ways.

How did you learn about the Fulbright opportunity?

I loosely knew about the Fulbright U.S. Student Program in undergrad, however at the time, I thought it was solely for liberal arts research and English teaching. It was not until I started at the Graduate School that I saw a story in the Graduates School's Year In Review 2018-2019 about the now alum Alexandria (Alex) Cogdill, PhD, who accepted a Fulbright scholarship in France for microbiology research. When I realized Fulbright allows for scientific research, the idea of applying sat in the back of my head for a few years. After I finished my coursework and passed candidacy, I began seriously considering applying. The Graduate School's student network was truly invaluable. I reached out to Alex, who shared her experience doing the Fulbright in the midst of her graduate career. Later on when I was applying, I received a lot of advice from MD/PhD student Pahul Hanjira, who carried out Fulbright research prior to starting at UTHealth Houston. So I'm tremendously grateful to those two current and past students for sharing with me their Fulbright advice and experience.

What research project are you working on currently?

My project in the lab of Gad Asher, PhD, will be an off shoot of my thesis project where I study the role of the circadian transcription factor, BMAL1, in mediating rhythms in the PVN which regulate daily energy metabolism. At the Weizmann Institute in Israel, I plan to study how the circadian rhythms of neurons synchronize and alter their circadian synchrony in response to certain hormones, neuropeptides and nutrient signals. In studying this, I'm aiming to better understand how the circadian synchrony of hypothalamic neurons may be affected by a range of biological signals, which in turn may affect the body's energy balance.

What goals do you have for your research career?

My goal is to continue down the path of academia to become an independent neuroscience researcher.

Why did you choose the Graduate School for your research education?

As a native Houstonian, I chose the Graduate School due to the diversity of neuroscience research offered and because I enjoy living in Houston.

What advice would you give to a first-year student?

Once you get started in your thesis lab, so probably around Spring of year two, 1) apply to the Common App [application] for spring/fall awards and fellowships; and 2) sign up for presenting opportunities (i.e., program retreats, department events, Graduate Student Research Day, etc.). While applying to the Common App and presenting can be some of the most intimidating tasks at the beginning of graduate school, writing the specific aims page for the application allows you to critically think about your project aims, and presenting your research helps you to build your scientific communication skills. I found it most helpful to reach out to older students in the program who received the award I was applying to. I would ask to see their application if they were willing to share it, I would ask their advice, and sometimes I would ask if they could read over my application. Don't be afraid to apply and don't be afraid to ask for help.

CELL REPORTS PUBLISHES RESEARCH BY CAI

Neuroscience PhD student Jing Cai published a first-author paper titled "AgRP neurons are not indispensable for body weight maintenance in adult mice," in the July 25 issue of Cell Reports. Her advisor is Qingchun Tong, PhD.

"This work is a collaboration with another lab from University of Science and Technology of China," said Cai. "We used complimentary genetics methods to achieve specific ablation of a group of hypothalamic neurons and overturned the long-lasting dogma in the field that these neurons were required for survival and body weight maintenance. This work will contribute to the 'thrifting gene' theory that the neural circuits in body weight regulation bias toward the direction of body weight gain and obesity development."

"Jing performed a series of technically demanding experiments, convincingly demonstrating that lesion of AgRP neurons in adult mice caused no obvious impact on feeding or body weight," said Tong. "Because these results are so in contrast to the well-established 'textbook' dogma that loss of AgRP neurons in adults causes starvation to death, we experienced a very hard time in getting the manuscript accepted despite the fact that it got reviewed by most of the high impact journals. During the publication process, Jing exhibited an extraordinary level of patience in designing more rigorous experiments to address reviewers' concerns. It is gratifying to see that Jing has grown so much, not only in performing scientific research but also in publishing results."

Cai's curiosity for scientific questions led her to the Neuroscience program at the Graduate School. With over 70 faculty members from different backgrounds and research focuses, she is able to explore various projects and collaborations.

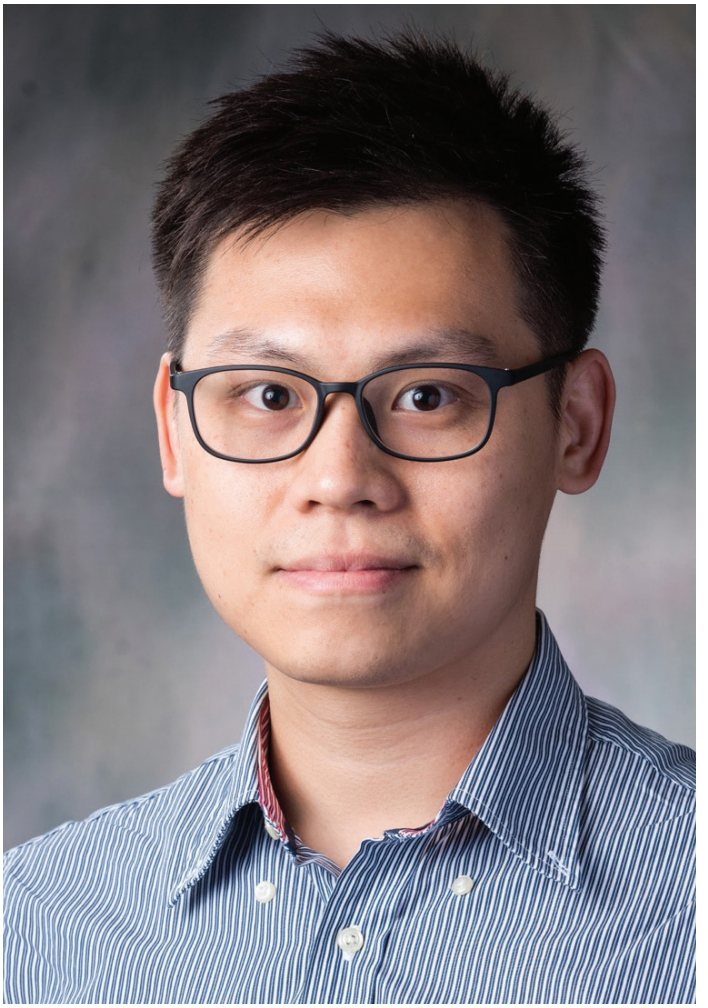
"In addition, the Graduate School community has always been welcoming and supportive to graduate students," added Cai.

She is also the recipient of several awards from the school, including the Russell and Diana Hawkins Family Foundation Discovery Fellowship (2021-2023); Investing in Student Futures Scholarship (2022-2023); and Dee S. and Patricia Osborne Endowed Scholarship in the Neurosciences.

"My goal is to become an independent researcher and contribute to the development of neuroscience and animal behavior study." said Cai.

When asked what advice she would give first-year students, Cai stated that "it is never too early to have a plan, but also be patient and flexible if anything does not go as you planned."

HSU RECEIVES F99/K00 AWARD FOR RESEARCH ON COLON CANCER



Wen-Hao "Howard" Hsu, a PhD student in the Cancer Biology program, received a Predoctoral to Postdoctoral Fellow Transition (F99/K00) Award from the National Cancer Institute (NCI). "This is a big deal," explains Raquel Salinas, PhD, the director of school's student affairs and career development. "The F99/K00 fellowship identifies the most promising graduate students in cancer research around the world and provides up to six years of funding to support their transition from grad student to postdoc."

In order to apply for the award, Hsu was required to submit both a proposal for the research he is currently conducting at the school, and another project proposal for his future research as a postdoctoral fellow. Hsu is a mentee of Ronald DePinho, MD, and conducts his research in the DePinho lab. He is currently focused on studying potential therapeutic interventions for colorectal cancer (CRC) by looking at how oncogenic KRAS instructs stromal lipofibrogenesis to promote cancer progression.

"Particularly in colorectal cancer, current targeted therapies for metastatic CRC patients show limited positive outcomes, especially in KRAS*-driven metastatic CRC patients where KRAS* bypasses targeted therapies to activate downstream survival, proliferation and cell cycle progression signaling. Understanding the molecular and cellular biological mechanisms of colorectal cancer progression will ultimately lead to new targets to prevent or treat advanced disease and prolong survival of metastatic CRC patients."

Hsu hopes to continue his research in colorectal cancer as a postdoctoral fellow, and is particularly interested in studying telomeric regulation of CRC evolution.

The involvement and dedication each program at the school puts into their students' growth was a major determinant for Hsu in choosing to pursue his PhD at the Graduate School. He finds the seminars, luncheons, and other events the Cancer Biology department hosts are invaluable to his predoctoral experience.

"The Cancer Biology department holds a weekly seminar inviting prestigious speakers from various scientific fields—not only cancer biology, but fields like RNA and viral biology—to improve and broaden trainees' knowledge. The training I am receiving at the Graduate School will establish a well-rounded foundation for my long-term goal of becoming an independent academic researcher."

Hsu would like to thank his family and significant other for their unconditional support since day one of his pursuit for a career in science. He would also like to recognize the efforts of his mentor, lab team, advisory committee, and the Cancer Biology program as a whole. He greatly appreciates the mentorship and confidence he receives from everyone involved in his academic journey.

Read more about our student and faculty successes at gsbs.uth.edu/news.

ENRIQUEZ ORTIZ PARTICIPATES IN THE YALE CIENCIA ACADEMY

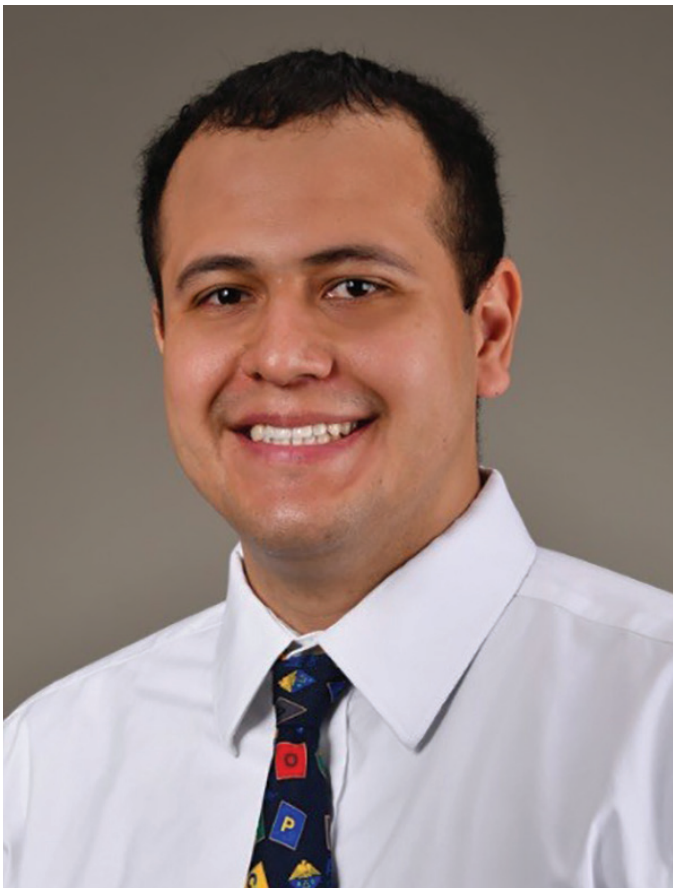
When José S. Enriquez Ortiz received an email from the Career Development Office about applying to the Yale Ciencia Academy (YCA), he immediately recognized it as a great opportunity to receive professional development training and work with peers who have similar experiences in the scientific community. After being accepted into the prestigious YCA program, José traveled to Yale University for a week filled with exercises, discussions, and networking opportunities all geared towards teaching students how to begin facilitating diversity in their own professional and academic settings. His participation continued until June 2023 when he and his cohort welcomed the next class to the program.

The YCA is a program geared towards equipping biomedical and health sciences doctoral students from underrepresented backgrounds with the knowledge, skills, and networks they need to find great postdoctoral positions. Students in the program are placed in both in-person and virtual activities throughout the year that foster an importance in implementing diversity in their scientific field and overcoming adversity in their academic and professional careers. YCA also provides students with dynamic academic career planning.

As Enriquez Ortiz maps out his post-grad journey, he found that YCA has helped him identify his own goals and preferences for his career. "I came to the GSBS with the knowledge that I want to implement my passion for chemistry into cancer detection and treatment. I've always known that I want to be involved with cancer imaging in my post-doc career, and I want to continue my work with leukemia, prostate, and pancreatic cancer. However, since being a part of YCA, I have begun to see how quality mentorship has played a positive role in my academic upbringing, and I have recognized a calling in myself to provide the same guidance I received to the next generation of scientists." José plans to pursue a position as a faculty member at a hybrid institution, meaning he will be occupied with a combination of both research and teaching at a university.

Another valuable lesson that José has gotten from his participation with YCA is the validation that he and his peers are not imposters, and that they should go into their postdoc futures with the confidence that they have the skills they need to succeed. This point was driven home during an improvisation exercise in which students were taught to trust in their science communication skills. In this training, random images were projected onto a board, and each student gave a presentation on whatever popped up. José felt that accomplishing this task fostered confidence in his and his peers' abilities to convey their scientific insight on the fly.

Enriquez Ortiz believes that the most poignant wisdom he has received from his experience with YCA is that as a student from an underrepresented background in research, it's easy to feel isolated, but that this is not the case. The program proved to him and his peers that they are not alone in their experiences, and that knowledge has provided a sense of motivation and community in the YCA participants. "Yale Ciencia Academy gave me the opportunity to work with peers who have similar goals of improving the diversity of the scientific community. I'm also really excited to bring that knowledge back to the Graduate School and help students reach their goals."



MOLINA EARNS NIDCR SUPPLEMENT, FORGES HER OWN WAY FORWARD

Andrea Molina—a PhD student in the Immunology program—joined the lab of Simon Young, DDS, MD, PhD, because her interest in translational work led her to a passion in improving cancer immunotherapy strategies using biomaterials, a concept Young has been working on throughout his career. Soon after committing to the Young lab, she was encouraged to apply for a National Institute of Dental Craniofacial Research (NIDCR) Supplement to Promote Diversity in Health-Related Research. As a Latina woman who was the first in her family to pursue higher education, Molina possesses a tenacity that made her the perfect applicant for the award. She received the supplement, and is using the funding to explore other types of immunomodulators to include into the SynerGel biomaterial platform Young and his colleagues have developed.

The development of SynerGel came out of a need to target immunosuppressive cells, which may limit the success of head and neck cancer immunotherapy. Since receiving the NIDCR diversity supplement, Hernandez is able to add on to the research being conducted with SynerGel and is expanding the scope of the biomaterial to include cytokines.

"I am now able to load cytokines into SynerGel and see if those cytokines have the potential for anti-tumor activity in our head and neck cancer models. I'm hoping that we are able to find a combination treatment that can be used with our biomaterial to treat head and neck cancer."

Molina's successes at the Graduate School have been a long time in the making. She was first introduced to the idea of becoming a scientist in high school, where she was part of the first graduating class of students in the Girls STEM Initiative at Rice University's Institute of Biosciences and Bioengineering (IBB). The program allowed first-generation female high school students to explore what a career in STEM would look like. Through this program, she was able to live on Rice University's campus for a week every summer, talk to graduate students, take part in lab activities, and fully immerse herself in the world of science and research. "The IBB Girls STEM Initiative helped me see that a career in science was possible." After graduating from the program, she earned her bachelor's degree, worked as a research technician at Rice University, and accepted an offer from the Graduate School to attend the PhD program.

Molina was drawn to the school because of the resources, experienced faculty, and connections in cancer research. The collaborative nature of the program also greatly appealed to her. As it stands, SynerGel is a collective project that has key personnel at MD Anderson UTHealth Houston Graduate School, UTHealth Houston School of Dentistry, and Rice University. She knew there would be fewer limitations to her research at the Graduate School,

and she could be part of a discovery that combined innovative minds throughout the Texas Medical Center.

When speaking about guidance she would give to those wishing to pursue a PhD in the biomedical sciences, Molina's first piece of advice was to study what you are passionate about, even if you are being told otherwise.

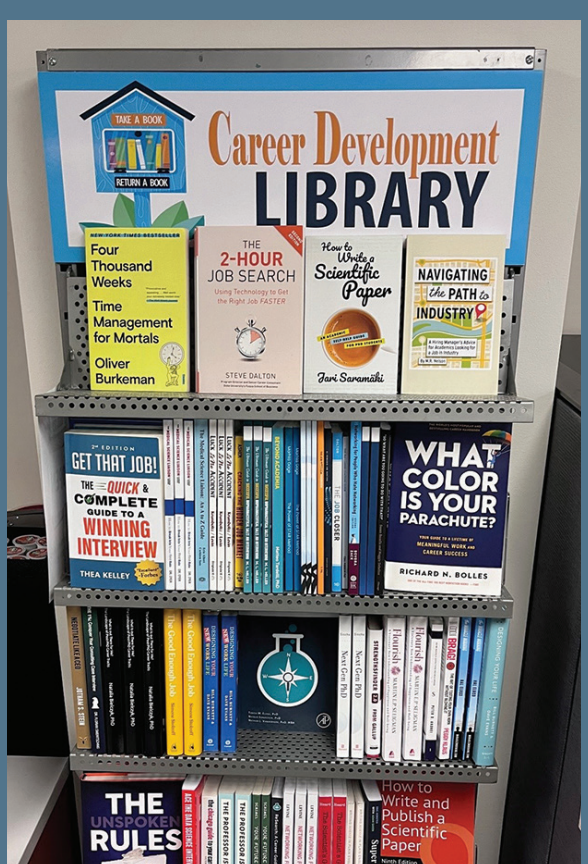
"One, I'm a woman, and two, I'm a Latina, so I was always questioned when I told someone I wanted to go into science," said Molina. "I had better grades in English than I did in math and science, so people would suggest I do something different, but I persisted in research."

She knew she wanted a career as a scientist, so she continued to vouch for herself.

Molina believes that having a support system is important in graduate school, and suggests surrounding yourself with people who genuinely want to see you succeed. She found a community in The Academy at the GSBS, an initiative geared towards providing high-level and effective training to individuals from historically underserved backgrounds who pursue graduate degrees in the biomedical sciences.

"Being a part of The Academy connected me to people who are going through the same transitions that I am going through," said Molina. "We got to meet each other before Orientation, so we were able to look for a familiar face when things got a little overwhelming."

Molina also receives encouragement from Young, who has made it one of his goals as a PI to be a valuable mentor to his lab students. "I had a lot of people looking out for me early in my career, and I want to train future researchers to go out and be successful in the world. That is the best part of the educational process."



The Office of Career Development is devoted to student success with dedicated staff members. Services include:

- A new career development lending library
- Individual career advising
- Career planning using the individual development plan (IDP)
- Internship navigation and integration into student's educational experience
- Career exploration seminars/programming for Graduate School students
- Assistance with job readiness tools: CV/resume, LinkedIn profiles
- Promotion of job, postdoc, internship, and fellowship opportunities

Learn more at **gsbs.uth.edu/career-development.**

STUDENT AWARDS - FALL 2022

Through generous philanthropic support, the school recognizes the accomplishments of students each year with competitive awards totaling more than $1.5 million in support.

HEY MIN LEE AND ZECHENG YANG
RALPH B. ARLINGHAUS, PHD, SCHOLARSHIP
Lee's advisor: E. Scott Kopetz, MD, PhD
Yang's advisor: Wantong Yao, PhD

TAYLOR HALSEY
MOLLY S. BRAY, PHD, SCHOLARSHIP
Advisor: Robert Jenq, MD

MARY FUENTES
R.W. BUTCHER ACHIEVEMENT AWARDS
Advisor: Pawel Mazur, PhD

SUNADA KHADKA
CANCER ANSWERS/SYLVAN RODRIGUEZ SCHOLAR
Advisor: Ronald DePinho, MD

DEANNA GLASSMAN AND THOMAIA PAMPLIN
CANCER ANSWERS SCHOLARSHIP
Glassman's advisor: Anil Sood, MD
Pamplin's advisor: Curtis Pickering, PhD

VIKRAM KULKARNI AND LEE-ANN NOTICE
CITY FEDERATION OF WOMEN'S CLUBS ENDOWED SCHOLARSHIP IN THE BIOMEDICAL SCIENCES
Kulkarni's advisor: Scott Evans, MD
Notice's advisor: Ambro van Hoof, PhD

KO-CHIEN CHEN AND JOAN JACOB
FLOYD HAAR, MD, ENDOWED MEMORIAL RESEARCH AWARDS IN MEMORY OF FREDA HAAR
Chen's advisor: Ronald DePinho, MD
Jacob's advisor: Kendra Carmon, PhD

CUAUHTEMOC (ULISES) GONZALEZ AND XIN RU (CHERYL) JIANG
THE ANTJE WUELFRATH GEE AND HARRY GEE, JR. FAMILY LEGACY AWARDS
Gonzalez's advisor: Vasanthi Jayaraman, PhD
Jiang's advisor: Katy Rezvani, MBBS, PhD

MARVIN WIRIANTO
GIGLI FAMILY ENDOWED SCHOLARSHIPS
Advisor: Seung-Hee (Sally) Yoo, PhD

YULUN HE
ELLEN TAYLOR GOLDIN LEGACY SCHOLARSHIP
Advisors: Kristy Brock, PhD, and Radhe Mohan, PhD

KRITHIKAA RAJKUMAR BHANU, JANANI SUBRAMANIAM, AND RUI YE
GSBS ENDOWMENT SCHOLARSHIP
Rajkumar Bhanu's advisor: Michael Curran, PhD
Subramaniam's advisor: Shane Cunha, PhD
Ye's advisor: Steven Lin, MD, PhD

SUMAN SHRESTHA AND DANIEL ZAMLER
JESSE B. HEATH, JR. FAMILY LEGACY AWARD
Shrestha's advisor: Rebecca Howell, PhD
Zamler's advisors: Giulio Draettta, MD, PhD, and Jian Hu, PhD

JIEXI LI AND HANGHUI YE
T.C. HSU MEMORIAL SCHOLARSHIPS
Li's advisor: Ronald DePinho, MD
Ye's advisor: Askar Akimshanov, PhD

KYLA GIBNEY, MELISSA FRANCH, YUN YAN, AND ER-YEN (NICK) YEN
INVESTING IN STUDENT FUTURES SCHOLARSHIP
Gibney's advisor: Francesco Versace, PhD
Franch's advisor: Valentin Dragoi, PhD
Yan's advisor: Nicholas Navin, PhD
Yen's advisor: Giulio Draetta, MD, PhD

JINHAO ZOU
THE FADINE JACKSON ROQUEMORE SCHOLARSHIP IN CANCER RESEARCH
Advisor: Sanjay Shete, PhD

STUDENT AWARDS - FALL 2022

OSCAR VILLARREAL
CHARLENE KOPCHICK FELLOWSHIP
Advisor: E. Scott Kopetz, MD, PhD

VAHID BAHRAMBEIGI, JOAN JACOB, TAKESE McKENZIE, EYAD SHIHABEDDIN, OSCAR VILLARREAL, AND TANVI VISAL
DR. JOHN J. KOPCHICK: 1ST YEAR FELLOWS
Bahrambeigi's advisor: Anirban Maitra, MBBS
Jacob's advisor: Kendra Carmon, PhD
McKenzie's advisor: Jian Hu, PhD
Shihabeddin's advisor: Jiaqian Wu, PhD
Villarreal's advisor: E. Scott Kopetz, MD, PhD
Visal's advisor: George Calin, MD, PhD

SHANNON HARTZELL, CELINE SHUET LIN KONG, KYLE LABELLA, SONIA PATEL, KAREEM WAHID, RUOYU WANG, AND XU ZHANG
DR. JOHN J. KOPCHICK: 2ND YEAR FELLOWS
Hartzell's advisor: Stephen Kry, PhD
Kong's advisor: Jichao Chen, PhD
LaBella's advisor: Ronald DePinho, MD
Patel's advisor: John Heymach, MD, PhD
Wahid's advisor: C. David Fuller, MD, PhD
Wang's advisor: Wenbo Li, PhD
Zhang's advisor: Fabricio DoMonte, DVM, PhD

SWATI MOHAPATRA AND WEI-HSIN LIU
STEVE LASHER AND JANIECE LONGORIA GRADUATE STUDENT AWARD IN CANCER BIOLOGY
Mohapatra's advisor: George Calin, MD, PhD
Liu's advisor: Yair Reisner, PhD

KAI HUANG AND YAO ZHAO
RAY MEYN SCHOLARSHIP FOR CANCER RESEARCH
Huang's advisor: Laurence Court, PhD
Zhoa's advisor: Jinzhong Yang, PhD

VIDHI CHANDRA, JIEXI LI, KAREEM WAHID, AND RUOYU WANG
PRESIDENTS' RESEARCH SCHOLARSHIPS
Chandra's advisor: Florencia McCallister, MD
Li's advisor: Ronald DePinho, MD
Wahid's advisor: C. Dave Fuller, MD, PhD
Wang's advisor: Wenbo Li, PhD

MABEL PEREZ-OQUENDO
OATES FAMILY FELLOWSHIP
Advisor: Don Gibbons, MD, PhD

CHARMELLE WILLIAMS
SYLVAN RODRIGUEZ FOUNDATION SCHOLARSHIPS HONORING GEORGE M. STANCEL, PHD
Advisor: Matthew Gubin, PhD

RECEP BAYRAKTAR, LI CAI, JINCHENG HAN, CHENG-EN (RODNEY) HSIEH, ARTHUR LIU, AND YIMO SUN
ANDREW SOWELL-WADE HUGGINS SCHOLARSHIPS IN CANCER RESEARCH
Bayraktar's advisor: George Calin, MD, PhD
Cai's advisor: Ronald DePinho, MD
Han's advisor: Ronald DePinho, MD
Hsieh's advisor: Michael Curran, PhD
Liu's advisor: Michael Curran, PhD
Sun's advisor: Greg Lizee, PhD

AKASH BODA AND WEN-HAO HSU
THE GEORGE M. STANCEL, PHD, FELLOWSHIPS IN THE BIOMEDICAL SCIENCES
Boda's advisor: Michael Curran, PhD
Hsu's advisor: Ronald DePinho, MD

CELSO CATUMBELA
HENRY W. STROBEL, PHD ENDOWED SCHOLARSHIP
Advisor: Advisor: Rodrigo Morales, PhD

ALEXIS MOBLEY
SAM TAUB AND BEATRICE BURTON ENDOWED FELLOWSHIPS IN VISION DISEASE
Advisors: Jaroslaw Aronowski, MD, PhD and Louise McCullough, MD, PhD

TAKESE McKENZIE
ROBERTA M. AND JEAN M. WORSHAM ENDOWED FELLOWSHIP
Advisor: Jian Hu, PhD

RHIANNON MORRISSEY
WEI YU FAMILY ENDOWED SCHOLARSHIP
Advisor: Guillermina Lozano, PhD

STUDENT AWARDS - SPRING 2023, RESEARCH & DISSERATION

AMANDA LANIER AND KAYLENE LU
PAULINE ALTMAN-GOLDSTEIN DISCOVERY FELLOWSHIPS
Lanier's advisor: Powel Brown, MD, PhD
Lu's advisor: Jian Hu, PhD

HANA BAROUDI, EMILY CAGGIANO, DAISY DIAZ-ROHENA, ANDREW GILLARD, PAHUL HANJRA, BENJAMIN INSLEY, KEVIN LIU, KAYLENE LU, BARBARA MARQUEZ, HUNTER MEHRENS, GRACE MURLEY, NICK NEWKIRK, MEKENZIE PESHOFF, VIVIAN SALAMA, HEATHER SONNEMANN, SREEPRADHA SRIDHARAN, AND LLARAN TURNER
AMERICAN LEGION AUXILIARY FELLOWSHIPS
Baroudi's advisor: Laurence Court, PhD
Caggiano's advisor: Cullen Taniguchi, MD, PhD
Diaz-Rohena's advisor: Deepa Sampath, PhD
Gillard's advisor: Candelaria Gomez-Manzano, MD
Hanjra's advisor: Anil Sood, MD
Insley's advisors: Mohammad Salehpour, PhD, and David Jaffray, PhD
Liu's advisor: Emil Schueler, PhD
Lu's advisor: Jian Hu, PhD
Marquez's advisor: Laurence Court, PhD
Mehrens' advisor: Stephen Kry, PhD
Murley's advisor: Mark Pagel, PhD
Newkirk's advisor: Swathi Arur, PhD
Peshoff's advisor: Krishna Bhat, PhD
Salama's advisor: C. David Fuller, MD, PhD
Sonnemann's advisor: Gregory Lizee, PhD
Sridharan's advisor: Michael Galko, PhD
Turner's advisor: George Eisenhoffer, PhD

RUSSELL MILTON, PHD
MICHAEL R. BLACKBURN OUTSTANDING DISSERTATION AWARD
Advisor: Valentin Dragoi, PhD

RUPAROSHNI JAYABALAN, ABBIGALE PERKINS, KIERSTEN SCOTT, RYAN SLOAN, AND MITHEERA V
DEAN'S EXCELLENCE SCHOLARSHIP
Jayabalan's advisor: Mauro Di Pilato, PhD
Perkins' advisor: William Margolin, PhD
Scott's advisor: Akihiko Urayama, PhD
Sloan's advisor: Jayhun Lee, PhD
V's advisor: Guillermina Lozano, PhD

IULIA VERONICA GHEORGHE
JOHN AND REBEKAH HARPER FELLOW IN BIOMEDICAL SCIENCES
Advisor: Traver Hart, PhD

LALIT PATEL, MD, PHD
ALFRED G. KNUDSON, JR., OUTSTANDING DISSERTATION
Advisor: Michelle Barton, PhD

RUOYU WANG
PRESIDENT'S RESEARCH EXCELLENCE
Advisor: Wenbo Li, PhD

AKASH BODA, SIYUAN HE, AND SWATI MOHAPATRA
SCHISSLER FOUNDATION FELLOWSHIPS
Boda's advisor: Michael Curran, PhD
He's advisor: Nicholas Navin, PhD
Mohapatra's advisor: George Calin, MD, PhD

AMANDA WARNER AND DON GIBBONS, MD, PHD
ANDREW SOWELL-WADE HUGGINS FELLOWSHIP & PROFESSORSHIP IN CANCER RESEARCH (1ST YEAR)

HANGHUI YE AND NICHOLAS NAVIN, PHD
ANDREW SOWELL-WADE HUGGINS FELLOWSHIP & PROFESSORSHIP IN CANCER RESEARCH (2ND YEAR)

HAO-NIEN CHEN AND MADELAINE THEARDY
ROSALIE B. HITE: 1ST YEAR FELLOWS
Chen's advisor: Dihua Yu, MD, PhD
Theardy's advisor: Wantong Yao, PhD

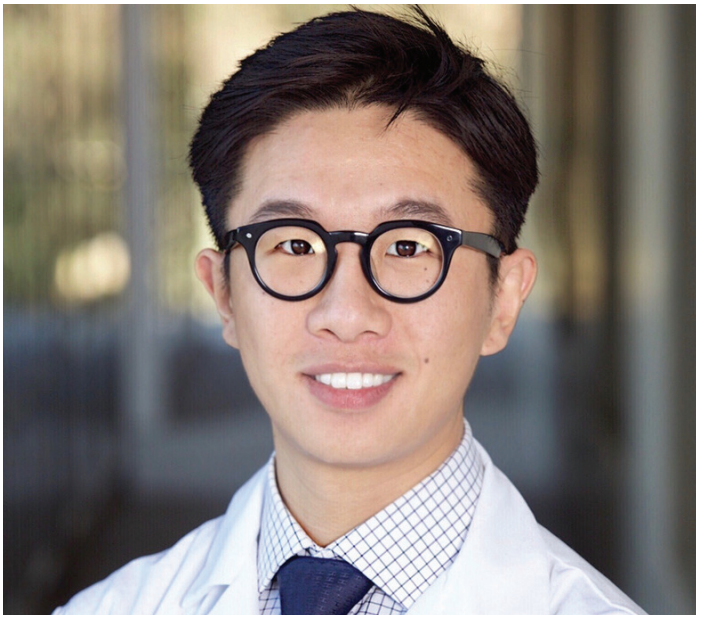
SERVANDO HERNANDEZ VARGAS AND MO-FAN HUANG
ROSALIE B. HITE: 2ND YEAR FELLOWS
Hernandez Vargas' advisor: Ali Azhdarinia, PhD
Huang's advisor: Dung-Fang Lee, PhD

RUI YE
ROSALIE B. HITE: 3RD YEAR FELLOWS
Advisor: Steven Lin, MD, PhD

HONG ANH (NIKKI) CAO
MARILYN AND FREDERICK R. LUMMIS, JR., MD FELLOWSHIP
Advisor: Daniel Frigo, PhD

MELISSA FRASCA AND HEATHER SONNEMANN
LINDA M. WELLS GSBS OUTREACH AWARD
Frasca's advisor: Francesca Cole, PhD
Sonnemann's advisor: Gregory Lizee, PhD

LI DISCUSSES FIRST-AUTHORING PAPERS AS A NON-NATIVE ENGLISH SPEAKER; EMPHASIZES A FOCUS ON ONE'S AUDIENCE



Ye (Ethan) Li is an Immunology PhD graduate and studied in the lab of Katy Rezvani, MBBS, PhD, to research novel treatments that use cell-based immunotherapy to locate and remove tumors. One of his most recent first-authored paper, titled "KIR-based inhibitory CARs overcome CAR-NK cell trogocytosis-mediated fratricide and tumor escape" was published in the September 2022 issue of Nature Medicine. Li provides insight to current students on what aspects to focus on when writing a first-authored paper.

When beginning to put your paper together, Li stresses the importance of knowing who your audience will be. The way your research is presented should reflect who will be reading it—physicians, patients, researchers, or even the general population are all possible audiences depending on how you write your paper.

"Everyone has a different background in terms of scientific knowledge. For example, depending on your level of scientific understanding, you may understand what an antibody is without any explanation, or you may need a whole page of explanation. Understanding who your audience will be will help you navigate how to present your research."

In order to find an accurate baseline for the scientific knowledge of your audience, Li suggests having your work peer reviewed by scientists in a different field of research. This will help you identify areas in your writing that may be over-explained, as well as any jargon that will be confusing for an audience who may not be an expert in your specific area of study.

After four first-authored papers, Li has developed a few tried-and-true methods for creating an impactful research paper. One of these suggestions is to find similar writings from prestigious journals and study their structures and the main focus of the writings. "How did they lay out their discussions? Did they get deep into the details, or were they more focused on the big picture? These questions will help guide your own paper."

Writing as a non-native English speaker can come with its own challenges throughout the writing process. Li uses these challenges as learning opportunities, and makes a point to ask his mentors why they made the change instead of accepting without questions. By doing this, he has learned more complex rules in English writing. His advice for non-native English speakers writing their first-author papers is to also share their work with contemporaries who have the same language background as themselves. "Your peers may better understand why you worded it a certain way and suggest a sentence structure that conveys your thoughts more succinctly in English."

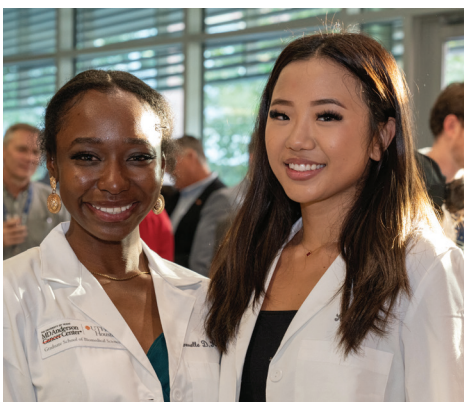
Li's research has highlighted a novel solution that is beginning to be widely applied in treatment. He hopes that this success will provide insight to students starting off their own research. "You can (and should) continue with observations that have unexpected results. That is how science evolves. If your findings do not match up to what common literature suggests, don't just abandon your studies. Continue investigating, and you might find a breakthrough."

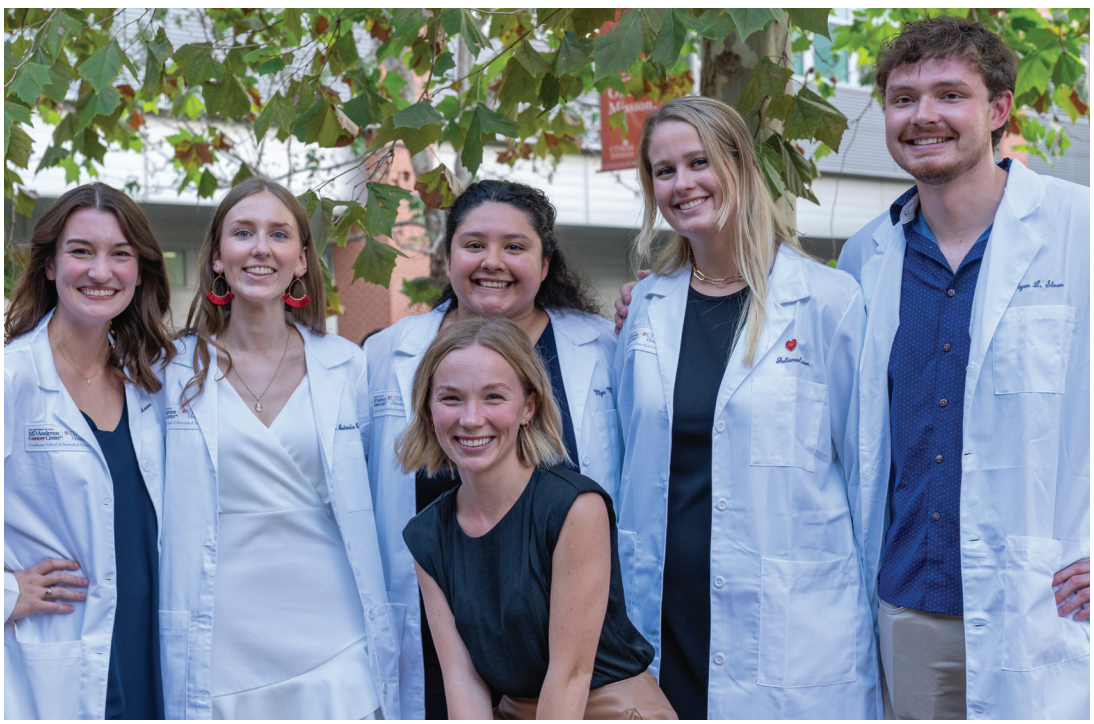
2022 cohort

LAB COAT CEREMONIES

In 2022, the Graduate School was able to go back to hosting in-person events, which included this ceremony that honors second-year PhD students, their mentors, and their commitment to a lab. The 2022 and 2023 celebrations were held at Cooley University Life Center at UTHealth Houston. Here are snapshots from these festivities.

2023 cohort





IN MEMORIAM
MD/PHD STUDENT DEBORAH SILVERMAN

Deborah Silverman, PhD, a graduate student affiliated with the MD/PhD and Immunology programs, passed away Nov. 19, 2022. She is remembered as a passionate scholar with a brilliant mind who had a bright future as a physician-scientist and who was a positive force for her community. Silverman was 32.

Silverman joined the program in 2013 and immediately made an impact on her fellow students and program faculty.

"Students in our program are here for eight years, so it's critical to have a community to support each other," says Dianna Milewicz, MD, PhD, director of the MD/PhD program. "Deb was the ideal person in our community to help keep people connected. She was just fun to be around, and her positive outlook and excitement about science and being a physician scientist was contagious."

Mikayla Bowen, a fellow student in the MD/PhD program, agrees.

"She was everybody's friend, cheerleader, and problem solver," Bowen says. "She was the heart of our program."

Her personality drew people to her, say those who worked with her, and she was known for her enthusiasm for learning and scientific research.

"Deb was an incredibly bright and hardworking student in our MD/PhD program," recalls Wendy Woodward, MD, PhD, a Graduate School faculty member and professor, Radiation Oncology, MD Anderson. "She was focused on making progress towards her degrees and was able to publish her work and get her PhD [in fall 2022], an amazing accomplishment."

George Calin, MD, PhD, who supervised Silverman in his lab, agrees."She was strong like a rock and completely focused on her work and graduating with her PhD," the professor of Translational Molecular Pathology at MD Anderson and MD/PhD program co-director says. "Deb was the driving force behind a project studying the role of interactions between neurons and immune cells in the tumor microenvironment, and throughout everything her mind was focused on research and making discoveries."

Silverman's passion for science was evident in all her work, and many of her achievements during her schooling reflect that.

"Deb was a superstar in the making," says Senior Associate Dean Bill Mattox, PhD.

She was the recipient of a grant from the Cullen Foundation and one of the John J. Kopchick Fellows at the graduate school. Additionally, she received an F30 grant from the NIH to explore groundbreaking research in T-cell cancer immunotherapy. Among her numerous publications was a featured cover story in the high-impact journal *Nature*. Her love of science extended to sharing her knowledge and excitement over the discovery process with others, even those who didn't have a medical or scientific background.

Fellow students and others she interacted with were also touched by her genuine kindness and interest in supporting those around her.

"Deb spent the last decade training to be a physician scientist fighting cancer with immunotherapy, and she inspired my own journey into studying tumor immunology and interest in [the school's] MD/PhD program," recalls fellow MD/PhD student Renato Guerrieri. "But most of all she was a fierce friend and support system through any academic or personal hurdle that came my way."

All those who knew her will miss her bright spirit and determination, and those who worked with her in the program know their lives were enriched because she was a part of it.

"Deb is an inspiration to so many," says Guerrieri. "We are all better for knowing her."

2022 ALUMNI CAREER SYMPOSIUM

On Nov. 1-2, 2022, the Graduate School's Office of Career Development hosted this sympoisum to allow students to hear how alumni have found career success and satisfaction in a multitude of ways, as well as learn details about how their careers have evolved since graduating.

With the theme "Explore, Connect, Inspire," attendees participated in virtual activities on the first day of the symposium while the second day was held in person at the UTHealth Houston Institute of Molecular Medicine (IMM).

On the first day of the symposium, attendees listened to a talk given by alumnus Steven Nadler, PhD, titled "Attaining personal and scientific success in industry." Nadler is the senior vice president and head of discovery and translational research at Aro Biotherapeutics.

The second day of the symposium featured the keynote lecture titled "Getting to the Second Mountain" given by GSBS alumna Rena D'Souza, DDS, MS, PhD '87, the director of the National Institute of Dental and Craniofacial Research (NIDCR). D'Souza spoke on her personal journey through a career in science, current obstacles in the scientific community, and the continued stride for diversity in research.

The Graduate School also invited three alumni to give presentations on their current roles and to provide insight into their career paths.

- Morgan McKeller, PhD '08, talked about what it is like to be a senior medical science liaison at Amgen U.S. Medical Affairs.
- Kendra Carmon, PhD '08, presented on her role as an associate professor at the Institute of Molecular Medicine, UTHealth Houston.
- Hillary Caruso, PhD '14, spoke about her experience being the vice president of strategic operations at Castle Biosciences.

Other highlights from the 2022 Alumni Career Symposium include:

- A panel titled "Young alumni: A conversation on starting your career" featuring Jianji (Paul) Chen, PhD '21; W. Frank Lenoir, PhD '20; Sydney Moyer, PhD '20; and Tristen Tellman, PhD '22.
- A panel titled "Developing and maintaining a work-life balance" featuring Petra den Hollander, PhD '06; Brittany Ellis Jewell, PhD '21; and Jon Lyons, PhD '06.
- A panel titled "Work in the new normal" featuring Doug Botkin, PhD '09; Kimiya Memarzadeh, PhD '19; Gloria Sierra, PhD '21; and Jena Tavormina, PhD '19.

View photos of the event at go.uth.edu/GSBS-ACS22-album.

ALUMNA GENCEL–AUGUSTO OFFERS INSIGHT INTO THE PURSUIT OF POSTDOC OPPORTUNITIES

"As long as you have a potential postdoc mentor to write a letter stating their commitment, you can apply to most postdoc fellowships without data. In fact, most fellowships are only offered to scientists who have a maximum of one year of postdoc experience. So earlier is better!"

When Jovanka Gencel-Augusto, PhD '23, entered her last year in the Genetics and Epigenetics program (with a Cancer Biology secondary concentration) at the Graduate School, she knew she wanted to continue her path towards a career in academia, specifically in cancer research. During her time at the school, Gencel-Augusto received the Thomas F. Burks Scholarship for Academic Merit, Rosalie B. Hite Fellowship, Dr. John J. Kopchick Fellowship, and Tzu-Chi Scholarship Award for Excellence.

She met with her advisor, Guillermina Lozano, PhD, to discuss labs that would be a good fit for her interests and professional goals and compiled a list of potential labs based on that conversation. This list of labs began Gencel-Augusto's search for the right postdoctoral opportunity for her. After lots of research, networking, writing and rewriting, her dedication to the process earned her a position in the Bivona lab at the University of California, San Francisco (UCSF) and the UC President's Postdoctoral Fellowship.

With her list of potential labs at the ready, Gencel-Augusto began reaching out to PIs for meetings. She knew she would be going to a conference where Trever Bivona, MD, PhD, would also be in attendance. She took this opportunity to schedule an in-person meeting to present her research, learn about his lab at UCSF, and make a meaningful introduction. During the appointment, she explained how a specific finding in her dissertation could be expanded upon using the research being conducted in the Bivona Lab. The meeting went well, and she was invited to visit the lab in person. She found the environment to be welcoming and constructive, and she soon had her heart set on UCSF for the next step in her career. With an offer secured, she began looking at postdoc fellowships.

One of the biggest pieces of advice she has for the postdoctoral process is to start researching fellowships early. She found that by the time she was looking, some applications had already closed. Luckily, the UC President's Postdoctoral Fellowship was still accepting applicants.

"As long as you have a potential postdoc mentor to write a letter stating their commitment, you can apply to most postdoc fellowships without data. In fact, most fellowships are only offered to scientists who have a maximum of one year of postdoc experience. So earlier is better!"

It's important to note that some labs only accept postdocs who already have funding secured. Gencel-Augusto recommends mentioning your active pursuit for fellowships in interviews you are having with potential PIs.

"You want to be able to prove that you can obtain funding for yourself and your research in the future. This skill is essential for faculty members."

Procuring a postdoctoral fellowship can be a lengthy and strenuous process, but Gencel–Augusto made sure to get feedback on each component of her fellowship application from multiple sources: lab mates, her advisor, mentors, the GSBS Office of Career Development, and even her future PI. She offers five key pieces of advice for those in the midst of their own fellowship applications.

1. Make a point to build a good relationship with your advisory committee members. One of her letters of recommendation was from a committee member; they are part of your team to help you, guide you, and hopefully be around for advice even after your time at the Graduate School.

2. Research who the previous fellows are and reach out to them to make a connection. In doing this, Gencel-Augusto was able to gain insight from someone who had successfully been through the process. This made her more aware of what the reviewers were looking for specifically.

3. Your research proposal needs to answer the following question: *how will your area of expertise converge with your postdoc lab's focus to help you learn new skills and develop your own line of research?* By learning about the PPAR signaling pathway through her own research findings, she found a link between her dissertation and the research at Bivona lab. After reviewing studies in the field, she found that no one had published research on her proposed concept. Branching into a new area of study through something she was familiar with and curious about studying further helped to illustrate her qualifications in her research proposal.

Additionally, ask for feedback from as many people as possible. If you can, ask people in different fields to read your research proposal, as reviewers are likely not working in your area of expertise.

4. Your personal statement must show reviewers why they should invest in you. This is where the Office of Career Development was instrumental in giving useful feedback to Gencel-Augusto. She met with the Student Affairs and Career Development Director Raquel Salinas, PhD, to go over the draft of her statement. "Dr. Salinas offered suggestions that wouldn't have even occurred to me. These recommendations made my statement stronger."

5. Go past how the fellowship will benefit you; talk about how you will use this opportunity to become a valuable resource for the next generation of scientists. During her personal statement review, Dr. Salinas asked Gencel-Augusto, "How will you continue learning to be an inclusive mentor in the future?" In the first draft of her statement, she spoke of obstacles she had in her path as an emerging scientist, and she had highlighted community service work she had done, but she had not focused much on her future philanthropic plans. "I cannot just say 'I'm finished, that's enough giving back.'" Think about what actions you can take to continue being a supportive mentor, faculty member, PI, etc. She truly believes that including this thought process in her statement set her apart from other applicants.

If you are preparing to begin your own journey through the postdoctoral fellowship process, start early and ask for help. At the school, there are so many resources available for feedback and guidance.

To get in contact with the Office of Career Development, email gsbs.careerdevelopment@uth.tmc.edu.

MATTOX TO RETIRE NOV. 30; FROST PROMOTED TO INTERIM ASSOCIATE DEAN

After 30 years of dedication to MD Anderson Cancer Center UTHealth Houston Graduate School of Biomedical Sciences, William "Bill" Mattox, PhD, retired at the end of November 2023.

Mattox joined the Graduate School faculty in 1993 as a faculty member affiliated with the Genes and Development program, know today as the Genetics and Epigenetics program. He then became an associate dean of graduate education in 2012, leading the school's Office of Academic Affairs. In 2020, he was promoted to senior associate dean of graduate education where he continued to direct academic and faculty affairs while interfacing with MD Anderson leadership on matters important to the school, thus filling one of the gaps left by the departure of Dean Michelle Barton, PhD, in the same year.

"Dr. Mattox is an exemplary educator, mentor, and scientist. His long-term service to the Graduate School provides him a uniquely rich breadth and depth of knowledge. No one understands our students and our faculty as well as Bill does. He will be hard to replace, but we wish him every happiness as he begins his next chapter."

-Interim Dean Sharon Y.R. Dent, PhD

"His caring attitude is always evident, even in the most difficult of situations, added Interim Dean Sharon Y.R. Dent, PhD. "Bill's extensive experience also makes him the resident expert on school's policies and bylaws. He represents our school tirelessly on multiple committees at our parent institutions as well, to ensure that the perspective of students and faculty are taken into account in decision making."

"Such representation was especially essential during the COVID-19 pandemic. We are very grateful for all of Dr. Mattox's many contributions. He will be hard to replace, but we wish him every happiness as he begins his next chapter," said Dent.

Mattox received his PhD in molecular genetics from The California Institute of Technology. Following his training as a Helen Hay Whitney Foundation and American Cancer Society Postdoctoral Fellow at Stanford University, he joined MD Anderson Cancer Center as an assistant professor in 1992.

In 1994, Mattox was named a Pew Scholar of Biomedical Sciences. He served as director of the Genes and Development graduate program from 2003-2005 and was a founding member of the MD Anderson Graduate Education Committee. He has also received many awards for his educational activities including The William Randolph Hearst Foundation Faculty Achievement Award in Education (2010), and MD Anderson Distinguished Educator (2019).

During his tenure at the school, Mattox has trained 20 MS and PhD students, nine postdocs, served on over 100 student committees, and directed three courses.

"It has been a true privilege, and a joy, to work with our students and faculty and especially the marvelous staff of the GSBS," said Mattox.

"I am very thankful for the many friends and colleagues who have supported me throughout my career."

To ensure the school continues its excellence in education management, Assistant Dean Jeffrey A. Frost, PhD, was promoted to associate dean of academic and faculty affairs *ad interim*, leading the academic affairs office in addition to his current duties.

In April 2022, Frost joined the school administration as a co-director of the Predoctoral & Postdoctoral Training in Clinical & Translational Sciences at UTHealth Houston and MD Anderson Cancer Center (CCTS- TL1). He has also helped with multiple facets of graduate education at the school, including representing the interests of faculty and students appointed at UTHealth Houston.

"I am very happy and excited to have this opportunity to work with the wonderful students, faculty and staff at Graduate School," said Frost "The mission of the Graduate School to train the next generation in the biomedical sciences is one that I wholeheartedly believe in, and I will do my best to live up to the lofty standards set by Bill."

Frost joined the faculty in 2000 and is currently a professor in the Department of Integrative Biology and Pharmacology at McGovern Medical School at UTHealth Houston. At the Graduate School, he is affiliated with the programs in Biochemistry and Cell Biology, and Genetics and Epigenetics.

He will continue to direct research in his lab, which focuses on cell signaling in breast and neuroendocrine tumors.

From top: Pictures here show Senior Associate Dean Mattox throughout the years at various school events.

McCULLOUGH RECOGNIZED WITH AMERICAN HEART ASSOCIATION BASIC RESEARCH PRIZE

For the acknowledgment of her research advancing the field of cardiovascular science, faculty member Louise McCullough, MD, PhD, was honored with the 2022 American Heart Association Basic Research Prize.

McCullough is professor and chair and the Roy M. and Phyllis Gough Huffington Distinguished Chair in the Department of Neurology with McGovern Medical School at UTHealth Houston, co-director of UTHealth Houston Neurosciences, and chief of neurology at Memorial Hermann-Texas Medical Center. At the Graduate School, she is affiliated with school's Immunology and Neuroscience programs.

The award is given annually to an individual who is making outstanding contributions to the advancement of cardiovascular science and who currently runs an exceptional cardiovascular basic science laboratory.

"We have seen an amazing growth in our understanding of the biology of sex differences, in both clinical and experimental studies over the past decade," McCullough said. "My first and primary area of research focus is the investigation of mechanisms underlying sex differences in stroke. This primary area of interest has shaped both my basic and clinical career and has been the driving force behind my translational efforts over the past decade."

Recognized for her work in cerebral vascular disease, McCullough is known for her research identifying sex differences in cell death pathways during stroke, which are now recognized as major factors in the response to an ischemic insult. Her research revealed the importance of sex differences in disease models at the bench level, and this work contributed to the National Institutes of Health's decision to mandate that both male and female animals be included in all preclinical research.

Additionally, McCullough's laboratory studies aging and inflammation, and how these factors influence recovery after stroke. Currently, her team is examining how age-related dysbiosis impairs stroke recovery, contributes to cognitive decline, and potentially affects women and their children through maternal transmission of their biome.

McCullough received a bachelor's degree in psychology, a master's degree in experimental psychology, and a doctorate in neuroscience from the University of Connecticut. She earned a Doctor of Medicine from the University of Connecticut School of Medicine Farmington, and completed her residency and fellowship at Johns Hopkins Hospital in Baltimore.

She has been funded by the National Institutes of Health and the American Heart Association for her research and has published more than 280 articles in peer-reviewed journals. She serves on the editorial boards of Acta Neuropathologica, Journal of Stroke and Cerebrovascular Disease, and Annals of Neurology, as well as Stroke, the peer-reviewed journal of the American Heart Association.

MILEWICZ LAB FINDS GENE MUTATION THAT COULD CAUSE ARTERY DISEASE AT A YOUNG AGE

A novel molecular pathway to explain how a mutation in the gene ACTA2 can cause individuals in their 30s – with normal cholesterol levels and no other risk factors — to develop coronary artery disease has been identified, according to researchers with UTHealth Houston.

The study was published in the European Heart Journal.

"The gene ACTA2 codes a specific protein that has nothing to do with cholesterol," said Dianna Milewicz, MD, PhD, senior author of the study, director of the Graduate School's MD/PhD program, and professor and director of the Division of Medical Genetics at McGovern Medical School at UTHealth Houston. "It was a surprise to find that people with the gene mutation had too much atherosclerosis at a young age and with no risk factors."

A 2009 study led by Milewicz found that a number of mutations in ACTA2 predispose humans to develop early onset (30s or younger) coronary artery disease.

Atherosclerosis is a buildup of fats, cholesterol, and other substances in and on the artery walls. It can develop over time and most people don't know they have it until they suffer a heart attack or stroke. Traditional risk factors for developing atherosclerosis include high cholesterol, high blood pressure, diabetes, smoking, obesity, lack of exercise, and consuming a high-fat diet.

ACTA2 is typically found in the smooth muscle cells, which line the arteries and allow the arteries to contract to control blood pressure and flow. Milewicz and her team found that protein coded by this gene is not folded correctly because of the mutation, and it triggers stress in the smooth muscle cell, which then forces the cell to make more cholesterol internally, regardless of the levels of cholesterol in the blood, driving atherosclerotic plaque formation.

"This finding is unique in that we found a completely new pathway to atherosclerosis. It explains why for years we have known statins protect people from heart attacks, even those people whose blood cholesterol levels are normal. In the people with ACTA2 mutations, the statins block the cholesterol made by the stressed smooth muscle cells," said Milewicz, the President George Bush Chair in Cardiovascular Medicine with McGovern Medical School. "In our study, the mutant protein made by the ACTA2 mutation caused the cells in the artery wall to be stressed, but there are many other factors that can stress cells. We are now working on the risk factors for coronary artery disease, like hypertension, that would also stress the cells and activate this novel pathway for coronary artery disease." One of the results of stress in smooth muscle cells associated with atherosclerosis is the deposition of calcium in the arteries.

"Cardiac calcium imaging in individuals with ACTA2 mutations could be a useful early diagnostic tool to monitor the development of the early atherosclerosis in these people. This would allow physicians to decide at what age to start these patients on statins," Milewicz said.

Using a genetically engineered mouse that contains a particular ACTA2 mutation and feeding the mice a diet rich in cholesterol, the researchers induced atherosclerosis and found that these mice have much more atherosclerosis than similarly treated mice normal mice. The study also found that the increased atherosclerosis could be reversed by treating the mice with pravastatin, a member of the statin group of drugs commonly prescribed to lower blood cholesterol. The researchers confirmed that same molecular pathway is activated in smooth muscles cells isolated from a human patient with an ACTA2 mutation.

Statins prevent coronary artery disease by lowering the levels of cholesterol in the blood. At the same time, more than half of heart attacks occur in apparently healthy men and women with average or low levels of plasma LDL-cholesterol. Statins also reduce heart attack events in people with normal cholesterol levels.

FACULTY MEMBERS PIWNICA-WORMS, WOOD ELECTED TO NAS

Three MD Anderson UTHealth Houston Graduate School faculty members from MD Anderson Cancer Center have been elected to the prestigious National Academy of Sciences (NAS). Helen Piwnica-Worms, PhD, professor of Experimental Radiation Oncology, Jennifer Wargo, MD, professor of Surgical Oncology and Genomic Medicine, and Richard Wood, PhD, professor of Epigenetics and Molecular Carcinogenesis. All are recognized for their respective contributions to advancing our understanding of cancer genetics, cancer therapies, biochemistry, and cell biology

Established in 1863 by President Abraham Lincoln, NAS is a private, non-profit society of distinguished scholars engaged in scientific and engineering research.

Piwnica-Worms, and Wood join previously elected Graduate School faculty James Allison, PhD; Ronald DePinho, MD; Guillermina Lozano, PhD; and distinguished senior lecturer V. Craig Jordan, PhD.

Piwnica-Worms has made significant contributions to our understanding of the biochemical mechanisms of cell cycle regulation and to determining how perturbations in cell cycle control mechanisms contribute to cancer onset. She discovered the biochemical mechanism by which CDK1, a key regulator of mitosis, is activated or deactivated during the cell cycle and how its activation is prevented by cell cycle checkpoints. This was the first direct link demonstrated between cell cycle checkpoints and mitotic control.

Her work has been essential to the understanding of breast cancer development and progression, and her discoveries have prompted clinical studies for agents targeting the cell cycle and checkpoint proteins in multiple cancer types. She currently is focused on identifying alterations driving triple-negative breast cancer (TNBC) and therapeutic resistance mechanisms. This research has already demonstrated that chemotherapy resistance in TNBC can occur through adaptable and reversible pathways, and it pointed to new vulnerabilities in drug-tolerant cancer cells.

Piwnica-Worms holds the Senator A.M. Aikin Jr. Distinguished Chair and was elected into the National Academy of Medicine, the American Academy of Arts and Sciences, the Fellows of the American Association for Cancer Research (AACR) Academy, and the Texas Academy of Medicine, Engineering, Science & Technology (TAMEST). At the Graduate School, she is affiliated with the Cancer Biology program.

Wood has made foundational contributions to the biochemistry and genetics of DNA repair and cancer development, elucidating how eukaryotic cells are protected from ultraviolet (UV) radiation damage. He established the first cell-free system for nucleotide excision repair (NER) in eukaryotes, allowing him to precisely define the NER mechanism and identify key enzymes in UV-induced damage repair. By reconstituting the entire NER pathway using 30 purified proteins, he made it possible for the first time to determine the role of each protein at each step.

These experiments included the discovery of the roles of replication proteins during NER and defining sequential NER steps at the molecular level, including opening the double helix by a multi-protein complex. The work revealed the

specific biochemical defects in xeroderma pigmentosum, an inherited disease conferring a greatly increased risk of skin cancer. Wood also was also the first to isolate the XPG and ERCC1-XPF nucleases and discovered their action via structure-specific incision. This work helped found the field of DNA structure-selective enzymology, now studied in multiple areas of DNA biology. His recent work has yielded numerous discoveries that define the roles of various DNA polymerases in genome stability and cancer.

Wood holds the J. Ralph Meadows Chair in Carcinogenesis and has been elected as a Fellow of the Royal Society (UK), the American Academy of Arts and Sciences, the American Association for the Advancement of Science, and as a member of TAMEST. At the Graduate School, he is affiliated with the Genetics and Epigenetics program.

DENT INDUCTED INTO GREATER HOUSTON WOMEN'S CHAMBER OF COMMERCE HALL OF FAME

Sharon Dent, PhD, dean ad interim, was inducted into the Greater Houston Women's Chamber of Commerce Hall of Fame in a ceremony on March 2. The Greater Houston Women's Chamber of Commerce is a nonprofit organization dedicated to advancing and empowering women in Houston through leadership, education, advocacy and mentoring. Their Hall of Fame program recognizes outstanding women who have contributed significantly to the advancement of women and improved the quality of life for future generations of Houstonians.

Dent was selected for her commitment to mentorship, education, the advancement of women in medicine, her servant leadership and service to the Graduate School, MD Anderson, and beyond.

In her nomination, she is acknowledged as having superb leadership skills. "Since becoming chair, Dr. Dent has built a world-class department with strengths in epigenetics, stem cell biology, immune system development, and genome integrity. Sharon has unified the department, recruited new faculty, developed departmental research focus, and renovated and refurbished departmental infrastructures, among many others," stated her nomination.

FACULTY AWARDS

2021-2022 PAUL E. DARLINGTON MENTOR AWARDS FOR GSBS FACULTY

JICHAO CHEN, PHD, is an associate professor in the Department of Pulmonary Medicine, Division of Internal Medicine at MD Anderson Cancer Center. He has been a faculty member at the Graduate School since 2011 and is affiliated witht the Genetics and Epigentics program.

His current research focuses on the normal developmental processes that build the lung and how such processes evolve across species and go awry during lung malformations, injury and tumorigenesis.

"I am honored to receive this mentor award, for doing what I enjoy and find meaningful and for passing on the excellent mentorship I received myself," said Chen. "Making a difference in the scientific career of others is as important as making scientific discoveries."

CARMEN DESSAUER, PHD, is chair of the Department of Integrative Biology and Pharmacology at McGovern Medical School at UTHealth Houston. She is affiliated with the programs in Biochemistry and Cell Biology, and Neuroscience and has been a GSBS faculty member since 1998.

Her research uses structural, biochemical, live-cell imaging, and molecular biology techniques to understand the complex regulation of adenylyl cyclase by heterotrimeric GTP-binding proteins, kinases, and other interacting proteins.

"Mentoring the next generation of scientists has always been a passion of mine and is the most gratifying part of my job," said Dessauer. "It is such an honor to be recognized by my students and fellow faculty and to receive an award bearing Paul Darlington's name. He was truly an inspiration to us all."

2023 PAUL E. DARLINGTON MENTOR AWARD FOR GSBS FACULTY

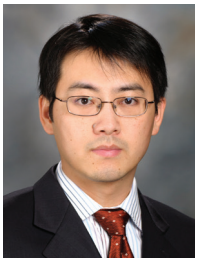
AMBRO VAN HOOF, PHD, is a professor in the Department of Microbiology and Molecular Genetics at McGovern Medical School at UTHealth Houston. A Graduate School faculty member since 2002, he is affiliated with the school's programs in Microbiology and Infectious Diseases, and Genetics and Epigenetics.

In 2018, he was the inaugural recipient of the D. Dudley and Judy White Oldham Faculty Award, which recognizes exceptional faculty who consistently demonstrate excellence in service and leadership.

His research focuses on understanding post-transcriptional mechanisms regulating gene expression, centered on the function of RNase enzymes in the maturation and degradation of RNA.

"Mentoring is one of the most rewarding parts of my job, but also one of the most challenging," said van Hoof. "The past winners of this award include very notable Graduate School faculty members and being considered by my peers and mentees in this same list means a great deal to me."

2022 JOHN P. MCGOVERN AWARD FOR OUTSTANDING TEACHING



JIAN HU, PHD, is an associate professor in the Department of Cancer Biology at the MD Anderson Cancer Center. He has been a faculty member at the Graduate School since 2014 and he is the director for Cancer Biology program and is also affiliated Neuroscience program.

This is the second time Hu has been selected for the McGovern teaching award as he was also named the 2019 recipient.

His current research focuses on glioblastoma, the most common type of brain tumor, and a regulatory protein called Quaking (QKI) as a glioma suppressor. Recently his lab is also interested in an important population of immune cells in malignant gliomas called glioma-associated microglia/macrophages (GAMs). Despite the promising therapeutic potential of GAM modulation, little is known regarding the molecular mechanisms underlying their immune suppressive nature during the course of tumorigenesis. His lab is trying to fill the knowledge gaps of how GAMs are converted from the antitumor to pro-tumor state and develop rational immunotherapeutic interventions to reverse immune-suppressive, tumor-promoting polarization of GAMs.

"I am honored and humbled to receive this prestigious award recognized by our students for the second time," said Hu. "I

have tremendous passion for teaching and mentoring. To me, mentoring is not about teaching facts. Instead, it is about equipping students with critical thinking that challenges everything they are told about, which I personally think is the key that leads to breakthrough discoveries. In a world where the scientific landscape changes rapidly every day, it is absolutely vital to inspire the curiosity of students and teach them how to ask the right questions. I am extremely grateful to our students for giving me the incredible opportunity to fulfill my passion for teaching and mentoring."

2023 JOHN P. MCGOVERN AWARD FOR OUTSTANDING TEACHING

MICHAEL C. LORENZ, PHD is chair of the Department of Microbiology and Molecular Genetics at McGovern Medical School at UTHealth Houston. He has been a faculty member at the Graduate School since 2003 and he is affiliated with the programs in Immunology and Microbiology and Infectious Diseases (MID).

This is the second time Lorenz has been selected for the McGovern teaching award as he was also named the 2020 recipient.

In 2015, he received the UT Regents' Outstanding Teaching Award, an honor that recognizes faculty members at UT System institutions who have demonstrated dedication to innovation and advancing excellence.

His current research focuses on *Candida albicans*, a fungal pathogen in humans. While most infections are acquired from environmental exposure, *C. albicans* is a natural part of the human microbiota, but can cause potentially lethal infections in people with immunological impairments. Lorenz's work investigates how *C. albicans* modulates immune cell function to promote survival and dissemination.

"I don't quite know what to say. To be selected for a teaching award by the students you teach is a great honor," said Lorenz. "There are so many dedicated Graduate School faculty members who deserve this recognition. The faculty has been tremendous in creating an environment where education matters and the faculty has a voice in shaping the culture of the school."

2022 D. DUDLEY AND JUDY WHITE OLDHAM FACULTY AWARD

FRANCESCA COLE, PHD, is an associate professor in the Department of Epigenetics and Molecular Carcinogenesis at MD Anderson who joined the school in 2012. At the Graduate School, she is director of the Genetics and Epigenetics program. Her research focuses on the regulation of DNA repair by homologous recombination to preserve germline genome integrity. Her lab is known for innovative new methods to study meiosis including interrogation of recombination on all four chromatids (mouse tetrads) and tracking interhomolog interactions genome-wide for the first time in any organism.

"Service to further the education and improve the experience of graduate students is its own reward, but it is an honor to be recognized for it," said Cole.

2023 D. DUDLEY AND JUDY WHITE OLDHAM FACULTY AWARD

MARY C. (CINDY) FARACH-CARSON, PHD, is chair of the Department of Diagnostic and Biomedical Sciences at UTHealth Houston School of Dentistry. She first joined the Graduate School faculty in 1989 and is affiliated with the Biochemistry and Cell Biology, and Medical Physics programs.

Studies in the Farach-Carson laboratory aim to integrate extracellular matrix biology with three fields of interest, namely salivary gland tissue engineering, cancer biology and metastasis to bone, and bone biology and tissue engineering. Translational partnerships support the development of new technologies needed to study cell behavior including cancer biology and regenerative medicine applications.

"I am honored and delighted to receive this award from the Graduate School because it reflects the many accomplishments of my many trainees who have gone on to successful careers in academia, industry, biotech, nonprofits, scientific writing, and government," said Farach-Carson. "They have taught me all I know about how to be a service-focused leader."

FACULTY MEMBERS RECEIVE MORE THAN $8 MILLION IN CPRIT FUNDING

Eleven MD Anderson UTHealth Houston Graduate School faculty members were awarded grants totaling over $8.8 million from the Cancer Prevention and Research Institute of Texas (CPRIT) in support of cancer research projects.

Since its inception, CPRIT has awarded more than $3 billion in grants for cancer research. Programs supported by CPRIT funding have brought more than 288 distinguished cancer researchers to Texas, advanced the knowledge base for cancer treatment throughout the state and provided more than 8.2 million cancer prevention and early detection services reaching all 254 counties in Texas.

All the recipients were recognized with Individual Investigator Research Awards. The school's CPRIT awardees are:

MICHAEL CURRAN, PHD, associate professor, Department of Immunology, MD Anderson Cancer Center. He is affiliated with the Immunology program. His funded project received $1,049,905 and is titled, "Blocking DNA damage response induction of 'don't eat me' signals converts local radiotherapy into systemic immunotherapy."

ELEONORA DONDOSSOLA, PHD, assistant professor, Department of Genitourinary Medical Oncology, MD Anderson. She is affiliated with the Cancer Biology, and Therapeutics and Pharmacology programs. Her funded project received $1,025,623 and is titled, "Overcoming therapy resistance by integrated computational modeling of the bone metastatic niche in prostate and renal cancers."

BOYI GAN, PHD, professor, Departments of Experimental Radiation Oncology & Molecular and Cellular Oncology, MD Anderson. He is affiliated with the Cancer Biology, and Genetics and Epigenetics programs. His funded project received $1,050,000 and is titled, "Studying and therapeutically targeting ferroptosis liability in BRCA1 deficient cancer."

JIAN HU, PHD, associate professor, Department of Cancer Biology, MD Anderson. He is director of the school's Cancer Biology program and affiliated with Neuroscience program. His funded project received $1,400,000 and is titled, "Normalizing membrane homeostasis in microglia/macrophages of pediatric high-grade gliomas."

SUE-HWA LIN, PHD, professor, Department of Translational Molecular Pathology, MD Anderson. She is affiliated with the Cancer Biology program. Her funded project received $1,050,000 and is titled, "A novel combination therapeutic approach to revitalizing immunotherapy for bone metastatic prostate cancer."

JOSEPH McCARTY, PHD, professor and vice chair, Department of Neurosurgery, MD Anderson. He is affiliated with Cancer Biology, and Genetics and Epigenetics programs. His funded project received $1,050,000 and is titled, "Targeting the Mlc1-GlialCAM protein complex in invasive glioma cells."

CULLEN TANIGUCHI, MD, PHD, was an associate professor, Department of Radiation Oncology, MD Anderson. He is affiliated with the Cancer Biology program. His funded project received $1,049,997 and is titled, "Enhancing immune responses in pancreatic cancer by stromal inhibition of HIF2."

PENG WEI, PHD, associate professor, Department of Biostatistics, MD Anderson. He is affiliated with the Quantitative Sciences program. His funded project received $1,199,994 and is titled, "Integrative modeling of spatially resolved multi-omics data to identify bladder cancer mucosal field effects."

WANTONG YAO, MD, PHD, associate professor, Department of Translational Molecular Pathology, MD Anderson. She is affiliated with the Cancer Biology, and Genetics and Epigenetics programs. Her funded project received $1,049,854 and is titled, "A novel therapeutic strategy targeting pancreatic cancer."

NIKI ZACHARIAS MILLWARD, PHD, assistant professor, Department of Urology, MD Anderson. She is affiliated with the Therapeutics and Pharmacology program. Her funded project received $1,019,997 and is titled, "Targeting distinct metabolic vulnerabilities of aggressive renal cell carcinoma variants."

LAMB NAMED FACULTY AFFAIRS ASSOCIATE DEAN AT WEILL CORNELL

Alumna Dolores J. (Dorrie) Lamb, PhD, was named associate dean for faculty affairs at Weill Cornell Medicine Urology.

Lamb joined Weill Cornell in 2018 as the vice chair for research in the Department of Urology; director of the Center for Reproductive Genomics; and holds the Robert S. Dow Professorship of Urology. Her research focuses on the fields of urology, male infertility, steroid hormone action, prostate cancer and genitourinary birth defects.

Lamb received her PhD from the Graduate School in 1980. Her advisor was Barbara Sanborn, PhD. After graduation, Lamb was an NIH postdoctoral fellow in Reproductive Biology at UTHealth Houston McGovern Medical School, and an NIH-NRSA postdoctoral fellow in the Department of Cell Biology at Baylor College of Medicine. She was also is the director of the Center for Reproductive Medicine; The Lester and Sue Smith Chair in Urologic Research; the vice chair for research (Scott Department of Urology) and a professor in the Departments of Urology and Molecular and Cellular Biology at Baylor College of Medicine.

Over her career, Lamb has received numerous awards including the Star Award from the American Society for Reproductive Medicine (2021); the Outstanding Mentor Award from the Endocrine Society, as part of the Society's Laureate Awards (2019); Graduate School's Distinguished Alumna (2014); the Distinguished Reproductive Urology Award for significant contributions in the field of reproductive urology from Society for the Study of Male Reproduction (2013); the Faculty Educator Award from Baylor in recognition of the more than 88 fellows trained in andrology research, eight of whom have already reached the rank of Department Chair of Urology (2010); and the first Distinguished Researcher Award from the American Society of Reproductive Medicine (2005).

Other recognitions include being named the Ramon Gutierras Lecturer for her lifetime contributions to the field of Urology and a distinguished andrologist by the American Society of Andrology.

Lamb has served on several boards including the Editorial Boards of Fertility and Sterility, Journal of Urology: Investigative Urology, Biology of Reproduction, and the Journal of Andrology, Human Reproduction (Associate Editor). Currently she is a member of the Editorial Boards of the Urology, Steroids, Andrology, Fertility and Sterility (Associate Editor), and the Asian Journal of Andrology.

She has served as the past-president of the Society for Male Reproduction and Urology of the American Society for Reproductive Medicine; the ASRM Board of Directors (the first PhD in the history of the society to be elected to the presidential chain); and the Society for Basic Urologic Research. Other leadership roles include secretary/past-president for the American Society of Andrology and secretary of Society of Women in Urology.

COMMENCEMENT SNAPSHOTS

On May 20, 2023, the Graduate School held its annual commencement exercises at Rice University, returning to its traditional venue and format after participating in UTHealth Houston joint graduation ceremonies in 2021 and 2022. More than 50 doctoral and master students were honored by colleagues, friends, and family as they received their diplomas. The keynote speaker was former dean Michelle C. Barton, PhD, who was awarded dean emerita at the event. Here are some photos from the festivities.

See additional photos and footage from the ceremony at gsbs.uth.edu/alumni/commencement.

2023 GSBS DISTINGUISHED ALUMNUS DAVID COOPER, PHD

From left to right: Jeanne Pellis and her huband Neal Pellis, PhD; David Cooper, PhD; and his wife and alumna Sybil Cooper, PhD.

David Cooper, PhD, was named the 2023 GSBS Distinguished Alumnus Award recipient. He received his PhD in Immunology in 1998 and his advisor was Neal Pellis, PhD.

Before studying at the Graduate School, Cooper obtained his bachelor's degree at Rochester Institute of Technology in 1991.

Today, Cooper is vice President and head of High-throughput Clinical Immunoassays & Diagnostics (HCID) within Vaccine R&D at Pfizer's Pearl River, New York, campus. He leads a diverse team of more than 350 scientists tasked with validation of clinical immunogenicity and diagnostic assays, and their use in supporting key clinical trial endpoints. Cooper and his team directly support the clinical development of all of Pfizer's vaccine candidates and were instrumental in the successful development of Pfizer's COVID-19 vaccine Comirnaty.

On May 19, 2023, Cooper held an information session called, "Lesson from Career Development in the Pharmaceutical Industry: It's not so dark on the dark side ..." where he spoke to current students about his career.

He received his award at the 2023 Commencement Ceremony.

IN MEMORIAM
CULLEN TANIGUCHI, MD, PhD

Graduate School faculty member Cullen M. Taniguchi, MD, PhD, passed away on Nov. 14, 2023. He was 47.

Taniguchi was an associate professor with a joint appointment in Gastrointestinal Radiation Oncology and Experimental Radiation Oncology at MD Anderson Cancer Center. He was a physician scientist specializing in gastrointestinal malignancies, with a clinical and research focus on pancreatic cancer.

"Cullen was a role model for everyone, faculty, and trainees alike. He was an exceptional scientist, colleague, and mentor," said Sharon Y.R. Dent, PhD, Graduate School dean ad interim.

One of the leading radiation oncology physician-scientists of his generation, Taniguchi's work played a key role in reducing acute and chronic toxicity from chemoradiation to improve cancer treatment and patient outcomes. His mission to end cancer was motivated by the impact of cancer on his own family.

"He was an exceptional clinician who was loved by his patients for his kind, gentle bedside manner," said Albert Koong, MD, PhD, Graduate School faculty member and division head for Radiation Oncology. "He had a remarkable ability to communicate difficult news to his patients and their families. He worked tirelessly to advance cancer care, always drawing inspiration from his patients and motivated by doing his best for them."

Taniguchi joined the Radiation Oncology faculty in 2014 as a Cancer Prevention and Research Institute of Texas (CPRIT) Scholar, pursuing work on stereotactic body radiation therapy (SBRT).

The Taniguchi Laboratory at MD Anderson, funded by the National Institutes of Health (NIH) and CPRIT, studies how hypoxia (low oxygen) biology can be used to reduce radiation toxicity in normal tissues to allow higher and potentially ablative doses of radiation to tumors when surgery is not possible. The lab has several early-phase clinical trials.

Known for his caring and joyful spirit, Taniguchi was deeply committed to mentorship and training. In 2015, he joined the school faculty and was affiliated with the Cancer Biology program.

"Cullen really cared about his students," said Bill Mattox, PhD, the school's senior associate dean. "He was exceptionally supportive and understanding of those who were going through challenging situations. He was a shelter in the storm."

And the students and alumni who worked with Taniguchi wholeheartedly agree with that sentiment.

"A few months ago, he gave our lab this career-oriented talk about how to succeed in academia," said Jasper Chen, a current MD/PhD student in the Taniguchi Lab. "He said that everyone has a superpower. I think Cullen's superpower was that he could see our hidden potential that no one else could see, not even ourselves, and he knew how to awaken it."

In 2022, Carolina García García, MD, PhD, graduated from school under Taniguchi's mentorship. Today, she is an internal medicine resident at the University of Pennsylvania.

"Cullen was more than a mentor to me, he was a friend, an advocate, and a role model," said García García. "He provided me with unconditional support, guidance, and freedom to pursue my scientific curiosities, clinical interests, and extracurricular endeavors. He changed my life and made me become a better person, a better physician, a better scientist, and a better teacher. Words will fall short with how indebted I am to him, and I will miss his mentorship throughout my career, which is only beginning."

Taniguchi has been recognized for his exceptional work, with honors that include the Andrew Sabin Family Fellowship at MD Anderson in 2016 and several research grants from NIH. Recently, he was named a 2022 Fellow of the American Association for the Advancement of Science. Earlier this year, he was appointed as the inaugural division director, Physician Scientists-Translational Science program that is aimed at catalyzing laboratory discoveries to clinical impact for the benefit of patients. Taniguchi's vision and passion for this work were palpable and far-reaching.

"We are all better for having known Cullen," Koong said. "His contributions in the lab and clinic will continue to impact our field for years to come, however his true legacy will be shaped by the many students, residents, postdoctoral and clinical fellows that he mentored."

MEET THE NEW DEAN

ALEJANDRO ABALLAY, PHARMD, PHD, WILL BECOME THE EIGHTH PERMANENT DEAN IN 2024

On October 4, The University of Texas MD Anderson Cancer Center and The University of Texas Health Science Center at Houston announced Alejandro Aballay, PharmD, PhD, a national leader in immune signaling and graduate education, has been named dean of the MD Anderson Cancer Center UTHealth Houston Graduate School of Biomedical Sciences, effective Jan. 2, 2024.

"Dr. Aballay is a consummate scientist with a vision for enhancing the Graduate School's national standing and global presence," said Giuseppe N. Colasurdo, MD, president of UTHealth Houston and the Alkek-Williams Distinguished Chair at UTHealth Houston. "As the school celebrates its 60th anniversary this year, we look forward to Dr. Aballay leading us toward an exciting future."

Currently, Aballay serves as professor and chair of the Department of Molecular Microbiology and Immunology at Oregon Health & Science University (OHSU) in Portland. He joined OHSU in 2017 and in his six years as chair, Aballay focused on faculty recruitment, mentoring and retention, as well as intradepartmental collaboration and a major building renovation to enhance laboratory space. He also led the department's response during the COVID-19 pandemic, quickly building a biosafety Level 2 Plus (BSL-2+) lab to facilitate grant applications to study the new virus.

"Educating and training the next generation of cancer scientists is critical to advancing our mission to end cancer. After a competitive national search, we are pleased to welcome Dr. Aballay as dean of our graduate school," said Peter WT Pisters, MD, president of MD Anderson. "Dr. Aballay will work with interprofessional teams to ensure the Graduate School's programs continue to align with the evolving competencies students need to advance scientific discovery and health technologies in the coming decades."

Aballay has a broad research program encompassing genetics, functional genomics and neurobiological approaches to study mechanisms involved in the neural control of immune responses and cellular homeostatic mechanisms. Given his research expertise, Aballay will be appointed professor of Genetics at MD Anderson, with a joint appointment in Microbiology and Molecular Genetics at McGovern Medical School at UTHealth Houston.

During his graduate studies, Aballay developed an interest in bacterial physiology and regulation while studying the intracellular transport of the bacterial pathogen *Brucella abortus*. He earned a doctorate in Molecular and Cell Biology from the Nacional de Cuyo University Medical School and a doctorate in Pharmacology from Juan Agustín Maza University in Mendoza, Argentina. He also studied cell biology at Washington University in St. Louis during his graduate studies. Following his doctoral work, he completed postdoctoral fellowships in Molecular Pathogenesis at Harvard Medical School and Massachusetts General Hospital, where he developed a novel pathogenesis system using the nematode Caenorhabditis elegans.

His independent academic career began in 2002 as assistant professor of Molecular Genetics and

Microbiology at Duke University Medical Center in Durham, NC, where he studied what makes bacteria pathogenic and how hosts become resistant to infection. Rising through the academic ranks, he was appointed associate professor in 2009 and professor in 2016. He served as director of Duke's Center for Host-Microbial Interactions from 2014 to 2017.

"I am proud to be joining these stellar institutions and, together, working to educate some of the top minds in the world," Aballay said. "Our future is bright and full of new opportunities to foster collaboration in interprofessional teams to expand our horizons and strengthen graduate education."

Aballay has long been committed to education, creating a robust training environment for graduate students, postdoctoral fellows, medical students and medical fellows. In addition to mentoring undergraduate and graduate students, he has served as training grant director and as a member of the executive, advisory and admissions committees in four graduate programs. He was also a thesis committee member for graduate students at Duke.

Aballay will work closely with members of the leadership team at school, including Sharon Dent, PhD, professor of Epigenetics and Molecular Carcinogenesis at MD Anderson, who has served as dean ad interim since 2022.

60th Anniversary Kickoff Event

More than 290 Graduate School community members attended this reception on Sept. 28, 2023.

From now until July 2024, the Graduate School will be celebrating our 60th anniversary. Want to get information about special events coming up? Be sure to check gsbs.uth.edu/alumni often. And register at uthealthhoustonalumni.org for news about university alumni events.

SAVE THE DATE: Alumni Reunion – Friday, May 17, 2024

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OUR LEADERSHIP

Sharon Y.R. Dent, PhD
Dean *ad interim*

Cherilynn R. Shadding, PhD
Associate Dean of Graduate Education

Karen Weinberg
Associate Dean for Management *ad interim*

Jeffrey A. Frost, PhD
Associate Dean of Graduate Education *ad interim*

The University of Texas MD Anderson Cancer Center UTHealth Houston Graduate School of Biomedical Sciences is a joint venture of The University of Texas MD Anderson Cancer Center and The University of Texas Health Science Center at Houston (UTHealth Houston) that offers PhD, MD/PhD, and MS degrees in many areas of study.

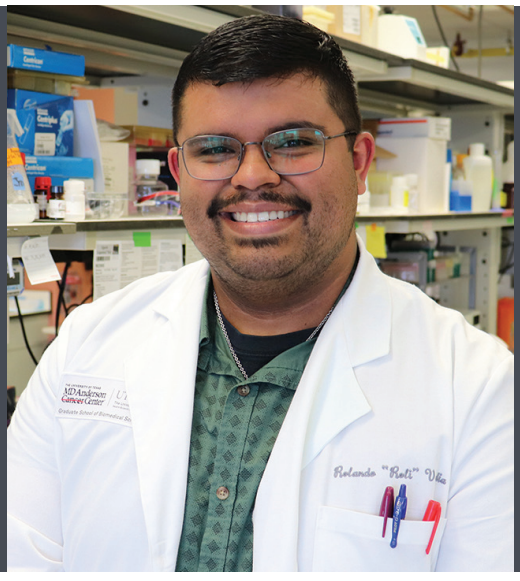
Established in 1963, MD Anderson UTHealth Houston Graduate School is ranked among the best in the nation, according to the National Research Council assessment. Through Synergy in Science®, the school provides students with access to top research programs, curriculum that develops their potential, and training that prepares them for top positions across the biomedical workforce.

VISION STATEMENT

To create a collaborative and innovative academic environment that inspires and lays the foundation for new generations of biomedical scientists to realize their potential, commit to success, and make discoveries that have major impact on treatment of diseases worldwide.

MISSION STATEMENT

Our mission is to maintain an innovative and diverse environment that provides an unprecedented breadth of opportunities for outstanding graduate students to train with leading biomedical scientists at MD Anderson and UTHealth Houston. The combined strengths of these institutions provide students with access to basic and translational scientific programs that are at the cutting edge of the fight to treat all major diseases. The curriculum is designed to give students rigorous exposure to critical thinking strategies, area-specific scientific skills, and career development initiatives. The curriculum, together with an emphasis on research training and scientific productivity, is designed to position our students for an outstanding and successful career in the biomedical sciences.



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