

# UC Irvine

School of Pharmacy &  
Pharmaceutical Sciences



**ANNUAL REPORT**

2023-2024



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# MESSAGE FROM THE DEAN

## FOUNDING DEAN JAN D. HIRSCH, BS PHARM, PHD

### Wow, what a year!

We have had **an amazing year in our school's history** as we solidify our identity as a leader in pharmaceutical sciences and clinical pharmacy education, research, and practice.

The UC Irvine School of Pharmacy & Pharmaceutical Sciences has grown to 720 total students, with 478 undergraduate students, 68 PhD students, 27 master's students, and 147 PharmD students. We had \$7.2 million in faculty research grants and contracts this past year and have over 20 research labs, programs, and centers. **All this is possible thanks to the people who are devoted and contributing to our success** — our students, faculty, staff, researchers, colleagues, friends, industry partners, and alumni.

In this year's Annual Report, we are highlighting the incredible work of our:

- **students who will continue to shape the future** of pharmaceutical sciences and clinical pharmacy practice through their commitment to groundbreaking scientific discovery, compassionate patient care, and the pursuit of better healthcare policy and equitable access.
- **faculty and students who address health disparities** in Orange County and worldwide by pioneering studies and community initiatives that explore care gaps among underserved populations and work to make quality healthcare accessible for all.
- **brilliant researchers who expand our understanding of disease, wellness, and the human body** to make discoveries that advance patient treatment and disease prevention strategies.
- **collaborators within the Susan & Henry Samueli College of Health Sciences and UCI Health system** who give our faculty and students the opportunity to work as true whole-patient care teams composed of professionals in medicine, nursing, population and public health, integrative health, and pharmacy.

In the UCI School of Pharmacy & Pharmaceutical Sciences, we remain dedicated to **conducting transformative research** that creates impactful, high-value solutions from drug discovery to clinical practice; education that **prepares pharmaceutical scientists and clinical pharmacists for the future**; and service that **impacts the broader community**, including educating patients on the safe and effective use of medications.

**Please join us!** There are a multitude of opportunities available for those who wish to **help continue our tradition of advancing education and research excellence**. So far, thanks to our generous supporters, we have been able to **further the dreams of students** who strive to serve their communities (*Michael Stevens*, page 13), **transform healthcare** (*Mental Health First Aid*, page 16), **conduct innovative research** (*Step into Our Labs*, pages 26-31), **elevate careers** (*Jens Thomas Escobar*, page 34), and more!

I invite you to turn the page to read about the incredible things we have accomplished and learn more about how you can **come along with us on this exciting adventure!**

Please enjoy our 2023-2024 Annual Report.

### Zot! Zot! Zot!

**Jan D. Hirsch, BS Pharm, PhD**  
Founding Dean



If you are interested in learning more about supporting our mission through providing mentorship, scholarships, your expertise, and more, contact Sonia Batra, Director of Development ([sbatra1@hs.uci.edu](mailto:sbatra1@hs.uci.edu)), or visit [pharmsci.uci.edu/giving](https://pharmsci.uci.edu/giving).

# WHO WE ARE

Founded in 2020, the UCI School of Pharmacy & Pharmaceutical Sciences is the first public pharmacy school in the Los Angeles-Orange County region.

The University of California, Irvine is one of the top universities in the United States, offering students unmatched academic resources and extensive research opportunities. Located in an economically vibrant community that is home to an array of pharmaceutical companies, as well as the UCI Health system, students in the UCI School of Pharmacy & Pharmaceutical Sciences are positioned to pursue successful careers upon graduation.

As part of the Susan & Henry Samueli College of Health Sciences, we actively collaborate with schools and programs in medicine, nursing, and population and public health, and the Susan Samueli Integrative Health Institute, to educate, train, and mentor the next generation of pharmaceutical scientists and clinical pharmacists.

**We offer the following undergraduate, graduate, and professional degrees:**

- **Bachelor of Science in Pharmaceutical Sciences**
- **Master of Science in Pharmacology**
- **Doctor of Philosophy in Pharmacological Sciences**
- **Doctor of Pharmacy**

**Our school encompasses two departments:**

- **Pharmaceutical Sciences** | *Established in 2007*
- **Clinical Pharmacy Practice** | *Established in 2020*



## MISSION

The mission of the UCI School of Pharmacy & Pharmaceutical Sciences is to be a driving force for advancing the health and wellness of individuals and society through innovative and integrative learner-centered education, cutting-edge pharmaceutical research, and leadership in interprofessional patient-centered healthcare.

## VISION

The UCI School of Pharmacy & Pharmaceutical Sciences is an emerging leader in transformational advances in team-based pharmacy practice, research, and healthcare.



**“We have had an amazing year in our school’s history as we solidify our identity as a leader in pharmaceutical sciences and clinical pharmacy education, research, and practice.”**

**Jan D. Hirsch, BS Pharm, PhD**  
Founding Dean



# FACTS & FIGURES

**720**  
TOTAL STUDENTS

**478**  
UNDERGRADUATE STUDENTS

**242**  
GRADUATE AND  
PROFESSIONAL STUDENTS

**68**  
PHD STUDENTS

**27**  
MSP STUDENTS

**147**  
PHARMD STUDENTS



# \$7.2 MILLION

IN FACULTY RESEARCH GRANTS & CONTRACTS

# 20+

LABS, PROGRAMS, & CENTERS  
FOSTERING INNOVATION AND COLLABORATION

## ACCREDITATION STATUS

**WASC Senior College and University Commission (WSCUC):**

Approved as of November 30, 2020

**Accreditation Council for Pharmacy Education (ACPE):**

Candidate status approved as of June 30, 2022



# the **FUTURE**



Every day, our students are shaping the future of clinical pharmacy practice and pharmaceutical sciences research through their compassion, hard work, and desire to learn.



# Carolina Franco & Esau Medina

Recognized with  
2023-2024 Henry  
Wood Elliott Graduate  
Student Awards

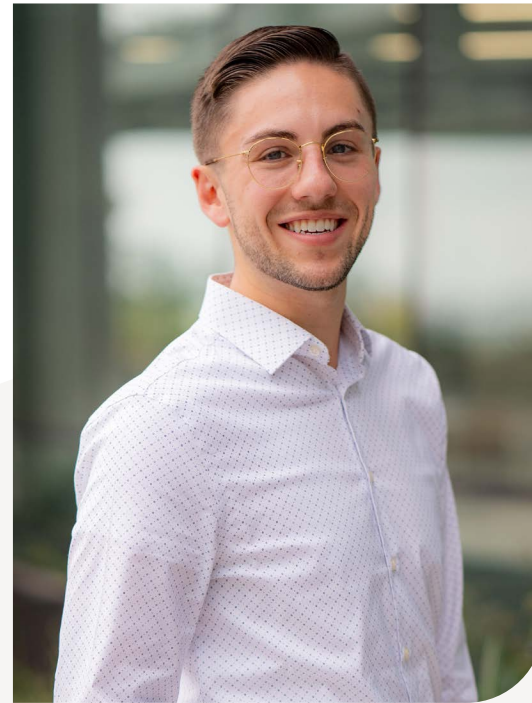


The Henry Wood Elliott Graduate Student Award recognizes excellence in research among graduate students who work with faculty members in the Department of Pharmaceutical Sciences. Franco and Medina were nominated by Dr. Lauren Albrecht and Dr. John Chaput, respectively, and are both the first people in their families to pursue PhD degrees.

# PhD Student Spotlight: Cody Loy

Research Opportunities Through the Trader Lab Brought Cody Loy to UCI from Purdue University

A graduate of Ball State University, Loy began pursuing his PhD at Purdue University as a student in their medicinal chemistry and molecular pharmacology program and researcher in the Trader Lab. During Loy's second year as a PhD student, Dr. Darci J. Trader accepted a position within the UCI School of Pharmacy & Pharmaceutical Sciences. Loy made the choice to join Dr. Trader and officially became an Anteater in July 2023.



# Undergraduate Student Spotlight: Kara Lee

Combined Pharmacy Education and ROTC Experience During Internship at Tripler Army Medical Center

Kara Lee completed an internship at Tripler Army Medical Center in Honolulu, an experience that allowed her to further her pharmacy education while utilizing the skills she's learned as a part of ROTC.





## Meet **Laura Sangiacomo,**

UCI School of Pharmacy & Pharmaceutical Sciences Student Athlete

In addition to her success on the track and field team, Sangiacomo has been recognized as an outstanding student. She has won multiple awards for her academic excellence, including being recognized previously for having the highest GPA on the women's track and field team and the highest GPA among athletes in the Susan & Henry Samueli College of Health Sciences.



## Student Pharmacist **Sara Ali**

Appointed to Practice Outcomes and Professional Benchmarking Committee by Hematology/Oncology Pharmacy Association (HOPA)

"I have a strong interest in hematology/oncology and am thrilled to play an integral role in the association's mission of promoting excellence in pharmaceutical practices and enhancing the quality of cancer treatment. It is an honor to be the only student member of the committee."



## Student Pharmacist Michael Stevens

Aims to Serve Patients and Support His Neighbors as a Community Pharmacist

“Community pharmacists are one of the reasons why I wanted to go to pharmacy school. I saw that they were helping people in a community setting, and they were easily approachable. I got the idea that empathy was really important and that caring about patients was really important. And access was super important — I could go in and talk to them about medications and could even talk to them about health conditions.”



## MSP Student Spotlight: Madeleine Prangle

Gained Renewed Career Confidence Through the Master of Science in Pharmacology Program

“I decided to pursue the MSP program because I focused my undergraduate studies in paleontology and evolutionary biology, and while that has given me a decent foundation for scientific research, I needed to learn more about the pharmacology field and get the background that I never had. The things I have learned in this program were immediately helpful to me at work.”



# ADVANCING HEALTH EQUITY



We are driven by the belief that quality healthcare should be accessible to everyone — that there is no one-size-fits-all approach to health and wellness, and that limited resources should not equate to limited treatment options.



# Mental Health First Aid (MHFA) Training

Gives Student Pharmacists the Necessary Skills to Aid in a Mental Health Crisis

Part of the required curriculum for those in the UCI School of Pharmacy & Pharmaceutical Sciences' PharmD program, Mental Health First Aid (MHFA) training offers student pharmacists knowledge on how to help someone who is in the midst of a mental health crisis or developing a mental health or substance use problem.



## Dr. Farah Khorassani

Provides Expert Insight at Lake Forest Town Hall on Fentanyl

A leading expert in the relationship between pharmaceuticals and mental health, Dr. Khorassani described the physiological process involved in the transition from prescription to addiction.





## Dr. Joyce Lee

Receives UC END DISPARITIES Pilot Award

Dr. Joyce Lee received a UC END DISPARITIES pilot award for her proposal, “Community-based Interprofessional Health Safety Net to Stop Diabetes: A Feasibility and Acceptability Study.” The research outlines health risks for people with prediabetes and how collaboration with community pharmacists can provide accessible intervention and timely care.

## Dr. Nana Entsuah & Dr. Cheryl Wisseh

Explore “Potentially Inappropriate Medication Use among Underserved Older Latino Adults” in Publication

Dr. Nana Entsuah and Dr. Cheryl Wisseh co-authored a study entitled “Potentially Inappropriate Medication Use among Underserved Older Latino Adults,” published in the *Journal of Clinical Medicine*. The study focused on medication use among Latino adults aged 65 years and older. Specifically, the authors examined the prevalence of potentially inappropriate medication (PIM) use within this vulnerable population.





# Community Health Fair

Provided Health Services to Over 200 People in Santa Ana's Underrepresented Minority Communities

Dr. Nana Entsuah and Dr. Cheryl Wisseh, along with other faculty leaders from the UCI Susan & Henry Samueli College of Health Sciences Interprofessional Education & Practice (IPEP) Collaborative, coordinated the organization's first community health fair, an event that provided chronic disease screening and health education to underrepresented minority communities in and around Santa Ana.



# Dr. Shawn Griffin & CSU Fullerton Student Gloria Castañón

Researching Health  
Disparities in Hispanic  
Populations; Connected  
Through Cancer Health  
Equity Research  
Partnership (CHERP)



Two Orange County universities have partnered to explore cancer disparities in the area, and for Castañón and Dr. Griffin, the program has provided a chance to conduct research they feel passionately about. Dr. Griffin and Castañón have been studying potential health disparities in Hispanic patients with acute lymphoblastic leukemia (ALL).

# INTERPROFESSIONAL & INTERDISCIPLINARY EDUCATION





Through our connection to the UCI School of Medicine, Sue & Bill Gross School of Nursing, Joe C. Wen School of Population & Public Health, Susan Samueli Integrative Health Institute, and UCI Health system, our students and faculty have the fabulous opportunity to work with healthcare professionals across disciplines.

# UCI Awarded \$2.4 Million Grant

to Study Potential Treatment for  
Cancer-Related Cognitive Impairment



The University of California, Irvine has been awarded a five-year, \$2.4 million grant from the National Cancer Institute to evaluate the augmentation of brain-derived neurotropic factor to alleviate cancer-related cognitive impairment. This project translates findings from past human studies conducted by Dr. Alexandre Chan into the laboratory. The multiple principal investigator team study is being conducted in partnership with Dr. Munjal Acharya, associate professor of anatomy and neurobiology.



# Dr. Christine Cadiz & Dr. Alexandre Chan

Receive 2024 UC Irvine Susan & Henry  
Samueli College of Health Sciences  
Pilot Studies Awards

Dr. Christine Cadiz and Dr. Alexandre Chan are among this year's recipients of the UCI Susan & Henry Samueli College of Health Sciences Pilot Studies Awards, which provide funding to projects spearheaded by multidisciplinary teams.



## Faculty Spotlight: Dr. Melanie Joe

Associate Director and Founding Associate  
Dean for Pharmacy Professional Affairs and  
Chief Pharmacy Officer of UCI Health

"Pharmacists are medication experts that have an integral role. Other healthcare professionals, such as physicians and nurses, look to pharmacists to provide drug information, education, and guidance on patient medication therapy. For many patients, a pharmacist is the most accessible healthcare practitioner – often physically located within the patient's local community."

# Dr. Joyce Lee & Fellow Susan & Henry Samueli College of Health Sciences Faculty

Recognized with Clinical Team Research Award



The award is in recognition of Dr. Lee's work in UCI Health Family Health Centers, alongside Dr. José Mayorga, who is a joint faculty member of the School of Medicine and School of Pharmacy & Pharmaceutical Sciences, and Vanessa Rodriguez, FNP, of the Sue & Bill Gross School of Nursing.

"This award is enormous because it's thrice as meaningful, celebrating the impact of teamwork among the three schools. I am so honored to be part of it," said Dr. Lee. "I want to thank the Faculty Assembly for establishing this award to highlight the impact of modern practice on clinical research and place interdisciplinary collaboration as the prime in advancing the health of patients and communities."





## UCI School of Pharmacy & Pharmaceutical Sciences Faculty Help High School Students Explore Careers in Healthcare

As part of the UCI Early Academic Outreach Program's Choosing a Major Conference, faculty from the UCI School of Pharmacy & Pharmaceutical Sciences joined other Susan & Henry Samueli College of Health Sciences professionals to teach 150 Orange County high school students about careers in healthcare. The event was hosted by faculty and staff from the Health Affairs Interprofessional Education & Practice Collaborative and the Center for Educational Partnerships.



# STEP INTO OUR LABS



The UCI School of Pharmacy & Pharmaceutical Sciences is home to innovative researchers. Step into our labs to learn more about the breakthroughs that are shaping the future of pharmaceutical sciences.



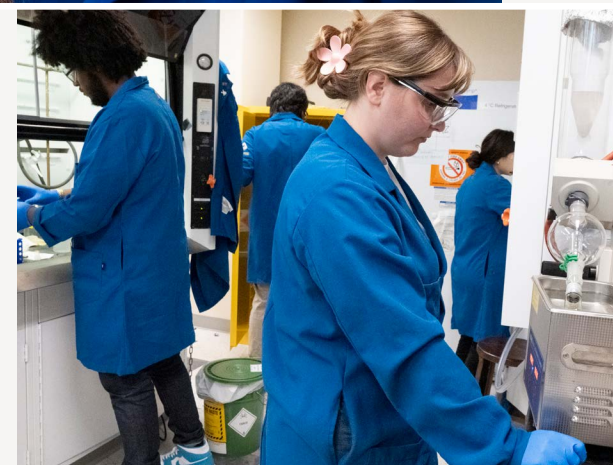
## Sjogren Lab

Regulator of G protein Signaling (RGS) proteins have emerged in recent decades as novel drug targets in disease states such as hypertension, cancer, Parkinson's disease, and more. In the Sjogren Lab, research focuses on identifying the mechanisms by which RGS protein levels and activity are controlled and developing targeting strategies in drug discovery efforts.



## Trader Lab

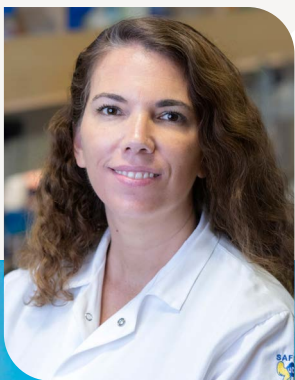
The Trader Lab team works to develop chemical strategies to control and harness protein degradation mediated by the proteasome, a multiprotein, multicatalytic site complex that acts as the main pathway for protein degradation in cells. Researchers seek to identify compounds that enable the stimulation, rescue, and direction of protein degradation.





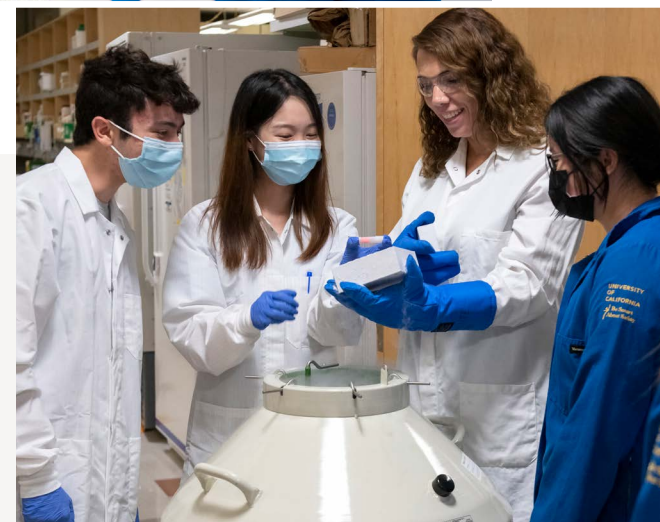
## Paegel Lab

Researchers in the Paegel Lab study and apply the principles of miniaturization to expand the pipeline of new medicines by democratizing drug discovery and investigating novel therapeutic targets that do not conform to the canonical constraints of druggability.



## Benavente Lab

With an emphasis on rare childhood solid tumors, researchers in the Benavente Lab work to advance our knowledge of, and develop novel therapeutics to eradicate, cancer. The lab's research interests include retinoblastoma, osteosarcoma, small cell lung cancer, triple negative breast cancer, and epigenomics of pediatric solid tumors.





## Kwon Lab

In the Kwon Lab, also known as BioTherapeutics Engineering Laboratory or BioTEL, researchers study multimodal gene carriers, engineered extracellular vesicles for comprehensive molecular therapy, and nanoantibiotics to develop more effective methods of treating disease.



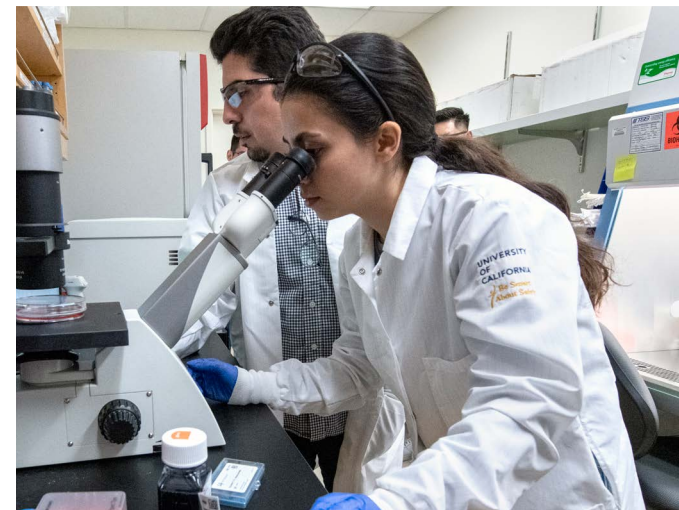
## Albrecht Lab

The Albrecht Lab aims to uncover the role of methylation in signal transduction, cellular metabolism, and human disease. The team of researchers study Arginine methylation and use chemical and cell biological approaches to understand fundamental cell biology, define the basis for human disease, and target the undruggable proteome with proximity-based medicine.



## Martínez Lab

Microproteins are proteins composed of less than 100 amino acids encoded by small open reading frames (smORFs). The mission of the Martínez Lab is to identify, characterize, and examine the therapeutic potential of microproteins involved in disease.





To learn more, visit:  
[pharmsci.uci.edu/research](https://pharmsci.uci.edu/research)



# ALUMNI



# ANTEATERS IN PHARMACY

Anteaters in Pharmacy is the official UCI Alumni chapter dedicated to pharmacy and pharmaceutical sciences students and alumni. Members engage in our community, build their networks, volunteer together, and contribute to UCI.

Becoming an Anteaters in Pharmacy mentor is a great way to connect with the UCI community and support the next generation of pharmacists and pharmaceutical scientists. Through networking sessions, career panels, and more, mentorship is a rewarding opportunity for professionals to share their knowledge and experiences with our mentees.

Thank you to our current alumni mentors — your support is an essential piece of our students' success!

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MENTORS

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MENTEES

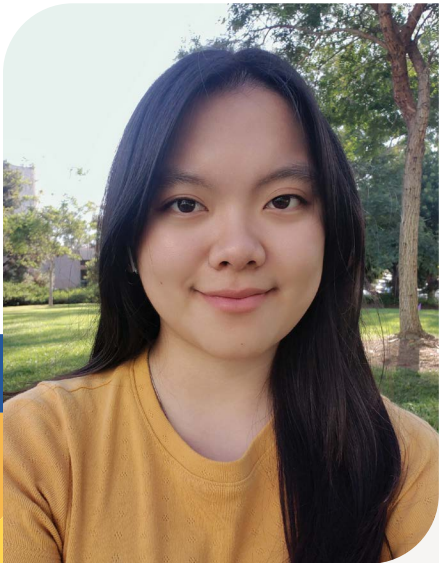


Interested in joining Anteaters in Pharmacy?  
Contact Meredith Kwok at [m.kwok@uci.edu](mailto:m.kwok@uci.edu).




## **Alumni Spotlight: How the Master of Science in Pharmacology Program Helped Jens Thomas Escobar Start His Career and Care for Family While Earning a Degree**

“Attending the Master of Science in Pharmacology program at UCI was an integral choice in my life that I would choose again in a heartbeat. The individual academic structure and remote schedule allowed me to pursue professional experience while studying for my master’s. I am my grandmother’s caretaker, and this gave me time to study in the morning and focus on my grandmother after I was done. I was also able to prioritize my mother by tending to the house – she works night shift as a nurse. It allowed me to grow closer to my family while making sure they were taken care of.”



## **My Trang Nguyen Awarded Anteaters in Pharmacy Alumni Scholarship**

“The Anteaters in Pharmacy Alumni Scholarship seeks to support undergraduate students who have shown passion and commitment to the field of pharmacy and highlight the importance of educating the next generation of pharmacy leaders. This year, we have selected My Trang Nguyen, as she has exemplified the essence of the scholarship. We are confident that she will be making significant contributions to the field of pharmacy in the future,” shared selection committee member Dr. Michelle Ding.



**“My mentor deserves recognition for his exceptional dedication to my growth and success in transitioning to graduate school. He consistently provides invaluable insights and shares his wealth of experience, empowering me to strengthen my profile and become a more competitive PhD candidate.”**

**— Serena Wu**

BS in Pharmaceutical Sciences '24



# Make a Meaningful Impact

We are deeply grateful to the alumni, friends, foundations, and corporations who support the success of the UCI School of Pharmacy & Pharmaceutical Sciences. **Your generosity helps make it possible for our students, faculty, research, and programs to continue to accelerate scientific, clinical, and educational innovations.**





## Jeff & Lynnette Yuen Endow Scholarship in PharmD Program

For Jeff and Lynnette Yuen, giving has always been a part of their aspirations, and their successful public health careers have enabled them to realize this lifelong goal. The couple gave a generous \$50,000 to endow a scholarship in the UCI School of Pharmacy & Pharmaceutical Sciences.

“We think in terms of the ripple effect, or at least that’s our hope. We would be thrilled if it all came full circle and the scholarship recipient someday helped other students in the position they were once in.”



## Dr. Linh Lee Helps to Establish Ralphs Grocery – Pharmacy Endowment

Dr. Linh Lee, a 1997 graduate of the UCI School of Biological Sciences and current Director of Pharmacy for Ralphs, has helped to establish a \$50,000 endowment to support student pharmacists in the UCI School of Pharmacy & Pharmaceutical Sciences’ PharmD program!

“The scholarship is designed for a student that has leadership qualities and is looking to take that to the community pharmacy.”



## PhD Students Anjali Dixit and Yijun Gu Honored as Vertex Scholars at 2024 Vertex Day

Vertex Day, an annual collaboration between Vertex Pharmaceuticals and the UCI School of Pharmacy & Pharmaceutical Sciences going back 15+ years, is a one-day event that features presentations from faculty, Vertex scientists, and the year's Vertex scholars, as well as a Vertex career panel.

"We are thankful to Vertex Pharmaceuticals for their continued support of our PhD students," said Sonia Batra, Director of Development for the UCI School of Pharmacy & Pharmaceutical Sciences. "Anjali Dixit and Yijun Gu are stellar students and are very deserving of this honor."

## Dean's Leadership Council Supports Mission and Values of UC Irvine School of Pharmacy & Pharmaceutical Sciences

Consisting of notable alumni, industry leaders, and other community members, the Dean's Leadership Council serves as an advisory board to Dean Hirsch, offering guidance on various issues and serving as ambassadors of the UCI School of Pharmacy & Pharmaceutical Sciences.



**By making a gift to our school, you are supporting our current funding priorities and initiatives, which include:**



### **Fostering Student Development and Success**

Your investment in a current-use or endowed scholarship or fellowship will help recruit and educate the diverse, talented pharmacists and pharmaceutical scientists of tomorrow. The support of all students is a priority of the UCI School of Pharmacy & Pharmaceutical Sciences. We are dedicated to maximizing opportunities for students from historically underrepresented groups and those who aspire to address social inequities. A gift of any amount will help us further promote a culture in which an inclusive student body is able to grow and thrive.



### **Pioneering Innovation and Discovery**

The UCI School of Pharmacy & Pharmaceutical Sciences is a leading research institution, home to scientific innovation that is transforming the way we approach and prevent disease. From drug discovery and development studies that investigate the way medications impact human health to clinical programs that showcase the application of such discoveries in real-world settings, your support of our faculty and student researchers helps to improve the health of patients and patient populations.



### **Expanding Our Physical Footprint**

We aspire to co-locate all UCI School of Pharmacy & Pharmaceutical Sciences faculty in contiguous or adjacent space to provide a home where our students, faculty, and staff can collaborate, build, and learn together. Additionally, your support of new wet lab facilities will accommodate the needs of our brilliant researchers who are advancing the development of treatment and prevention modalities.

**Whether it funds student support, breakthrough research, or improved facilities, any gift — small or large — can make an impact!**

**If you are interested in investing in the future of the UCI School of Pharmacy & Pharmaceutical Sciences, please contact Sonia Batra at [sbatra1@hs.uci.edu](mailto:sbatra1@hs.uci.edu).**



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