UC LEADS

UNIVERSITY OF CALIFORNIA

Leadership Excellence through Advanced Degrees (UC LEADS)

Preparing Scholars for Graduate Education in

STEM since 2000

Annual Report

24-25

Table of Contents

UC LEADS

Preparing Promising Scholars for Graduate School and Beyond

The University of California Leadership Excellence through Advanced DegreeS (UC LEADS) program trains California's future leaders by preparing promising students for advanced education in science, technology, mathematics, and engineering (STEM). UC LEADS identifies exceptional UC undergraduate students with great potential to succeed in these disciplines, and who have experienced situations or conditions that have adversely impacted their advancement in their field of study. UC LEADS Scholars participate in a two-year program guided by faculty mentors and UC LEADS staff, including 2 years of scientific research at their home campus, an 8 – 10 week summer program and research at another UC campus, professional development, and graduate school preparation. By providing valuable educational experiences for a diverse pool of graduate applicants, the UC system empowers a new generation of leaders.

The Year in Review

A MESSAGE FROM THE STATEWIDE DIRECTOR MICHELE JOHNSON

This year marked a period of exciting growth and renewed investment in the UC LEADS program. Thanks to increased support from SAPEP over the past few years, our program has expanded significantly across all nine undergraduate-serving UC campuses. In 2024–25, we welcomed 60 scholars into the incoming cohort, who joined 57 second-year scholars already in the program—**bringing our total to an impressive 117 UC LEADS scholars**. More students than ever are engaging in year-round research, leadership development, and cross-campus collaboration—key pillars of UC LEADS that prepare our scholars for success in graduate school and beyond. This expansion is evident in the increased number of publications highlighted across the next two pages.

We were especially proud to share the launch of the new UC LEADS Graduate Fellowship, a pilot funding allocation designed to increase the application, admission, and enrollment of talented UC LEADS alumni into STEM Ph.D. programs at UC campuses. The early impact of this initiative is already clear: **the number of UC LEADS alumni admitted to UC graduate programs rose from 22 last cycle to 31 this year, and 17 scholars enrolled at a UC for their doctoral studies**. This fellowship represents a significant step in reinforcing the UC LEADS pathway from undergraduate research to advanced STEM training within the UC system, and fostering long-term success for our scholars as they transition into advanced study and research careers.

The record number of student research presentations at this year's symposium, along with the inspiring presence of alumni, faculty, and campus leaders, reflect the growing momentum behind UC LEADS. We are deeply grateful for the continued partnership of SAPEP, the UC Office of the President, and our dedicated campus teams who make this work possible. Together, we are building a stronger, more inclusive research pipeline for California and beyond.

Leadership in Scholarship

IMPACT THROUGH SCHOLARLY CONTRIBUTIONS:

These UC LEADS Scholars are already making an impact through their scholarly publications

John Arriola | UC Irvine

Sanchez, G. P., Lopez, M., Velez, L. M., Tamburini, I., Ujagar, N., Angulo, J. A., De Robles, G., Choi, H., **Arriola, J.**, Kapadia, R., Zonderman, A. B., Evans, M. K., Jang, C., Seldin, M. M., & Nicholas, D. A. (2025). Comparative Analysis of White and African American Groups Reveals Unique Lipid and Inflammatory Features of Diabetes. *Journal of racial and ethnic health disparities*, 10.1007/s40615-025-02642-z. Advance online publication. https://doi.org/10.1007/s40615-025-02642-z

Adriann Brodeth and Cara Susilo | UC Los Angeles

Schwartz, L. A., **Brodeth, A. L.**, **Susilo, C. T.**, Rodolf, A. A., Ivanov, T., Corrales, E. M., Kumar, S. S., & Kamariza, M. (2025). Tre-DST: A new drug susceptibility test for Mycobacterium tuberculosis using solvatochromic trehalose probes. *bioRxiv : the preprint server for biology*, 2025.06.23.661142. https://doi.org/10.1101/2025.06.23.66114

Jordan Brower | UC Santa Barbara

Hertler, P. R., Yu, X., **Brower, J. D.**, Nguyen, T. D., Wu, G., Autschbach, J., & Hayton, T. W. (2024). Exploring Spin-Orbit Effects in a [Cu6Tl]+ Nanocluster Featuring an Uncommon Tl-H Interaction. *Chemistry (Weinheim an der Bergstrasse, Germany)*, 30(25), e202400390. https://doi.org/10.1002/chem.202400390

Tietje-Mckinney, D. P., **Brower, J. D.**, Hertler, P. R., Baeza Cinco, M. Á., Wu, G., Laverman, L. E., & Hayton, T. W. (2025). Photolytic Release of CS2 from Bis(Tritylthiocarbonyl) Disulfide, Ph3CC(S)SS(S)CCPh3. I*norganic chemistry*, 64(36), 18323–18331. https://doi.org/10.1021/acs.inorgchem.5c02719

Elle Defensor | UC Davis

Eckstein, S., Sun, Y., **Defensor, L**., Baradaran, D., Niu, X., Yermakov, M., Grinshpun, S., Song, G., & Sun, G. (2025). Preparation of photoactive antibacterial polylactic acid fibrous membranes for facemask applications. *Industrial & Engineering Chemistry Research*, 64(25), 12654–12664. https://doi.org/10.1021/acs.iecr.5c00962

Tim Duong | UC Los Angeles

Li B., **Duong, T.**, Neuhauser D., Alexandrova A., and Caram J. (2024). A Simple Algorithm for Converting Random Number Generator Outputs to Universal Distributions to Aid Teaching and Research in Modern Physical Chemistry. ChemRxiv. https://doi.org/10.26434/chemrxiv-2024-4thlz-v2

Allen, T., Li, B. Y., **Duong, T.**, Williams, K., & Neuhauser, D. (2025). Efficient plane-wave approach to generalized Kohn-Sham density functional theory of solids with mixed deterministic and stochastic exchange. *Physical Review B*, 112(15), 155104. https://doi.org/10.1103/kr5c-csnv

Nguyen, M., **Duong, T.**, & Neuhauser, D. (2024). Time-dependent density functional theory with the orthogonal projector augmented wave method. *The Journal of chemical physics*, 160(14), 144101. https://doi.org/10.1063/5.0193343

Sonali Feeley | UC Los Angeles

Freetly T., Albright P., **Feeley S.**, Feeley B., and Chambers C. (2024). Increased Utilization of Pitchers in NCAA Women's Softball Compared to Men's Baseball. *Journal of Women's Sports Medicine*. 4(2), 1-8. https://doi.org/10.53646/khdyxt64

Wu, D., Eugenis, I., Hu, C., Kim, S., Kanugovi, A., Yue, S., Wheeler, J. R., Fathali, I., **Feeley, S.**, Shrager, J. B., Huang, N. F., & Rando, T. A. (2025). Bioinstructive scaffolds enhance stem cell engraftment for functional tissue regeneration. Nature materials, 24(9), 1364–1374. https://doi.org/10.1038/s41563-025-02212-y

Thomas Frisch | UC San Diego

Bruckbauer, A., Scofield, G. B., Allemann, M. N., Reindel, J., Zhao, J., **Frisch, T.**, … Burkart, M. D. (2024). Renewable and Biodegradable Polyurethane Foams with Aliphatic Diisocyanates. Macromolecules. https://doi.org/10.1021/acs.macromol.3c02356

Bruckbauer, A., Scofield, G. B., **Frisch, T.**, Halloran, M. W., Guan, Z., Wnuk-Fink, K. M. J., … Burkart, M. D. (2025). Rethinking Polyurethane Dogma for Fully Renewable and Biodegradable Foams. Chemistry of Materials, 37(4), 1561–1569. https://doi.org/10.1021/acs.chemmater.4c03132

Andrew E. Gabagat | UC San Francisco

Yee, W. X., Lee, Y. J., Klein, T. A., Wirganowicz, A., **Gabagat, A. E.**, Csörgő, B., Makarova, K. S., Koonin, E. V., Weigele, P. R., & Bondy-Denomy, J. (2025). END nucleases: Antiphage defense systems targeting multiple hypermodified phage genomes. *bioRxiv : the preprint server for biology*, 2025.03.31.646159. https://doi.org/10.1101/2025.03.31.646159

Baldemar Motomochi Cedillo | UC Merced
Eck, E., Moretti, B., Schlomann, B. H., Bragantini, J., Lange, M., Zhao, X., VijayKumar, S., Valentin, G., Loureiro, C., Franco, P. P., Jollivet, C., **Motomochi, B.**, Royer, L. A., Oates, A. C., & Garcia, H. G. (2025). Single-cell transcriptional dynamics in a living vertebrate. *bioRxiv : the preprint server for biology*, 2024.01.03.574108. https://doi.org/10.1101/2024.01.03.574108

Nicole Lav | UC Irvine
Lav, N. S., Schiefer, E. J., Das, S., Vancheeswaran, N., Ahmad, S., Nguyen, M., & Nicholas, A. (2025). Undergraduate learning assistants using online messaging improves student educational experiences in large Neuroscience lecture course. *Journal of Undergraduate Neuroscience Education*, 23(2), a50–a55. https://doi.org/10.59390/vwem4773

Stephanie Lin | UC Merced
Weingram, A., Cui, C., **Lin, S.**, Munoz, S., Jacob, T., Viers, J., & Lu, X. (2025). A definition and taxonomy of digital twins: case studies with machine learning and scientific applications. *Frontiers in High Performance Computing*, 3. https://doi.org/10.3389/fhpcp.2025.1536501

Allison (Rosie) Manner | UC Santa Barbara
Ostwald, M. M., Smith, C., Allen, J., Buetow, A., **Manner, A. R.**, Guralnick, R., Goldsmith, C., & Seltmann, K. C. (2025). Leveraging community science to measure bee body size from museum specimens. *Ecology and Evolution*, 15(6), e71665. https://doi.org/10.1002/ece3.71665

Anna Nguyen | UC San Diego
Haddadin, Z., **Nguyen, A. M.**, & Poulikakos, L. V. (2025). Corner cutting connects chiral colorimetry to net electric flux in lossless all-dielectric metasurfaces. *Optics Express*, 33(5), 11731. https://doi.org/10.1364/oe.545515

Haddadin, Z., **Nguyen, A. M.**, & Poulikakos, L. V. (2024). Crafting chirality in three dimensions via a novel fabrication technique for bound states in the continuum metasurfaces. *Light Science & Applications*, 13(1), 45. https://doi.org/10.1038/s41377-023-01368-z

Eun Sang (Patrick) Park | UC Merced
Park, E., & Kim, C. (2024). Modeling Infectious disease spread: Comparison of the Agent-Based-Modeling and Differential-Equation approaches. *UC Merced Undergraduate Research Journal*, 17(1). https://doi.org/10.5070/m417164598

Breanna Remigio | UC Los Angeles
Ramirez, A., Orcutt-Jahns, B., Pascoe, S., Abraham, A., **Remigio, B.**, Thomas, N., and Meyer, A.. (2024). Integrative, high-resolution analysis of single cells across experimental conditions with PARAFAC2-RISE. *bioRxiv*. https://doi.org/10.1016/j.cels.2025.101294

Cassandra Reyes | UC Berkeley
Fedorova, D., Ben-Nissan, R., Milshtein, E., **Reyes, C.**, Jona, G., Dezorella, N., Feiguelman, G., Fedorov, R., Gomaa, A., Lindner, A. B., Noor, E., & Milo, R. (2025). Demonstration of bioplastic production from CO2 and formate using the reductive glycine pathway in E. coli. *PLoS ONE*, 20(7), e0327512. https://doi.org/10.1371/journal.pone.0327512

Kate Saxen | UC Santa Barbara
Heathcote, J., Gatkine, P., & **Saxen, K.** (2025). SNR estimation for studying exoplanet transits with astrophotonic spectrographs. *Techniques and Instrumentation for Detection of Exoplanets XII*, 78. https://doi.org/10.1117/12.3065792

Daniel F Torres Pomares | UC San Francisco
Lizzadro, L., Li, J., Taha, T. Y., Degotte, G., Detomasi, T. C., Zapatero-Belinchon, F. J., Hantz, E. R., Huang, S., Matsui, Y., Henderson, W. R., McCann, J. T., Montano, M., Rosecrans, J., **Pomares, D. F. T.**, McGovern, B. L., Diaz-Tapia, R., Benjamin, J., Gordon, M. E., Suazo, I. D., . . . Renslo, A. R. (2026b). Discovery of Coronavirus Main Protease Inhibitors with Enhanced Brain Exposure and Potent Oral Efficacy in SARS-CoV-2 and MERS Infection Models. *Journal of Medicinal Chemistry*, 69(2), 1530–1551. https://doi.org/10.1021/acs.jmedchem.5c03015

Kimberly Vasquez | UC Los Angeles
Deng, S., Jung, H.-J., Shen, Y., Roshandel, H., Chantranuwathana, V., Nguyen, H., Tran, T., **Vasquez, K.**, et al. (2024). Ortho-aromatic polyamides by ring-opening polymerization of N-carboxyanhydrides. *ChemRxiv*. https://doi.org/10.26434/chemrxiv-2024-5zmzn

Abdel Zaro | UC Berkeley
Asselmeier, M., Ahuja, D., Zaro, A., Abuaish, A., Zhao, Y., & Vela, P. A. (2025). Dynamic Gap: Safe gap-based navigation in dynamic environments. In Proceedings of the IEEE International Conference on Robotics and Automation (ICRA) (pp. 12870–12876). IEEE. https://lab-idar.gatech.edu/wp-content/uploads/2024/10/ICRA_2025_DynamicGapNavigation.pdf

2025 KORET UC LEADS **Research and Leadership** Symposium

MARCH 1, 2025 | UC LOS ANGELES

The **25th Annual Koret UC LEADS Research and Leadership Symposium** was hosted by UC Los Angeles at Carnesale Commons. Attendees were welcomed by Dr. Tama Hasson, Assistant Vice Provost for Undergraduate Research. This year, 103 scholars registered to present posters—a record number and a testament to the continued success of the program, supported in part by increased annual funding from SAPEP. We are deeply grateful to the 42 faculty and alumni judges who provided thoughtful feedback during the two morning poster sessions.

At lunch, scholars attended an engaging alumni panel focused on graduate education and career pathways after UC LEADS. The panel featured Dr. Salvador Badillo Rios (UC Irvine alum and Founder and CEO of EquiTech Innovate), Dr. Franklin Dollar (UC Berkeley alum and Associate Dean of Graduate Studies at UC Irvine School of Physical Sciences), Hanh Nguyen (UC San Diego alum and UC Irvine graduate student), and Dr. Cassie Reuter (UC Berkeley alum and Assistant Project Scientist for the South Pole Telescope). The panel was moderated by Dr. Laura McGeehan from UC Riverside and Mariela Menendez from UC Irvine.

Following lunch, a networking session gave scholars the chance to connect more personally with the panelists, faculty, and alumni in attendance. In the afternoon, scholars explored the UCLA campus through a lively scavenger hunt that encouraged collaboration and discovery. The day concluded with an awards ceremony and a celebration of the scholars' achievements. The evening keynote was delivered by Dr. Steven Chavez, UC Berkeley alum and Assistant Professor in the UCLA Chemical and Biomolecular Engineering department, who offered an inspiring message to kick off the award ceremony.

The **Graduate Deans' Leadership Award** was given to three scholars who exhibited extraordinary leadership during their tenure as UC LEADS scholars. Awards went to **Tim Duong** (UC Los Angeles), **Jesus De La Mora Herrera** (UC Merced), and **Rosie Manner** (UC Santa Barbara). This $500 award was selected by the UC LEADS Executive Steering Committee and funded by the Deans of all 10 UC Graduate Divisions. Other nominees, and recipients of the **Campus Leadership Awards**, were **Isaac Duarte Valdez** (UC Berkeley), **Elle Defensor** (UC Davis), **Nicole Sang Lav** (UC Irvine), **Andrew Abdala** (UC Riverside), **Anna Nguyen** (UC San Diego), and **Yeison Samayoa** (UC Santa Cruz).

POSTER AWARDS

Biological Sciences

Poster Top Honors Winners
Nandini Mannem, UC Riverside
Patrick Smith, UC San Diego
Marissa Todesco, UC San Diego

Campus Honorable Mentions
Hannah Aguilar, UC Berkeley
Madhurima Kesaraju, UC Riverside
Daniel Torres Pomares, UC Los Angeles

Engineering, Computer & Data Sciences

Poster Top Honors Winners
Kenzie Nguyen, UC Merced
Tin Nguyen, UC San Diego
Matthew Madrid, UC Irvine

Campus Honorable Mentions
Elle Defensor, UC Davis
Mabel Espinoza, UC Merced
Anna My Nguyen, UC San Diego
Dorian Simpson, UC Davis

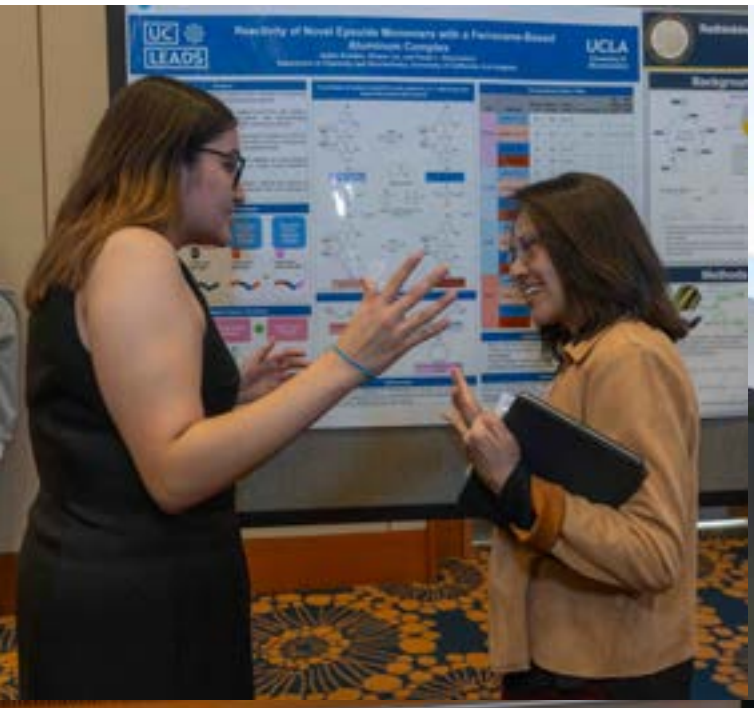
Physical Sciences & Mathematics

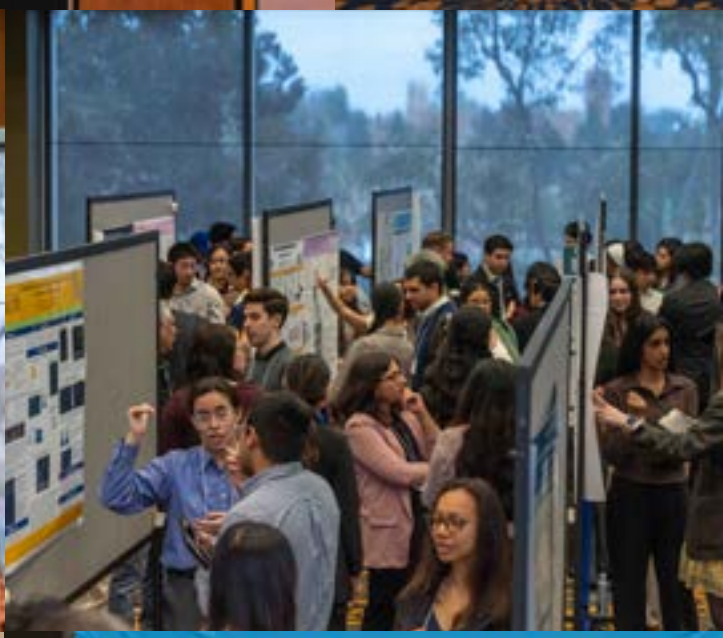
Poster Top Honors Winners
Jordan Brower, UC Santa Barbara
Thomas Frisch, UC San Diego
Steven Umbarger, UC Merced

Campus Honorable Mentions
Michael Father, UC Irvine
Maya Kang-Chou, UC Santa Barbara
Ambrosio Rivera, UC Santa Cruz

2025 KORET UC LEADS **Research and Leadership** Symposium

MARCH 1, 2025 | UC LOS ANGELES



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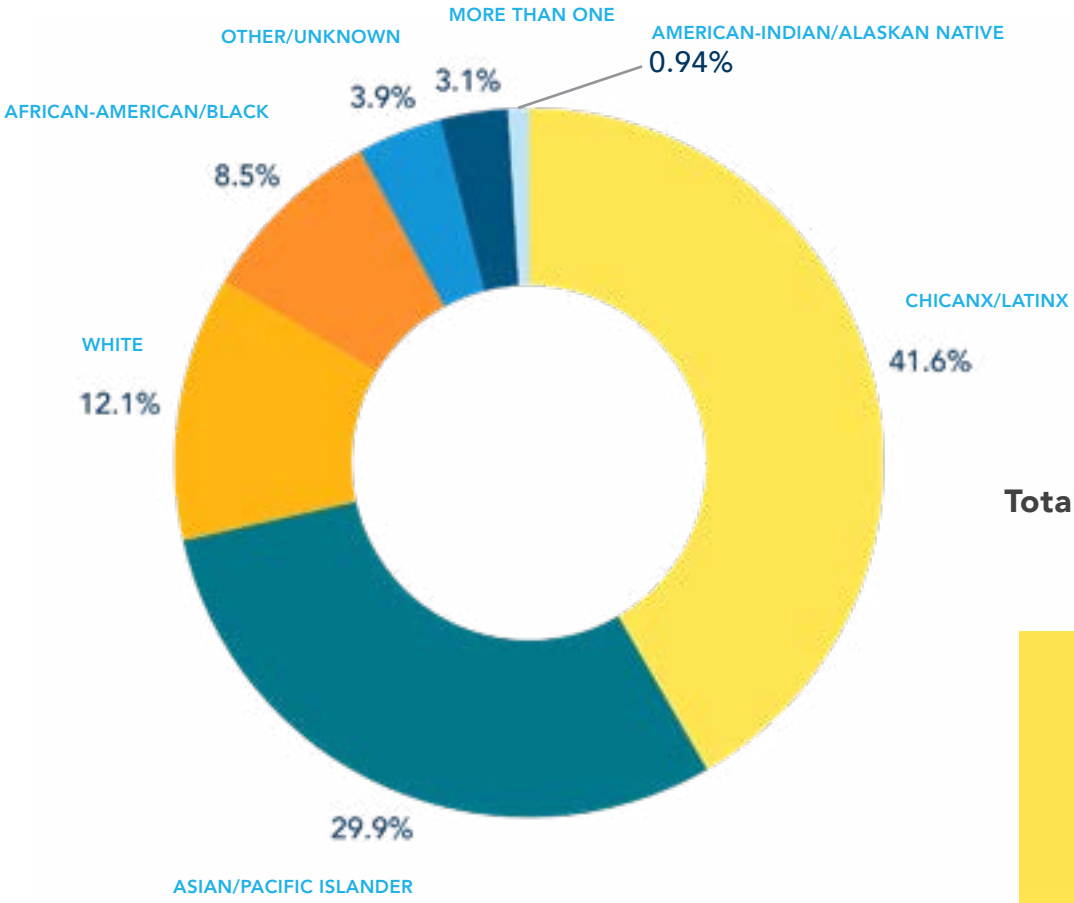
Program **Impact** Summary

RECRUITING A DIVERSE POOL OF SCHOLARS

Since 2000, UC LEADS begins to fulfill its goal of diversifying graduate education and STEM leadership by recruiting a diverse pool of scholars. The UC LEADS population is **52%** first-generation college students and **52%** underrepresented minorities. Males and females are represented almost equally in program alumni (**51.5%** females, **47.9** male, **0.6%** identifying as another gender). Over the past 25 years, UC LEADS has supported **1321** scholars.



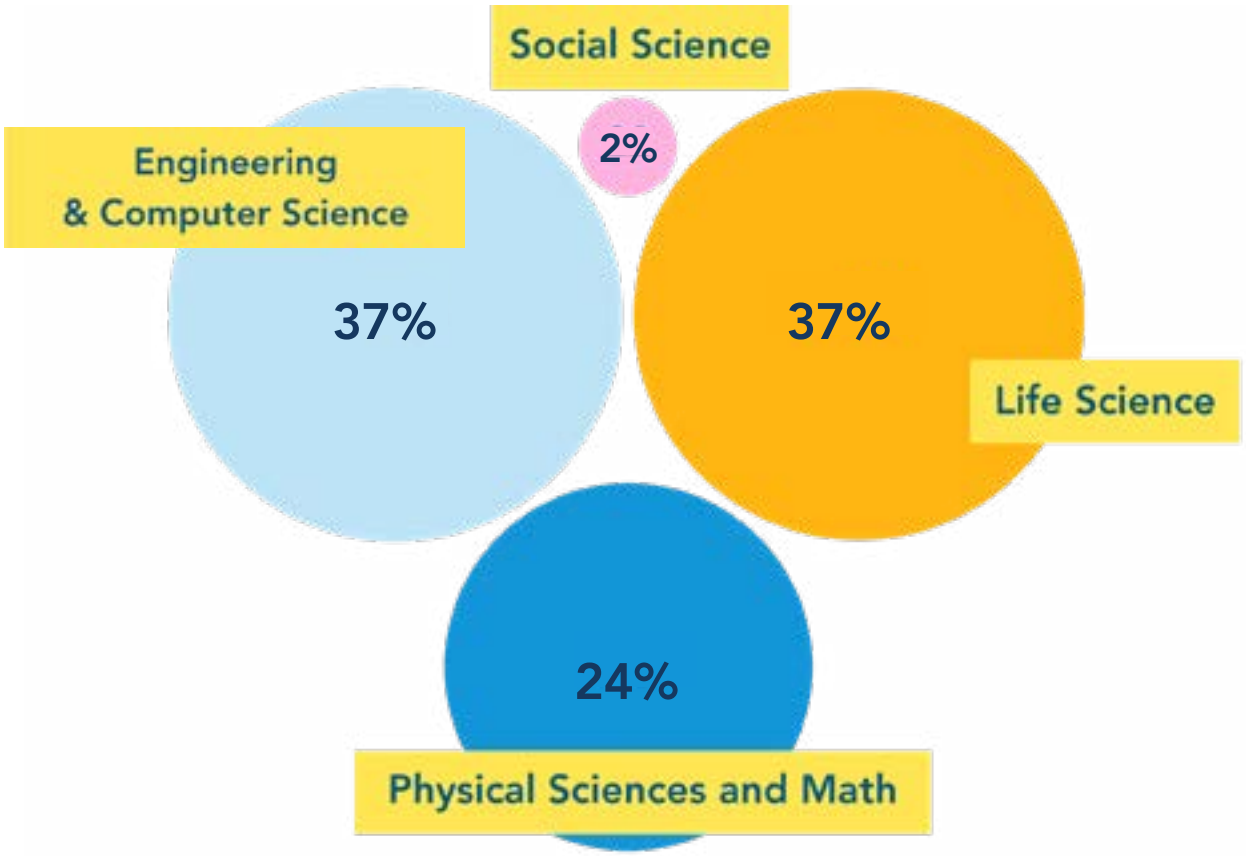
ETHNICITY

Total Scholars count: 1321

We have a **99.4%** **undergraduate graduation rate**

> The most valuable part was the mentorship I received from my mentor. I felt extremely supported and like he genuinely cared about my learning and understanding, which was really nice to experience.
>
> *— UCLA UC LEADS Scholar about their second summer experience*

UNDERGRADUATE DISCIPLINE



* *The social science majors include Clinical Psychology, Physiological Psychology, Managerial Economics, Neuroscience, Cognitive Psychology, Cognitive Science, and Psychology, Anthropology, Geography (GIS). These majors are considered STEM on the scholars' home campus, or these scholars conducted research in STEM fields related to their major. The most common social science majors were psychology and cognitive science.*

CURRENT ACADEMIC STATUS

711 or 61% have completed a postbaccalaureate or graduate program

"It was awesome! I learned a lot this summer thanks to the new lab environment, and that would not have been possible for me without this program. I was lucky to have joined a really welcoming and helpful lab, and this summer experience convinced me to apply for a program at UCLA to see if I could continue doing research there in the future. I am also grateful that our summer cohort was amazing, and I'm glad I got the chance to meet and become friends with them. I can't really think of a better way I could have spent this summer, so I'm really grateful to UC LEADS for the experience."

— UC Davis UC LEADS Scholar about their second summer experience

Campus **Updates**

UC Berkeley | Year in Review

Our UC Berkeley UC LEADS program received national recognition through "The 2025 Inspiring Programs in STEM Award" from Insight Into Academia. Our program brought in seven scholars for our 2024 cohort and five visiting summer scholars. Six of our scholars were successfully accepted into STEM graduate doctoral programs. We have increased our opportunities for UC LEADS alumni who are current graduate students at UC Berkeley to get involved with our undergraduate community, which has led to 1x1 poster support, lab tours, community building, and important access to these successful role models. We are fortunate to have our program housed in the Cal NERDS Student Center which allows for a lot of cross-pollination of programs, ideas, innovation, and trainings. This includes Graduate School Planning, which involves workshops on application timelines, letter of recommendation packets, graduate essays, statement of purpose development, and financing graduate school strategies. We also did critical training in Scientific communication and research poster design.

Optional opportunities were accessible such as a quantum physics research lab tour, introduction to python training, and intro to 3D printing. We also make efforts to reach out to community college MESA programs for outreach visits. Our eight-week Cal NERDS UC LEADS summer research program focused on Professional Development. This included STEM graduate student mentoring dinners, where these role models shared their stories and advice on the graduate school application process, how they picked their graduate programs, and their research journeys. In addition, special attention was given to establishing an effective research Mentor-Mentee relationship. We had a chance to attend UC Davis' Graduate School Visitation day "Grad Scoop". The summer program culminated in a research poster showcase, where staff, faculty, colleagues, and friends came to support our scholars research presentations.

Second-Year Scholars

Vy Duong (Chemical Engineering) did her second summer research at UC Los Angeles. She graduated in fall 2024 and is currently working as a Process Engineer at Henkel.

Andrew Gabagat (Cell & Molecular Biology) did his second summer research at UC San Francisco. He presented a poster at the 2025 UC LEADS Symposium titled *Examining Pseudomonas aeruginosa Defense Systems Against a Broad Host Range Lytic Phage Family*. He graduated and applied to STEM PhD program in fall 2025. He has been accepted to multiple programs, including Harvard University and is making his decision in the spring of 2026.

Jason Hodes (Mechanical Engineering) did his second summer research at UC San Diego. He presented a poster at the 2025 UC LEADS Symposium titled *Muli-Agent Simultaneous Localization and Mapping*. He applied to Engineering PhD programs in the fall 2025 and plans to graduate in spring 2026.

Clarissa Jacobo Hernandez (Biomedical Engineering) did her second summer research at UC Berkeley. She presented a poster at the 2025 UC LEADS Symposium titled *Modulating Macrophage Polarization by Prolyl Hydroxylase (PHD) Inhibitor-Treated Fetal Membrane Cells for Fetal Membrane Repair*. She graduated in fall 2025 and will be applying to STEM PhD graduate school in fall 2026.

Cassandra Reyes (Biomedical Engineering) did her second summer research at UC Berkeley. She graduated in spring 2024 and is currently a Research Associate at Innovative Genomics Institute. She graduated in the fall of 2025 and has been accepted to multiple programs. She is making her decision in the spring of 2026.

First-Year Scholars

Hannah Aguilar (Statistics) did her first summer research at UC Berkeley. Her poster, *Tissue Specific mtDNA Mutational Landscapes in the Aging Brain*, received an honorable mention at the 2025 UC LEADS Symposium. She graduated in spring 2025 and is currently a Statistics master's of science student at UC Berkeley. She applied to STEM PhD programs in fall 2025. She has been accepted to multiple programs and has accepted UC Berkeley's offer.

Alberto "Isaac" Duarte Valdez (Nuclear Engineering) was a transfer student and did his first summer research at UC Berkeley. He presented a poster at the 2025 UC LEADS Symposium titled *Neutron Albedo and Radiative Heat Rejection in Lunar Reactors: a Dual Challenge in Extraterrestrial Fission Systems*. He also exhibited exceptional leadership qualities during his time in UC LEADS and received the 2025 Campus Leadership Award. He plans to graduate in spring 2026 and plans on taking a gap year before submitting graduate school applications during the fall of 2027.

Alicia Naylor Guerrero (Cognitive Science) did her first summer research at UC Berkeley. She presented a poster at the 2025 UC LEADS Symposium titled *Multivariate Analysis of Intentional Information Prioritization During Visual Working Memory*. She will graduate in spring 2026 and will be applying to STEM PhD graduate school programs in fall 2026.

Jovanny Ramirez (Industrial Engineering & Operations Research) did his first summer research at UC Berkeley. He presented a poster at the 2025 UC LEADS Symposium titled *Minutes of MVTA Necessary to Accurately Quantify Duty Cycle & Frequency*. He plans to graduate in spring 2026. He applied to STEM PhD programs in fall 2025 and plans to graduate in spring 2026.

Richard Rodriguez (Astrophysics) was a transfer student and did his first summer research at UC Berkeley. He presented a poster at the 2025 UC LEADS Symposium titled *Electromagnetically Isolated Global Signal Estimation Platform*. He graduated in fall 2025 and is currently an Astronomy and Astrophysics master's in science student at San Francisco State University.

Abdel Zaro (Mechanical Engineering) was a transfer student and did his first summer research at UC Berkeley. He presented his research project at UC Berkeley's Cal NERDS Summer Showcase entitled "A Comparison of Classical- and Learning-based Robot Social Navigation Methods." Abel was published as a co-author of a research paper "Dynamic Gap: Safe gap-based navigation in dynamic environments" in the Institute of Electrical and Electronics Engineers proceedings. He graduated in spring 2025 and is currently a Mechanical Engineering PhD student at Georgia Tech.

Pooneh Zehtabfard (Applied Mathematics, Planetary Science) did her first summer research at UC Berkeley. She presented a poster at the 2025 UC LEADS Symposium titled *Convection in Enceladus' Ice Shell Produced by Tiger Stripe Fissures*. She applied to STEM PhD programs in fall 2025. She has been accepted to multiple programs and has accepted Yale's offer.

Alumni Spotlight

AHYEON HWANG

UC LEADS 2016-2018
BA Applied Mathematics

Ahyeon Hwang received her BA in Applied Mathematics from UC Berkeley and her PhD in Mathematical, Computational and Systems Biology from UC Irvine. As a UC LEADS scholar, she had the opportunity to work with scientists across numerous research institutions and laboratories including the Redwood Center for Theoretical Neuroscience, Lawrence Berkeley National Laboratory, and the Salk Institute, where she focused on computational neuroscience and machine learning. During her PhD, she worked on a large-scale single-cell genomics bioinformatics project investigating PTSD and depression disease mechanisms in the human brain, resulting in a publication in Nature. She is currently a research affiliate at UCSB, where her work focuses on modeling chronic pain using fMRI data. Throughout her career, Ahyeon has been actively involved in STEM diversity initiatives that promote research and academic excellence for students from all backgrounds and educational levels. *Fun fact: her sister is the UC Davis Highlight!*

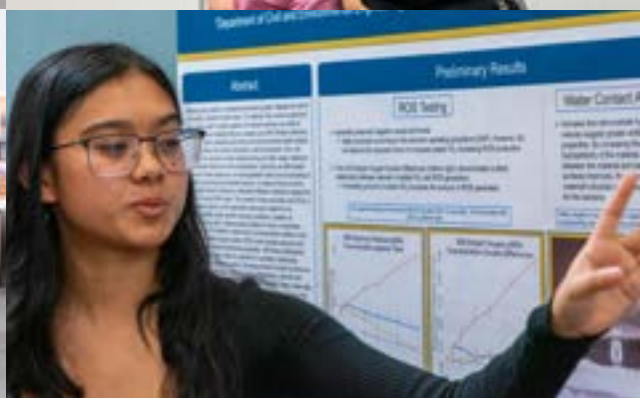
"The mentorship and training I received as a UC LEADS scholar were fundamental in shaping me into the scientist I am today. The strong foundation I gained in research, leadership, and communication helped me overcome numerous challenges during my graduate studies. I am grateful to all of my mentors and advisors and hope to give back by supporting the next generation of students."

Campus **Updates**

UC Davis | Year in Review

This summer, we enthusiastically welcomed eight first-year scholars for our new cohort, a significant increase from previous years. They were joined by four visiting scholars from UC Merced, UC Santa Barbara, and UC San Diego for our summer research program. The expansion of our first-year cohort brought a fresh sense of energy and made for a dynamic and enriching summer research program and research symposium. With a broader range of research topics, disciplines, and majors represented, the symposium provided a more engaging platform for scholarly exchange and collaboration among participants. While the larger group size added excitement and vibrancy to the academic aspects of the program, it also shifted the nature of some of our traditional community-building activities. Events like field trips, campus tours, and small-group social gatherings, which tend to work best with more intimate groups due to logistical considerations, transportation needs, and staffing capacity, required some adjustments. Despite these challenges, we successfully maintained the core elements of our programming and hosted the majority of these community-building events.

During the academic year, we hosted two professional development workshops for our seven continuing scholars, led by UC LEADS alumna Monica Kirkland, a coaching and consulting



professional. These workshops provided valuable guidance on navigating academic and leadership challenges. During each of the three academic quarters, the scholars engaged in two impactful, one-hour workshops designed to address critical areas of personal and academic growth including broader themes such as empowerment for success, leadership skills, communication and interpersonal skills, conquering perfectionism and fear of inadequacy, networking, school-work-life balance, time management, conflict resolution, adaptability and flexibility, and empathy and emotional intelligence. Through interactive discussions and expert insights, the scholars gained actionable strategies to overcome challenges and thrive in both their personal and academic journeys.

Overall, this summer marked an important milestone for our program's growth and impact, reflecting our ongoing commitment to fostering scholarly development, professional growth, and cross-campus collaboration across the UC system.

UC Davis

Second-Year Scholars

Lauren (Elle) Defensor (Civil Engineering) did her second summer research at UC Irvine. Her poster, *Fabrication and Characterization of Thermoregulatory Composites*, received an honorable mention at the 2025 UC LEADS Symposium. She also exhibited exceptional leadership qualities during her time in UC LEADS and received the 2025 Campus Leadership Awards. She graduated in spring 2025 and is currently working as a virtual tutor at My Private Professor.

Emily Thrall (Biomedical Engineering) did her second summer research at UC Davis. She graduated in fall 2024 and is currently working as an Assistant Scientist-Target Biology at Empirico.

Taylor Tran (Neurobiology, Physiology and Behavior) did her second summer research at UC San Diego. She graduated in spring 2024 and is currently working as a Junior Specialist a UC Davis

First-Year Scholars

Jhaydine Bandola (Computer Science) did her first summer research at UC Davis. She presented a poster at the 2025 UC LEADS Symposium titled *LupBook: An Open Source Offline Interactive Textbook Framework*. She plans to graduate in spring 2026.

Landon Battin (Neurobiology, Physiology, and Behavior) did his first summer research at UC Davis. He presented a poster at the 2025 UC LEADS Symposium titled *Quantitative Characterization of Microglia Activation in the Murine Olfactory Bulb using Machine Learning Classification*. He plans to graduate in spring 2026.

Navleen Kaur (Civil Engineering) did her first summer research at UC Davis. She presented a poster at the 2025 UC LEADS Symposium titled *Characterizing Granular Materials for Development of a Deployable Granular Anchor*. She plans to graduate in spring 2026.

Dean Ramos (Psychology and Cognitive Science) did his first summer research at UC Davis. He presented a poster at the 2025 UC LEADS Symposium titled *Developmental Plasticity in Somatosensation: Tactile Discrimination in Early-Blind vs Sighted Short-Tailed Opossums (Monodelphis domestica), and Somatosensory Cortex Mapping of Norwegian Brown Rats (Rattus norvegicus) Raised in Enriched vs Conventional Environments*. He plans to graduate in spring 2026

Dorian Simpson (Food Science & Technology) did her first summer research at UC Davis. Her poster, *Effects of Agarose Matrigel Core-Shell Printing on Aggregation and Differentiation of Bovine Skeletal Muscle Stem Cells*, received an honorable mention at the 2025 UC LEADS Symposium. She plans to graduate in spring 2026. .

Ruba Thekkath (Data Science) did her first summer research at UC Davis. She presented a poster at the 2025 UC LEADS Symposium titled *(Machine) Learning Invariants of Polyhedra*. She graduated in spring 2025 and is currently a Master of Engineering in Data Science student at Cornell University.

Emily Vong (Chemical Engineering) did her first summer research at UC Davis. She presented a poster at the 2025 UC LEADS Symposium titled *Precise Control of Semiconducting Polymer Film Thickness and Absorption via Spin Coating*. She plans to graduate in spring 2026.

Alumni Spotlight

HYEYEON HWANG

UC LEADS 2017-2019

BS Computer Science

I received my BS in Computer Science from UC Davis and continued as a Junior Specialist in the lab of Dr. Janine LaSalle, investigating the epigenetics of autism spectrum disorders. I then pursued a PhD in Computational Biology at Brown University. Advised by Dr. Nikos Tapinos and Dr. Ritambhara Singh, I developed bioinformatic and deep learning approaches to identify therapeutic targets in glioblastoma. Currently, I work as an AI Scientist at Tinos Therapeutics – an RNA therapeutics startup that emerged from the Tapinos Lab – where I leverage AI, RNA biology, and bioinformatic tools to develop computational frameworks that accelerate the discovery of novel cancer therapies. *Fun fact: her sister is the UC Berkeley Highlight!*

"UC LEADS encouraged me to be proactive and nurtured my passion for scientific discovery. Through seminars, mentorship, and hands-on experience, I developed critical thinking skills, communication skills, and resilience. The program gave me confidence and direction, reinforcing my commitment to research. UC LEADS not only introduced me to science, but also empowered me to pursue it wholeheartedly, shaping my success in the field today."

Campus **Updates**

UC Irvine | Year in Review

This year we welcomed 9 first year UCLEADs scholars and grew our program to support a total of 18 students! We expanded our graduate student support by hiring a graduate student to work with our second year scholars virtually, to review their graduate school writing statements while they were away at their second summer research programs. This helped our second year scholars tremendously when applying in the fall. Our first-year scholars were able to be a part of the UC Irvine in person summer program along with other 4 visiting UCLEADs scholars. We offered them a rich program of social activities, mentorship, hands-on research experience, writing and professional development. The summer program culminated with a research symposium that allowed students to showcase their summer projects. We were excited to learn students were accepted to present their summer research projects at national conferences like Annual Biomedical Research Conference for Minoritized Scientists (ABRCMS) and Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)!

To kick off the academic year, new scholars participated in our annual Northern California tour of University of California campuses, by visiting UC Berkeley and UC Davis. The campus visits offered opportunities to meet with prospective second summer labs, tour the campuses, meet with current

graduate students and faculty, and learn about each campus' graduate admissions process. The tour created an opportunity for scholars to bond with one another and build community. Students traveled to the SACNAS and ABRCMS conferences to present their research. First year scholar Michael Father won an award at SACNAS for his research presentation! Other scholars also traveled to Chicago, Baltimore, San Diego and South Africa to present their research in conferences related to their field!

Throughout the academic year, our scholars were mentored by two UCI PhD graduate students. They hosted a variety of workshops on topics ranging from topics like the hidden curriculum to managing redirection. We ended the year by hosting our traditional, student-led workshop, where second year scholars discuss the process of applying to graduate school from the student perspective. Students also shared their perspectives managing research at other campuses for the summer and offered advice on managing summer experiences to the soon-to-be second year scholars. Second year scholars that applied to graduate school will be enrolling in UC doctoral programs in the fall!

UC Irvine

Second-Year Scholars

Joshuah Arellano (Biological Sciences) did his second summer research at UC San Diego. He graduated in spring 2025 and is currently a Neuroscience PhD student at UC San Diego.

John Arriola (Biology) did his second summer research at UC San Francisco. He presented a poster at the 2025 UC LEADS Symposium titled *Memory T Cell Response to CD1A in T2D Patients*. He graduated in spring 2025.

Faith Faulyn Enriquez (Biological Sciences) did her second summer research at UC San Francisco. She graduated in spring 2025 and is currently a Microbiology PhD student at UC Davis.

Diego Guzman (Information Science) did his second summer research at UC Berkeley. He presented a poster at the 2025 UC LEADS Symposium titled *Document Clustering of Police Records: Enhancing Transparency and Accessibility*. He graduated in spring 2025 and is currently a Computer Science and Informatics PhD Student at Emory University.

Alison Martinez (Aerospace Engineering) did her second summer research at UC San Diego. She graduated in spring 2025.

Anjali Moore (Physics) did her second summer research at UC Santa Barbara. She presented a poster at the 2025 UC LEADS Symposium titled *Improving Direct Imaging of Exoplanets Through the Use of Silicon-on-Glass Metasurfaces*. She graduated in spring 2025 and is currently an Astronomy PhD student at UC Riverside.

Verenice Patino (Biology) did her second summer research at UC Irvine. She presented a poster at the 2025 UC LEADS Symposium titled *Determining role of neutrophils in demyelination of Multiple Sclerosis*. She graduated in fall 2025.

Nicole Sang Lav (Biological Sciences) did her second summer research at UC San Francisco. She also exhibited exceptional leadership qualities during her time in UC LEADS and received the 2025 Campus Leadership Awards. She graduated in fall 2024 and is currently a Neuroscience PhD at UC San Diego.

Daniel Santos (Pharmacology) did his second summer research at UC San Diego. He plans to graduate in spring 2026.

First-Year Scholars

Vincent Caudillo (Physics/Math) did their first summer research at UC Irvine. They presented a poster at the 2025 UC LEADS Symposium titled *Comparing Dark Matter Density for Simulated Milky Way Dwarf Spheroidal Galaxies to Observation*. They plan to graduate in spring 2026.

Imani Cowart (Biological Sciences) did her first summer research at UC Irvine. She presented a poster at the 2025 UC LEADS Symposium titled *Cracking Open the Cell: Detecting Cross-Linking in Moderately Complex Cell Fractions*. She plans to graduate in spring 2026.

Michael Father (Physics) did his first summer research at UC Irvine. His poster, *Investigating Optical Properties of Epsilon Near Zero Materials on D-Shaped Optical Fibers*, received an honorable mention at the 2025 UC LEADS Symposium. He plans to graduate in spring 2026.

Marie Li (Biological Sciences) did her first summer research at UC Irvine. She presented a poster at the 2025 UC LEADS Symposium titled *Exploring Potential Therapeutic Compounds for PCOS Identified from Screening Genetic Diversity*. She plans to graduate in spring 2026.

Matthew Madrid (Aerospace Engineering) did his first summer research at UC Irvine. His poster titled *Evaluating Conditionally-Averaged Velocity Profiles for Wall-Bounded Turbulent Flows*, received top honors at the 2025 UC LEADS Symposium. He plans to graduate in spring 2026.

Michelle Mercado (Chemical Engineering) did her first summer research at UC Irvine. She presented a poster at the 2025 UC LEADS Symposium titled *Exploring the Encapsulation Behaviors of Quantum Dots and Gold nanoparticles within Polystyrene-block-Polyacrylic Acid Coacervates and Self-Assembled Nanoparticles*. She plans to graduate in spring 2026.

Emily Nhan (Biomedical Engineering) did her first summer research at UC Irvine. She presented a poster at the 2025 UC LEADS Symposium titled F*ocal Adhesion Disruption and Reprogramming Enhance Tumor Spheroid Compaction in a Somatic Lung Cancer Cell Line*. She plans to graduate in spring 2026.

Miriam Olivera Marquez (Biological Sciences) did her first summer research at UC Irvine. She presented a poster at the 2025 UC LEADS Symposium titled *Nicotine-Induced Neurotransmitter Levels in the Adolescent Rat Brain Carrying a Human Polymorphism in the CHRNA6 Gene 3'UTR*. She plans to graduate in spring 2026.

Alumni Spotlight

DR. KIMBERLY J. KOMATSU

UC LEADS 2005-2007
Applied Physics

Kimberly Komatsu received her BS in Ecology and Evolutionary Biology from UC Irvine in 2007, where she conducted research on invasive plants and snails in southern California through UC LEADS. She then completed a PhD in Ecology and Evolutionary Biology at Yale University and a postdoctoral fellowship at UC Berkeley. She started her professional career as a Senior Scientists for six years at the Smithsonian Environmental Research Center, before moving to join the faculty at the University of North Carolina at Greensboro as an Associate Professor and the Florence Schaffer Distinguished Scholar in 2022. Since discovering her passion for global change research as an undergraduate student, she has received over $5 million in research funding and published over 100 peer-reviewed papers related to human impacts on grassland and agricultural systems with a specific focus on climate change, nutrient pollution, species loss, and land use change. She strives to incorporate collaborations with land managers and decision makers in her research from project inception, with the goal of developing science-driven solutions to environmental challenges.

"UC LEADS taught me the power of scientific collaborations. We can push the boundaries of science so much further through interactions with other scientists, practitioners, and the public. UC LEADS introduced me to a broad network of scientists with a common passion for understanding and protecting the environment. Through these connections, I found research advisors and collaborators at every stage of my career. Having these "science life partners" that serve as research collaborators, mentors, and friends has brought so much joy to my scientific career."

Campus **Updates**

UC Los Angeles | Year in Review

In summer 2024, we were excited to welcome a wonderful new cohort of 7 UCLA students to the UC LEADS program. We also had the pleasure of hosting our largest ever group of visiting seniors, with 10 scholars coming from UC Riverside, UC Santa Barbara, UC Davis, UC Irvine, and UC Santa Cruz. Throughout the summer, these students did groundbreaking work ranging from robotics to tissue engineering. These UC LEADS research experiences culminated in an amazing slate of presentations at the Summer Research Showcase.

In the last year, UCLA UC LEADS scholars have been authors on eight different scientific publications! It is really a testament to the hard work and talent of all of these amazing UC

LEADS students. Our graduating seniors have gone on to take amazing next steps of their careers, including beginning doctoral programs at prestigious universities.

From the programming side, our students engaged in a custom curriculum designed specifically for UC LEADS students. 2024-25 saw our students take courses in a Scientific Journal Club, Science Communication, and a Writing Workshop that led each student to create a review article on their research discipline. Overall, it was an amazing year for the program, and we are excited to build upon these successes in the coming year!

UC Los Angeles

Second-Year Scholars

Tim Duong (Chemistry) did his second summer research at UC Berkeley. He presented a poster at the 2025 UC LEADS Symposium titled *Generalized/Parametrized Attenuated Exchange Formalism for High-Quality TDHF@vW Spectra*. He also exhibited exceptional leadership qualities during his time in UC LEADS and received the 2025 Graduate Deans' Leadership Award. He graduated in spring 2025 and is currently a PhD student in Theoretical and Computational Chemistry at Princeton University.

Sonali Feeley (Neuroscience) did her second summer research at UC San Francisco. She presented a poster at the 2025 UC LEADS Symposium titled *Inducing Proliferation Without Excessive Differentiation of Fibroadipogenic Progenitor Cells in Skeletal Muscle in Vitro*. She plans to graduate in spring 2026.

Jack Lichterman (Physics) did his second summer research at UC Berkeley. He presented a poster at the 2025 UC LEADS Symposium titled *Contact Resistance in TMD Heterostructures with a RuCL3 Charge Transfer Layer*. He graduated in spring 2025 and is currently a Lab Technician at UC Los Angeles.

Breanna Remigio (Computational and Systems Biology) did her second summer research at UC Merced. She presented a poster at the 2025 UC LEADS Symposium titled *Using PARAFAC2 to Examine Cell-to-Cell and Spatial Variation in Colorectal Cancer*. She graduated in spring 2025 and is currently a Computational Bioscience PhD student at University of Colorado Anschutz Medical Campus.

Daniel Torres Pomares (Chemistry) did his second summer research at UC San Francisco. His poster, *Re-evaluating the P1 Position in a New Class of Covalent SARS-CoV-2 MPro Inhibitors*, received an honorable mention at the 2025 UC LEADS Symposium. He graduated in spring 2025 and is currently a Medicinal and Pharmaceutical Chemistry PhD student at UC San Francisco.

First-Year Scholars

Sofia Ando (Chemistry) did her first summer research at UC Los Angeles. She presented a poster at the 2025 UC LEADS Symposium titled *Electrostatic Modulation through Secondary Sphere Mutations in Nickel-Substituted Rubredoxin*. She plans to graduate in spring 2026.

Lindsay Land (Computational and Systems Biology) did her first summer research at UC Los Angeles. She presented a poster at the 2025 UC LEADS Symposium titled *Uncovering Patterns of Forest Gain in Central Africa via Dataset Corroboration and Evaluation*. She plans to graduate in spring 2026.

Isabel Rosales (Biochemistry) did her first summer research at UC Los Angeles. She presented a poster at the 2025 UC LEADS Symposium titled *Reactivity of Novel Epoxide Monomers with a Ferrocene-Based Aluminum Complex*. She plans to graduate in spring 2026.

Cara Susilo (Bioengineering) did her first summer research at UC Los Angeles. She presented a poster at the 2025 UC LEADS Symposium titled *Quantifying Drug Effects on Mycobacteria via Fluorescence on a Plate Reader Towards Development of Drug Susceptibility Test*. She plans to graduate in spring 2026.

Ryan Teoh (Aerospace Engineering) did his first summer research through an outside industry internship. He presented a poster at the 2025 UC LEADS Symposium titled *Deep Reinforcement Learning Control of an Oscillating Hydrofoil to Maximize Power Extraction*. He plans to graduate in spring 2026.

Alumni Spotlight

WINN HUYNH

UC LEADS 2014-2016

BS Chemistry-Materials Science with a minor in Science Education

Winn Huynh received a BS in Chemistry-Materials Science with a minor in Science Education from UCLA and a PhD in Chemistry from UC Riverside. As a UC LEADS scholar, he refined his interest in inorganic chemistry with the Kaner Group (UCLA) and Long Group (UC Berkeley). As a Cota-Robles fellow in the Conley group (UC Riverside), he used a combination of solid-state NMR spectroscopy and computational modeling to elucidate the structure of both molecules and surface-supported molecular fragments. He is now a chemistry professor at LA Pierce College, where he enjoys creating classroom activities, mentoring first-generation students, and connecting students to research opportunities. His active involvements include MESA, AI Campus, and Science Journal Club.

"I met Johny (UC Riverside) at a UC LEADS Symposium, and he was a valuable resource towards choosing UC Riverside for graduate school. I reached out to his faculty mentor when I started graduate school, and the transition into a PhD program as a first-generation suddenly became less intimidating. I learned how to be more confident, communicate effectively, and set expectations for meaningful mentorship."

Campus **Updates**

UC Merced | Year in Review

The UC LEADS cohort at UC Merced continued to grow through SAPEP funding and the UCSF STRETCH Program, supporting a record 19 scholars: nine first-year and ten second-year participants. Scholars engaged in alumni networking events, meeting with UC LEADS and UROC alumni who shared their experiences in Ph.D. programs.

Scholars participated in national conferences that supported their academic and professional growth. Kyra Ruiz presented at the 2024 American Physical Society Division of Fluid Dynamics (APS DFD) Annual Meeting in Salt Lake City, UT, earning a student poster award. Steven Umbarger presented at the 30th Annual Keck Science Meeting in Pasadena, CA, and the 245th American Astronomical Society (AAS) Meeting in National Harbor, MD. Patrick Park presented at the 2025 Joint Mathematics Meetings in Seattle, WA. Aarthika Nagarajan, Kenzie Nguyen, and Jesus De

La Mora received awards for their research at the 2025 Emerging Researchers National (ERN) Conference in STEM in Atlanta, GA. Additionally, Katherine Herrera, Anika Potu, and Jesus De La Mora also presented at the 2025 National Conference on Undergraduate Research (NCUR) in Pittsburgh, PA.

At the 2025 UC LEADS Annual Symposium, two UC Merced scholars received Top Honors Awards, one earned an Honorable Mention, and one was recognized with the Graduate Deans' Leadership Award. Three scholars also received their department's Outstanding Student Award at graduation. These accomplishments highlight the program's impact and commitment to advancing equity and leadership in STEM research.

UC Merced

Second-Year Scholars

Logan Adrian (Physics) did his second summer research at UC Santa Cruz and presented the poster *Characterization of Silicon Pixel Detectors for the ATLAS Large Hadron Collider* at the 2025 UC LEADS Symposium. He graduated in spring 2025 and is currently a Cryogenic Service Engineer at Bluefors Cryocooler Technologies Inc in Syracuse, New York.

Maria Contreras-Chavez (Environmental Engineering) did her second summer research at UC Davis. She received the UC Merced School of Engineering's Outstanding Student Award upon graduating in fall 2024. Maria is currently a Junior Specialist in Geospatial Analytics and Remote Sensing at UC Merced's Valley Institute for Sustainability, Technology, and Agriculture (VISTA).

Jesus De La Mora Herrera (Mechanical Engineering) did his second summer research at UC Santa Barbara and presented the poster *The Phenomena of Tribology: Varnish Removal from Metal Surfaces in Mechanical Components* at the 2025 UC LEADS Symposium. He received the 2025 Graduate Dean's Leadership Award for his leadership in UC LEADS. Jesus also presented at the 2025 ERN and NCUR Conferences, earning third place in the Undergraduate Poster Presentation, Civil, Mechanical, and Industrial subdiscipline, Technology and Engineering category at ERN. He graduated in spring 2025 and is now a Mechanical Engineering PhD student at UC Merced, supported by a UC LEADS Graduate Student Fellowship.

Mabel Espinoza (Civil Engineering) did her second summer research at UC Berkeley. Her poster, *Social Life Cycle Assessment of Strawberry Production in California*, received an honorable mention at the 2025 UC LEADS Symposium. She plans to graduate in spring 2026.

Rida Mirza (Biology) did her second summer research at UC Davis, cofunded by the UC STRETCH Program. She plans to graduate in spring 2026 and, after a gap year, apply to MD/PhD programs for fall 2027.

Baldemar Motomochi Cedillo (Biology) did their second summer research at UC Berkeley. They graduated in fall 2025 and received the NSF Graduate Research Fellowship. Baldemar is now a Molecular and Cell Biology PhD student at UC Berkeley, supported by a UC LEADS Graduate Student Fellowship.

Aarthika Nagarajan (Chemistry, Biology Emphasis) did her second summer research at UC Irvine. She presented the poster *Synthesis of Carbonic Anhydrase Mimic for Environmental and Therapeutic Applications* at the 2025 UC LEADS Symposium and the 2025 ERN Conference. At ERN, she received first place in the Undergraduate Oral Presentation category for Chemical Sciences. Aarthika graduated in spring 2025 and now works as a Hospital Laboratory Technician at UCLA Health.

Patrick (Eun Sang) Park (Applied Math, Computer Science Emphasis) did his second summer research at UC Irvine. He presented the poster *Equilibrium Surface Coverage for Reversible Adsorption of Dimers on Various Finite Lattice Structures* at the 2025 UC LEADS Symposium and the 2025 JMM. Upon graduating in fall 2025, he received the Outstanding Student Award from the Department of Applied Mathematical Science at UC Merced. Patrick is applying to PhD programs for fall 2026.

Desiree Solis (Cognitive Science) did her second summer research at UC Los Angeles. She presented the poster *Dopamine, Interoception, and Affect* at the 2025 UC LEADS Symposium. Desiree graduated in spring 2025 and is currently seeking work experience and further developing her technical and research skills to apply to graduate programs in Cognitive Neuroscience in the future.

Steven Umbarger (Physics) did his second summer research at UC Santa Cruz. His poster, *Star Clusters in M31: A Multimedia Exploration Using Keck Adaptive Optics, Hubble Space Telescope, and 3D Models*, received top honors at the 2025 UC LEADS Symposium. He also presented at the 2025 Keck Science Meeting and APS Conferences. Upon graduating in spring 2025, Steven received the Outstanding Student Award from the UC Merced School of Natural Sciences' Department of Physics. He is now a PhD student in astronomy at the University of Michigan.

First-Year Scholars

Frances Cardinale (Mechanical Engineering) completed their first summer research at UC Merced and presented the poster *Technology for Entanglement Preserving Photon Switches* at the 2024 UROC Summer Symposium. They plan to graduate in spring 2027.

Katherine Herrera (Cognitive Science) did her first summer research at UC Merced and presented the poster *Eliciting Moral Elevation with a Humanoid Robot* at the 2025 UC LEADS Symposium and the 2025 NCUR. Katherine plans to graduate in fall 2025.

Frances Cardinale (Mechanical Engineering) completed their first summer research at UC Merced and presented the poster *Technology for Entanglement Preserving Photon Switches* at the 2024 UROC Summer Symposium. They plan to graduate in spring 2027.

Katherine Herrera (Cognitive Science) did her first summer research at UC Merced and presented the poster *Eliciting Moral Elevation with a Humanoid Robot* at the 2025 UC LEADS Symposium and the 2025 NCUR. Katherine plans to graduate in fall 2025.

Trizthan Jimenez Delgado (Environmental Systems Science) did her first summer research at UC Merced and presented the poster *Assessing Soil Organic Amendments for Improved Climate Resilience in Rangelands* at the 2024 UROC Summer Symposium. She plans to graduate in spring 2026.

Emily Le (Biological Sciences) did her first summer research at UC Merced and presented the poster *Exploring the Role of Ammonia Assimilating Bacterial Strains in Aiptasia* at the 2025 UC LEADS Symposium. She plans to graduate in spring 2026.

Stephanie Lin (Computer Science and Engineering) did her first summer research at UC Merced and presented the poster *Llama LLM Inference Utilizing HPC for AI Driven Digital Twin* at the 2025 UC LEADS Symposium. She plans to graduate in fall 2025.

Kenzie Nguyen (Cognitive Science) completed her first summer research at UC Merced. Her poster, *Exploring Romantic Preferences in Human-Robot Interaction*, received top honors at the 2025 UC LEADS Symposium. She also presented at the 2025 ERN Conference in STEM, earning second place in the Undergraduate Oral Presentation in Social, Behavioral, and Economic Science category. She plans to graduate in spring 2026.

Anika Potu (Computer Science and Engineering) did her first summer research at UC Merced and presented the poster *Visualizing Agricultural Digital Twin Data* at the 2025 UC LEADS Symposium. She plans to graduate in fall 2025.

Kyra Ruiz (Mechanical Engineering) did her first summer research at UC Merced and presented the poster *Establishing Symbiosis in the Bobtail Squid* at the 2025 UC LEADS Symposium. She also presented at the 2024 American Physical Society Division of Fluid Dynamics Annual Meeting, where she received a student poster award. She plans to graduate in spring 2026.

Sarine Yeghiayan (Physics) did her first summer research at UC Merced and presented the poster *Attempting to Observe the Aharonov - Bohm Effect in a Rubidium Spectroscopy Apparatus* at the 2025 UC LEADS Symposium. She plans to graduate in spring 2026.

Alumni Spotlight

ADRIAN GARCIA

UC LEADS 2010-2012

BS Mechanical Engineering

Since UC LEADS, I've pursued my passion for solving the world's hardest problems. After completing my PhD in Materials Science at UC Irvine (2014-2019), I tackled what I saw as one of the biggest unsolved challenges: spam & fraud across the global telecommunications ecosystem. I founded FynCom to develop an algorithmic solution using refundable economic deposits; Resulting in my first patent & fulfilling a bucket-list dream of becoming a United States inventor. My journey included raising venture capital & joining accelerators like EvoNexus / Berkeley SkyDeck. Now I'm seeking opportunities to collaborate with talented teams pushing the boundaries of technology.

"UC LEADS taught me to turn rejection into opportunity. I was initially rejected from UC LEADS! I asked for reconsideration, met the director & got in. At my poster presentation, a UCI professor transferred my rejected Mechanical Engineering PhD application to Materials Sciences within a week! These lessons shaped my startup journey afterwards. After losing a pitch competition, a judge approached me & became my first advisor. That led to a patent, VC funding, accelerators like EvoNexus & Berkeley SkyDeck. UC LEADS showed me: stay curious, build genuine connections with people solving hard problems, and maintain networks intentionally: success follows."

Campus **Updates**

UC Riverside | Year in Review

In Summer 2024, we welcomed six students into our UC LEADS program. These six students formed part of a larger cohort of summer research participants at UC Riverside; and benefited from networking with 50+ other students. Our first year UC LEADS scholars enjoyed fun group activities including the ropes course, writing workshops, and weekly lectures on topics related to graduate school. Meanwhile, our second year UC LEADS students found placements at UCLA, UCSD, UCSB, and UCSF. Although missed here at UC Riverside, these second-year scholars made us proud by representing our campus at other UC's and conducting impressive research. The summer culminated in an in-person research symposium in which students presented their research in either oral or poster presentations. Mentors and lab mates attended to cheer on our talented developing scientists.

The rest of the academic year included monthly check-in sessions to prepare for the Spring 2025 Symposium. We were immensely proud of second-year scholar Andrew Abdala for being named as a nominee for the Graduate Dean's Leadership Award, second year scholar Nandini Mannem for winning Top Honors in Biological & Health Sciences, and second year scholar Madhurima Kesaraju for winning Honorable Mention in Biological & Health Sciences at the Symposium. We ended the academic year with a "Senior Send-Off" party for our wonderful second-years in Spring 2025.

UC Riverside

Second-Year Scholars

Andrew Abdala (Chemical Engineering) completed his second summer research at UC Santa Barbara. He presented a poster at the 2025 UC LEADS Symposium titled *The Influence of Polyvinylpyrrolidone (PVP) and Temperature on Copper Nanoparticle Sizes through Chemical Reduction Synthesis*. He also exhibited exceptional leadership qualities during his time in UC LEADS and received the 2025 Campus Leadership Award. He graduated in spring 2025 and is currently a Run Engineer at Elementis Global.

Allison Hwang (Electrical Engineering) completed her second summer research at UC San Diego. She presented a poster at the 2025 UC LEADS Symposium titled *Optimizing Transistor Placements via Gradient Descent to Enhance Chip Performance*. She graduated in winter 2025 and is currently an Electrical and Computer Engineering master's of science student at University of Illinois Urbana Champaign.

Madhurima Kesaraju (Cell, Molecular, Developmental Biology) completed her second summer research at UC San Diego. Her poster, *Examining the Importance of NMD for the Oocyte-to-Embryo Transition*, received an honorable mention at the 2025 UC LEADS Symposium. She graduated in fall 2024.

Carolina Loera (Biology) completed her second summer research at UC San Diego. She presented a poster at the 2025 UC LEADS Symposium titled *Asian Elephant Age and Sex Classification Protocol Using Camera Traps*. She graduated in spring 2025 and is currently a Wildlife Biologist for the Texas A&M Natural Resources Institute.

Christian Macaluso (Bioengineering) completed his second summer research at UC Los Angeles. He presented a poster at the 2025 UC LEADS Symposium titled *Designing Physical Models for Pediatric Rehabilitation*. He plans to graduate in spring 2026.

Aurchana Manickavasagan (Biochemistry) completed her second summer research at UC San Francisco. She presented a poster at the 2025 UC LEADS Symposium titled *Investigating the Effects of CRISPR Editing and Repeat Length on C9ORF72 FTD/ALS Pathology*. She plans to graduate in spring 2026.

Nandini Mannem (Neuroscience) completed her second summer research at UC San Francisco. Her poster, *Optimizing Single-Neuron Transcriptomics in Patch-seq*, received top honors at the 2025 UC LEADS Symposium. She plans to graduate in spring 2026.

Garrett Sakomizu (Microbiology) completed his second summer research at UC Los Angeles. He presented a poster at the 2025 UC LEADS Symposium titled *In Vivo and In Vitro development and evaluation of an Intra-arterial Drug Delivery Device*. He graduated in spring 2025

First-Year Scholars

Edward Almaraz (Computer Engineering) completed his first summer research at UC Riverside. He presented a poster at the 2025 UC LEADS Symposium titled *Simplified Memory Layout in Field Programmable Gate Array Clusters*. He plans to graduate in spring 2026.

Karina Chang (Neuroscience) completed her first summer research at UC Riverside. She presented a poster at the 2025 UC LEADS Symposium titled *Structuring a Growth Mindset in Undergraduate Chemistry Curriculum*. She plans to graduate in spring 2026. .

Phiphi Dinh (Bioengineering) completed her first summer research at UC Riverside. She presented a poster at the 2025 UC LEADS Symposium titled *Development of In Vitro Aneurysm Phantoms for the Purpose of Particle Image Velocimetry*. She plans to graduate in spring 2026.

Kaajal Sharma (Neuroscience) completed her first summer research at UC Riverside. She presented a poster at the 2025 UC LEADS Symposium titled *Benefits of Early Life Exercise: Impact on Adult Exercise Motivation and Musculoskeletal Adaptations in Mice*. She plans to graduate in spring 2027.

Bayron Vazquez (Microbiology) completed his first summer research at UC Riverside. He presented a poster at the 2025 UC LEADS Symposium titled *Combatting an Emerging Strain of Fusarium oxysporum Causing Fusarium Wilt Disease of Lettuce*. He plans to graduate in spring 2026.

Sarah Zohary (Environmental Engineering) completed her first summer research at UC Riverside. She presented a poster at the 2025 UC LEADS Symposium titled *Are You Cooking or Being Cooked: Evaluating Ultrafine Particles and Health Implications from Common Cooking Oils*. She plans to graduate in spring 2027.

Alumni Spotlight

QUEENIE LIN

UC LEADS 2021-2023
BS Bioengineering

I graduated with my BS in Bioengineering from UC Riverside in 2023. I am currently pursuing my PhD in Mechanical Engineering at Stanford University, where I am an NSF GRFP, EDGE, and Summer First Fellow. I am concurrently pursuing a MS in Mechanical Engineering with a concentration on Manufacturing and Product Realization. My research focuses on utilizing the mechanical properties of biomaterials for regenerative medicine. Outside of the lab, I am passionate about outreach and equity initiatives and serve as a mentor for the EDGE and Undergraduate STEM Fellowship programs. I am also involved with the Mechanical Engineering Women & Gender Minorities Group, and the Summer First and Stanford SURF Programs.

"As a first-generation college student, I am deeply grateful for the supportive community that UC LEADS provided. The program created an environment where I could grow as a researcher and feel comfortable asking questions. During my time as a UC LEADS scholar, I strengthened my scientific communication skills and explored several subfields within biomedical engineering, which helped me discover my research passion and clarify my future career path. With the guidance and mentorship I received, UC LEADS equipped me with the tools, confidence, and preparation needed to ultimately decide to pursue a PhD."

Campus **Updates**

UC San Diego | Year in Review

During the summer of 2024, scholars conducted research at UC San Diego, participated in graduate school preparation workshops, and built community through cohort activities, including visits to the San Diego Zoo and the beach. Each scholar worked closely with a faculty mentor to gain hands-on research experience and presented their findings at the program's conclusion. A summer luncheon welcoming UC LEADS scholars from across campuses further expanded opportunities for peer connection and professional networking.

Our second-year scholars advanced their academic trajectories through research at UC Irvine, UC Davis, UC Berkeley, and UCSF—institutions recognized for research excellence. Paired with dedicated faculty mentors, they deepened their technical expertise and intellectual independence. Throughout the academic year, the program offered research discussions, professional development sessions, and community-building events that strengthened scholarly identity and belonging.

This year marked a notable milestone: scholars contributed to five peer-reviewed publications, reflecting the high-impact research in which they are engaged. Their growing scholarly presence

was further demonstrated through conference presentations, invited talks, and leadership roles, including mentoring peers and serving in executive positions within student organizations. Many also secured competitive awards, fellowships, and scholarships supporting their graduate and long-term research goals.

Mentorship was further strengthened with the addition of a second graduate student mentor. Quetzal Flores-Ramirez and Concepcion Sanchez enhanced the quality of support and training available to scholars, playing a vital role in their continued growth and success.

At the UCLA UC LEADS Symposium, scholars once again distinguished themselves. Four earned top honors in their disciplines, while another received honorable mention and the campus leadership award—recognition that underscores the cohort's academic excellence and leadership across the UC system.

UC San Diego

Second-Year Scholars

Anetzy Bermudez Torales (Biochemistry) did her second summer research at UC Davis. She graduated in summer 2024.

Michelle Gomez (Cognitive Psychology) did her second summer research at UC Irvine. She presented a poster at the 2025 UC LEADS Symposium titled *Expressive Syntactic Deficits in MCI and Dementia.* She plans to graduate in Spring 2025**.**

Runpeng Jian (Computer Science) did his second summer research at UC San Diego. He graduated in summer 2024 and is currently a Computer Science master's of science student at UC San Diego.

Anna Nguyen (Mechanical Engineering) did her second summer research at UC San Francisco. Her poster, *Color Coding Light's Twisting Via Nanotechnology to Differentiate Chiral Orientations*, received an honorable mention at the 2025 UC LEADS Symposium. She also exhibited exceptional leadership qualities during her time in UC LEADS and received the 2025 Campus Leadership Awards. She graduated in spring 2025 and is currently a mechanical engineering master's of science student at UC San Diego.

Tin Nguyen (Cell and Molecular Biology) did his second summer research at UC San Diego. His poster *Enhancing Multiagent Robotic Systems with Game Theory and Safety Frameworks*, received top honors at the 2025 UC LEADS Symposium. He plans to graduate in summer of 2025.

Julian Ramirez (Mechanical Engineering) did his second summer research at UC Berkeley. He graduated in Spring 2025 and is currently a PhD student in Nuclear Engineering at UC Berkeley.

Edwin Ruiz (Neuroscience) did his second summer research at UC San Diego. He plans to graduate in Spring 2026.

Marissa Todesco (Neuroscience) did her second summer research at UC San Francisco. Her poster, titled *Persistent Auditory-Motor Projections May Enable Lifelong Vocal Flexibility in European Starlings*, received top honors at the 2025 UC LEADS Symposium. She plans to graduate in Spring 2026.

First-Year Scholars

Thomas Frisch (Biochemistry) did his first summer research at UC San Diego. His poster, *Rethinking Polyurethane Dogma for Fully Renewable and Biodegradable Foams*, received top honors at the 2025 UC LEADS Symposium. He plans to graduate spring 2026.

Edrian Kabiling (Chemical Engineering) did his first summer research at UC San Diego. He presented a poster at the 2025 UC LEADS Symposium titled *Optimizing the Performance of High-Capacity Layered Lithium-Manganese Oxides*. He plans to graduate spring 2026.

Patrick Joseph Smith (Microbiology) did his first summer research at UC San Diego. His poster, *Leveraging Nanotechnology, Including Plant-Polymer Biohybrids and Plant Virus-based Nanoparticles*, for Precision Agriculture, received top honors at the 2025 UC LEADS Symposium. He graduated spring 2025 and is currently a Microbiology master's in science student at UC San Diego.

Xinyi Zhang (Biology with specialization in bioinformatics) did her first summer researc-h at UC San Diego. She presented a poster at the 2025 UC LEADS Symposium titled *Epigenetic Regulators of Dynamic Transcriptional Response*. She plans to graduate spring 2026.

Patrick Joseph Smith (Microbiology) did his first summer research at UC San Diego. His poster, *Leveraging Nanotechnology, Including Plant-Polymer Biohybrids and Plant Virus-based Nanoparticles*, for Precision Agriculture, received top honors at the 2025 UC LEADS Symposium. He graduated spring 2025 and is currently a Microbiology master's in science student at UC San Diego.

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Alumni Spotlight

CINDY KHUU

UC LEADS 2014-2016
BS Molecular Biology

Cindy Khuu received her BS in Molecular Biology from UC San Diego, before going on to pursue a PhD at UC Davis. She had the opportunity to be on the other side of UC LEADS— supporting scholars through their undergraduate journeys. While it was limited by the pandemic, it was incredibly rewarding for her to give back to UC LEADS and support scholars in their pursuit of higher education. After graduating with her PhD in Biochemistry, Molecular, Cellular, and Developmental Biology with a Designated Emphasis in Biotechnology, she joined Cytokinetics in their Regulatory Affairs department, where she now supports clinical development. When possible, she still enjoys attending UC LEADS symposiums, hearing about the latest research from current scholars, and sharing her journey to her current role.

"My time as a UC LEADS scholar was instrumental in developing my collaboration and communication skills. Presenting my research and engaging with scholars across disciplines at academic conferences helped me develop communication skills. These skills taught me to articulate complex problems in ways that are accessible to a broad range of audiences. I refined these skills through consistent exposure and numerous opportunities provided by UC LEADS, which I now rely on to work effectively with various teams in my current role."

Campus **Updates**

UC Santa Barbara | Year in Review

The UC LEADS program at UC Santa Barbara had a landmark year, kicking off Summer 2024 by welcoming its largest cohort yet. The group was composed of seven exceptional first-year UCSB Scholars, including two incoming transfer students who immediately integrated into their new campus home. We also had the privilege of hosting three visiting scholars from UC Merced, UC Riverside, and UC Irvine, enriching our program with diverse perspectives from across the UC system.

Our summer immersion was intentionally structured, featuring a blend of crucial academic training and professional development workshops. Scholars also received one-on-one coaching from a writing specialist. The students concluded their summer research by presenting their findings during both the 2024 Academic Research Consortium Symposium and the CSEP 2024 Research Colloquium. We consciously fostered a broader research community across campus programs, including organizing several events and networking opportunities. A special highlight in 2024 was

an inspiring guest lecture from Dr. Frank Harris of San Diego State University, who captivated our students by speaking about the invaluable contributions of scholars from diverse backgrounds.

Moving into the 2024–2025 academic year, our commitment to scholar success continued. We enhanced program access and built a stronger, more unified cohort through new twice-weekly office hours, contributing significantly to greater cohesiveness. Beyond UCSB, our students were busy taking their curiosity and research on the road: they attended and presented at major events, including the Fall 2024 SACNAS conference in Phoenix and the California Forum for Diversity in Graduate Education at UC Riverside. They also regularly presented their work at professional conferences in their specific fields and various campus-based research showcases. Finally, our commitment to community extended beyond the current cohort, as we continue to deepen our relationship with our UC LEADS alumni, welcoming them for an annual dinner and engaging them directly in outreach and mentorship opportunities to support the next generation of scholars.

UC Santa Barbara

Second-Year Scholars

Janae Gayle (Pharmacology) did her second summer research at UC San Francisco. She presented a poster at the 2025 UC LEADS Symposium titled *Creating a Dose Curve Observing Sarcomere Remodeling Through Heart Failure Medications: Omecamtiv Mecarbil*. She graduated in summer 2025.

Jordan Brower (Chemistry) did her second summer research at UC San Diego. Her poster, *Modulated Activation of CS2 with the Trityl (Triphenylmethane) Substituent*, received top honors at the 2025 UC LEADS Symposium. She graduated in spring 2025 and is currently a Research Associate at OliX US.

Allison (Rosie) Manner (Zoology) did her second summer research at UC Davis in collaboration with Lassen Volcanic National Park and the National Park Service. She presented a poster at the 2025 UC LEADS Symposium titled *Impact of Prescribed Burns on Wildlife at Dangermond Preserve*. She also exhibited exceptional leadership qualities during her time in UC LEADS and received the 2025 Graduate Deans' Leadership Award. She graduated in spring 2025.

Katelyn (Kate) Saxen (Physics) completed her second summer of research at UC Los Angeles under Professor Pradip Gatkine, contributing to the development of a signal-to-noise ratio estimation code for transiting exoplanets that was published in the SPIE Digital Library. She presented a poster titled *Phase-Locking for Directed Energy Systems* at the 2025 UC LEADS Symposium. She graduated in Summer 2025 and is currently a lab assistant in UCSB's Experimental Cosmology Lab under the direction of Philip Lubin, with plans to apply to master's and PhD programs in Fall 2026.

First-Year Scholars

Lana Azar (CCS Computer Science & Mathematics) did her first summer research at UC Santa Barbara. She presented a poster at the 2025 UC LEADS Symposium titled *Security Proof of a Proposed Quantum One-Time Signature Scheme*. She plans to graduate in spring 2026

Harleen Dhanda (Psych & Brain Sciences) did her first summer research at UC Santa Barbara. She presented a poster at the 2025 UC LEADS Symposium titled *Contextual Racial Presentation*. She plans to graduate in spring 2026.

John Fan (Cellular & Development Biology) did his first summer research at UC Santa Barbara. He presented a poster at the 2025 UC LEADS Symposium titled *Naturally cycling estradiol modulates hippocampal navigation in mice*. He plans to graduate in spring 2026, followed by pursuing a Ph.D. in Neuroscience to continue his studies of sex differences.

Krish Jain (Pre-Data Science) did his first summer research at UC Santa Barbara. He presented a poster at the 2025 UC LEADS Symposium titled *Targeted Edge Perturbations on GNNs: Exploring Greedy, Heuristic, and Gradient-Driven Approaches*. He plans to graduate in spring 2026

Maya Kang-Chou (Physics) did her first summer research at UC Santa Barbara. Her poster, *Fractional Quantum Anomalous Hall Effect in tMote2*, received an honorable mention at the 2025 UC LEADS Symposium. She plans to graduate in spring 2026.

Natalie Pham (Biological Sciences) did her first summer research at UC Santa Barbara. She presented a poster at the 2025 UC LEADS Symposium titled *Data-Driven AI Models for the Dynamics of Infectious Diseases*. She plans to graduate in spring 2026 and pursue a PhD at the interface of computational biology and genetics.

Magnolia Saur (Electrical Engineering) did her first summer research at UC Santa Barbara. She presented a poster at the 2025 UC LEADS Symposium titled *Systemic Evaluation of Neural Extraction Techniques for Visual Protheses*. She plans to graduate in spring 2026 and intends to pursue a master's degree in the field of electrical engineering.

Alumni Spotlight

RICARDO ESPINOSA LIMA

UC LEADS 2020-22
BA Biology

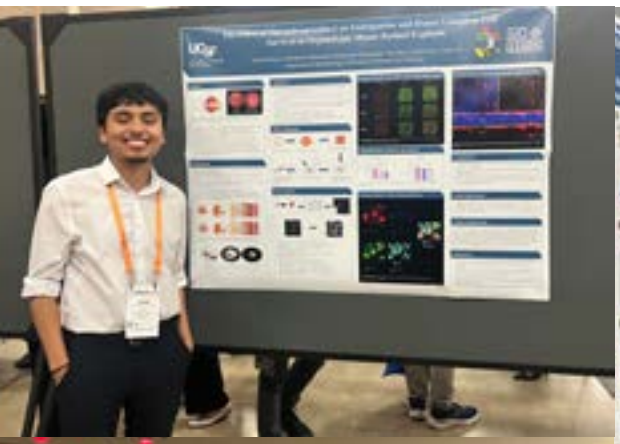
Ricardo earned his bachelor's degree in biology from the College of Creative Studies (CCS) at UC Santa Barbara. As part of the UC LEADS fellowship, Ricardo worked in Dr. Angela Pitenis's lab and used hydrogel-based technologies to investigate microenvironment stiffening in pancreatic cancer progression. During the second summer of the fellowship, Ricardo worked under the supervision of Dr. Song Li at UCLA, where he used polystyrene microparticles and protein-linking chemistry to create a synthetic environment for the molecular SynNotch system. Inspired by his experiences in molecular and tissue engineering, Ricardo continued his education at UCSF's Developmental and Stem Cell Biology PhD program. Currently, he works under the supervision of Dr. Aparna Lakkaraju, where he has used advanced bioinformatic pipelines and developed novel in vitro models to interrogate vision loss driven by aberrant mechanotransduction in macular degeneration. Ricardo's efforts throughout his graduate and undergraduate careers have contributed to peer-reviewed publications in the areas of bioengineering and molecular therapeutics.

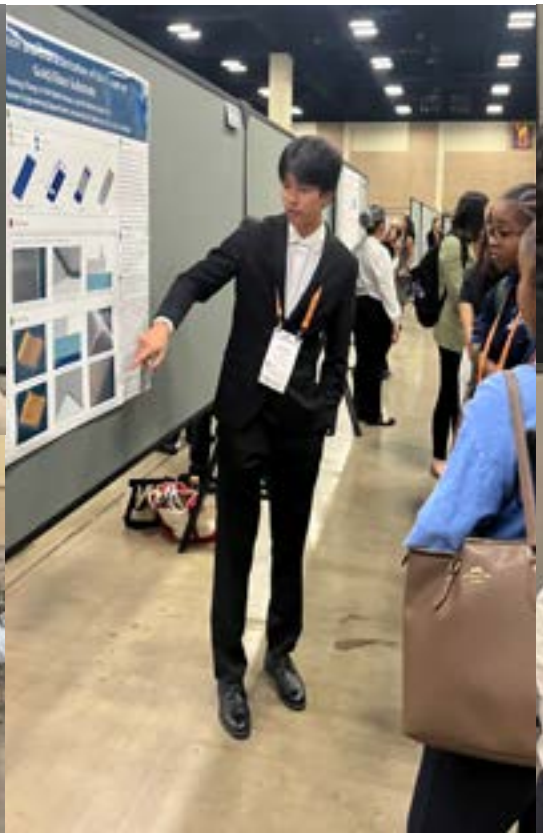
"UC LEADS has allowed me to connect with other scientists and mentors at other campuses. I maintain close connections with former mentors and lab mates at UCSB and UCLA, who continue to offer advice and support throughout my graduate education. They have helped me navigate graduate school and offered career advice, which is extremely useful for a first-generation scholar."

Campus **Updates**

UC Santa Cruz | Year in Review

Our UC LEADS cohort had another dynamic eight-week summer research program experience. We hosted professional development workshops, book club, ethics training, writing lectures and sessions, faculty research seminars, and social community-building events. Scholars also benefited from outside speakers and career panels, along with large community events that fostered connection both outdoors and indoors. Our first-year scholars completed an intensive, eight-week, full-time summer research training, including 12 hours of research ethics and 15 hours of professional development. All scholars participated in the end-of-summer poster symposium showcasing their research.





During the academic year of 2024-2025, all scholars participated in quarterly check-ins with program coordinators and met quarterly for cohort check-ins with Dr. Upasna, and engaged in professional development workshops throughout the year. During Fall 2024, nine scholars attended SACNAS and all participated in the UC LEADS Statewide Symposium. One UC LEADS scholar graduated in Winter 2024 and four graduated in Spring 2025. Of our five second-year UC LEADS scholars, Yesenia Puga became a Retention Specialist at the College of San Mateo, Brian Lee accepted an M.S. in Biological Science at Cal State Los Angeles, Camila Martinez accepted an M.S. in Physics at Ohio State University, Ashai Moreno accepted a Ph.D. in Optics at Delaware State University, and Elizabeth Wang accepted a Ph.D. in Biosciences at the University of California, Los Angeles and is a recipient of the UC LEADS Graduate Fellowship.

UC Santa Cruz

Second-Year Scholars

Brian Le (Neuroscience) did his second summer research at UC Santa Cruz. He presented a poster at the 2025 UC LEADS Symposium titled *Using in vivo imaging to study dendritic spine dynamics*. He graduated in spring 2025 and is currently a Biology master's in science student at Cal State University Los Angeles.

Camila Martinez (Astrophysics) did her second summer research at UC San Diego. She presented a poster at the 2025 UC LEADS Symposium titled *Determining Atmospheric Parameters in A-type Stars via Forward Modeling Techniques*. She graduated in spring 2025 and is currently a Physics PhD student at Ohio State University.

Ashai Moreno (Astrophysics) did his second summer research at UC San Diego. He presented a poster at the 2025 UC LEADS Symposium titled *Implementation and Characterization of Infrared Light on the SEAL Testbed*. He graduated in spring 2025 and is currently a Optics/Optical Science PhD student at Delaware State University.

Elizabeth Wang (Molecular, Cell & Developmental Biology) did her second summer research at UC Santa Cruz. She presented a poster at the 2025 UC LEADS Symposium titled *Characterizing the splicing efficiency of the Saccharomyces cerevisiae RPL8B gene*. She graduated in spring 2025 and is currently a Molecular Biology PhD student at UC Los Angeles.

First-Year Scholars

Julia Hernandez (Environmental Sciences) did her first summer research at UC Santa Cruz. She presented a poster at the 2025 UC LEADS Symposium titled *To Till or Not to Till: Can Layering Soil Health Practices Lead to Successful Implementation of No-Till in Organic Systems?* She plans to graduate in spring 2026.

Yesenia Puga (Computer Engineering) did her first summer research at UC Santa Cruz. She presented a poster at the 2025 UC LEADS Symposium titled *Implementing a Fine Tuning Feature in Bell Jar: A Tool for Neurohistological Image Analysis*. She graduated winter 2025 and is currently a MESA Retention Specialist at College of San Mateo.

Anthony Reyna (Computer Science) did his first summer research at Carnegie Mellon Internship. He presented a poster at the 2025 UC LEADS Symposium titled *Decoding Visual Language: Exploring the Structure of Token-Based Image Representations in Computer Vision Models*. He plans to graduate in spring 2026.

Ambrosio Rivera (Ecology and Evolution) did their first summer research at UC Santa Cruz. Their poster, *Population Dependent Aggression in CichlidsA*, received an honorable mention at the 2025 UC LEADS Symposium. They plan to graduate spring 2026.

Yeison Samayoa (Biochemistry and Molecular Biology) did his first summer research at UC Santa Cruz. He presented a poster at the 2025 UC LEADS Symposium titled *KZNF 534/90s Role in Transposable Element Regulation in Naïve and Primed State Pluripotency*. He also exhibited exceptional leadership qualities during his time in UC LEADS and received the 2025 Campus Leadership Awards. He graduated fall 2025

Dalong Zhang (Electrical Engineering) did his first summer research at UC Santa Cruz. He presented a poster at the 2025 UC LEADS Symposium titled *Electrochemical Biosensing Chips for Scalable Lab-on-a-Chip Applications*. He plans to graduate fall 2027

Alumni Spotlight

ELEKTRA ROBINSON

UC LEADS 2012-2014

BS Biochemistry and Molecular Biology

Since my time as a UC LEADS scholar, I have continued building a career rooted in scientific discovery, mentorship, and education. I completed my PhD in Molecular, Cellular, and Developmental Biology at UC Santa Cruz in Susan Carpenter's lab, where I studied innate immunity and non-coding RNA while mentoring undergraduate researchers. I am currently a postdoctoral fellow at Stanford University in the Department of Microbiology and Immunology in Justin Sonnenburg's lab, where my work focuses on host-microbe interactions, inflammation, and microbially derived metabolites. Alongside research, I have remained deeply committed to teaching through guest lecturing, outreach, and mentoring, and I am now actively preparing for a career that integrates both science and student-centered education.

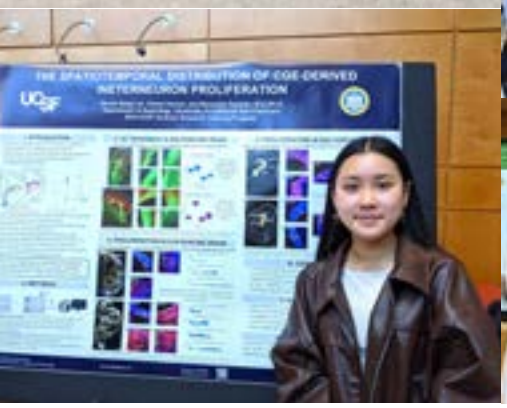
"Through UC LEADS, I made formative connections to research environments beyond my home institution, including working in a lab at UCLA. That experience broadened how I thought about science and helped me identify new areas that excited me, including in vitro cell culture systems, which remain central to my research today. UC LEADS also connected me to mentors and resources that demystified graduate school, from preparing for the GRE to navigating the application process. Attending a research conference through the program further expanded my perspective and reinforced my love for sharing science and learning from others.

Campus **Updates**

UC San Francisco | Year in Review

In the summer of 2024, UCSF welcomed ten UC LEADS scholars from five UC campuses as part of a diverse cohort of 54 students from across the nation participating in our Summer Research Training Program. Over the course of 8 to 10 weeks, these students engaged in a range of activities designed to enhance their skills as scientists and their understanding of how their personal and professional identities align.

All students participated in weekly professional development, weekly meetings with their graduate student advisors, presented an oral and poster presentation at the culminating 3-day symposium, and social community-building activities such as visits to local museums and major San Francisco landmarks.



Alumni Spotlight

SALMAN BANANI

UC LEADS 2006-2008
BS Chemical Biology

After graduating from UC Berkeley and completing the UCSF LEADS program, I entered the Medical Scientist Training Program at the University of Texas Southwestern Medical Center, where I pursued my graduate training in Molecular Biophysics. I subsequently completed residency training in Clinical Pathology at the Brigham and Women's Hospital, followed by postdoctoral research at the Whitehead Institute for Biomedical Research. I am now a faculty member at the University of Chicago, where my laboratory investigates the mechanisms of cellular resilience in the context of human disease and biological adaptation.

As a UC LEADS Scholar, I had the privilege of training in the laboratory of Dr. Warner Greene at the Gladstone Institutes. Dr. Greene has been an important role model throughout my career. Dr. Greene trained as a physician-scientist, and he inspired me to pursue a career that combines scientific curiosity and discovery with a desire to make an impact on human health and well-being. Working in this phenomenal research environment was transformative for me. His leadership and mentorship profoundly shaped my career trajectory and solidified my commitment to the physician-scientist path.

UC San Francisco

Second-Year Scholars

John Arriola is a UC LEADS Scholar at the UC Irvine. He conducted research in Brian Freely's laboratory on a project titled *Investigating Rotator Cuff Tissue Pathology: A Survey of Available Murine Model Systems*.

Adriann Josef Brodeth is a UC LEADS Scholar at the UC Los Angeles. He conducted research in Seth Shipman's laboratory on a project titled *Developing RetroDecoys for Transcriptional Regulation in Human Cells*.

Faith Enriquez is a UC LEADS Scholar at UC Irvine. She conducted research in Susan Lynch's laboratory on a project titled *Mapping Intergenerational Microbial Transmission with Significantly Different Rates of Allergy and Asthma in Mexican Americans*.

Andres Gabagat is a UC LEADS Scholar at the UC Berkeley. He conducted research in Joe Bondy-Denomy's laboratory on a project titled *Examining Pseudomonas aeruginosa Defense Systems Against a Broad Host-Range Lytic Phage Family*.

Nicole Lav is a UC LEADS Scholar at UC Irvine. She conducted research in Mercedes Paredes' laboratory on a project titled *The Spatiotemporal Distribution of CGE-Derived Interneuron Proliferation*.

Aurchana Manickavasagan is a UC LEADS Scholar at UC Riverside. She conducted research in Claire Clelland's laboratory on a project titled *Investigating the Effects of CRISPR Editing and Repeat Length on C9ORF72 FTD/ALS Pathology*.

Nandini Mannem is a UC LEADS Scholar at UC Riverside. She conducted research in Cathryn Cadwell's laboratory on a project titled *Optimizing Single-Neuron Transcriptomics in Patch-seq*.

Anna My Nguyen is a UC LEADS Scholar at UC San Diego. She conducted research in Matt Spitzer's laboratory on a project titled *Artificial Placenta: Improving Production and Hemocompatibility of Silicon Membranes*.

Marissa Todesco is a UC LEADS Scholar at UC San Diego. She conducted research in Edward Chang's laboratory on a project titled *Linking Pre-Stimulus Neural States to Perceptual Accuracy*.

Daniel Torres Pomares is a UC LEADS Scholar at UC Los Angeles. He conducted research in Adam Renslo's laboratory on a project titled *Optimization of Highly Effective Irreversible Covalent SARS-CoV-2 MPro Inhibitors*.

2024-25 UC LEADS Executive Steering Committee

The UC LEADS Executive Steering Committee guides the policies, procedures, best practices and direction of the program on a UC-systemwide level. It includes the following members:

Dr. Jean-Pierre Delplanque
Executive Steering Committee Chair
Vice Provost and Dean of Graduate Studies
UC DAVIS

Michele Johnson
UC LEADS Systemwide Director
UC SANTA BARBARA

The UC LEADS Systemwide Office is currently housed within the Graduate Division at UC Santa Barbara, and is supported by the Graduate Studies office at the University Office of the President.

NORTHERN CALIFORNIA

Dr. Alexei Filippenko
Faculty Representative
UC BERKELEY

Yuliana Ortega
UC LEADS
Staff Representative
UC SANTA CRUZ

SOUTHERN CALIFORNIA

Dr. Huinan Liu
Faculty Representative
UC RIVERSIDE

Karen van Gool
Staff Representative
UC SANTA BARBARA

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UC Los Angeles	Dr. David Gray and RaShawna Williams **sciences.ugresearch.ucla.edu/programs-and-scholarships/uc-leads**
UC Merced	Valerie Anderson and Diana Hernandez Garcia **uroc.ucmerced.edu/uc-leads**
UC Riverside	Dr. Laura McGeehan, Karla Bonilla and Nicholas Hall **apro.ucr.edu/undergrad/uc-leads**
UC San Diego	Edgar Beas and Steffi Schultz **grad.ucsd.edu/oar2/oar2office/programs/undergraduate-programs/uc-leads**
UC San Francisco	Yvonne Garcia **graduate.ucsf.edu**
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UC Santa Cruz	Yulianna Ortega and Dr. Steven Panigua **stemdiv.ucsc.edu**
Statewide	Michele Johnson UC LEADS Systemwide Director **ucleads.ucop.edu**