UCLA Graduate Programs in Bioscience

Equity | Inclusion | Community | Excellence

Website: bioscience.ucla.edu

Fall 2023

Graduate Programs in Bioscience

Graduate Programs in Bioscience is a consortium of 11 Home Areas and their affiliated Ph.D. programs, organized to provide the best possible research training and professional development for graduate students pursuing PhDs in the life and biomedical sciences. Students are offered the flexibility to pursue their interests across the wide range of bioscience fields. At the same time, they benefit from individually tailored education in smaller training communities, defined by today's research themes, not traditional departments.

Home Areas

- Biochemistry, Biophysics & <u>Structural Biology</u>
- **Bioinformatics**
- <u>Cell & Developmental Biology</u>
- <u>Gene Regulation, Epigenomics &</u> <u>Transcriptomics</u>
- Genetics & Genomics
- Immunity, Microbes & Molecular
 Pathogenesis
- Medical Informatics
- Molecular, Cellular & Integrative
 Physiology
- <u>Molecular Pharmacology</u>
- <u>Neuroscience</u>
- Physics & Biology in Medicine
- The GRE is optional for all home areas

Connect with us:

Eugene Cota-Robles Fellowship Recipients

UCLA Graduate Programs in Bioscience is committed to diversity and inclusion. Our commitment is central to cultivating a community that nurtures creativity and intellectual curiosity. In this edition of our newsletter, we proudly celebrate students who received the prestigious Eugene V. Cota-Robles Fellowship. These students recently completed their first year of training and are shining examples of the diverse talent in the UCLA bioscience community.

Martín Alcaraz Jr. (he/him/his)

UCLA Home Area: Gene Regulation, Epigenomics & Transcriptomics (GREAT)

Undergraduate Institution: Stanford University Research Programs: ACS Project SEED

Martín's interest in bioscience research started as a high school student, when he participated in the ACS Project SEED Program. He then participated in research programs at Stanford University, the Yale Can-



cer Biology Institute, and as an intern at Genentech, Inc. His intern experience led to an award-winning poster and encouraged Martín to continue his research and pursue a PhD. Born and raised in East Los Angeles, Martín was eager to return to his home city and be a part of a diverse and inclusive graduate program that provided the academic support needed to reach his goal of becoming a cancer researcher. One of Martín's first year highlights is his home area director who shares a Latino identity with him and has been attentive and helpful in many aspects of his life, including choosing a lab and navigating rotations. He looks forward to gathering preliminary data in Dr. Claudio Scafoglio's lab and solidifying his thesis project.



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Fall 2023 **Enrollment Facts**

- Total enrollment: 70
- California residents: 46 (66%)
- Out-of-State students: 18 (26%)
- International students: 6 (9%)
- From underrepresented backgrounds: 24 (34%)
- First-generation: 23 (33%)

Connect with us:

Christian Bustillos (he/him/his)

UCLA Home Area: Immunity, Microbes, and Molecular Pathogenesis (IMMP) Undergraduate Institution: California Lutheran University

Research Programs: McNair Scholars Program Christian began his academic journey as a McNair scholar at California Lutheran University. Then he transitioned to the Master's program at the Keck



Graduate Institute/Irell & Manella Graduate School at City of Hope, where he worked on the generation of natural killer cells. This project culminated in the publication titled "The Generation of Human Natural Killer Cells from CD34+ HPCs." Christian decided to come to UCLA for his PhD because of the great people and environment he saw here. His first year classes and Molecular Biology Institute seminars have helped create a network of friends and older colleagues who can help support and guide him. He looks forward to identifying his thesis project and finding his own space in research while working in Dr. Maureen Su's lab.

Nalani Coleman (she/her/hers)

UCLA Home Area: Cell and Developmental Biology (CDB)

Undergraduate Institution: San Diego State Uni-

Research Programs: NIH MARC, NSF LSAMP/ CAMP

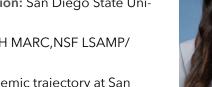
Nalani started her academic trajectory at San Diego State University where she conducted in-

dependent research in Dr. Christal Sohl's lab. She was the first in her lab to use the program Cytoscape to make visualizations of connections between data sets. Her project, titled "Visualizing metabolites in cellular models of IDH1-driven gliomas using Cytoscape," helped her learn what doctoral research might be like. This experience led to Nalani's first publication, "Capturing the Dynamic Conformational Changes of Human Isocitrate Dehydrogenase 1 (IDH1) upon Ligand and Metal Binding Using Hydrogen-Deuterium Exchange Mass Spectrometry." Nalani chose UCLA because of the availability of research opportunities and because of the connections she made during her current program's Admit Day. She has benefitted from the support of her family, friends, Home Area director, cohort mates, and the Office of Graduate Programs in Bioscience during her first year. Nalani is looking forward to taking a deeper dive into her research as part of Dr. Steven Dubinett's lab.

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Nicolas Coral (he/him/his)

UCLA Home Area: Biochemistry, Biophysics, and Structural Biology (BBSB)

Undergraduate Institution: Texas State University Research Program: NIH MBRS RISE

Nicolas began as an undergraduate researcher in Prof. Ryan Peterson's research group. As one of the first members of the lab, Nicolas took full ownership of his research project in synthetic biology titled "Harnessing Bacteria to Identify Polystyrene Microplastics". The

presence of highly regarded structural biologists and strong DEI initiatives attracted Nicolas to UCLA for graduate school. During his first year at UCLA, Nicolas benefitted from the support of his Home Area Director Prof. Feng Guo. Additionally, he was fortunate to be a part of the Competitive Edge program and Grad STRIVE 2.0 program, which provided a broad range of helpful workshops and valuable peer mentoring opportunities. One of the highlights of Nicolas' first year has been learning cryo-electron microscopy despite not having prior experience in structural biology. As Nicolas begins his second year of graduate school, he is most looking forward to starting his current project titled, "Structure determination of Mammalian reovirus assembly intermediates using cryoEM" in Prof. Hong Zhou's research group and living in the Sawtelle area with his girlfriend.



Shania Day (she/her/hers)

UCLA Home Area: Immunity, Microbes, and Molecular Pathogenesis (IMMP) Undergraduate Institution: UC Irvine Research Programs: NIH MARC, NIH IMSD Shania's undergraduate research experience at UC Irvine with the Minority Science Program (MSP) helped put her on the current research path she is on today. She conducted independent research with Professor Naomi Morrisette, working on a database of mutations, post-translational modifications and struc-

tural features of tubulins. Afterward, she transitioned to the wet lab where she helped analyze candidate parasite-selective tubulin-targeting agents for inhibition of human protozoan parasites. She presented her work at the AAAS Annual Meeting, ABRCMs, UCI MSP Symposium, and won a poster presentation award at the Sigma Xi Annual Meeting. This research also resulted in coauthorship on a publication, "Systematic Analysis of Clemastine, a Candidate Apicomplexan Parasite-Selective Tubulin-Targeting Agent." The abundance of research opportunities and the collaborative scientific community attracted Shania to apply to UCLA. As a Eugene V. Cota-Robles and Summer Mentored Research Fellowship awardee, Shania is excited to focus on her research project studying the characterization of sortase-associated factors in pilus assembly and membrane homeostasis in the oral pathogen *C. Diphtheriae*.

Bioscience PhD Facts

Research Excellence

UCLA is among the nation's top recipients of research funding (over \$1.7 Billion awarded in 2021-2022).

Opportunity

Over 400 members of the basic science and clinical faculty are potential mentors to students in the program.

Flexibility

Students can rotate with any Bioscience faculty member, provided one rotation is in their Home Area, and they can change Home Areas if evolving research interests dictate.

Support

All incoming PhD students receive full financial support during the course of their study, including a living allowance (\$40,651 in 2023-2024), all tuition and fees, and student health insurance.

Training Opportunities

Grad School Hacks

Workshops provide incoming students with strategies for effectively integrating into PhD programs and labs, as well as a space for sharing experiences with

Leadership Training Program

peers and building community.

This series of interactive workshops is designed to help trainees thrive in a research environment, deal with conflicts, and be effective team members and leaders.

Mentorship Training

Mentorship, leadership, and diversity sensitivity training for graduate students and post-doctoral trainees.

Scientific Excellence Through Diversity

A student-run seminar series for outside speakers that celebrates diversity in the scientific ecosystem.

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Undergraduate Summer Research

Superior Opportunities for Maximizing Access (SOMA) to Neuroscience Program supports a deeper Hispanic/LatinX participation in neuroscience, and ultimately the pursuit of a neuroscience doctoral degree. Interested students from our four partner Hispanic-Serving Institutions (CSU Long Beach, CSU Los Angeles, CSU Dominguez Hills, and CSU San Bernardino) should apply for this 8-week summer immersive, in-person experience at UCLA to do research in a host laboratory.

Applications due: mid-December, 2023 https://bri.ucla.edu/undergraduate-summer-research-programs/uc-hsi-soma-sum-<u>mer/</u> Contact: profizquierdobns@gmail.com

Brain Research Institute Summer Undergraduate Research Experience (BRI-SURE) program is for students currently attending a HBCU or participating in MARC research programs. BRI SURE is an 8 to 10week summer research training program for students interested in pursuing research careers in Neuroscience or Physiology. The program is designed to provide in-depth research experience to prepare participants for Ph.D. and M.D./Ph.D. graduate programs.

Applications due: starting Dec. 15, 2023 bri.ucla.edu/outreach/bri-sure-summer/ Contact: brisure@ucla.edu

Bruins-In-Genomics (B.I.G.) Summer Research Program is an 8-week immersion program for undergraduates interested in learning how to read and analyze genes and genomes. Students will have the opportunity to experience graduate-level coursework, and learn the latest cuttingedge research, tools and methods.

Rolling admissions: first application review start on Jan 3 https://qcb.ucla.edu/big-summer/ Contact: <u>BIGSummer@ucla.edu</u>

Jade Fachin (she/her/hers)

UCLA Home Area: Molecular, Cellular & Integrative Physiology (MCIP)

Undergraduate Institution: UC Merced

Jade achieved her Master's degree at UCLA in Dr. Rachelle Crosbie's lab, completing the project titled "The Effects of a Myocardial Hydrogel on Duchenne Muscular Dystrophy-Associated Cardiomyopathy." This experience solidified her desire to continue her graduate studies at UCLA. She was interested in the MCIP graduate program because



of the financial and mentoring support it offers. In her first year, the Competitive Edge program and her mentor from Grad STRIVE 2.0 helped set her up for success. She is grateful for the people she has met during her rotations, and all the volunteering and extracurricular activities available at UCLA. She looks forward to being a part of Dr. Xia Yang's lab and learning about genetics, computational biology, and scientific communication in the coming years.

Maris Kamalu (she/her/hers)

UCLA Home Area: Genetics and Genomics Undergraduate Institution: Pomona College Research Programs: NSF Summer REU, IRACDA SURF

After her freshman year at Pomona College, Maris worked in Samuel I. Miller's lab at the University of Washington Genome Sciences Summer REU where she learned the importance of developing a unique scientific identity. Carrying this value throughout her scientific career, Maris chose UCLA



because of the possibility of conducting translational research, and she became interested in developing research tools for this field during her first year. Thanks to the large selection of faculty, freedom, and time to explore options, she is able to do the work she enjoys. The Grad School Hacks workshops and her home area cohort encouraged her throughout her first year. She was excited to choose Steven Jacobsen's lab where she will be engineering TnpBs, compact programmable RNA-guided nucleases, to improve their genome editing efficiency in plants.

Student Groups

Graduate Programs in Biosciences proudly supports our student organizations:



AMEBA: The Association for Multi-Ethnic Bioscientists' Advancement, AMEBA, is a graduate student group sponsored by Graduate Programs in Bioscience and Life Sciences at UCLA. The goal of AMEBA is to create an equitable environment to promote the advancement and retention

of graduate trainees across GPB and Life Sciences. They aim to provide members with skills and experiences, they seek to build a community, and they work to promote diversity in the sciences via academic development, professional development, outreach, and wellness.

BSIB: Black Scholars in Bioscience (BSiB) aims to provide a safe, supportive space for members of the Black UCLA STEM collective. Their goal is to enhance the professional success of Black Bioscientists by promoting connection, collaboration, and community among graduate students, postdocs, and faculty.





SACNAS at UCLA: Society for the Advancement of Chicanos & Native Americans in Science, SACNAS, is dedicated to increasing the numbers of underrepresented students in higher education and in science. This group is open to undergraduates, graduate students, transfer students, community college students,

post-docs, faculty and staff who share a common concern about equal access to education, who have interest in outreach, and/or are in need of opportunities in academic leadership and participation.

Fee Waivers

Waivers of the application fee are available for applicants who participate(d) in eligible research programs or demonstrate financial need as described here: <u>https://grad.ucla.edu/</u> admissions/research-requirements/

Fellowship Application Support & Incentive Program

Writing workshops and a library of successful proposals are some of the support services available to bioscience students. About 20% of students hold prestigious individual merit-based fellowships each year from programs such as the NIH National Research Service Award, the NSF Graduate Research Fellowship, and the HHMI Gilliam Fellowship or are appointed to federally funded training grants. As an incentive to encourage students to seek extramural fellowships, GPB offers an annual \$3500 stipend bonus to Ph.D. students who have successfully competed for these prestigious awards.

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