Achievement Rewards for College Scientists

Northern California Chapter

2023–2024

Annual Report

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ARCS ADVANCING SCIENCE IN AMERICA

MISSION

MISSION STATEMENT: ARCS Foundation advances science and technology in the United States by providing financial awards to academically outstanding U.S. citizens studying to complete degrees in science, technology, engineering, mathematics and medical research.

ARCS STORY

ARCS STORY: In 1958, a group of intrepid women in Los Angeles took on the challenge of the "space race" and created ARCS Foundation, funding gifted science, medical and engineering students to help re-establish our country's leadership in science. Today the challenge is achieving breakthroughs in biotechnology, regenerative medicine, and clean energy to secure our country's future. Our answer remains the same: when we support brilliant young scientists, we invest in America's future in a powerful way.

Every dollar contributed to ARCS Foundation's Scholar Awards Fund goes directly to students selected by their universities for their merit and the caliber of their research. The impact is profound: ARCS scholars appreciate our belief in them as much as the financial help that we provide.

ARCS has 15 chapters in the United States and has awarded over $137 million to more than 11,800 scholars since 1958.

NORTHERN CALIFORNIA CHAPTER

NORTHERN CALIFORNIA CHAPTER: The Northern California Chapter of ARCS Foundation was established in 1970 and and has funded more than 3,100 Scholar Awards totaling over $27 million. For the 2024-2025 academic year, the Chapter distributed $1,210,000 to 80 scholars attending seven prestigious Northern California universities.

ARCS IS UNIQUE

* ARCS is 100% FOCUSED: ARCS is the largest private membership organization in the United States focusing on support to the most promising U.S. science scholars.
* ARCS grants are 100% FLEXIBLE: ARCS award recipients decide how best to use ARCS funds to pursue their academic research efforts.
* ARCS is 100% VOLUNTEER: ARCS members donate their time, talents and financial resources in order to foster academic excellence and research in the sciences, mathematics, medicine and engineering.
* ARCS is 100% EFFECTIVE: 100% of all donations to the annual Scholar Awards Campaign are directed to the best and brightest scholars at our nation's top research universities.

Recipient Schools of ARCS Foundation Grants

ARCS FOUNDATION, INC. can boast of alumni who have achieved distinction in their fields and are making significant contributions to the strength and leadership of our country.

The scholar awards program is administered by the academic institutions to which ARCS chapters make allocations. Recipient institutions are approved by the National Board of ARCS FOUNDATION, INC. according to exacting standards.

Following is a list of the recipient schools of ARCS Foundation scholar awards for the fifteen chapters which make grants.

Atlanta Chapter
Emory University
Georgia Institute of Technology
Morehouse College
University of Georgia (Athens)

Colorado Chapter
Colorado School of Mines
Colorado State University
University of Colorado at Boulder
University of Colorado at Colorado Springs
University of Colorado at Denver
University of Colorado School of Medicine

Honolulu Chapter
University of Hawaii, Manoa

Illinois Chapter
Illinois Institute of Technology
Loyola University of Chicago, Stritch School of Medicine
Northwestern University
The University of Chicago
The University of Illinois at Urbana-Champaign

Los Angeles Chapter
California Institute of Technology
Harvey Mudd College
Pomona College
University of California, Los Angeles:Brain Research Institute
University of Southern California: Keck School of Medicine
Viterbi School of Engineering

Metropolitan Washington Chapter
Georgetown University
The George Washington University
The Johns Hopkins University
University of Maryland, College Park
University of Virginia

Minnesota Chapter
University of Minnesota

Northern California Chapter
San Francisco State University
Stanford University
University of California, Berkeley
University of California, Davis
University of California, Merced
University of California, San Francisco
University of California, Santa Cruz

Orange County Chapter
University of California, Irvine

Oregon Chapter
Oregon Health and Science University
Oregon State University
University of Oregon

Phoenix Chapter
Arizona State University
Northern Arizona University
University of Arizona

Pittsburg Chapter
Carnegie Mellon University
University of Pittsburgh

San Diego Chapter
San Diego State University
Scripps Research Institute
University of California, San Diego
University of San Diego

Seattle Chapter
University of Washington
Washington State University

Utah Chapter
University of Utah

University Leadership

ARCS Foundation Northern California Chapter appreciates its strong alliance with each of the universities receiving award funds. We hereby salute the presidents and chancellors of these, our area's finest universities, and list their names together with the departments in which scholars were funded this year.

Dr. Lynn Mahoney, President
San Francisco State University

Department of Biology (Biomedical Science)
Department of Biology (Cellular & Molecular)
Department of Biology (Integrative)
Department of Biology (Marine)
Department of Biology (Marine & Estuarine)
Department of Biology (Physiology & Behavioral)
Department of Chemistry & Biochemistry
Department of Computer Science (Data Science & AI)
Department of Geography (Resource Management & Environmental Planning)
Department of Mathematics
Department of Physics & Astronomy

Dr. Jonathan Levin, President
Stanford University

Department of Biology
Department of Biophysics
Department of Chemical Engineering
Department of Earth & Planetary Sciences
Department of Earth System Science
Department of Electrical Engineering
Department of Materials Science & Engineering
Department of Mathematics
Department of Mechanical Engineering
Department of Physics
Department of Statistics

Dr. Carol Christ, Chancellor
University of California, Berkeley

Department of Applied Science & Technology
Department of Earth & Planetary Science
Department of Environmental Science, Policy & Management
Department of Statistics
Energy & Resources Group

Dr. Gary S. May, Chancellor
University of California, Davis

Animal Behavior Graduate Group
Center for Neuroscience
Department of Agricultural & Environmental Chemistry
Department of Civil & Environmental Engineering
Department of Biomedical Engineering
Department of Chemistry
Department of Earth & Planetary Sciences
Department of Soils & Biogeochemistry
Ecology Graduate Group
Geology Graduate Group
Integrative Pathobiology Graduate Group
Population Biology Graduate Group

Dr. Juan Sánchez Muñoz, Chancellor
University of California, Merced

Department of Chemistry
Department of Cognitive & Information Sciences
Department of Environmental Systems
Department of Physics

Dr. Sam Hawgood, Chancellor
University of California, San Francisco

Departments of Biochemistry & Molecular Biology
Department of Bioengineering
Department of Biomedical Sciences
Department of Chemistry & Chemical Biology
Department of Developmental & Stem Cell Biology
Department of Epidemiology & Translational Science
Department of Neurology
Department of Neuroscience
Department of Pharmaceutical Science & Pharmacogenomics

Dr. Cynthia Larive, Chancellor
University of California, Santa Cruz

Department of Applied Mathematics
Department of Astronomy & Astrophysics
Department of Biomolecular Engineering
Department of Chemistry
Department of Computational Media
Department of Earth & Planetary Science
Department of Ecology & Evolutionary Biology
Department of Environmental Studies
Department of Mathematics
Department of Microbiology & Environmental Toxicology
Department of Molecular, Cell & Developmental Biology
Department of Ocean Sciences
Department of Physics
Science Communication Master's Program

San Francisco State University

Department of Biology (Biomedical Science)
Department of Biology (Cellular & Molecular)
Department of Biology (Integrative)
Department of Biology (Marine)
Department of Biology (Marine & Estuarine)
Department of Biology (Physiology & Behavioral)
Department of Chemistry & Biochemistry
Department of Computer Science (Data Science & AI)
Department of Geography (Resource Management & Environmental Planning)
Department of Mathematics
Department of Physics & Astronomy

Department of Chemistry & Biochemistry

Seiham Alansary
ARCS Foundation Scholar

Seiham is a second-year Master's student who is conducting research centered on the improvement of lower-division STEM education. Her interests involve creating more hands-on and group-oriented approaches to learning and teaching STEM that center on empowering student curiosity. She is currently part of the team introducing Studio Chemistry to SFSU's general chemistry courses. Her work will center on working with students and collecting the required data to better understand student needs in this new learning space. Her other projects involve understanding the needs of marginalized and underrepresented students in STEM and how to best meet their needs in a classroom setting.

Department of Biology (Marine)

Berenice Baca-Ceballos
Lakeside Foundation Scholar

Berenice is fascinated by the diversity and beauty of developmental stages. As an undergraduate, she was the first to rear brooding sea star embryos in the genus *Leptasterias* through hatching and juvenile development, while discovering variation in timing of hatching, potentially related to maternal care. This *tour de force* earned her several awards and is the basis for her Master's research exploring the impact of environmental variables on reproductive patterns in marine organisms. Berenice gained specialized training through the University of Washington's Larval Ecology course and the Comparative Embryology course at the University of São Paulo. A first-generation college student, she aims to gain a Ph.D. while pursuing her interests in developmental biology, ecology, and evolutionary biology.

Department of Biology
(Cellular & Molecular)

Ruben Castro Corral

Montgomery Street Foundation Endowment Fund Scholar

Ruben's research at SFSU/UCSF investigates the role of sleep in memory and learning in the nematode *Caenorhabditis elegans*. As a first-generation Mexican American college graduate, Ruben plans to collaborate with the schools in the Salinas Valley to advocate for the importance of pursuing higher education in underrepresented groups. After obtaining his Master's, Ruben plans to matriculate into medical school and pursue a career as a neurologist or neuropathologist. Outside research, he enjoys walking his dogs, spending time with his loved ones, and hiking.

Department of Biology
(Cellular & Molecular)

Mariah Angel Cuyson

ARCS Foundation Scholar

Mariah is a first-generation college student interested in researching the link between the ecology of emerging infectious diseases and public health. Her interest in studying vector-borne diseases sparked as an undergraduate research assistant in Dr. Andrea Swei's lab at San Francisco State. Continuing her research as a Master's student in the Swei lab, Mariah's project focuses on the impact of host blood meal identity on tick microbiomes by developing a multi-species analysis on small mammals and reptiles. Mariah also currently serves as the NSF/CSU Louis Stokes Alliance for Minority Participation (LSAMP) Program Administrator at SFSU, which aims to financially support undergraduates from underrepresented and disadvantaged backgrounds majoring in STEM. Outside of the lab, Mariah's hobbies include music, indoor rock climbing, and cooking.

Department of Computer Science (Data Science & AI)

ANDREW DAHLSTROM

Linda Dyer Millard Scholar

While pursuing his Master's in Data Science and Artificial Intelligence, Andrew has demonstrated a strong focus on natural language processing and generative AI. His research has been supported by prestigious funding sources, including the National Science Foundation for automated career services, the Department of Energy for developing energy-efficient metals, and the Smith-Kettlewell Eye Research Institute for understanding Cerebral Visual Impairment. Andrew has excelled academically and has also contributed significantly as a teaching assistant and graduate research assistant. Outside of his academic pursuits, he enjoys hiking with his husband and their French bulldog, Turing.

Department of Mathematics

KRISTEN DAWSON

ARCS Foundation Scholar

Kristen studies applied algebraic geometry, with a focus on algebraic statistics. She is currently working on a research project studying conditional independence models with hidden variables. Her other work includes research on the uniqueness of positive semidefinite matrix factorizations as well as two summers spent studying numerical linear algebra at Lawrence Berkeley National Lab. She is the President of the SIAM student chapter at SFSU and an organizer of the SFSU Math Club. In her free time, she enjoys reading, scuba diving, and neighborhood walks with her dog, but not all three at once.

Department of Biology (Marine & Estuarine)

ANTHONY DONAHUE

Joan D. McCauley Endowment Fund Scholar

Anthony has extensive experience in aquaculture of aquatic organisms, including the endangered Delta Smelt and threatened Longfin Smelt while working at the UC Davis Fish Conservation and Cultivation lab as a fish culturist. He also worked at UC Berkeley in a lab assisting with Zebrafish husbandry. His current thesis project focuses on the variability in the natural diets of the larval stages of native and non-native fishes across restoring wetlands of the northern San Francisco Estuary, using next-generation DNA sequencing. Anthony plans to pursue a Ph.D. in Marine Biology or Biological Oceanography. During his free time, Anthony enjoys hiking with his daughter.

Department of Physics & Astronomy — **PETER HARAMIS**
ARCS Foundation Scholar

Peter has had a lifelong passion for astronomy. He's interested in a variety of topics, including but not limited to black hole physics, the detection of dark matter candidates, and cosmology. He has a BS in Physics (Astrophysics) from SFSU with a Minor in Mathematics, and graduated Magna Cum Laude in 2022. Peter has been a docent at SFSU's student-operated observatory for the past year, operating the telescopes along with other docents and showing students and members of the public the many wonders of the universe.

Department of Geography (Resource Management & Environmental Planning) — **FIONA LAWLER**
Barbee & Bruce Callander Scholar

Fiona is a geographer interested in conducting her Master's research in river channel morphology, sediment fluxes, and how natural and anthropogenic influences shape river channels, in order to understand the way climate change is impacting these systems. Her desire is to educate and inspire others to take sustainable action. As an undergraduate at UC Berkeley, she worked on an honors thesis project in which she calculated and mapped landslide risk in the Bay Area using the Shallow Stability Model. She also enjoys working at her former community college where she is an embedded tutor for Geography classes. After completing her Master's degree, Fiona would like to pursue a career in teaching. Her passion for geography is something that she aims to pass along to future generations.

Department of Biology (Biomedical Science) — **TOMMY LUONG**
ARCS Foundation Scholar

Tommy's research at SFSU/UCSF investigates neuroinflammation and reactive gliosis in the enteric nervous system using stem cell-derived enteric neurons and glia. A first-generation Vietnamese college student, Tommy was a Student Commencement Speaker and the President/Dean's Scholar at San Jose State University. Upon completing his degree, he aspires to pursue a career in government or industry in science policy and regulations. Outside research, Tommy delves into history, technology, photography, running, Lego, and crafts.

Department of Biology (Integrative)

DORHKAS RAMOS

ARCS Foundation Scholar

Dorhkas works on the impact of the environment on developmental processes in invertebrate chordates. These animals are found commonly in bays and harbors worldwide. Their tremendous capacity to adapt to new conditions raises questions about the flexibility of early developmental processes. Dorhkas delights in learning about animal care and developmental processes. At home, she raises guinea pigs and fish. At SFSU, she is a valued member of the vertebrate animal care facility. Last summer, she traveled to Brazil to attend an international workshop on Invertebrate Embryology. Her current project focuses on the impact of temperature variation on fertilization and early stages of development.

Department of Biology (Physiology & Behavioral)

TIMARA VEREEN

Carol Henwood Scholar

Susan & Dennis Mooradian Scholar

Timara received her BS from the College of Charleston Honors College where she researched marine ecology and benthic ecosystems. Her graduate research at SFSU focuses on the influence of geography and pathogen infection on the host-seeking behavior of *Ixodes pacificus* ticks, the primary vector of Lyme disease in the western US. Timara has earned multiple honors, including the NIH Bridge MS Scholar and a SACNAS and Public Entomology for All travel award. Outside of her academic pursuits, Timara actively participates in community service and STEM outreach, including leadership roles in BE-STEM and Rotary International.

Stanford University

Department of Biology
Department of Biophysics
Department of Chemical Engineering
Department of Earth & Planetary Sciences
Department of Earth System Science
Department of Electrical Engineering
Department of Materials Science & Engineering
Department of Mathematics
Department of Mechanical Engineering
Department of Physics
Department of Statistics

Department of Materials Science & Engineering — Neil Baugh

Kimball Foundation Scholar

Neil works on designing liposome hydrogels for drug delivery and cell culture applications. He's interested in intentionally designing materials at the molecular level to influence their macroscopic properties and how they interact with biological systems. Outside of research, Neil is passionate about scientific communication and writes a science-themed newsletter breaking down research papers to a broad audience. Neil has received the Goldwater Scholarship, NSF Graduate Research Fellowship, and PhRMA Foundation Drug Delivery Fellowship.

Department of Physics — Christina Bell

ARCS Stanford Graduate Fellow

Christina has a deep interest in the development and characterization of superconducting quantum devices for applications in astrophysics and quantum computing. As an undergraduate, she spent two summers conducting research at NASA's Jet Propulsion Laboratory, where she characterized an unconventional thin-film superconducting material for applications in THz device technology. In addition, she has worked at Arizona State University's CXFEL Lab on the low-level RF system to enable the world's first compact X-ray free electron laser. Christina is also dedicated to extending opportunities to underrepresented students in physics; she co-founded ASU's first Association of Women in Physics, which motivated her and united a growing community of like-minded women. Outside of research, she enjoys weight lifting, sketching, and staying active outdoors.

Department of Biology

JOHANNAH FARNER

Kimball Foundation Scholar

Johannah is a disease ecologist who studies how rapidly changing environmental conditions shape disease risk for humans, domesticated animals, and wildlife. Her research combines extensive field surveys with experiments and mathematics to investigate how factors such as temperature, heat waves, and land use shape host–parasite interactions and species distributions in the mosquito species of western North America. She earned her BS in Biology at Stanford University; her undergraduate thesis focused on the ecology of plant fungal pathogens in California grasslands. Before starting her graduate studies, Johannah worked on conservation projects for threatened and endangered amphibians, fish, and plants.

Department of Biophysics

JAMES FERRARE

ARCS Foundation Scholar

James is a fifth-year student whose research focuses on understanding how the competition between adaptive genetic variants influences evolutionary dynamics in microbial populations. Most recently, he has studied how natural selection acts on mutations that modify the evolutionary process itself, by changing the rates and benefits of future mutations. Prior to arriving at Stanford, James studied Physics and International Development at Tulane University and has conducted research in several countries including Austria, Japan, Haiti, and Paraguay. Outside of the laboratory, he enjoys backpacking and exploring the Bay Area.

Department of Statistics

WILL HARTOG

Georgiana Ducas Endowment Fund Scholar

Will is a fourth-year student whose research interests include modern sequential analysis. His first project involves developing new multiple testing methodology for e-values, a sequentially valid alternative to p-values. He is also working with his advisor and DoorDash on leveraging existing data to shorten the length of experiments. He enjoys and cares deeply about teaching, has served as primary instructor for four Stanford statistics courses, and has coached for statistics Ph.D. qualifying exam preparation. Will plays French horn with the Stanford orchestras and can often be found exhausting the library's collection of jigsaw puzzles.

Department of Earth System Science

Stephanie Lim

ARCS Foundation Scholar

Stephanie is a biological oceanographer studying the effects of climate change on the polar oceans. She investigates blooms of single-celled algae, which form the base of the aquatic food web and contribute to the carbon cycle, using a combination of satellite remote sensing, modeling, and field expeditions. She has spent over 65 days at sea on research vessels in the Arctic Ocean. Stephanie also works to increase access to STEM and higher education through long-range mentorship with the Future Advancers of Science and Technology program. Outside of work, she enjoys dancing, cooking, and travelling.

Department of Chemical Engineering

Jocelyn Padilla

Barbara Glynn Scholar

Jocelyn's research interests involve engineering proteins and antibodies to study and target the immune microenvironment in cancer and other degenerative diseases. She is currently working with a team to develop antibodies against immunosuppressive chemokines in glioblastoma. Prior to coming to Stanford, Jocelyn received her B.S. in Chemical Engineering from San Jose State University, where her research experience spanned modifying nanodiamonds as biosensors and engineering *E. coli* for lithium-ion batteries. While at SJSU, Jocelyn interned at Genentech where she discovered her passion for shaping patient outcomes with her research. Outside of the lab, Jocelyn enjoys staying active outdoors and at the gym, watching movies, and traveling with her friends and family.

Department of Mathematics

Christian Serio

Rhoda Goldman Memorial Scholar

Christian's interests lie at the intersection of probability theory and mathematical physics. His current focus is to understand the large-scale behavior of random interface models and growth models arising in statistical mechanics. Many of these objects, although seemingly very different on small scales, are conjectured to share certain universal scaling limits in the so-called Kardar-Parisi-Zhang universality class. Some of Christian's recent work has focused on proving limit theorems and verifying this universality for random surfaces arising from physical models of magnetism. Outside of math, Christian enjoys playing guitar, cooking, and weightlifting.

Department of Mechanical Engineering — **ELIZABETH VASQUEZ**
Emery Family Foundation Scholar

Elizabeth's research in rehabilitative and assistive technology uses a community-centered approach to create more accessible technology for stroke survivors with motor disabilities, particularly those who are medically underserved. She holds a BS in Mechanical Engineering from MIT and an MS from Stanford. In her free time, she mentors incoming freshman and Ph.D. students and serves as a community associate where she fosters and encourages a sense of community in the residences of her living area.

Department of Earth & Planetary Sciences — **ADRIAN WACKETT**
ARCS Foundation Scholar

Adrian is a soil geomorphologist and biogeochemist who has explored diverse topics spanning soil biogeochemical impacts of belowground biological invasions to the tectonic evolution of the North American Cordillera and the fate of hydrothermal iron exported to ocean basins. His dissertation research uses cosmogenic and fallout isotopes as geochemical tracers of soil and sediment dynamics following disturbance. He is trained in environmental education and wilderness guiding and has volunteered with several 'science-in-the-schools' programs in his hometown of St. Paul, Minnesota, and most recently around the Bay Area. Passionate about outreach, Adrian has also communicated his work publicly with features in *The New York Times* and *The Guardian*, among other outlets.

Department of Electrical Engineering — **JERRY YANG**
William K. Bowes, Jr. Foundation Scholar

Jerry is a fifth-year student whose current research focuses on flexible in-sensor computing applications of two-dimensional (2D) materials, vertical sidewall flash memories based on 2D materials, and active learning-based pedagogies for semiconductor education/workforce development. He is also interested in equity and social justice, particularly in LGBTQ+ issues in engineering. He is a recipient of the National Science Foundation Graduate Research Fellowship and is a student member of the Institute for Electrical and Electronics Engineers (IEEE), Materials Research Society (MRS), and the American Society for Engineering Education (ASEE). In his spare time, he enjoys cats, memes, and pickleball.

University of California, Berkeley

Department of Applied Science & Technology
Department of Earth & Planetary Science
Department of Environmental Science, Policy & Management
Department of Statistics
Energy & Resources Group

Department of Environmental Science, Policy & Management

Anusha Bishop

ARCS Foundation Scholar

Anusha is a fourth-year Ph.D. candidate studying how evolution shapes genetic diversity across landscapes. Genetic diversity is crucial for population health and adaptation and determining its drivers is key for assessing vulnerability to environmental change. In her research, Anusha builds and applies tools for understanding genetic diversity and works with the California Conservation Genomics Project to inform the conservation of hundreds of species across the state. Passionate about making data science accessible to everyone, Anusha is also a consultant for the Berkeley D-Lab where she helps Berkeley researchers with coding and statistics.

Energy & Resources Group

Colette Brown

Susan & James Acquistapace Scholar

Colette's current work is focused on quantifying post-fire vegetation recovery in the Arctic tundra. She has combined field data and remote sensing imagery using machine learning to extend the spatial and temporal resolution of recovery patterns following this novel disturbance. More broadly, she is interested in combining data sources to catalogue the impacts of climate change on terrestrial ecosystems. Outside of research, she is a dedicated teacher and received a UC Berkeley and department award as an outstanding instructor.

Department of Statistics

Anthony Ozerov

ARCS Foundation Scholar

Anthony's research focuses on statistics in the physical sciences. Over two internships at the SETI Institute, Anthony used Bayesian modeling to understand the global distribution of large meteor impacts. At Berkeley, Anthony is currently involved in a project on using deep learning to accurately simulate fluid dynamics at low resolution, and another project on fusing different data sources to learn more about glaciers. He believes in the importance of statistics outreach and mentors undergraduate students. Outside of work, Anthony likes ice skating, miscellaneous sports, reading, and writing.

Department of Earth & Planetary Science

MARA REED

Nancy Mueller Scholar
Bailey & Chris Meyer Scholar

Geyser study has important implications for volcanology, mineral exploration, and the search for life's origins. Mara's research seeks to understand the factors that influence geyser eruption timing and to apply lessons learned from geyser study to volcanology. She is enthusiastic about integrating the public into monitoring efforts and volunteers as a scientific advisor for GeyserTimes, a crowdsourced database of geyser observations. When she's not thinking about geysers, Mara dabbles in cave photography and especially enjoys organizing beginner trips for Bay Area caving clubs.

Department of Applied Science & Technology

SELCO COOPER

Rhoda Goldman Memorial Scholar

During his undergraduate education, Cooper did research in experimental quantum science, published several papers related to this research in well-known journals and presented them at leading conferences. He also won various awards and many internal fellowships from his university (USC). In his graduate work at UC Berkeley, Cooper is interested in performing research related to quantum sensing and nanoscale spin dynamics. Outside of research, Cooper enjoys both playing and watching sports such as basketball, soccer, and Formula One.

University of California, Davis

Animal Behavior Graduate Group
Center for Neuroscience
Department of Agricultural & Environmental Chemistry
Department of Civil & Environmental Engineering
Department of Biomedical Engineering
Department of Chemistry
Department of Earth & Planetary Sciences
Department of Soils & Biogeochemistry
Ecology Graduate Group
Geology Graduate Group
Integrative Pathobiology Graduate Group
Population Biology Graduate Group

Center for Neuroscience — Maribel Anguiano

ARCS Foundation Scholar

Maribel is a 3rd year student who is researching the molecular and functional interrogation of circuitry underlying the relationship between social hierarchy and reward-seeking, using new technologies to discover what molecules are present in the neural circuits underlying disease. Her research has been recognized by awards such as the Karen Sigvardt, Ph.D. Neuroscience Award and the Barbara Chapman Neuroscience Award. She has uplifted her entire community by bolstering diversity, equity, inclusion, and justice (DEIJ) in the broader STEM fields. She is a DEIJ Leader Fellow and Chicana Latina Foundation Leadership and Scholarship recipient.

Population Biology Graduate Group — Shreya Banerjee

Jane Fuller Gillespie Memorial Scholar

Shreya is interested in how human activities alter ecological relationships between species and affect evolution in marine systems. Before beginning her Ph.D., she completed a Master's in marine biology at UCSD and worked as a lab manager at UMass Amherst and Stanford University. At Davis, she is working on understanding and predicting climate-driven range shifts and adaptive capacity in ribbed limpets. She is passionate about applying scientific findings towards conservation and has conducted a collaborative project on fisheries management and interned at NOAA fisheries. She is also an active member of the UC Davis community through participating in the Student Diversity Committee and the CMSI co-mentoring program (CPOC). Outside of science, she enjoys yoga, dancing, hiking, and the beach.

Geology Graduate Groupv

BENJAMIN FAULKNER

Charlie Campbell Scholar
Patricia Klitgaard Scholar

Ben is a vertebrate paleontologist who investigates how diet shapes the bodies of diapsids (the group containing lizards, birds, and dinosaurs) over multi-million-year timescales. A dedicated science educator, he trains undergraduates in paleontological field techniques each summer in Montana and has delivered over 2,000 public programs at the California Academy of Sciences. Previously, Ben worked as an after-school science teacher and AmeriCorps member at the Science Museum of Minnesota. He co-hosts the podcast Reel Beasts, exploring the science behind prehistoric animals in pop media, and was a semi-finalist in the 2022 UC Grad Slam competition. Outside of science, Ben is an avid runner, soccer player, and rock musician in the Bay Area.

Ecology Graduate Group

OLIVIA FELDMAN

Eileen D. and Lisa C. Ludwig Endowment Fund Scholar

Olivia researches how wildlife, livestock and people interact in Argentina's Patagonia region, and how these dynamics shape human-wildlife conflict. She is a former Fulbright Scholar and recipient of Panthera's Small Cat Action Fund. Olivia's background is interdisciplinary, and she worked for many years in international development before studying wildlife biology. Having grown up and worked in Latin America and South Asia where people, livestock and wildlife all share space, Olivia believes strongly in integrating people into how we study wildlife to improve conservation outcomes for both. Outside of her research, Olivia believes strongly in making conservation science more inclusive and collaborative, especially when it is international. She enjoys hiking, horseback riding and looking for fossils with her partner and dogs in the Patagonian dirt in her free time.

Department of Soils & Biogeochemistry

JANE FUDYMA

Katherine Hellman Black Endowment Fund Scholar

Jane is investigating soil viruses, their fate and transport in soil matrices, and their roles in microbial ecology and soil ecosystem function. More specifically, she is currently attempting to link viruses to the microbial hosts they infect using a suite of advanced 'omics techniques, in order to begin to understand how viruses affect microbial communities and their nutrient cycling processes in soil. Before graduate school, she spent nearly five years working in mining bioremediation, and spent two years in academia in an environmental soil organic matter lab. She has worked as an instructor for multiple UC undergraduate programs to teach field methods, field safety, and introduce students to outdoor experiences. In her spare time, she enjoys attending live music, camping, and skiing.

Department of Agricultural & Environmental Chemistry

LAURA HEINLEIN

Carol & Clark Mitchel Scholar

Laura's introduction to California was in 2021 when she walked the 2650-mile Pacific Crest Trail. She narrowly missed the Dixie Fire, which burned nearly 1 million acres as the second biggest wildfire in state history. Hiking across California during an infamous wildfire year inspired Laura's research into wildfire smoke chemistry, driven to understand the impact of wildfires on air quality and climate. Beyond research, Laura has collaborated with a local middle school to teach an air quality unit and volunteers to provide afterschool science programs. Laura is committed to conducting research and disseminating science to protect environmental and human health.

Integrative Pathobiology Graduate Group — **CALEB HUNTINGTON**
ARCS Foundation Scholar

Caleb is currently a second-year Ph.D. candidate. He discovered his love for research through an NSF-funded summer research position in an influenza lab and an independent study project on spectacled bears in Ecuador. After graduating from college, he worked as a public health associate at the Centers for Disease Control and Prevention (CDC) where he was paired with the Minneapolis Health Department to respond to the COVID-19 pandemic. With his current work at UC Davis, he has combined his interests in virology, ecology, and public health to study pre-emergent wildlife viruses and new tools for their study. In his free time, he enjoys the outdoors through surfing, hiking, rock climbing, and skiing.

Department of Earth & Planetary Sciences — **SARAH KING**
Jack Lund Endowment Fund Scholar

Sarah's interests lie in the ecology of extreme ecosystems and planetary habitability. She is developing mathematical models to quantify the mechanisms that drive the spatial self-organization of benthic microbial mats in Antarctic lakes. Through this, she aims to better understand microbial ecology and how these communities are responding to climate change. Sarah's passion for planetary science has extended to an internship at NASA and an independent project designing an interactive reconstruction of Mars to teach planetary geology to 1,000 students. Outside of research, Sarah enjoys cultivating fungi and a variety of heirloom tomatoes.

Department of Chemistry — **YANNICK KRAEMER**
ARCS Foundation Scholar

Yannick was born in Lörrach, Germany and moved to the United States at a young age. He obtained a B.S. in Chemistry from UC Santa Cruz and held three industrial internships during his undergraduate studies. His Ph.D. research at UC Davis has focused on developing synthetic methods to enable easier access to the pentafluorosulfanyl group on organic molecules. Yannick has presented posters on his published research at the UC Davis Miller Symposium, the 2023 ACS Fall meeting, and the 2023 Bay Area Chemical Symposium. He was also accepted to the Zürich School of Crystallography for a summer program.

Animal Behavior Graduate Group

ALICE MICHEL

Marie & Barry Lipman Scholar

Alice studies between-group communication in western lowland gorillas. Using passive acoustic monitoring in a community reserve in the tropical peatland forests of northern Republic of Congo, she aims to disentangle how different selective pressures contribute to long-distance signaling behavior. Her objective is to shed light on the social and ecological lives of elusive wildlife, while providing scientific training and working in collaboration with local communities. Outside her dissertation work, she is a technical advisor for the gorilla conservation organization GRACE, a mentor to undergraduate interns, a GSR for the Road Ecology Center, and a column editor for the UCD Animal Behavior blog, The Ethogram. In her spare time, Alice enjoys biking, running, and spending time with friends.

Department of Civil & Environmental Engineering

DAMON NGUYEN

ARCS Foundation Scholar

Damon's research is focused on developing resilient and efficient infrastructure solutions by adapting the strategies used by snakes to generate frictional anisotropy. Particularly, Damon's work aims to develop new foundations and soil anchors for buildings, wind turbines, and solar panels. Damon engages in advocacy and charity events for Spinal Muscular Atrophy (SMA) research. He currently serves as the seminar coordinator for the Geotechnical Graduate Student Society at UC Davis. Damon has been selected as recipient of the Conetec Inc. Award and the Patrick Lucia Geotechnical Engineering Scholarship.

Department of Biomedical Engineering — **HANNAH O'TOOLE**

Allison & Aneel Bhusri Scholar

Hannah's research includes nanoengineering, nanoparticle synthesis Raman spectroscopy, and biomarker identification, in part via analysis of circulating extracellular vesicles (EVs). She has worked on sepsis detection in burn patients, cancer metabolite detection using synthesized nanosensors, and characterizing ultra-fine particulate matter in brains of Alzheimer's disease rodent models exposed to traffic-related air pollution. A former NIH T32 Fellow, she has won numerous presentation awards and led the BME student organization, BESA, promoting DEI initiatives. Outside the lab, she enjoys golfing, yoga, Pilates, and spending time with her dachshunds, Bennie and Teddy. Hannah aims to pursue postdoctoral research and eventually lead her own group investigating EVs as theranostics for metabolic diseases like IBDs and cancers.

Department of Chemistry — **ALICIA ROSS**

Jill H. Kramer Scholar

Alicia's research projects focus on using computers to help understand the small details that govern natural product mechanisms. Her background in analytical and synthetic chemistry from her Master's and Bachelor's made her a perfect fit for Dean Tantillo's lab, where computational chemistry tools are used for application purposes in synthetic and isolation chemistry collaborations. One of the biggest passions that she brings to her teaching and academic career is her love of travel. She has studied and worked as an educator in China, Spain, and Ecuador and hopes to continue to intertwine her love of travel with her academic goals.

Animal Behavior Graduate Group — **KIRSTEN SHEEHY**

ARCS Foundation Scholar

Kirsten's research interests center around individual differences in behavior and their consequences in groups. Her interest in behavioral diversity stems from experiences as a queer, neurodivergent person. Throughout her early academic career, she struggled with undiagnosed Obsessive Compulsive Disorder (OCD). After a diagnosis in 2018, she has learned to channel her natural planning tendencies into healthier outlets. In particular, she fosters diversity by helping students of all ages map out careers in academia. In her free time, you can find Kirsten caring for her small menagerie of critters or working on overly ambitious crafting projects.

Department of Civil & Environmental Engineering — **DENI VELAGIC**
ARCS Foundation Scholar

Deni's research interests lie in strengthening concrete girders with Fiber Reinforced Polymers (FRP). Specifically, he has been looking into the problems associated with shear strengthening of concrete girders using Externally Bonded FRP. He enjoys teaching engineering to undergraduate students and has had the opportunity to do so several times as a Teaching Assistant. Outside of academia, he likes being with friends and family, rock-climbing, traveling, reading and watching soccer.

Ecology Graduate Group — **BROOKE WAINWRIGHT**
Michele Goss Scholar

Brooke is interested in how different factors (e.g., grazing, climate change) affect California flora from the trait to the community level. Currently, she studies how drought affects functional traits strategies of California grassland plants. She obtained her MS from the University of New Mexico, where she investigated how a changing climate mean and variance affected the recruitment dynamics of foundation desert species. Brooke is particularly interested in increasing outdoor education, recreation, and restoration access. This was instilled in her through her time working as a preserve ranger at The Wildlands Conservancy and continues through her work as a co-director of Hands on the Land, an organization dedication to providing free immersive restoration experiences for the Davis community.

Integrative Pathobiology Graduate Group — **DARRIELLE WILLIAMS**
Agilent Technologies Scholar

Darrielle is broadly interested in microbial ecology and animal health, with the hope of reducing the burden of infectious diseases on animal populations. For her dissertation research, Darrielle's project focuses on the interaction between plastic and pathogen pollutants. She is currently leading a new set of experiments designed to test whether parasites that can 'hitchhike' on plastic biofilms can retain their viability longer than parasites that are freely suspended in seawater. Outside of the lab, Darrielle is involved in outreach programs in middle and high schools to further encourage students from underserved backgrounds to foster strong curiosity about the world around them.

University of California, Merced

Department of Chemistry
Department of Cognitive & Information Sciences
Department of Environmental Systems
Department of Physics

Jennifer Alvarez

Department of Environmental Systems

Agilent Technologies Scholar

Jennifer is passionate about regenerative agriculture. Growing up in the San Joaquin Valley, she witnessed firsthand the impacts of conventional farming on her community. Her research focuses on how regenerative practices affect soil health and its ability to act as a carbon sink or source, addressing both climate change and socio-environmental inequalities. Soils play a crucial role in every aspect of natural and built environments, she hopes to convey this to the future generations with research and education. Jennifer is currently a Farms, Food, Future Fellow funded by the U.S. Economic Development Administration's Build Back Better Regional Challenge. Her research will be used to propel the San Joaquin Valley into a climate-smart Agrifood Tech hub. Beyond her academic pursuits, Jennifer advocates for self-care through movement including dance, exercise, and mindful walks.

Victor Duran Arroyo

Department of Chemistry

ARCS Foundation Scholar

Before entering graduate school, Victor was an inorganic chemistry technician for an agricultural product testing facility located in his hometown of Oxnard, California. Victor's current research interests are the design, synthesis, and application of a new generation of catalysts using earth-abundant transition metals to offer greener, more sustainable alternatives to current precious-metal catalysts used in chemical industries. His current project is the mechanistic elucidation of a Ni-catalyzed hydrodefluoronation process. He intends to leverage the knowledge obtained to later rationally modify the Ni catalyst and pursue regioselective C–F borylation of polyfluorinated molecules. Outside of the lab, he loves to watch films and cook.

Department of Cognitive & Information Sciences **SAMUEL CAREY**
Elizabeth & Clark Callander Scholar

During his undergraduate research in kinesiology, Sam gained valuable insights into the challenges faced by individuals with neurological injuries or disorders and the rehabilitation techniques used to aid their recovery. Inspired by this, Sam contributed to research innovative rehabilitation methods and the integration of robotic systems to enhance movement and coordination during reaching tasks. He then pursued a Master's degree where he studied how humans integrate multiple tasks simultaneously. His current Ph.D research focuses on understanding how cognitive demands and sensory environments differentially influence motor control during upright standing. His goal is to harness sensory noise to improve balance and explore the intricate connections between cognitive and motor systems, particularly in the context of dual-task interference. Sam enjoys backpacking and hiking in the Sierra Nevada in his spare time.

Department of Environmental System **SHELBY DEFEO**
ARCS Foundation Scholar

Shelby's research interests revolve around water quality and contamination, along with identifying solutions to these problems. Their work has focused on harmful algal blooms as well as nitrate and mercury contamination and has been shared in multiple capacities, including a TEDx talk. Their interest in these topics began during their 3,400 hours of service with AmeriCorps and has been influenced by social equity and serving disadvantaged communities in the United States and El Salvador. Shelby has been engaged as a mentor throughout their Ph.D. through multiple initiatives and is also highly involved with Central Valley Pride, a local nonprofit providing support to LGBTQIA+ community members.

Department of Cognitive & Information Sciences **YASEMIN GOKCEN**

Julie & Tom Reis Scholar
Carmi & Darrell Ticehurst Scholar

Yasemin's undergraduate work in developmental cognitive neuroscience at The Ohio State University inspired her interest in learning about the brain and connecting brain structure anatomy to cognitive functioning, as well as using a wide range of methodology from neuroimaging techniques to computational modeling. Yasemin's current work uses EEG and computational models to understand the mechanisms of sentence processing, gearing towards building neurobiologically plausible models. Outside of her research, Yasemin has served on the CIS Graduate Student Group as the Social and Community Chair. She also enjoys traveling, hiking around national parks, and cooking for friends and family.

Department of Physics **ARABI SESHAPPAN**

Danaher Foundation Scholar

A high school dropout and community college transfer, Arabi obtained her B.S. in Chemistry from UCLA. Following this, she was a Bridge to Doctorate Fellow at California State University, Los Angeles, where she realized her passion lay in physics. In the UC Merced graduate program, she studies the physics of materials through computational modeling methods. Potential applications of this work include building better solar cell materials or qubits for quantum computing. Additionally, Arabi is dedicated to increasing diversity in academia; she has been elected to the Graduate Dean's Advisory Committee on Diversity (GDACD) twice, and she serves as a graduate mentor for the Undergraduate Research Opportunities Center (UROC) on campus. In her spare time, Arabi rides horses and has three dogs.

Department of Physics

ALAUNA WHEELER

ARCS Foundation Scholar

A Ph.D. candidate and mother to two young children, Alauna's research interests include soft matter and self-assembly of biological systems. Her current projects include a study of the self-assembly of nanoparticles in a liquid crystal solvent undergoing a phase transition, self-assembly of the COVID viral particle, and the effect of e-cigarette chemical additives on lung surfactants. She also recently published a collaborative paper on the structure of electrosensory gels in cartilaginous fishes. Pre-Ph.D., Alauna spent 3+ years as a rocket propulsion and testing engineer. Her current outreach focuses on conducting hands-on science activities for elementary students using common household items. She is developing an accompanying YouTube channel so kids everywhere can do the activities at home with their adults. Alauna enjoys small boat sailing, visiting national and state parks with family, and board games for young children.

University of California, San Francisco

Departments of Biochemistry & Molecular Biology
Department of Bioengineering
Department of Biomedical Sciences
Department of Chemistry & Chemical Biology
Department of Developmental & Stem Cell Biology
Department of Epidemiology & Translational Science
Department of Neurology
Department of Neuroscience
Department of Pharmaceutical Science & Pharmacogenomics

Department of Neuroscience — Andoni Asencor

ARCS Foundation Scholar

Andoni's current research focuses on understanding the biological mechanisms of the transcobalamin receptor (CD320) in and beyond vitamin B12 uptake into the central nervous system. Prior to joining UCSF, Andoni completed his BA in neuroscience at Boston University and worked as a research associate at the University of Miami, Miller School of Medicine. As a proud Jamaican-Spanish American from Miami, Andoni uses his visibility as a neuroscientist to recruit more Caribbean-American students into neuroscience research and to highlight the work of other Caribbean-American scientists already in the field.

Department of Biomedical Sciences — Mary Clare Beytagh

Dr. & Mrs. Bernard M. Kramer Endowment Fund Scholar

Mary Clare is a physician-scientist in training whose primary research interests include cancer biology, stem cell biology, and epigenetics. Her current projects focus on medulloblastoma metastasis and the biological role of N-Myc-driven multimeric clusters. She is focused on finishing her thesis work while continuing to explore novel ideas and mentor students. As a staunch advocate for women in science, Mary-Clare is delighted to have the support of a women's organization such as ARCS Foundation.

Department of Neuroscience

CHRISTINE BOUTROS

Carol & Dixon Doll Scholar
Leslie & George Hume Scholar

Christine, a California native, attended Northeastern University in Boston and graduated in 2017 with a BS in Behavioral Neuroscience. During her time in Boston, Christine worked at Boston Children's Hospital studying the neuroscience of motivation and later studied novel therapeutics for HIV treatment at Massachusetts General Hospital. Christine is now an MD-PhD candidate in UCSF's Medical Scientist Training Program (MSTP). She is combining her interests in neuroscience and infectious diseases by studying *coccidioidomycosis* (aka "Valley Fever") to better understand the factors that influence dissemination to the central nervous system as a means to improve patient outcomes and clinical care.

Department of Biophysics

KEVIN ALEXANDER ESTRADA ALAMO

ARCS Foundation Scholar

Kevin is a protein biochemist and structural biologist interested in how cells communicate with one another and how cells process and respond to stimuli. Previously, Kevin studied the structural constraints of ligand specificity in PDZ and SH2 domains and how ligands are recognized and activate integrins. As a Ph.D. student, Kevin is using protein design to probe how different clustering behaviors of the BCR complex and other co-receptors impact the BCR signaling output in primary B cells and how that impacts cell fate. Outside the lab, Kevin's hobbies are designing clothes, jewelry, and furniture.

Department of Biophysics

GYUNA KIM

Devlin Family Endowment Fund Scholar

Gyuna's research interests include computational protein design and high throughput testing to help expedite therapeutic discovery and development. She developed her interest in proteins at MIT, where she majored in chemistry and biology. In her first industry role at Repertoire Immune Medicine, she developed an array of high throughput assays. She then joined Neoleukin Therapeutics to help develop computationally-designed de novo immunotherapy drug candidates, and later InduPro to work on bispecific antibodies and protein-drug conjugates. Outside of research, Gyuna enjoys playing music, video games, and trying out new hobbies.

Department of Epidemiology & Translational Science **MIA NAVARRO**
Chris Simpson Brent and Bruce Brent Scholar
In Memory of Dorothy Lewis Simpson

Mia is a pre-doctoral fellow in the NIMHD TADA-BSSR T32 Program. She aims to research structural determinants of health, to evaluate policies and programs via econometrics, and to develop resource allocation strategies. Mia's previous research focused on violence and health care utilization among children in Burkina Faso, poverty and cognitive performance over the lifetime, and neighborhood socioeconomic disadvantage and COVID-19 outcomes. Her work at the Center for Dissemination and Implementation Science focuses on implementation research in substance use disorder treatment. During her previous internship with the California Department of Public Health's Office of Binational Border Health, Mia developed surveillance tools and analyzed COVID-19 knowledge and attitudes. Mia aspires to work in the public sector and bridge the gap between academic research and policymaking. In her free time, she enjoys golfing, cooking, and yoga.

Department of Pharmaceutical Sciences & Pharmacogenomics **THU PHAM**
Merrill Randol Scholar

Thu is dedicated to precision medicine, focusing on understanding complex gene regulation and the role of genetic differences in health outcomes. She is passionate about reducing healthcare disparities, particularly in the field of pharmaceuticals and drug development. Her research project investigates gene regulation underlying chemotherapy-induced peripheral neuropathy (CIPN), a common side effect of cytotoxic drugs, with the goal of improving drug safety and developing therapeutic agents for CIPN. Beyond her research, Thu serves as president of the Associated Students of the Graduate Division at UCSF and advises the Patient Assistance Program at the Paul Hom Asian Clinic. She enjoys singing, yoga, and food tours.

Department of Developmental & Stem Cell Biology **AUNOY PODDAR**
Deborah Mann Scholar

Aunoy is an aspiring physician scientist with an interest in studying neurodevelopmental disorders. He graduated *magna cum laude* from Columbia University in 2019 with a BA in Biology and Computer Science. As an MD-PhD student at UCSF, he is studying the consequences of oxygen deprivation on newborn brain development. Leveraging recent advances in molecular biology, Aunoy will use AI-powered disease modeling to reconstruct the molecular patterns of hypoxic injury from high resolution RNA profiling. He will then translate his findings using the piglet to model human injury and test candidate therapies in collaboration with UC Davis.

Department of Chemistry and Chemical Biology **LEAH RAGOSTA**
Barbara A. Wolfe Scholar

Leah is a graduate of Northeastern University with a degree in Chemical Engineering and Biochemistry. As an undergraduate, she was able to participate in three research internships in drug discovery. These experiences gave her a passion for finding new ways to treat historically untreatable diseases through a chemical biology perspective. Leah is greatly looking forward to beginning her academic career at UCSF and being able to gain mentorship and support from faculty and peers that share her love for scientific inquiry.

Department of Bioengineering **DEVAN SHAH**
ARCS Foundation Scholar

Devan is enthusiastic about engineering cellular systems which sense molecular signals and coordinate responses for applications ranging from immunotherapy to tissue regeneration. He is currently working on engineering synthetic cell-cell communication in primary human T cells. The goal of his project is to build synthetic multicellular systems which recapitulate endogenous multicellular network operations like sense/response function modularity, response amplification, feedback-based response control, and spatial control of response activation. Prior to joining the bioengineering program at UCSF, he completed his BS and MS at San Francisco State University researching embryonic cardiac development. Outside of lab, Devan enjoys playing tabla, basketball, hiking, and rock climbing.

Department of Bioengineering

SERENA TANG

JP Morgan Chase Scholar

As an undergrad, Serena majored in physics and neuroscience because she was fascinated by the brain and space. There, she stumbled upon the field of space medicine, a field that combined her passions. With the support of a NASA grant and other university fellowships, she researched various aspects of human health in space. She enjoyed the multidisciplinary nature of this field, and it led her to pursue a Ph.D. in Bioengineering. Serena's current research focuses on building MRI analysis algorithms to better understand the glymphatic system in those with Alzheimer's disease and other related dementias. Her ultimate goal is to develop analytical tools to better understand changes in the brain under challenging conditions such as aging or space and figure out ways to preserve brain health.

Department of Biomedical Sciences

VIVASVAN VYKUNTA

Libby Tyree Taylor & Barry Taylor Scholar

Vivasvan's research interests focus on understanding and harnessing immunologic mechanisms for therapeutic benefit. As an undergraduate at UC Berkeley, he first began research, identifying mechanisms that restrain inappropriate B cell responses. Excited to translate these types of fundamental discoveries toward clinical applications, he joined the Gladstone Institutes following his graduation and developed gene editing platforms for adoptive cell therapies. Now, as an MD-PhD student in UCSF's Krummel Lab, Vivasvan is studying how myeloid cells regulate immunity both in physiologic and pathologic contexts and hopes to continue working to meet patient needs as a future physician-scientist. Outside of research, Vivasvan enjoys biking, cooking, and tending to his collection of indoor plants.

University of California, Santa Cruz

Department of Applied Mathematics
Department of Astronomy & Astrophysics
Department of Biomolecular Engineering
Department of Chemistry
Department of Computational Media
Department of Earth & Planetary Science
Department of Ecology & Evolutionary Biology
Department of Environmental Studies
Department of Mathematics
Department of Microbiology & Environmental Toxicology
Department of Molecular, Cell & Developmental Biology
Department of Ocean Sciences
Department of Physics
Science Communication Master's Program

Department of Mathematics — Sophie Aiken

Robert Lansdon Trust Scholar

Sophie's research interest lies in geometric analysis and geometric partial differential equations. Her Ph.D. research has two ongoing projects. The first is on fractional Yamabe problems; Sophie has already made significant progress. The second is a joint project with some of the leading researchers in the field from Chile, Brazil, and Germany. She has been doing exceptionally well in research and will be visiting this team in Chile in fall of 2024. Sophie has outstanding teaching experience and is also involved in many community building and outreach activities. She serves as a head TA in the Mathematics department and was an invited speaker at the Alliance of Hispanic Serving Institution Educators Best Practices Conference.

Science Communication Master's Program — Rita Aksenfeld

ARCS Foundation Scholar

Rita plans to focus on communicating science to audiences who have found it difficult to understand traditional science journalism. In particular, she wants to make science more accessible to people who have disabilities that impede their ability to engage with traditional forms of information. Her experience in the interdisciplinary field of chemical biology at both the undergraduate and graduate level allows her to quickly integrate information from multiple areas and communicate it to people with very different backgrounds. She has earned multiple awards for her scientific presentations, and works as a writer for UCLA's Division of Physical Sciences Newsroom.

Department of Ocean Sciences

MAR ARROYO

Wildcat Cove Foundation Scholar

Mar studies marine carbon cycling using a combination of observational and modelling tools to enhance our understanding of the ocean's role in global climate. His research specifically focuses on characterizing the spatial and temporal changes to ocean carbonate chemistry associated with anthropogenic carbon accumulation and the potential impacts of ocean acidification on the habitable zones of marine organisms. Mar is actively involved in mentorship and community building and is a leader in advancing diversity, equity, and inclusion efforts.

Department of Environmental Studies

CHRISTINA BLEBEA

ARCS Foundation Scholar

Christina is interested in how restoration affects biodiversity and insect-plant interactions in tropical forests. Her current project investigates ant functional traits and secondary seed dispersal in a nearly two-decade old forest restoration experiment in Costa Rica. She also studies how community factors affect forest permanence in El Salvador. Christina is passionate about undergraduate STEM education and mentors students both in the field and in the lab. Before beginning her Ph.D, Christina worked for ten years in nonprofits focused on ecological restoration, education, and human rights. In the future, she hopes to train students and further conservation efforts in Central America.

Department of Earth & Planetary Science

TERRA GANEY

Edina Jennison Scholar

Terra's research is motivated by her drive to help inform meaningful and effective solutions to anthropogenic climate change. As a third-year Ph.D. candidate, Terra uses biogeochemical modeling to reconstruct the evolution of seawater chemistry and climate through time, with the goal of better understanding the role of Earth's oceans in regulating the carbon cycle-climate system. Her current projects focus on the long-term carbon cycle and the mechanisms that set atmospheric CO2 through Earth history. Outside of research, Terra demonstrates her leadership and commitment to fostering an inclusive geoscience community through her work with numerous mentorship programs and outreach initiatives. In her free time, she enjoys exploring the California coast on long hikes, trail runs, and bike rides.

Department of Ecology & Evolutionary Biology **FRANKIE GERRATY**
Mary Ann Peoples Scholar

Frankie Gerraty is an Australian-American biologist, storyteller, and PhD student at UC Santa Cruz. His research examines ecosystem connectivity along human-disturbed coastlines, with a focus on how humans influence pathways of marine-to-terrestrial nutrient transfer. Frankie's research findings have been featured in *The Mercury News, Los Angeles Times,* and *SFGate*, and his scientific accomplishments have garnered him numerous awards including grants from the National Science Foundation, Explorers Club, PADI Foundation, Western Society of Naturalists, and the American Museum of Natural History. Dedicated to community engagement and science storytelling, he hosts a natural history podcast for KSQD Santa Cruz public radio and his creative nonfiction stories have been published by *The Center for Humans and Nature* and *Loam*. In his free time, he enjoys reading, surfing, listening to birds, raising houseplants, rock climbing, and exploring rocky intertidal zones.

Science Communication Master's Program **ANNA GUTH**
ARCS Foundation Scholar

Anna FitzGerald Guth is a journalist based in Northern California who covers agriculture, ecology, conservation, and the climate crisis. She is especially interested in the link between sustainable agriculture and climate resilience and has been a contributor to *Civil Eats*, a daily news source for critical thought about the American food system, for nearly a decade. For four years, she was a staff reporter and editor for the *Point Reyes Light*, the Pulitzer Prize-winning weekly newspaper covering the Point Reyes National Seashore and the coastal towns of Marin County. She earned her B.A. with honors in English and environmental studies from Wesleyan University in 2014.

Department of Biomedical Engineering — **ERIC MALEKOS**

Kathryn & Frederick Baron Scholar

Eric has a background in Computer Science, Applied Mathematics, and Pharmacology, and has applied his unique skillset to earn co-authorship on two published papers, two preprints, and one review since entering graduate school in 2020. Eric has developed a computational tool for designing CRISPR libraries for high throughput screen experiments, and is screening novel peptides for their contributions to inflammation and innate immune signaling. Eric has volunteered his time to others, mentoring five undergrads. He also volunteers as a Bay Area leader in Nucleate, an accelerator program which helps academic researchers launch biotech companies.

Department of Physics — **ADAM MOLNAR**

ARCS Foundation Scholar

Adam is a third-year doctoral student with a strong interest in nuclear instrumentation and its application to the studies of the fundamental foundations of the natural world. He is currently working on the development of a new type of charge-particle sensor, the "AC LGAD", that can provide precision timing and spatial information, and its prospective use in a compound system, known as the Active Target, in the PIONEER experiment that, if built, would be the first "four-dimensional" (three space dimensions plus time) tracking system to be developed. Adam is an avid Jugger player, traveling internationally for tournaments, and also has a bit of expertise in the field of herpetology.

Department of Astronomy & Astrophysics — **JOSEPH MURPHY**

Debbie Wreyford Scholar

Joey is interested in what the population of precisely characterized "exoplanets" (planets orbiting stars other than the Sun) can tell us about the physical processes that govern planet formation and evolution in our Galaxy. He is a member of several large, multi-institution Doppler surveys of promising planet candidates discovered by NASA's Transiting Exoplanet Survey Satellite. Prior to starting his work with Dr. Natalie Batalha at UC Santa Cruz, Joey received his undergraduate and master's degrees from Stanford University, where he studied the variable accretion processes of young stars. Beyond research, Joey is exploring the duality of his identity as a Native Hawaiian working in observational astronomy. In his free time, he enjoys swimming in the San Francisco Bay as a member of the Dolphin Club.

Department of Ecology & Evolutionary Biology **EMILY NAZARIO**
Rita & James Milner Scholar

Emily has developed an innovative approach to connecting a species' physiological limitations to their habitat use; this in turn is used to evaluate effective spatial management schemes. Her dissertation integrates numerous disciplines and methods as she details novel ways of assessing marine mammal dive recovery, uncovers the role of metabolic demands in juvenile shark habitat use, and evaluates factors contributing to successful applications of a climate-ready management approach. To accomplish her goals, she has developed a large network of university and government agency collaborators critical for completing her dissertation objectives as well as promoting their application to ongoing management efforts in the California Current. Emily has been involved in the NASA Ecological Conservation Impact Assessment project, and has published one first-authored and two co-authored publications. Additionally, Emily is devoted to improving the accessibility of research opportunities. She has worked to develop formal resources such as seminar series and workshops, and has provided stipends to her undergraduate research mentees. Outside of her graduate work, she continues to explore her passion for the marine environment through trail running, surfing, and art.

Department of Microbiology & Environmental Toxicology **BAO NGUYEN**
Nordstrom Stores Endowment Fund Scholar

Bao has been studying the regulation of biofilm formation and virulence in the human pathogen Vibrio cholerae, exploring how one major signal transduction pathway affects the bacterium's environmental survival and disease potential. Her research offers new insights into how these biofilms function during cholera transmission and infection. Bao has actively shared her findings at seminars and conferences. In the future, Bao plans to work on projects designed to improve sustainability in the context of biological systems.

Department of Computational Media — **DUSTIN PALEA**

Ji Ing Soong Endowment Fund Scholar

Dustin is helping solve a crucial problem: *How do we improve the quality of education, but in ways that inclusively scale to many learners?* His earliest work designed the Exploratory Reading Group program (supported by the NSF, Spencer Foundation) for undergraduates to explore the creative and motivating aspects of CS, together (ACM SIGCSE). Follow-on qualitative research uncovered barriers preventing computing faculty from engaging with them in full research experiences (ACM ICER). This led to a refocusing of the program to address these barriers towards creating pipelines into research; now institutionalized as an officially accredited Engineering course, serving hundreds of students.

More recent work turns large classes into an advantage rather than a disadvantage, by using crowdsourcing algorithms to surface peer work as hints – providing more guidance to every student and opportunities for authentic learning of complex skills (ACM IUI, AAAI HCOMP+CI – Best Poster Award). Outside of research, Dustin serves as an advisory board member for the Santa Cruz County Office of Education's K-12 CS Initiative, and volunteers at high school events to teach design and web development.

Department of Chemistry — **ROBERT SHEPHERD**

ARCS Foundation Scholar

Robert is a community minded bioanalytical chemist who has been pursuing the creation of high throughput mass spectrometry assays and workflows to enhance how we screen directed evolution libraries and identify natural products for drug discovery. He has received a number of awards, including the UCSC Chancellor's fellowship and the National Science Foundation Graduate Research Fellowship (GRFP) and has already published multiple manuscripts. In addition to his scholarship, Robert has been involved in translating his research to local outreach events including Expanding Your Horizons and Science on Tap through the UCSC Women in Science and Engineering group.

Department of Molecular, Cell & Developmental Biology

MEREDITH STEVERS

Ramsay Family Foundation Scholar

Meredith is a talented researcher with an impressive track record. She came to the Ph.D. program with several years' experience as a research technician, where she contributed to several publications, including a first-author paper. She is now in her fifth year and making outstanding progress on her thesis research, despite the drag the pandemic placed on her studies. Meredith's research focuses on the mechanism of a molecular "machine" in cells called the spliceosome. She established a system to determine how cancer associated mutations in the U2 snRNA alter spliceosome function in human cells. Having collected a significant amount of data, she is writing a manuscript that will be published in the coming year. Meredith is also committed to mentoring and helped one of her undergraduate mentees develop an independent project that garnered multiple undergraduate research awards.

Department of Applied Mathematics

ALEXIS TETER

ARCS Foundation Scholar

Alexis obtained a BS degree in Applied Mathematics from UCLA with a specialization in computing. Her research interests are in optimization, control and machine learning. Alexis's doctoral research investigates far-reaching generalizations of the so-called Schrödinger bridge problem and their solutions, originally formulated by physicist Erwin Schrödinger in 1931-32 in an attempt to understand quantum mechanics through stochastic calculus. She is deeply interested in STEM teaching, with experience in innovative pedagogy, course design and instructing mathematics and machine learning to middle- and high-schoolers and undergraduates.

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(as of 6/30/2024)

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URS Corporation
Lonna Wais
Mrs. Paul L. Wattis

Nothern California Chapter Donors

(gifts received between 7/1/2023 and 6/30/2024)

Scholar Awards Fund

Summa Cum Laude ($50,000-$99,999)

The Kimball Foundation / Gretchen Kimball
Arthur Rock and Toni Rembe Rock

Magna Cum Laude ($20,000-$49,999)

Agilent Technologies Foundation
William K. Bowes, Jr. Foundation
Dagmar Dolby
Dana and Robert Emery
John and Marcia Goldman Foundation
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Frederick and Kathryn Baron
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Chris Simpson Brent and Dr. Bruce Brent
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Charlie Campbell
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Debjani Sen and
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Anjali Sharma
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Christopher Wiseman and Eric Sleigh
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Kimberly Seashore
Spencer Sherwin
Camilla and George Smith
Sara Stephens
Peyton Stein
Lynne Otto Stickrod
James Teng
Kathryn Troxler

In Honor Of

Joanna Beam
Rita Benton Milner
Ellie Bingham & Katy Hope
Barbara Glynn
Linda Dyer Millard
Nancy Mueller

Contributors

Frederick Baron
Chris Simpson Brent
Katherine Chou
Patricia Gregory
Rosamonde Drabkin Morgan
Mary Poland
Paula Rantz
Kathryn Troxler

In Memory Of

John Glynn
Al Loranger

Contributors

Jane Gardner
Cynthia Haueter

General Operating Fund

Ellie Bingham
Elizabeth Callander
Katherine Chou
Barbara Glynn
Merrill Randol
Libby Tyree-Taylor

Our Thanks to Those Who Also Helped ARCS During the 2023-2024 Year

Dandelion Chocolate
Lee Dickinson, Advanced Visual Production
Deborah Greenwood and Carol Schimke of the ARCS office
Novogradac & Company
Martie Bateson Sautter/Sautter Graphics and Print
Gina Su

Supernova 2024
Scholar Celebration and Symposium

Individual Sponsors

$25,000

Barbara Glynn
Gretchen B. Kimball

$15,000

Lisa and Derek Kirkland
Wildcat Cove Foundation / Betsy Vobach

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$5,000

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Charlie Campbell
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Susan Taylor Kistler and Henry Kistler
Sheila and Tom Larsen
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Judy Swanson
Barbara A. Wolfe

SUPERNOVA 2024
SCHOLAR CELEBRATION AND SYMPOSIUM

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Cooley, LLP
Glynn Capital Management
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WINE SPONSOR

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Event Speakers

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Dr. Daniel Kinka, American Prairie
Dr. David Schaffer, UC Berkeley
Dr. Hila Shamon, Smithsonian Conservation Biology Institute
Dr. Michael Stryker, UCSF

Scholar Speakers

Jessie Blumenfeld, UCSF
Tyler Singer-Clark, UC Davis

Supernova 2024 Panel Moderators

Simone Bianco, Altos Labs Bay Area Institute of Science
Tony Capra, UCSF
Elizabeth Crum, JP Morgan Chase & Co.
Erika Check Hayden, UC Santa Cruz

Supernova 2024 Scholar Panelists

Ahmad Zaid Abassi, UC Berkeley
Amin Al-Jamal, San Francisco State University
Madelyn Broome, UC Santa Cruz
Camille Derderian, UCSF
Julia Harenčár, UC Santa Cruz
Mallory Harris, Stanford University
Arabi Seshappan, UC Merced
Tyler Singer-Clark, UC Davis

Northern California Chapter
Emerita Members (30+ Years)

(as of 6/30/2024)

Thank you to our Emerita Members for over thirty years of dedication to ARCS. We are honored by your commitment and generous contributions over the years.

Janet Miller Abbott
Susan Andrews
Donna Miller Casey
Karin Chamberlain
Cynthia Coolidge
Marion Cope
Gretchen de Baubigny
Dagmar Dolby
Michele Goss
Cynthia Haueter
Fifi Holbrook
Peggy Huntington
Sallie Huntting
Anne Kaiser
Jill H. Kramer
Laura Mateo
Margaret Dostal McDowell
Bailey Meyer
Linda Dyer Millard
Ellen Magnin Newman
Ada Regan
Adrianna Pope Sullivan
Judy Swanson
Laura Waste
Diane B. Wilsey

Northern California Chapter
Founded October 22, 1970
Leadership

Founders

Phyllis De Young Tucker+
Ann Russell Miller+
Ji Ing Soong+

Past Presidents

1970–1974 Ann Russell Miller+
1974–1976 Joan Cochran+
1976–1978 Jane H. Otto+
1978–1980 Diana Knowles+
1980–1982 Ji Ing Soong+
1982–1984 Penny Devlin+
1984–1986 Gail Glasser
1986–1988 Shirley C. Freund+
1988–1990 Eileen Ludwig+
1990–1992 Dagmar Dolby
1992–1994 Susan Boeing
1994–1996 Jill Kramer
1996–1998 Elizabeth Davis Devlin
1998–2000 Donna Miller Casey
2000–2002 Mary Beth Starzel
2002–2004 Linda Millard
2004–2006 Molly Hauser+
2006–2008 Sheila Larsen
2008–2010 Vickie Johnston
2010–2012 Cynthia W. Haueter
2012–2013 Donna Miller Casey & Sheila Larsen
2013–2014 Roulhac Austin & Donna Miller Casey
2014–2015 Roulhac Austin
2015–2017 Susan Mooradian
2017–2019 Chris Simpson Brent
2019–2020 Chris Simpson Brent & MJ Whitehouse, MD
2020–2021 MJ Whitehouse, MD
2021-2022 Elizabeth Callander
2022-2023 Ellie Bingham & Katy Hope

Board of Directors 2023–2024

Chris Simpson Brent, Deborah Mann & Leslie Van Houten, Co-Presidents
Ellie Bingham & Katy Hope, Immediate Past Presidents
Nancy Bush & Diana Moore, First Vice Presidents
Glennie Eisele & Francie Osthimer, Co-Secretaries
Nancy Bush & Andrea Tiller, Co-VPs, Finance
Deborah Mann & Libby Tyree Taylor, Co-VPs, Development
Heidi Huchberger & Judy Webster, Co-VPs, University Relations
Susan Acquistapace, VP, Scholar & Alum Relations
Barbee Callander & Diana Moore, Co-VPs, Membership
Nancy Bush & Mary Ann Peoples, Co-VPs, Communications
Nancy Mueller & Merrill Randol, Co-VPs, Science Activities
Jane Gardner, Advisor at Large, Ad Hoc

Leadership/Chapter Advisory

Debjani Sen, DEI Liaison to National
Joanna Beam, Governance/Parliamentarian
Janet Berry, Leslie Brenman, & Barbara Glynn,
Leadership Advisory Council Liaisons

+ Deceased

Northern California Chapter Members

(as of 6/30/2024)

Janet Abbott
Susan Acquistapace
Elizabeth Kibbey Adams
Betty Alberts
Susan Andrews
Pat Applegate
Roulhac Austin
Joanna Beam
Janet Berry
Allison Bhusri
Genny Biggs
Ellie Bingham
Joan Boothe
Leslie Manace Brenman
Chris Simpson Brent
Rada Brooks
Laine Buckingham
Nancy Bush
Carolyn Butcher
Barbee Callander
Elizabeth Callander
Charlie Campbell
Vera Carpeneti
Donna Miller Casey
Karin Chamberlain
Deborah Chesky
Cynthia Coolidge
Katie Cooper
Marion Cope
Pamela Rummage Culp
Lisi Bailliere Dean
Gretchen de Baubigny
Jerry DiVecchio
Dagmar Dolby
Carol Doll
Sheila Dowell
Lisa Ludwig Duffell
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Noelle Filippenko
Jane Gardner
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Michele Goss
Janice Haris
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Leah Hearst
Blair Heath
Cathie Hehman
Mary Henry de Tessan
Carol Henwood
Tina Bartlett Hinckley
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Leslie Hume
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Patricia Klitgaard
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Kendra Kramlich
Laura Lambert
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Sheila Larsen
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Ellen Magnin Newman
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Northern California Chapter Endowment Fund

The Northern California Chapter Endowment was established in 1987 with $10,000 to initiate provision for a perpetual source of funds for science scholarships. Subsequent gifts have substantially increased the corpus of the Endowment. There are two types of Endowment assets: (1) permanently restricted per donor instructions, and (2) as designated by the ARCS Foundation Northern California Chapter Board from large, unspecified donations and excess funds raised.

The Endowment offers an excellent vehicle for memorial funds and planned giving. The ARCS Foundation NCC Endowment Fund provides for establishment of named funds. Named funds established and fully funded to date are as follows:

- Katherine Hellman Black Fund
- Devlin Family Fund
- Georgiana Ducas Charitable Trust
- Dr. and Mrs. Bernard Kramer Fund
- Robert Lansdon Trust Fund
- Eileen D. and Lisa C. Ludwig Fund
- Jack Lund Fund
- Joan Diehl McCauley Fund
- Montgomery Street Foundation Fund
- Nordstrom Fund
- Ji Ing Soong Fund

In addition, the following named funds have been established by Barbara Wolfe and are in the process of being funded:

- Linda Dyer Millard Fund
- Barbara A. Wolfe Fund

If you would like more information regarding the ARCS Foundation Endowment, please call the ARCS office at 415-561-6537.

NOVOGRADAC & COMPANY LLP®

Independent Accountants' Compilation Report

To the Board of Directors of

Achievement Rewards for College Scientists Foundation, Inc.
Northern California Chapter:

Management is responsible for the accompanying financial statements of Achievement Rewards for College Scientists Foundation, Inc., Northern California Chapter (a nonprofit organization), which comprise the statement of financial position as of June 30, 2024, and the related statements of activities, functional expenses, and cash flows for the year then ended, and the related notes to the financial statements in accordance with accounting principles generally accepted in the United States of America. We have performed a compilation engagement in accordance with Statements on Standards for Accounting and Review Services promulgated by the Accounting and Review Services Committee of the AICPA. We did not audit or review the financial statements nor were we required to perform any procedures to verify the accuracy or completeness of the information provided by management. We do not express an opinion, a conclusion, nor provide any form of assurance on these financial statements.

Novogradac & Company LLP

Walnut Creek, California
September 24, 2024

ACHIEVEMENT REWARDS FOR COLLEGE SCIENTISTS FOUNDATION, INC.
NORTHERN CALIFORNIA CHAPTER
STATEMENT OF FINANCIAL POSITION
JUNE 30, 2024

	Net Assets without Donor Restrictions	Net Assets with Donor Restrictions	Total
ASSETS			
Cash and cash equivalents	$ 1,330,591	$ -	$ 1,330,591
Accounts receivable	30,500	-	30,500
Endowments, at fair value	5,421,097	4,329,703	9,750,800
Total assets	$ 6,782,188	$ 4,329,703	$ 11,111,891
LIABILITIES			
Accrued expenses	$ 14,232	$ -	$ 14,232
Accrued scholar awards	1,170,000	-	1,170,000
Total liabilities	1,184,232	-	1,184,232
NET ASSETS			
Without donor restrictions	176,859	-	176,859
Board designated endowment fund	5,421,097	-	5,421,097
Restricted endowment fund	-	4,329,703	4,329,703
Total net assets	5,597,956	4,329,703	9,927,659
Total liabilities and net assets	$ 6,782,188	$ 4,329,703	$ 11,111,891

see accompanying notes
2

ACHIEVEMENT REWARDS FOR COLLEGE SCIENTISTS FOUNDATION, INC.
NORTHERN CALIFORNIA CHAPTER
STATEMENT OF ACTIVITIES
FOR THE YEAR ENDED JUNE 30, 2024

	Net Assets without Donor Restrictions	Net Assets with Donor Restrictions	Total
SUPPORT AND REVENUE			
Grants and contributions	$ 803,462	$ 1,115	$ 804,577
Membership dues and fees	49,514	-	49,514
Scholar awards event	281,625	-	281,625
Field trips and other events	12,407	-	12,407
Endowment gain, net	776,194	583,358	1,359,552
Interest	201	-	201
Amounts appropriated for expenditure	247,100	(247,100)	-
Total support and revenue	2,170,503	337,373	2,507,876
EXPENSES			
Program services			
Scholar awards	1,170,000	-	1,170,000
Other program services	163,051	-	163,051
Supporting services			
Management and general	223,108	-	223,108
Fundraising	113,205	-	113,205
Total expenses	1,669,364	-	1,669,364
INCREASE IN NET ASSETS	501,139	337,373	838,512
NET ASSETS			
Beginning of the year	5,096,817	3,992,330	9,089,147
End of the year	$ 5,597,956	$ 4,329,703	$ 9,927,659

see accompanying notes

ACHIEVEMENT REWARDS FOR COLLEGE SCIENTISTS FOUNDATION, INC.
NORTHERN CALIFORNIA CHAPTER
STATEMENT OF FUNCTIONAL EXPENSES
FOR THE YEAR ENDED JUNE 30, 2024

	Program Services	Supporting Services: Management and General	Supporting Services: Fundraising	Total Expenses
Expenses				
Grants and other assistance	$ 1,331,689	$ -	$ -	$ 1,331,689
Salaries and wages	-	85,121	103,763	188,884
Accounting and legal	-	53,014	-	53,014
Office expenses	-	15,018	-	15,018
Occupancy	-	13,536	-	13,536
Insurance	-	1,004	-	1,004
Member events	-	41,721	-	41,721
Member communications	1,362	9,151	-	10,513
Community outreach	-	-	9,442	9,442
Miscellaneous	-	4,543	-	4,543
Total expenses	$ 1,333,051	$ 223,108	$ 113,205	$ 1,669,364

see accompanying notes

ACHIEVEMENT REWARDS FOR COLLEGE SCIENTISTS FOUNDATION, INC.
NORTHERN CALIFORNIA CHAPTER
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED JUNE 30, 2024

CASH FLOWS FROM OPERATING ACTIVITIES:	
Increase in net assets	$ 838,512
Adjustments to reconcile increase in net assets to net cash provided by operating activities:	
Net realized and unrealized gains	(1,405,114)
Decrease in accounts receivable	15,025
Increase in accrued expenses	7,196
Increase in accrued scholar awards	1,170,000
Net cash provided by operating activities	625,619
CASH FLOWS FROM INVESTING ACTIVITIES:	
Purchases of investments	(1,115)
Withdrawal of investments	655,785
Net cash provided by investing activities	654,670
NET INCREASE IN CASH AND CASH EQUIVALENTS	1,280,289
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	50,302
CASH AND CASH EQUIVALENTS AT END OF YEAR	$ 1,330,591

see accompanying notes
5

ACHIEVEMENT REWARDS FOR COLLEGE SCIENTISTS FOUNDATION, INC.
NORTHERN CALIFORNIA CHAPTER
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2024

1. Organization

Achievement Rewards for College Scientists Foundation, Inc., Northern California Chapter (the "Organization") was formed in October 1971 and incorporated in November 1973 for the purpose of funding science scholarships for students of high achievement at Northern California universities.

2. Summary of significant accounting policies and nature of operations

Basis of accounting
The Organization prepares its financial statements on the accrual basis of accounting consistent with accounting principles generally accepted in the United States of America ("US GAAP").

Basis of presentation
The Organization is required to report information regarding its financial position and activities according to the following net asset classifications:

Net assets without donor restrictions: Net assets that are not subject to donor-imposed restrictions and may be expended for any purpose in performing the primary objectives of the Organization. These net assets may be used at the discretion of the Organization's management and the board of directors.

Net assets with donor restrictions: Net assets subject to stipulations imposed by donors and grantors. Some donor restrictions are temporary in nature, which will be met by actions of the Organization or by the passage of time. Other donor restrictions are perpetual in nature, whereby the donor has stipulated the funds be maintained in perpetuity.

Donor-restricted contributions are reported as increases in net assets with donor restrictions. When a restriction expires, net assets are reclassified from net assets with donor restrictions to net assets without donor restrictions in the statement of activities.

Estimates
The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Cash and cash equivalents
Cash and cash equivalents include all cash balances on deposit with financial institutions and highly liquid investments with a maturity of three months or less at the date of acquisition.

Concentration of credit risk
The Organization maintains its cash in bank deposit accounts, which, at times, may exceed federally insured limits. The Organization has not experienced any losses in such accounts. The Organization believes it is not exposed to any significant credit risk on cash and cash equivalents.

2. Summary of significant accounting policies and nature of operations (continued)

Contributions and accounts receivable

Contributions received are recorded as net assets without donor restrictions or net assets with donor restrictions, depending on the existence and/or nature of any donor-imposed restrictions. Contributions that are restricted by the donor are reported as an increase in net assets without donor restrictions if the restriction expires in the reporting period in which the contribution is recognized. All other donor-restricted contributions are reported as an increase in net assets with donor restrictions, depending on the nature of restriction. When a restriction expires (that is, when a stipulated time restriction ends or purpose restriction is accomplished), net assets with donor restrictions are reclassified to net assets without donor restrictions and reported in the statements of activities as net assets released from restrictions.

Unconditional promises to give that are expected to be collected within one year are recorded at net realizable value. Unconditional promises to give that are expected to be collected in future years are recorded at the present value of their estimated future cash flows. The discounts on those amounts are computed using risk-adjusted interest rates applicable to the years in which the promises are received. Discount amortization is included in contribution revenue. Conditional promises to give are not included as support until the conditions are met.

As of June 30, 2024, the Organization's contributions receivable consisted of unconditional promises to give in the amount of $30,500.

Management considers receivables to be fully collectible. If amounts become uncollectible, they are charged to operations in the period in which that determination is made. Accounting principles generally accepted in the United States of America require that the allowance method be used to recognize bad debts; however, the effect of using the direct write-off method is not materially different from the results that would have been obtained under the allowance method.

Fair value measurements

The Organization applies the accounting provisions related to fair value measurements. These provisions define fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, establish a hierarchy that prioritizes the information used in developing fair value estimates and require disclosure of fair value measurements by level within the fair value hierarchy. The hierarchy gives the highest priority to quoted prices in active markets (Level 1 measurements) and the lowest priority to unobservable data (Level 3 measurements), such as the reporting entity's own data. These provisions also provide valuation techniques, such as the market approach (comparable market prices), the income approach (present value of future income or cash flows) and the cost approach (cost to replace the service capacity of an asset or replacement cost).

2. Summary of significant accounting policies and nature of operations (continued)

Fair value measurements (continued)
A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The three levels of valuation hierarchy are defined as follows:

Level 1: Observable inputs such as quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2: Inputs other than quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.

Level 3: Unobservable inputs that reflect the Organization's own assumptions.

Investments
Investments in marketable securities with readily determinable fair values and all investments in debt securities are reported at their fair values in the accompanying statement of financial position. Realized and unrealized gains and losses are included as a component of net investment income on the accompanying statement of activities.

Transfers of assets to a recipient organization
The Organization will occasionally transfer assets to a recipient organization. When the Organization specifies itself or its affiliate as the beneficiary, the Organization reports the transfer as a decrease in the asset transferred and an increase in another asset.

Endowment funds
In August 2008, Financial Accounting Standards Board ("FASB") provided guidance on the net asset classification of donor-restricted endowment funds for a not-for-profit organization that is subject to an enacted version of the Uniform Prudent Management of Institutional Funds Act of 2006 ("UPMIFA"). This guidance also improves disclosures about an organization's endowed funds (both donor-restricted endowment funds and board-designated endowment funds) whether or not the organization is subject to UPMIFA.

The Organization is subject to the required disclosures in that the Organization classifies its unrealized gains and losses on donor-restricted endowed funds as net assets with donor restrictions. As of June 30, 2024, no fund balances were below the historical gift amount. The Organization is subject to additional disclosures regarding endowment funds, which are further detailed in Note 4.

Income taxes
The Organization is exempt from federal income taxes under Internal Revenue Code Section 501(c)(3) and from California income and franchise taxes under Revenue and Taxation Code Section 23701(d). It has also been determined by the Internal Revenue Service that the Organization is not a private foundation within the meaning of Internal Revenue Code Section 509(a).

2. Summary of significant accounting policies and nature of operations (continued)

Income taxes (continued)
The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires the Organization to report information regarding its exposure to various tax positions taken by the Organization. Management has determined whether any tax positions have met the recognition threshold and has measured the Organization's exposure to those tax positions. Management believes that the Organization has adequately addressed all relevant tax positions and that there are no unrecorded tax liabilities. Federal and state tax authorities generally have the right to examine and audit the previous three years of tax returns filed. Any interest or penalties assessed to the Organization are recorded in operating expenses. No interest or penalties from federal or state tax authorities were recorded in the accompanying financial statements.

Revenue recognition
Membership dues are deferred and recognized in the appropriate membership year. Special event ticket sales are deferred and recognized when the event takes place.

Functional expenses
The costs of providing program services and other activities have been summarized on a functional basis in the statement of activities. Accordingly, certain costs have been allocated among program services, administrative and support, and fundraising services benefited. Such allocations are determined by management on an equitable basis.

Leases
The Organization determines if an arrangement is a lease at inception. An arrangement is a lease if the arrangement conveys a right to direct the use of and to obtain substantially all of the economic benefits from the use of an asset for a period of time in exchange for consideration.

Operating lease right-of-use assets and liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. The Organization uses a risk-free rate at the commencement date in determining the present value of lease payments.

The operating lease right-of-use asset also includes any lease payments made and excludes lease incentives. The lease terms may include options to extend or terminate the lease when it is reasonably certain that the Organization will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

Under the Financial Accounting Standards Board Accounting Standards Codification 842, Leases, the Organization elected the available practical expedient as an accounting policy election to apply the short-term lease exception, which does not require the capitalization of leases with terms of 12 months or less.

Subsequent events
Subsequent events have been evaluated through September 24, 2024, which is the date the financial statements were available to be issued, and there are no subsequent events requiring disclosure.

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3. Liquidity and availability of financial assets

The Organization's financial assets available for general expenditure, that is, without donor restrictions limiting their use, within one year of the statement of financial position date, comprise the following:

Cash and cash equivalents	$ 1,330,591
Accounts receivable	30,500
Investments, at fair value	5,421,097
Total	$ 6,782,188

The Organization regularly monitors liquidity required to meet its operating needs and other contractual commitments, while also striving to maximize the investment of its available funds. Additionally, the Organization operates with a balanced budget and anticipates generating sufficient revenue to cover general expenditures.

4. Endowments and fair value measurements

The Organization's endowment, established in 1988, exists in perpetuity to produce income to supplement current fundraising for the Organization's annual scholar awards. Its endowment includes both donor-restricted endowment funds and funds designated by the Board of Directors to function as endowments. As required by accounting principles generally accepted in the United States of America, net assets associated with endowment funds, including funds designated by the Board of Directors to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

The Organization has adopted investment and spending policies for endowment assets that attempt to provide a predictable stream of income to supplement fundraising for scholar awards as needed. Endowment assets include those assets of donor-restricted funds that the Organization must hold in perpetuity as well as board-designated funds. Under this policy, as approved by the Board of Directors, the endowment assets are invested in a manner that is intended to produce results that meet or exceed the performance results of the S&P 500 index while assuming a moderate level of investment risk. The Organization expects its endowment funds, over time, to yield an average rate of return of approximately 5-10%. Actual returns in any given year may vary from this amount.

To satisfy its long-term performance objectives, the Organization utilizes a total return strategy in which investment returns are achieved through both capital appreciation (realized and unrealized) and current yield (interest and dividends). The Organization targets a diversified asset allocation that places an emphasis on equities and fixed income investments to achieve its long-term return objectives within prudent risk constraints.

The Organization maintains a policy of appropriating no more than a 5% annual distribution of its endowment fund's average fair value over the prior 16 quarters. In establishing this policy, the Organization considered the long-term expected return on its endowment and expects the current spending policy will maintain the corpus of the endowment assets held in perpetuity as well as provide additional growth through new gifts and investment return.

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4. Endowments and fair value measurements (continued)

As of June 30, 2024, endowment net assets consisted of the following:

	Without donor restrictions	With donor restrictions	Total
Donor-restricted endowments	$ -	$ 4,329,703	$ 4,329,703
Board-designated endowments	5,421,097	-	5,421,097
Total	$ 5,421,097	$ 4,329,703	$ 9,750,800

For the year ended June 30, 2024, changes in endowment net assets consisted of the following:

	Without donor restrictions	With donor restrictions	Total
Endowment net assets, beginning of year	$ 5,008,026	$ 3,992,330	$ 9,000,356
Net investment return	776,194	583,358	1,359,552
Contributions	45,562	1,115	46,677
Withdrawals	(408,685)	-	(408,685)
Amounts appropriated for expenditure	-	(247,100)	(247,100)
Total	$ 5,421,097	$ 4,329,703	$ 9,750,800

The return on the endowments for the year ended June 30, 2024 was a net gain in the amount of $1,359,552, which is comprised of the following:

	Without donor restrictions	With donor restrictions	Total
Interest and dividends	$ 114,200	$ 93,312	$ 207,512
Fees	(29,125)	(22,855)	(51,980)
Net realized/unrealized gains	691,119	512,901	1,204,020
Total	$ 776,194	$ 583,358	$ 1,359,552

Donor-restricted endowments measured and recognized at fair value are comprised of the following as of June 30, 2024:

	Level 1	Level 2	Level 3	Fair Value Measurements
Money market funds	$ 47,426	$ -	$ -	$ 47,426
Fixed income	1,035,616	-	-	1,035,616
Equities	2,220,156	-	-	2,220,156
Exchange traded funds	205,313	-	-	205,313
Mutual funds	775,049	-	-	775,049
Real estate investment trusts	46,143	-	-	46,143
Total assets	$ 4,329,703	$ -	$ -	$ 4,329,703

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4. Endowments and fair value measurements (continued)

Board-designated endowments measured and recognized at fair value are comprised of the following as of June 30, 2024:

	Level 1	Level 2	Level 3	Fair Value Measurements
Money market funds	$ 37,888	$ -	$ -	$ 37,888
Fixed income	1,150,354	-	-	1,150,354
Equities	3,208,848	-	-	3,208,848
Exchange traded funds	310,886	-	-	310,886
Mutual funds	646,392	-	-	646,392
Real estate investment trusts	66,729	-	-	66,729
Total assets	$ 5,421,097	$ -	$ -	$ 5,421,097

5. Office lease

On April 19, 2018, the Organization entered into a standard office lease agreement (the "Lease") with Tides, Inc., a California non-profit corporation to rent an office space in San Francisco, California. On January 9, 2020, the Lease was amended, and the lease term was renewed for an additional three-year period commencing February 1, 2020, and expiring on January 31, 2023, with monthly rent of $1,057.50 for year one, $1,092.75 for year two, and $1,128.00 for year three. In accordance with the amendment, rent shall be adjusted February 1, 2021, and every 12 months thereafter. Following the expiration of the amended lease term, the Lease was held over on a month-to-month basis. For the year ended June 30, 2024, office lease expense was $13,536.

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