



Sanford Consortium
FOR REGENERATIVE MEDICINE
UC San Diego



ARCS

ADVANCING
SCIENCE
IN AMERICA®



SAN DIEGO CHAPTER

ANNUAL REPORT
2024 - 2025

ACHIEVEMENT REWARDS for COLLEGE SCIENTISTS MISSION

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, engineering and medical research.



Microbiomes of the Human Body

This map depicts the different microbial communities of the human body – oral, epidermal, vaginal, fecal - and reveals how distinct they are from one another. The image was incorporated into a unique piece of art created by ARCS supporter Janet Hubka, CEO of Ilus Art, and presented to Dr. Rob Knight at the 2025 Scientist of the Year Celebration.

MESSAGE FROM THE PRESIDENT

CELEBRATING OUR 40TH ANNIVERSARY, THE SAN DIEGO ARCS CHAPTER CONTINUES TO THRIVE

Thanks to the generosity of our members, foundation supporters and friends during the past fiscal year, we are again able to fund 50 Scholars at area universities at \$10,000 each during 2025-26. And with the severe federal funding cuts to scientific research, ARCS' support is more important than ever.

Reviewing the numbers, members donated \$128,676 to our Scholar Fund last year. Charter Member Dottie Georgens matched up to \$40 of donations made during the spring, netting the Chapter an extra \$800! Our Scientist of the Year event netted \$102,401. Foundations generously supported our efforts to the tune of \$220,000, and Friends of ARCS helped us with \$16,450. With \$6,785 in miscellaneous income, and \$25,688 from our reserve, we are able to fully fund another 50 Scholars. 100% of these funds go to Scholar awards.

ARCS is the success it is due to the strength of its members. Happily, three new members joined our chapter to help keep us strong: Sally Oxley, Greta Treadgold and Nicola Wilkins-Miller. Ingrid Benirschke-Perkins was overwhelmingly selected as our ARCS Light Awardee, the highest honor our Chapter can bestow. Her contributions are too numerous to list but they all spring from an exceptional can-do attitude.

Speaking of the Scientist of the Year Celebration, under the careful leadership of Cathie Atkins, about 160 guests reveled in science and hospitality at the Conrad Prebys Performing Arts Center. UC San Diego Professor Rob Knight, one of the most cited scientists in the world, earned his place in our SOY hall of fame, delivering startling remarks about how microbiomes affect our mental and physical health as well as the environment. Approximately 20 of our 50 Scholars from San Diego State University, Scripps Research, UC San Diego and the University of San Diego shared their research with inquisitive guests via poster sessions and all Scholars were introduced both on stage and via video montage. So uplifting!

In February the chapter coordinated a spectacular visit for the ARCS National Board, a first for our chapter. Visitors from across the country didn't seem

to mind visiting San Diego in the dead of winter! Besides meetings in spectacular venues on the coast, guests were treated to fascinating field trips. Former Chapter President Kathe Albrecht earned a national ARCS Sparks award for her leadership in organizing the three-day visit.

Members fostered their interest in science and discovery throughout the year with captivating presentations at three general meetings which included our newest Scholars describing their research and two Scholar Alums who are leading in their career fields. These Alums are Leslie Nangle, Vice President, Research at Tyr Pharma and Megan Jennings, Conservation Ecologist and Co-Director of SDSU's Institute for Ecological Monitoring and Management.

Members also attended field trips to learn about the aerosolization of border pollution in the Tijuana River Valley from UC San Diego Professor Kimberly Prather, and the sophistication of modern simulation labs at the USD School of Nursing from Professor Caroline Etland and Lab Coordinator Christine Kelly.

Board members mingled with Scholars at the annual Scholar Picnic at the home of University Relations VP Catie Madani, while a dozen members paired with Scholars throughout the year in the Getting to Know You Program. Members also enjoyed socializing at our annual summer party at member Elizabeth Taft's home and our holiday party at the San Diego Yacht Club.

My deepest personal thanks go to our board, our members, and all our wonderful supporters for making 2024-25 a banner year for ARCS and ARCS Scholars. We are busy, bold and brave, eager to meet this moment by doing even more in 2025-26 for PhD students in STEM fields.



LESLIE K. BRUCE
President 2024-2025



WHO WE ARE: THE HISTORY of ARCS

October 4, 1957, was a game-changer. On that date, Russia launched Sputnik, a 183-pound satellite, roughly the size of a beach ball, into space. This surprise launch shocked the United States and forced it to rethink its place as the technological leader of the world. It also ushered in the Space Age and the Cold War. The Russian action touched all areas of America, including politics, patriotism, science, the military, and education. In response, the U.S. undertook an unprecedented push to educate Americans in science and math.

As part of that initiative, a group of women in Los Angeles saw the opportunity to make a difference by creating a partnership between science and society. Their goal was to re-establish and re-energize the technological superiority of the United States. They started the first ARCS chapter in September 1958. ARCS (Achievement Rewards for College Scientists) is a nationally recognized nonprofit organization founded and administered by women who volunteer their time and talent to support American advancement in STEM (science, technology, engineering and math) and in biomedical research. It is now comprised of 15 chapters across the nation.

In 1985, four San Diego women established ARCS Foundation, San Diego Chapter: Karen Bowden, Karon Luce, Barbara McColl, and Pattie Wellborn. Forty years later, ARCS San Diego has provided over \$13 million in financial awards to the brightest STEM scholars at four local academic institutions. By investing in these scholars, we are securing a better future for America and the world.

FACTS AT A GLANCE

101 CURRENT MEMBERS

1985 CHAPTER STARTED WITH 4 FOUNDERS

\$13,302,000 FUNDED SINCE 1985

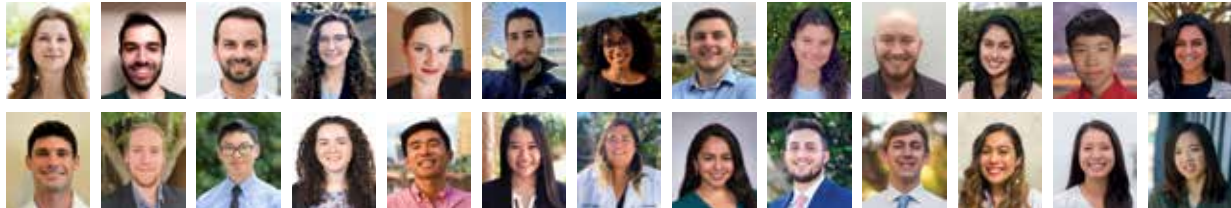
50 SCHOLARS AWARDED **\$500,000** IN 2024-2025

98% GRADUATION RATE

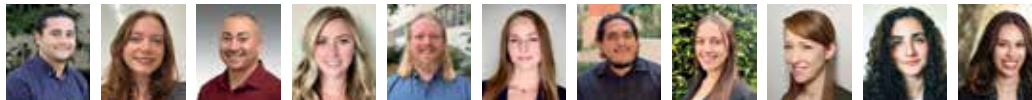
OUR SCHOLARS ... TOMORROW'S LEADERS

2024-2025 ARCS SAN DIEGO CHAPTER SCHOLARS

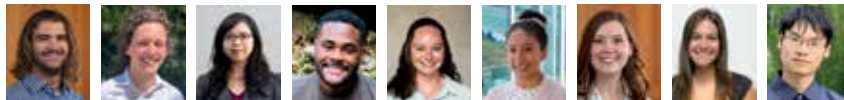
UNIVERSITY OF CALIFORNIA, SAN DIEGO



SAN DIEGO STATE UNIVERSITY



SCRIPPS RESEARCH



UNIVERSITY OF SAN DIEGO



We continue to be amazed by our Scholars' talent, hard work, and dedication. We are also grateful for our academic partners - UC San Diego, San Diego State University, Scripps Research and the University of San Diego – who choose our Scholars and who are approved by the ARCS National Board on the basis of excellence in basic science, engineering, math and medical research.

Our Scholars are all PhD candidates and are conducting research and making new discoveries that will lead to advances in global health and wellness, understanding and treatment of disease, national security, ecological improvements, space exploration and in many other STEM areas.

We are proud to volunteer our own time to promote scientific advancement in our country and to provide unrestricted funds to tomorrow's leaders. 100% of our contributions go directly to our Scholars, not to administration or infrastructure. ARCS is one of the largest contributors to basic science education of any private membership organization in the United States.

SCHOLAR SELECTION

Scholars must be U.S. citizens and meet ARCS-established academic criteria with a minimum 3.5 GPA, while pursuing graduate degrees in a wide range of scientific subjects. These Scholars are specializing in astronomy, biochemistry, botany, cell and molecular biology, chemistry, computer science, ecology, engineering, genetics, marine biology, mathematics, medical research, oceanography, physics and more.



**LUISJESUS SANTIAGO
CRUZ**

SDSU / UC SAN DIEGO

College of Sciences

Concentration: Biology

Specialization: Cancer Biology



KAYLA ELAINE NUTSCH

SCRIPPS RESEARCH

Skaggs Graduate School of
Chemical and Biological Sciences

Concentration: Biomedical Sciences

Specialization: Chemical Biology



CHESSON SCOTT SIPLING

UC SAN DIEGO

Physical Sciences

Concentration: Physics

Specialization: Physical

Approaches to Computation



KRISTINA MARIA LOPEZ

UNIVERSITY OF SAN DIEGO

Hahn School of Nursing and Health
Science

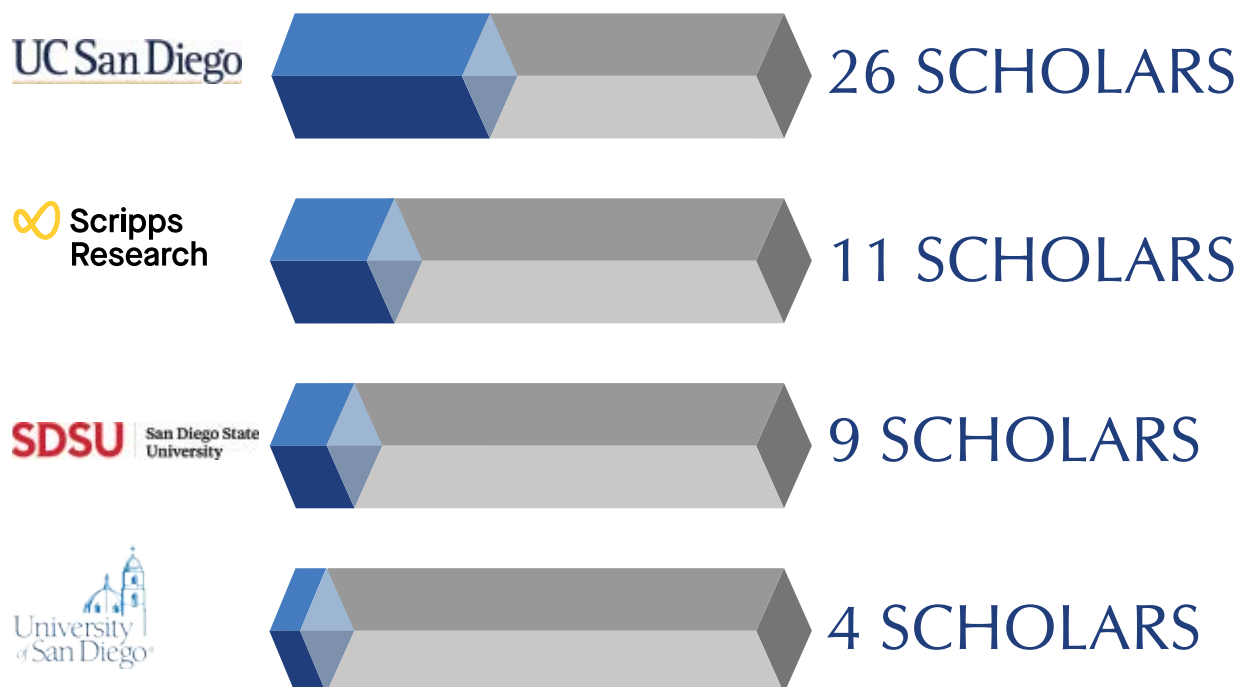
Concentration: Nursing

Specialization: Perianesthesia

ALLOCATION of ARCS SCHOLAR AWARDS

The amount of funding available for ARCS Scholar Awards is calculated each year by using a distribution formula based on the percentage of eligible Scholars enrolled at each ARCS-approved recipient university.

The 2024-2025 academic year awards were allocated as follows:



ARCS SAN DIEGO

CUMULATIVE FUNDING 1985-2025

TOTAL AWARDS GRANTED 1,734
TOTAL FUNDING \$13,302,000



\$7,117,500

887
AWARDS

UC San Diego

\$3,394,500

515
AWARDS

SDSU San Diego State
University

\$1,485,000

230
AWARDS

 **Scripps
Research**

\$775,000

102
AWARDS


University
of San Diego

2025 SCIENTIST of THE YEAR CELEBRATION

Oh what a night! The Conrad Prebys Performing Arts Center buzzed with excitement as we celebrated our 2025 Scientist of the Year, Dr. Rob Knight, a renowned microbiome pioneer from UC San Diego, along with this year's Scholars, all 50 of them!



The Scholar poster presentations drew the usual excitement and praise from our guests, who so enjoyed meeting one-on-one with these young scientists and learning about their research. Soon it was time to move into the main auditorium for the program. President Leslie Bruce welcomed the audience and then announced the arrival of the Scholars, who marched on stage accompanied

by the traditional trumpet fanfare. Next up was a heart-warming video collage of Scholar introductions, followed by an inspiring video message from Scholar alum Dr. Kathryn Patras.

Dr. Stanley Maloy then took the stage and introduced this year's SOY, Dr. Rob Knight. Dr. Knight wowed us with his insights about the profound impact our microbiome has on our mental and physical health and earned an enthusiastic standing ovation.

We could not have been prouder of the talent and dedication to science on full display among our Scientist of the Year, and our Scholars, and Scholar Alums. We were also incredibly grateful to our members and sponsors who helped us raise over \$100,000 for the Scholar Fund!



ROB KNIGHT, PhD – 2025 SCIENTIST of THE YEAR

Dr. Knight has dedicated his career to the study of microbiomes—the microorganisms that live in the environment and the human body. His research has a wide range of practical applications, and his affiliations on campus reflect the deep interdisciplinary nature of his work. Knight is a professor in the Department of Pediatrics in the UC San Diego School of Medicine; and a professor in the Department of Bioengineering and the Department of Computer Science & Engineering at the UC San Diego Jacobs School of Engineering, where he is also the founding director of the UC San Diego Center for Microbiome Innovation. Also at UC San Diego, Knight is affiliated with the Halicioğlu Data Science Institute (HDSI) and the Institute for Engineering in Medicine (IEM).



KATHRYN PATRAS, PhD – ARCS SCHOLAR ALUMNA SPEAKER

Dr. Patras earned her PhD jointly from SDSU and UC San Diego. She went on to complete her postdoc at UC San Diego before becoming an assistant professor of Molecular Virology and Microbiology at the Alkek Center for Metagenomics and Microbiome Research at the Baylor College of Medicine in Houston, Texas. Dr. Patras' lab focuses on biological interactions between bacterial pathogens, mucosal immunity, and the microbiota of the female urogenital tract.

“STEM ACCELERATOR” TITLE SPONSOR

UC San Diego

“STEM ENERGIZER” SPONSORS

SDSU San Diego State University

BENEFITS of ARCS MEMBERSHIP

ARCS members have the opportunity to actively engage with Scholars and academic partners at presentations, lab and site visits, and social events. Members also enjoy learning about cutting-edge technologies and establishing relationships with Scholars. Here are some of the presentations and field trips we enjoyed in 2024-2025.



SCRIPPS INSTITUTION OF OCEANOGRAPHY

| ARCS members and friends were treated to back-to-back talks by two leading scientists at SIO engaged in cutting edge research surrounding the environmental disaster caused by sewage and industrial waste spilling

from Tijuana River into the South Bay: Dr. Jeff Bowman and Dr. Kim Prather



UNIVERSITY OF SAN DIEGO NURSING SIMULATION CENTER |

ARCS members and guests were offered a guided tour of USD's state-of-the art Nursing Simulation Center, where talented performers create real-life scenarios, from sinus infections to emotional life-and-death situations. This enables students

to practice critical skills needed to treat patients in the clinical setting such as compassion, cultural sensitivity, and composure under pressure. Our own Dr. Caroline Etland, professor of nursing at USD, and Christine Kelly, Simulation Lab Coordinator, led the tour.



CONSERVATION AND WILDLIFE MANAGEMENT |

Dr. Megan Jennings, conservation ecologist and Co-Director of SDSU's Institute for Ecological Monitoring and Management, was invited to speak at the Summer General Meeting in June. She discussed her current work, which focuses on wildlife movement, landscape connectivity, and climate adaptation. Dr. Jennings uses field, lab-based, and analytical techniques to inform conservation planning and wildlife management, and to support resilience to climate change in our natural landscapes and local communities. Dr. Jennings was an ARCS Scholar at SDSU in 2011-2012.

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Cindy Goodman



MEMBERS-AT-LARGE
Margaret Dudas, Linda Johnson



2024-2025 DONOR HONOR ROLL

JULY 1, 2024 – JUNE 30, 2025
GIFTS RECEIVED FOR AWARDS TO BE MADE IN THE ACADEMIC
YEAR 2025-2026

\$70,000

Reuben H. Fleet Foundation

\$40,000

Beyster Family Foundation

Hervey Family Fund

\$30,000

Donald C. and Elizabeth M. Dickinson
Foundation

University of California, San Diego

\$20,000 - \$29,999

Ellen Browning Scripps Foundation

San Diego State University

\$10,000 - \$14,999

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\$5,000 - \$7,499

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University of San Diego

Mara Ybarrondo

\$2,500 - \$4,999

Cathie Atkins

Hologic

Helga Moore

Prebys Foundation

\$1,000 - \$2,499

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Kristin Boyd

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Lozano-Fellek Fund

Barbara McColl

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Nancy Rudolph

Barbara Starkey

Greta Treadgold

Cindy Wollaeger

Britt Zeller

\$500 - \$999

June Chocheles

Marty and Lynn Glick

Susan Johnson

Alexis Lasheras

Marti and Frank Panarisi

Lisa Perich

Carolyn Sharp

Ann Siemens

Tamia Strachan

UP TO \$499

Nancy Anderson

Nancy Bildsoe

Susan Barbey Booth
Alice Brown
Rachel Collins
Andrea Correnti
Kelsey Dale
Suzanne Dixon
Kim Doren
Susan Dramm
Cheryl Ernst
Caroline Etland
Mary Fitz
Peggy Hanley
Kelly Hartshorn
Ann Hill
Alexa Hudnut
Sue Hylton
Linda Johnson
Sue Kalish
Joy Kirsch
Candace Kohl
Karen Kritzer
Sharon Lerner
Catie Madani
Deborah Mandabach
Margaret McFall-Ngai

Grace Miller
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Yolanda Walther-Meade
Patricia Wellborn
Pam Werner

The amounts above indicate donations to the ARCS Foundation Scholar Awards Fund, Endowment Fund and Memorial Funds.

See an error or omission? Please send an email to: sandiego@arcsfoundation.org



OUR ALUMNI – CHANGING THE WORLD!

Thousands of ARCS Scholar alumni go on to make outstanding contributions to advance science and keep America competitive. Here are just a few standouts from our chapter.



PAUL YAZAKI, PHD (1991-1992, SDSU) is currently a research professor in the Department of Immunology & Theranostics at the Arthur Riggs Diabetes & Metabolism Research Institute, City of Hope in Duarte, CA. He is also Director of Clinical Production at the Center for Theranostic Studies at the Beckman Research Institute of City of Hope. Dr. Yazaki's research focus is antibody engineering novel molecules for clinical applications. The scope of this research includes recombinant antibodies, antibody fragments, fusion proteins and antibody-based nanoparticles for the imaging and therapy of cancer.



AMY KOBALTER, MD, FAAD (1991-1992, UCSD) is a dermatologist in San Rafael, CA with over 30 years of experience in the medical field. She graduated from the UC San Diego School of Medicine in 1992 and is currently affiliated with the MarinHealth Medical Center, where she specializes in complex skin conditions and skin cancer. She is passionate about providing the most comprehensive care for her patients through meticulous examination and thoughtful treatment. Dr. Kobalter has been consistently awarded Marin's Top Doctor Award.



ROSHAN KUMAR, PHD (1998-2000, SCRIPPS RESEARCH) is the Head of Research at HiFiBiO Therapeutics based in Cambridge, Massachusetts. He is a scientist with over 15 years of experience in the study of complex biological systems. Roshan leads US External Innovation activities to identify high impact partnerships and collaborations for the company's internal pipeline and DIS® platform. Roshan's previous research was focused on the study of transcriptional regulatory networks in mammalian systems, and on understanding how cellular heterogeneity influences fate decisions in individual pluripotent stem cells.

INVESTING IN AMERICA'S FUTURE



Join us to support ARCS Scholars and invest in the future of science, technology, research and innovation in America. The Scholar Award Fund is supported by ARCS members, foundations, academic institutions, businesses, and individuals in the community.

Give online at san-diego.arcsfoundation.org

Donations by check may be mailed to:

ARCS Foundation, Inc. - San Diego Chapter, c/o Mother Lode Bookkeeping, Inc.
Attn: Christine Diaz, 207 West D Street, Encinitas, CA 92024

All gifts are tax-deductible and greatly appreciated by our members, the Scholars and their academic institutions.

100% OF EACH DONATION GOES TOWARD SCHOLAR AWARDS

To make a donation of stock, create an endowment, include ARCS in your Estate plans, or request additional information, please contact:

Leslie Bruce, President | lkbrucejd@gmail.com
Kristin Boyd, VP Fund Development | kmgboyd@gmail.com

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