

INSIDER



April 2024

PRESIDENT'S MESSAGE...



Kathe Albrecht

Welcome to the April issue of the *Insider* newsletter. With the Spring season well underway, our chapter has been busy with field trips, meetings, Scholar activities, and planning upcoming events. I know you will enjoy reading highlights of these activities in the following pages. Thank you to all who have contributed to this issue, including **Ingrid Benirschke-Perkins**, who puts together our newsletter each quarter.

In this issue, first and foremost, we introduce our 2024 Scientist of the Year, **Dr. Terry Sejnowski**. Dr. Sejnowski's early work on machine learning and the brain laid the groundwork for today's burgeoning field of artificial intelligence (AI). Dr. Sejnowski continues to be at the forefront of research on neural networks and AI and was recently named as the 2024 recipient of the coveted Brain Prize. Invitations have been sent out for the Scientist of the Year Celebration. Please join us on April 27 at The Conrad in La Jolla, to celebrate our 2024 Scientist of the Year, our current Scholars, and ARCS Alumni. It will be a very special evening!

In the following pages, learn about our member activities such as the recent field trip to the Sharp Prebys Innovation and Education Center, an impressive new event facility. Also highlighted in this issue is our Winter General Meeting which was held on January 30 at the La Jolla Country Club. In addition to our business meeting, we enjoyed a fascinating talk by **Dr. James Brewer**, director of the Shiley-Marcos Alzheimer's Disease Research Center at UC San Diego School of Medicine. We learned so much about the latest research on Alzheimer's Disease. It is reassuring to know how much is being done to understand more about this disease which affects so many families, and to hear about exciting inroads they are making in developing therapies and treatments. Of course, the Winter Meeting highlight was the presentation of the ARCS Light Award to our dedicated member **Kimberly Miller**. Congratulations, Kimberly! Catch all the highlights of these and other activities in this issue.

Read about our current Scholars and Scholar Alums. What are they up to? They continue to make such an impact on the world of science. For example, we learn that ARCS alum **Jervaughn Hunter**'s work on heart disease was recently

Continued on Page 2



PRESIDENT’S MESSAGE... Continued from Page 1

published in *Journals of the American College of Cardiology: Basic to Translational Science*. Current ARCS Scholar **Joshua Mesfin** was also one of the co-authors of the paper. Jervaughn believes this is likely the first use of an injectable biomaterial therapy to be evaluated for its impacts on preventing ventricular heart failure. Thanks to this work, the FDA has approved moving forward with clinical trials in pediatric patients. His work will clearly have a direct impact on treatment for disease. Our Scholars and Alums continue to amaze us with their talent and dedication to science.

Enjoy the *Insider!* And I will see you at the Scientist of the Year Celebration!

Kathe Albrecht, President
ARCS Foundation, San Diego Chapter

***Scripps Research Check Presentation
(February 27, 2024)***



The annual ARCS check presentation was held in late February at the Scripps Research (SR) Faculty Club. Attending the event from SR were all nine 2023-2024 ARCS scholars (**Justice Fleischmann, Stephan Freeman, Brett Garabedian, Sergio Labra, Garrett Lindsey, Michaela Medina, Colleen Maillie, Kylie Nutsch and Caroline Stanton**), Dean of Graduate & Postdoctoral Studies **Phil Dawson**, Associate Professor of Molecular & Cellular Biology **Katja Lama**, Regional Philanthropy Director **Tara Holcomb**, Senior Director of Donor Relations **Addie Eure**, and Donor Relations Specialist **McVey Ayers**.

Attending from the ARCS San Diego Chapter were President **Kathe Albrecht**, President Elect **Leslie Bruce**, University Relations VP **Catie Madani**, SR Liaisons **Kelly Hartshorn** and **Tami Strachan** and UR’s Editor of Scholar Profiles **Janet Roemer**.

Continued on Page 3



Scripps Research Check Presentation...

Continued from Page 2

Phil Dawson discussed the beginning of the Graduate School at Scripps Research in 1989. Since its beginning, the Graduate School has supported and graduated 1,000 students in PhD studies in Cell & Molecular Biology, Structure and Chemistry. ARCS has supported 73 of these Scholars over the years. The Graduate programs at SR in Chemistry and Biological Sciences are currently each listed as one of the top ten best in the US by *US News and World Report*. Phil went on to explain that a very special aspect of the Graduate program is that it allows the students the ability to explore different sections of the program and then allows them to decide what path they choose to follow. SR is celebrating its 100th year anniversary in 2024.

Following the SR remarks, Kathe Albrecht spoke to the group. She thanked the SR team that hosted ARCS for this event and the nine amazing Scholars for 2023-2024. Each ARCS Scholar was then introduced and provided a short summary of their research, which they each accomplished with clarity for the layperson attendees. The scholars also took the opportunity to express their heartfelt thanks for the scholarships which provided them with an important means of progressing both their research and other life needs.

At the end of the ceremony, the check for \$90,000 was presented, and all the meeting attendees gathered for a group photo. This was followed by drinks and food prepared by SR, where the meeting attendees gathered informally and had a chance to enjoy further interaction.

SDSU's 13th Annual Scholarship Donor Appreciation Luncheon (February 26, 2024)



President **Kathe Albrecht**, VP Fund Development **Kristin Boyd**, and VP University Relations **Catie Madani** represented ARCS San Diego at SDSU's 13th Annual Scholarship Donor Appreciation Luncheon, hosted by **Chancellor Adela de la Torre**. They enjoyed a wonderful lunch with some of our amazing ARCS Scholars, including **Tiffany Luong**, **Ashley Schwartz**, and **Isabel White**.



Field Trip to Sharp Prebys Innovation & Education Center (February 22, 2024)

Thanks to **Jayne Lindberg** and the Field Trips Subcommittee, eighteen ARCS members were able to tour the Sharp Prebys Innovation and Education Center (SPIEC) on February 22, observing in amazement the beauty of the building's various facilities, especially its various patient simulation labs. Past San Diego ARCS president **Holly Heaton**, also a board member of the Sharp Foundation, greeted ARCS members and introduced Foundation CEO **Bill Littlejohn** who gave a history of Sharp HealthCare and the SPIEC. Bill then introduced the group to former ARCS Scholar **Laurie Ecoff**, PhD, RN, NEA-BC, CNL who runs the Terrence and Barbara Caster Institute for Nursing Excellence which is housed at the SPIEC. Laurie shared her career journey with the group, expressing her gratitude for the support from ARCS when it mattered most. After the fascinating tour, many members stayed for lunch, conversation and good company at the Modern Recipe Café on site. Our thanks to **Laurie Roeder** for snapping these photos for all to enjoy!





Winter General Meeting (January 30, 2024)

The Winter General Meeting was a huge success, attracting over 60 members and guests to the La Jolla Country Club for an action-packed business agenda and a fascinating talk on Alzheimer’s disease, delivered by **Dr. James Brewer**, Professor and Chair of the Department of Neurosciences and Director of the Shiley-Marcos Alzheimer’s Disease Research Center at UC San Diego School of Medicine.

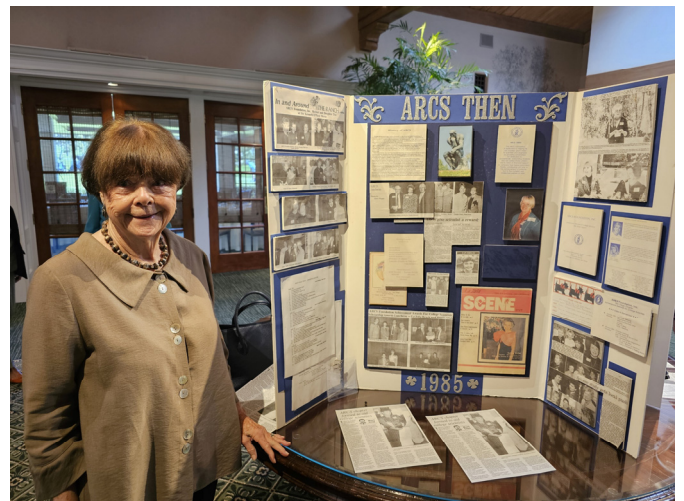


After hearing report highlights from President **Kathe Albrecht**, Member Giving Director **Robin Luby** and SOY Chair **Ingrid Benirschke-Perkins**, the much anticipated moment arrived...the revelation of this year’s ARCS Light award recipient! **Holly Heaton** gave a warm and heartfelt tribute to this year’s ARCS Light honoree, **Kimberly Miller**, who has touched us all with her kindness, thoughtfulness, and dedication to ARCS. Brava, Kimberly, we salute you and thank you for your longtime support of ARCS!



Kimberly Miller is our 2023-2024 San Diego ARCS Light.

Next, **Leslie Bruce**, VP of Meetings and Social Events and President Elect, introduced our guest speaker, and for the next half hour, we were enthralled by the exciting and promising research



San Diego ARCS history is presented by Chapter co-founder **Karen Bowden**.



Winter General Meeting (January 30, 2024)...

Continued from Page 5

that Dr. Brewer is leading in regard to the early detection of Alzheimer's and the efficacy of new drugs under development. After a few questions from the audience, it was time for a delicious lunch and pleasant conversation with fellow ARCS members and guests.

Kudos and thanks to **Leslie Bruce** and her team for organizing such an interesting and enjoyable meeting!





2024 Scientist of the Year Announcement (January 9, 2024)

Professor **Terrence Sejnowski** has been named 2024 Scientist of the Year by the ARCS Foundation of San Diego. The ARCS (Achievement Rewards for College Students) San Diego chapter is honoring Sejnowski for his pioneering research in neural networks and computational neuroscience.

Each year, an ARCS committee that includes multiple members and the foundation's president, and seeking input from former Scientist of the Year honorees and scientific advisors in the community, makes a recommendation to its membership for the Scientist of the Year award. ARCS voted unanimously for Sejnowski to be its 2024 honoree.



"This honor is validation of the trailblazing work Terry has done in the field of computational neuroscience," says Salk President **Gerald Joyce**. "We are thrilled ARCS has recognized him in this prestigious manner."

"The importance of artificial intelligence, AI, its incredible potential in today's data-driven world, cannot be overstated, and the San Diego Chapter of ARCS is thrilled to honor one of its pioneers," says **Kathe Albrecht**, president of ARCS San Diego. "Dr. Terry Sejnowski's visionary work on neural networks and computational neuroscience in the 1980s laid the foundation for the machine learning and AI revolution that we're experiencing today. His current research continues to further our understanding of the brain and its complex functions, from filtering what we see to recalling memories. We are proud to recognize Dr. Sejnowski as our 2024 Scientist of the Year and look forward to celebrating his achievements in April."

Read the full press release at: <https://www.salk.edu/news-release/salk-institutes-terrence-sejnowski-named-scientist-of-the-year-by-arcs-san-diego/>



Updates from ARCS Members

Heartfelt thanks to ARCS Member **Barbara Bry** for shining a light on three inspirational ARCS Scholars - **Jennie Lee** (USD), **Brett Garabedian** (Scripps Research), **Wilfredo Gonzalez-Rivera** (UCSD) - all first-generation college graduates, and for revealing the motivating forces that propelled each of them into a career in STEM despite the many obstacles along the way!



Jennie Lee
(USD)



Brett Garabedian
(Scripps Research)



Wilfredo Gonzalez-Rivera
(UCSD)

Here's the full story, published in March in the *SD Union-Tribune*:

<https://www.sandiegouniontribune.com/business/story/2024-03-11/celebrating-3-stem-scholars-and-their-stories-of-resilience-spirit-and-success>

In early January, ARCS Member **Ann Hill** wrote a very thoughtful and encouraging piece for *The San Diego Union-Tribune* about how to improve the world in your own individual way. "My hope is that in this new year, those of you whose needs are met will choose to explore the issues that are most meaningful to you (not just to your friends or co-workers) and become involved. If you don't know where you're going, or what cause is most important to you, any road will do. You are the only one who can determine what truly speaks to your heart, which requires careful consideration and due diligence. Consider a nonprofit that serves the people or cause you find of interest and take that first step."



You can read the full opinion piece here:

<https://www.sandiegouniontribune.com/opinion/story/2024-01-15/opinion-new-year-san-diego-philanthropy-charity-give-back>

Updates from ARCS Scholars & Scholar Alumni



Daniel Beaglehole (2023-2024 ARCS Scholar at UCSD) was first co-author on a paper published in the March 7 issue of the journal *Science*, presenting work on how neural networks learn. This is part of a larger study by Mikhail Belkin's research group at UCSD's Halıcıoğlu Data Science Institute to develop a mathematical theory that explains how neural networks work. Congratulations to Daniel for his contributions to this important study!

Read the full story here: <https://today.ucsd.edu/story/how-do-neural-networks-learn-a-mathematical-formula-explains-how-they-detect-relevant-patterns>



"To the best of our knowledge, it's the first time that an injectable biomaterial therapy has been evaluated to mitigate right ventricular heart failure," said ARCS Scholar alum **Jervaughn D. Hunter, PhD (2021-2023 ARCS Scholar at UCSD)**, first author of a paper published March 6 in *Journals of the American College of Cardiology: Basic to Translational Science*.

As a result of this study, the FDA gave the green flag for a clinical trial with the hydrogel in pediatric patients in the coming months, once institutional approvals are received.

Note that **2023-2024 ARCS Scholar Joshua Mesfin** is also one of the co-authors of this paper! Bravo, Jervaughn and Joshua!!

Read the full story here: <https://today.ucsd.edu/story/this-injectable-hydrogel-mitigates-damage-to-the-right-ventricle-of-the-heart>



ARCS Scholar alum **Nicole Mlynaryk, MS (2019-2021 ARCS Scholar at UCSD)** issued her first press release on behalf of Salk Institute in mid-February, after being hired as a full-time Scientific Communications Manager at the start of 2024. Brava, Nicole!



ARCS Scholar alum **Theresa Burnham, PhD (2020-2021 ARCS Scholar at SDSU)**, who is currently a postdoctoral researcher at the University of Maine, co-authored a recent blog post discussing the challenges and opportunities for social and economic science in the American fishery.

You can read the full blog entry here: <https://seagrant.umaine.edu/2023/11/08/challenges-and-opportunities-for-social-and-economic-science-in-the-american-lobster-fishery/>

Continued on Page 10

Updates from ARCS Scholars & Scholar Alumni... Continued from Page 9



In early January, ARCS Scholar alum **Gabriel Lander, PhD (2007-2008 ARCS Scholar at Scripps Research)** received the Mentor of the Year award at Scripps Research, where he leads a lab in the Department of Integrative Structural and Computational Biology. Congratulations, Dr. Lander!



Kudos to ARCS Scholar **Sergio Labra** for receiving this year's Award for Trainee Mentorship at Scripps Research! Sergio is a neuroscience and chemical biology PhD candidate working on Alzheimer's disease cerebral organoid models and treatments in the Jeffery W. Kelly and Stuart Lipton Labs at SR.

Scholar Alumni - Where Are They Now?

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. Areas of expertise include antibody design, discovery, engineering, expression, purification, biophysical characterization, in vivo preclinical animal models, process development and cGMP production.

Dr. Yazaki earned his PhD in Cell and Molecular Biology through the SDSU-UCSD Joint Doctoral Program in 1992. He went on to work as a Postdoctoral Fellow at Hybritech Inc. from 1993-1996 in La Jolla, and then joined the research team at the Beckman Research Institute of City of Hope, where he has remained to this day.



Continued on Page 11



Scholar Alumni - Where Are They Now?...

Continued from Page 10

Kathryn Koeller, PhD (1998-2001, Scripps Research) is an Associate Director in the Division of Receipt and Referral and the Research Integrity Officer at the NIH Center for Scientific Review (CSR) in Bethesda, MD.

Prior to assuming this position, she was a Scientific Review Officer in the Biological and Macromolecular Biophysics Integrated Review Group for twelve years, primarily running the Synthetic and Biological Chemistry B study section. Before joining CSR, she was Assistant Professor in the Chemistry Department at the University of Washington-Seattle.

Dr. Koeller holds a PhD in Chemistry from Scripps Research, where her graduate research focused on chemical and enzymatic synthesis of complex oligosaccharides, glycopeptides, and aminoglycoside antibiotics. During post-doctoral research in chemical biology at Harvard University, she pursued cell-based screening approaches toward the discovery of small molecules modulators of nuclear and cytoplasmic histone deacetylase function.



Sandra Tice-Raskin, MD (1992-1994, UCSD) is a pediatrics specialist affiliated with the Sutter Medical Group in North Auburn, CA. Her professional interests include, ADHD evaluation and management, adolescent health, breastfeeding, newborn care, parenting issues, and pediatric nutrition counseling.

Dr. Tice-Raskin graduated from UC San Diego's School of Medicine in 1993 and completed a residency at Lucile Salter Packard Children's Hospital at Stanford. She is board certified in Pediatrics.





ARCS Calendar of Events

APRIL

- Tuesday, April 16 – Board Meeting (via Zoom)
- Saturday, April 27 – Scientist of the Year Celebration
(The Conrad Performing Arts Center)

MAY

- Tuesday, May 21 – Board Meeting (via Zoom)
- Thursday, May 30 – Tour of The Conrad Prebys
Performing Arts Center
- Friday, May 31 – Invitation to piano concert at The Conrad

JUNE

- Tuesday, June 4 – Member General Meeting
(Tom Ham's Lighthouse)
- June 5-9 – All ARCS Conference (Chicago, IL)
- Tuesday, June 18 – Board Meeting (via Zoom)