

ARCS

ARCS PITTSBURGH EXECUTIVE SUMMARY 2019-2020

Message from the Co-Presidents

“The University of Pittsburgh School of Nursing is both honored and grateful for the ARCS support to students in our Ph.D. program. We are pleased to report that our first ARCS scholar graduated this past academic year. She was able to achieve a stellar record of external funding, publications and presentations of her research and was accepted for a prestigious postdoctoral fellowship upon graduation. We are looking forward to similar accolades and successes from our currently enrolled ARCS scholars. The support they receive from the ARCS Foundation impacts the future of nursing science and evidence based nursing practice.”

Yvette P. Conley, Ph.D., FAAN

*Professor of Nursing and Human Genetics
Vice Chair for Research
Ph.D. Program Director*

Wow! What a difference one year makes. ARCS Pittsburgh started 2019 with a bang. We had a wonderful Donor Appreciation event hosted by University of Pittsburgh in early September and introduced the scholars we would be supporting during the 2019-2020 year, with 14 new scholars among them. Our guest speakers, James R. Martin II, Ph.D., U.S. Steel Dean of Engineering and 3rd year scholars Sam Foley and Gary Yu (both of whom are featured in this issue) delivered thoughtful and insightful remarks that inspired us all. The Program Co-chairs planned several wonderful programs for the spring, we established a 5th endowed award at CMU, and then in December, we signed the partnership agreement to establish endowment awards at University of Pittsburgh. We had the world under control.

Just before the end of the first quarter of 2020, however, the wheels came off and the brakes came on. Within one week we had to cancel all upcoming programs and events, and we postponed, with fingers crossed, our 2020 Vision Anniversary/Scholar Celebration Event – the planning of which had taken an entire year. Unfortunately, cancellations continued, including our anniversary celebration which we are now moving to 2023, to celebrate our 20th year. The year was not, however, a total loss and ARCS showed its mettle. We addressed a number of structural and management issues and set the stage for a bright future when the Covid chaos ends. This included the hiring of a talented administrative assistant to help the board, improvements to our website (that are ongoing), and a thorough Policies and Procedures and By Laws review. And although we were no longer able to meet in person, we mastered Zoom and have put on informative and fun virtual gatherings and programs. Work on recruiting new members and fund-raising continues and will be a challenge in the coming year.

Covid-19 may have wreaked a lot of havoc, but it has not derailed our mission! With the efforts of all, ARCS Pittsburgh will continue to advance science and technology by providing financial support to the best and brightest young women and men working toward a Ph.D. degree in science, technology, or medicine. On the conclusion of our term, we want to especially thank our forward-thinking, all-women philanthropic members. You make an impact here in Pittsburgh that ripples on for years to come, as our scholars advance science and bring us the next wave of break-throughs that enhance our world.

Beverlynn Elliott and Jennifer Martin
Co-Presidents, 2018-2020

Mission and History

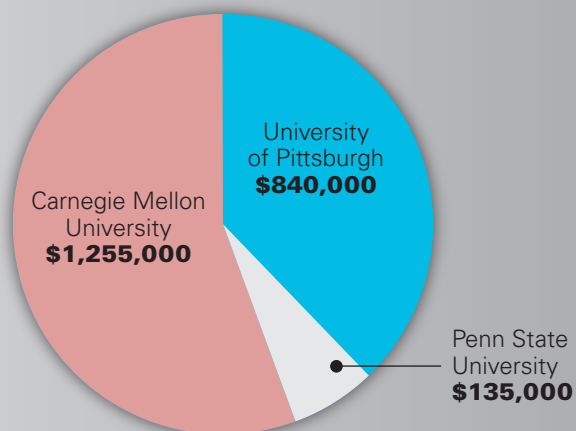
Achievement Rewards for College Scientists Foundation (ARCS)

advances science and technology in the United States by providing financial awards to academically outstanding U.S. citizens completing degrees in science, engineering, and medical research.

The Pittsburgh Chapter began in November, 2002, with 15 women committed to the mission. An initial relationship was established with Carnegie Mellon University. Our first award was given in the fall of 2004. In 2007, a partnership was established with University of Pittsburgh. Support for both university partners has since expanded to include six departments and multiple programs. The Chapter also supported scholars at Penn State University between between FY 2011 and FY 2017.

Cumulative award funding committed to scholars by June 30, 2020 for distribution through fiscal year 2021-2023:
\$2,230,000*

* This amount includes \$75,000 to be paid through the established CMU endowments.



2019-2020 Donors

ARCS Foundation Pittsburgh greatly appreciates the generosity of all our donors.

ARCS ENDOWED AWARD DONORS

A number of generous donors have chosen to support ARCS scholars in perpetuity through the legacy of endowing an award.

FULL ENDOWED AWARDS

Alicia M. Avery and Virgil Gligor, Ph.D.
Jeanne B. Berdik and Richard F. Berdik**
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Lizbeth Gillette, Ed.D. and Glenn Gillette, The Learmonth Fund of The Pittsburgh Foundation*
Mary Ann Templeton

ARCS NAMED AWARD DONORS

Many individual ARCS members, foundations, and corporations contributed full or partial funding to sponsor a three-year \$15,000 Named Award for a scholar.

FULL SCHOLAR AWARDS

Susan and Roy Dorrance
Sheila and Milton* Fine through the Fine Foundation
Jewish Healthcare Foundation
The Leonard B. and Helen P. McCully Fund of The Pittsburgh Foundation*

HALF AWARDS

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SPECIAL THANKS

We wish to thank our 2020 Vision Celebration lead sponsors, UPMC Health Plan and UPMC. In addition, we thank Carnegie Mellon University, Mellon College of Science and University of Pittsburgh.

* Deceased

** Board Member

*** Host Committee donors for 2020 Vision Celebration Event

+ Since 1945, The Pittsburgh Foundation has been connecting its generous donors with the critical needs of our community. In 2019, the Foundation awarded \$48.6M in grants to a vast array of non-profit organizations, students through scholarships, and medical researchers, based on donor interest and specific purposes of individual funds.

Gary Yu, Physician in the Making

Gary Yu recently completed his Ph.D. in the Department of Bioengineering at the University of Pittsburgh, and is now a third year medical school student in the joint degree Medical Scientist Training Program, earning his M.D. As a third-year medical student, he is beginning to see patients for the first time, currently in Internal Medicine.

His Ph.D. dissertation involved using therapeutic ultrasound pulses to destroy injected microbubbles, creating miniature explosions inside blood vessels which may destroy blood clots and restore blood flow, such as in heart attacks.

While completing his Ph.D., Gary greatly appreciated his ARCS award because it significantly enhanced his quality of life. "It meant I could take Uber to the hospital in the early morning when the buses aren't running on time," he said.



"I could also have groceries delivered instead of having to spend time and energy shopping."

Gary made good use of his time as an ARCS scholar, publishing papers, presenting at national scientific conferences, and even patenting new technologies. His first patent, inspired from work in his undergraduate years at UC Berkeley investigating the microstructure of fossilized mammoth bone, involved designing new 3D-printed bone substitutes made from biodegradable alloys.

The second, based on his dissertation work, involves a new type of bioactive microbubble for use with therapeutic ultrasound. "One of the most important goals of research for me is working toward interventions that will benefit patients directly," Gary explains. "That's why I originally decided to pursue an MD/PhD."

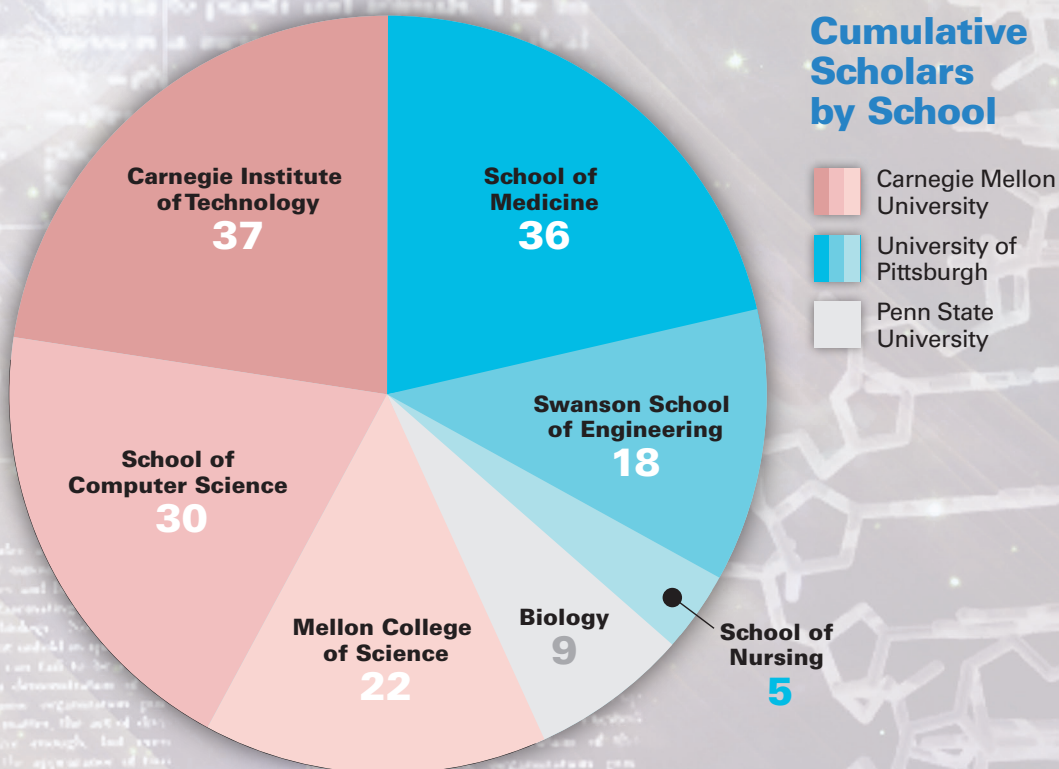
Total number of students supported since 2003



“The support of ARCS Foundation allows us to attract some of the brightest young scientists to Carnegie Mellon University and Pittsburgh. The doctoral researchers supported by ARCS conduct groundbreaking research in emerging fields, paving the way for the future of science.”

Rebecca W. Doerge, Ph.D.
Glen de Vries Dean of the Mellon College of Science
Carnegie Mellon University

Cumulative Scholars by School



Samuel Foley: A Physics Dream Comes True

Sam Foley recently finished his third year as an ARCS Scholar at Carnegie Mellon University in the Physics Department, where he continues to study biological physics, specifically the soft condensed matter of lipid membranes. The lipids in these membranes form the foundation of our cells.

“Physics is a beautiful thing,” Sam said. “When I was young, it was like a wild dream for me. I grew up reading Stephen Hawking and Carl Sagan, and I thought only those genius people could understand it. But after I aced an electromagnetism exam in college, I knew that physics was the path I wanted to go down.”

Sam came to CMU from Penn State University, where he had earned a tuition-paying fellowship by his senior year. He grew up in a small town near Philadelphia where his parents



and girlfriend still live. He could return occasionally to see them because of his ARCS award, he said, adding, “That award gave me peace of mind in a time of life when stress was everywhere.”

Sam has submitted a paper to the prestigious Journal of Chemical Theory and Computation, describing his group’s particular model of simulating asymmetric membranes, important because our bodies’ membranes are asymmetrical. “Before any practical application,” Sam explains, “before any drug design or therapy, you have to understand the basic building blocks of what you’re working on. That basic understanding informs everything that builds on it.”

Peering into his future, Sam says, “I’d like to stay in academia. Maybe it’s another wild dream, but I’d like to be a physics professor someday.”

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New member **Lynne Porter** brought 35 new members into our chapter during the two years she co-chaired the membership committee with existing member, Carol Heppner.

"I couldn't have done it without her," Lynne said. "Among other things, Carol set up hostesses for our 'meet-and-greets' for potential new members.

"We need younger people who understand the mission," she went on. "They have the right skill sets for today. But ARCS isn't a hard sell, particularly with the Covid-19 disaster. In science, our

country is behind, since we don't fund enough scientific research. We weren't prepared, despite being warned through several presidencies about a possible pandemic.

"I especially like ARCS myself, because one of its perks is getting to meet scholars in their scientific fields." — **Lynne Porter, M.D.**

Endowed Awards—A Legacy of Scholar Support

Building on the successful establishment of the Scholar Award Endowment partnership with Carnegie Mellon University in 2018-19, a fifth endowed award was established this past year. Endowments now total \$560,000 committed to provide scholar awards in perpetuity at CMU. The Endowment initiative was successfully replicated at University of Pittsburgh with the signing of a partnership agreement in December 2019. Both academic partners are generously offering five years of bridge funding for each endowment pledge and have agreed to assist in a broader community outreach effort to identify possible donors.

Many thanks to the generous donors whose gifts will impact scientific, technological and medical innovation in Pittsburgh and across the globe far into the future. If you have an interest in learning more about creating a legacy of perpetual support for our scholars, please contact pittsburgh@arcsfoundation.org for information on establishing or partnering with others to establish an ARCS Endowment.

Financial Summary 2019-2020

