



# ACS Project SEED

## 2020 Virtual Summer Camp

### Donor Report



**ACS** Office of Philanthropy  
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## VIRTUAL SUMMER CAMP

ACS Project SEED

Earlier this year, as the COVID-19 pandemic gripped our nation, we recognized that we could not conduct the ACS Project SEED program the same way we had for the past 51 consecutive years. For this summer at least, it would be impossible to invite economically disadvantaged high school students into labs to experience the joys and challenges of hands-on, college-level research. Rather than cancel the program, our staff got to work to devise a new model to continue to serve students.

In lieu of the traditional program, we hosted a four-week “virtual summer camp” aimed at helping students better communicate and understand chemistry research, while building critical lab safety, professional development and college-readiness skills. Participants received a small stipend and a Chromebook to engage in webinars, virtual panels and writing and research assignments. The program was led by ACS volunteers as well as 62 paid undergraduate or graduate student “cabin leaders” who mentored Project SEED students.

The reimaged program yielded its own powerful benefits. Unlike the traditional program, which enables students to delve into an exciting research project alongside a dedicated mentor, the virtual program exposed students to a broad range of chemistry-related topics and potential career paths. This summer, they gained insight from not one scientist, but from an array of prestigious professionals with diverse experiences and backgrounds—some very much like their own. Students attended virtual presentations delivered by a total of 43 speakers, including scientists as well as mental health, college admissions and financial aid experts.

In the wake of school closures and social distancing measures, Project SEED participants cherished their virtual interactions with 291 scientifically curious peers from across the US who took part in this summer’s program. For many, these connections laid the groundwork for their budding professional networks.

During this extraordinary year, we remained focused on our goal of narrowing the well-documented scientific literacy gap between economically disadvantaged high school students and students from more affluent backgrounds. We hope that our efforts will in turn address related discrepancies in college enrollment and graduation rates for these groups. Each year, students who participate in Project SEED report that the program encouraged them to earn a college degree, and an overwhelming majority say that Project SEED led them to pursue a degree in a chemistry-related field.

We could not have anticipated the unprecedented events that impacted our nation and our world this year. But thanks to your generosity, we were well equipped and well positioned to adapt our programs to help meet the heightened financial and academic needs of hundreds of students involved in Project SEED. Thank you for your continued support!

## Connecting aspiring scientists ...

One of the feats of this summer’s Virtual Summer Camp was mimicking the sense of community that Project SEED students have always felt in-person in the lab, where they are supported by a scientist mentor as well as undergrad and grad students.

Even within this summer’s unfamiliar virtual environment, many of this summer’s program participants reported feeling an almost-immediate affinity for their cabin leaders—undergraduate or graduate students who paired up to lead 6 to 10 student “campers” grouped within “cabins” named for chemical elements.

Starting off with ice-breaker games, cabin leaders forged relationships with the campers before coaching them on how to create a résumé, complete college applications, prepare for life on campus or just deal with the pressures of everyday life.



**Gerardo Carreon**  
Cabin Leader

Many of the 62 cabin leaders come from backgrounds that helped them relate to their SEED mentees; eighteen were former Project SEED participants or mentors, and 22 are part of the ACS Scholars Program, which provides scholarships to minority students

underrepresented in the chemical sciences.

While cabin leaders helped SEED students bolster their knowledge base and academic credentials, they also honed skills of their own. “As a cabin leader it was on me to engage the students and promote a safe space for them to talk, share their fears and dreams and work with one another,” said ACS Scholar Gerardo Carreon, a chemical engineering student at Texas A&M University. “So, it challenged me to step out of my comfort zone and build on my leadership skills—something that will serve me well when I eventually start a renewable energy technologies career in industry.”

## ... as they discover new areas of research

One highlight of this summer’s Project SEED experience was a series of research hikes — presentations that explore contemporary research projects. Titles ranged from “Vaccination: A New Approach to the Opioid Epidemic” to “Cracking Under Internal Pressure: Photodynamic Azide Crystals” to “History and Chemistry of Platinum-based Anticancer Drugs.”

“Students were exposed to many different scientific fields through inspiring presentations delivered by a diverse group of professional scientists who looked like them, came from similar socioeconomic backgrounds and overcame challenges to establish successful careers,” said Princeton University chemical and biological engineering undergrad Natalia Miller, who served as a cabin leader.



**Natalia Miller**  
Cabin Leader

# ACS Project SEED 2020 Students



**Bernice Owusu, Project SEED II student**  
Irvington, New Jersey

“Coming from a low-income family and having this big dream of becoming a scientist is kind of scary sometimes. But Project SEED helps you to see that it’s possible. Interacting with other scientists — whether virtually or in person — gives you that assurance that you can do it. Project SEED helps you to uncover your hidden potential and develop skills that are not just essential for a career in science, but for everything you face for your entire life.”



**Seham Abutaha**  
SEED II Student  
Toledo, Ohio

“I really liked interacting with highly motivated students — who will be part of my future network — to explore scientific research and the professional world that we will all be a part of soon.”



**Daniel Favala**  
Laughlin, Nevada

“The summer camp really helped me understand how to prepare for college and grad school and a future career in one of the sub-fields of chemistry that I had not even known existed.”



**Emma Lazo**  
Bethlehem, Pennsylvania

“Listening to the presentations, including one about research into Native American opioid addiction, I was truly amazed to see how scientists are working to positively impact our world.”



**Kennedy Thrash**  
Corpus Christi, Texas

“The speakers helped me see that it is OK for us to not know exactly where we will end up in our careers. I learned that passions change, and people change as we continue our journeys.”



**Siham Busera**  
Silver Spring, Maryland

“Some of the presenters were former Project SEED students who are now PhD’s. Their stories were inspiring to me, because as they talked about their background, it made me think, ‘Oh that’s me and maybe I can achieve those things, too.’”



**Fernando Camacho**  
Guaynabo, Puerto Rico

“Because of this program, I am 100% sure I want to have a STEM career in the future.”



# ACS Project SEED College Scholarships

Project SEED program participants are eligible to compete for a Project SEED College Scholarship as they enter their freshman year. Scholarships are awarded to students who demonstrate a high potential to succeed in chemistry and declare a major in the chemical sciences.

In 2020, 38 students were awarded first-year, nonrenewable scholarships for the 2020-2021 academic year. In addition, three students were awarded three-year college scholarships for the 2020-2022 academic year. Biographies for a sampling of these talented students are included here.

*As I start my college chemistry courses, I have felt more prepared and less stressed because I had been introduced to lab techniques and materials through Project SEED.*

**Andrea Mancia**

**Gonzalo Alarcon**  
Columbia University



Gonzalo Alarcon graduated from the José Martí STEM Academy in Union City, New Jersey in May 2020. In 2019, he participated in Project SEED for a second summer under the guidance of Dr. Steven Levison at Rutgers New Jersey Medical School. Gonzalo worked on the research project, "Evaluating the Effects of Leukemia Inhibitory Brain Injury." During his first summer in Project SEED, he conducted research at the New Jersey Institute of Technology. Gonzalo is now attending Columbia University as a biochemistry major.

**Andrea Mancia**  
Emory University



Andrea Mancia graduated from Northgate High School in Newnan, Georgia, in May 2020. She participated in Project SEED in 2019 at Spelman College under the direction of Dr. Michelle Gaines. Their research focused on cell growth and migration using synthetic biomaterial systems that mimic the human body's extracellular matrix. Andrea presented her research at the 2019 ACS Fall National Meeting in San Diego, where she was also selected to speak at the ACS donor reception. She is now attending Emory University, majoring in chemistry. Upon completion of her undergraduate degree, Andrea would like to pursue an MD/PhD.

**Maura Dresner-Pfau**  
University of Pennsylvania



Maura Dresner-Pfau graduated from Timberline High School in Boise, Idaho, and participated in Project SEED in 2018 and 2019. Under the direction of Dr. Jeunghoon Lee at Boise State University, Maura worked on the project, "Optimization of Gold Nanoparticle Release from Magnetic Polymer Microbead Templates for Sensitive Colorimetric Detection of DNA." She presented her research at the ACS 2019 Fall National Meeting in San Diego. She is majoring in chemical and biomolecular engineering at the University of Pennsylvania.

**Alexis Grady**  
North Carolina Agricultural & Technical State University



Alexis Grady attended Atlanta's Benjamin Elijah Mays High School and was the Salutatorian of the Class of 2020. Alexis participated in Project SEED in 2018 at Clark Atlanta University. Under the direction of Shirnece Brown, she conducted experiments working with polyethylene oxide and molybdenum disulfide. Alexis is studying chemical engineering at North Carolina Agricultural & Technical State University.

**Huixin Ma**  
University of California, Berkeley



Huixin Ma graduated from Galileo Academy in San Francisco. She participated in Project SEED in 2018 and 2019 under the direction of Dr. Misty Kuhn at San Francisco State University. Last summer, Huixin's research focused on developing a computational protocol to examine and compare the *Pseudomonas aeruginosa* Gcn5-related N-acetyltransferase acceptor sites of 30 different proteins. Huixin is attending the University of California, Berkeley.

**Frank Peprah**  
Amherst College



Frank Peprah graduated from Irvington High School in New Jersey in May 2020. He participated in Project SEED in 2018 and 2019, working with Dr. Huixin He at Rutgers University. His project, "Microwave-Enabled Rapid Fabrication of Enzyme-Inspired, Substrate-Assisted Catalysis using Metal–Organic Frameworks as Precursors" aimed at producing an inexpensive and eco-friendly source of electricity to replace fossil fuels. Frank is majoring in biochemistry at Amherst College. He plans to attend graduate school to prepare for a career as a biomedical scientist.

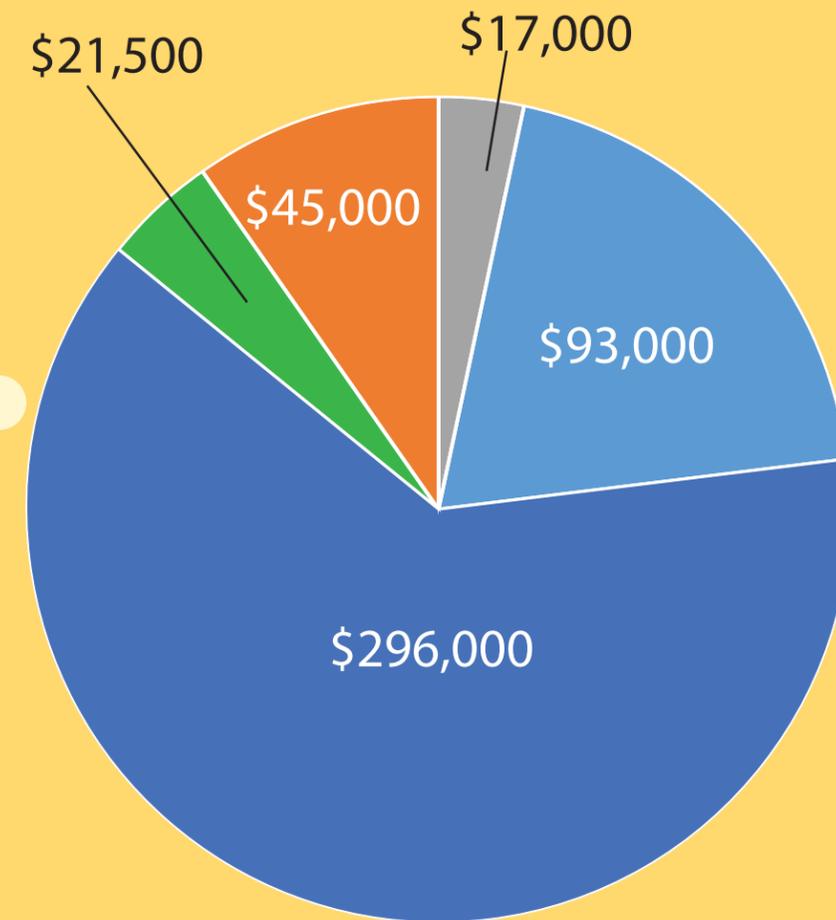
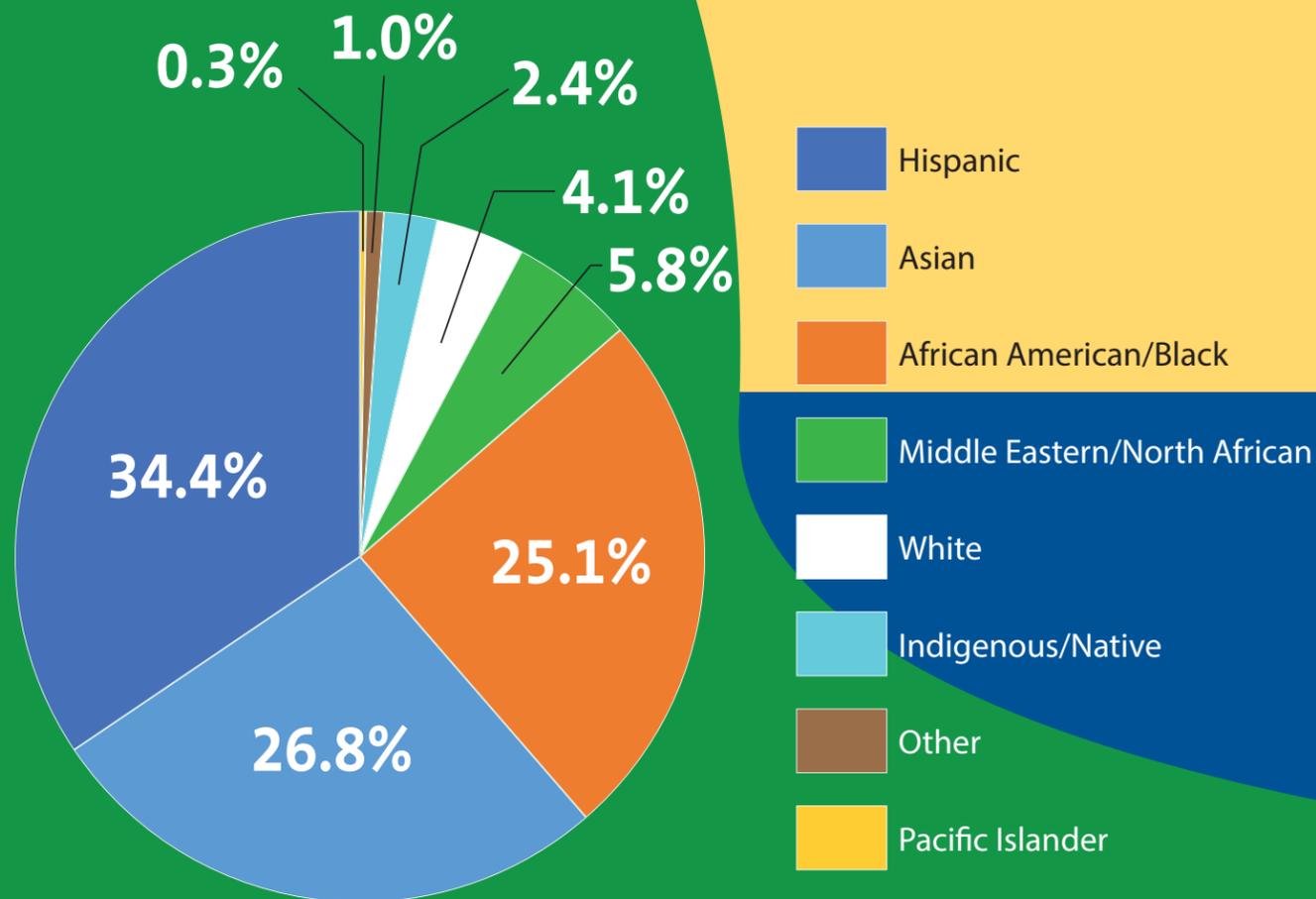
## 2020 Project SEED College Scholarships Sponsors

- Ashland, Inc.
- Bader Philanthropies: Isabel & Alfred Bader Fund
- Bayer Foundation
- CIBA Specialty Chemicals
- Estate of Elizabeth Ernst Fosbinder
- Gilead Sciences
- Joseph D. Loconti Endowment
- Glenn & Barbara Ulliot

# Project SEED By the Numbers

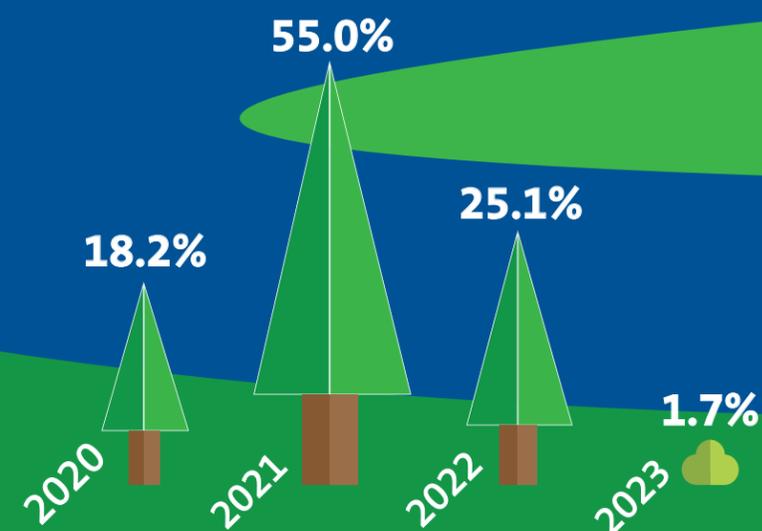
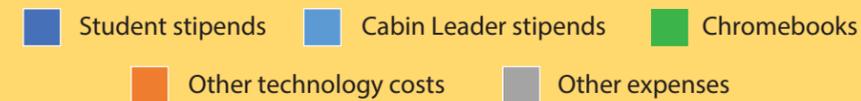
## Race/Ethnicity of 2020 Project SEED students

Project SEED participants came from a wide variety of racial and ethnic backgrounds with the majority of the 291 participants identifying as Hispanic.



## Financial Expenditures

Of the total \$ 472,500 in Virtual Summer Camp expenditures, more than 85% went directly to student participants and undergraduate and graduate student cabin leaders in the form of stipends and Chromebooks.



## Anticipated Graduation Year

Though most participants have entered their final year of high school this Fall, the program included an array of grade levels.

# ACS Project SEED Program Staff

## Racquel Jemison, PhD

### Student Experiences Portfolio Manager

Dr. Racquel Jemison is the student experiences portfolio manager at ACS, leading the Project SEED program as well as other key educational programs that serve more than 700 students per year. She ensures that students receive mentoring support and access to ACS programming to fuel their excitement for chemistry and scientific careers. Through her dedicated efforts, she helps students build connections to the ACS network of members and volunteers that will last a lifetime. Racquel also collaborates with members of ACS governance to guide the strategic direction of ACS educational programs including Project SEED. Prior to joining ACS in 2016 as a senior education associate, Racquel worked in research and development for Dow Chemical in the Philadelphia area. Guided by her passion for improving underrepresented minority students' access to STEM fields, she is a longtime volunteer for the National Organization of Black Chemists & Chemical Engineers. Racquel earned a BS in chemistry from Morgan State University and a PhD in organic polymer chemistry from Carnegie Mellon University.



## Justin Zimmerman Program Specialist

Justin Zimmerman is a program specialist for the Project SEED program. He helped plan and launch a new Project SEED database and was instrumental in developing the curriculum and learning management system for the 2020 Virtual Summer Camp. Prior to joining ACS, Justin was a chemistry teacher at Kennedy High School in Winston-Salem, North Carolina, and was part of the 2017 cohort of Stanford University's Hollyhock Fellows. Justin earned a BA in chemistry and secondary education from the College of Charleston.



## Kelechi Uzo-Okoro Program Specialist

Kelechi Uzo-Okoro is a program specialist in the ACS Education Division. She manages social media accounts that connect hundreds of students to ACS and each other. She also handles program logistics for ACS scholarship programs. Kelechi holds a BA in business administration from the University of Maryland, Eastern Shore.



## Mahalia Randle Program Manager

Mahalia Randle is a program manager in the ACS Education Division. She directs the Project SEED scholarship program and fully manages the ACS Scholars program, providing funding for many students to help them advance their chemistry education. Before joining ACS, Mahalia served as assistant program officer for the College Success Foundation in Washington, DC, where she administered \$3 million in scholarships to more than 300 students. She earned a BA in English from Langston University and a MEd in Educational Leadership from Northern Arizona State University.



# Looking Ahead To 2021

Faced with the pandemic, ACS worked swiftly and creatively to re-envision the Project SEED program this year, ensuring that hundreds of economically disadvantaged high school students could continue to explore the wonders of chemistry. Through a new suite of lessons and virtual interactions, students gained new skills, confidence and information about exciting careers. Along the way, we learned a few lessons ourselves.

Through our virtual program pivot, we discovered ways to reinvigorate the traditional Project SEED program going forward. As students return to the lab next summer, we hope to give them access to a virtual platform that will allow them to interact with each other and attend presentations that illuminate the breadth of fascinating chemistry research topics while also delivering critical professional development tools.

Thanks to your generosity, we were able to stay the course and navigate uncharted waters with agility, skill and unwavering resolve. We appreciate the opportunity to continue to partner with you to nurture aspiring scientists who may address the next major global challenge facing all of us.



*Thank you for giving us the resources and the opportunity to acquire knowledge, connect with other students, get experience with virtual learning and have such an awesome summer experience! Through your support, you are helping students find the path to becoming great scientists in the future.*

## Kaura Reyes

2020 Project SEED student  
Current Freshman at Syracuse University



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*For additional information about how your support makes Project SEED possible, please contact:*

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