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VISION

The future chemical enterprise will be racially and ethnically inclusive to take full advantage of society’s rich diversity.

MISSION

The American Chemical Society Scholars Program will be the premier catalyst to foster the intellectual talents of individuals from historically underrepresented groups who are motivated to pursue degrees, careers, and leadership positions in the chemical sciences.

ACKNOWLEDGEMENTS

The ACS Scholars program would like to thank the many ACS members, corporate sponsors, endowment founders, donors, ACS governance and ACS staff of past and present who have supported, and continue to support this 25+ year endeavor.

We give special recognition to Zaida Morales-Martinez for her 21 years of service as the ACS Scholars Mentoring Consultant. Her dedicated service to ACS Scholars in this role has resulted in numerous mentor pairings and networking connections. We truly appreciate her commitment to and investment in the ACS Scholars Program.

We also acknowledge Iona Black, a long-time application reviewer and ACS Scholars advocate. Iona passed away in 2020, only a few short months after helping to select the 2020 ACS Scholars cohort. She will truly be missed.
Scholars 2020: Year in Review

The ACS Scholars Program started in 1995 in response to the underrepresented number of African American, Hispanic, and American Indian undergraduate students receiving chemistry degrees and in professional roles in the chemical enterprise. Since then, over 3,500 students have participated. Annually, there are between 300 and 400 Scholars with an additional 100-160 new Scholars inducted each year. The scholarship program provides not only financial support, but also mentoring and professional development.

While the year 2020 marked the 25th anniversary of ACS Scholars, it was also an unprecedented year with the COVID-19 pandemic, economic uncertainty, and global protests for social justice. These events have affected students especially, making decision-making for upcoming semesters increasingly difficult, finances even more constrained, and has increased concerns of the health of family and friends (particularly those from socioeconomically marginalized communities). In spite of these challenges, ACS Scholars have remained steadfast and resilient. In response to these challenges, scholarship award use was expanded for the 2020-2021 academic year. This adjustment afforded students the opportunity to use their scholarship funds as needed for tuition, books, supplies, as well as room and board.

With much of the in-person celebratory events canceled, the 25th anniversary served as an opportunity to increase student engagement and recognition. Several of the year’s program highlights listed to the right demonstrate our commitment to providing such opportunities for the ACS Scholars.

Program Highlights

25th Scholars Cohort: 360 ACS Scholars for the 2020-2021 academic year, which included 100 newly selected Scholars.

ACS Connects: Launch of a new mentoring and networking platform. To date there are 308 registered users representing 2016-2020 ACS Scholars cohorts.

Scholars Research Spotlight: 14 student research projects featured across ACS Scholars social media platforms.

C&EN Articles: 6 bi-monthly featured articles showcasing ACS Scholars alumni who were interviewed by current ACS Scholars and recent graduates under the direction of C&EN editor Linda Wang.

Zaida Morales-Martinez Recognition: 21 years of dedicated service. A video-tribute, plaque, and gift box were awarded in honor of her retirement.

Merck Corporate Mentoring program launched: 8 ACS Scholars paired with a Merck mentor as part of the scholarship sponsorship opportunity.

Society of Chemical Industry partners with ACS Scholars: Internship opportunities and scholarship sponsorship for current ACS Scholars.

Webinars: BASF - Internships 101 Webinar, Mentoring: Finding Meaningful Connection on ACS Connect, Calvin Terrell, Conversation on Race and Self Care, and Virtual Game Nights.
**ACS SCHOLARS: ORIGINS**

The ACS Scholars Program, along with the ACS Committee of Minority Affairs, were created to "change the face of chemistry" by increasing representation of Black/African-American, American Indian, and Hispanic/Latinx in the chemical enterprise. The creation of an undergraduate scholarship program could help to broaden the pipeline by helping to reduce the financial burden of college education. The addition of mentors and network access further increased the value of the program for participants assisting them with acquiring the skills and credentials needed for success in chemical science careers.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1991</td>
<td>Dr. S. Allen Heininger, President of the American Chemical Society, appointed a task force on minorities in the chemical sciences. The task force recommended creation of the Committee on Minority Affairs (CMA).</td>
</tr>
<tr>
<td>1994</td>
<td>The ACS Scholars Program officially launched in the fall of 1994 by awarding scholarships to 200 students.</td>
</tr>
<tr>
<td>1995</td>
<td>The ACS Minority Scholars Program officially launched in the fall of 1995 by awarding scholarships to 200 students.</td>
</tr>
<tr>
<td>1996</td>
<td>The ACS Board of Directors granted a time extension of the program to 2005, and an additional appropriation of $300,000 per year.</td>
</tr>
<tr>
<td>1997</td>
<td>The ACS Board of Directors granted an extension of the program to 2006, and an additional appropriation of $300,000 per year.</td>
</tr>
<tr>
<td>1999</td>
<td>The ACS Board of Directors granted an extension of the program to 2007, and an additional appropriation of $300,000 per year.</td>
</tr>
<tr>
<td>2000</td>
<td>The Scholars Program was again granted an extension by the Board, this time from 2005 to 2008.</td>
</tr>
<tr>
<td>2002</td>
<td>The Scholars Program was awarded an extension by the Board through 2010.</td>
</tr>
<tr>
<td>2005</td>
<td>The first ACS Scholars profile series was published online, highlighting a few of the many Scholar Alumni and their career paths.</td>
</tr>
<tr>
<td>2007</td>
<td>To me, becoming an ACS Scholar is joining an inclusive community of like-minded individuals who want to use the sciences and particularly chemistry to better the world through research and developing new products and chemicals. It’s an honor to be a part of this selective community of such individuals…</td>
</tr>
<tr>
<td>2018</td>
<td>Brandon T. McReynolds, Class of 2020</td>
</tr>
</tbody>
</table>

To me, becoming an ACS Scholar is joining an inclusive community of like-minded individuals who want to use the sciences and particularly chemistry to better the world through research and developing new products and chemicals. It’s an honor to be a part of this selective community of such individuals...

- Brandon T. McReynolds, Class of 2020
The American Chemical Society Scholars Program was created to increase the number of African American, Hispanic, and American Indian bachelor degree recipients in chemistry-related disciplines, and ultimately the broader chemical enterprise. Often, the barriers to degrees in science and engineering fields for marginalized groups is financing their studies, receiving mentoring and advisement, and accessing an effective network for internships and full-time career opportunities (M.E. Brazziel, W. F. Brazziel, Journal of Science, Education, and Technology).

The ACS Scholars Program aimed to address those gaps via the provision of scholarship funding, and later introducing mentoring, conference travel awards, and internship access.

When the program first started in 1995, only 13.8% of all Science and Engineering Bachelor degree recipients identified as either African American, Hispanic, or American Indian. As of 2018, the percentage of Science and Engineering Bachelor degrees conferred to underrepresented groups increased to 24%.

### Breakdown of Major within Science and Engineering Bachelor Degree Recipients

<table>
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<tr>
<th></th>
<th>CHEMISTRY</th>
<th>CHEMICAL ENGINEERING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>2018</td>
<td>21%</td>
<td>15%</td>
</tr>
</tbody>
</table>


This increase in the number of graduates in science and engineering fields is attributed to a number of initiatives, organizations, and programs aimed towards these historically underrepresented groups created along the way. ACS Scholars has helped to achieve this goal.

Following the 20th anniversary of ACS Scholars, an in-depth survey of program alumni and a comprehensive update of alumni information was conducted. A total of 335 alumni and current Scholars participated. Slightly over 30% were ACS Scholars at the time, and 9% had withdrawn from the Scholars program.

71% of alumni and current Scholars reported that they were very satisfied with the program, noting networking, internship opportunities, mentoring, and other professional development as primary benefits. 90% listed reduced financial concerns while in college as an additional benefit.

First-generation college students and alumni were even more likely to point out the influence of the ACS Scholars Program, with statistically-significant agreement that the program helped their opportunities to attend college, pursue a chemistry related major and complete their degree. Many also said the program encouraged them to pursue graduate degrees in chemistry-related fields (ACS Scholars Program 1995-2016 Survey Analysis Report).

Nearly 75% of alumni were employed full-time in chemistry-related fields.

Additionally, 70% of alumni indicated that they used their technical skills and education to a considerable or very great extent in their full-time careers (only 4% weren’t using those skills at all). Similar trends were found when comparing the 2016 survey data to alumni updates of the 1995 ACS Scholars (primarily through LinkedIn and web updates or individuals).
Since 1995, over 3,500 students from over 691 colleges and universities across the United States and its territories have become ACS Scholars. Of the total participants, updates on about 50% were found. Over half received advanced, terminal, and/or professional degrees, including 450+ alumni who received a PhD, MD/PhD, or PharmD. An additional 165 earned an MD, 129 received an MBA, and 58 received a JD. Scholar alumni have taken on roles in industry (738), medicine/healthcare (290), academia/education (299), and government/military (96). Some top employers include ExxonMobil, Procter & Gamble, Dow Chemical, Intel Corporation, and DuPont.

**Former ACS Scholars in education:**
- 34 Assistant Professors
- 14 Associate Professors
- 5 Full or named professors
- 78 in K-12 related roles, including teachers and principals

**Former ACS Scholars received one or more of these graduate degrees:**
- PhD
- MD/PhD
- MD
- PharmD

**Most Popular College Majors of ACS Scholars**
- Chemistry
- Chemical Engineering
- Biochemistry

**Race/Ethnicity**
- African American, Black: 46%
- Hispanic, Latinx: 45%
- Other: >1%
- Unidentified, Non-binary: >1%

**Gender Identity**
- Women: 57%
- Men: 43%

**A CLOSER LOOK: ALL CURRENT SCHOLARS**
While the current group of ACS Scholars does differ a bit from the overall program demographics, with a greater percentage of women and Hispanic/Latinx individuals, the greatest shift is seen in the most popular college majors, with chemical engineering overtaking chemistry as the most popular.

**School Year**
- Freshman: 12%
- Sophomore: 17%
- Junior: 21%
- Senior: 50%

**Cohort Year**
- 2015: 0.5%
- 2016: 33%
- 2017: 18%
- 2018: 29%
- 2019: 27%
- 2020: 100%

**Most Popular College Majors**
- Chemical Engineering: 131
- Chemistry: 130
- Biochemistry: 55

**Race/Ethnicity**
- African American, Black: 40%
- Hispanic, Latinx: 65%
- Other: 1%
- Not Indicated: 5%

**Gender Identity**
- Women: 57%
- Men: 38%
To me, being an ACS Scholar means opportunity. Acceptance as a Scholar by the American Chemical Society will provide me not only with financial support during my college career, but also the means to aid me in succeeding in my future career as a graduate student with an interest in scientific research, specifically using Biochemistry as a way to potentially solve current issues in the field of medicine.

- Alejandro Gomez Gonzalez

Being an ACS scholar surrounded by people with similar interests and the desire to help one another, rather than stepping on each other, is the security I have dreamed of since I was six years old. Being an ACS scholar to me means acceptance and support of my aspirations while being able to build relationships in a healthy, mentally stimulating environment. Thank you for what you have provided me with.

- Christalyn B. Aussler

I truly appreciate your generous scholarship support. Because of you, I have been given some relief and time to focus more on schoolwork instead of how I will be having to pay for school. You have not only helped me, but also my family by helping me further my education. My goal was to work and try to help pay for my schooling, this would have been a lot, but with your help, I have had the chance to avoid that this year. Once again, I want you to know that I cannot thank you enough for your kindness.

- Aaliyah Lemons

This scholarship has a lot of meaning to me because it serves as a reminder that all my hard work is worth it. And it pushes me to keep moving forward and to not conform myself with less. I’m very grateful for this award, and I can’t wait for everything that follows!!

- Shakra M. Martinez Vazquez

Receiving this scholarship award has made me realize that there is much more I could achieve. It has been very exciting and has relieved me from some financial burden. Thank you to ACS.

- Felix Forch

I’m thoroughly excited to be an ACS Scholar because I’ve never had a mentor outside of my family. As a role model for younger students in my community, I value the importance of mentorship greatly. I can’t wait to see all the amazing things I’ll learn as a mentee. Additionally, being an ACS Scholar will provide invaluable opportunities to network with professionals and students going through similar experiences. I now know that the year ahead will be enriched with lessons that I can carry with me for a lifetime.

- Oriana Nelson

Everything ACS stands for by promoting a diverse collective in STEM is my true goal in my educational endeavors. Being an ACS Scholar means I am on the right track to do just this and excel and that all the effort I have put into my work thus far is truly starting to shine through. Thank you for this amazing opportunity and I am beyond excited to be a member of the ACS unprecedented Scholar’s Program.

- Victoria Diaz
At the start of the Fall 2020 semester, ACS Scholars were scattered across 41 states; Washington, DC; and two US territories (Guam and Puerto Rico). Scholars are most represented in California, New York, Texas, Illinois, and Georgia. A majority of students attend 4-year institutions, but also the types of institutions also include:

- 4 special focus universities including 3 schools of engineering
- 5 two-year and Associate-level schools

Historically Black Colleges and Universities attended by 19 ACS Scholars

Research Universities, including 65 with “very high” research activity

Institutions with ACS-certified chemistry departments

**SCHOLAR SPOTLIGHT**

**Carmita Semaan, MBA, Chicago, Illinois**

A member of the original 1995 cohort, Carmita graduated with her BSE in chemical engineering in 1999 from the University of Michigan. Shortly after, she began her MBA at Northwestern University's Kellogg School of Management, and spent time studying abroad in London.

In 2014, after eight years working in non-profits, Carmita founded the Surge Institute, a novel leadership institute for emerging leaders of color in the field of education with the aim to dramatically change the face of leadership in education reform by preparing, connecting, and supporting high-capacity African-American and Latinx leaders in the field.
### ACS Scholars Endowment Founders

<table>
<thead>
<tr>
<th>Scholar Type</th>
<th>Name</th>
<th>Endowment Founder?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arindam Bose ACS Scholar</td>
<td>Arindam Bose</td>
<td>Yes</td>
</tr>
<tr>
<td>Ronald Breslow ACS Scholar</td>
<td>Family &amp; colleagues of Ronald Breslow</td>
<td>Yes</td>
</tr>
<tr>
<td>Bill &amp; Mary Carroll ACS Scholar</td>
<td>Bill &amp; Mary Carroll</td>
<td>Yes</td>
</tr>
<tr>
<td>Halley Merrell ACS Scholar</td>
<td>Matthew K. Chan</td>
<td>Yes</td>
</tr>
<tr>
<td>Gilead Sciences ACS Scholar</td>
<td>Gilead Sciences</td>
<td>Yes</td>
</tr>
<tr>
<td>Diane Grob Schmidt ACS Scholar</td>
<td>Diane Grob Schmidt</td>
<td>Yes</td>
</tr>
<tr>
<td>Gretchen R. Hall ACS Scholar</td>
<td>Gretchen R. Hall</td>
<td>Yes</td>
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<tr>
<td>Carolyn Haynie and William Penn ACS Scholar</td>
<td>Sharon Haynie</td>
<td>Yes</td>
</tr>
<tr>
<td>S. Allen Heininger ACS Scholars</td>
<td>S. Allen Heininger</td>
<td>Yes</td>
</tr>
<tr>
<td>Madeleine Jacobs ACS Scholars</td>
<td>Madeleine Jacobs &amp; Anonymous Donor</td>
<td>Yes</td>
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<tr>
<td>Joan M. Kaminski ACS Scholar</td>
<td>Joan M. Kaminski</td>
<td>Yes</td>
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<tr>
<td>Marjorie O. Leenhouts Scholarship for a Young Woman in College Majoring in Chemical Sciences</td>
<td>Jim &amp; Marjorie Leenhouts</td>
<td>Yes</td>
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<tr>
<td>Bruce E. &amp; Cynthia A. Maryanoff ACS Scholar</td>
<td>Bruce E. &amp; Cynthia A. Maryanoff</td>
<td>Yes</td>
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<tr>
<td>E.G. Meyer Family ACS Scholar</td>
<td>E.G. Meyer</td>
<td>Yes</td>
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<tr>
<td>Eli Pearce ACS Scholar</td>
<td>Family &amp; colleagues of Eli Pearce, the ACS New York Local Section</td>
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</tr>
<tr>
<td>Barbara Rupple ACS Scholar</td>
<td>Barbara Rupple</td>
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<tr>
<td>Catherine T. Sigal ACS Scholar</td>
<td>Catherine T. Sigal</td>
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<tr>
<td>Joseph Vacca ACS Scholar</td>
<td>Joseph Vacca</td>
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<tr>
<td>Carlos Huang</td>
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<tr>
<td>Morgan Skidders</td>
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<tr>
<td>Caiden Golder</td>
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<tr>
<td>Terril Jones</td>
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<tr>
<td>Jesus Aguilar</td>
<td></td>
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<tr>
<td>Jayda Jackson</td>
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<td>Yes</td>
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<tr>
<td>Leilani Garcia</td>
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<tr>
<td>Kira Hudson</td>
<td></td>
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<tr>
<td>Andrew Beahan, Melanie Soto, Alyssa Tipler &amp; Karla Troncoso</td>
<td>Yes</td>
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<tr>
<td>Sophia Mittman &amp; Habeeb Salau</td>
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<tr>
<td>Andrea Lopez</td>
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<tr>
<td>Sean Deresh</td>
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<tr>
<td>Alexandra Fernandez</td>
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<td>David Gonzalez</td>
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<tr>
<td>Brea Tinsley</td>
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<td>Genesis Vasquez</td>
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<tr>
<td>Briyhan Martin</td>
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### ACS Scholars Corporate Contributors

#### Founding Partner
- $1 million
- PPG Industries

#### Benefactor
- $1 million
- Procter & Gamble

#### Visionary Partners
- $5 million
- 3M
- The Camille and Henry Dreyfus Foundation
- GlaxoSmithKline

#### Sustaining Partners
- $250,000
- ACS Petroleum Research Fund
- BASF
- Dow Coming
- DuPont
- Merck & Co. Inc.
- Schering-Plough
- Société de Chimie Industrielle

#### Partners
- $100,000
- Air Products
- AstraZeneca
- Celgene
- CME ACS
- Covestro
- The Dow Chemical Company
- Genentech
- Gilead Sciences
- Pfizer
- WR Grace
- Xerox

Gifts from $2,500 to $99,000 have been received from more than 40 corporations and foundations.
**IN THE LAB: STUDENT RESEARCH**

ACS Scholars are encouraged to seize opportunities to participate in research. Of the 94 ACS Scholars that graduated in 2020, 97% participated in at least one research experience. ACS Scholars hosted a yearlong social media campaign featuring 14 ACS Scholars for a research spotlight. Scholars shared the research they were participating in and the impact of that research on their respective fields. Five of those features are included below.

**Angel X. Arrendondo, Los Angeles, California**

*California State University, Los Angeles  
Senior majoring in Chemistry*

Angel X. Arrendondo is an ACS Scholar working in an atmospheric chemistry lab at California State University, Los Angeles, under the guidance of Dr. Krishna Foster. In this laboratory, the scientists focus on detecting polycyclic aromatic hydrocarbons (PAHs) in the Los Angeles and San Bernardino counties of California using HPLC instruments. These aromatic hydrocarbons consist of multiple fused benzene rings that form due to incomplete combustion reactions.

Reactions forming PAH happen constantly in the troposphere, originating from burning biomass, motor vehicle exhaust, industrial emissions, in-home heating, and other reactions (in liquid or gas phase). Each of these processes lead to incomplete combustion and form PAH. Since some PAHs are known to cause various forms of cancer, it is crucial to study the particular matter in the air that people breathe on a daily basis.

Angel's role in the current project is to collect samples from the greater Los Angeles area for analysis, and quantify PAH within these samples using HPLC.

**Juan Caravez Barajas, Chico, California**

*California State University, Chico  
Recent graduate in Chemistry*

Juan Caravez is an ACS Scholar who conducted research on the "Complete synthesis of duryne and homologues" under Dr. David Ball.

Duryne and its homologues are naturally occurring enynols isolated from the marine sponge Petrosia ficiformis and have shown cytotoxic activity. The family of isolated acetylenes were screened against HeLa cells in a MTT assay and showed promising inhibition of tumor cell growth. Literature has shown synthetic routes to synthesize the symmetric enantiomers of duryne.

However, expanded synthetic routes are still needed for the asymmetric homologues. Under the guidance of Dr. Ball, we investigated a potential generalized synthetic route to obtain the asymmetric durynes of varying carbon backbones.

---

Being an ACS Scholar has meant having a great support system that allows me to reassure that dreams do come true. As an ACS Scholar and the support system provided I feel confident that I will make my dreams come true.

- Juan Caravez, Class of 2020
Gabrielle Hernandez, Boston, Massachusetts
Northeastern University
Junior majoring in Biochemistry

Gabrielle Hernandez is an ACS Scholar who worked on the project "Characterizing the Phosphotransfer that Regulates Antibiotic Resistance in Acinetobacter baumannii" with Dr. Edward Geisinger of Northeastern University, assisted by Nicole Raustad, a graduate student.

The project investigates disease-causing bacteria that are quickly developing resistance to antibiotics used to treat infected patients, leaving doctors with limited treatment options. Cases of infection from antibiotic-resistant bacteria, including Acinetobacter baumannii, have increased worldwide. New solutions must be discovered to effectively target the bacteria's virulence and resistance pathways.

One possible drug target is the BfmR sensory-transduction system. Two component systems such as this have been linked to modulating many genes in bacteria that influence its cell wall, biofilm, and antibiotic resistance. The objective of Gabrielle's project is to evaluate how a mutation of a possible phosphorylation site in this system affect antibiotic resistance regulation in this bacteria. A DSBA mutation in bfmR will lead to its inability to be phosphorylated thereby decreasing the gene expression and antibiotic resistance in the bacteria to that of a complete knockout of the system.

Conclusively, the BfmR protein could be a potential target in the future of treating A. baumannii infections because of its essential role in controlling the expression of the genes that lead to the bacteria's extreme resistance.

Glory Onajobi, Atlanta, Georgia
Emory University
Recent graduate in Chemistry

Glory Onajobi is an ACS Scholar who performed research under the guidance of Dr. Gary Kunkel of Texas A&M University on "Investigating the Phenotypic Effects After Deletion of the Major Promoter Driving Expression of the Transcriptional Protein CHD8 in Danio rerio."

Glory's research focused on examining the phenotypic effects that occur after the deletion of the promoter for the transcriptional regulatory protein, chromodomain helicase DNA binding protein 8 (CHD8). CHD8 is an ATP-dependent chromatin remodeling factor that regulates gene expression and is thought to affect the expression of many other genes that are involved in brain development. Mutations in the CHD8 gene impair the function of the CHD8 protein, and symptoms that result from loss of function mutations have been discovered to align with symptoms found in individuals with Autism Spectrum Disorder (ASD).

The model system Danio rerio (zebrafish) was used to study the phenotypic effects of the promoter deletion. Single guide RNAs (sgRNAs) and Cas9 were injected into the embryos of wildtype zebrafish to generate a germline mutation containing a deletion of the CHD8 promoter. Phenotypic effects of presumed reduced synthesis of the CHD8 protein were visualized through evidence of disruption of brain development.

Through this research, Glory found that 89% of embryos outcrossed from the founder fish lacked a prominent midhindbrain boundary in comparison to 3% identified in a wildtype cross.

Being an ACS Scholar meant having the opportunity to pursue my goals knowing I had a community that supported me and was well invested in making sure I succeed.

- Glory Onajobi, Class of 2020
Joseph Pavelites II, Tuscaloosa, Alabama

University of Alabama
Recent graduate in Chemistry

Joseph Pavelites II is an ACS Scholar who conducted research under the guidance of Dr. Julia Cartwright, a geochemist at the University of Alabama. He worked on the project “Compositional Investigations of Moundville Artifacts to Determine the Presence of Meteoric Iron.”

Iron meteorites existed as a rare form of workable iron for societies without the technology to purify iron ore. Because of this, many artifacts before this time period were made up of this unique material. The objective was to develop a reliable, non-destructive method for identifying the elemental composition of artifacts to determine the possibility of meteoric iron in samples. A hand-held XRF instrument was used to analyze Mississippian tribal items for iron-nickel ratios that are indicative of meteoric composition.

The information gained from this study will allow us to determine the suitability of the portable XRF in investigating sample composition. The analyzed artifacts could potentially also be used to track dissemination of items made from the same base material.

Being an ACS Scholar has given me so many opportunities to interact with my fellow scholars and other chemists. Having the ability to travel to conferences, individuals to talk to about my career goals, and opportunities to help other students are what made the scholarship more than tuition assistance.

- Joseph Pavelites II, Class of 2020

Rhondee A. Baldi, MD, MSc, Washington, DC

Rhondee is an internist and the current medical director of Inovalon, Inc. in Washington, DC. She is passionate about practice changes to improve the patient experience in primary care, and has been thus engaged in health care operations, completing analytic and evaluative work to support program and policy formulation. She has led the implementation of care teams and patient-centered medical home activities in her practice.

As a managing consultant at The Lewin Group, Rhondee led the development of quality measures and formulated technical assistance tools and materials directed at community health centers seeking to integrate primary care services. Her prior research focused on mental illness and medical co-morbidity. In addition to her clinical practice, Dr. Baldi served as attending preceptor for three years at Georgetown University and the Venice Family Clinic at UCLA.

Dr. Baldi graduated as an ACS Scholar in 1997 from Spelman College as a Biochemistry major. She earned her MD from Harvard Medical School and holds two masters degrees.

Charles "Carlos" Armesto, New York, New York

A member of the original 1995 Scholars cohort, Mr. Armesto graduated with a degree in Chemical Engineering from the Massachusetts Institute of Technology. While at MIT, he participated in the theater community, leading him to earn his MFA in directing from Carnegie Mellon University.

Upon settling in New York City, Mr. Armesto immersed himself in theater, directing musicals and productions. In 2009, he became head of Theatre C, a company that brings together music, dance, plays, and immersive events. Alongside his interest in the arts, Mr. Armesto has tutored high school and college students in STEM subjects for over a decade, highlighting his life-long passion for math and science as well as a commitment to teaching as a way to engage young minds.
Daniel Abebe, University of Maryland, College Park, Chemistry
Alejandra Acevedo Montano, Portland State University, Chemistry
Mikeclinton Agejo, Clemson University, Chemistry
Oluwagbemilai Akinsoji, University of Central Florida, Chemistry
Juan Alcantara, Skidmore College, Biochemistry
Sienna Alices, North Central College, Chemistry
Oba Amponsah, Howard University, Chemistry
Chistalyn Ausler, Cornell University, Chemical Biology & Biology
Adara Bacon, Georgia Southern University, Biochemistry
Natalie Banzadio, Towson University, Chemistry
Emily Barragan, University of California, Irvine, Chemical Engineering
Abeshai Bemardi, Prairie View A&M University, Undeclared
Ayana Blair, Illinois Wesleyan University, Biochemistry
Joseph Blount, Raritan Valley Community College, Chemical Engineering
Sebastian Boysen, University of Arkansas, Fayetteville, Chemistry
Melanie Buathier, Arizona State University, Forensic Science
Shanel Calle Urgiles, Stevens Institute of Technology, Chemical Biology
Alina Carranza, West Virginia University, Forensic Science
Natalia Carrasco-Munoz, University of Notre Dame, Environmental Engineering

Being an ACS Scholar is a reflection of hard work and intellectual tenacity that has continued to inspire me to challenge myself. I want to thank the Selection Committee from the American Chemical Society who reviewed my application and found inspiration within my story. To be receiving a national award in the chemistry field, is an honor and validating as a scientist. I am excited to be a part of a network that has amazing, hardworking and inspiring scholars.

- Alejandra Acevedo Montano

Gabriella Cerna, Arizona State University, Biochemistry
Carter Cohen, Georgetown University, Biochemistry
Natalie De La Luz, Polytechnic University of Puerto Rico, Chemical Engineering
Jose Del Rio, Georgia Gwinnett College, Chemistry
Gerald DeRogers, Jr., Oklahoma State University, Chemical Engineering
Aissata Diallo, University of Tennessee, Knoxville, Chemical Engineering
Victoria Diaz, California State University, Long Beach, Chemical Engineering
Jonathan Elisabeth, Pomona College, Chemistry
Luke Ellsby, University of California, Los Angeles, Chemistry
Christian Ellis, University of the District of Columbia, Chemistry
Jarisa Escalante, State University of New York, Potsdam, Biochemistry
Andraw Fierro, Arizona State University, Biochemistry
Felix Forcho, University of Maryland, College Park, Chemical Engineering
Emil Gillett, Trinity University, Chemistry
Jessica Gomez, University of Texas, El Paso, Chemistry
Alejandro Gomez Gonzalez, Saint Peter's University, Biochemistry
Jordan Gonzalez, Lewis & Clark College, Chemistry
Diego Granados Delgado, University of Texas, Austin, Chemistry

I am honored to be part of the American Chemical Society Scholars Program. As a first generation college student, this generous donation has brought me one step closer to my goal of earning a B.S. in Biochemistry and eventually a Ph.D. Thanks to the American Chemical Society, my path to a career in a chemical field is within sight. I see myself contributing to the scientific community in meaningful ways in the future.

- Gabriella Cerna
Throughout my academic career thus far, I have questioned my sense of belonging in STEM due to seeing so few who look like me — both African American and female — in academia. Being selected as an ACS Scholar gives me the courage and confidence to say I have a place within my field and can make unique contributions to the future of STEM. I am immeasurably grateful to the professionals, scientists, and academics that see my potential and are investing into my success as a chemist. I am eager to one day inspire future girls who do not yet see themselves reflected in the hard sciences and remind them they, too, belong. Being an ACS Scholar is only the beginning of that journey.

— Kayla Landers

Glenn Grimmert, Northeastern University, Chemical Engineering
Nicolas Gutierrez, New Jersey Institute of Technology, Chemical Engineering
Alexia Gutierrez Ledesma, Pitzer College, Chemistry
Nicholas Hadler, University of South Florida, Chemistry
Sky Harper, Drexel University, Chemistry
Katelin Harris, Marist College, Chemistry
Miauaxochitl Haskie, Brown University, Environmental Science
Hannah Hassoun, Case Western Reserve University, Chemistry
Hailey Hendricks, University of Rhode Island, Chemistry
Jabari Hinton, Alabama A&M University, Food Science
Nnenna Ijomanta, Harvard University, Chemical Engineering
Monet Irvin, Xavier University of Louisiana, Chemistry
Melissa Jones, Harvard University, Bioengineering
Tiffany Kalu, Harvard University, Environmental Engineering
Kayla Landers, California State University, Long Beach, Chemistry
Aaliyah Lemons, University of Texas, Austin, Chemical Engineering

Alyssa Liming, West Virginia University, Forensic Chemistry
Mitzy Lopez Canez, Northern Arizona University, Chemistry
Lizeth Lopez Vasquez, University of California, Irvine, Chemistry
Shakira Martinez Vasquez, Polytechnic University of Puerto Rico, Chemical Engineering
Christopher McDonald, Texas State University, Biochemistry
Giovan McKnight, Harvard College, Chemistry
Brandon McReynolds, New Mexico Institute of Mining & Technology, Chemical Engineering
Paula Mendoza Moreno, Colorado State University, Chemical Engineering
Molly Monge, Rensselaer Polytechnic University, Biochemistry
Nicholas Morales, Hunter College, Chemistry
Oriana Nelson, Princeton University, Environmental Engineering
Dequan Nichols, James Madison University, Biophysical Chemistry
Cillali Nieves Lira, Oregon State University, Chemistry
Adriana Okonkwo, Texas A&M University, Biochemistry
Elena Olvera, Westmont College, Chemistry
Javier Orozco, University of Florida, Biochemistry

Becoming an ACS Scholar has really given me something to look forward to for my college career. Throughout this coronavirus pandemic, I got pretty anxious about the future. I was afraid that I might not be able to have a college experience in the fall, and began to fret about my family’s financial situation. Receiving the email that I was selected as an ACS Scholar definitely gave me some hope. I am excited to create long lasting relationships within this scholar program with other scholars and mentors. Most of all, I am eager to further my love for learning about the chemical sciences.

— Tiffany Kalu
Valery Ortiz, University of California, Santa Cruz, Biochemistry
Adrian Ortiz, Texas A&M University, Chemical Engineering
Alexandria Palazzo, Florida State University, Chemistry
Harith Palmer, University of Michigan, Chemical Engineering
Gustavo Pulido Molina, University of South Florida, Chemical Engineering
Hasna Rachid, Cleveland State University, Chemical Engineering
Maximus Ramirez, University of Delaware, Chemical Engineering

It means the absolute world to me to be an ACS Scholar. It validates the time and interest that I’ve invested over the years into the subject and I hope that this will lead into new exciting opportunities!
- Juan Alcantara

Tobias Rangel Guilien, University of Washington, Chemistry
Anthony Rodriguez, University of California, San Diego, Chemistry
Omar Salinas, University of Chicago, Chemistry
Joseph Sampson, Monmouth College, Chemistry
Kimmia Saunders-Butler, Georgia Institute of Technology, Chemical Engineering
Victor Schiller, New Mexico Institute of Mining and Technology, Chemistry
Greydon Shangreaux, South Dakota School of Mines and Technology, Chemistry
Jade Simmons, University of Maryland, College Park, Engineering
Madelyn Skloss, Texas A&M University, Chemical Engineering
Ryal Smith, University of Maryland, Baltimore County, Chemistry
Abigail Soliven, Purdue University, Chemistry

Having the support of the American Chemical Society and its large network of professionals and scientists provides me with the confidence to pursue my goals of becoming a professional scientist and helping others through chemistry research.
- Luke Elssry

Pamela Joy Tabaquin, City College of New York, Biochemistry
Sebastian Uribe Leon, University of South Florida, Biochemistry
Jazmyn Vivaldo, Benedictine University, Chemistry
Kyler Westphal, Brigham Young University, Biochemistry
Keiyana White, Gordon State College, Chemistry
Leo Williams, California Institute of Technology, Bioengineering
Janeva Williams, North Carolina State University, Chemistry
Brittany Williams, Louisiana State University, Chemical Engineering
Manuel Yepes, Harvard University, Chemistry
Dulce Zamora, University of Houston, Chemical Engineering

To be an ACS Scholar is an immense honor that I have earned through my persistent hard work and effort as an individual in the chemical sciences. It means that my potential is defined by me, and is decidedly infinite, as I am unwilling to let anything hold me back- be it rigor, circumstance, or my own comfort zone. I am dedicated to chemistry, and being a Scholar means that I have what it takes to feed my passion and to grow from it.
- Janeva Williams
Marisa Moore, MBA, RDN, Atlanta, Georgia

As an ACS Scholar, Marisa majored in Chemistry, graduating from Georgia Institute of Technology in 1999. She went on to earn her MBA from Georgia State University and become a registered dietitian nutritionist.

This unique educational background positioned her perfectly to become a federal contractor for the U.S. Centers for Disease Control (CDC) where she developed, marketed, implemented, and evaluated nutrition and wellness programs. After more than 6 years at the CDC, Marisa shifted into roles that let her reach an even broader audience, becoming spokesperson for the Academy of Nutrition and Dietetics, writing for Food & Nutrition Magazine, and starting her own business, Marisa Moore Nutrition, LLC.

As part of her business, she offers both communications and consulting services in the food and nutrition space. She develops recipes; conducts media training for TV, radio, and print; writes for corporate and consumer audiences, and acts as spokesperson. Over the course of her career, she has been featured in over 1,000 interviews in national print, TV, and radio. Even while juggling these responsibilities and contracts, Marisa also taught for almost 10 years as an adjunct faculty member at Georgia State University.

Candra Smith-Chambers, West Columbia, South Carolina

In 1998, Candra graduated from Tougaloo College with a degree in Chemistry. Shortly after graduation, she attended veterinary school at Tuskegee University, where she received her DVM in 2002. She spent a few years working in private practice and mobile preventative practice before joining Van Crest Animal Hospital in 2003, where she is affectionately called “Dr. C.” At Van Crest, she is both a veterinarian and co-owner of the hospital, specializing in internal medicine, dermatology, and geriatric medicine. The other owner of the hospital is her husband, Nick Chambers of Mississippi.

ACS SCHOLARS IN C&EN

Previous milestone anniversaries of the ACS Scholars Program included Chemical and Engineering News (C&EN) profiles on Scholar Alumni, highlighting their career paths, reflections on their time as a Scholar, and accomplishments since they graduated from the program. The 25th anniversary of ACS Scholars focused on more engagement and celebration of current ACS Scholars as well.

The first engagement activity was the Research Spotlight series on ACS Scholar social media channels. Current Scholars shared the research activity they were engaged in during the academic year or summer. You can find these spotlights throughout this annual report.

In 2019, ACS staff issued a call for current Scholars to write Alumni Profiles for C&EN, capturing the activities of select alumni, while also providing those Scholars a byline in a globally-distributed magazine.

A number of Scholars expressed interest, but the final group was narrowed down to just six. These students worked with C&EN editor Linda Wang to prepare for and conduct interviews, write up their piece, and solicit feedback. These pieces were then released in C&EN every other month over the course of 2020.

Congratulations to the selected writers for 2020:
- Joseph Lance Casila, 2018 cohort
- Hilary Fokwa, 2016 cohort
- Rebecca Leuschen, 2017 cohort
- Jade McDaniel, 2016 cohort
- Niara Nichols, 2018 cohort
- Andrew Palacios, 2016 cohort
Corina McClure

Current ACS Scholar Niara Nichols chats with this FDA chemist about being a woman of color in chemistry

Niara Nichols, special to C&EN

“B
de 1 was an ACS S c h o l a r , I w a s n ’ t f a m ili a r w i t h t h e A m e r i c a n C h e m i c a l S o c i e t y , ” s a y s C o r i n a M c C l u r e , w h o w a s a n A C S S c h o l a r f r o m 2 0 1 2 t o 2 0 1 4 , w h e n s h e w a s a n u n d e r g r a d u a t e a t t h e U n i v e r s i t y o f N o r t h C a r o l i n a W i l m i n g t o n . “ B e i n g a n A C S S c h o l a r r e a l l y g e t t e d m e i n t e r e s t e d a n d a c t i v e a s a n A C S m e m b e r . A n d I ’ m s t i ll a n A C S m e m b e r t o t a l l y t o d a y . ”

M c C l u r e , w h o n o w w o r k s a s a n a n a l y t i c a l c h e m i s t a t t h e U S F o o d a n d D r ug A d m i n i s t r a t i o n , w a s o n t h e b o a r d o f h e r A C S l o c a l s e c t i o n , t h e C h e m i c a l S o c i e t y o f W a s h i n g t o n . S h e s a y s h e i n v o l v e d w i t h A C S , p r e v i o u s l y a s a n A C S S c h o l a r a n d n o w a s a n A C S m e m b e r , h a s o p e n e d d o o r s t o n e w o p p o r t u n i t i e s f o r h e r . F o r e x a m p l e , M c C l u r e l e a r n e d a b o u t t h e O a k R i d g e I n s t i t u t e f o r S c i e n c e a n d E d u c a t i o n F e l l o w s h i p d u r i n g a n A C S e v e n t . T h i s e x p e r i e n c e a l l o w e d h e r t o g e t h e r i n t o t h e d o o r s i n t h e g o v e r n m e n t a n d s t a r t m a k i n g c o n n e c t i o n s t h e r e . “ N e t w o r k i n g i s v e r y i m p o r t a n t , n o t o r d e r t o b e u n d e r s t i m a t e d , ” M c C l u r e s a y s .

B e f o r e h e r j o b a t t h e F I A , M c C l u r e d i d a d o t o w o r k i n e n v i r o n m e n t a l c h e m i s t r y f o r a n e n v i r o n m e n t a l o r g a n i z a t i o n t h a t c l e a n e d u p W i l s o n B a y w h i l e s h e w a s e n r o l l e d a t C o a s t a l C a r o l i n a C o m m u n i t y C o l l e g e . W h e n s h e w a n t e d t o c o m e h e r b a c h e r o o d e g r e e i n c h e m i s t r y f r o m t h e U n i v e r s i t y o f N o r t h C a r o l i n a W i l m i n g t o n , s h e t o o k h e r p a s s i o n f o r t h e e n v i r o n m e n t w i t h h e r , c o n t i n u i n g r e s e a r c h o n o c e a n p l a s t i c s .

M c C l u r e a l s o h a s a p a s s i o n f o r w o r k i n g w i t h k i d s . W h i l e w o r k i n g t o w a r d h e r b a c h e r o o d d e g r e e i n c h e m i s t r y f r o m G e o r g e M a s o n U n i v e r s i t y , M c C l u r e w o r k e d w i t h t o p i c a l s v i s i t i n g e l e m e n t a r y s c h o o l c l a s s r o o m s a n d d i d h a n d - o n s c i e n c e a c t i v i t i e s w i t h t h e s t u d e n t s , s p a r k i n g t h e i r i n t e r e s t i n s c i e n c e . S h e l a t e r r e t u r n e d t o t h e c l a s s r o o m , w o r k i n g a s a c h e m i s t y t e a c h e r . W h i l e s h e e n j o y e d w o r k i n g w i t h s t u d e n t s , h e r h e a r t w a s i n t h e l a b .

M c C l u r e e v e n t u a l l y m a d e h e r w a y b a c k t o t h e l a b . S h e l a n d e d a j o b a s a n a n a l y t i c a l c h e m i s t i n t h e C e n t e r f o r F o o d S a f e t y a n d A p p l i e d N u t r i t i o n , w h e r e s h e c u r r e n t l y w o r k s . W h e n a s k e d h o w s h e f e e l s b e i n g a w o m a n o f c o l o r i n c h e m i s t r y , s h e s a y s t h e f i e l d i n w h i c h w o m e n w i t h p r o g r e s s i v e o r m i l l e n n i a l r e s i d e n t s a r e u n d e r r e p r e s e n t e d . M c C l u r e s a y s s h e s e e s a u n i q u e o p p o r t u n i t y t o c o n n e c t w i t h o t h e r s . A s h e s e e s i t , M c C l u r e c h a l l e n g e s t h e n o n e s w h o c r e d i t h e h e r u n i q u e n e s s , i n t e r e s t s i n c h e m i s t r y , a n d a s d i s c o u r a g e s t h e m t o c o n n e c t t h e n e w e r g e n - t h e n e w e r g e n , t o o . M c C l u r e c o n s i d e r s h e r a h e a l t h y c o m b i n a t i o n f o r t h e c h a n s t h e c h e m i s t r y f i e l d w i l l c o n t i n u e 

ACS SCHOLARS PROFILE

Current ACS Scholar Niara Nichols chats with this FDA chemist about being a woman of color in chemistry

**Nearby Location**

![ACS Scholars Annual Report](https://example.com/acs-scholars-anual-report.jpg)

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**ACS SCHOLARS ALUMNUS:**

Bart Bartlett

**Current ACS Scholar Rebecca Leushen chats with this University of Michigan professor about motivation and inspiration.**

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**REBECCA LEUSHEN:**

How was the American Chemical Society a catalyst to your educational journey, and what advice do you have for current ACS Scholars?

**Bart Bartlett (left) and graduate student Andrew Breuhaus-Alvarez look over data together.**

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**Bart Bartlett**, a professor of chemistry at the University of Michigan, was an ACS Scholar from 1998 to 2000, the first group of graduate students at the University of Michigan in the ACS Scholars Program.

**Andrew Breuhaus-Alvarez**

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**Bart Bartlett**

I think it’s the obvious part that it helped in financing education, which is not so small. It’s only getting harder now as the cost of education keeps going up. That was extremely helpful and ensured that I didn’t have to take out loans for books and room and board the last couple of years. The advice that I give to current scholars is that there’s now a large alumni network. And as you go out you’re presenting your work at ACS meetings, get involved. Participate in ACS Scholars activities just to get advice and ask questions about how to get graduate school applications together or apply for fellowships.

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**What is your favorite activity outside of the office?**

It’s kind of exciting right now in my family. My wife and I welcomed a son, Lilm, in December, so that’s a totally new part of life. I also have two dogs that keep me busy and make sure I get lots of exercise. I also play softball, because you know, I’m a chemist, and my baseball career was going nowhere.

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**Rebecca Leushen** is an ACS Scholar and undergrad chemistry major at the University of Nebraska–Lincoln. This year she is a recent ACS Scholar with early-career alumni for a conversation. To learn about the ACS Scholars Program or to make a donation, visit www.acs.org/scholars.
Richelle Delia
Current ACS Scholar Andrew Palacios chats with this chemical engineer about her atypical career path

Although she enjoyed her research and its potential to eventually help a niche population, she wanted to create a real-time and systemic impact. This inspired her to complete a Fulbright fellowship at the University of the West Indies in St. Lucia. There, she investigated the effect of glut cell response to inflammatory cytokines in an effort to mimic wound healing in an inflammatory environment.

Her Fulbright experience was a direct extension of her materials-related graduate work. Her project tackled wound healing in a diabetic environment—a problem that affects nearly 20% of the adult population. Delia describes her Fulbright experience as “a more applied fruition” of her work. When earning her PhD, she received a job offer from Owens Corning Science & Technology as an advanced engineer in R&D. She conducted life cycle assessments on insulation products, offered lectures that contributed to the zero-energy movement, and studied how carbon emissions can be reduced through policy and business. She worked in the company’s Strategic Marketing and Government Affairs departments with lobbyists on state-level residential building energy codes for proactive business development.

After realizing the gaps that exist in the quality housing supply, Delia and her real estate developer husband, John, cofounded Housing Joint Venture, a real estate investing and development company that seeks to restore vibrancy in overlooked neighborhoods without supporting gentrification. To address the housing affordability crisis, Delia and her team are focusing on converting abandoned properties into for-lease units for investors and families.

Andrew Palacios, a recent ACS Scholar, just graduated from Columbia University. He will be joining Anheuser-Busch as a chemical engineer in June. This series brings together current or recent ACS Scholars with early- or midcareer alumni for a conversation. To learn about the ACS Scholars Program or to make a donation, visit www.acs.org/scholars.

Chyree Batton
Current ACS Scholar Jade McDaniel chats with this industrial chemist about her passion for chemistry

JADE MCDANIEL, SPECIAL TO O&EN

From a young age, Chyree Batton knew that she wanted to make a difference in the world. She grew up wanting to cure cancer after her aunt was diagnosed with breast cancer. "Meeting someone struggle with that disease and ultimately die from it, I thought, ‘I want to be the one who finds the cure,’” Batton says. After taking and excelling in a chemistry class in high school, she realised she had found her medium to accomplish this goal.

Today, Batton is a PhD chemist working at SC Johnson in Racine, Wisconsin. She credits many influences for her success today and one of those influences was the ACS Scholars program. Batton attended Spelman College in Atlanta, Georgia, where she was an ACS Scholar. It was there that she met Lyle Whiffield, who became her adviser and helped her make the decision to pursue graduate school. "Whiffield really anchored me there and helped me focus my energy so that when I did graduate, I had a purpose, I knew what I was doing, and I could give back,” she says. Batton earned a BS in chemistry from Spelman College in 2009.

Batton went on to earn a PhD in organic chemistry from Louisiana State University, and then accepted a position at SC Johnson working in product formulation. In her current role as a scientist at SC Johnson, Batton notes, “I really want to be part of it.” She then, “There’s just all these different applications that an organic chemist could do to help.” And her message to current chemistry students, ACS Scholars and working professionals alike is very similar to the way she is leading her career. "Be willing to stretch the imagination of what you can do with your chemistry degree, she says. “Explore all possibilities. Be creative with what you want to do.”

Batton credits the ACS Scholars program for much of her success. She says the program was crucial to her undergraduate career and allowed her to focus on her education instead of just money. She adds that during her time at Spelman College, there were several other ACS Scholars in the chemistry program with her. The connection they developed through the program helped them build a network of students that could study together and elevate each other. "It was a major impact," she says. "The fact that I met other ACS Scholars who are doing really amazing things lets me know that the program is working."
Joseph Lance Casila talks to this synthetic chemist about the catalysts that have shaped his life and career

Joseph Lance Casila, SPECIAL TO CA
e

Catalysts are powerful tools in synthesis, helping reactions overcome their activation energy barrier. Life’s hardships are like those barriers, and academic and spiritual support are the catalysts that help people move toward their goals. After earning his Ph.D. in organic chemistry from Bowling Green State University, I decided that I really wanted to pursue a Ph.D. because I was very interested in research and analytical chemistry,” she says. Her research uses ion-selective electrodes to determine electrolyte levels in blood samples. Her advice to other ACS Scholars is to take advantage of mentorship opportunities and ask people for advice. “Broaden your horizons, and learn as much as you can,” she says. Aside from doing chemistry research, Herrero loves chemistry puns and jokes. In her free time, she enjoys training for half marathons, hiking, and backpacking. It’s important to have work-life balance, she says. “Make sure you take care of yourself and take some time off.”

Hilary D. Forkey, a recent ACS Scholar, graduated this year from the University of Richmond. She is currently a graduate student in chemistry at the University of North Carolina at Chapel Hill. This series brings together graduates of recent ACS Scholars with early- or mid-career alumni for a conversation. To learn about the ACS Scholars Program or to make a donation, visit www.acs.org/scholars.

Daniel Mindiola is in his lab at the University of Pennsylvania

JACK NUTTER, SAW MINDIOLA struggling and reached out to him by tutoring him in the early morning. That mentorship paid off, and Mindiola started excelling in his classes.

After graduating high school, more catalysts came into Mindiola’s life as he moved toward his future career as a professor. As an undergraduate at Michigan State University, Mindiola met chemist professor Kim Dunbar, who exposed him to laboratory research and inspired him to major in chemistry. In graduate school at the Massachusetts Institute of Technology, Mindiola worked in the lab of Christopher Cummins. He then completed a postdoc at the University of Chicago under the mentorship of Gregory Hillhouse. “Each of them played a significant and critical role in channelling me into the person I am now,” Mindiola says.

After his postdoc, Mindiola joined the chemistry faculty at Indiana University Bloomington. Eleven years later, he moved to the University of Pennsylvania. His research is both fundamental and applied, spanning areas like synthetic and catalytic chemistry. “I always think about how I can engage with students in my lab,” he says.

Robert Lansing, a recent ACS Scholar, graduated from the University of Guelph in 2019. He is currently a chemistry graduate student at the University of Chicago.

This series brings together current or recent ACS Scholars with early- or mid-career alumni for a conversation. To learn about the ACS Scholars Program or to make a donation, visit www.acs.org/scholars.

Eliza Herrero credits the ACS Scholars Program with her decision to pursue a chemistry degree

Eliza Herrero received her high school chemistry teacher last year and told him, “I want to let you know that I’m doing chemistry because of you.” Herrero, who is now a third-year graduate student in chemistry at the University of Minnesota Twin Cities, says it’s important for teachers and other mentors to know how big an impact they have on their students. In fact, Herrero has had many mentors throughout her life who have influenced her career path.

Herrero grew up in Scarsdale, New York. She credits her Cuban grandmother, whom she calls Abuela, for her dedicated work ethic: “She had a real big impact on me.” Herrero says that her grandmother “taught me that you have to work hard and that you need to face a lot of adversity.” Her grand- mother used to say to Herrero, “If you have the game, then you have to keep going even if you come back with the yes.”

Herrero opened up about the issues she has encountered as a Hispanic chemist: “When you’re reading papers, or when you’re in classes, or when you’re talking to other professionals, you can feel sometimes on the outside of the circle,” she says. “I’m of Hispanic descent, and it’s not that common to come across Hispanic in the field.”

One of the ways she was able to cope with her feelings of being an outsider was through her seminar studying abroad in South America, where she conducted research on techniques to measure levels of metals in water samples. “That was a really cool experience no longer being in the minority but being in the lab and speaking Spanish and realizing that while the majority of papers I’m reading are published in the United States, there is really great research being done internationally.”

After earning a BS in chemistry from the University of Notre Dame, Herrero volunteered with an orphanage in Nicaragua for 18 months. When she returned to the US, she got a job as a science teacher at Success Academy Charter Schools in the Bronx, New York. She then worked as a quality-control chemist with LMK International before starting grad school at the University of Minnesota. “I decided that I really wanted to pursue a Ph.D. because I was very interested in research and analytical chemistry,” she says. Herrero’s research uses ion-selective electrodes to determine electrolyte levels in blood samples. Her advice to other ACS Scholars is to take advantage of mentorship opportunities and ask people for advice. “Broaden your horizons, and learn as much as you can,” she says. Aside from doing chemistry research, Herrero loves chemistry puns and jokes. In her free time, she enjoys training for half marathons, hiking, and backpacking. It’s important to have work-life balance, she says. “Make sure you take care of yourself and take some time off.”

Hilary D. Forkey, a recent ACS Scholar, graduated this year from the University of Richmond. She is currently a graduate student in chemistry at the University of North Carolina at Chapel Hill. This series brings together current or recent ACS Scholars with early- or mid-career alumni for a conversation. To learn about the ACS Scholars Program or to make a donation, visit www.acs.org/scholars.

Eliza Herrero credits the ACS Scholars Program with her decision to pursue a chemistry degree.

ACS SCHOLARS PROFILE

ACS Scholar alumnus: Eliza Herrero

Recent ACS Scholar Hilary Fukwa talks to this analytical chemist about the value of mentorship

HILARY D. FORKEY, SPECIAL TO CA

ACS SCHOLARS PROFILE

ACS Scholar alumnus: Daniel Mindiola

Recent ACS Scholar Joseph Lance Casila talks to this synthetic chemist about the catalysts that have shaped his life and career
A TRIBUTE TO ZAIDA C. MORALES-MARTINEZ

A beloved fixture of the ACS Scholars Program, Zaida Morales-Martinez served as Mentoring Consultant to the ACS Scholars program for 21 years before retiring in the fall of 2020. Beyond being a mentor, Zaida also contributed to the founding of the program, serving on the original task force that was instrumental in creating the ACS Scholars Program at the American Chemical Society.

As Mentoring Consultant to the ACS Scholars program, Zaida wrote a personal letter to welcome each of the new Scholars, assisted in pairing them with mentors, and checked in on them via email once per year for each year they participated in the program. She kept up with thousands of Scholars throughout her time with the program, thus earning her the affectionate title of "Mama Z."

In Zaida’s words, "The ACS Scholars Program is one of my children. I’m proud that we continue to serve three communities and have kept a high level of students. I’m proud of the statistics and that something we envisioned came to fruition."

Zaida is highly regarded as an authority on mentoring, authoring several articles on its importance and methods, including one published in Science by the American Association of the Advancement of Science. She has also been invited to serve on advisory panels on mentoring like the National Council of La Raza national conference where she spoke on "Empowering Women in STEM: The Strength of Mentoring."

Her dedication to students has earned her recognition, including the Distinguished Service Medalion from Florida International University, where she taught for over 25 years; the Presidential Award for Excellence in Science, Mathematics & Engineering Mentoring in 2018; and two ACS awards: Encouraging Disadvantaged Students into Careers in the Chemical Sciences and the ACS Award for Volunteer Service. In 2011, the Zaida C. Morales Martinez Prize for Outstanding Mentoring of ACS Scholars was established to highlight the importance of mentoring and the impact of Zaida’s service.

“I try to give [students] hope for the future and push them to do better. I encourage them to see their advisors and get their GPA’s up. You have to use the gifts you have been given. I think that I have the gift of being able to talk to these kids. On the other hand, these kids keep me going. Their successes are my reward.”

- Zaida Morales-Martinez

"Dear Mama Z..."

Your mentorship of current and former ACS Scholars is extraordinary! Thank you for all of the phone calls, emails, and smiles that have enriched the ACS Scholars community. You will be missed, but not forgotten.

- LaShanda Kotley, Cohort of 1995

Countless miles and thousands of smiles – how Zaida C. Morales-Martinez made the world a better place. It’s been an honor to know you and work with you for my 21 years as part of the ACS Scholars program. Your wisdom never fades.

- Robert Hughes, Former ACS Staff Member

Thank you for all of your support and encouragement to myself and all ACS Scholars over the years! I appreciated you taking the time to write me occasionally to check in or let me know that you were proud of my accomplishments. The ACS Scholars community is such a valuable one and your work has been a key part of that.

- Jessica Kisunzu, Cohort of 2007

Your dedicated service to the ACS Scholars program has had an immeasurable impact on so many students who affectionately know you as "Mama-Z." From your role in helping to establish and grow the program to your commitment to mentoring students directly, you have been an inspiration and role model to those of us who came along later.

- Robert Hoyte, ACS Scholars Subcommittee Member

Thank you for your friendship over the years! I appreciate your just checking in to see how I’m going and connecting me with lots of great students.

- Bart Bartlett, Cohort of 1998
We want to extend a special thank you to members of the 2020 ACS Scholars selection committee. Each year, our reviewers dedicate two weeks for training and to review 600+ student applications. This year, with the chaos of the COVID-19 pandemic, the selection committee’s efforts were especially appreciated. Most of the committee members are college professors, many of whom had to juggle very abrupt shifts to virtual teaching mere weeks before the application review began. Their resiliency and commitment ensured the program’s continuation despite the pandemic.

We also want to acknowledge Iona Black of James Madison University, who passed away this year a few short months after selection of the 2020 cohort. She was a dear friend and long-time supporter of ACS Scholars. Iona will be missed.

2020 Selection Committee

Dee Dee Allen        Jim Long
Harry Bermudez       Daniel Mindiola
Iona Black           Zaida Morales-Martinez
Kathleen Carrigan    Sarah Mullins
Milly Delgado        William Myers
George Fisher        Amy Paris
Michael Greenfield   Thomas Potts
Trinity Hale         Jerry Sarquis
Robert Hoyte         Bradley Scates
Waisu Lawal          Heather Sklenica
Carol Libby          Emanuel Waddell
Dan Libby            Linette Watkins
Celia Williams

ACS Scholars Program Staff

Racquel Jemison, Student Experiences Portfolio Manager
Racquel leads ACS Scholars and Project SEED, serving 700+ students per year, regularly collaborating with other staff to guide the strategic direction of these programs. Racquel's efforts are fueled by her passion to increase access to STEM fields, particularly for marginalized groups.

B.S., Chemistry; Ph.D., Organic Polymer Chemistry

Mahalia Randle, Program Manager
Mahalia manages the ACS Scholars program and directs the Project SEED scholarship program, providing funding for many students to help them advance their chemistry education. Before joining ACS, Mahalia served as an assistant program officer for the College Success Foundation in Washington, D.C., where she administered $3 million in scholarships to 300+ students.

B.A., English; M.Ed., Educational Leadership

Kelechi Uzo-Okoro, Program Specialist
Kelechi manages social media accounts that connect hundreds of students to ACS and each other. She also handles program and payment logistics, and communications for ACS Scholars and Project SEED scholarships.

B.A., Business Administration

Justin Zimmerman, Program Specialist
Justin managed program logistics for Project SEED, contributed to the planning and launch of the new Project SEED database, and was instrumental in developing the curriculum and learning management system for the 2020 Virtual Summer Camp. Prior to ACS, Justin was a chemistry teacher in North Carolina at Kennedy High School.

B.S., Chemistry and Secondary Education