



**American Chemical Society - Pittsburgh Section**  
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# Celebrate Black History Month with ACS

## 5 Black Chemists Who Made a Difference

African-Americans have been making major advances in the chemical sciences for more than 170 years.



St. Elmo Brady

**St. Elmo Brady** (1884-1966) was the first African-American to receive a Ph.D. in chemistry in the U.S. After receiving his doctoral degree from the University of Illinois at Urbana-Champaign in 1916, Brady taught and held leadership roles at historically black universities and colleges, including Tuskegee Institute, Howard University, Fisk University, and Tougaloo College, leaving an impressive teaching legacy of strong undergraduate and graduate chemistry programs.

Photo: University of Illinois Archives



George Washington Carver

**George Washington Carver** (1865-1943) was born a slave. He worked hard to gain an education and become a scientist. He taught at Tuskegee Institute and became the "Peanut Man" who discovered myriad uses for the "lowly" legume. He developed hundreds of new uses for Southern agricultural crops and taught poor Southern farmers methods of soil improvement.

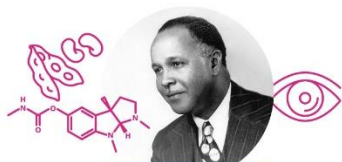
Photo: Library of Congress



Mae Jemison

The first African-American woman to fly in space, **Mae Jemison** (1956-) holds a B.S. in chemical engineering. In 1992, she served on an eight-day Space Shuttle mission that conducted microgravity investigations in materials and life sciences while orbiting Earth 127 times. Jemison was a co-investigator on the bone cell research experiment flown on the mission. She was also the first astronaut to appear on Star Trek.

Photo: NASA



Percy L. Julian

In 1935, in Minshall Laboratory, DePauw alumnus **Percy L. Julian** (1899-1975) first synthesized the drug physostigmine, previously only available from its natural source, the calabar bean. His pioneering research led to the process that made physostigmine readily available for the treatment of glaucoma. It was the first of Julian's lifetime of achievements in the chemical synthesis of commercially important natural products.

Photo: DePauw University Archives



Norbert Rillieux

**Norbert Rillieux** (1806-1894), widely considered to be one of the earliest chemical engineers, revolutionized sugar processing with the invention of the multiple effect evaporator under vacuum. The discovery, patented in 1846, enabled production of better-quality sugar at lower cost. Rillieux's invention is widely recognized as the best method for lowering the temperature of evaporation in other industries and for saving large quantities of fuel.

Photo: Louisiana State Museum

[Read about](#) Black Chemists throughout history, including George Washington Carver, Percy Lavon Julian, and Marie Maynard Daly.

Check out [ChemDiversity](#), the ACS Committee on Minority Affairs

[Learn about](#) how ACS is advancing their value of diversity, equity, inclusion, and respect

[Watch](#) a video from ACS highlighting the achievements and contributions of African American chemists.



### St. Elmo Brady—A National Historic Chemical Landmark

The American Chemical Society (ACS) has honored the achievements of several African-American chemists, including George Washington Carver, Percy L. Julian, Norbert Rillieux and, most recently, St. Elmo Brady, with the designation of a National Historic Chemical Landmark. The Landmarks program ([www.acs.org/Landmarks](http://www.acs.org/Landmarks)) recognizes major advances in the chemical sciences.



Did you know that as an ACS member, you have access to webinars specifically produced by ACS?

Upcoming February Webinar Topics include:

Feb 9<sup>th</sup>, 2-3pm Eastern time, Zebras or Horses? How a False Sense of Security can Lead to Lab Accidents

Feb 17<sup>th</sup>, 2-3pm Eastern, 10 Tips for Creating Abstracts with Substance and Style

Feb 23<sup>rd</sup>, 2-3 pm Eastern, Why You Need to Care About Ethics

Click [here](#) for more information and to register.

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ACS just launched a science podcast called “Tiny Matters”. The podcast covers things small in size but big in impact. Their first episode explored the question, “How are dinosaur fossils helping scientists predict our planet’s future?” If you’re looking for something educational and interesting to keep your workday exciting, check out “Tiny Matters” on Spotify, iHeartRadio, or wherever you listen to podcasts! Click [here](#) to read more about it.



Society for Analytical Chemists of Pittsburgh  
Spectroscopy Society of Pittsburgh



**FEBRUARY MEETING (In-Person or Virtual)**

**Wednesday, February 16, 2022**



**DUQUESNE  
UNIVERSITY**

in Pittsburgh



**PLEASE NOTE THAT  
DUQUESNE HAS AN IN-PERSON  
MASK MANDATE IN PLACE**

5:00 PM – Social Hour  
5:30 PM – Technology Forum  
6:30 PM – Dinner  
7:15 PM – Business Meeting  
8:00 PM – Technical Program

**SSP TECHNOLOGY FORUM (Will Not Be Offered Virtually)**



**Paul Gardullo, Ph.D.  
Co-Director of the Center for the Study of Global Slavery  
Smithsonian National Museum of African American  
History and Culture**

**“Slave Wrecks Project”**

**Biography**

Dr. Gardullo has over twenty-five years of experience professionally and academically researching, presenting, writing about and collaborating on American, African American, and Afro-Diasporan history and culture. He served on the core team building the NMAAHC's foundational collections as well as conceiving and crafting its inaugural exhibitions. He lectures, curates, consults, and advises nationally and internationally on a number of topics including slavery and the making of the modern world; Reconstruction and its legacies; The Power of Place, Race and Memory; Museums as sites of transformation, reckoning, and change; Community engagement and Public History and Humanities. He has contributed to multiple documentaries and appeared on CBS 60 Minutes, ABC, NBC, BBC, Slate, NPR, PBS as well as many newspapers, journals and online.

**Abstract**

The Slave Wrecks Project (SWP) is an international network of researchers and institutions hosted by the Smithsonian NMAAHC that searches for slave shipwrecks and takes a collaborative and international approach looking at sites, histories and legacies connected by their voyages.

SWP seeks to bring the immensity of that history to a human scale, voyage by voyage, through recovering the experiences and highlighting the humanity of those who were enslaved aboard the ships that plied the most horrific and extensive trade in people in world history. Through SWP's efforts, previously submerged archeological remains and long-neglected histories are recovered, restored, remembered, protected, and shared.



## **SACP TECHNICAL PROGRAM**

**Lisa Jones, Ph.D.**

**Associate Professor, University of Maryland School of Pharmacy**

### **"In-Cell Protein Footprinting Coupled with Mass Spectrometry for Structural Biology Across the Proteome"**

#### **Biography**

Dr. Jones's research interests include the use of the protein footprinting method fast photochemical oxidation of proteins (FPOP) coupled with mass spectrometry for the characterization of the higher order structure of proteins. In particular, her lab has further developed the FPOP method for in-cell (IC-FPOP) studies for proteome-wide structural biology. Biological applications of IC-FPOP include characterizing protein folding intermediates directly in the cell and drug target (both on and off targets) determination. The Jones lab has also extended the method for in vivo analysis (IV-FPOP) in *C. elegans*. This provides the ability to study protein structure in an animal model for human disease.

#### **Abstract**

In recent years, protein footprinting coupled with mass spectrometry has been used to identify protein-protein interaction sites and regions of conformational change through modification of solvent accessible sites in proteins. The footprinting method, fast photochemical oxidation of proteins (FPOP), utilizes hydroxyl radicals to modify these solvent accessible sites. To date, FPOP has been used in vitro on relatively pure protein systems. We have further extended the FPOP method for in vivo analysis of proteins. This will allow for study of proteins in their native cellular environment and be especially useful for the study of membrane proteins which can be difficult to purify for in vitro studies. A major application of the in vivo method is for proteome-wide structural biology. In one such application, we used in-cell FPOP (IC-FPOP) to identify on and off targets of the anti-cancer drug methotrexate in leukemia cells. By obtaining structural information on proteins across the proteome, we were able to distinguish downstream structural changes that occur due to drug treatment. We have further extended the FPOP method for analysis in *C. elegans*, a member of the nematode family. This allows us to study protein structure directly in animal model for human disease. These methods have the potential to become a powerful tool in the structural biology toolbox.

**MEETING RESERVATIONS:** For both in-person and virtual reservations, please [CLICK HERE](#) by **BY NO LATER THAN Friday, February 5, 2022**. In-person entree choices include Crab Cake or Stuffed Portabello Mushroom. Please let us know if you have any dietary restrictions. Dinner will cost \$10 (\$5 for undergraduate students). Checks can be made payable to either SACP or SSP, depending on your membership. Please note the dinner policy included in your document links regarding cancellations.

**PARKING:** Duquesne University Parking Garage entrance is on Forbes Avenue. Upon entering the garage, you will need to get a parking ticket and drive to upper floors. The Power Center can be accessed from the 8th Floor of the Forbes Garage. Bring your parking ticket to the dinner or meeting for a valedation sticker. Please contact Duquesne University, if any difficulties should arise. If there is a special event, please note that you are there for an SSP or SACP meeting to get a parking ticket.

For any questions or problems, please contact Colleen, the Society Coordinator, at 412-825-3220 (Ext. 215).



## Register for the ACS Spring National Meeting!

March 20-24 in San Diego and Virtual

The schedule is now available [here](#).

Click [here](#) for registration information.

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## Call for Abstracts!



The ACS Fall 2022 National Meeting will be held in Chicago from August 21-25. The deadline for abstracts is March 14. To see the list of symposia and to submit your abstract, click [here](#)!



**ACS** Local Section  
Huron Valley

The Central Regional Meeting of the ACS (CERM) 2022 is being hosted by the Huron Valley Local Section and will take place June 7-10<sup>th</sup>, in Ypsilanti, MI on the campus of Eastern Michigan University. The deadline for submissions is March 7. To view the regional meeting website and to see the list of symposia, click [here](#).

## Women Chemists Committee/Eli Lilly Travel Award

The Women Chemists Committee and Eli Lilly and Company sponsor this program to provide funding for undergraduate, graduate, and postdoctoral female chemists to travel to meetings to present the results of their research. Deadline is March 1 for travel during the second half of 2022. Click [here](#) for more information and to apply.

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## IUPAC Global Women's Breakfast



IUPAC has been organizing a Global Women's Breakfast each year in conjunction with the UN Day of Women and Girls in Science. Members are encouraged to host their own local breakfast event and register the event with IUPAC [here](#).

If you haven't organized a local event at your institution or organization, you are encouraged to register and tune into the ACS Virtual Event by clicking [here](#). On February 16, ACS will host a panel event from 10-11 AM EST but will also host networking sessions before and after.



**ACS** Local Section  
Pittsburgh



**Host the 2022  
ACS “On the Road” and  
Mildred E. Perry Memorial Lecture**

Each year, the Pittsburgh local section features an “On the Road” event, which has the Mildred E. Perry Memorial Lecture. This is a great opportunity for local section chemists to visit your site or campus. The organizers choose the speaker and program details. Past organizers would be happy to share our experiences and websites if the host location is interested. In 2021, this event was hosted by Saint Francis University and featured Dr. Lan Deng from PPG. The event was virtual, and we encourage virtual events during these uncertain times. If your institution is located in the Pittsburgh Local Section and you would like to host the 2022 ACS “On the Road” event, please contact ACS Chair, Kim Woznack ([woznack@calu.edu](mailto:woznack@calu.edu)).

**American Chemical Society Pittsburgh Local Section**

*To advance the broader chemistry enterprise and its practitioners for the benefit of Pittsburgh region and its people.*  
[www.pittsburghacs.org](http://www.pittsburghacs.org)





## American Chemical Society Pittsburgh Section

[www.pittsburghacs.org](http://www.pittsburghacs.org)

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Dear Academic ACS Pittsburgh Section Members,

The Pittsburgh Section of the American Chemical Society has budgeted funds to help encourage undergraduate/graduate student participation in national and regional ACS meetings. The awards are intended to help defray meeting registration and travel-related expenses (lodging, transportation, per diem) for eligible students. Awards will be made based on the scientific merit of the paper/poster to be presented, financial need, and preference will be given to ACS members.

To apply for the funds, applicants should complete the attached application and return it by the relevant deadline. The deadlines for receipt of applications are as follows:

- **06/01 (for travel to be completed by 12/31)**
- **12/01 (for travel to be completed by 06/30)**

As noted on the application, students should include an abstract and confirmation (if received) of the paper/poster being accepted for the Meeting. In addition to the application form, applicants should include a recommendation letter from the PI of the project being presented and/or a recommendation letter from another and a personal statement as to the anticipated benefits of meeting attendance.

Applications can be made electronically (*preferred*) by emailing the application to Heather Juzwa ([hljuzwa@shimadzu.com](mailto:hljuzwa@shimadzu.com) or [heather\\_sapko@hotmail.com](mailto:heather_sapko@hotmail.com)) or by mailing a hard-copy application (Pittsburgh Section ACS Travel Grants / Heather Juzwa / Center / 321 Winners Circle / Canonsburg, PA 15317).

Since 2013, the Pittsburgh Section of the ACS has awarded up to four \$500 grants each year to aid our undergraduate/graduate student members in presenting papers or posters at ACS Meetings. This is an ongoing program in our Section, and details will be updated on our website ([www.pittsburghACS.org](http://www.pittsburghACS.org)) as necessary.

Applicants will be notified via email that their application was received. All efforts will be made to announce awards within two weeks of the application deadline, and all applicants will be notified of the final committee decisions. Our Section is looking forward to helping increase the participation of local students in ACS conferences. If you have any questions, please do not hesitate to contact me.

Sincerely,

Heather Juzwa, ACS Pittsburgh Section Student Travel Grants, Chair  
Senior Field Sales Engineer, Shimadzu Scientific Instruments, Inc



American Chemical Society  
Pittsburgh Section

[www.pittsburghacs.org](http://www.pittsburghacs.org)

| Application Deadline | Travel Completion Date    |
|----------------------|---------------------------|
| December 1           | June 30 (subsequent year) |
| June 1               | December 31 (same year)   |

Name of Applicant: \_\_\_\_\_

Name of Institution: \_\_\_\_\_

\_\_\_\_\_ Undergraduate Student / Year

\_\_\_\_\_ Graduate Student / Year

Mailing Address to Receive Payment if Awarded:

\_\_\_\_\_  
\_\_\_\_\_

Email: \_\_\_\_\_ Phone: \_\_\_\_\_

PI: \_\_\_\_\_

ACS Membership No.\*: \_\_\_\_\_

*\*If you do not know your ACS number, please email [hljuzwa@shimadzu.com](mailto:hljuzwa@shimadzu.com) to receive it by email.*

Meeting Location: \_\_\_\_\_ Meeting Date: \_\_\_\_\_

Project Title: \_\_\_\_\_

\_\_\_\_\_ Paper Presentation      \_\_\_\_\_ Poster Presentation

*\*Please attach a copy of your project abstract to the application.*

Has your project been accepted?      Yes      No

*\*Attach documentation regarding acceptance if received at point of application.*

Will this be your first presentation at an ACS national or regional meeting?      Yes      No

If no, please list conferences at which you have presented: \_\_\_\_\_

Purpose of grant: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Other funding sources (if any): \_\_\_\_\_

\_\_\_\_\_

Personal Statement of anticipated benefits of meeting attendance: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Has the applicant received a travel grant from the ACS Pittsburgh Section in the past?    Yes                      No

If your application was selected, the Pittsburgh Section of the ACS would like you to write a short (one page) description of your activity upon completion of the conference for publication in our monthly newsletter, The Crucible, and on our website. The description is due within 30 days of the meeting attended. Photos are welcomed and encouraged.

I am willing to complete this report:                      Yes                      No

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Send completed hard-copy applications and supporting documentation to:

Pittsburgh Section ACS Travel Grants

Heather Juzwa, 321 Winners Circle, Canonsburg, PA 15317

Electronic copies of completed applications should be sent to [hljuzwa@shimadzu.com](mailto:hljuzwa@shimadzu.com) and [heather\\_sapko@hotmail.com](mailto:heather_sapko@hotmail.com). Be sure to place "Pittsburgh Section ACS Travel Grants" in the subject line.



## The Crucible

The Crucible is published monthly, August through May. All statements and opinions expressed herein are those of the editors or contributors and do not necessarily reflect the position of the Pittsburgh Section.

Design Editor: Alysia Mandato, [crucible@pittsburghacs.org](mailto:crucible@pittsburghacs.org)

## 2022 Pittsburgh Section Officers

### Chair

Kim Woznack  
[woznack@calu.edu](mailto:woznack@calu.edu)

### Secretary

Alysia Mandato  
[atm75@pitt.edu](mailto:atm75@pitt.edu)

### Treasurer

Matthew Price  
[price@calu.edu](mailto:price@calu.edu)

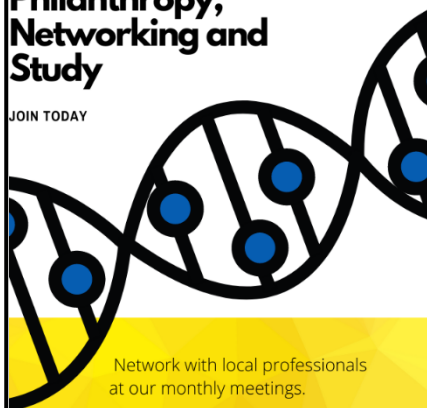
### Spectroscopy Society of Pittsburgh



[chemistryoutreach.org](http://chemistryoutreach.org)

### Science Outreach through Philanthropy, Networking and Study

JOIN TODAY



Network with local professionals at our monthly meetings.

Society for Analytical Chemists of Pittsburgh  
[chemistryoutreach.org](http://chemistryoutreach.org)



### Advancing Analytical Chemistry through Science Education

JOIN TODAY



Network with local professionals at our monthly meetings.

## Volunteers Needed!

We recently updated our website and are looking for someone to help with maintenance. If you are interested in volunteering, please contact Heather Juzwa at [hjuzwa@shimadzu.com](mailto:hjuzwa@shimadzu.com)!

## The Crucible Deadline

The deadline for items submitted to The Crucible is the 25<sup>th</sup> of the month prior to publication. For example, all items for the February 2022 issue must be to the editor by January 25<sup>th</sup>, 2022.

## Advertise in The Crucible

|           | 1X    | 3X    | 6X    | 10X  |
|-----------|-------|-------|-------|------|
| Full Page | \$120 | \$115 | \$100 | \$75 |
| Half Page | \$75  | \$70  | \$60  | \$45 |
| 3.5" x 2" | \$50  | \$45  | \$25  | \$20 |

## ACS Member-Get-a-Member

Recruit a new member to the American Chemical Society and receive a free 2021 Periodic Table of the Elements blanket!

See [here](#) for more information

## ACS Regional Awards – Apply Today!

More information can be found [here](#)