

# FINAL PROGRAM



## ABRCMS 2018

INDIANAPOLIS, INDIANA

NOVEMBER 14-17, 2018

*Shaping Tomorrow's Diverse STEM Leaders Today*



Managed by  
**AMERICAN  
SOCIETY FOR  
MICROBIOLOGY**

Funded by



National Institute of  
General Medical Sciences

# PUT YOUR PASSION INTO PRACTICE



STOP BY THE KCU BOOTH (621) TO LEARN ABOUT OUR:

DOCTOR OF OSTEOPATHIC MEDICINE (DO)

DOCTOR OF PSYCHOLOGY IN CLINICAL PSYCHOLOGY (PsyD)

MASTER OF SCIENCE IN BIOMEDICAL SCIENCE (MS)



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*All program content is current as of October 24, 2018.*

## Join the conversation! #ABRCMS

Download the official conference mobile app for the most up-to-date and detailed information.



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[instagram.com/abrcms](https://instagram.com/abrcms)



[twitter.com/abrcms](https://twitter.com/abrcms)

# Welcome from Avery August



On behalf of the Annual Biomedical Research Conference for Minority Students (ABRCMS), I would like to welcome you to Indianapolis, Indiana, and the 2018 meeting. This is the 18th year that we have been organizing and hosting this conference, and this year continues to be one of change, adjustment and transformation. We have seen change how changes in administration has catalyzed changes in societal engagement of scientists, and continued changes in the meeting itself. I continue to firmly believe that it is even more imperative that ABRCMS exists. I continue to be heartened and extremely proud that ABRCMS continues its tradition of being transformational for our students.

It is therefore fitting that the theme of our meeting this year, "Shaping Tomorrow's Diverse STEM Leaders Today," focuses on how we can continue to affirmatively be part of preparing future leaders in STEM. ABRCMS is extremely proud of the role that we play in transforming underrepresented students for a career STEM research. But more than a career, we strive to develop leaders, leaders who can carry the ABRCMS tradition of transformational change. At no other time has biomedical science been at its promising to improve health, and with that improvement, drive social change reduce health disparities, and impacts of environmental and climate change that affect our communities. Tomorrow leaders emerging from ABRCMS will be leading this change.

We are proud to present this incredible program this year! For the students attending, you are here to be transformed. You have done the research, prepared your posters and presentations, and now you join us as colleagues. We encourage you to take in as much as you can in this transformation. For the faculty mentors and advisors, you have worked with your students, supporting their research, and we all join you in ensuring that they fully participate in the program and experience this transformation. For the presenters, we look forward to hearing some of the best science, and to be inspired by your words, and for the exhibitors, we look forward to your full engagement with students. This is ABRCMS! Network, attend the stimulating talks on the most recent work in the biomedical and behavioral sciences, and fully engage in our discussions of the critical issues facing our community of minority scholars, and of our scientific communities.

Each year, the ABRCMS meeting follows hurricane season, and this year, again, our hearts go out to our colleagues, students and their families in areas affected by the devastating hurricanes, many of whose homes and lives are upended, some in Puerto Rico after more than 1 year. The ABRCMS Steering Committee, the ASM staff, the exhibitors (make sure to visit the booths!), and many volunteers have done a remarkable job to make this meeting possible. They have invested their most precious resource, time, in preparing the program, reviewing abstracts, planning and preparing the location to host your visit, preparing materials, setting up booths, and making sure that everything is just right. This, all so that you can allow your inner leader to emerge. I would like to thank them all in advance for their hard work in making this meeting a success. We also are extremely grateful for the continued support of Division of Training, Workforce Development, and Diversity at the National Institute of General Medical Sciences, NIH, whose funding has continued to make ABRCMS what it is.

With my warmest wishes,

**Avery August, Ph.D.**  
Chairperson, ABRCMS

# Greetings

## from NIH



On behalf of the National Institutes of Health's National Institute of General Medical Sciences, we'd like to welcome you to the 2018 Annual Biomedical Research Conference for Minority Students. We're very proud to support this meeting, which brings together a community of outstanding students and scientists for stimulating discussions of research, careers, and more.

This meeting is one element of our many activities in the areas of training, workforce development, and diversity. Our programs range from the undergraduate level to the doctorate and beyond, and they include the Bridges to the Baccalaureate, Maximizing Access to Research Careers, Research Initiative for Scientific Enhancement, Initiative for Maximizing Student Development, Postbaccalaureate Research Education, Bridges to the Doctorate, and Institutional Research and Academic Career Development Awards. Our programs also include institutional and faculty development through the Native American Research Centers for Health, the Support of Competitive Research Programs, as well as the Building Infrastructure Leading to Diversity. Additionally, the National Institutes of Health supports the National Research Mentoring Network to enhance the training and career development of individuals from diverse backgrounds who are pursuing biomedical research careers.



For those of you who are attending as mentors and sponsors, we truly appreciate your dedication and many contributions to your students and our shared goals.

For those of you still in training, we hope that your involvement in this meeting further inspires and motivates you to pursue research careers and leadership roles in biomedical science. During your time here, you will gain important allies for your future: a community of peers who will become your colleagues and friends as well as a network of scientists and mentors who are deeply committed to your success in pursuit of a research doctorate and a biomedical career.

We encourage you to make the most of the meeting and take every advantage of the resources and opportunities it offers to help you prepare for the next stages of your research career. We look forward to seeing your presentations and talking to you over the course of the next few days.

Sincerely,

**Jon R. Lorsch, Ph.D.**

Director  
National Institute of General Medical Sciences  
National Institutes of Health

**Alison Gammie, Ph.D.**

Director  
Division of Training, Workforce Development, and Diversity  
National Institute of General Medical Sciences  
National Institutes of Health

## Wednesday, November 14

12:00 p.m. – 8:00 p.m.	Registration Open
8:00 a.m. – 6:00 p.m.	Concurrent Workshops
3:00 p.m. – 4:30 p.m.	Concurrent Professional Development Sessions
5:00 p.m. – 6:00 p.m.	Concurrent Professional Development Sessions
6:30 p.m. – 8:30 p.m.	Networking Dinner and Opening Keynote Address
8:45 p.m. – 9:15 p.m.	ABRCMS Travel Awardee Orientation

## Thursday, November 15

7:30 a.m. – 7:00 p.m.	Registration Open
7:00 a.m. – 7:45 a.m.	Networking Breakfast
8:00 a.m. – 8:45 a.m.	Mandatory Judges Meeting by Discipline
8:00 a.m. – 9:00 a.m.	Orientation for Students
8:00 a.m. – 9:00 a.m.	Concurrent Professional Development Sessions
9:15 a.m. – 10:00 a.m.	Concurrent Scientific Sessions
10:15 a.m. – 11:15 a.m.	Concurrent Professional Development Sessions
11:30 a.m. – 12:15 p.m.	Concurrent Professional Development Sessions
12:15 p.m. – 1:00 p.m.	Networking Lunch by Discipline
1:00 p.m. – 1:45 p.m.	Plenary Scientific Session
1:45 p.m. – 5:30 p.m.	Exhibit and Poster Hall Hours
2:00 p.m. – 3:15 p.m.	Poster Session 1 (A)
3:00 p.m. – 5:00 p.m.	Mentoring Coaching
3:30 p.m. – 4:45 p.m.	Poster Session 2 (B)
5:30 p.m. – 6:45 p.m.	Oral Presentations
7:00 p.m. – 7:45 p.m.	Networking Dinner by Discipline
8:15 p.m. – 9:30 p.m.	Concurrent Professional Development Sessions
8:00 p.m. – 10:00 p.m.	Master's Level Poster Session/Grad Student and Postdoc Dessert and Networking Mixer

***“This conference provides a warmth and welcoming environment where students receive continuous support, mentorship, and a breadth of resources that empowers them to achieve their dreams and shows them that they matter.”***

## Friday, November 16

7:30 a.m. – 5:00 p.m.	Registration Open
7:00 a.m. – 7:45 a.m.	Networking Breakfast
8:00 a.m. – 9:00 a.m.	Plenary Session
9:15 a.m. – 10:00 a.m.	Concurrent Professional Development Sessions
10:15 a.m. – 12:00 p.m.	Exhibit and Poster Hall Hours
10:30 a.m. – 11:30 a.m.	Mentoring Coaching
10:30 a.m. – 11:45 a.m.	Poster Session 3 (C)
12:15 p.m. – 1:00 p.m.	Networking Lunch by Discipline
1:00 p.m. – 1:45 p.m.	Plenary Scientific Session
2:00 p.m. – 3:00 p.m.	Concurrent Professional Development Sessions
3:00 p.m. – 6:00 p.m.	Exhibit and Poster Hall Hours
3:15 p.m. – 4:30 p.m.	Poster Session 4 (D)
3:30 p.m. – 4:15 p.m.	Mentoring Showcase
4:30 p.m. – 5:30 p.m.	Mentoring Coaching
4:45 p.m. – 6:00 p.m.	Poster Session 5 (E)
6:15 p.m. – 7:15 p.m.	Concurrent Professional Development Sessions
6:30 p.m. – 9:00 p.m.	Networking Events

## Saturday, November 17

7:30 a.m. – 1:00 p.m.	Registration Open
7:00 a.m. – 7:45 a.m.	Networking Breakfast
8:00 a.m. – 9:15 a.m.	Oral Presentations
9:15 a.m. – 12:00 p.m.	Exhibit and Poster Hall Hours
9:30 a.m. – 11:20 a.m.	Exhibitor Showcase
9:30 a.m. – 11:30 a.m.	Mentoring Coaching
10:00 a.m. – 11:15 a.m.	Poster Session 6 (F)
12:15 p.m. – 1:00 p.m.	Networking Lunch
1:00 p.m. – 1:45 p.m.	Closing Keynote Address
2:15 p.m. – 3:15 p.m.	Concurrent Professional Development Sessions
3:30 p.m. – 4:30 p.m.	Concurrent Professional Development Sessions
4:30 p.m. – 7:30 p.m.	FREE TIME!
7:30 p.m. – 10:00 p.m.	Banquet and Awards Ceremony
10:00 p.m. – 2:00 a.m.	Dance and Social (all are invited)

***“ABRCMS gives me hope that there will be a diverse scientific workforce in the future.”***

# Important Conference Information

## Orientation for Community College, Undergraduate, and Postbaccalaureate Students

ABRCMS orientation will help maximize your learning and networking opportunities throughout the conference. Orientation will be held on **Thursday, November 15**, from 8:00 a.m. – 9:00 a.m.

## ABRCMS Mobile App

Get the latest conference program, exhibitor information, conference maps and much more at your fingertips with the ABRCMS Mobile App. Search for ABRCMS in your app store.

## Judges Needed

Active researchers in all 12 scientific disciplines are needed to serve as judges for the ABRCMS Student Presentation Program. To volunteer as a judge, visit the Judges Lounge (Room: 141).

## Dining Plan

The daily dining plan is included in the registration fee. Registration includes the following meals:

- Wednesday: Dinner
- Thursday: Breakfast, Lunch, and Dinner
- Friday: Breakfast and Lunch
- Saturday: Breakfast, Lunch, and Awards Banquet

## Awards Banquet and Ceremony

The Awards Banquet and Ceremony is **Saturday, November 17**, from 7:30 p.m. – 10:00 p.m. The ceremony will begin promptly at 7:30 p.m.

## Wifi at ABRCMS

Great news! Free Wi-Fi is available in the exhibit hall, session rooms, and convention center hallways. This service has been brought to you by ABRCMS and the American Society for Microbiology.

**Network ID** – ABRCMS

**Password** – ABRCMS2018

## Name Badge Policy & Badge Replacement

All ABRCMS attendees are required to wear conference badges onsite at all times. Badges give you access to sessions, the exhibit hall, and workshops. It is your responsibility to ensure that you have your badge at all times. There is a charge of \$50 for badge replacement. No exceptions will be made.

## Evaluation

This year we are re-implementing real time evaluation during sessions. Please take a few minutes to complete your evaluation in the mobile app at the end of each session you attend.

**A post conference evaluation will be emailed to all attendees following the conference.** We value your feedback, and every completed evaluation helps us improve future conferences.

## Cell Phone Usage

Out of consideration for your ABRCMS colleagues, all cell phones must be turned off in session rooms.

## Networking within Scientific Disciplines

Networking sessions will be held on **Wednesday, November 14**, from 5:00 p.m. – 6:00 p.m. These informal sessions offer a forum for small-group discussions focused on the student activities and career pathways offered by societies. All ABRCMS exhibitor and faculty attendees who are within the 12 scientific disciplines are strongly encouraged to attend.

## Gateway to the Future: Career Paths in the Biomedical Sciences, STEM Disciplines, and Behavioral Sciences

**Thursday, November 15**, from 8:15 p.m. – 9:30 p.m. Research scientists and representatives from a variety of career sectors will engage students in small group discussions focused on “a day in the life of a research scientist.” They will discuss their career pathways and educational backgrounds, what they enjoy about their work, and their strategies for professional and personal life balance. Career sectors include pharma/biotechnology/industry, media/communications, research intensive academic/staff scientist, undergraduate liberal arts academic/community college, M.D.–Ph.D. in academic health center, and government/policy/foundation/law.

## Photo Policy

By registering for ABRCMS, you agree to allow ASM/ABRCMS to use any photos taken of you during the conference in news media, website, publications, articles, marketing pieces, etc. In order to protect data shared during presentations, no photos may be taken of posters or scientific session slides at ABRCMS.

## Dress Code

ABRCMS attendees are expected to dress professionally for all conference activities.

## ABRCMS Code of Conduct

The Annual Biomedical Research Conference for Minority Students (ABRCMS), managed by the American Society for Microbiology (ASM), is one of the nation's largest conferences for underrepresented students in STEM. ABRCMS is committed to providing an environment that encourages the free expression and exchange of scientific ideas and promotes equal opportunities and respectful treatment for all participants. All participants are expected to treat others with respect and consideration, follow venue rules, and alert ASM/ABRCMS staff or security of any dangerous situations or anyone in distress. ABRCMS prohibits and will not tolerate any form of harassment or bullying at its events. This policy applies to all attendees, speakers, exhibitors, contractors, volunteers, and guests at ABRCMS. Violation of this code of conduct may result in the participant being asked to leave the event at which the incident occurred, without warning or refund; being barred from attending ABRCMS in the future.

If a participant experiences or witness harassment, please follow the protocol at [abrcms.org/code-of-conduct](http://abrcms.org/code-of-conduct) or contact an ASM/ABRCMS staff (identifiable by staff badge) as soon as possible or contact security.

## Rooms

### Exam Rooms

Lincoln (Marriott Downtown)  
Room 242 (Indiana Convention Center);  
Thursday – Saturday  
*Sign ups available at the Registration desk.*

### Poster Presentation Practice Room

Room 144 –145 (Indiana Convention Center)

### Oral Presentation Practice Room

Room 143 (Indiana Convention Center)

### Speaker Ready Room

Room 142

### First Aid Room

Convention Center, Registration Area



**NEW!**

## ABRCMS Year-round Programming

ABRCMS has extended its mission and vision by establishing a year-round program to continue broadening the success of student development, as they pursue higher education in the biomedical sciences. Phase 1 of the program implementation focuses on programming and resources for students in two main categories: pre-ABRCMS and post-ABRCMS. Topics include, but are not limited to:

- **How to write and submit an abstract** (pre-ABRCMS)
- **How to present a poster and get ready for ABRCMS** (pre-ABRCMS)
- **Connecting students to graduate schools** (post-ABRCMS)
- **How to prepare and choose a summer research experience** (post-ABRCMS)

Phase 2 of implementation (ABRCMS 2019 and beyond) will focus on programming for early career professionals, faculty and advisors.

Visit the ABRCMS “Education & Training” page at <http://abrcms.org/ed-training> for more information about our year-round programs.

## College/University Spirit Day

**NEW!** On **Wednesday, November 14**, represent your institution by sporting your school jacket, t-shirt, tie, polo, and etc. Don't forget to show off your school spirit on the ABRCMS Twitter, Instagram, and Facebook pages using #ABRCMS

## Master's Level Poster Session/Grad Student and Postdoc Dessert and Networking Mixer

**NEW!** (Sponsored by IU College of Arts & Sciences, IU School of Medicine Biomedical Science Gateway Programs, and The University Graduate School at IU and IUPUI)

## ★ BACK BY POPULAR DEMAND! Exhibit Passport

Participate in the exhibit hall passport program to win prizes. See page 43 – 44 for details.

## ★ BACK BY POPULAR DEMAND! Presentation Practice and Peer Mentoring Sessions

(Sponsored in Partnership with FASEB)  
The FASEB MARC Program will sponsor poster/oral presentation practice and peer mentoring sessions for students presenting at ABRCMS 2018. These practice sessions are scheduled for 30-minute periods. Students **MUST** sign up at the JW Marriott (Room 207) in advance.

### FASEB Practice Room Hours/Location

#### FASEB Poster Practice Room

201-203 (JW Marriott)

#### FASEB Oral Practice Room

204-205 (JW Marriott)

#### Wednesday, November 14

9:00 a.m. – 10:00 p.m.

#### Thursday, November 15

7:00 a.m. – 10:30 p.m.

#### Friday, November 16

7:00 a.m. – 10:00 p.m.

### FASEB Presentation Practice Mentors

- **Tyesha Burks, Ph.D.**  
Bowie State University
- **Laura de Lorenzo, Ph.D.**  
University of Kentucky
- **Felicia Emery, Ph.D.**  
St. Charles Community College
- **Kamilah Grant, Ph.D.**  
Alcorn State University
- **Mario Izaguirre-Sierra, Ph.D.**  
Northern New Mexico College
- **Oliver Jenkins, Jr., M.S.**  
Virginia State University
- **L'Aurelle Johnson, Ph.D.**  
University of Minnesota
- **Michelle Juarez, Ph.D.**  
City College of New York
- **LeeCole Leggette, Ph.D.**  
Pharmavite LLC
- **Shaun Logan, Ph.D.**  
Texas A&M University College of Dentistry
- **Noraida Martinez-Rivera, Ph.D.**  
University of Kansas
- **Melissa Mason, Ph.D.**  
Alcorn State University
- **Kimberly Mulligan-Guy, Ph.D.**  
Auburn University
- **Jayne S. Reuben, Ph.D.**

- *Texas A&M University College of Dentistry*  
**Kennie Shepherd, Ph.D.**  
*Morehouse School of Medicine*
- **Tracy Womble, Ph.D.**  
*Florida A&M University*

### Exhibitor Showcase



Join us in the Exhibit and Poster Hall for the inaugural Exhibitor Showcases, where you can hear directly from the exhibitors. These innovative 20-minute presentations will be held on **Saturday, November 17**, from 9:30 a.m. – 11:20 a.m. in the **Exhibit Hall Theater**.

#### 9:30 a.m. – 9:50 a.m.

*American Society for Microbiology  
Education Department*

#### 10:00 a.m. – 10:20 a.m.

*St. Jude Children's Research Hospital Graduate  
School of Biomedical Sciences*

#### 10:30 a.m. – 10:50 a.m.

*Emory University – Laney Graduate School*

#### 11:00 a.m. – 11:20 a.m.

*Purdue University/Weldon School of Biomedical  
Engineering*

### ★ BACK BY POPULAR DEMAND!

#### Mentoring Coaching Sessions

*(Recommended for all students)*

Come discuss the ins and outs of mentoring, within and outside the research environment. Several mentors have been identified to host a table and provide one-on-one coaching during exhibit hall hours. First time attendees should be especially mindful that first impressions are critical at the beginning of their careers.

### Mentoring Showcase

*(Recommended for all students)*

Join us in the Exhibit and Poster Hall for the Mentoring Showcase, where you can hear about relevant topics in mentoring. This will be held on **Friday, November 16** from 3:30 p.m. – 4:15 p.m. in the **Exhibit Hall Theater**

Session Time: 3:30 p.m. – 4:15 p.m.

Group Coaching Time: 4:30 p.m. – 5:30 p.m.

### 2018 ABRCMS Mentors

- **Howard G. Adams, Ph.D.**  
*H.G. Adams & Associates*
- **Earnestine Baker, M.A.**  
*University of Maryland, Baltimore County*
- **Marcus Huggans, Ph.D.**  
*GEM Fellowship*
- **Deborah King, Ph.D.**  
*Dartmouth College*
- **Juan Ramirez Lugo, Ph.D.**  
*University of Puerto Rico, Rio Piedras*
- **Amy Maki, Ph.D.**  
*A.O. Maki & Associates*
- **Camille McKayle, Ph.D.**  
*University of the Virgin Islands*
- **Beronda Montgomery, Ph.D.**  
*Michigan State University*
- **Ofelia Olivero, Ph.D.**  
*National Institutes of Health*
- **Manu Platt, Ph.D.**  
*Georgia Tech/Emory University*
- **Yvette Pearson, Ph.D.**  
*Rice University*
- **Marquitta Quals, Ph.D.**  
*Entropia Consulting*
- **Cheryl Rowe Rendleman, Ph.D.**  
*Omar Consulting*
- **Sylvia Wilson Thomas, Ph.D.**  
*H.G. Adams & Associates*
- **Patrice Yarbough, Ph.D.**  
*NASA*

**ABRCMS** offers many opportunities for networking. Join colleagues with similar interest to share ideas and develop research collaborations. Networking is strongly encouraged throughout the conference; however, attendees are asked to sit in their respective disciplines during lunch and dinner on Thursday, and during lunch on Friday. Disciplines tables are identified by napkin colors. See table below.

*Social and Behavioral Sciences  
and Public Health, Physiology*

*Microbiology, Immunology,  
Cell Biology*

*Cancer Biology,  
Developmental Biology  
& Genetics*

*Neuroscience,  
Developmental Biology*

*Biochemistry and Molecular  
Biology, Computational &  
Systems Biology*

*Engineering, Physics &  
Mathematics, Chemistry*



## ABRCMS would like to recognize the following universities and organizations for their support of ABRCMS 2018.

### Major Conference Sponsors



**AMERICAN  
SOCIETY FOR  
MICROBIOLOGY**



**National Institute of  
General Medical Sciences**

#### Diamond Sponsors

- IU Office of the Biocentennial
- IU School of Medicine – Biomedical Science Graduate Programs
- Marian University – College of Osteopathic Medicine & Biomedical Sciences
- The University Graduate School at IU and IUPUI

#### Platinum Sponsors

- NewScientist
- University of Alabama at Birmingham

#### Gold Sponsors

- American Chemical Society
- Biocomputational Evolution in Action (BEACON)@A&T
- Genentech, Inc.
- Novartis Institutes for BioMedical Research
- NYU School of Medicine, Sackler Institute of Graduate Biomedical Sciences
- Society of Toxicology
- University of South Florida

#### Silver Sponsors

- American Heart Association/American Stroke Association
- American Physiological Society
- American Society for Biochemistry and Molecular Biology
- Columbia University Vagelos College of Physicians & Surgeons
- Howard Hughes Medical Institution (HHMI)

- Medical College of Wisconsin (MCW) Graduate School
- Medical College of Wisconsin (MCW) Medical School
- Medical College of Wisconsin Pharmacy School
- Society for Neuroscience
- St. Jude Children's Research Hospital Graduate School of Biomedical Sciences
- University of Kansas – Graduate Studies and Self Graduate Fellowship
- University of Minnesota Biomedical Sciences Graduate Programs
- University of Minnesota Medical Scientist Training Program
- Weill Cornell Graduate School of Medical Sciences

#### Bronze Sponsors

- American Association of Immunologists (AAI)
- Biophysical Society
- Boise State University
- Emory University – Laney Graduate School
- Roberts Center for Pediatric Research
- University of Arizona, Department of Immunobiology
- University of Illinois, Bioengineering
- University of New England, College of Osteopathic Medicine
- University of Texas at San Antonio, The Graduate School

## Wednesday, November 14



7:45 p.m. – 8:30 p.m.  
**OPENING KEYNOTE ADDRESS**  
**Science Focused on Human Development**  
*Wanda Díaz Merced, Ph.D.*  
South African Astronomical Observatory  
Cape Town, South Africa

## Friday, November 16



8:00 a.m. – 9:00 a.m.  
**PLENARY SESSION ADDRESS**  
**State of STEM Research in Hurricane Impacted Areas and Lessons Learned**  
*Juan S. Ramírez Lugo, Ph.D.*  
University of Puerto Rico, Rio Piedras, PR

## Thursday, November 15



1:00 p.m. – 1:45 p.m.  
**PLENARY SCIENTIFIC SESSION**  
**Dynamic Control of Metabolic Flux for Pathway Engineering**  
*Kristala L. Jones Prather, Ph.D.*  
Massachusetts Institute of Technology, Cambridge, MA

## Friday, November 16



1:00 p.m. – 1:45 p.m.  
**PLENARY SCIENTIFIC SESSION**  
**Insights from non-human animals into the neurobiology of language**  
*Erich D. Jarvis, Ph.D.*  
The Rockefeller University  
New York City, NY

## Friday, November 16



8:00 a.m. – 9:00 a.m.  
**PLENARY SESSION ADDRESS**  
**State of STEM Research in Hurricane Impacted Areas and Lessons Learned**  
*Camille A. McKayle, Ph.D.*  
University of the Virgin Islands, Charlotte Amalie, U.S. Virgin Islands

## Saturday, November 17



1:00 p.m. – 1:45 p.m.  
**CLOSING KEYNOTE ADDRESS**  
**Translating Science: Obstacles and Opportunities**  
*Kafui Dzirasa, M.D., Ph.D.*  
Duke University, Durham, NC

**“Everyone’s voices are heard and valued — ABRCMS helps highlight the human side of science: the fact that every researcher has a story, and that every story is valuable.”**

**Thursday, November 15 | 9:15 a.m. – 10:00 a.m.**



**Making Sense of Biomedical Research**

**Vanessa Ezenwa, Ph.D.**  
University of Georgia  
Athens, GA



**Making Sense of Biomedical Research**

**Brandon Ogbunu, Ph.D.**  
Brown University  
Providence, RI



**Making Sense of Biomedical Research**

**Luis Zaman, Ph.D.**  
University of Michigan  
Ann Arbor, MI



**Transplacental Genotoxicity of AIDS Therapy**

**Ofelia Olivero, Ph.D.**  
National Cancer Institute, NIH  
Rockville, MD



**Scientific Discoveries of the BRAIN Initiative®**

**Michelle Jones-London, Ph.D.**  
National Institute of Neurological Disorders and Stroke  
Bethesda, MD



**Scientific Discoveries of the BRAIN Initiative®**

**Carlos Lois, M.D., Ph.D.**  
California Institute of Technology  
Pasadena, CA



**Scientific Discoveries of the BRAIN Initiative®**

**Dario Ringach, Ph.D.**  
University of California, Los Angeles  
Los Angeles, CA



**Making a Face: Visualizing Cellular Behaviors During Normal and Defective Orofacial Development**

**Oscar Ruiz, Ph.D.**  
MD Anderson Cancer Center  
Houston, TX



**Bow to the Microbial Overlords: An Introduction to Microbiome Research**

**Jacquelyn Meisel, Ph.D.**  
University of Maryland, UMIACS  
College Park, MD



**Bow to the Microbial Overlords: An Introduction to Microbiome Research**

**Mihai Pop, Ph.D.**  
University of Maryland, UMIACS  
College Park, MD



**From Clinical Treatments to a Gene Therapy Cure for Sickle Cell Disease**

**Betty Pace, M.D.**  
Augusta University  
Augusta, GA



**NextGen STEM: The Future of Developmental & Regenerative Biology**

**Caralina Marin de Evsikova, Ph.D.**  
University of South Florida Health  
Tampa, Tampa, FL



**NextGen STEM: The Future of Developmental & Regenerative Biology**

**Nestor Oviedo, Ph.D.**  
University of California, Merced  
Merced, CA



**“Cell Biologists Love to take “cellfies” – Strategies to Understand the Cell Biology of Disease**

**James Olzmann, Ph.D.**  
University of California, Berkeley  
Berkeley, CA



**Sunlight, Cancer, and Caffeine: Chemoprevention for Skin Cancer**

**Masaaki Kawasumi, M.D., Ph.D.**  
University of Washington  
Seattle, WA



**All Aboard! How the Monon Trail Initiative Plans to Improve Indiana's Health Community by Community**

**Anantha Shekhar, M.D., Ph.D.**  
Indiana University School of Medicine,  
CTS1 Indianapolis, IN

All sessions take place in the Indiana Convention Center unless otherwise noted.

Repeat Sessions are denoted by ★

## Wednesday, November 14

8:00 a.m. – 5:30 p.m.  
JW Marriott 103 – 104

### Bring Your Research to the Students: Developing CURE's

In partnership with REIL Biology Network  
(Recommended for postdoctoral scientists, faculty, program directors, and exhibitors)

#### Speakers

- **Christopher Beck**, Ph.D., Emory University, Atlanta, GA
- **Lawrence Blumer**, Ph.D., Morehouse College, Atlanta, GA
- **Rachelle Spell**, Ph.D., Emory University, Atlanta, GA

3:00 p.m. – 6:00 p.m.  
Room 242

### Do You Play Fair?

(Recommended for postdoctoral scientists, faculty, program directors, and exhibitors)

#### Speakers

- **Percy Brown**, MS.Ed., University of Wisconsin Madison, Wisconsin Center for Education Research, Madison, WI
- **Donald Dantzer**, MS.Ed., University of Wisconsin Madison, Wisconsin Center for Education Research, Madison, WI



## Concurrent Professional Development Sessions (4 Session Options)

3:00 p.m. – 4:30 p.m.

Session 1 | Rooms 134 – 135

### A Case Study: How to Move Student Unrest About Diversity Forward in the Direction of Reconciliation

(Recommended for graduate students, postdoctoral scientists, faculty, program directors, and exhibitors)

#### Speakers

- **Sara Police**, Ph.D., University of Kentucky, Lexington, KY
- **Renay Scales**, Ph.D., University of Kentucky, Lexington, KY

3:00 p.m. – 4:30 p.m.

Session 2 | Rooms 136 – 137

### Panel Discussion: So...You Want to Go to Grad School

(Recommended for community college, undergraduate, and postbaccalaureate students)

#### Panelists

- **Simone Douglas**, Ph.D. candidate, Georgia Institute of Technology & Emory University, Atlanta, GA
- **Rhea-Comfort Addo**, Ph.D. student, University of California, San Diego, San Diego, CA
- **Alyssa Brunal-Brown**, Ph.D. candidate, Virginia Polytechnic Institute, Blacksburg, VA
- **Victor Reyes-Umaña**, Ph.D. candidate, University of California, Berkeley, Berkeley, CA

3:00 p.m. – 4:30 p.m.

Session 3 | Rooms 132 – 133

### Build Your Personal Statement!

(Recommended for all students)

#### Speakers

- **Victoria Freedman**, Ph.D., Albert Einstein College of Medicine, New York, NY
- **Nancy Schwartz**, Ph.D., University of Chicago, Chicago, IL

3:00 p.m. – 4:30 p.m.

**Session 4 | Rooms 138 – 139**

## Presentation Techniques: How to Make Effective Poster and Oral Presentations

(Recommended for first-time presenters and non-presenters)

### Moderator

- **Florisela Herrejon Chavez**, Ph.D. student, Gerstner Sloan Kettering Graduate School of Biomedical Sciences, New York, NY

### Speaker

- **Shelley Payne**, Ph.D., University of Texas at Austin, Austin, TX

## Concurrent Professional Development Sessions (3 Session Options)

5:00 p.m. – 6:00 p.m.

**Session 1**

## Networking in Your Scientific Discipline

### – All Disciplines –

(Recommended for all students)

Biochemistry and Molecular Biology:

**Rooms 236 – 237**

Cancer Biology: **Room 234**

Cell Biology: **Room 233**

Chemistry: **Rooms 240 – 241**

Computational Biology and Systems Biology:

**Room 235**

Developmental Biology and Genetics: **Room 232**

Engineering, Physics and Mathematics: **Room 231**

Immunology: **Rooms 130 – 131**

Microbiology: **Rooms 238 – 239**

Neuroscience: **Rooms 134 – 135**

Physiology: **Rooms 132 – 133**

Social and Behavioral Sciences and Public Health:

**Rooms 136 – 137**

5:00 p.m. – 6:00 p.m.

**Session 2 | Rooms 138 – 139**

## Understanding Interventions: Changing Practice through Research: Self-Regulation Skills as Predictors of URM Success in Biomedical Research

In partnership with Understanding Interventions

(Recommended for postdoctoral scientists, faculty, program directors, and exhibitors)

### Speakers

- **Daryl E. Chubin**, Ph.D., Understanding Interventions, Brooklyn, NY
- **Anthony L. DePass**, Ph.D., Long Island University, Brooklyn, NY
- **Michelle Williams**, Ph.D., University of Connecticut, Mansfield, CT

5:00 p.m. – 6:00 p.m.

**Session 3 | Room 140**

## Job Search Strategies and Negotiating the Job Offer

(Recommended for graduate students, postdoctoral scientists, faculty, program directors, and exhibitors)

### Speaker

- **Lauren Celano**, M.B.A., Propel Careers, Cambridge, MA

6:30 p.m. – 7:15 p.m.

## Networking Dinner

**Hall F – G**

7:15 p.m. - 7:45 p.m.

## Conference Overview & Highlights

- **John Fitzgerald Gates**, Ph.D., University of Virginia, Charlottesville, VA

## Chairperson Opening Remarks

- **Avery August**, Ph.D., Cornell University College of Veterinary Medicine, Ithaca, NY

## Welcome Remarks

- **Alison Gammie**, Ph.D., National Institute of General Medical Sciences, NIH, Bethesda, MD
- **Rafael Bahamonde**, Ph.D., Indiana University - Purdue University Indianapolis, Indianapolis, IN
- **Carl McMillian**, Ph.D., Eli Lilly and Company, Indianapolis, IN

7:45 p.m. - 8:30 p.m.

*Opening Keynote Address*

## PLENARY SESSION

*Science Focused on Human Development*

### Moderator

- **John Fitzgerald Gates, Ph.D.**, University of Virginia, Charlottesville, VA

### Speaker

- **Wanda Díaz Merced, Ph.D.**, South African Astronomical Observatory, Cape Town, South Africa

8:45 p.m. - 9:15 p.m.

*ABRCMS Travel Award Orientation*

**Rooms 138 - 139**

8:45 p.m. - 10:00 p.m.

*PREP Scholars Meet & Greet*

*(By Invitation Only)*

**Room 243**

## Thursday, November 15

7:00 a.m. - 7:45 a.m.

*Networking Breakfast*

**Hall J**

## CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS

*(5 Session Options)*

8:00 a.m. - 8:45 a.m.

**Session 1**

*Mandatory Judge Meeting by Discipline*  
*(12 sessions)*

Biochemistry and Molecular Biology:

**Rooms 236 - 237**

Cancer Biology: **Room 234**

Cell Biology: **Room 233**

Chemistry: **Rooms 240 - 241**

Computational and Systems Biology: **Room 235**

Developmental Biology and Genetics: **Room 232**

Engineering, Physics and Mathematics: **Room 231**

Immunology: **Rooms 130 - 131**

Microbiology: **Rooms 238 - 239**

Neuroscience: **Rooms 134 - 135**

Physiology: **Rooms 132 - 133**

Social and Behavioral Sciences and Public Health:

**Rooms 136 - 137**

8:00 a.m. - 9:00 a.m.

**Session 2 | Hall F - G**

*Orientation for Community College, Undergraduate, and Postbaccalaureate Students*

*(Mandatory for community college, undergraduate, and postbaccalaureate students)*

*Networking as a Required Life Skill and Professionalism as a Necessary Attribute for Students*

### Speaker

- **Howard G. Adams, Ph.D.**, H.G. Adams and Associates, Norfolk, VA

*Program Overview and Making the Most of ABRCMS*

### Speaker

- **Sandra Murray, Ph.D.**, University of Pittsburgh, Pittsburgh, PA



**Conference Updates and Announcements****Speaker**

- **Irene Hulede**, American Society for Microbiology, Washington, DC

**Session 3 | Rooms 138 – 139**

8:00 a.m. – 9:00 a.m.

**How to Navigate the NIH Peer Review Process and Receive an NIH Fellowship and Research Grant**

(Recommended for graduate students, postdoctoral scientists, faculty, program directors, and exhibitors)

**Speaker**

- **Anna Riley**, Ph.D., National Institutes of Health, Center for Scientific Review, Bethesda, MD

**Session 4 | Room 140**

8:00 a.m. – 9:00 a.m.

**Postdoc Fundamentals: Selecting a Training Experience to Match Your Career Goal**

(Recommended for graduate students and postdoctoral scientists)

**Speakers**

- **Sibby Anderson-Thompkins**, Ph.D., University of North Carolina at Chapel Hill, Chapel Hill, NC
- **Alberto Roca**, Ph.D., DiverseScholar, Orange County, CA

**Session 5 | Room 242**

8:00 a.m. – 9:00 a.m.

**Understanding Interventions: The Influence of Scientific Communication Skills on Science Identity and Research Career Intention**

*In partnership with Understanding Interventions*  
(Recommended for postdoctoral scientists, faculty, program directors, and exhibitors)

**Moderators**

- **Daryl E. Chubin**, Ph.D., Understanding Interventions, Brooklyn, NY
- **Anthony L. DePass**, Ph.D., Long Island University, Brooklyn, NY

**Speaker**

- **Carrie Cameron**, Ph.D., The University of Texas MD Anderson Cancer Center, Houston, TX

**CONCURRENT SCIENTIFIC SESSIONS  
(10 Session Options)**

9:15 a.m. – 10:00 a.m.

**Session 1 | Rooms 130 – 131****Making Sense of Biomedical Research**

Sponsored by Biocomputational Evolution in Action (BEACON)@A&T

**Speakers**

- **Vanessa Ezenwa**, Ph.D., University of Georgia, Athens, GA
- **Brandon Ogbunu**, Ph.D., Brown University, Providence, RI
- **Luis Zaman**, Ph.D., University of Michigan, Ann Arbor, MI

9:15 a.m. – 10:00 a.m.

**Session 2 | Rooms 132 – 133****Transplacental Genotoxicity of AIDS Therapy**

Sponsored by Society of Toxicology

**Speaker**

- **Ofelia Olivero**, Ph.D., National Cancer Institute, NIH, Rockville, MD

9:15 a.m. – 10:00 a.m.

**Session 3 | Rooms 134 – 135****Scientific Discoveries of The BRAIN Initiative®****Speakers**

- **Michelle Jones-London**, Ph.D., National Institute of Neurological Disorders and Stroke, Bethesda, MD
- **Carlos Lois**, M.D., Ph.D., California Institute of Technology, Pasadena, CA
- **Dario Ringach**, Ph.D., University of California, Los Angeles, Los Angeles, CA

**“What is remarkable is bringing together students with such high qualifications and to have them in the same room with recruiters from key academic institutions. From my perspective, I feel the networking with schools and demystifying the application process is invaluable to students.”**

9:15 a.m. – 10:00 a.m.

Session 4 | Rooms 136 – 137

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## *Making a Face: Visualizing Cellular Behaviors During Normal and Defective Orofacial Development*

### Moderator:

- **Arianna Gómez**, Ph.D. candidate, University of Washington, Seattle, WA

### Speaker

- **Oscar Ruiz**, Ph.D., MD Anderson Cancer Center, Houston, TX

9:15 a.m. – 10:00 a.m.

Session 5 | Rooms 138 – 139

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## *Bow to the Microbial Overlords: An Introduction to Microbiome Research*

### Speakers

- **Jacquelyn Meisel**, Ph.D., University of Maryland, UMIACS, College Park, MD
- **Mihai Pop**, Ph.D., University of Maryland, UMIACS, College Park, MD

9:15 a.m. – 10:00 a.m.

Session 6 | Rooms 240 – 241

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## *From Clinical Treatments to a Gene Therapy Cure for Sickle Cell Disease*

### Moderator:

- **Divine Nwafor**, M.D.-Ph.D. candidate, West Virginia University, Morgantown, WV

### Speaker

- **Betty Pace**, M.D., Augusta University, Augusta, GA

9:15 a.m. – 10:00 a.m.

Session 7 | Rooms 238 – 239

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## *NextGen STEM: The Future of Developmental & Regenerative Biology*

### Speakers

- **Caralina Marín de Esvikova**, Ph.D., University of South Florida Health, Tampa, Tampa, FL
- **Nestor Oviedo**, Ph.D., University of California, Merced, Merced, CA



9:15 a.m. – 10:00 a.m.

Session 8 | Rooms 236 – 237

## Cell Biologists Love to Take “cellfies” – Strategies to Understand the Cell Biology of Disease

### Moderator

- **Beatriz Ibarra**, Ph.D. candidate, Case Western Reserve University, Cleveland, OH

### Speaker

- **James Olzmann**, Ph.D., University of California, Berkeley, Berkeley, CA

9:15 a.m. – 10:00 a.m.

Session 9 | Room 140

## Sunlight, Cancer, and Caffeine: Chemoprevention for Skin Cancer

### Moderator

- **Thaiesha Wright**, Ph.D. candidate, Miami University, Oxford, OH

### Speaker

- **Masaaki Kawasumi**, M.D., Ph.D., University of Washington, Seattle, WA

9:15 a.m. – 10:00 a.m.

Session 10 | Room 234

## All Aboard! How the Monon Trail Initiative Plans to Improve Indiana’s Health Community by Community

### Speaker

- **Anantha Shekhar**, M.D., Ph.D., Indiana University School of Medicine, CTSI, Indianapolis, IN

## CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS (9 Session Options)

10:15 a.m. – 11:15 a.m.

Session 1

### NIGMS Program Director Discussions (2 tracks)

(Mandatory for TWD program directors)

#### Room 232

Diversity-focused, primarily undergraduate programs with an emphasis on:

- Student Tracking
- Student Support (while in training programs and beyond)

- Student Research Training Activities
- Dissemination - Sharing of Training Approaches/Activities

#### Room 233

Post-bac, Graduate and Postdoc topics focused on:

- Developing Achievable and Measurable Training Objectives
- Employing Evidence-Based Practices for Training and Mentoring
- Teaching Rigor and Transparency as well as Responsible Conduct of Research Throughout
- Focusing on Trainee Skills Development
- Emphasizing that Diversity and Inclusion is Essential for Training Excellence
- Preparing Trainees for a Broad Range of Careers in the Biomedical Research Workforce

10:15 a.m. – 11:15 a.m.

Session 2 | Rooms 136 – 137

### CAREER PATHWAY: What’s Next?: STEM Career Pathways Across Sectors

(Recommended for all students)

#### Speakers

- **Ruan Cox**, Ph.D., Moffitt Cancer Center, Tampa, FL
- **Maiysha Jones**, Ph.D., Procter & Gamble, Cincinnati, OH
- **Dinelia Rivera-Burgos**, Ph.D., Battelle, Columbus, OH
- **Kevin Villalongo**, M.B.A., PMP, American Laboratories, Inc., Omaha, NE

10:15 a.m. – 11:15 a.m.

Session 3 | Rooms 134 – 135

### CAREER PATHWAY: Is Pharmaceutical Science for Me? “Degrees of Separation”

(Recommended for all students)

#### Speakers

- **Manoj Chiney**, Ph.D., AbbVie, Chicago, IL
- **Peter Gannett**, Ph.D., Nova Southeastern University, Fort Lauderdale, FL
- **L’Aurelle Johnson**, M.S., Ph.D., University of Minnesota, Minneapolis, MN
- **Chloe N. Poston**, Ph.D., The Leadership Alliance, Providence, RI
- **Jayne Reuben**, Ph.D., Texas A&M College of Dentistry, Dallas, TX
- **Mark Simmons**, Ph.D., University of Maryland Eastern Shore, Princess Anne, MD

10:15 a.m. – 11:15 a.m.

Session 4 | Rooms 132 – 133

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## CAREER PATHWAY: Exploring Career Pathways in the Biotech Industry

Sponsored by Genentech, Inc.

(Recommended for all students)

### Speakers

- **Leslie Dickmann**, Ph.D., Genentech, San Francisco, CA
- **Alex Gaither**, Ph.D., Novartis, Basel, Switzerland
- **Marlena Jackson**, Genentech, San Francisco, CA
- **Geneva Licht**, Genentech, San Francisco, CA

10:15 a.m. – 11:15 a.m.

Session 5 | Rooms 236 – 237

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## CAREER PATHWAY: Understanding Translational Science and Developing a Career as a Translational Scientist

(Recommended for all students)

### Speakers

- **Jessica Faupel-Badger**, Ph.D., National Center for Advancing Translational Sciences, NIH, Bethesda, MD
- **Brittany Haynes**, Ph.D., National Center for Advancing Translational Sciences, NIH, Bethesda, MD
- **Alan Palkowitz**, Ph.D., Eli Lilly and Company, Indianapolis, IN
- **Gurusingham Sittampalam**, Ph.D., National Center for Advancing Translational Sciences, NIH, Bethesda, MD

10:15 a.m. – 11:15 a.m.

Session 6 | Rooms 130 – 131

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## Getting Published: Advice for Graduate Students and Postdoctoral Scientists

(Recommended for graduate students, postdoctoral scientists, and early-career scientists)

### Moderator

- **Marissa Rice**, Ph.D. candidate, Cornell University, Ithaca, NY

### Speaker

- **Victor DiRita**, Ph.D., Michigan State University, East Lansing, MI

10:15 a.m. – 11:15 a.m.

Session 7 | Rooms 138 – 139

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## How We Learn...and How We Don't

(Recommended for postdoctoral scientists, faculty, program directors, and exhibitors)

### Moderator

- **Aurelia Happs**, Ph.D. Candidate, Johns Hopkins University, Baltimore, MD

### Speaker

- **Robert A. Duke**, Ph.D., University of Texas at Austin, Austin, TX

10:15 a.m. – 11:15 a.m.

Session 8 | Room 140

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## Incorporating Authentic Research in Introductory Lab Courses

In partnership with REIL Biology Network

(Recommended for faculty, program directors, and exhibitors)

### Speakers

- **Christopher Beck**, Ph.D., Emory University, Atlanta, GA
- **Lawrence Blumer**, Ph.D., Morehouse College, Atlanta, GA
- **Rachelle Spell**, Ph.D., Emory University, Atlanta, GA

10:15 a.m. – 11:15 a.m.

Session 9 | Rooms 238 – 239

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## Crafting an Effective Resume

(Recommended for all attendees)

### Speaker

- **Lauren Celano**, M.B.A., Propel Careers, Cambridge, MA



**CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS****(5 Session Options)****11:30 a.m. – 12:15 p.m.****Session 1 | Rooms 136 – 137****Picking the Perfect Ph.D. Program for You: Why Choose a School with a T32?***(Recommended for students interested in the Ph.D. track)***Speaker**

- **Sharon Milgram**, Ph.D., National Institutes of Health, Bethesda, MD

**11:30 a.m. – 12:15 p.m.****Session 2 | Rooms 138 – 139****MD-PhD, is it right for me?***(Recommended for students interested in the M.D./Ph.D. track)***Presenter**

- **Juanita Merchant**, M.D., Ph.D., University of Arizona-Cancer Center, Tucson, AZ

**Panelists**

- **Barbara Kazmierczak**, M.D., Ph.D., Yale University, New Haven, CT
- **Jared Smith**, Indiana University School of Medicine, M.D.-Ph.D. student, Indianapolis, IN
- **Kristina Tymes-Wilbekin**, University of Alabama-Birmingham, M.D.-Ph.D. student, Birmingham, AL
- **Azucena Ramos**, Harvard Medical School, M.D.-Ph.D. student, Boston, MA
- **Petria Thompson**, Vanderbilt University, M.D.-Ph.D. student, Nashville, TN

**11:30 a.m. – 12:15 p.m.****Session 3 | Rooms 132 – 133****Success in Training and Beyond: Transcending Disciplines***(Recommended for all attendees)***Speakers**

- **Mary O'Riordan**, Ph.D., University of Michigan, Ann Arbor, MI
- **Shoba Subramanian**, Ph.D., University of Michigan, Ann Arbor, MI

**11:30 a.m. – 12:15 p.m.****Session 4 | Rooms 130 – 131****Diverse Minds are Required to Invent the Future – An Inclusive Model Program for Learning from Nature for Societal Benefit***(Recommended for postdoctoral scientists, faculty, program directors, and exhibitors)***Moderator**

- **Lionel Rodriguez**, Ph.D. candidate, Johns Hopkins University, Baltimore, MD

**Speaker**

- **Robert J. Full**, Ph.D., University of California, Berkeley, Berkeley, CA

**11:30 a.m. – 12:15 p.m.****Session 5 | Rooms 134 – 135****Time Management 101***(Recommended for all students)***Moderator**

- **Adele Whaley**, Ph.D. student, Gerstner Sloan Kettering Graduate School of Biomedical Sciences, New York, NY

**Speaker**

- **Sandra Murray**, Ph.D., University of Pittsburgh, Pittsburgh, PA

**12:15 p.m. – 1:00 p.m.****Networking Lunch by Discipline****Hall F – G****1:00 p.m. – 1:45 p.m.****PLENARY SCIENTIFIC SESSION****Dynamic Control of Metabolic Flux for Pathway Engineering****Hall F – G****Moderator**

- **John Fitzgerald Gates**, Ph.D. University of Virginia, Charlottesville, VA

**Speaker**

- **Kristala L. Jones Prather**, Ph.D., Massachusetts Institute of Technology, Cambridge, MA

**1:45 p.m. – 5:30 p.m.****Exhibit and Poster Hall Hours****Hall H – I**

# Program

**2:00 p.m. – 3:15 p.m.**

**Poster Session 1 (A)**

**Hall H – I**

**3:00 p.m. – 5:00 p.m.**

**Mentoring Coaching**

**Exhibit Hall Mentoring Tables**

**3:30 p.m. – 4:45 p.m.**

**Poster Session 2 (B)**

**Hall H – I**

**5:30 p.m. – 6:45 p.m.**

**Oral Sessions 1 (12 Session Options)**

Biochemistry and Molecular Biology:

**Rooms 236 – 237**

Biochemistry and Molecular Biology and Physiology:

**Rooms 238 – 239**

Cancer Biology: **Room 132 – 133**

Cancer Biology and Immunology:

**Room 130 – 131**

Cell Biology: **Room 233**

Chemistry: **Rooms 134 – 135**

Computational and Systems Biology: **Room 234**

Developmental Biology and Genetics and

Engineering, Physics, and Mathematics: **Room 232**

Engineering, Physics, and Mathematics: **Room 140**

Microbiology: **Rooms 240 – 241**

Neuroscience and Physiology: **Room 235**

Social and Behavioral Sciences and Public Health:

**Rooms 136 – 137**

**7:00 p.m. – 7:45 p.m.**

**Networking Dinner by Discipline**

**Hall F – G**

**8:15 p.m. – 9:30 p.m.**

**PDO Steering Committee Meeting**

(By Invitation Only)

**Room 243**

**8:15 p.m. – 9:30 p.m.**

**Gateway to the Future: Career Paths in the  
Biomedical Sciences, STEM Disciplines, and  
Behavioral Sciences**

(Recommended for all students)

**Marriott Downtown  
Indiana Ballroom**

## Featured Scientists/Representatives:

- **Ruan R. Cox Jr., Ph.D.**  
Moffitt Cancer Center (Non Profit/Research)
- **Jessica Faupel-Badger, Ph.D.**  
National Center for Advancing Translational Sciences, NIH (Government/Research)
- **L. Alex Gaither Ph.D.**  
Novartis Institutes for Biomedical Research (Pharmaceutical/Research)
- **Peter Gannett, Ph.D.**  
Nova Southeastern University, College of Pharmacy (Teaching/Administration)
- **Kenneth Gibbs, Ph.D.**  
NIH (Government)
- **Vanessa Gonzalez-Perez, Ph.D.**  
Princeton University (Teaching/Administration)
- **Ronald Hunter, Ph.D.**  
Mérieux Nutrisciences (Industry)
- **Brittany Haynes, Ph.D.**  
National Center for Advancing Translational Sciences, NIH (Government/Research)
- **Marlena Jackson, B.S.**  
Genentech Inc., a Member of the Roche Group (Research)
- **L'Aurelle A. Johnson, Ph.D., M.S.**  
University of Minnesota, College of Pharmacy (Teaching/Administration)
- **Geneva Licht, B.S.**  
Genentech Inc., a Member of the Roche Group (Research)
- **Fahmy Mamuya, Ph.D., M.B.A.**  
VUE Health Insights (Medical Writing)
- **Claudio Ortiz, Ph.D.**  
Colgate (Industry/Research)
- **Deborah Philip, Ph.D.**  
NIH (Government/Administration)
- **Chloe Poston, Ph.D.**  
Brown University (Administration)
- **Marquita Qualls, Ph.D.**  
Entropia (Consulting)
- **Cheryl Rowe Rendleman, Ph.D.**  
Omar Consulting (Consulting)
- **Dinelia Rivera-Burgos, Ph.D.**  
Battelle (Industry/Research)
- **Gurusingham Sittampalam, Ph.D.**  
National Center for Advancing Translational Sciences, NIH (Government/Research)
- **Kevin Villalongo, M.B.A., PMP**  
American Laboratories, Inc. (Industry/Research)
- **Kristen Walker, M.S.**  
USDA (Government/Research)
- **Robert Walker, Ph.D.**  
NIH (Government/Administration)
- **Patrice Yarbrough, Ph.D.**  
NASA (Government/Research)

8:00 p.m. – 10:00 p.m.

## Master's Level Poster Session/Grad Student and Postdoc Dessert and Networking Mixer

Sponsored by IU College of Arts & Sciences, IU School of Medicine Biomedical Science Gateway Programs, and The University Graduate School at IU and IUPUI (Recommended for graduate students and postdoctoral scientists)

JW Marriott

White River Ballroom A – E

## Friday, November 16

7:00 a.m. – 7:45 a.m.

### Networking Breakfast

Hall J

8:00 a.m. – 9:00 a.m.

### PLENARY SESSION

#### State of STEM Research in Hurricane Impacted Areas and Lessons Learned

Hall F – G

#### Moderator

- **Mary Sanchez Lanier**, Ph.D., Washington State University, Pullman, WA

#### Speakers

- **Juan S. Ramirez Lugo**, Ph.D., University of Puerto Rico, Rio Piedras, San Juan, Puerto Rico
- **Camille A. McKayle**, Ph.D., University of the Virgin Islands, Charlotte Amalie, U.S. Virgin Islands

## CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS

(5 Session Options)

9:15 a.m. – 10:00 a.m.

★ Session 1 | Rooms 136 – 137

### Picking the Perfect Ph.D. Program for You: Why Choose a School with a T32?

(Recommended for students interested in the Ph.D. track)

#### Speaker

- **Sharon Milgram**, Ph.D., National Institutes of Health, Bethesda, MD

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9:15 a.m. – 10:00 a.m.

★ Session 2 | Rooms 138 – 139

### MD-PhD, is it right for me?

(Recommended for students interested in the M.D./Ph.D. track)

#### Presenters

- **Juanita Merchant**, M.D., Ph.D., University of Arizona-Cancer Center, Tucson, AZ

#### Panelists

- **Sandra Lemmon**, Ph.D., University of Miami, Miami-Dade County, FL
- **Ellis Tibbs**, University of Maryland, M.D.-Ph.D. student, College Park, MD
- **Carlos Perez Kerkvliet**, University of Minnesota, M.D.-Ph.D. student, Minneapolis, MN
- **Anthony Angueira**, University of Pennsylvania, M.D.-Ph.D. student, Philadelphia, PA
- **Briaunna Minor**, University of Rochester, M.D.-Ph.D. student, Rochester, NY

9:15 a.m. – 10:00 a.m.

★ Session 3 | Rooms 134 – 135

### Diverse Minds are Required to Invent the Future – An Inclusive Model Program for Learning from Nature for Societal Benefit

(Recommended for postdoctoral scientists, faculty, program directors, and exhibitors)

#### Moderator

- **Shawn Williams**, Ph.D. candidate, Brown University

#### Speaker

- **Robert Full**, Ph.D., University of California, Berkeley, Berkeley, CA

9:15 a.m. – 10:00 a.m.

Session 4 | Rooms 130 – 131

### Building Institutional Partnerships to Enhance Diversity and Inclusion in the Research Workforce

(Recommended for postdoctoral scientists, faculty, program directors, and exhibitors)

#### Speakers

- **Don C. Brunson**, Ph.D., Vanderbilt University, Nashville, TN
- **Ja'Wanda S. Grant**, Ph.D., Xavier University of Louisiana, New Orleans, LA
- **Chloe N. Poston**, Ph.D., The Leadership Alliance, Brown University, Providence, RI

9:15 a.m. - 10:00 a.m.

Session 5 | Rooms 240 – 241

## Creating A Diverse & Inclusive Campus: Strategies For Helping Nontraditional Students Succeed 2.0

(Recommended for all attendees)

### Speakers

- **L'Aurelle Johnson**, M.S., Ph.D., University of Minnesota, Minneapolis, MN
- **Janice Reuben**, University of Michigan, Ann Arbor, Ann Arbor, MI
- **Jayne Reuben**, Ph.D., Texas A&M College of Dentistry, Dallas, TX

10:15 a.m. – 12:00 p.m.

## Exhibit and Poster Hall Hours

Hall H – I

10:30 a.m. – 11:30 a.m.

## Mentoring Coaching

Exhibit Hall Mentoring Tables

10:30 a.m. – 11:45 a.m.

## Poster Session 3 (C)

Hall H – I

12:15 p.m. – 1:00 p.m.

## Networking Lunch by Discipline

Hall F – G

1:00 p.m. – 1:45 p.m.

## PLENARY SCIENTIFIC SESSION

*Insights from non-human animals into the  
neurobiology of language*

Hall F – G

### Moderator

- **John Fitzgerald Gates**, Ph.D., University of Virginia, Charlottesville, VA

### Speaker

- **Erich D. Jarvis**, Ph.D., The Rockefeller University, New York City, NY

## CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS (8 Session Options)

2:00 p.m. – 3:00 p.m.

Session 1 | Rooms 138 – 139

## Evidence-based Strategies to Improve Student Performance in STEM

(Recommended for postdoctoral scientists, faculty,  
program directors, and exhibitors)

### Speakers

- **L'Aurelle Johnson**, M.S., Ph.D., University of Minnesota, Minneapolis, MN
- **Jayne Reuben**, Ph.D., Texas A&M College of Dentistry, Dallas, TX

2:00 p.m. – 3:00 p.m.

Session 2 | Rooms 136 – 137

## Have You Earned Authorship? Using Case Studies to Develop Practical and Ethical Guidelines for Authorship

(Recommended for senior –level graduate students,  
postdoctoral scientists, and faculty)

### Speaker

- **Laurel Southard**, Cornell University, Ithaca, NY

2:00 p.m. – 3:00 p.m.

Session 3 | Rooms 134 – 135

## Implicit Bias and Microaggressions: How Our Brains Take Short Cuts

(Recommended for all attendees)

### Speakers

- **Stephen Allsop**, Ph.D., Harvard Medical School, Boston, MA
- **Bruce Birren**, Ph.D., Genomic Center for Infectious Diseases, The Broad Institute, Cambridge, MA

**“ABRCMS allows students the opportunity to solely develop themselves as better informed and oriented professionals in the fields they wish to pursue. It is the best meeting at giving the students the importance in all aspects of the meeting.”**

2:00 p.m. – 3:00 p.m.

Session 4 | Rooms 132 – 133

## FACTUALITY: Cultural Competence & Empathy via Board Game

(Recommended for all attendees)

### Speaker

- **Natalie Gillard**, FACTUALITY the Game, Baltimore, MD

2:00 p.m. – 3:00 p.m.

Session 5 | Rooms 130 – 131

## Setbacks and Comebacks – Navigating Your Path to Success after Hitting the Roadblock

(Recommended for all attendees)

### Speaker

- **John Williams**, Ph.D., Albany State University, Albany, GA

2:00 p.m. – 3:00 p.m.

Session 6 | Rooms 236 – 237

## Overcoming Imposter Syndrome and Stereotype Threat

(Recommended for all attendees)

### Speaker

- **Alan Landry**, M.D., M.P.H., Harvard Medical School, Boston, MA

2:00 p.m. – 3:00 p.m.

★ Session 7 | Rooms 238 – 239

## Job Search Strategies and Negotiating the Job Offer

(Recommended for graduate students, postdoctoral scientists, and early –career faculty)

### Speaker

- **Lauren Celano**, M.B.A., Propel Careers, Cambridge, MA

2:00 p.m. – 3:00 p.m.

Session 8 | Rooms 240 – 241

## TWD–PDO Meeting (Organized by the NIGMS Program Directors Association)

(Recommended for NIGMS Program Directors)

3:00 p.m. – 6:00 p.m.

Exhibit and Poster Hall Hours

Hall H – I

3:15 p.m. – 4:30 p.m.

Poster Session 4 (D)

Hall H – I

3:30 p.m. – 4:15 p.m.

Mentoring Showcase

Exhibit Hall Theater

4:30 p.m. – 5:30 p.m.

Mentoring Coaching

Exhibit Hall Mentoring Tables

4:45 p.m. – 6:00 p.m.

Poster Session 5 (E)

Hall H – I

## CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS

(10 Session Options)

6:15 p.m. – 7:15 p.m.

Session 1 | Rooms 138 – 139

## Preparing for Graduate School: Doctoral Student-Run Multidisciplinary Information Session

(Recommended for community college, undergraduate, and postbaccalaureate students)

### Speakers

- **Carolina M. Herrera**, Rutgers University, Newark, NJ
- **Clair Kotula**, Rutgers University, Newark, NJ

6:15 p.m. – 7:15 p.m.

Session 2 | Rooms 136 – 137

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## The First Year of Graduate School: How to Survive and Thrive

(Recommended for community college, undergraduate, and postbaccalaureate students)

### Speakers

- **Kortany Baker**, B.S., Purdue University, West Lafayette, IN
- **Joseph Ogas**, Ph.D., Purdue University, West Lafayette, IN
- **Elizabeth Tran**, Ph.D., Purdue University, West Lafayette, IN

6:15 p.m. – 7:15 p.m.

Session 3 | Rooms 134 – 135

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## Pitch Perfect: A Storytelling Session Helps Build Confidence in Communication and Networking

(Recommended for all students and postdoctoral scientists)

### Speaker

- **Shuai Li**, Ph.D., Mayo Clinic, Rochester, MN

6:15 p.m. – 7:15 p.m.

Session 4 | Rooms 132 – 133

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## Confessions of Admission Officials: What We Look at, and for, in Graduate School Application

(Recommended for community college, undergraduate, and postbaccalaureate students)

### Speakers

- **Gustavo Arrizabalaga**, Ph.D., IU School of Medicine, Indianapolis, IN
- **Colleen Gabauer**, Ph.D., Purdue University, West Lafayette, IN
- **Tara Hobson**, M.A., IU School of Medicine, Indianapolis, IN

6:15 p.m. – 7:15 p.m.

Session 5 | Rooms 240 – 241

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## Strategies for Taking Standardized Admissions Tests: Preparing for the GRE Exams

(Recommended for undergraduate and postbaccalaureate students)

### Speaker

- **Laurie Connor**, Ph.D., Baylor School of Medicine, Houston, TX

6:15 p.m. – 7:15 p.m.

Session 6 | Rooms 238 – 239

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## Strategies for Taking Standardized Admissions Tests: Preparing for the MCAT Exams

(Recommended for undergraduate and postbaccalaureate students)

### Speaker

- **Sandra Oyewole**, Ph.D., Trinity University, Washington, DC

6:15 p.m. – 7:15 p.m.

Session 7 | Rooms 236 – 237

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## Postbaccalaureate Programs and Tips for Submitting a Successful Application

(Recommended for students considering postbaccalaureate training)

### Speaker

- **Sharon L. Milgram**, Ph.D., National Institutes of Health, Bethesda, MD

6:15 p.m. – 7:15 p.m.

Session 8 | Rooms 130 – 131

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## Interviewing for M.D.-Ph.D. Programs

(Recommended for undergraduate students)

### Speakers

- **Joseph Barbieri**, Ph.D., Medical College of Wisconsin, Milwaukee, WI
- **Sandra Lemmon**, Ph.D., University of Miami Miller School of Medicine, Miami, FL

6:15 p.m. – 7:15 p.m.

Session 9 | Room 235

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## Solutions for Success: A Guide for Survival in College Chemistry Courses

(Recommended for community college, undergraduate, and postbaccalaureate students)

### Speakers

- **Daniel LaMaster**, Graduate Student, Louisiana State University, Baton Rouge, LA
- **Gretchen Schneider**, Ph.D., Louisiana State University, Baton Rouge, LA
- **Graca Vicente**, Ph.D., Louisiana State University, Baton Rouge, LA

**6:15 p.m. – 7:15 p.m.**  
**Session 10 | Room 140**

## **Acing the Interview**

*(Recommended for all attendees)*

### Speaker

- **Lauren Celano, M.B.A.**, Propel Careers, Cambridge, MA

**6:15 p.m. – 8:00 p.m.**

**JW Marriott**  
**White River Ballroom C – D**

## **Diversifying the Biomedical Scientific “Thinkforce” through Training and Partnerships**

**Hosted by the Diversity Program Consortium Coordination and Evaluation Center at UCLA**  
**In partnership with National Research Mentoring Network**

*Note: This session will continue its 3rd component at the NRMN Meet and Greet*

*(Recommended for students, postdoctoral scientists, faculty, and administration)*

### Speaker

- **Alison Gammie, Ph.D.**, National Institutes of Health (NIH), National Institute of General Medical Sciences (NIGMS), Bethesda, MD

**6:30 p.m. – 8:00 p.m.**

**JW Marriott**  
**JW Grand Ballroom 1 – 5**

## **Speakers, Exhibitors, Judges, and Program Directors Networking Social**

**8:00 p.m. – 9:00 p.m.**

**JW Marriott**  
**Rooms 103 – 104**

## **LGBTQ Networking Social & Tips on Succeeding as a Scientist**

**8:00 p.m. – 9:00 p.m.**

**JW Marriott**  
**White River Ballroom A – B**

## **National Research Mentoring Network Meet & Greet**

**In partnership with the Diversity Program Consortium’s Coordination and Evaluation Center at UCLA**

*This session is preceded by the Diversifying the Biomedical Scientific “Thinkforce” through Training and Partnerships*

**8:00 p.m. – 9:00 p.m.**

**JW Marriott**  
**JW Grand Ballroom 7**

## **Chemistry Career Building/Networking Event**

### Speaker

- **Ann Kimble-Hill, Ph.D.**, Indiana University School of Medicine, Indianapolis, IN

**8:00 p.m. – 9:00 p.m.**

**JW Marriott**  
**Rooms 305 –306**

## **PREP Program Director Meeting (By Invitation Only)**

**9:00 p.m. – 10:00 p.m.**

**JW Marriott**  
**Room 304**

## **MAPRS Program Director Meeting (By Invitation Only)**



## Saturday, November 17

7:00 a.m. – 7:45 a.m.

*Networking Breakfast*

Hall J

8:00 a.m. – 9:15 a.m.

*Oral Sessions 2 (12 Session Options)*

Biochemistry and Molecular Biology:

**Rooms 236 – 237**

Biochemistry and Molecular Biology:

**Rooms 238 – 239**

Cancer Biology: **Rooms 130 – 131**

Cancer Biology: **Rooms 132 – 133**

Chemistry: **Rooms 240 – 241**

Computational Biology and Systems Biology and

Developmental Biology and Genetics: **Room 234**

Developmental Biology and Genetics: **Room 232**

Engineering, Physics and Math: **Room 140**

Microbiology: **Rooms 134 – 135**

Microbiology and Physiology: **Rooms 136 – 137**

Neuroscience: **Room 233**

Neuroscience: **Room 235**

9:15 a.m. – 12:00 p.m.

*Exhibit and Poster Hall Hours*

Hall H – I

9:30 a.m. – 9:50 a.m.

*Exhibitor Showcase*

American Society for Microbiology, Education  
Department

**Exhibit Hall Theater, Hall H – I**

9:30 a.m. – 11:30 a.m.

*Mentoring Coaching*

**Exhibit Hall Mentoring Tables**

10:00 a.m. – 10:20 a.m.

*Exhibitor Showcase*

St. Jude Children's Research Hospital Graduate  
School of Biomedical Sciences

**Exhibit Hall Theater, Hall H – I**

10:00 a.m. – 11:15 a.m.

*Poster Session 6 (F)*

Hall H – I



10:30 a.m. – 10:50 a.m.

*Exhibitor Showcase*

Emory University – Laney Graduate School

**Exhibit Hall Theater, Hall H – I**

11:00 a.m. – 11:20 a.m.

*Exhibitor Showcase*

Purdue University/Weldon School of Biomedical  
Engineering

**Exhibit Hall Theater, Hall H – I**

12:15 p.m. – 1:00 p.m.

*Networking Lunch*

Hall F – G

1:00 p.m. – 1:45 p.m.

*Closing Keynote Address*

**PLENARY SESSION**

*Translating Science: Obstacles and  
Opportunities*

Hall F – G

**Moderator**

John Fitzgerald Gates, Ph.D., University of  
Virginia, Charlottesville, VA

**Speaker**

• Kafui Dzirasa, M.D., Ph.D., Duke University,  
Durham, NC

## CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS

(4 Session Options)

2:15 p.m. – 3:15 p.m.

Session 1 | Rooms 138 – 139

### Essential Mentoring Skills for Early-Career Scientists and Faculty Mentors

(Recommended for graduate students, postdoctoral scientists, faculty, program directors, and exhibitors)

#### Speakers

- **Kelly Diggs-Andrews**, Ph.D., National Research Mentoring Network, Chestnut Hill, MA
- **Alvin Holder**, Ph.D., Old Dominion University, Norfolk, VA
- **Harlan Jones**, Ph.D., National Research Mentoring Network, University of North Texas Health Science Center, Fort Worth, TX
- **Cassandra McCullum**, Ph.D., Alcorn State University, Lorman, MS
- **Rasha Morsi**, Ph.D., Norfolk State University, Norfolk, VA
- **Desh Ranjan**, Ph.D., Old Dominion University, Norfolk, VA
- **Roland Thorpe**, Ph.D., The Johns Hopkins University, Baltimore, MD

2:15 p.m. – 3:15 p.m.

Session 2 | Rooms 136 – 137

### Mentoring Diverse Students on the Way to STEM Research Careers

(Recommended for postdoctoral scientist, faculty, program directors, and exhibitors)

#### Speakers

- **Marcus Lambert**, Ph.D., Weill Cornell Graduate School of Medical Sciences, New York City, NY
- **Raquel Catellanos**, Ph.D., Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA
- **William Wittels**, Ph.D., The Leadership Alliance, Providence, RI

2:15 p.m. – 3:15 p.m.

Session 3 | Rooms 134 – 135

### Developing Your Scientific Swag

Sponsored by Indiana University Purdue University Indianapolis

(Recommended for all students)

#### Speakers

- **Patrice L. Capers**, Ph.D., M.S.C.R., The Citadel, Charleston, SC
- **Tabitha M. Hardy**, Ph.D., Indiana University Purdue University Indianapolis, Indianapolis, IN

2:15 p.m. – 3:15 p.m.

Session 4 | Rooms 130 – 131

### Panel Discussion: The Ph.D. Green-Book: A Survival Guide for Navigating Graduate School

(Recommended for undergraduate and postbaccalaureate students)

#### Panelists

- **Brittanie Bloom**, Ph.D. candidate, San Diego University/University of California, San Diego, San Diego, CA
- **Liz J. Hernández Borrero**, Ph.D. candidate, The Pennsylvania State University, University Park, PA
- **Victor Hugo Canela**, Ph.D. student, Indiana University School of Medicine, Indianapolis, IN
- **Imade Imasuen-Williams**, Ph.D. candidate, Indiana University School of Medicine, Indianapolis, IN
- **Keila Miles**, Ph.D. candidate, University of Cincinnati, Cincinnati, OH
- **Mirelis Santos-Cancel**, Ph.D. candidate, University of Cincinnati, Cincinnati, OH

**“This meeting has a long-standing history and reputation for bringing the best and the brightest diverse scholars together to share their work and build their professional networks.”**

# Program

## CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS

(5 Session Options)

3:30 p.m. – 4:30 p.m.

★ **Session 1** | **Rooms 138 – 139**

### Build Your Personal Statement!

(Recommended all students)

#### Speakers

- **Victoria Freedman, Ph.D.**, Albert Einstein College of Medicine, New York, NY
- **Nancy Schwartz, Ph.D.**, University of Chicago, Chicago, IL

3:30 p.m. – 4:30 p.m.

**Session 2** | **Rooms 130 – 131**

### Navigating Your Mentoring Relationships as a Mentee: What undergraduate Mentees Need to Know

(Recommended for community college, undergraduate, and postbaccalaureate students)

#### Speakers

- **Kelly Diggs-Andrews, Ph.D.**, National Research Mentoring Network, Chestnut Hill, MA
- **Harlan Jones, Ph.D.**, National Research Mentoring Network, University of North Texas Health Science Center, Fort Worth, TX
- **Roland Thorpe, Ph.D.**, The Johns Hopkins University, Baltimore, MD

3:30 p.m. – 4:30 p.m.

**Session 3** | **Rooms 132 – 133**

### Blogging, Tweeting, & Writing to Promote Your Career and Diversify Science

(Recommended for all students)

#### Speaker

- **Michael Johnson, Ph.D.**, University of Arizona, Tucson, AZ

3:30 p.m. – 4:30 p.m.

★ **Session 4** | **Rooms 136 – 137**

### Overcoming Imposter Syndrome and Stereotype Threat

(Recommended for all attendees)

#### Speaker

- **Alan Landry, M.D., M.P.H.**, Harvard Medical School, Boston, MA

3:30 p.m. – 4:30 p.m.

**Session 5** | **Rooms 134 – 135**

### #STEMatSLAC: What's Special About STEM at Small Liberal Arts Colleges?

(Recommended for graduate students, postdoctoral scientists, and faculty)

#### Speaker

- **Michelle Tong, Ph.D.**, Earlham College, Richmond, IN

4:30 p.m. – 7:30 p.m.

**FREE TIME! FREE TIME! FREE TIME!**

7:30 p.m. – 10:00 p.m.

### Awards Banquet and Ceremony

**Hall F – G**

#### Greetings from ASM Chief Executive Officer

- **Stefano Bertuzzi, Ph.D., M.P.H.**, American Society for Microbiology, Washington, DC

### Conference Wrap-up and Student Presentation Awards Ceremony

- **John Fitzgerald Gates, Ph.D.**, University of Virginia, Charlottesville, VA

### Concluding Remarks from Chairperson

- **Avery August, Ph.D.**, Cornell University College of Veterinary Medicine, Ithaca, NY

10:00 p.m. – 2:00 a.m.

### Closing Social and Dance (All are invited)

**JW Marriott  
White River Ballroom**



AMERICAN  
SOCIETY FOR  
MICROBIOLOGY

# 2019 ASM Education Offerings

For faculty, early career and postdoctoral scientists, and graduate/undergraduate students



*Consider these opportunities from ASM. Dates may change without notice. Please consult program websites for timely information.*

## Fellowships

### Undergraduate Research Fellowship

*Application deadline: February 15, 2019*

Up to \$6,000 awards to undergraduate, community college, and post-baccalaureate students to perform 10-12 weeks of summer research

[asm.org/urf](http://asm.org/urf)

### Research Capstone Fellowship

*Application deadline: March 15, 2019*

Up to \$2,000 travel subsidy for underrepresented minority students at the following educational levels: community college, undergraduate, post-baccalaureate, master's, early doctoral and senior doctoral students to attend and present at the ASM Microbe. [asm.org/rcf](http://asm.org/rcf)

## Courses

Visit [asm.org/build-your-skills](http://asm.org/build-your-skills)

### Best Practices in Curriculum Design & Assessment Online Course

*January - April 2019*

Built upon the elements of ASM's Science Teaching Fellows Program, participants in this course develop the skills needed to succeed in positions that have a significant teaching component.

### Scientific Writing and Publishing Online Course

*January - April 2019*

Participants develop scientific writing skills needed to prepare a manuscript for publication.

### The Microbe Academy for Professional Development (MAPD)

*June 19 - 20, 2019, San Francisco, CA*

In-person meeting held prior to ASM Microbe 2019, this one and a half day professional development workshop provides students skillset training in presentations techniques, networking and gives the science answers they have been looking for.

### ASM Grant Writing Online Course

*September - December 2019*

Overview for finding opportunities and writing grant applications. Speakers come from varied backgrounds and will lend unique perspectives.

### Improving Undergraduate Biology Education Based on Research in Science Learning

*September - December 2019*

Building on the most notable elements from the ASM-NSF Biology Scholars Program, participants will dissect discipline-based education research (DBER) literature.

## Conferences

### ASM Conference for Undergraduate Educators

*August 1 - 4, 2019 | Tysons, VA*

Teaching, learning, and assessment conference with workshops, education sessions, posters, and exhibitors for microbiology and biology educators.

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

### Annual Biomedical Research Conference for Minority Students

*November 13 - 16, 2019*

Undergraduate student conference with poster presentations and networking, scientific and professional development, and recruiters for summer programs and graduate training.

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

# Poster Presentations by Scientific Listing

## Community College, Undergraduates, and Posbaccalaureate Poster Presentations

### Sessions A –F

Biochemistry and Molecular Biology:  
001 –045

Cancer Biology: 046 –076

Cell Biology: 077 –99

Chemistry: 100 –129

Computational and Systems Biology:  
130 –143

Developmental Biology and Genetics:  
144 –168

Engineering, Physics, and Mathematics:  
169 –197

Immunology: 198 –215

Microbiology: 216 –252

Neuroscience: 253 –291

Physiology: 292 –307

Social and Behavioral Sciences and  
Public Health: 308 –341

## Master's Student Poster Presentations Session M

Biochemistry and Molecular Biology:  
01 –12

Cancer Biology: 13 –15

Cell Biology: 16 –19

Chemistry: 20 –26

Computational and Systems Biology:  
27 –28

Developmental Biology and Genetics:  
29 –30

Engineering, Physics, and Mathematics:  
31 –36

Microbiology: 37 –40

Neuroscience: 41

Physiology: 42

Social and Behavioral Sciences and

Public Health: 43 –48

*“The conference being for minority students provided a unique perspective on science and careers that is rarely discussed in our universities or professional environment. The plenary sessions discussing racial bias regarding the portrayal of environment or economic programs were enlightening. The atmosphere is very open to discussing these issues and encouraging the attendees to look further into it.”*



## Oral Session 1: Biochemistry and Molecular Biology

Thursday, November 15

5:30 p.m. – 6:45 p.m.

Rooms 236 – 237

O –001

Profiling Global Chromatin Proteome and Histone Post-translational Modifications Upon Knockdown of SMARCC2 via Mass Spectrometry

**Nia Harmon**, University of Pennsylvania

Biochemistry and Molecular Biology: Proteomics

O –002

Whether In or Out NO Knows Which Path to Take in Type 2 Diabetes

**Zakiyah Henry**, Winston-Salem State University

Biochemistry and Molecular Biology: Biochemistry

O –003

Development of a High Throughput IgG Peptide Digestion Protocol to Facilitate the Implementation of a Robust Peptide Map Assay

**Tanu Priya**, Boehringer Ingelheim

Biochemistry and Molecular Biology: Proteomics

O –004

The Mechanism of FOXO1 Nuclear Translocation During Embryo Implantation

**Kaitlan Smith**, University of North Carolina at

Pembroke

Biochemistry and Molecular Biology: Biochemistry

O –005

Unraveling the Mysteries of the *GAL1* –70

Bidirectional Promoter

**Hugh Yeh**, Harvard Medical School

Biochemistry and Molecular Biology: Genomics

## Oral Session 1: Biochemistry and Molecular Biology and Physiology

Thursday, November 15

5:30 p.m. – 6:45 p.m.

Rooms 238 – 239

O –006

Experimental Colitis-Induced Depression of Behavior of Nesting in Mice

**Stanley Cheatham**, Virginia Commonwealth University

Physiology: Pharmacology

O –007

The Impact of Elevated BCAAs on Hepatic Insulin Signaling and Mitochondrial Function

**Azuri Hughes**, Saint Peter's University

Physiology: Endocrinology

O –008

The Study of Protein Aggregation in *Caenorhabditis elegans* Neurons as a Function of Age

**Elizabeth Soto**, City College of New York

Biochemistry and Molecular Biology: Structural

Biology

O –009

Structural Investigation of the Impact of Three Disease –Causing Mutations on the Catalytic Cycle of the Neuronal Motor Protein, Kif5A

**Lauren Thornton**, Xavier University of Louisiana

Biochemistry and Molecular Biology: Structural

Biology

O –010

Intermolecular Interactions of the HIV –1 Spacer Peptide 1 – Nucleocapsid and the Core Encapsidation Signal

**Claudia Walker**, University of Maryland, Baltimore County

Biochemistry and Molecular Biology: Structural

Biology

## Oral Session 1: Cancer Biology

Thursday, November 15

5:30 p.m. – 6:45 p.m.

Rooms 132 – 133

O –011

Characterization of Metastatic Progression

**Torhera Durand**, Purdue University

Cancer Biology: Cancer Biology

O –012

Enhancement of Immunotherapy on PD –1 by Auranofin in Ovarian Cancer

**Yoonji Eum**, Georgia State University

Cancer Biology: Cancer Biology

O –013

Characterizing Survival Mechanisms Following Oncogenic Kras Ablation in Pancreatic Cancer Cells

**Mauricio Flores**, University of California, San

Francisco

Cancer Biology: Cancer Biology

# Student Oral Presenters Listing

O-014

Interleukin 24 Production is Regulated by p38 MAPK via TTP-Dependent Pathway in Cancer

**Justina Kasteri**, City University of New York  
Cancer Biology: Cancer Biology

O-015

The Role of Dopamine Signaling in Biological Disparity of Prostate Cancer

**Isaiah Pickett**, Clark Atlanta University  
Cancer Biology: Cancer Biology

## Oral Session 1: Cancer Biology and Immunology

Thursday, November 15

5:30 p.m. – 6:45 p.m.

Rooms 130 – 131

O-016

Immunophenotypic and Functional Analysis of Hematopoiesis in G0S2 Null Mice

**Faith Adams**, Baylor College of Medicine  
Immunology: Basic Immunology

O-017

CD103+Dendritic Cell-Based Vaccine: A Powerful Cancer Immunotherapy

**Oleksandr (Sasha) Kyrysyuk**, University of Texas MD Anderson Cancer Center  
Immunology: Basic Immunology

O-018

Methamphetamine Alters the Expression of Toll-like Receptor 4 on Microglia

**Dormarie Rivera-Rodriguez**, University of Puerto Rico in Ponce  
Immunology: Basic Immunology

O-019

Repurposing an Anti-Malarial Drug to Treat the Deadliest Cancer in Children

**Daniel Ssozi**, Dana-Farber Cancer Institute  
Cancer Biology: Cancer Biology

O-020

Phenotyping of the Airway Epithelium in Search for Subpopulation of Cells Conferring Long Term Risk for Developing Lung Cancer

**Alexander Weingart**, Vanderbilt University School of Medicine  
Cancer Biology: Cancer Biology

## Oral Session 1: Cell Biology

Thursday, November 15

5:30 p.m. – 6:45 p.m.

Room 233

O-021

Optoacoustic Imaging of Breast Cancer Using Dark Quencher QC1 pHLP

**Crystal Choi**, Memorial Sloan Kettering Cancer Center  
Cell Biology: Molecular Imaging

O-022

Non-Canonical Activation of the Unfolded Protein Response Pathway by *Legionella pneumophila*

**Tanya Kumar**, University of California, San Francisco  
Cell Biology: Molecular Imaging

O-023

OPA-1 Deficient Skeletal Muscle ER-Stress Increases Mitochondria Associated Membranes Through a MFN-1 –MFN-2 –GRP78 Tethering Mechanism

**Margaret Mungai**, University of Iowa  
Cell Biology: Cell Biology

O-024

Texture Analysis to Predict Survival in Patients with Glioblastomas Receiving Immunotherapy

**Elise Wang**, Memorial Sloan Kettering Cancer Center  
Cell Biology: Molecular Imaging

O-025

High Resolution Melting Analysis of STR Loci to Discriminate Repeated Donor Blood Samples

**Ava Wong**, Chaminade University of Honolulu  
Cell Biology: Cell Biology

## Oral Session 1: Chemistry

Thursday, November 15

5:30 p.m. – 6:45 p.m.

Rooms 134 – 135

O-026

Volatile Organic Compound Profiling from Postmortem Microbes Using GC-MS to Assist in Forensic Search and Recovery

**Terezie Cernosek**, Chaminade University of Honolulu  
Chemistry: Analytical Chemistry



*“It is one of the largest research based minority conferences that attracts such top-talent and bright young leaders. For that reason alone, ABRCMS is always worth attending.”*

○ –027

Electrochemical Impedance Spectroscopy for the Detection of Neuropeptide Y Using Aptamer-Modified Platinum Microelectrodes

**Nerika Hernandez**, Universidad del Turabo  
Chemistry: Analytical Chemistry

○ –028

Synthesis, Characterization, and Catalytic Studies of Cobalt-Containing Complexes for Hydrogen Generation

**Halie Maass**, Old Dominion University  
Chemistry: Inorganic Chemistry

○ –029

Synthesis, Characterization, and Catalytic Studies of Lignin Model Compounds with Cobalt III Cubane Complexes

**Jennifer Mejia**, Old Dominion University  
Chemistry: Inorganic Chemistry

○ –030

High-Field NMR Spectroscopy and Mass Spectrometry for the Quality Control of *Epidemium grandiflorum* Dietary Supplements

**Ifunanya Okeke**, Scripps College  
Chemistry: Analytical Chemistry

## Oral Session 1: Computational and Systems Biology

Thursday, November 15

5:30 p.m. – 6:45 p.m.

Room 234

○ –031

Association of Psychological Phenotypes with Inflammation in Alpha –1 Antitrypsin Deficiency

**Titilope Akinwe**, Georgia State University  
Computational and Systems Biology: Bioinformatics

○ –032

Gene Expression Biomarker Discovery in Endometriosis

**Valerie Maisonave-Collazo**, University of Puerto Rico at Mayagüez

Computational and Systems Biology: Bioinformatics

○ –033

Improved Epitope Prediction on the Lyme Disease Antigen Outer Surface Protein C (OspC)

**Muhammad Nazim**, Hunter College of the City University of New York

Computational and Systems Biology: Bioinformatics

○ –034

Annotating Genes within Differentially Methylated Regions of Bovine Fetuses with Large Offspring Syndrome

**Oluwateniayo Ogunsan**, University of Missouri, Columbia

Computational and Systems Biology: Bioinformatics

# Student Oral Presenters Listing

○ –035

Characterizing Kidney Disease Gene Variants: A Programmatic Approach

**Kate Sanders**, The Broad Institute of MIT and Harvard

Computational and Systems Biology: Bioinformatics

## Oral Session 1: Developmental Biology and Genetics and Engineering, Physics and Mathematics

*Thursday, November 15*

*5:30 p.m. – 6:45 p.m.*

Room 232

○ –036

Alcohol –Related Behaviors in Strains of Mice Selected for High and Low Open –Field Activity

**Eliza Elliotte**, University of Colorado Boulder  
Developmental Biology and Genetics: Genetics

○ –037

Segregation of Phenotypes in Families with Cerebral Cavernous Malformation Type 1 – Common Hispanic Mutation

**Hyeyeon Hwang**, University of California, San Francisco  
Developmental Biology and Genetics: Genetics

○ –038

Bio-Inspired Degradable Tough Adhesives for Diverse Wet Surfaces

**Nadja Maldonado-Luna**, Harvard University  
Engineering, Physics and Mathematics: Biomedical Engineering

○ –039

Improvements to Single-Cell Messenger Ribonucleic Acid Sequencing Technology

**Yash Nagpal**, University of California, Santa Barbara

Engineering, Physics and Mathematics: Bioengineering

○ –040

Rapid Desktop Inkjet Printing of an Inexpensive and High-Resolution Electrocardiogram Electrode Array

**Alana Tillery**, University of Maryland  
Engineering, Physics and Mathematics:

Bioengineering

## Oral Session 1: Engineering, Physics and Mathematics

*Thursday, November 15*

*5:30 p.m. – 6:45 p.m.*

Room 140

○ –042

Understanding the Phagocytic Behavior of Asymmetrical Nanoparticles

**Amy Leslie**, University of Queensland  
Engineering, Physics and Mathematics: Nanotechnology

○ –043

Assessment of the Toxicity of Zn-based Nanoparticles

**Josian Luciano-Velazquez**, University of Puerto Rico in Ponce  
Engineering, Physics and Mathematics: Nanotechnology

○ –044

Maximizing Flux Along Microtubules via Cooperation Among Molecular Motors

**Keshav Patel**, University of North Carolina at Chapel Hill  
Engineering, Physics and Mathematics: Mathematics

○ –045

Biophysical Modeling of Nanoparticles for Localized Drug Delivery using Focused Ultrasound

**Brenda Yu**, Stanford University  
Engineering, Physics and Mathematics: Biophysics

## Oral Session 1: Microbiology

*Thursday, November 15*

*5:30 p.m. – 6:45 p.m.*

Rooms 240 – 241

○ –046

DMSO Reduction Influences *Salmonella* Typhimurium Intestinal Colonization and Environmental Persistence

**Eddy Cruz**, North Carolina State University  
Microbiology: Microbial Physiology

○ –047

Identification of Genes Involved in Contact Dependent Signaling in *Burkholderia thailandensis*

E64

**Nicolas Lopez**, California State University,  
Northridge  
Microbiology: Bacteriology

O –048

Phenotypic Assessment of Mutants from Novel  
Virulence-Associated Accessory Genomic Elements  
in *Pseudomonas aeruginosa*  
**Tatiana Ortiz-Serrano**, University of Puerto Rico,  
San Juan  
Microbiology: Bacteriology

O –049

Defining the Role Master Regulators of Virulence  
Factors Play in *Mycobacterium abscessus*  
**George Walters-Marrah**, University of Central  
Florida  
Microbiology: Bacteriology

O –050

Revealing an Unexpected CRISPR –Cas9 Antagonist  
**Elias Wisdom**, Fred Hutchinson Cancer Research  
Center  
Microbiology: Bacteriology

## Oral Session 1: Neuroscience and Physiology

Thursday, November 15

5:30 p.m. – 6:45 p.m.

Room 235

O –051

The Effect of Thymic Nurse Cell Transplantation on  
Cardiovascular Remodeling in a Model of Systemic  
Lupus Erythematosus  
**Rilda Duron**, Talladega College  
Physiology: Physiology

O –052

Electrochemical Method for *In Vitro* Detection of  
Neuropeptide Y  
**John Gonzalez-Amoretti**, Universidad del Turabo  
Neuroscience: Neurobiology

O –053

Reduction of IGF –1 Receptor in the Adult  
Hippocampus Impairs Learning and Memory  
**Cellas Hayes**, University of Mississippi  
Neuroscience: Neurobiology

O –054

The Effect of Prenatal Exposure to an  
Environmentally Relevant Phthalate Mixture on  
Testosterone Levels in Adult Male Mice  
**Talia Seymore**, Pennsylvania State University  
Physiology: Toxicology

O –055

Glutamate Increases the Sensitivity of Individual  
Muscle Spindle Receptor Endings to Muscle Stretch  
in Adult Mice  
**Natanya Villegas**, San Jose State University  
Neuroscience: Neurobiology

## Oral Session 1: Social and Behavioral Sciences and Public Health

Thursday, November 15

5:30 p.m. – 6:45 p.m.

Rooms 136 – 137

O –056

Differences in Depressive Symptoms by  
Sociodemographic Characteristics in Cancer  
Survivors Residing in Central Pennsylvania  
**Kellie Cooper**, Winthrop University  
Social and Behavioral Sciences and Public Health:  
Public Health and Epidemiology/Biostatistics

O –057

Finding Community: Can Extracurricular Activities  
be a Positive Influence for the Mental Health  
of Students of Color at a Predominantly White  
Institution  
**Frances Ikeokwu**, University of Virginia  
Social and Behavioral Sciences and Public Health:  
Psychology

O –058

Examining How the San Diego County Hepatitis  
A Outbreak Affected Homeless Young Adults via  
Community Engagement, Resource Mapping, and  
Photovoice  
**Talia Kieu**, San Diego State University  
Social and Behavioral Sciences and Public Health:  
Public Health and Epidemiology/Biostatistics

O –059

Sexual Harassment During Medical Internship:  
A Closer Look at Gender Representation and  
Depression  
**Fatima Obeid**, University of Michigan  
Social and Behavioral Sciences and Public Health:  
Psychology

# Student Oral Presenters Listing

O –060

The Development of Response to Social Directives in Infants Later Diagnosed with ASD

**Christina Tovai**, University of Pittsburgh  
Social and Behavioral Sciences and Public Health:  
Psychology

## Oral Session 2: Biochemistry and Molecular Biology

*Saturday, November 17*

8:00 a.m. – 9:15 a.m.

Rooms 236 – 237

O –061

The Investigation of the Effect of Cpeb4 Expression on Fat Distribution in Mice

**Ngozi Akingbesote**, University of Virginia  
Biochemistry and Molecular Biology: Genomics

O –062

Evaluation of the HIV Genome to Promote Gag Hexamerization

**Nahum Arefeayne**, University of Maryland, Baltimore County  
Biochemistry and Molecular Biology: Structural Biology

O –063

Molecular Determinants of Melanopsin Function, Localization, and Activation

**Robin Bailey**, University of Maryland, Baltimore County  
Biochemistry and Molecular Biology: Biochemistry

O –064

Elucidating Cross-Species Transmission of a Protein Based Mechanism of Drug Resistance

**Arielle Buckley**, Stanford University  
Biochemistry and Molecular Biology: Proteomics

O –065

The Function of Female Sex Hormones in Glucose Metabolism Following Traumatic Brain Injury

**Jade Dodge**, University of California, Los Angeles  
Biochemistry and Molecular Biology: Biochemistry

## Oral Session 2: Biochemistry and Molecular Biology

*Saturday, November 17*

8:00 a.m. – 9:15 a.m.

Rooms 238 – 239

O –066

Characterizing the Dynamic Properties of the Capsid –SP1 Junction Helix of the HIV –1 Gag Polyprotein and the Mechanism of Maturation Inhibitors

**Emily Cannistraci**, University of Maryland, Baltimore County  
Biochemistry and Molecular Biology: Structural Biology

O –067

Characterization of the Allosteric Regulation of BAM2 in *Arabidopsis thaliana*

**Nithesh Chandrasekharan**, James Madison University  
Biochemistry and Molecular Biology: Structural Biology

O –068

Biophysically Characterizing a Redox Deficient Mutant in Human Primase and Its Potential Implications in Replication

**Andrew Dorfeuille**, Morehouse College  
Biochemistry and Molecular Biology: Structural Biology

O –069

Interaction of Two Influenza A Matrix Proteins Critical to Viral Budding

**Reham Mahgoub**, Swarthmore College  
Biochemistry and Molecular Biology: Structural Biology

O –070

Validating MRAS as a Candidate Gene in the Pathogenesis of Cardiomyopathy

**Prashit Parikh**, Vassar College  
Biochemistry and Molecular Biology: Structural Biology

## Oral Session 2: Cancer Biology

Saturday, November 17

8:00 a.m. – 9:15 a.m.

Rooms 130 – 131

O –071

Stag2 Mutations and Their Influence on Activating Histone Marks

**Besmira Alija**, Memorial Sloan Kettering Cancer Center

Cancer Biology: Cancer Biology

O –072

Effect of Small Molecule Agonist of Relaxin Receptor on ERBB2-Induced Breast Cancer

**Elizabeth Ferrer**, Florida International University

Cancer Biology: Cancer Biology

O –073

Optimizing the Use of and Understanding the Resistance Mechanisms to Anti-HER2 Therapy Containing the Irreversible Pan-HER Inhibitor Neratinib

**Javier Granados**, Baylor College of Medicine

Cancer Biology: Cancer Biology

O –074

Quantifying Minimal Residual Disease in Breast Cancer Dormancy

**Cuyler Luck**, University of Pennsylvania

Cancer Biology: Cancer Biology

O –075

Understanding Crosstalk Between Melanoma Cells and the Microenvironment Using a Chemical Screening Approach

**Stephanie Melendez**, Memorial Sloan Kettering Cancer Center

Cancer Biology: Cancer Biology

## Oral Session 2: Cancer Biology

Saturday, November 17

8:00 a.m. – 9:15 a.m.

Rooms 132 – 133

O –076

Identification of Biomarkers of Sensitivity to Aurora Kinase Inhibitors in Head and Neck Squamous Cell Carcinoma

**Diana Odhiambo**, MD Anderson Cancer Center

Cancer Biology: Cancer Biology

O –077

Pharmacokinetics of an Ultrasmall Silica Nanoparticle Drug Conjugate (NDC)

**Syed Rizvi**, Sloan Kettering Institute for Cancer Research

Cancer Biology: Cancer Biology

O –078

Mycn Drives Fatty Acid Metabolism in Neuroblastoma

**Kevin Rodriguez**, Baylor College of Medicine

Cancer Biology: Cancer Biology

O –079

The Role of Mir –510 in Breast Cancer Disparities

**Arabia Satterwhite**, South Carolina State University

Cancer Biology: Cancer Biology

O –080

Radiation Therapy Potentiation via Ferroptosis Induction for the Treatment of Pancreatic Ductal Adenocarcinoma

**Alexandra Seas**, University of Nebraska Medical Center

Cancer Biology: Cancer Biology

## Oral Session 2: Chemistry

Saturday, November 17

8:00 a.m. – 9:15 a.m.

Rooms 240 – 241

O –081

Regulation of Hydrogen Peroxide-Induced Cataractogenesis in Cultured Bovine Lenses by L –Cysteine

**Anthony Baker**, Nebraska Wesleyan University  
Chemistry: Pharmaceutical Chemistry

O –082

Surface Modification of Iron-Based Metal-Organic Framework for Drug Delivery

**Angela Bui**, California University, Long Beach  
Chemistry: Analytical Chemistry

O –083

Photo-Degradation of Ciprofloxacin Using Different Titanium Oxide Catalyst

**Kenneth Fontáñez**, Universidad del Turabo  
Chemistry: Environmental Chemistry

O –084

Thermoelectric Effect with a Series of Ionic Liquids

**Marcus Jackson**, Queens College of the City University of New York  
Chemistry: Organic Chemistry

# Student Oral Presenters Listing

O –085

Development of a One-Step Methodology for the Synthesis Allylic Alcohols Based on the Hydrometalation and Carbometalation of Propargylic Alcohols Followed by the Epoxide Cleavage to Obtain Polyketide Fragments Precursors

**Jose Martinez Matias**, Pontifical Catholic University of Puerto Rico  
Chemistry: Organic Chemistry

## Oral Session 2: Computational and Systems Biology and Developmental Biology and Genetics

Saturday, November 17

8:00 a.m. – 9:15 a.m.

Room 234

O –086

Effect of Lisinopril on Senescence and Survivorship in *Drosophila melanogaster*

**Chetana Jadhav**, University of Maryland, Baltimore County  
Developmental Biology and Genetics: Evolution and Developmental Biology

O –087

Identification and Annotation of Pathogenic Gene Variants with Possible Implementation in High Functioning Autism Spectrum Disorder

**Erin Jean**, Hampton University  
Developmental Biology and Genetics: Genetics

O –088

Distinct and Overlapping Functions of Scl, Lmo2, and Ldb1 in Regulating the Divergence of Hematopoietic and Cardiac Fates

**Hamilton Oh**, University of California, Los Angeles  
Developmental Biology and Genetics: Developmental Biology

O –089

The Role of Macrophages in Skin Regeneration in African Spiny Mouse (*Acomys* spp.)

**Jamarcus Robertson**, University of Florida  
Developmental Biology and Genetics: Developmental Biology

O –090

Developing an Amplicon Sequencing Protocol for Lassa Virus

**Erick Salvador Rocha**, Broad Institute of MIT and Harvard  
Computational and Systems Biology: Bioinformatics

## Oral Session 2: Developmental Biology and Genetics

Saturday, November 17

8:00 a.m. – 9:15 a.m.

Room 232

O –091

A *Drosophila* Model for Human Intellectual Disability: Functional Links between a Conserved Poly(A) RNA Binding Protein and m6A Methylation Machinery

**Brianna Brown**, Emory University  
Developmental Biology and Genetics: Genetics

O –092

The Promising Role of a Mitochondrial Cocktail in the Management of Rett Syndrome

**Kira Griffith**, University of Toronto  
Developmental Biology and Genetics: Genetics

O –093

A Budding Yeast Model to Explore the Functional Consequences of Amino Acids Substitutions that Cause a Novel Syndrome in Humans: The RNA Exosome and Disease

**Samika Joshi**, Emory University  
Developmental Biology and Genetics: Genetics

O –094

Behavioral Characterization of Dual Lrrk2/Rab29 Knockout Mice: A Novel Model for Parkinson's Disease

**Victoria Nguyen**, National Institute on Aging  
Developmental Biology and Genetics: Genetics

O –095

Transcriptionally-Regulated Genes Direct Gap Junction Specificity in the Motor Circuit of *C. Elegans*

**Isaiah Swann**, Vanderbilt University  
Developmental Biology and Genetics: Genetics

## Oral Session 2: Engineering, Physics and Mathematics

Saturday, November 17

8:00 a.m. – 9:15 a.m.

Room 140

O –096

Developing a Sensor to Detect Formaldehyde in Ambient

**Makayla Headley**, University of Maryland, Baltimore County  
Engineering, Physics and Mathematics: Material Sciences

# Student Oral Presenters Listing

O –097

Simulation and Analysis of Self-Assembled Silver Nanowires Networks

**Roshell Lamug**, California State University, Long Beach  
Engineering, Physics and Mathematics:  
Nanotechnology

O –098

Lights, Camera, Hemodynamics: A Novel Technique to Monitor Blood Using Spectroscopy

**Wesley Matingou**, Morehouse College  
Engineering, Physics and Mathematics: Biomedical Engineering

O –099

Surface Functionalization of Quantum Dots and Nanotoxicity

**Jousen Merced**, University of Puerto Rico  
Engineering, Physics and Mathematics:  
Nanotechnology

O –100

Sensing of Cells and Biomolecules with Semiconductor Nanowires

**Sesegma Rygzydmaeva**, University of the District of Columbia  
Engineering, Physics and Mathematics:  
Nanotechnology

## Oral Session 2: Microbiology

Saturday, November 17

8:00 a.m. – 9:15 a.m.

Rooms 134 – 135

O –101

Using Hyperspectral Imaging and Artificial Neural Networks to Detect *E. coli* on Romaine Lettuce and Spinach

**Paul Dydych**, University of Northern Iowa  
Microbiology: Environmental Microbiology

O –102

A Preliminary Study Towards Systematic Measurement of Antibiotic Tolerance in *Mycobacterium abscessus*

**Kaydine Edwards**, Brooklyn College of the City University of New York  
Microbiology: Bacteriology

O –103

Investigating Intracellular Action of Antimicrobial Peptides Using a Tunable Internal Gene Expression System

**Federico Prokopczuk**, California State University, Northridge  
Microbiology: Bacteriology

O –105

Investigating the Relationship Between a Social Trait, Bacteriocin Production, and Virulence in Pathogenic Bacteria

**Valeria Toro**, Indiana University  
Microbiology: Bacteriology

## Oral Session: Microbiology and Physiology

Saturday, November 17

8:00 a.m. – 9:15 a.m.

Rooms 136 – 137

O –106

Colonization of Healthy Adults with Community-Associated Methicillin-Resistant *Staphylococcus aureus*: Hidden Beyond the Nares and Standard Detection

**Bouchra Benghomari**, Suffolk University  
Microbiology: Bacteriology

O –107

Multidrug Resistance-Associated Protein 4 (Mrp4) Play a Crucial Role in the Pathogenesis of Fatty Liver Disease

**Maria De La Rosa**, University of Connecticut  
Physiology: Physiology

O –108

Assessing the Impact of Media on Antibiotic Production

**Maria Ford**, North Carolina Agricultural and Technical State University  
Microbiology: Bacteriology

O –109

Examining the Role of Exopolysaccharide in *Myxococcus xanthus* Surface Social Motility

**Kimberley Kissoon**, McGovern Medical School, University of Texas Health Science Center  
Microbiology: Bacteriology

O –110

Analyzing the Spatial Ecology of *Chelonia mydas* through the Use of Camera Technology

**Kyle Oliveira**, University of North Carolina at Chapel Hill  
Physiology: Physiology

# Student Oral Presenters Listing

## Oral Session 2: Neuroscience

Saturday, November 17

8:00 a.m. – 9:15 a.m.

Room 233

O –111

Assessing Behavioral Preference for Mouse Pup Calls as a Function of Maternal Experience and Oxytocin Signaling

**Katherine Furman**, New York University

Neuroscience: Neurobiology

O –112

The Role of Innate Immune Cells Within the Spinal Subarachnoid Space in the Development of Chronic Neuropathic Pain

**Taylor Phillips-Jones**, Howard University

Neuroscience: Neurobiology

O –113

ALS-Related NEK1 Haploinsufficiency Disrupts Nucleocytoplasmic Transport in iPSC –Derived Motor Neurons

**Liana Tellez**, Northwestern University

Neuroscience: Neurobiology

O –114

The Role of ApoE Genetic Polymorphisms on Outcomes in a Mouse Model of Repeated Mild Traumatic Brain Injury

**Christina Washington**, Rutgers University

Neuroscience: Neurobiology

O –115

A Framework to Model the Consequences of Early Life Environmental Exposures and Genetic Risk Underlying Complex Features of Mental and Behavioral Disorders in Mice

**Mingxiao Yang**, Baylor College of Medicine

Neuroscience: Neurobiology

## Oral Session 2: Neuroscience

Saturday, November 17

8:00 a.m. – 9:15 a.m.

Room 235

O –116

Single-Arm Torque Perception in Individuals with Chronic Hemiparetic Stroke

**Angelica Alberto**, California State University, Northridge

Neuroscience: Neurobiology

O –117

Does Value-Based Decision –Making Require Emotional or Cognitive Intelligence? A Neuropsychological Approach

**Yerika Germosen**, University of Iowa

Neuroscience: Neurobiology

O –118

Optical Recording of Neuronal Activity in a Parkinsonian Mouse Model of Deep Brain Stimulation

**Isabelle Gonzalez Montalvo**, University of Puerto Rico, San Juan

Neuroscience: Neurobiology

O –119

Neural Correlate of Mating Drive Examined in *Drosophila Melanogaster*

**Kenny Igarza**, Columbia University

Neuroscience: Neurobiology

O –120

Identifying Memory Retrieval Strategies Following a Mild Traumatic Brain Injury Using the CVLT –II

**Corinne Meinhausen**, University of Arizona

Neuroscience: Neurobiology

*“ABRCMS has been a life changing experience for me and for my students and colleagues. As a white male scientist, I spent most of my career having limited interactions with colleagues and students from underrepresented grounds. Attending ABRCMS has given me the opportunity to meet, interact, network, and only discuss issues of equity and inclusion that were unavailable at other professional meetings.”*

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 <p><b>IUPUI GRADUATE OFFICE</b> <small>THE UNIVERSITY GRADUATE SCHOOL</small></p> <p>Indiana University Purdue University Indianapolis - IUPUI Graduate School Booth# 801</p>	 <p><b>Kansas City University</b> <small>OF MEDICINE AND BIOSCIENCES™</small></p> <p>Kansas City University of Medicine and Biosciences Booth# 621</p>	 <p><b>MARIAN UNIVERSITY</b> <small>Indianapolis</small> <small>College of Osteopathic Medicine</small></p> <p>Marian University – College of Osteopathic Medicine &amp; Biomedical Sciences Booth# 503</p>	 <p><b>MCW</b> GRADUATE SCHOOL</p> <p>Medical College of Wisconsin (MCW) Graduate School Booth# 401</p>
 <p><b>NOVARTIS</b></p> <p>Novartis Institutes for BioMedical Research Booth# 700</p>	 <p><b>PennState</b> College of Medicine</p> <p>Penn State College of Medicine Booth# 514</p>	 <p>University of Missouri</p> <p>University of Missouri Booth# 924</p>	 <p><b>USF<sup>®</sup></b> <b>HEALTH</b> <small>MEDICAL SCIENCES Ph.D. MORRIS COLLEGE OF MEDICINE</small></p> <p>University of South Florida Booth# 712</p>
 <p><b>WISCONSIN</b> <small>UNIVERSITY OF WISCONSIN-MADISON</small></p> <p>University of Wisconsin-Madison Booth# 301</p>	 <p><b>VAN ANDEL INSTITUTE</b> GRADUATE SCHOOL™</p> <p>Van Andel Institute Graduate School Booth# 510</p>		

## Drop off completed form at the Exhibit Hall Theater by 10:00 a.m., Saturday, November 17.

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- After the grid is complete, enter your contact information and submit your card at the Exhibit Hall Theater.
- Drop off completed card by 10:00 a.m. on Saturday, November 17 to be eligible for the drawing.
- Winners will be posted on **Saturday, November 17 at 11:00 a.m.** at the **Exhibit Hall Theater.**
- You do not need to be present to win.

### Your Contact Information

Name \_\_\_\_\_

University \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

Registration Type (Circle one)

Student

Non Student

Exhibitor

### Exhibit Hours

**Thursday, November 15**

1:45 p.m. – 5:30 p.m.

**Friday, November 16**

10:15 a.m. – 12:00 p.m.

3:00 p.m. – 6:00 p.m.

**Saturday, November 17**

9:15 a.m. – 12:00 p.m.



(as of October 24, 2018)

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Alabama College of Osteopathic Medicine	633	Boston University Biological and Environmental Sciences	1152
Albert Einstein College of Medicine	520, 522	Boston University Graduate Medical Sciences	1032
American Aging Association	1145	Boston University Graduate Program for Neuroscience	1030
American Association for Cancer Research (AACR)	1338	Brandeis University Division of Science	543
American Association for the Advancement of Science	1128	Broad Institute of MIT and Harvard	311
American Association of Anatomists	1242	Brown School at Washington University in St. Louis	531
American Chemical Society	815	Brown University	927
American Heart Association/American Stroke Association	908	Burrell College of Osteopathic Medicine	640
American Physiological Society	1238	Caltech	424
American Society for Biochemistry and Molecular Biology	1003	Caltech Amgen Scholars –WAVE Fellows	422
American Society for Investigative Pathology (ASIP)	1243	Campbell University College of Pharmacy & Health Sciences	426
American Society for Microbiology (ASM)	1101	Carle Illinois College of Medicine	555
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Association of American Medical Colleges (AAMC)	1352	Chicago Medical School/Rosalind Franklin University	1110
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# Exhibitor Listing

Cornell University Graduate School	1210	Harvard University, Division of Medical Sciences & M.D. –Ph.D. Program	713
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Eli Lilly and Company	1200	Indiana University Psychological & Brain Sciences, Program in Neuroscience & Cognitive Sciences	1000
Emory University – Graduate Division of Biological and Biomedical Sciences	721	Indiana University Purdue University Indianapolis – IUPUI Graduate School	801
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Genentech, Inc.	440	IU School of Medicine – Biomedical Science Graduate Programs	701
Georgetown University Biomedical Graduate Education	506	IU School of Medicine – Biomedical Sciences	504
George Washington University	1045	IU School of Public Health –Bloomington	905
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Harvard University Biophysics Program, Chemical Biology Program & Systems Biology Program	812		

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Keck School of Medicine USC	708	National Institute on Alcohol Abuse and Alcoholism (NIAAA)	602
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Lake Erie College of Osteopathic Medicine (LECOM)	951	National Institutes of Health, Office of Intramural Training & Education	601
Lawrence Berkeley National Laboratory	1053	National Research Mentoring Network	1346
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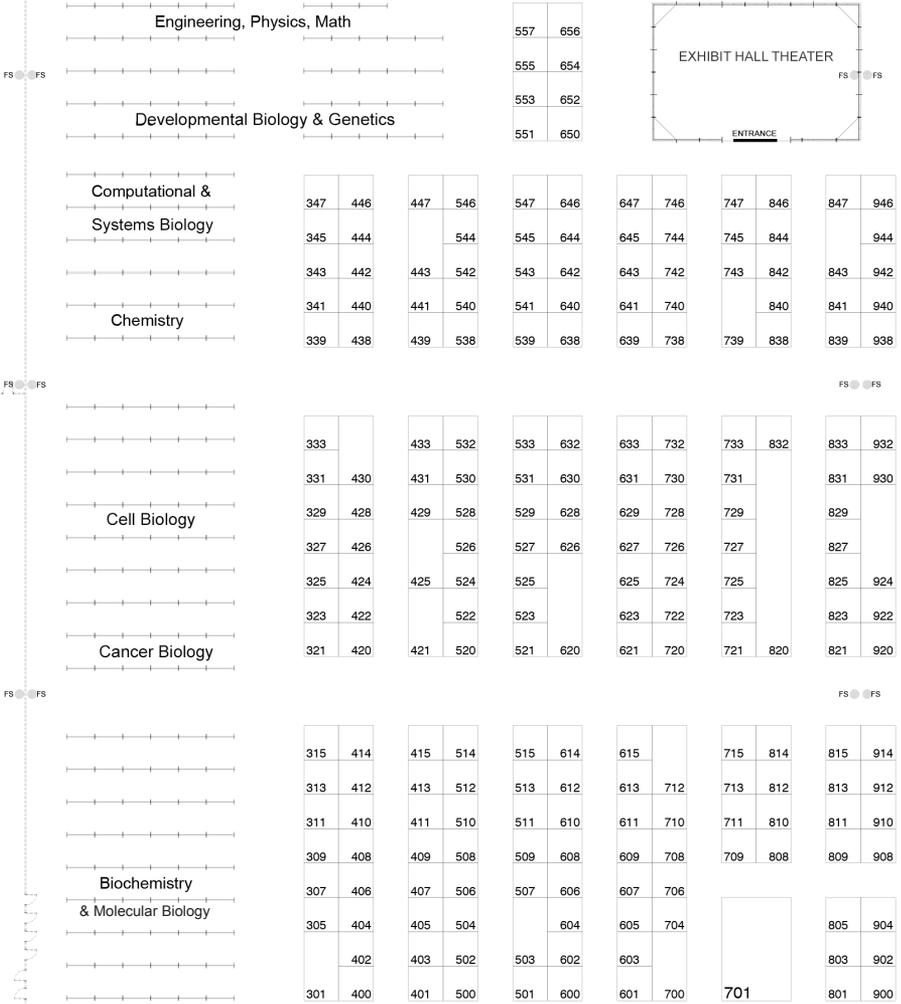
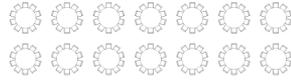
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***“ABRCMS promotion of diversity in STEM can be seen through its attendees and speakers. It was an inspirational setting, especially as a minority student. Seeing speakers who came from similar backgrounds as myself further motivated me to pursue a STEM degree.”***



# Exhibit and Poster Hall Floor Plan

Exhibit Hall  
Mentoring Tables



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of Veterinary Medicine*



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*Moffitt Cancer Center*



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*The City College of New  
York*



**Tracy Johnson, Ph.D.**  
*University of  
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Los Angeles*



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