Final Program

ABRCMS 2012

Annual Biomedical Research Conference for Minority Students

San Jose

CALIFORNIA • NOVEMBER 7–10, 2012

Building the Future of Science by Building Diversity Today

What's New in 2012

Anniversary Recognition

This year marks the 50th anniversary of the National Institutes of Health's National Institute of General Medical Sciences (NIGMS), the organization that funds ABRCMS. It is also the 40th anniversary of the NIGMS Minority Access to Research Careers and Minority Biomedical Research Support programs. As part of its anniversary activities, NIGMS selected student poster presentations at a number of scientific meetings for special recognition, including an invitation to present the work at the Institute's 50th anniversary symposium. The poster presenters selected at the 2011 ABRCMS meeting are Brittany Barfield of San Diego State University, Orrianne Morrison of Spelman College, and Theodor Uzamere of Morehouse College. To learn more, see www.nigms.nih.gov/about/50anniversary.

Incorporating Interdisciplinary Research in Judging

New this Year

All undergraduate and postbaccalaureate students will be judged based on how well they have incorporated interdisciplinary research within their projects. This criterion is in addition to the main judging criteria. A select number of presentations that demonstrate exceptional knowledge of interdisciplinary science research will be recognized at the closing banquet.

"It was terrific. Each of my students them [sic] expressed their enthusiasm and indicated how much they had learned. They really enjoyed the opportunity to present their research, talk with the judges, and to go to all the exhibits and the professional meetings, which ranged from post-bac sessions to tips for interviewing. I really enjoyed having the opportunity to spend time with my students without the daily pressures of other meetings."

Faculty, PD, Admin

ABRCMS Career Development Skills Café

This session is designed to help students gain a broad appreciation for career exploration and the job search process. In a small-group, round-table setting, this session will allow students with specific questions to get input from appropriate experts at the meeting.

The Tech Museum – Fun for All Ages!

20% Discount for ABRCMS Attendees!

ABRCMS has arranged a special discount rate for attendees who visit the Tech Museum on Wednesday, November 7, and Sunday, November 11. This unique museum offers over 100 hands-on interactive exhibits – many supported by Stanford, NASA, and NOAA. Explore alternative energy, genetics, earth science and more. Experience the largest IMAX dome screen in the west – the Hackworth IMAX Dome Theater. ABRCMS discount rates are:

Combo (gallery + educational IMAX film)	$14
Gallery admission	$8
Educational IMAX film	$6
Mythbusters	$15

The museum is open from 10 a.m. to 8:00 p.m. daily. **You must show your ABRCMS badge to receive the museum discounts.**

Princeton Review at ABRCMS

New this Year

Princeton Review representatives are available to share resources and test preparation information on the GRE and MCAT exams. Stop by Booth 228 to get more information.

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San Jose

"My students always get so much out of this meeting. One thing I'm always amazed at is how much their confidence grows; they come away from ABRCMS assured that they CAN do science, research, go to graduate/medical school and on into successful careers. They go back to campus and talk about it to other students and the excitement is infectious. I'm grateful they have an environment such as this to hone their skills and build their confidence."

Faculty, PD, Admin

Program at a Glance

Wednesday, November 7, 2012

12:00 p.m. – 4:00 p.m. Explore San Jose/Visit the Tech Museum *(on Your Own)*

12:00 p.m. – 8:00 p.m. Registration Open

2:00 p.m. – 8:00 p.m. Exhibit Set-up

4:00 p.m. – 5:30 p.m. PRECONFERENCE PROFESSIONAL DEVELOPMENT SESSIONS

6:30 p.m. – 8:15 p.m. Dinner, Conference Overview/Keynote Address

8:15 p.m. – 9:15 p.m. Networking in Your Discipline

Back by Popular Demand!

8:30 p.m. – 10:00 p.m. PREP Program Directors Meeting

9:30 p.m. – 10:30 p.m. Graduate Student and Postdoctoral Scientist Mixer

Thursday, November 8, 2012

7:30 a.m. – 5:00 p.m. Registration Open

7:30 a.m. – 8:15 a.m. Networking Breakfast

8:00 a.m. – 12:00 p.m. Exhibit Set-up

8:30 a.m. – 9:30 a.m. CONFERENCE ORIENTATION

Orientation for Undergraduate Students and Postbaccalaureates

Orientation for Graduate Students and Postdoctoral Scientists

Orientation for Exhibitors

Orientation for Judges (All 12 Disciplines)

9:45 a.m. – 10:45 p.m. CONCURRENT SCIENTIFIC SESSIONS

Session 1

The Dark *E. coli* Rises
(Sponsored by the American Society for Microbiology)
Speaker
Alfredo Torres, Ph.D.
University of Texas Medical Branch, Galveston

Session 2

The Roles of CCR7 in Disease Processes
(Sponsored by the American Society for Cell Biology)
Speaker
Charlotte Vines, Ph.D.
University of Kansas, Kansas City

Session 3

From Fossils to Living Plants: Fueling Our Future with Plant Biomass-Based Fuels
(Sponsored by the American Society of Plant Biologists)
Speakers
Miguel Vega-Sanchez, Ph.D.
University of California, Davis/Joint BioEnergy Institute
Larry P. Walker, Ph.D.
Cornell University, Ithaca, NY

Session 4

Traumatic Brain Injury: Hope through Research
(Sponsored by the National Institute of Neurological Disorders and Stroke, NIH)
Speakers
Grace Griesbach, Ph.D.
University of California, Los Angeles
David Okonkwo, M.D., Ph.D.
University of California, Los Angeles

Session 5

Mechanistic Mining of Glycol-Induced Renal Toxicity in Order to Dig Up New Treatments
(Sponsored by the Society of Toxicology)
Speaker
Kenneth P. McMartin, Ph.D.
Louisiana State University Health Science Center, Shrevesport

Session 6

Addressing American Indian Health Disparities through Science Practice and Collaborative Education
Speaker
Annie Belcourt, Ph.D.
The University of Montana, Missoula, MT

Session 7

Beyond Assessing Knowledge – Card Sorting, Superheroes, and Moving Towards Measuring Biological Expertise among Undergraduates
Speaker
Kimberly D. Tanner, Ph.D.
San Francisco State University

Session 8

Biomapping in the Biomedical and Social Behavioral Sciences
Speaker
Debra Furr-Holden, Ph.D
Johns Hopkins University

11:00 a.m. – 12:15 p.m. CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS

12:30 p.m. – 1:15 p.m. Networking Lunch

1:15 p.m. – 2:15 p.m. PLENARY SCIENTIFIC SESSION

Carbon Materials and Serendipity: the Inside (and Outside) Story
Speaker
Luis Echegoyen, Ph.D.
University of Texas at El Paso

2:15 p.m. – 6:30 p.m. Exhibits Open

2:30 p.m. – 3:45 p.m. POSTER SESSION 1

3:15 p.m. – 4:15 p.m. Meet and Greet Speakers

4:00 p.m. – 5:15 p.m. POSTER SESSION 2

5:30 p.m. – 6:30 p.m. ORAL PRESENTATION SESSIONS 1 – 12
(All Disciplines)

6:45 p.m. – 7:30 p.m. DINNER

7:45 p.m. – 9:30 p.m. Plenary Professional Development Sessions for Faculty, Students, and Postdoctoral Scientists

9:30 p.m. – 10:15 p.m. Networking with Colleagues as Speakers

Friday, November 9, 2012

7:30 a.m. – 5:00 p.m. Registration Open

7:30 a.m. – 8:15 a.m. Networking Breakfast

8:30 a.m. – 9:30 a.m. PLENARY SCIENTIFIC SESSION

Global Health Challenges and Opportunities in the 21st Century: The Role of Science Diplomacy
Speaker
Susan Blumenthal, M.D., M.P.A.
Health and Medicine Program, Center for the Study of Presidency and Congress
Global Health Program, Meridian International Center

9:45 a.m. – 10:45 a.m. Professional Development Sessions

10:45 a.m. – 12:15 p.m. Exhibits Open

11:00 a.m. – 12:15 p.m. POSTER SESSION 3

12:30 p.m. – 1:15 p.m. Networking Lunch

1:15 p.m. – 2:15 p.m. PLENARY SCIENTIFIC SESSION

The Role of Cholesterol in HIV Infection and Pathogenesis
Speaker
James Hildreth, M.D., Ph.D.
University of California, Davis

2:30 p.m. – 3:30 p.m. PLENARY PROFESSIONAL DEVELOPMENT SESSIONS

Undergraduate Student Session

Strategies for Analyzing and Developing Your Network
Speaker
Stacey Blake-Beard, Ph.D.
Simmons College, Boston, MA

Graduate Student and Postdoc Session

Career Development: How We Learn… and How We Don't
Speaker
Robert Duke, Ph.D.
University of Texas at Austin, Austin, TX

Faculty Session

Removing Barriers to STEM Completion: Using Research on STEM Student Experiences to Inform Better Educational Practice
Speaker
Sylvia Hurtado, Ph.D.
University of California, Los Angeles

3:30 p.m. – 6:30 p.m. Exhibits Open

3:45 p.m. – 5:00 p.m. POSTER SESSION 4

4:30 p.m. – 5:30 p.m. "Meet and Greet" Speakers

5:15 p.m. – 6:30 p.m. POSTER SESSION 5

6:45 p.m. – 8:00 p.m. Professional Development Sessions

6:45 p.m. – 8:30 p.m. NETWORKING FOR EXHIBITORS, SPEAKERS, PROGRAM DIRECTORS, AND JUDGES
(This event is NOT open to undergraduates, postbaccalaureates, graduate students, or postdoctoral scientists)

8:45 p.m. – 9:45 p.m. TWD Program Director Meeting
(All programs meet as large group)

9:45 p.m. – 10:30 p.m. BRIDGES Program Director Meeting

9:45 p.m. – 10:30 p.m. MARC/MBRS/RISE/SCORE Program Director Meeting

9:45 p.m. – 10:30 p.m. IDeA Program Director Meeting

Saturday, November 10, 2012

7:30 a.m. – 12:00 p.m. Registration Open

7:30 a.m. – 8:15 a.m. Networking Breakfast

8:30 a.m. – 9:15 a.m. Exhibitor Feedback Session

8:30 a.m. – 9:30 a.m. ORAL PRESENTATION SESSIONS *(All Disciplines)*

9:30 a.m. – 12:30 p.m. Exhibits Open

9:45 a.m. – 11:00 a.m. POSTER SESSION 6

11:15 a.m. – 12:30 p.m. POSTER SESSION 7

12:30 p.m. – 1:30 p.m. Networking Lunch

1:00 p.m. – 2:30 p.m. Exhibit Takedown

1:30 p.m. – 2:30 p.m. Closing Keynote Address

Opportunity in an Era of Change
Speaker
Michael Eric Dyson, Ph.D.
Georgetown University, Washington, DC

2:45 p.m. – 3:45 p.m. PROFESSIONAL DEVELOPMENT SESSIONS

4:00 p.m. – 6:00 p.m. PROFESSIONAL DEVELOPMENT SESSIONS

6:00 p.m. – 7:30 p.m. FREE TIME!

7:30 p.m. – 9:30 p.m. BANQUET, CONFERENCE WRAP-UP, AND AWARDS CEREMONY

9:30 p.m. – 10:00 p.m. Photo Session for ABRCMS Presentation Award Winners

10:00 p.m. – 1:00 a.m. Dance and Social **(All Are Invited)**

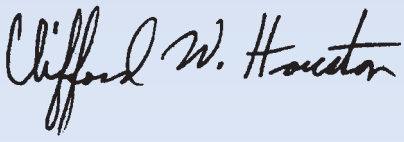
Conference Welcome

Welcome to San Jose, California, home of the 2012 Annual Biomedical Research Conference for Minority Students (ABRCMS). This is a landmark year, as we are celebrating the 40th anniversary of the Minority Access to Research Careers (MARC) and Minority Biomedical Research Support (MBRS) programs and the 50th anniversary of the National Institute of General Medical Sciences as well as their contributions to the advancement of underrepresented minority students in the sciences. This is a banner year for ABRCMS as well, as we have set growth records in the number of abstracts submitted, number of exhibit booths sold, and amount of money raised for sponsorship.

With the rapidly changing demographics in the United States and the simultaneously aging "baby boomer" workers, the need is urgent to prepare more people who are underrepresented in the biomedical sciences to join the future scientific workforce. By providing students with opportunities to meet renowned speakers, industry experts, faculty and administrators; network with peers; learn about recent advances in the biomedical and behavioral sciences; and participate in discussions about some of the most important issues facing minority students to date, ABRCMS is poised to prepare the next generation to address future challenges in the biomedical sciences. Students – this conference provides you with a unique opportunity to have a very rewarding educational experience. Please be prepared to take full advantage of this opportunity.

This year's conference theme, "Building the Future of Science by Building Diversity Today," reflects the importance of investing in our young people, which ultimately is an investment in our future. It would be impossible to conduct ABRCMS at its current level without the assistance of many dedicated volunteers and generous sponsors. I thank the ABRCMS Steering Committee members, ASM staff, program directors, exhibitors, and volunteer judges for all of their hard work before and during the conference. In addition, I thank all of our sponsors, especially the Minority Opportunities in Research Division of the National Institute of General Medical Sciences at the National Institutes of Health, whose contributions have made this conference possible.

Respectfully,



Clifford W. Houston, PhD
Chairperson, ABRCMS

Greetings

Clifton A. Poodry

Judith H. Greenberg

Dear Students, Colleagues and Friends,

On behalf of the National Institutes of Health's National Institute of General Medical Sciences (NIGMS), we welcome you to the 2012 Annual Biomedical Research Conference for Minority Students (ABRCMS). We are very proud to support this meeting, which brings together truly outstanding students and scientists for stimulating discussions of research and exchanges of ideas.

This is a very special year for NIGMS, as it is both the 50th anniversary of the Institute and the 40th anniversary of our Minority Access to Research Careers (MARC) and Minority Biomedical Research Support (MBRS) programs. Over the course of their existence, these programs have provided research and training support to thousands of undergraduate, graduate and postdoctoral students across the nation. Many of you at this meeting are either current or former program participants.

We hope that your involvement in the MARC and MBRS programs has inspired and motivated you to pursue research careers and leadership roles in the scientific enterprise. And more immediately, we hope that your experience at ABRCMS helps prepare you for the next stages of your research careers. We encourage you to make the most of the meeting and take advantage of the many scientific presentations, professional development workshops, networking sessions and wealth of other opportunities it offers.

Sincerely,

Judith H. Greenberg, Ph.D

Clifton A. Poodry, Ph.D

50 YEARS NIGMS

ABRCMS Conference Highlights & Opportunities

The 2012 conference offers a comprehensive program of scientific sessions, professional development workshops, student oral and poster presentations, and exhibits. Full program details are provided later in this program; meanwhile, please take note of the following highlights and opportunities:

Preconference Workshops

On **Wednesday, November 7, from 4:00 to 5:30 p.m.**, several workshops will be held to offer participants the opportunity to enhance their knowledge or gather information about specific topics. See page 9 for more information. Please plan your travel accordingly so that you can attend these informative workshops.

Exhibit Program Recruitment Teams

An important ABRCMS goal is to address the needs of the diverse student population that attends the conference. To this end, ABRCMS strives to continually enhance its exhibits program and recommends a team approach for exhibitors. An ABRCMS recruitment team ideally includes at least four individuals, with each assuming a unique role and responsibility:

(i) **Research faculty members** share information about science courses and programs, research opportunities and mentors, career planning, and information pertinent to the research community.
(ii) **Postdoctoral fellows** share information about research projects, career pathways, professional development opportunities, and general discipline information.
(iii) **Graduate students** share candid information about personal experiences, particularly courses, advisers, mentor selection, campus environment, social life, and networking opportunities.
(iv) **Deans and admissions directors** provide general information about their institutions, deadlines and requirements for summer programs, and the graduate school application process.

Keystone Travel Award for Grads and Postdocs

Keystone Symposia on Molecular Biology will grant two travel awards to eligible graduate students and postdocs attending the 2012 ABRCMS. The award will cover the registration fee for a conference selected in addition to travel and lodging expenses up to $1,000. Award eligibility requires a brief survey during ABRCMS.

Lead Retrieval

ABRCMS now offers the lead retrieval system (LRS) to exhibitors. By allowing the scanning of name badge barcodes, LRS helps exhibitors manage attendee information in a quick, digital way.

Conference Orientation

Your ABRCMS orientation will help you maximize your learning and networking opportunities over the next three and a half days. All orientation sessions will be held on **Thursday, November 8, from 8:30 to 9:30 a.m.** See page 21 for more information.

Networking in Your Discipline

Networking sessions with disciplinary societies will be held on **Wednesday, November 7, from 8:15 to 9:15 p.m.** Led by professional society members, 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 professional society members are strongly encouraged to attend.

Online Abstract Database for Exhibitors

Exhibitors, did you know you can access student abstracts before the conference? The ABRCMS online abstract database offers information about each student's scientific discipline, so you can tailor your recruitment efforts accordingly. The database will be available beginning October 3, 2012. Visit www.abrcms.org for up-to-date information.

Early Admittance into Exhibit Hall for Exhibitors

Exhibitors may use their exhibitor badges to access their booths 30 minutes prior to the opening of the exhibit hall. **Exhibit Hall takedown is from 1:00 p.m. to 4:00 p.m., November 10.**

Onsite Registration and Check In

Express self-registration will be offered at the 2012 ABRCMS. Bring a copy of your registration confirmation letter with you to expedite the registration process.

ABRCMS Career Development Skills Cafe

The Cafe offers a unique opportunity for participants to engage in discussions with leaders in all scientific disciplines. Don't miss this opportunity to seek individual advice on goal setting, identifying careers and becoming successful in the sciences.

Meet and Greet Speakers

Invited ABRCMS speakers will be available to meet informally with students during main exhibition hours on Thursday and Friday. This is a wonderful opportunity to meet one on one with speakers and learn more about their research and pathways to success.

NIGMS Grants Management Open House

NIGMS Grants Management is located at booth 102, near the entrance of the exhibit hall. Stop by to discuss grant-specific issues with any of the NIGMS Grants Management staff.

Information for All Attendees

ABRCMS Booth

Visit the ABRCMS booth, located outside the exhibit hall, for information on the following items and activities:

- General information
- Exhibit hall raffle

Shuttle Service

Shuttle Service will be provided for Attendees at San Jose Garden Hotel and Holiday Inn Airport to/from the Convention Center.

Hours are:

Wednesday, November 7	5:00 p.m. - 12 midnight
Thursday, November 8	5:00 p.m. - 12 midnight
Friday, November 9	No shuttle service
Saturday, November 10	5:00 p.m. - 2 am

Call for Judges

On-site judges for 12 disciplines in the biomedical and behavioral sciences, including mathematics, are needed to evaluate the approximately 1,600 poster and oral presentations at the 2012 ABRCMS. For more information, visit the judges' lounge (Room 114) or attend the judges' orientation (see page 21) on Thursday, November 8, at 8:30 a.m.

Cell Phone Usage

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

Child Policies

Because ABRCMS is an professional meeting, bringing young children to the conference is discouraged. Attendees who bring children to ABRCMS should contact their hotel to coordinate childcare services in their hotel rooms. Note that if children two years old and over attend any portion of ABRCMS (e.g., sessions, exhibits, or meals), they must be paid registrants of the conference, wear a conference badge, and be accompanied by a parent and/or guardian at all times. Please note the following policies regarding children at ABRCMS:

Meals. Anyone entering conference meal areas must be registered and show an ABRCMS name badge at the door. Children under age two may accompany their parents and/or guardians to meals as long as they are seated in a stroller or on the lap of a parent or guardian. There are no exceptions to this policy.

Sessions. The presence of young children at ABRCMS sessions is particularly discouraged because this may distract other participants. Please contact your hotel to coordinate childcare services in your hotel room.

Exhibit hall. For any minor, regardless of registration status, a liability waiver must be completed at the registration desk by a parent or guardian. An ABRCMS staff representative will cosign the waiver and provide the parent or guardian with a copy to show security guards to gain entry into the exhibit hall. The waiver permits access to the exhibit hall only, not to meal areas or meeting rooms. No strollers are allowed in the exhibit hall. For the protection of all attendees, no dangerous or disruptive behavior will be tolerated.

Conference Orientation

The conference orientation is scheduled for Thursday, November 8, from 8:30 – 9:30 a.m. and is required for all attendees; it sets the tone for participants and prepares them to take advantage of the many opportunities available at ABRCMS. Topics will include navigating through a scientific meeting, the importance of networking, and best practices in recruitment.

Dress Code

ABRCMS is a professional conference; therefore, attendees are expected to dress professionally for all conference activities. Student attendees should be especially mindful that they are at the beginning of their careers and first impressions are critical. It is recommended that male students wear button-down shirts with collars. Although ties are appropriate, they are not required. Female students must also dress professionally. Short skirts, half tops, and anything considered "club attire" are not appropriate attire for conferences.

E-mail Center

The e-mail center, located on concourse level, is available for all attendees to receive and send e-mail during ABRCMS. Please limit your sessions to 15 minutes.

E-Mail Center Hours

Wednesday, November 7	12:00 p.m. – 10:00 p.m.
Thursday, November 8	7:30 a.m. – 10:00 p.m.
Friday, November 9	7:30 a.m. – 8:00 p.m.
Saturday, November 10	7:30 a.m. – 6:30 p.m.

Evaluation

A conference evaluation will be e-mailed to all attendees immediately following the conference. We value your feedback, and every completed evaluation helps us improve future conferences.

Exhibits Program

The ABRCMS exhibits program is an integral component of the conference that provides attendees with opportunities to learn

Continued on next page

about the many summer research opportunities, funding sources, internships, professional networks, and graduate programs within the biomedical and behavioral sciences, including STEM. Approximately 280 exhibitors from educational institutions, federal and government agencies, industry-based companies, foundations, and research hospitals will be represented.

Exhibit Set-Up and Break Down

Wednesday, November 7:	2:00 p.m. – 8:00 p.m. (Set-up)
Thursday, November 8:	8:00 a.m. – 12:00 p.m.
Saturday, November 10:	12:00 p.m. – 3:00 p.m. (Break Down)

Dates and Times of Exhibition

Thursday, November 8:	2:15 p.m. – 6:30 p.m.
Friday, November 9:	10:45 a.m. – 12:15 p.m. and 3:30 p.m. – 6:30 p.m.
Saturday, November 10:	9:30 a.m. – 12:30 p.m.

First Aid

First aid services will be available at the San Jose Convention Center.

First Aid Services Hours

Wednesday, November 7	12:00 p.m. - 11:00 p.m.
Thursday, November 8	7:30 a.m. - 11:00 p.m.
Friday, November 9	7:30 a.m. - 7:45 p.m.
Saturday, November 10	7:30 a.m. - 10:00 p.m.

Judges' Orientation

All individuals volunteering to judge student presentations **must** attend this session. Expectations of judges and the ABRCMS judging process will be discussed, and judging packets will be distributed. Judges who do not attend the orientation should pick up their packet at the Judges Lounge (Room 114). The orientation is Thursday, November 8, from 8:30 to 9:30 a.m.

Name Badge Replacement Fee

Attendees must wear their ABRCMS name badge to all conference functions. Name badges permit access to all sessions, the e-mail center, exhibits program, and conference meals. No individual without an official ABRCMS name badge will be permitted in these areas. **Please note: there is a $100 fee for replacement name badges.**

Networking Meals

ABRCMS offers many opportunities for networking. Join colleagues with similar interests to share ideas and develop research collaborations. All ABRCMS meals are held in Hall 3, and the conference registration fee covers all meals except Friday dinner. Name badges are required to enter the meals area.

Photo Policy

In order to protect data shared during presentations, no photos may be taken of posters or scientific session slides at ABRCMS.

Safety Tips

Meeting participation, with its related travel, is a major component of scientific work. New cities, people, and environments move us away from our normal, routine lives and may cause us to let down our guard. It is important for ABRCMS participants to remember that no place is exempt from crime. For safety tips to help you travel safely, please inquire at the Convention Center information desk.

Speaker Ready Room

The speaker ready room is located in the San Jose Convention Center, Room 214. Technical support staff will be available in the room to assist speakers and student oral presenters with their presentations. **All speakers should check in with the technical support staff at least one hour prior to giving their presentations.**

Study Hall Locations

ABRCMS has arranged with a number of the hotels to provide quiet areas as Study Hall during the conference. Locations are:

Fairmont Hotel- California Room
Hilton Hotel- University Room & Plaza Room
Marriott Hotel-Blossom 1
Hyatt Place- Meeting Place 1 & 2
Sainte Claire- Santa Cruz Room

Alphabet Soup? A Glossary for ABRCMS Attendees

Students, we realize that the many abbreviations, acronyms, and initialisms used as shorthand for scientific organizations can be a source of confusion when you are just beginning your research career. To help keep everyone on the same page, here is a glossary of common terms that you will encounter in this program — and see throughout your career.

AAAS	–	American Association for the Advancement of Science
FASEB	–	Federation of American Societies for Experimental Biology
HHMI	–	Howard Hughes Medical Institute
MARC	–	Minority Access to Research Careers
MBRS	–	Minority Biomedical Research Support
NIH	–	National Institutes of Health
NIGMS	–	National Institute of General Medical Sciences
RISE	–	Research Initiative for Scientific Enhancement
TWD	–	Training and Workforce Development
U-STAR	–	Undergraduate Student Training in Academic Research

Information for Student Presenters

Student Presentations and Awards

Poster presentations are scheduled throughout the conference during exhibit hours. A small number of abstracts have been chosen for oral presentations. The student oral presentations will be held on Thursday, November 8, from 5:30 p.m. to 6:30 p.m., and Saturday, November 10, from 8:30 a.m. to 9:30 a.m. Undergraduate and postbaccalaureate presentations will be judged during the conference, and those receiving the highest scores will be given awards at the closing banquet on Saturday, November 10.

Oral Presentations

Student oral presentations have been divided into two sessions. One will be held on Thursday, November 8, from 5:30 to 6:30 p.m., and the other on Saturday, November 10, from 8:30 to 9:30 a.m. Presentation numbers and room assignments are listed in program. **Students who arrive late or who do not turn in their presentations by the deadline will not be permitted to present. There are no exceptions to this policy.**

Poster Presentations

All undergraduate, postbaccalaureate, and graduate student poster presentations will take place in seven sessions scheduled Thursday through Saturday, November 8 to 10, in the Exhibit Hall 1 & 2. Students are expected to be present at their respective poster boards and to present their research during the entire duration of their assigned time. Students who do not show up for their presentations may not be permitted to present in the future. **Faculty mentors should not coach students during their presentations.** Students whose abstracts were not accepted may not put up posters or present their findings at any time during the conference.

Please refer to the poster set-up and take-down times below for each respective poster session. Posters not removed promptly may be discarded; posters set up late may be ineligible for the poster competition.

"ABRCMS was the best conference that I have ever attended. I was impressed that from the minute I stepped off the plane, I saw signs and banners everywhere that said "Welcome ABRCMS." The professional development was indispensable, the networking opportunities were invaluable, and the speakers were truly inspiring. I hope to have the opportunity to attend again next year!"

Graduate Student

Poster & Oral Presentation Schedule

Session 1 (A)	Thursday, November 8, 2:30 p.m. – 3:45 p.m. Set-up: 2:15 p.m. – 2:30 p.m. Take-down: 5:15 p.m. – 5:30 p.m.
Session 2 (B)	Thursday, November 8, 4:00 p.m. – 5:15 p.m. Set-up: 2:15 p.m. – 2:30 p.m. Take-down : 5:15 p.m. – 5:30 p.m.
Session 3 (C)	Friday, November 9, 11:00 a.m. – 12:15 p.m. Set-up: 10:45 a.m. – 11:00 a.m. Take-down : 12:15 p.m. – 12:30 p.m.
Session 4 (D)	Friday, November 9, 3:45 p.m. – 5:00 p.m. Set-up: 3:30 p.m. – 3:45 p.m. Take-down: 6:30 p.m. – 6:45 p.m.
Session 5 (E)	Friday, November 9, 5:15 p.m. – 6:30 p.m. Set-up: 3:30 p.m. – 3:45 p.m. Take-down: 6:30 p.m. – 6:45 p.m.
Session 6 (F)	Saturday, November 10, 9:45 a.m. – 11:00 a.m. Set-up: 9:30 a.m. – 9:45 a.m. Take-down: 12:30 p.m. – 12:45 p.m.
Session 7 (G)	Saturday, November 10, 11:15 a.m. – 12:30 p.m. Set-up: 9:30 a.m. – 9:45 a.m. Take-down: 12:30 p.m. – 12:45 p.m.
Oral Sessions 1-12	Thursday, November 8, 5:30 p.m. – 6:30 p.m.
Oral Sessions 13-24	Saturday, November 10, 8:30 a.m. – 9:30 a.m.

Raffle Drawings

At the end of each of the seven poster session, a raffle is held outside the main exhibit hall at the ABRCMS booth. This is an effort to promote student participation in the exhibits program; as such, exhibitors may give raffle tickets to students who show genuine interest in the programs they have to offer. Winners receive exhibitor-donated, institutional logo items such as hats, shirts, bags, mugs, or portfolios. Students may enter to win prizes on each day of exhibits.

Student Certificates

Each student who participates in a poster or oral presentation will receive a certificate of participation. Certificates will be mailed after the conference to the address that the student listed on the abstract submission site.

Continued on next page

Information for Judges

Judges' Orientation

(Mandatory for All Student Presentation Judges)
An orientation session is scheduled for all judges on Thursday, November 8, from 8:30 a.m. to 9:30 a.m. Anyone volunteering to judge student presentations **must** attend this session. Orientations will be held by scientific disciplines below; please attend the session for your assigned discipline.

Expectations of judges and the ABRCMS judging process will be discussed, and judging packets will be distributed. If you have questions about the session, please come to the judges' lounge (Room 114 (Convention Center).

Biochemistry
Location: Room 230 A (Convention Center)

Cancer Biology
Location: Room 230 B (Convention Center)

Cell Biology
Location: Room 230 C (Convention Center)

Chemistry
Location: Room 211 A/C (Convention Center)

Developmental Biology and Genetics
Location: Room 211 D/B (Convention Center)

Engineering, Physics and Mathematics
Location: Room Willow Glen III (Marriott)

Immunology
Location: Room Willow Glen I (Marriott)

Microbiology
Location: Room 212 D/B (Convention Center)

Molecular and Computational Biology
Location: Room 113 (Convention Center)

Neuroscience
Location: Room Willow Glen II (Marriott)

Physiology
Location: Room 112 (Convention Center)

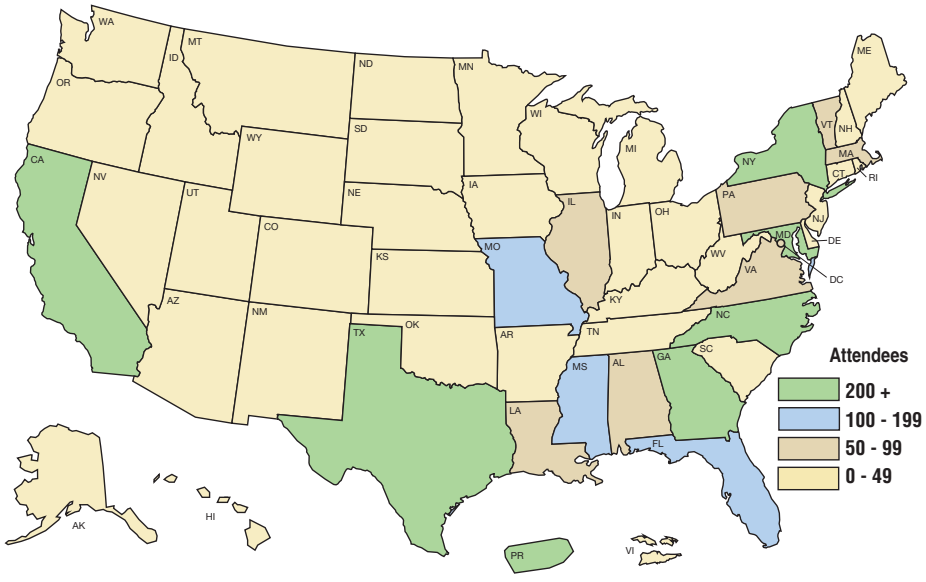
Social and Behavioral Sciences and Public Health
Location: Room 212 A/C (Convention Center)

Information for NIGMS/TWD Program Directors

PREP Program Director Meeting: This meeting is scheduled for Wednesday, November 7, from 8:30 p.m. to 10:00 p.m. at the Marriott in Room Willow Glen III.

The NIGMS/TWD Program Directors meeting will be held on Friday, November 9 at 8:45 p.m. at the Fairmont Hotel (Club Regents Room). The group will first meet as a large group and break out into program areas in Club Regents Room (Fairmont), Gold Room (Fairmont) and Valley Room (Fairmont).

ABRCMS Attendees by Location



Networking Tables By Discipline

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 your respective disciplines during lunch and dinner on Thursday , lunch on Friday and lunch on Saturday. Disciplines tables are identified by napkin colors. See table below.

Chemistry Biochemistry (Blue Napkins)	**Microbiology & Immunology (Red Napkins)**
Cell Biology Molecular Biology & Computational Biology (Purple Napkins)	**Cancer Biology (Cream Napkins)**
Neuroscience Physiology (Pink Napkins)	**Social & Behavioral Science Public Health (Seafoam Napkins)**
Developmental Biology (Black Napkins)	**Engineering, Physics & Mathematics (Yellow Napkins)**

"Actually, I was overwhelmed by the numerous and unexpected ways the conference changed my perspective. It developed my sense of community and science profoundly on personal and academic levels. I did not expect the level of intensity, professionalism, and content to be so exceptional. Thank you everyone who made this possible. You moved my life."

Postbaccaulareate Student

Professional Development Sessions

To serve the needs of ABRCMS attendees, in addition to the keynote and scientific sessions offered at the conference, a series of professional development sessions and activities have been organized specifically for you. See program for details.

Undergraduate and Postbaccalaureate Students

Wednesday, November 7

4:00 p.m. – 5:30 p.m.
- Graduate School Application Process
- Summer Research Programs - Essential Components of the Graduate School Application Process

8:15 p.m. – 9:15 p.m.
- Networking in Your Disciplines

Thursday, November 8

8:30 a.m. – 9:30 a.m.
- Undergraduate and Postbaccalaureate Student Orientation

11:00 a.m. – 12:15 p.m.
- Picking the Perfect Ph.D. Program for You
- M.D.-Ph.D. — Is It Right for Me?
- Graduate Opportunities in Public and Global Health Research
- Presentation Techniques: How to Make Effective Poster and Oral Presentations

2:45 p.m. – 4:30 p.m.
- Career Coaching Corner / Meet and Greet Speakers

7:45 p.m. – 9:30 p.m.
- Gateway to the Future — Career Paths in the Biomedical Sciences, STEM Disciplines, and Behavioral Sciences

> *"My students had an extremely positive experience. [The] possibility to learn about so many available programs and learning about so many different pathways they can take after graduation was most valuable."*
>
> Faculty, PD, Admin

Friday, November 9

8:30 a.m. – 9:30 a.m.
- Global Health Challenges and Opportunities In the 21st Century: The Role of Science Diplomacy

9:45 a.m. – 10:45 a.m.
- Mentoring: an Enabling Relationship that Fosters Professional Growth and Development

2:30 p.m. – 3:30 p.m.
- Strategies for Analyzing and Developing Your Network

3:45 p.m. – 5:30 p.m.
- Career Coaching Corner / Meet and Greet Speakers

6:45 p.m. – 7:45 p.m.
- Writing a Successful Personal Statement for Graduate School Admission and/or Summer Programs - Getting into Highly Competitive Graduate Schools and Summer Programs
- Strategies for Taking Standardized Admissions Tests: Preparing for the GRE and MCAT
- Graduate School Application Process (REPEAT)
- Tips on Applying to an NIH Postbaccalaureate Program
- Strategies for Taking Standardized Admissions Tests: Preparing for the GRE and MCAT Exams

Saturday, November 10

7:30 a.m. – 8:15
- Networking Breakfast

2:45 p.m. – 3:45 p.m.
- Graduate School Experience: My Personal Story
- Leveraging Diversity to Increase Team Efficiency and Creativity

4:00 p.m. – 6:00 p.m.
- Speed App-ing: Strategies for Navigating the Graduate School Application Process

10:00 p.m. – 1:00 a.m.
- Dance and Social (All Are Invited)

Graduate Students and Postdoctoral Scientists

Wednesday, November 7

4:00 p.m. – 5:30 p.m.
- Grant Writing 101 for Graduate Students and Postdocs

8:15 p.m. – 9:15 p.m.
- Networking in Your Disciplines

9:30 p.m. – 10:30 p.m.
- Graduate Student and Postdoctoral Scientists Mixer

Thursday, November 8

8:30 a.m. – 9:30 a.m.
- Orientation for Graduate Students and Postdoctoral Scientists

11:00 a.m. – 12:15 p.m.
- Making the Most of Mentoring Relationships
- Graduate Opportunities in Public and Global Health Research
- Presentation Techniques: How to Make Effective Poster and Oral Presentations
- Getting Published: Advice for Graduate Students and Postdoctoral Scientists

3:15 p.m. – 4:15 p.m.
- Career Coaching Corner / Meet and Greet Speakers

7:45 p.m. – 9:30 p.m.
- Gateway to the Future — Career Paths in the Biomedical Sciences, STEM Disciplines, and Behavioral Sciences
- Leadership and Management Skills for Graduate Students and Postdoctoral Scientists

Friday, November 9

9:45 a.m. – 10:45 a.m.
- Mentoring: an Enabling Relationship that Fosters Professional Growth and Development
- Navigating Your Way into a Postdoctoral Position and Opportunities for a Successful Postdoctoral Experience
- GCAT, Synthetic Biology, and a Summer Faculty Workshop Opportunity
- Collaborating for Success: Interdisciplinary Partnerships for Addressing Biological Complexity

2:30 p.m. – 3:30 p.m.
- How We Learn… and How We Don't
- Removing Barriers to STEM Completion: Using Research on STEM Student Experiences to Inform Better Educational Practices

3:45 p.m. – 3:30 p.m.
- Career Coaching Corner / Meet and Greet Speakers

Saturday, November 10

7:30 a.m. – 8:15 a.m.
- Networking Breakfast

2:45 p.m. – 3:45 p.m.
- Career Decisions: How to Find a Science Career that Fits YOU
- Intercultural Development

4:00 p.m. – 6:00 p.m.
- Achieving Your Goals: Goal-Setting Strategies for Scientific and Career Success

Faculty, Program Directors and Exhibitors

Wednesday, November 7

8:15 p.m. – 9:15 p.m.
- Networking in Your Disciplines

9:30 p.m. – 10:00 p.m.
- PREP Program Director Meeting

Thursday, November 8

8:30 a.m. – 9:30 a.m.
- Orientation for Exhibitors
- Orientation for Judges

7:45 p.m. – 9:30 p.m.
- What Do You Want Your Students to Know? Designing Effective Courses through Backwards Design
- NIH Grants Management Workshop

9:30 p.m. – 10:15 p.m.
- Networking with Colleagues and Speakers

Friday, November 9

9:45 a.m. – 10:45 a.m.
- Vision and Change Leadership Fellows: Transforming Undergraduate Life Sciences
- GCAT, Synthetic Biology, and a Summer Faculty Workshop Opportunity
- Collaborating for Success: Interdisciplinary Partnerships for Addressing Biological Complexity

2:30 p.m. – 3:30 p.m.
- How We Learn… and How We Don't
- Removing Barriers to STEM Completion: Using Research on STEM Student Experiences to Inform Better Educational Practices

6:45 p.m. – 8:45 p.m.
- Networking for Exhibitors, Speakers, Program Directors, and Judges at Fairmont Hotel

8:45 p.m. – 10:30 p.m.
- NIGMS/TWD Program Director meeting (including IDEA Program Directors) at Fairmont Hotel

Saturday, November 10

2:45 p.m. – 3:45 p.m.
- Leveraging Diversity to Increase Team Efficiency and Creativity

10:00 p.m. – 1:00 a.m.
- Dance and Social (All Are Invited)

Graduate Student and Postdoctoral Scientist Opportunities

PROGRAM INCLUDES

- Professional Development Opportunities for Graduate Students and Postdoctoral Scientists
- Doctoral-Level Graduate Student Poster Presentations
- Postdoctoral Fellowship Opportunities
- Networking Reception
- Mentoring
- Career Counseling

Graduate Student Presentations

Graduate and undergraduate poster sessions will be held concurrently in the main exhibit hall; however, graduate presentations will be held in a separate area of the hall and are not judged or eligible for awards. Representatives and faculty from postdoctoral fellowships and other educational programs are encouraged to visit the posters and take advantage of this opportunity for graduate students, postdoctoral scientists, and faculty to network.

Since 2001, ABRCMS has doubled its number of graduate and postdoctoral scientist attendees. This has prompted the conference to continue to offer opportunities for:

1. Representatives from postdoctoral fellowship programs to recruit graduate students and postdoctoral scientists.
2. Graduate students to present their research and network with faculty, postdoctoral scientists, and colleagues.

Number of Graduate and Postdoc Attendees

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
Grad/Postdoc	161	251	311	316	371	400	235	294	293	295	309	286

*As of October 31, 2012

Keystone Travel Award for Graduate Students & Postdocs

Keystone Symposia on Molecular and Cellular Biology will grant two travel awards to eligible graduate students and postdocs attending the 2012 ABRCMS. The award will cover the registration fee for a keystone conference selected in addition to travel and lodging expenses up to $1,000. Award eligibility requires a brief survey during ABRCMS.

> *As a postdoc recruiter, I found the graduate student poster presentations to be very helpful. It allowed me to speak with the students more directly about their research and to evaluate their scientific abilities.*
>
> Postdoctoral Recruiter

> *We are able to get a feel for what our peers are working on, as well as what types of postdoctoral opportunities are currently being offered. In many cases, we were also able to talk face to face with potential postdoc employers.*
>
> 2010 Graduate Student

Conference Program

Keynote, Plenary and Concurrent Scientific Speakers

Wednesday, November 7, 7:45 – 8:00 p.m.

ANNIVERSARY REMARKS

Anniversary Remarks

Cliff Poodry, Ph.D.
National Institute of General Medical Sciences

Wednesday, November 7, 8:00 – 8:15 p.m.

OPENING KEYNOTE ADDRESS

Celebrating the Past, Preparing for the Future

Carlos G. Gutierrez, Ph.D.
California State University, Los Angeles

Thursday, November 8, 1:15 – 2:15 p.m.

PLENARY SCIENTIFIC SESSION

Carbon Materials and Serendipity: the Inside (and Outside) Story

Luis Echegoyen, Ph.D.
University of Texas at El Paso

Thursday, November 8, 9:45 – 10:45 a.m.

CONCURRENT SCIENTIFIC SESSIONS

Concurrent Scientific Session 1
The Dark *E. coli* Rises
(Sponsored by the American Society for Microbiology)
Alfredo Torres, Ph.D.
University of Texas Medical Branch, Galveston

Concurrent Scientific Session 2
The Roles of CCR7 in Disease Processes
(Sponsored by the American Society for Cell Biology)
Charlotte Vines, Ph.D.
University of Kansas, Lawrence

Concurrent Scientific Session 3
From Fossils to Living Plants: Fueling Our Future with Plant Biomass-Based Fuels
(Sponsored by the American Society of Plant Biologists)
Miguel Vega-Sanchez, Ph.D.
University of California, Davis

Larry P. Walker, Ph.D.
Cornell University, Ithaca, NY

Concurrent Scientific Session 4
Traumatic Brain Injury: Hope through Research
(Sponsored by the National Institute of Neurogical Disorders and Stroke, NIH)
Grace Griesbach, Ph.D.
University of California, Los Angeles

Concurrent Scientific Session 4 (continued)
David Okonkwo, M.D., Ph.D.
University of Pittsburgh, Pittsburgh, PA

Concurrent Scientific Session 5
Mechanistic Mining of Glycol-Induced Renal Toxicity in Order to Dig Up New Treatments
(Sponsored by the Society of Toxicology)
Kenneth P. McMartin, Ph.D.
Louisiana State University Health Sciences Center, Shrevesport

Concurrent Scientific Session 6
Addressing American Indian Health Disparities through Collaborative Science Practice and Education
Annie Belcourt
The Montana State University

Concurrent Scientific Session 7
Beyond Assessing Knowledge – Card Sorting, Superheroes, and Moving Towards Measuring Biological Expertise among Undergraduates
Kimberly D. Tanner, Ph.D.
San Francisco State University

Concurrent Scientific Session 8
Biomapping in the Biomedical and Social Behavioral Sciences
C. Debra Furr- Holden, Ph.D.
Johns Hopkins University
Bloomberg School of Public Health

Friday, November 9, 8:30 – 9:30a.m.

PLENARY SCIENTIFIC SESSION

Global Health Challenges and Opportunities in the 21st Century: The Role of Science Diplomacy

Susan Blumenthal, M.D., M.P.A.
Center for the Study of Presidency and Congress, Washington, DC
Meridian International Center, Washington, DC

Friday, November 9, 1:15 – 2:15 p.m.

PLENARY SCIENTIFIC SESSION

The Role of Cholesterol in HIV Infection and Pathogenesis

(Sponsored by the American Society for Microbiology)

James Hildreth, M.D., Ph.D.
University of California, Davis

Friday, November 9, 2:30 – 3:30 p.m.

PLENARY PROFESSIONAL DEVELOPMENT SESSION– UNDERGRADUATE AND POSTBACCALAUREATE STUDENTS

Strategies for Analyzing and Developing Your Network

Stacey Blake-Beard, Ph.D.
Simmons College, Boston, MA

PLENARY PROFESSIONAL DEVELOPMENT SESSION– GRADUATE STUDENTS AND POSTDOCS

How We Learn… and How We Don't

Robert Duke, Ph.D.
University of Texas at Austin

PLENARY PROFESSIONAL DEVELOPMENT SESSION– FACULTY

Removing Barriers to STEM Completion: Using Research on STEM Student Experiences to Inform Better Educational Practice

Sylvia Hurtado, Ph.D.
University of California, Los Angeles

Saturday, November 10, 1:30 – 2:30 p.m.

CLOSING KEYNOTE ADDRESS

Opportunity in an Era of Change

Michael Eric Dyson, Ph.D.
Georgetown University, Washington, DC

Wednesday, November 7, 2012

12:00 p.m. – 8:00 p.m. **Registration Open**

12:00 p.m. – 4:00 p.m. **Visit the Tech Museum**

2:00 p.m. – 8:00 p.m. **Exhibit Set-up**

4:00 p.m. – 5:30 p.m. **PRECONFERENCE PROFESSIONAL DEVELOPMENT SESSIONS** *(Six Session Options)*

Session 1 Location: Room 210 B/F (Convention Center)

Graduate School Application Process

(Recommended for undergraduate and master's-level students)

This three-part session provides potential graduate students with the information necessary to prepare and plan for the graduate school admissions process and to subsequently create and submit a competitive application packet. Part one briefly covers the undergraduate years – coursework, internships, and standardized tests. The process of selecting schools for application and subsequent matriculation will be discussed as well as the application process, with a focus on the admissions file. There will be a discussion of the application form and supporting documentation, with a special focus on the personal statement. Also covered are the interview process and how to succeed in graduate school. The personal statement introduces the applicant to the school and its admissions committee; therefore, part two provides tips and strategies on writing a powerful personal statement for applications for graduate school and/or summer internships. Lastly, part three offers strategies for financing graduate education.

Speaker

C. Gita Bosch, Ph.D., *G. Bosch & Associates, Yorktown Heights, NY*

Session 2 Location: Room 210 C/G (Convention Center)

How to Meet, Greet, and Make Conversation

(Recommended for all attendees)

The initial conversations we have with others can often predict our success or failure. First impressions are hard to dislodge when they are negative. By learning how not to get tongue-tied with higher-ups, we can forge relationships and build bridges to new opportunities. Small talk is, in fact, a very big skill. Most persons in authority decide whether we have a place in their organizations based on that first conversation. This session offers strategies to help you effectively (i) meet, greet, and make conversation with decision makers; (ii) prepare for social occasions in terms of what to wear relative to other attendees and your personal goals; (iii) master the etiquette of introducing yourself and others; (iv) master the art of making conversation with strangers; (v) deal with difficult conversational situations, e.g., pronouncing difficult names, forgetting names, and breaking into and away from groups; and (vi) share your accomplishments without bragging.

Speaker

Mary M. Mitchell, *The Mitchell Organization, Seattle, WA*

Session 3 Location: Room 212 D/B (Convention Center)

Summer Research Programs – Essential Components of the Graduate School Application Process

(Recommended for undergraduates and community college students)

Summer programs are essential for enhancing your graduate school admissions file. This session discusses the importance of summer internships and how to (i) navigate the ABRCMS exhibit hall to identify the best summer program for you, (ii) select and apply to summer programs, (iii) establish a good relationship with your faculty mentor, and (iv) have a successful summer research experience. Don't miss this opportunity to take home strategies for getting accepted into the best summer programs!

Speakers

John Augusto, Ph.D., *University of Kansas, Lawrence, KS*

Roberta Pokphanh, Ph.D., *University of Kansas, Lawrence, KS*

Session 4 Location: Room 212 A/C (Convention Center)

National Science Foundation Graduate Research Fellowship Program

(Recommended for undergraduate seniors and first year graduate students)

The NSF Graduate Research Fellowship Program (GRFP) helps ensure the vitality of the human resource base of science and engineering in the United States and reinforces its diversity. The program recognizes and supports outstanding graduate students in NSF-supported science, technology, engineering, and mathematics disciplines who are pursuing research-based master's and doctoral degrees at accredited United States institutions. Fellows share in the prestige and opportunities that become available when they are selected. Fellows benefit from a three-year annual stipend of $30,000 along with a $12,000 cost of education allowance for tuition

Wednesday, November 7, 2012

and fees, opportunities for international research and professional development, and the freedom to conduct their own research at any accredited U.S. institution of graduate education they choose. Eligibility is limited to undergraduate seniors and early stage graduate students. This session will provide valuable information about the fellowship program and provide further insights into the application process. Undergraduates and early stage graduate students are encouraged to attend.

Speaker

Tim Turner, Ph.D. *American Society for Engineering Education, Washington, DC*

Session 5 Location: Room 210 A/E (Convention Center)

Grant Writing 101

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

This session provides an overview of best practices for preparing, writing, and submitting NIH, NSF, and foundation grant proposals. Although many of the basic strategies for preparing proposals apply to all funding sources, each federal agency has its own proposal style, submission process and evaluation system. This session will offer tips for organizing proposals and avoiding pitfalls and provide information about the lifecycle of NIH, NSF, and foundation proposals and factors influencing funding decisions.

Speaker

Victoria McGovern, Ph.D., *Burroughs Wellcome Fund, Research Triangle Park, NC*

4:00 p.m. – 5:30 p.m. **Session 6** Location: Room 210 D/H (Convention Center)

Research Faculty are Encouraged to Attend.

ASM-NSF Leaders Inspiring Networks and Knowledge (LINK) Program Orientation

The ASM-NSF LINK program supports scientists to guide students and educators at two nationally renowned conferences – ABRCMS and the Annual ASM Conference for Undergraduate Educators (ASMCUE) – in developing skills for successfully participating in emerging and interdisciplinary sciences. The complex environmental and social problems that are facing us nationally and globally will require collaboration from scientists with a diversity of backgrounds, disciplinary knowledge, and experimental approaches. The NSF-sponsored LINK program aspires to facilitate meaningful interactions, including mentoring relationships and collaborations, between established scientific investigators – many of whom are NSF investigators or prospective investigators – with students, educators and junior investigators. Through structured mentoring, the LINK program seeks to develop participant skills in communications, teaching and mentoring, ethics, career planning, management and leadership, and interpersonal relationships. This session will orient prospective mentors about ABRCMS and the LINK initiative, and discuss the developing national need for a structured-mentoring program that will cultivate diversity and competency in STEM.

Speakers

Amy Chang, M.S., *American Society for Microbiology, Washington, DC*
Parag Chitnis, Ph.D., *National Science Foundation, Arlington, VA*
Beronda Montgomery, Ph.D., *Michigan State University, East Lansing, MI*

6:30 p.m. – 7:15 p.m. **Dinner** Location: Hall 3 (Convention Center)

7:15 p.m. – 8:15 p.m. **Conference Overview** Location: Hall 3 (Convention Center)

John Fitzgerald Gates, Ph.D., *Criticality Management Consulting, New York, NY*

Opening Remarks Location: Hall 3 (Convention Center)

Clifford W. Houston, Ph.D., *University of Texas Medical Branch, Galveston, TX*

Conference Welcome Location: Hall 3 (Convention Center)

Ann Hagan, Ph.D., *Division of Extramural Activities, NIH National Institute of General Medical Sciences, Bethesda, MD*

Welcome/NIGMS Anniversary Remarks Location: Hall 3 (Convention Center)

Clifton A. Poodry, Ph.D., *Division of Training, Workforce Development and Diversity, NIH National Institute of General Medical Sciences (NIGMS), Bethesda, MD*

Opening Keynote Address

Celebrating the Past, Preparing for the Future Location: Hall 3 (Convention Center)

Carlos G. Gutiérrez, Ph.D., *University of California-Los Angeles, Los Angeles, CA*

Introduction of Speaker: ***Mary Sanchez Lanier, Ph.D.,*** *Washington State University, Pullman, WA*

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Wednesday, November 7, 2012

8:15 p.m. – 9:15 p.m. **Networking in Your Scientific Discipline**

This informal session is designed to help students transition to the next level – being involved with their disciplinary societies and attending professional society meetings. Disciplinary society members will lead the session, interact one on one with students, discuss student activities and programs offered by their organizations, and offer advice on career pathways and work and personal life balance. Program directors will also be in attendance to mentor students.

Biochemistry and Biophysics	Location: Room 210 D/H (Convention Center)
Cancer Biology	Location: Room 112 (Convention Center)
Cell Biology	Location: Room 230B (Convention Center)
Chemistry	Location: Room 210 C/G (Convention Center)
Developmental Biology and Genetics	Location: Room 210 A/E (Convention Center)
Engineering, Physics and Mathematics	Location: Room 230 C (Convention Center)
Microbiology and Immunology	Location: Room 230A (Convention Center)
Molecular and Computational Biology	Location: Room 210 B/F (Convention Center)
Neuroscience	Location: Room 211 A/C (Convention Center)
Physiology	Location: Room 211 D/B (Convention Center)
Plant Biology	Location: Room 113 (Convention Center)
Public Health	Location: Room 212 D/B (Convention Center)
Social and Behavioral Sciences	Location: Room 212 A/C (Convention Center)

9:30 p.m. – 10:30 p.m. **GRADUATE STUDENT AND POSTDOCTORAL SCIENTIST MIXER** Location: Atrium Lobby (Sainte Claire)

Sponsored by Procter & Gamble

Graduate students, postdoctoral scientists, and recruiters of postdoctoral positions are invited to this mixer. Don't miss this great opportunity to share experiences, relax, and network. This event is NOT open to undergraduates or postbaccalaureates.

"Our students' experience at ABRCMS was outstanding. The amount of minority students in one place, all striving for the same thing, provided a lot of perspective to them. I believe that many of them will in the end apply to graduate school because of some of the experiences that received from this program. Many of our students presented and got a better idea of questions they could be asked for the future of their research. This will help guide their research projects when they return to campus."

Faculty, PD, Admin

"Judging was the best part of the conference. I truly enjoyed listening and giving advice to the undergrads on how to present and what to do to make their presentations stronger. Judging posters is the one thing that will keep me coming back to ABRCMS."

ABRCMS Judge

Thursday, November 8, 2012

7:30 a.m. – 5:00 p.m. **Registration Open**

7:30 a.m. – 8:15 a.m. **Networking Breakfast** Location: Hall 3 (Convention Center)

8:00 a.m. – 12:00 p.m. **Exhibit Set-up**

8:30 a.m. – 9:30 a.m. **CONFERENCE ORIENTATION**

Orientation for Undergraduates and Postbaccalaureates Location: Ballroom 210 (Convention Center)
(Mandatory for undergraduates and postbaccalaureates)
This orientation sets the tone of the conference, provides an overview of ABRCMS for attendees, and prepares them to take advantage of the many opportunities available at the meeting. Featured topics include tips on (i) following essential conference etiquette, (ii) making the best of a scientific meeting, (iii) successfully navigating a national conference, (iv) establishing mentoring relationships, (v) learning about networking opportunities and techniques, and (vi) maximizing professional growth opportunities.

Networking as a Required Life Skill and Professionalism as a Necessary Attribute for Students Location: Ballroom 210 (Convention Center)
Speaker
Howard G. Adams, Ph.D., *H.G. Adams and Associates, Norfolk, VA*

Program Overview and Making the Most of ABRCMS Location: Ballroom 210 (Convention Center)
Speaker
Sandra Murray, Ph.D., *University of Pittsburgh, Pittsburgh, PA*

Orientation for Graduate Students and Postdoctoral Scientists Location: Ballroom I-III (Marriott)
(Mandatory for graduate students and postdoctoral scientists)
This session highlights ABRCMS program enhancements for graduate students and postdoctoral scientists.
Speakers
Mary Sanchez Lanier, Ph.D., *Washington State University, Pullman, WA*
Victoria McGovern, Ph.D., *Burroughs Wellcome Fund, Research Triangle Park, NC*
Ansley A. Abraham, Jr., Ph.D., *Southern Regional Education Board/Compact for Faculty Diversity, Atlanta, GA*

Orientation for Exhibitors Location: Ballroom IV-VI (Marriott)
(Recommended for all exhibitors)
The session focuses on meeting highlights for exhibitors and how this group can make the most of the ABRCMS experience and take leadership roles at the conference. The session will (i) highlight future directions of ABRCMS, (ii) solicit feedback and answer questions that exhibitors may have, (iii) provide information (and training) on the lead retrieval service, and (iv) offer information about Freeman Decorator Services.
Speakers
John Augusto, Ph.D., *University of Kansas, Lawrence, KS*
Chad Betzner, *Experient, Inc., Frederick, MD*
Cheryl Lenz, *Scholars Information Services, Inc., Folsom, CA*
Meredith Martin, *Freeman Decorating Services, Atlanta, GA*

Judges needed! Attend this session if you are interested in serving as an ABRCMS judge.

Orientation for Judges (All 12 Disciplines)
(Mandatory for all student presentation judges)
Pick up your judging packet and learn the ins and outs of the ABRCMS judging process.

- *Biochemistry* Room 230 A (Convention Center
- *Cancer Biology* Room 230 B (Convention Center)
- *Cell Biology* Room 230 C (Convention Center)
- *Chemistry* Room 211 A/C (Convention Center)
- *Developmental Biology and Genetics* Room 211 D/B (Convention Center)
- *Immunology* Room Willow Glenn I (Marriott)
- *Microbiology* Room 212 D/B (Convention Center)
- *Molecular and Computational Biology* Room 113 (Convention Center)
- *Neuroscience* Room Willow Glenn II (Marriott)
- *Physical Sciences and Mathematics* Room Willow Glenn III (Marriott)
- *Physiology* Room 112 (Convention Center)
- *Social and Behavioral Sciences and Public Health* Room 212 A/C (Convention Center)

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Thursday, November 8, 2012

9:45 a.m. – 10:45 a.m. **CONCURRENT SCIENTIFIC SESSIONS** *(Eight Session Options)*

Session 1 Location: Ballroom I-III (Marriott)

The Dark *E. coli* Rises

Sponsored by the American Society for Microbiology

Shiga toxin-producing *Escherichia coli* (STEC) are members of a category of pathogenic *E. coli* that can cause illness ranging from mild intestinal diarrheal disease to severe kidney complications, such as hemolytic uremic syndrome (HUS). In 2011, an uncommon STEC strain caused an unusual number of gastroenteritis and HUS cases, starting in northern Germany and disseminating to other European countries. This talk summarizes recent progress in understanding the biology of STEC infections and exemplifies how the scientific community working as a unit can combat an outbreak.

Speaker

Alfredo Torres, Ph.D., *University of Texas Medical Branch, Galveston, TX*

Introduction of Speaker: ***Olivia Harriott, Ph.D.,*** *Fairfield University, Fairfield, CT*

Session 2 Location: Ballroom IV-VI (Marriott)

Traumatic Brain Injury: Hope through Research

Sponsored by the National Institute of Neurological Disorders and Stroke (NINDS)

Traumatic brain injury (TBI) is a serious public health problem in the United States. Each year, TBIs contribute to a substantial number of deaths and cases of permanent disability (approximately 1.7 million people sustain TBIs annually). This session, offered from both basic and clinical research perspectives, highlights exciting research by two NINDS-funded scientists: Grace Griesbach's research focuses on enhancing molecular mechanisms of neuroplasticity following TBI. She has explored the time-dependent effects of exercise after brain injury and is determining the effects of post-traumatic stress on the efficacy of exercise therapies. David Okonkwo's research involves developing novel therapeutic interventions for brain and spinal cord injury. He is the principal investigator of a nationally funded clinical core to study the pathophysiology of TBI and several ongoing clinical studies in neurotrauma.

Speakers

Grace S. Griesbach, Ph.D., *UCLA Medical Center, Los Angeles, CA*
David O. Okonkwo, M.D., Ph.D., *University of Pittsburgh, Pittsburgh, PA*

Introduction of Speaker: ***Michelle Jones-London, Ph.D.,*** *NIH/NINDS, Bethesda, MD*

Session 3 Location: Room 210 C/G (Convention Center)

From Fossils to Living Plants: Fueling Our Future with Plant Biomass-Based Fuels

Sponsored by the American Society of Plant Biologists

As crude oil prices and demands for fossil fuels continue to rise, there is growing interest in the development and use of renewable resources for the production of biofuels. A number of recent efforts are geared towards producing cheaper, sustainable plant-based resources for the production of renewable energy. Many factors contribute to the efficacy of using plants to produce biofuels. In this session, the importance of understanding plant architecture, growth, and development, as well as key issues related to the conversion of plant biomass to energy will be discussed.

Speakers

Larry P. Walker, Ph.D., *Cornell University, Ithaca, NY*
Miguel Vega-Sánchez, Ph.D., *University of California-Davis/Joint BioEnergy Institute, Davis, CA*

Introduction of Speaker: ***Beronda Montgomery, Ph.D.,*** *Michigan State University, East Lansing, MI*

Session 4 Location: Room 210 A/E (Convention Center)

The Roles of CCR7 in Disease Processes

Sponsored by the American Society for Cell Biology

C-C chemokine receptor 7 (CCR7) is a G-protein-coupled receptor that plays roles in homeostasis and in controlling the levels of antibodies that are produced during normal immune responses following vaccination or during autoimmunity. Our laboratory studies the behavior of CCR7 in naïve T cells, where it is expressed endogenously and is important for sending T cells and other immune cells into the lymph nodes. CCR7 can be activated by two different protein ligands. We have found that signaling from one ligand, CCL19, can regulate the levels of antibodies that the body produces in response to being vaccinated. In addition, while CCL21, the second ligand for CCR7, promotes entry into the lymph nodes, we found that CCL19 controls expression of a second G-protein-coupled receptor that promotes T-cell exit from the lymph nodes. Our second line of research involves understanding how CCR7 affects migration and survival of breast tumor cells within the lymph nodes. We have found that expression of CCR7 in breast tumors leads to metastasis to the lymph nodes. More importantly, we have found that this expression correlates with reduced metastasis to

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other vital organs, including the liver and lung. This is important since understanding how tumor cells target different organs can provide clues to medicines that we can develop that can be used to block tumor cells from reaching different organs and growing within them. These studies could save many lives.

Speaker

Charlotte M. Vines, Ph.D., *University of Kansas Medical Center, Kansas City, KS*

Introduction of Speaker: ***Sandra Murray, Ph.D.,*** *University of Pittsburgh, Pittsburgh, PA*

Session 5 Location: Room 212 D/B (Convention Center)

Mechanistic Mining of Glycol-Induced Renal Toxicity in Order to Dig Up New Treatments

Sponsored by the Society of Toxicology

Ethylene glycol (EG) and diethylene glycol (DEG) produce acute renal failure that has no antidotal treatment. Renal accumulation of calcium oxalate monohydrate (COM) crystals produces the kidney injury of EG. Aluminum citrate blocks COM cytotoxicity by preventing COM attachment, which represents a unique molecular target for therapy. We evaluated the efficacy and mechanism of aluminum citrate in EG-poisoned rats and showed that it decreased renal injury by lowering renal COM retention, thus enhancing excretion of calcium oxalate. Also, *in vivo* and *in vitro* studies have assessed the roles of DEG metabolites in its renal toxicity. We have demonstrated for the first time that diglycolic acid (DGA) is the metabolite that produces the kidney necrosis of DEG poisoning. By understanding the mechanism of toxicity, we are able to develop useful treatments for glycol-induced kidney damage and for other diseases involving high levels of oxalate (such as kidney stones).

Speaker

Kenneth E. McMartin, Ph.D., *Louisiana State University Health Sciences Center, Shreveport, LA*

Introduction of Speaker: ***José Manautou, Ph.D.,*** *University of Connecticut, Storrs, CT*

Session 6 Location: Room 212 A/C (Convention Center)

Addressing American Indian Health Disparities through Science Practice and Collaborative Education

American Indian and Alaskan native populations face severe and significant health and mental health disparities. These disparities must be contextualized by an understanding of the social determinants of health, which include poverty and unequal access to healthcare, education, and housing opportunities. This presentation will describe the current health status of the American Indian and Alaskan native communities and the need for students from underrepresented populations to pursue advanced training and careers in the biomedical and behavioral sciences to improve the health of these populations. A review of epidemiological data, examination of applied research, and discussion of health policy suggestions will also be provided.

Speaker

Annie Belcourt, Ph.D., *The University of Montana, Missoula, MT*

Introduction of Speaker: ***Patricia Baynham, Ph.D.,*** *St Edward's University, Austin, TX*

Session 7 Location: Room 210 B/F (Convention Center)

Beyond Assessing Knowledge – Card Sorting, Superheroes, and Moving towards Measuring Biological Expertise among Undergraduates

How do biology experts structure their thinking about the concepts in their discipline? How is this different from the way those new to the field approach these same ideas? In this interactive presentation, Kimberly Tanner will engage the audience in thinking about expert and novice thinking in biology by drawing upon her own research, which integrates methodologies from science education and cognitive psychology. Approaches to understanding and measuring biological expertise are strongly tied to ideas put forward by the American Association for the Advancement of Science and the National Science Foundation in the recently published report, *Vision and Change for Undergraduate Biology Education.*

Speaker

Kimberly D. Tanner, Ph.D., *San Francisco State University, San Francisco, CA*

Introduction of Speaker: ***Jerraine Johnson-Heywood, Ph.D.,*** *Adecco at General Electric Transportation, Erie, PA*

Session 8 Location: Room 210 D/H (Convention Center)

Bio Mapping in the Biomedical, Social, and Behavioral Sciences

Bio mapping is the integration of biological data with geographic data, and as a system, it includes three components: (1) A biomarker sensor and/or data logger, (2) a commercial global-positioning system (GPS) unit, and (3) visualization and/or mapping software. Research participants wear a mobile wristwatch-type or chest-mounted device that includes a small GPS microchip and a biosensor. Conventional biomarkers, such as blood pressure, heart rate, and body temperature, change as a function of behavior and arousal. In

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this workshop, an understudied biomarker, galvanic skin response (GSR), will also be considered. GSR is an electrodermal response used to detect changes in the sympathetic nervous system (SNS) through skin conductance. GSR has been linked to stress, SNS arousal, and cognitive ability. GSR has yet to be fully explored as a biomarker for behavior, and its potential utility as a biomarker for drug craving, drug use, and measure of individual sensitivity to environmental stimuli will be explored.

Speaker

Debra Furr-Holden, Ph.D., *Johns Hopkins University, Baltimore, MD*

Introduction of Speaker: ***Cherrie B. Boyer, Ph.D.,*** *San Francisco State University, San Francisco, CA*

11:00 a.m. – 12:15 p.m. **CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS** *(Eight session options)*

Session will be Taped

Session 1 Location: Ballroom I-III (Marriott)

Making the Most of Mentoring Relationships

(Recommended for graduate students and postdoctoral scientists)

Researchers often are not trained for the crucial role they play in mentoring the next generation. Based on a research mentor training program developed at the University of Wisconsin-Madison, this workshop is designed to help you become a more effective mentor, be a more proactive mentee, and enhance research mentor training on your own campus. Through presentations, case studies, activities and small-group discussion, we will:

- Learn the core elements of research mentoring,
- Share mentoring challenges and solutions with one another,
- Articulate expectations for mentoring relationships and explore ways to communicate those expectations both as mentors and as mentees,
- Develop practical tools and strategies that you can implement immediately to become a more effective mentor and/or mentee, and
- Learn to implement a research mentor training seminar or workshop at your own institution.

Speaker

Christine Pfund, Ph.D., *University of Wisconsin-Madison, Madison, WI*

Session 2 Location: Room 210 C/G (Convention Center)

Picking the Perfect Ph.D. Program for You

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

Because pursuing a doctorate requires a major investment of time and energy – at least four years of working as hard as you have ever worked and deferring earnings – picking the Ph.D. program that will provide you with the best chance of success is crucial. Clearly you want to select a program with research strengths that match your interests. This workshop provides you with strategies for answering important questions, such as: Is the program structure compatible with my strengths and goals? How successful is the program at producing Ph.D.s? What careers are Ph.D.s from the program pursuing? Will the program provide me with the professional skills I need to succeed, and will I have the support I need to complete the program?

Speakers

Sharon L. Milgram, Ph.D., *NIH Office of Intramural Training & Education, Bethesda, MD*

Additional Speakers To Be Determined

Session 3 Location: Room 210 A/E (Convention Center)

M.D.-P.h.D. – Is It Right for Me?

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

This session provides potential M.D.-Ph.D. applicants with information needed to (i) decide if this is the correct pathway for them, (ii) prepare and plan for the M.D.-Ph.D. admissions process, and (iii) create and submit a competitive application packet. Topics include the admissions process, guidelines for preparing an application, school selection, criteria evaluated by M.D.-Ph.D. programs, necessary research experience, national program data, the interview process, matriculation, the M.D.-Ph.D. curriculum, and post-training pathways. The session ends with a Q&A period, and several M.D.-Ph.D. directors and administrators will be present to speak with students individually.

Speakers

Juanita L. Merchant M.D., Ph.D., *University of Michigan, Ann Arbor, MI*

Danai Nyasha Chagwedera, M.D.-Ph.D. Trainee (Year 1), *University of California-San Francisco, San Francisco, CA*

Joseph T. Barbieri, Ph.D., *AAMC GREAT M.D.-Ph.D. Section and Medical College of Wisconsin, Wauwatosa, WI*

Michael Penn, M.D., Ph.D., *Gladstone Institutes and University of California-San Francisco, San Francisco, CA*

Introduction of Speakers: ***Jana Toutolmin,*** *University of California-San Francisco, San Francisco, CA*

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Session 4 Location: 210 D/H (Convention Center)

Graduate Opportunities in Public and Global Health Research

(Recommended for undergraduates and postbaccalaureates)

This session will draw on the natural sciences and mathematics, as well as economics and social and cultural sciences, to address public and global health research as a model for interdisciplinary education and training. Participants will learn about graduate opportunities in public health and global health research, including steps for pursuing advanced degrees and succeeding in the field.

Speakers

Michael Stephens, M.P.H., *Association of Schools of Public Health, Washington, DC*

Jason Rao, Ph.D., *American Society for Microbiology, Washington, DC*

Session 5 Location: Ballroom IV-VI (Marriott)

Presentation Techniques: How to Make Effective Poster and Oral Presentations

(Recommended for first-time presenters)

Effective communication is essential to every stage of a scientific career. This workshop offers philosophies and strategies for making the most of each opportunity to attend scientific meetings and present your work. Students will learn the essentials of designing compelling oral and poster presentations, including developing a clear conceptual framework, adding graphics, polishing delivery, and responding to questions.

Speaker

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

Session 6 Location: Room 212 D/B (Convention Center)

Succeeding with Your Strengths: How to Assess and Apply Your Unique Strengths toward Your Ideal Career

(Recommended for all attendees)

During ABRCMS, you will hear lots of advice and suggestions, but how do you know what advice is suitable for you and will lead to your future success? Not all suggestions are suitable for everyone, because we each have our own unique set of strengths and preferences in communication and working styles. Our strengths impact how we make critical decisions, and understanding our strengths will help us find careers that match our interests and experiences. To help you discover and develop your strengths, this workshop will introduce you to some simple and effective self-assessment tools drawn from the latest research and evidence-based approaches. Once you assess your strengths, you can then apply them as you make decisions toward a career that fits your vision of success.

Speaker

Steven P. Lee, Ph.D., *Northwestern University, Chicago, IL*

Session 7 Location: Room 211 D/B (Convention Center)

Getting Published: Advice for Graduate Students and Postdoctoral Scientists

(Recommended for graduate students and postdoctoral scientists)

Publishing your work is the key to expanding your success and influence. This session will help you choose a journal for publication, prepare and submit your manuscript, and suggest ways to (i) deal with requests for revision and (ii) cope with occasional rejection. It also will explain the ethics of scholarly publishing, including authorship, multiple submissions, and redundant publication. The session ends with a Q&A period.

Speaker

Paul Turner, Ph.D., Yale University, New Haven, CT

FACULTY SESSION

Session 8 Location: 210 B/F (Convention Center)

Rock Stars, Deficit Models, and Stereotype Threats: Learning to See Inequity in Science and Strategies for Addressing It

Interested in understanding issues that impede efforts to diversify the biological sciences? Want strategies that can promote equity, fairness, and diversity in all your professional interactions as a biologist? While attempts to diversify the sciences have been ongoing for decades, progress has been modest at best. Multiple lines of research from the social sciences suggest that scientists' efforts to diversify their ranks may be misdirected or even counterproductive. Findings from research on why talented individuals leave the biological sciences, as well as examples of both successful efforts and problematic attempts towards diversifying the biological sciences will be considered.

Speaker

Kimberly D. Tanner, Ph.D., *San Francisco State University, San Francisco, CA*

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12:30 p.m. – 1:30 p.m. **Networking Lunch** Location: Hall 3 (Convention Center)

1:30 p.m. – 2:15 p.m. **PLENARY SCIENTIFIC SESSION** Location: Hall 3 (Convention Center)

Carbon Materials and Serendipity: the Inside (and Outside) Story

Science progress and serendipity are good partners, but only when the well-trained eye of the scientist is present and able to take advantage of serendipitous occurrences. The development of new carbon-based materials beyond graphite and diamond began serendipitously in 1985, with the discovery of the buckminsterfullerenes, also known as buckyballs or fullerenes. Along the historical and serendipitous new carbon structure trail, nanotubes were discovered in 1991 (multiwalled) and 1993 (single walled) and the so-called carbon nanoonions (CNOs), or multilayer fullerenes, came about in 1992. Endohedral fullerenes, or buckyballs with atoms or clusters inside, were detected almost immediately after the empty carbon cages, but high yields were not observed until almost ten years later, in another serendipitous discovery, that of $Sc_3N@C_{80}$ (@ represents the inclusion of Sc_3N inside a C_{80} cage). This rather exotic structure is the third most abundant fullerene that can be prepared in an arc reactor (after C_{60} and C_{70}), and many analogous structures have resulted since. Chemist Luis Echegoyen will discuss new endohedral structures with varying metals and non-metals inside as well as structures possessing many different cage sizes and isomers, especially those with interesting electronic properties for potential photovoltaic applications. A bit about the exohedral chemistry, or chemistry on the surfaces, will also be presented. The presentation concludes with a brief segment to probe how serendipitous serendipity really is and whether there are ways to induce serendipity in our work and lives, something that some people refer to as planned serendipity, while others call it an oxymoron.

Speaker

Luis Echegoyen, Ph.D., *University of Texas-El Paso, El Paso, TX*

Introduction of Speaker: ***John Fitzgerald Gates, Ph.D.,*** *Criticality Management Consulting, New York, NY*

2:15 p.m. – 6:30 p.m. **Exhibits Open**

2:30 p.m. – 3:45 p.m. **POSTER SESSION 1 (A)**

2:45 p.m. – 4:30 p.m. **Meet and Greet Speakers**

4:00 p.m. – 5:15 p.m. **POSTER SESSION 2 (B)**

5:30 p.m. – 6:30 p.m. **ORAL PRESENTATION SESSIONS 1 – 12**

Oral Session 1: Biochemistry Location: 210 C/G (Convention Center)

O01 Novel 2-Methoxy-6-Icosynoic Acid – a Fatty Acid that Induces Death of Neuroblastoma and Adenocarcinoma Cells
Karolyna Rosado, *Unversity of Puerto Rico-Rio Piedras, San Juan, PR*

O02 Optimization of Beta-Cyclodextrins Binding to Lipofuscin in Retinal Pigment Epithelium
Shelby Goicochea, *University of Florida, Ocala, FL*

O03 Metabolic Defect in Down Syndrome Cell Lines
Jocelyn Argueta, *University of California-Irvine, Long Beach, CA*

O04 The Effect of Mutations on the Rpb2 Subunit of RNA Polymerase II on Alternative Polyadenylation Site Selection
Opher S. Kornfeld, *University of Oregon, Eugene, OR*

Session Moderator: ***Joseph Orban, Ph.D.,*** *Southern University at Shreveport, Shreveport, LA*

Oral Session 2: Cancer Biology Location: 211 A/C (Convention Center)

O05 Characterizing Mist1 Transcriptional Targets in the Exocrine Pancreas
Edhriz Siraliev-Perez, *University of Puerto Rico, Aguadilla, San Antonio, PR*

O06 The Role of Snail and Peroxidasin in Perineural Invasion
Marisha L. Morris, *Clark Atlanta University, Atlanta, GA*

O07 Development of a Rapid Quantification Assay to Measure Target Inhibition in MPN Patient Samples
Laura K. Leung, *Smith College, Northampton, MA*

O08 Targeting Kinases Critical for TMPRSS2-ERG Function in Prostate Cancer
Kyle Nakatsuka, *Southern Methodist University, Dallas, TX*

Session Moderator: ***Hao Nguyen, Ph.D.,*** *California State University, Sacramento, CA*

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Oral Session 3: Cell Biology

Location: 210 B/F (Convention Center)

O09 Gap Junction Protein Phosphorylation and Annular Gap Junction Formation
Jordan Harper, *Fort Valley State University, Hinesville, GA*

O10 Investigation of the Requirement of Hepcidin Antimicrobial Peptide for the Anemia of Inflammation
Saiah C. Yates, *University of Maryland-Baltimore County, Bowie, MD*

O11 Investigation of Nuclear Protein Export Using a Novel Protein Export Assay
Tinashe E. Nyanhete, *Colgate University, Hamilton, NY*

O12 Regenerative Potential of Adipose and Cord Tissue Derived Mesenchymal Stem Cells
Jorge A. Alvarez, *University of Arizona, Tucson, AZ*

Session Moderator: ***Brent Berwin, Ph.D.,*** *Dartmouth Medical Center, Lebanon, NH*

Oral Session 4: Chemistry

Location: 230 C (Convention Center)

O13 Synthesis and Anticancer Activity of Benzyl-Tetra Isoquinoline Alkaloids Berberine Analogs on Breast and Prostate Cancer
Karry Wright, *Xavier University of Louisiana, New Orleans, LA*

O14 An Exploration of Peptidomimicry by an Antibacterial Natural Product
Anthony Scruse, *Morehouse College, Atlanta, GA*

O15 Allelopathic, Antimitotic, Antibiotic and *In Vivo* Cytotoxicity of Ethno Pharmacologically Selected Medicinal Plants from the Dominican Republic
Ghislain B. Tchomobe Sr., *Bowie State University, Landover, MD*

O16 The Effect of Substituents on Benzodiazepine Electron Affinity and Electron Transfer
Nadia Ott, *San Diego State University, San Diego, CA*

Session Moderator: ***Jerainne Johnson-Heywood, Ph.D.,*** *Adecco at General Electric Transportation, Erie, PA*

Oral Session 5: Developmental Biology and Genetics

Location: 230 A (Convention Center)

O17 Tetracycline Antibiotic Resistance Genes in Free-Living *Escherichia coli* and Their Phylogenetic Relationships
Peter C. Hernandez, *Orange Coast College, Costa Mesa, CA*

O18 Characterization of Myosin Dynamics in a *Drosophila* Germband Extension Mutant
Nelson M. LaMarche, *Cornell University, Ithaca, NY*

O19 Interactions of Grxcr1 with the Usher Protein Complex in the Zebrafish Inner Ear
Jennifer M. Panlilio, *University of Miami, Miami, FL*

O20 RanGAP1: A Target for Endo-siRNAs
Andrea Quinones-Rivera, *University of California-Santa Cruz, Santa Cruz, CA*

Session Moderator: ***Lisa Goering, Ph.D.,*** *St. Edwards University, Austin, TX*

Oral Session 6: Engineering, Physics and Mathematics

Location: 212 D/B (Convention Center)

O21 Injectable Albumin Hydrogel: Novel Biomaterial for Tissue Regeneration
Sarah K. Zemlok, *Wellesley College, Wellesley, MA*

O22 Mathematical Approach to Illegal Steroids Use
Quarail Hale, *Norfolk State University, Suffolk, VA*

O23 The Distribution of the Greatest Common Divisor of Gaussian Integers
Tai-Danae Bradley, *The City College of New York, Valley Stream, NY*

O24 Electrospinning PLA Nanofibers Containing Ibuprofen for Wound-Healing Applications
Lewis Q. Lott, *Delaware State University, Dover, DE*

Session Moderator: ***Mauricio Cabrera-Rios, Ph.D.,*** *University of Puerto Rico-Mayaguez, Mayaguez, PR*

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Oral Session 7: Immunology

Location: Willow Glen I-III (Marriott)

O25 Kinetics of IL-17 Expression in Response to Oral Thrush
Oseogie Okojie, *University of Maryland-Baltimore County, Baltimore, MD*

O26 Understanding the Role of TIPE3 in Gut Inflammation
Royce E. Onyimba, *University of Maryland-Baltimore County, Columbia, MD*

O27 Dendritic Cells Undergo Major Metabolic Alterations following Toll-Like Receptor Mediated Activation
Daniel T. McManus, *University of Massachusetts-Boston, Boston, MA*

O28 Effects of Interferon Gamma on Mitochondrial Encoded Genes
Rosa M. Leon, *Syracuse University, Utuado, PR*

Session Moderator: ***David Sanchez, Ph.D.,*** *Western University of Health Sciences, Pomona, CA*

Oral Session 8: Microbiology

Location: 210 D/H (Convention Center)

O29 The *Helicobacter pylori* Effector Protein CagA Induces Cell Proliferation in the *Drosophila* Gut through the Gut Microbiota
Elisabeth A. Dewailly, *Harvard University, Cambridge, MA*

O30 Investigation of the Untranslated Region of the HIV-2 RNA Genome
Mateo Hernandez, *University of South Florida, Tampa, FL*

O31 Demonstration of Antibiofilm and Antifungal Efficacy of Nitric Oxide Releasing Nanoparticles against *Candida albicans* Biofilms
Mohammed Ahmadi, *Adelphi University, Bayside, NY*

O32 Characterization of a Taurine-Regulated Promoter in *Alphaproteobacteria*
Tanisha Saini, *San Francisco State University, San Francisco, CA*

Session Moderator: ***Alfredo Torres, Ph.D.,*** *University of Texas Medical Branch, Galveston, TX*

Oral Session 9: Molecular and Computational Biology

Location: 211 D/B (Convention Center)

O34 Characterizing Spermatogenesis at a Single-Cell Level
Francine R. Camacho, *Washington University School of Medicine, St. Louis, MO*

O33 Data Mining: Exploring the Association between Semantic Categories and Attributes in Large Databases
Nichole Etienne, *University of the Virgin Islands, St. Thomas, VI*

O35 Generating 3D Ultrasound Images from 2D Scans: Reconstruction Algorithm Implementation and Analysis
Joy A. Franco, *San José State University, Fremont, CA*

O36 The Role of LMNA in Human Longevity
Lavida Brooks, *University of the Virgin Islands, St. Thomas, VI*

Session Moderator: ***Lynn S. Villafuerte, Ph.D.,*** *University of Kansas, Lawrence, KS*

Oral Session 10: Neuroscience

Location: 210 A/E (Convention Center)

O37 Ventilatory Pattern Variability in a Rodent Model of Pulmonary Inflammation
Glenford Robinson, *Lafayette College, Easton, PA*

O38 Effects of Optogenetic Silencing of Parvalbumin-Expressing Interneurons on Prepulse Inhibition
Christine Liu, *University of Oregon, Eugene, OR*

O39 Identification of Genes Involved in Neuronal Attachment in *Caernorhabditis elegans*
Daniel Cabrera, *Columbia University, New York, NY*

O40 Mirror Neuron System Activation as a Function of Autism Symptom Severity: A Replication and Extension of Previous Findings
Wendy Y. Plante, *University of California-Los Angeles, Los Angeles, CA*

Session Moderator: ***Elba Serrano, Ph.D.,*** *New Mexico State University, Las Cruces, NM*

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Oral Session 11: Physiology Location: 212 A/C (Convention Center)

O41 Role of Theca Cell Insulin Receptor in the Development of Obesity-Induced Infertility
Amanda Nwaopara, *The Johns Hopkins University, Upper Marlboro, MD*

O42 The Effects of Neonatal Hyperoxia on the Lung: A Rodent Model for Chronic Lung Disease in Premature Infants
Symone V. Jordan, *Bowie State University, Accokeek, MD*

O43 Atypical Pkc Isoforms Contribute Nfkb-Induced Inflammation and Vegf/tnf-Induced Permeability
Krystal Harrison, *North Carolina A&T State University, Greensboro, NC*

O44 Depressive Behavior and Deficits in Memory and Cognition Precede Nigra Dopamine Neuron Degeneration in an Experimental Parkinson's Mouse Model
Janella J. Wynter, *Spelman College, Stone Mountain, GA*

Session Moderator: ***J. Derek Stone, Ph.D.,*** *Paine College, Augusta, GA*

Oral Session 12: Social and Behavioral Sciences and Public Health Location: 230 B (Convention Center)

O45 Where Are They Now? Tri-Institutional M.D.-Ph.D. Program Follow-up at 40 Years
Diana Yusim, *City College of New York, Brooklyn, NY*

O46 Engaging Businesses in HIV Prevention and HIV Testing Promotion in a Neighborhood-Based HIV Prevention Campaign in Philadelphia, PA
Joy Walker, *Tougaloo College, Greenwood, MS*

O47 Development of a Diabetes Risk Score for the Eastern Cape Province, South Africa
Joshua Nwosu, *Oakwood University, Loma Linda, CA*

O48 The Effects of Past and Ongoing Violence Experience on HIV Antiretroviral Adherence
Terence L. Johnson, *University of North Carolina at Chapel Hill, Chapel Hill, NC*

Session Moderator: ***Cherrie B. Boyer, Ph.D.,*** *University of California, San Francisco, CA*

6:45 p.m. – 7:30 p.m. **DINNER** Location: Hall 3 (Convention Center)

7:45 p.m. – 9:30 p.m. **Plenary Professional Development Sessions for Faculty, Students, and Postdoctoral Scientists** *(Four Session Options)*

Session 1 Location: Ballroom I-VI (Marriott)

Gateway to the Future – Career Paths in the Biomedical Sciences, STEM Disciplines, and Behavioral Sciences
(Recommended for undergraduate and graduate students)
In this session, we will explore the wide variety of careers available in the biomedical sciences, the physical sciences, engineering, and the behavioral sciences, as well as the many types of training that can help you reach your goals. Experienced scientists will discuss their career pathways and educational backgrounds, what they enjoy about their work, and their professional and personal life balance. At the end of the session, you will have a clearer understanding of why graduate training programs (including postbaccalaureate, master's, and doctoral) are the gateway to your future opportunities. Speakers will be available to meet in small groups after the session.

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

Speakers
Mary Farrow, Ph.D., *Instituto Tecnológico de Química Verde, Brazil*
Maisha Gray-Diggs, Ph.D., *Procter & Gamble, Cincinatti, OH*
Jasmine McDonald, Ph.D., *Columbia University, New York, NY*
Michael Penn, M.D., Ph.D., *Gladstone Institutes and University of California-San Francisco, San Francisco, CA*
Deborah Philp, Ph.D., NIH/NIDCR, Bethesda, MD
Jason Rao, Ph.D., *American Society for Microbiology, Washington, DC*
Jayne S. Reuben, Ph.D., *University of South Carolina, Columbia, SC*
Kennie Shepherd, Ph.D., *Morehouse School of Medicine, Atlanta, GA*

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Session will be Taped

Session 2 Location: Willow Glen I-III (Marriott)

Leadership and Management Skills for Graduate Students and Postdoctoral Scientists

A successful career in science – in any sector, at or away from the bench – requires that you develop strong interpersonal, management, and leadership skills. In this interactive workshop, we will explore differences in communication and work styles, with the goal of increasing your self-awareness and your awareness of other approaches. Through presentation and group exercises, you will learn how teams develop and explore ways to enhance team effectiveness while dealing with conflict. This workshop is appropriate for graduate students and postdoctoral fellows at all educational levels.

Speakers

Sharon L. Milgram, Ph.D., *NIH Office of Intramural Training & Education, Bethesda, MD*
Lori M. Conlan, Ph.D., *NIH Office of Intramural Training & Education, Bethesda, MD*

Session 3 Location: Room 210 C/G (Convention Center)

FACULTY SESSION

What Do You Want Your Students to Know? Designing Effective Courses through Backwards Design

(Recommended for faculty, future faculty program directors, and exhibitors)

In the age of "information overload," many instructors struggle with what should be covered in courses. This session will explore how to address this issue using the Backwards Design Course Development approach. Through a series of activities, participants will work through the steps of the backwards design process. Participants will learn how to develop course outcomes, and various methods to assess these outcomes will be explored. To complete the process, instructional and learning activities plans will be considered. Finally, the advantages of backwards design will be discussed.

Speaker

Loretta Brancaccio-Taras, Ph.D., *Kingsborough Community College, New York, NY*

Session 4 Location: Room 210 B/F (Convention Center)

FACULTY SESSION

NIH Grants Management Workshop

(Recommended for program directors and faculty)

This session covers updates for the (i) National Institute of General Medical Sciences Minority Opportunities in Research Program, including current budget information, (ii) clarification of requirements for the use of human subjects, (iii) use of the "Streamlined Noncompeting Award Process" for applications, and (iv) areas of interest in the Minority Biomedical Research Support and Minority Access to Research Careers programs.

Speakers

Lori Burge, B.S., *NIH National Institute of General Medical Sciences, Bethesda, MD*
Micheal Mace, M.A., *NIH National Institute of General Medical Sciences, Bethesda, MD*
Justin Rosenzweig, M.P.A., *NIH National Institute of General Medical Sciences, Bethesda, MD*
Susan F. South, M.P. A., *NIH National Institute of General Medical Sciences, Bethesda, MD*
Robert Altieri, M.A., *NIH National Institute of General Medical Sciences, Bethesda, MD*

9:30 p.m. – 10:15 p.m. **Networking with Colleagues and Speakers** Location: Marriott Lobby

Following the plenary sessions, participants will have an opportunity to network with speakers and colleagues and continue discussions from earlier sessions.

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7:30 a.m. – 5:00 p.m. **Registration Open**

7:30 a.m. – 8:15 a.m. **Networking Breakfast**

8:30 a.m. – 9:30 a.m. **PLENARY SCIENTIFIC SESSION** Location: Ballroom 210

Global Health Challenges and Opportunities in the 21st Century: The Role of Science Diplomacy

In the 21st century, health is very much a global issue with significant humanitarian, economic, and national security implications. With international trade, travel, and telecommunications, the world is shrinking. Two million people cross national borders every day. This means that the threat of infectious diseases such as a pandemic flu or AIDS, bioterrorism, the spread of tobacco and obesity, and the safety of our food and water supply do not respect state or national borders. This presentation will review some of the critical global health challenges today and examine the current administration's U.S. Global Health Initiative and other programs that address these issues. The importance and role of science diplomacy, a critical component of America's foreign policy toolbox, will be discussed as a key component to strengthening knowledge, rectifying disparities, and building infrastructure and partnerships to improve health worldwide.

Speaker

Rear Admiral Susan J. Blumenthal, M.D., M.P.A., *Center for the Study of the Presidency and Congress, and Global Health Program, Meridian International Center, Washington, DC*

Introduction of Speaker: ***John Fitzgerald Gates, Ph.D.,*** *Criticality Management Consulting, New York, NY*

9:45 a.m. – 10:45 a.m. **Professional Development Sessions** *(Five Session Options)*

Session 1 Location: Ballroom (Marriott)

UNDERGRADUATE, COMMUNITY COLLEGE, AND MASTER'S-LEVEL STUDENT SESSION

Mentoring: an Enabling Relationship that Fosters Professional Growth and Development

This session introduces mentoring as a strategy for enhancing academic, career, personal, and professional development. It explores success stories in mentoring undergraduate and graduate students and describes mentorship models. It is structured to provide participants with (i) the philosophy and terminology of mentoring, (ii) the rationale for mentoring, (iii) mentoring roles and responsibilities, (iv) tips for forming an effective mentoring alliance, and (v) ways to use mentoring as a strategy for developing people. The session highlights the graduate advisor's roles and the warning signs of unethical relationships. Case studies and participants experiences will be used as tools to delve into mentoring.

Speakers

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

Lourdes Echegoyen, Ph.D., *University of Texas-El Paso, El Paso, TX*

Session 2 Location: Room 211 (Convention Center)

Navigating Your Way into a Postdoctoral Position and Tips for a Successful Postdoctoral Experience

(Recommended for doctoral-level graduate students and postdoctoral scientists)

This session will focus on the many critical issues that graduate students and postdoctoral scientists face when selecting first and second postdoctoral positions. These issues include securing funding, expected duration, racial and ethnic composition of the postdoctoral pool, health care and other benefits, job responsibilities, and career development activities. The forum will encourage candid conversations focused on everything that graduate students and postdoctoral scientists want to know but are afraid to ask.

Speaker

Alfredo Torres, Ph.D., *University of Texas Medical Branch, Galveston, TX*

FACULTY SESSION

Session 3 Location: Room 212 (Convention Center)

Vision and Change Leadership Fellows: Transforming Undergraduate Life Sciences

A national effort is underway to transform the way life sciences are taught in this country at the undergraduate level, how academic departments support faculty, and how curricular decisions are made. Come hear more about PULSE (Partnership for Undergraduate Life Sciences Education), a joint initiative of the National Science Foundation, Howard Hughes Medical Institute, and National Institutes of Health. The effort is supporting a yearlong program in which 40 Vision and Change Leadership Fellows consider and then recommend to the greater colleague community models for improving undergraduate life sciences education. Significant

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contributions from the greater community throughout the yearlong project are needed to develop and implement the framework for systemic change. Visit www.pulsecommunity.org for more information.

Moderators
Shawn Drew Gaillard, Ph.D., *NIH National Institute of General Medical Sciences, Bethesda, MD*
Cynthia Bauerle, Ph.D., *Howard Hughes Medical Institute, Chevy Chase, MD*

Speakers
Loretta Brancaccio-Taras, Ph.D., *Kinsgborough Community Collge, New York, NY*
Richard Cardullo, Ph.D., *University of California, Riverside, CA*
Bill Davis, Ph.D., *Washington State University at Pullman, WA*
Cynthia Peterson, Ph.D., *University of Tennesse, Knoxville, TN*

FACULTY SESSION

Session 4 Location: 210 B/F (Convention Center)

GCAT, Synthetic Biology, and a Summer Faculty Workshop Opportunity
Sponsored by the Genome Consortium for Active Teaching (GCAT)
(Recommended for postdoctoral scientists, faculty, program directors, and exhibitors)
The Genome Consortium for Active Teaching (GCAT) is an organization of faculty dedicated to improving the resources available for teaching genomics to undergraduates. Synthetic biology is a dynamic, young field that incorporates engineering principles and mathematical modeling with molecular biology techniques to produce novel genetic devices with applications in energy, the environment, medicine, and computation. Synthetic biology pulls together the perspectives of many disciplines to shed new understanding on biological processes. This field is full of opportunities for undergraduate research. This session will share application information for a three-day, NSF-funded GCAT Synthetic Biology Workshop for interdisciplinary faculty pairs (one biologist and one non-biologist) in June 2013.
Speaker
Jeff Poet, Ph.D., *Missouri Western State University, Saint Joseph, MO*

Session 5 Location: Room 210 A/E (Convention Center)
FACULTY SESSION
Collaborating for Success: Interdisciplinary Partnerships for Addressing Biological Complexity
(Recommended for senior graduate students, postdoctoral scientists, faculty, program directors and administrators)
Interdisciplinary partnerships and interactions are increasingly critical for successfully approaching multidimensional, complex problems that require input from a variety of scientific disciplines. Such approaches fully integrate perspectives from independent disciplines to address questions that transcend the knowledge of a single discipline, methodology, or theoretical framework. Emergent biology-based interdisciplinary fields of study are allowing scientists to approach problems that give attention to systems-level organismal responses, organism-environment interactions, or other complex systems, rather than pure reductionist approaches. Initiating and sustaining interdisciplinary partnerships requires attention to several factors, including sustaining the involvement of multiple scientific stakeholders, developing fully integrated approaches and incorporating the sometimes disparate standards of each of the disciplines involved in the partnership. Such approaches can be used in research from the undergraduate to faculty level, and specific examples and methods for doing so will be presented in this session.
Speakers
Beronda Montgomery, Ph.D., *Michigan State University, East Lansing, MI*
Andrea L. Stith, Ph.D., *University of Colorado, Boulder, CO*
Robert Full, Ph.D., *University of California-Berkeley, Berkely, CA*

10:45 a.m. – 12:15 p.m. **Exhibits Open**

11:00 a.m. – 12:15 p.m. **POSTER SESSION 3 (C)**

12:30 p.m. – 1:15 p.m. **Networking Lunch** Location: Hall 3 (Convention Center)

1:15 p.m. – 2:15 p.m. **PLENARY SCIENTIFIC SESSION** Location: Hall 3 (Convention Center)
The Role of Cholesterol in HIV Infection and Pathogenesis
Sponsored by the American Society for Microbiology
Replication of the human immunodeficiency virus (HIV) requires a highly orchestrated series of steps, many of which represent the hijacking of cellular pathways and factors by the virus. Indeed a very large number of cellular proteins have been implicated in virus

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replication. Moreover, infection of cells by HIV results in modulation of expression of numerous genes. Our previous work identified the lipid cholesterol as playing pivotal roles in HIV replication. Cholesterol and cholesterol-enriched membrane domains serve as platforms for virus entry, assembly, and release. Interestingly, all genes involved in cholesterol biosynthesis are up-regulated by HIV infection. We performed experiments to determine whether the overall cholesterol content of cells could impact the ability of the virus to replicate or its infectivity once released. In performing these studies, we observed an apparent association between the cholesterol content of cells and viral protein production. We hypothesized that HIV gene transcription was controlled by the same mechanisms that controlled cholesterol biosynthesis. Further study revealed that a major transcription factor, TFII-I, involved in regulating HIV gene transcription, is the product of a sterol-response gene. Our data show that the sterol element binding protein SREBP2 directly regulates HIV transcription by controlling expression of TFII-I. These results demonstrate for the first time that HIV gene transcription is directly linked to cholesterol homeostasis in T cells. These results have major implications for understanding HIV pathogenesis. We have evaluated a small molecule inhibitor of SREB2 activation for its effect on HIV infection. Our results show that the SREB2 inhibitor profoundly suppresses HIV infection in T cells. Based on our results, such molecules may potentially represent a new class of HIV therapeutic drug.

Speaker

James E. K. Hildreth, Ph.D., *University of California-Davis, Davis, CA*

Introduction of Speaker: ***John Fitzgerald Gates, Ph.D.,*** *Criticality Management Consulting, New York, NY*

2:30 p.m. – 3:30 p.m. **PLENARY PROFESSIONAL DEVELOPMENT SESSIONS**

Session 1 Location: Ballroom (Marriott)

Strategies for Analyzing and Developing Your Network

(Mandatory for undergraduates and postbaccalaureates)

In this session, participants will be exposed to a framework to strategically manage their network relationships. Participants will use network mapping to analyze their networks and develop specific measures to address gaps through a structured, systematic action plan.

Speaker

Stacey Blake-Beard, Ph.D., *Simmons College, Boston, MA*

Session 2 Location: Room 210 A/E & B/F (Convention Center)

Career Development: How We Learn ... and How We Don't

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

Changes in the functional capacities of learners are visible manifestations of changes in the physical structure of the brain. Although we seldom think of learning experiences as brain-reorganization activities, they most certainly are precisely that. We will look at why formal education often fails to make substantive and lasting changes in how we think and behave, and we will consider how to design learning experiences that lead to advantageous changes in cognition, affect, and behavior, all of which are components of expertise in every discipline.

Speaker

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

Session 3 Location: Room 210 C/G & D/H (Convention Center)

Removing Barriers to STEM Completion: Using Research on STEM Student Experiences to Inform Better Educational Practices

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

The new imperative to increase STEM degree completions depends on improving educational practices. Sylvia Hurtado has studied underrepresented student completion in STEM for eight years under sponsorship from NIH and NSF. In this session, she will share findings obtained from students related to issues at various stages of the pipeline that inform potential areas for improvement at national and institutional levels of practice.

Speaker

Sylvia Hurtado, Ph.D., *University of Michigan, Ann Arbor, MI*

3:30 p.m. – 6:30 p.m. **Exhibits Open**

3:45 p.m. – 5:00 p.m. **POSTER SESSION 4 (D)**

3:45 p.m. – 5:30 p.m. **Meet and Greet Speakers** Location: Exhibit Hall

5:15 p.m. – 6:30 p.m. **POSTER SESSION 5 (E)**

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6:45 p.m. – 7:45 p.m. **Professional Development Sessions** *(Five Session Options)*

These sessions are wonderful opportunities for students to meet in smaller groups to discuss issues and seek one-on-one advice.

Session will be Taped

Session 1 Location: Room 210 A/E (Convention Center)

Writing a Successful Personal Statement for Graduate School Admission and/or Summer Programs – Getting into Highly Competitive Graduate Schools and Summer Programs

(Recommended for undergraduate, postbaccalaureate, and master's students)

What are graduate programs in the sciences looking for in applicants? Find out in this session that focuses on finding programs, using ranking systems smartly, getting better recommendations, selecting work samples, making that critical connection with potential mentors, writing awesome statements of purpose, and learning how to get full funding and go to school for free. The session offers useful tips on how to write powerful, effective statements for applications to graduate schools and/or summer programs. Get help from presenters who, during their careers, have written many personal statements, read thousands of submitted statements, and helped many early-career students to write great statements. Bring a copy of a personal statement that you are working on.

Speakers

Joel D. Oppenheim, Ph.D., *New York University, New York, NY*

Victoria H. Freedman, Ph.D., *Albert Einstein University, New York, NY*

Session 2 Location: Room 210 C/G (Convention Center)

Strategies for Taking Standardized Admissions Tests: Preparing for the GRE and MCAT Exams

(Recommended for undergraduate students)

This session focuses on test-taking strategies and provides valuable information about resources for preparing for standardized admissions tests, particularly the GRE and MCAT. It is important to note that the session is not intended to take the place of formal comprehensive workshops, such as courses offered by your institution and/or independent test preparation agencies.

Speakers

Gayle Slaughter, Ph.D., *Baylor College of Medicine, Houston, TX*

Saundra Oyewole, Ph.D., *Trinity Washington University, Washington, DC*

Session 3 Location: Room 210 D/H (Convention Center)

Graduate School Application Process (REPEAT)

(Recommended for undergraduate and master's-level students)

This three-part session provides potential graduate students with the information necessary to prepare and plan for the graduate school admissions process and to subsequently create and submit a competitive application packet. Part one briefly covers the undergraduate years – coursework, internships, and standardized tests. The process of selecting schools for application and subsequent matriculation will be discussed as well as the application process, with a focus on the admissions file. There will be a discussion of the application form and supporting documentation, with a special focus on the personal statement. Also covered are the interview process and how to succeed in graduate school. The personal statement introduces the applicant to the school and its admissions committee; therefore, part two provides tips and strategies on writing a powerful personal statement for applications for graduate school and/or summer internships. Lastly, part three offers strategies for financing graduate education.

Speaker

C. Gita Bosch, *G. Bosch & Associates, Yorktown Heights, NY*

Session 4 Location: Room 210 B/F (Convention Center)

Tips for Applying to an NIH Postbaccalaureate Program

(Recommended for students considering postbaccalaureate training)

Many students consider postbaccalaureate training prior to applying to graduate school, and the NIH has the largest "postbac" training program in the country. The session will focus on NIH postbac program details and requirements, including the nuts and bolts of submitting a successful application. Information and resources on other U.S. postbac programs will also be presented.

Speaker

Sharon L. Milgram, Ph.D., *NIH Office of Intramural Training & Education, Bethesda, MD*

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Session 5 Location: Willow Glen (Marriott)

Dining Is Not about Food

There is an unspoken yet very strong prejudice against individuals whose dining skills are lacking or nonexistent. Unfortunately, no one will tell you that they'd prefer not to work with you because of your poor table manners. Graceful, confident dining is a lost art. Yet with more work being done at the table than ever before, the prospect of a formal meal can strike terror in the hearts of otherwise polished professionals. This workshop will cover the basics of dining etiquette, seating, ordering wine, handling "difficult" foods and special dietary concerns, tipping, conversation skills, European and American styles of dining, responsibilities of the host and guest, invitations and gifts. Work life adds another dimension to the dining experience. While dining is supposed to be a pleasurable experience, in the business arena, it is also an unfair test. Unfair because nobody really tells you how you fail, if you do. The truth is that dining is a test of your ability to handle and supervise people, your taste, sophistication, conversation skills, and not incidentally, food and wine. The objectives of this session are to (i) review correct table manners and etiquette, (ii) clarify roles of hosts and guests, and (iii) become confident of your business dining skills.

Speaker

Mary M. Mitchell, *The Mitchell Organization, Seattle, WA*

6:45 p.m. – 8:30 p.m. **Networking for Exhibitors, Speakers, Program Directors, and Judges at the Fairmont San Jose Hotel** Location: Regency Ballroom (Fairmont Hotel)

This event is NOT open to undergraduates, postbaccalaureates, graduate students, or postdoctoral scientists

8:45 p.m. – 9:45 p.m. **NIGMS/TWD Program Director Meeting (including IDEA Program Directors)** Location: Regents Club (Fairmont Hotel)

(All programs meet as large group)

9:45 p.m. – 10:30 p.m. **Program Directors break out into small group meetings at the Fairmont Hotel.** Room Locations: Club Regents Room, Gold Room, Valley Room

"ABRCMS was a one-stop shop for everything I need to prepare for graduate schools. Being able to meet dozens of researchers in my intended area gave me confidence and affirmed my love of public health."

Undergraduate Student

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7:30 a.m. – 12:00 p.m. **Registration Open**

7:30 a.m. – 8:15 a.m. **Networking Breakfast** — Location: Hall 3 (Convention Center)

8:30 a.m. – 9:15 a.m. **Exhibitor Feedback Session** — Location: Exhibit Hall/Networking Area

8:30 a.m. – 9:30 a.m. **ORAL PRESENTATION SESSIONS (All 12 Disciplines)**

Oral Session 13: Biochemistry

Location: 210 C/G (Convention Center)

O49 Assessing the Role of Assorted Bile Acids in Gpbar1-Dependent Biliary Acute Pancreatitis
Sean S. Amegadzie, *Emory University, Boston, MA*

O50 Identification of the Signal Recognition Particle RNA in the Human Pathogenic Yeast *Cryptococcus neoformans*
Tiffany Nguyen, *University of California-Los Angeles, Los Angeles, CA*

O51 Can Haptoglobin Attenuate Hemoglobin-Induced Vascular Damage?
Yanaira Alonso, *University of Puerto Rico, Guayanilla, PR*

O52 Optimization of the Cross-Linked Product Template and Acyl-Carrier Protein in Type I Non-Reducing Iterative Polyketide Synthases
Jonathan Ruiz, *University of California, Anaheim, CA*

Session Moderator: ***Mario G. García-Ríos, Ph.D.,*** *Mount Ida College, Newton, MA*

Oral Session 14: Cancer Biology

Location: 211 A/C (Convention Center)

O53 Determining the Influence of Age on Glioma Formation: Does Mutating Adult Oligodendrocyte Precursor Cells Lead to Brain Cancer?
Jordan E. Harbin, *California Polytechnic San Luis Obispo, Lake Forest, CA*

O54 Identification of New Anticancer Therapeutics
Hawasatu Dumbuya, *Massachusetts College of Pharmacy & Health Sciences, Medford, MA*

O55 TNF-Alpha-Induced Metabolic Alterations in Pancreatic Ductal Adenocarcinoma
Gabriel Muhirei Gihana, *California Baptist University, Riverside, CA*

O56 Chd5 Expression in Fetal Stem Cells
Helen S. Mueller, *Columbia University, New York, NY*

Session Moderator: ***Emil Bogenmann, Ph.D.,*** *Children's Hospital Los Angeles, Los Angeles, CA*

Oral Session 15: Cell Biology

Location: 210 B/F (Convention Center)

O57 Simvastatin Confers Cardioprotection through Parkin-Dependent Mitophagy
Genaro Hernandez, *San Diego State University, Chula Vista, CA*

O58 Role of the p38-MK2-Hsp27 Pathway in Mediating Apoptosis during LPS-Induced Lung Injury
Hasina Maredia, *Brown University, Providence, RI*

O59 Insulin-Induced Lipid Bodies are Dynamically Regulated in Activated Mast Cells
Christina Linares, *Chaminade University, Honolulu, HI*

O60 The Effect of Polyethylene Glycol Density on Surface-Enhanced Raman Spectroscopy Active Nanoparticle Biodistribution *In Vivo*
Chantal Henry, *City College of New York, Arverne, NY*

Session Moderator: ***Elissa Purnell, Ph.D.,*** *Savannah State University, Savannah, GA*

Oral Session 16: Chemistry

Location: 230 C (Convention Center)

O61 The Utility of Infrared Vibrational Frequencies for the Lead Optimization of Quinoxalines and Pyridinopyrazines as PKB/Akt Inhibitors
Katie L. Shewbart, *Chaminade University of Honolulu, Honolulu, HI*

O62 Synthesis and Structure Characterization of an Ionic Tributyltin Complex with Oxalic Acid
Andrei Callejas, *University of the District of Columbia, Washington, DC*

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O63 Characterization of Dissolved Organic Matter in Maryland Coastal Bay using Fluorescence Spectroscopy
Alexander Nyarko, *University of Maryland Eastern Shore, Princess Anne, MD*

O64 Synthesis of Chromophores with Switchable Absorption Profiles and Fluorophores with Switchable Absorption/Emission Profiles
Duane E. Simpson II, *University of Maryland-Eastern Shore, Princess Anne, MD*

Session Moderator: ***Marco Lopez, Ph.D.,*** *California State University, Long Beach, CA*

Oral Session 17: Developmental Biology and Genetics

Location: 230 A (Convention Center)

O65 Genetic Variation and Phylogeography of Hexaploid Barbs (*Labeobarbus* spp.) in Kenya
Maya Patterson, *Xavier University of Louisiana, New Orleans, LA*

O66 Potential Association of Synaptotagmin IV (SYT4) with Schizophrenia
LeAnne Seal, *Virginia Commonwealth University, Richmond, VA*

O67 Catenin Signaling Controls Dedifferentiation during Zebrafish Caudal Fin Regeneration
Alan W. Gomez, *University of Oregon, Eugene, OR*

O68 Role of Klf2 in Mouse Atrioventricular Canal Development
Benjamin A. Koppenhaver, *Virginia Commonwealth University, Herndon, VA*

Session Moderator: ***Judith Venuti, Ph.D.,*** *Oakland University, Rochester, MI*

Oral Session 18: Engineering, Physics and Mathematics

Location: 212 D/B (Convention Center)

O69 The Effect of Oligonucleotide Length on Binding Affinity and Loading Stoichiometry with Amine-Functionalized Single-Walled Carbon Nanotube Platforms
Parmanand Dasrat, *City College of New York, Richmond Hill, NY*

O70 Increased Solute Permeability of an *In Vitro* Blood-Brain Barrier Model Exposed to Blast Overpressure
Syed F. Haider, *City College of New York, Flushing, NY*

O71 Implementation of a Wireless Body Area Network for Healthcare Monitoring
Ashenafi T. Lambebo, *University of the District of Columbia, Washington, DC*

O72 Engineering Macroporous Hydrogels with Internal Channels Using Stimuli-Responsive Microfibers
Joshua A. Hammer, *Arizona State University Tempe, AZ*

Session Moderator: ***Rebecca Hubbard, Ph.D.,*** *University of Washington, Seattle, WA*

Oral Session 19: Immunology

Location: Willow Glen I-III (Marriott)

O73 Characterizing Factors of the Melanoma Tumor Microenvironment Involved in Exhaustion of Natural Killer Cells
Tomas E. Meijome, *Indiana University-Purdue University Indianapolis, Greenwood, IN*

O74 The Role of Leucine Rich Repeat (in Flightless 1) Interacting Protein 1 in the Catenin Pathway
Melissa L. Spear, *The University of Texas-El Paso, El Paso, TX*

O75 Examining the Role of Hmgb1 in Vdj Recombination
Fabian Ortega, *Yale University, New Haven, CT*

O76 Survivin's Role in the Regulated Secretory Pathway for Insulin
Jessica Cardenas, *Mount St. Mary's College, Los Angeles, CA*

Session Moderator: ***Jayne S. Reuben, Ph.D.,*** *University of South Carolina, Columbia, SC*

Oral Session 20: Microbiology

Location: 210 D/H (Convention Center)

O77 *Leishmania amazonensis* Rhomboid Proteins: A Gene Characterization Study
Lauren Ware, *Lamar University, Beaumont, TX*

O78 Kinetic Studies of Phage Lambda Integrase-Mediated HJ Resolution
Steven Esquivel, *San Diego State University, San Diego, CA*

O79 Determining Reservoirs and Compartments of HIV-1
Cameron R. Adams, *University of Washington, Shoreline, WA*

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O80 Analysis of Natural Variation within the NS5b RNA Polymerase of the Hepatitis C Virus by Different Sequencing Methods
Veronica Ortiz, *University of California, Irvine, Irvine, CA*

Session Moderator: ***Patricia Baynham, Ph.D.,*** *St. Edward's University, Austin, TX*

Oral Session 21: Molecular and Computational Biology

Location: 211 D/B (Convention Center)

O81 Discovering Potentially Bioactive Peptides Participating in Novel Protein Hormone Signal Transduction Pathways
Fatoumata B. Diallo, *University of Massachusetts-Amherst, Dorchester, MA*

O82 Sequencing and De Novo Annotation of the Transcriptomes of *Botryococcus braunii* Races A and L for Creating Biofuels
Erik F. Andersen, *University of Arizona, Tucson, AZ*

O83 Sequence Determinants of Cbf1 Binding in *Saccharomyces cerevisiae*
Stephanie K. Pleasant, *Texas Tech University, Lubbock, TX*

O84 Metagenomic Analysis of the Lung Microbiome in Chronic Obstructive Pulmonary Disease
Misael Fernandez, *Florida International University, Miami Lakes, FL*

Session Moderator: ***Jeanette Papp, Ph.D.,*** *University of California-Los Angeles, Los Angeles, CA*

Oral Session 22: Neuroscience

Location: 210 A/E (Convention Center)

O85 The Inhibition of Neuronal Nitric Oxide Synthase (nnos) in the Dorsal Striatum: Effects on Active and Passive Avoidance Memory in Mice
Fatoumatta L. Ceesay, *Rust College, Memphis, TN*

O86 Contributions of Prefrontal Cortex, Hippocampus, Amygdala, and Accumbens to the Expression of Active Avoidance
Edith Brignoni-Pérez, *University of Puerto Rico-Río Piedras, Toa Alta, PR*

O87 Omega-3 Fatty Acid Consumption Is Associated with Higher Cognitive Performance in Overweight and Obese Adolescents
Naima Ross, *Yale University, New Haven, CT*

O88 Behavioral and Physiological Response to Forced Swim Stress Are Differentially Altered during Withdrawal Following Chronic Intermittent Ethanol Exposure in C57BL/6J Mice
Raechel McKinley, *North Carolina A&T State University, Greensboro, NC*

Session Moderator: ***Alejandro Sanchez Alvarado, Ph.D.,*** *University of Utah, Salt Lake City, UT*

Oral Session 23: Physiology

Location: 212 A/C (Convention Center)

O89 Red Diamond Back Rattlesnake Venom Proteins as Potential Therapeutic Agents for Cardiovascular Disease
Rachel E. Smith, *Central State University, Wilberforce, OH*

O90 Effect of Physical Fitness on Cardiovascular Reactivity to Acute Psychological Stress
Martin J. Gonzalez, *Virginia Commonwealth University, Fredericksburg, VA*

O91 Examining tRNA Hypomethylation and Its Role in Fetal Hemoglobin Regulation
Keon D. Wimberly, *Xavier University of Louisiana, New Orleans, LA*

O92 Amphetamine Regulation of the Inflammatory Response in Pulmonary Arterial Endothelial Cells
Sebastian U. Perez, *University of Puerto Rico-Rio Piedras, San Juan, PR*

Session Moderator: ***Basil Ibe, Ph.D.,*** *LA BioMed at Harbor-UCLA Medical Center, Torrance, CA*

Oral Session 24: Social and Behavioral Sciences and Public Health

Location: 230 B (Convention Center)

O93 Marijuana Use and Its Effects on Fear Inhibition
Alphonso G. Mills, *Morehouse College, Atlanta, GA*

O94 The Relationship between Intimate Partner Violence and Risky Sexual Behavior among Young African American Women with Mental Health Concerns
Sierra S. Batts, *Jackson State University, Jackson, MS*

O95 Early Language Skills Mediate the Relation between Preschoolers, ADHD Severity and Reading Achievement at 8 Years Old
Veronica J. Thornton, *Queens College, City University of New York, Brooklyn, NY*

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O96 An Examination of Lifestyle Practices of Jamaican Men with Prostate Cancer
Kimberly Martin, *Shaw University, Raleigh, NC*

Session Moderator: ***Cherrie B. Boyer, Ph.D.,*** *University of California-San Francisco, San Francisco, CA*

9:30 a.m. – 12:30 p.m. **Exhibits Open** — Location: Exhibit Hall 1 & 2

9:45 a.m. – 11:00 a.m. **POSTER SESSION 6 (F)**

11:15 a.m. – 12:30 p.m. **POSTER SESSION 7 (G)**

12:30 p.m. – 1:30 p.m. **Networking Lunch** — Location: Hall 3 (Convention Center)

1:00 p.m. – 4:00 p.m. **Exhibit Takedown**

1:30 p.m. – 2:30 p.m. **CLOSING KEYNOTE ADDRESS** — Location: Hall 3 (Convention Center)
Opportunity in an Era of Change

2:45 p.m. – 3:45 p.m. **CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS**
UNDERGRADUATE AND POSTBACCALAUREATE STUDENT SESSION

Session 1 — Location: Room 210 A/E & 210 B/F (Convention Center)

Graduate School Experience: My Personal Story
(Recommended for undergraduate, postbaccalaureate, and master's-level students)
Hear graduate students share their experiences in discussions that include goal setting, selecting a mentor, time management, and balancing academics and social life.
Speakers
To Be Determined

Session Moderator: ***Beronda Montgomery, Ph.D.,*** *Michigan State University, East Lansing, MI*

GRADUATE STUDENT/POSTDOCTORAL SCIENTIST SESSION

Session 2 — Location: Room 212 D/B (Convention Center)

Career Decisions: How to Find a Science Career that Fits YOU
(Recommended for doctoral graduate students and postdoctoral scientists)
Do you want to find a career that you'll enjoy and find rewarding? Of course! But how do you find the right path, especially when there are so many different directions scientists can follow in their careers? For instance, there are more than 50 doctorate-level career options in the biomedical sciences. See a list of these careers, while learning to select the best option for you, by attending this thought-provoking and interactive workshop! You will learn a logical, step-by-step process for exploring your career options and deciding which will provide the best fit for your own set of skills, values and interests. Attendees of this workshop are strongly encouraged to attend the "Achieving Your Goals" workshop immediately following this session.
Speakers
Bill Lindstaedt, M.S., *University of California-San Francisco, San Francisco, CA*
Phil Clifford, Ph.D., *Medical College of Wisconsin, Milwaukee, WI*

Session 3 — Location: Room 210 C/G & 210 D/H (Convention Center)

Leveraging Diversity to Increase Team Efficiency and Creativity
(Recommended for all attendees)
Are you able to effectively navigate your encounters with individuals of different races, cultures, or backgrounds from your own? Do your interactions result in different impacts from what you intended? This workshop will focus on the importance of self-awareness, empathy and other skills that help you engage in a process of intercultural development to more effectively navigate the complexity of human differences and similarities. In addition, you may learn some new things about yourself!
Speaker
T. Shá Duncan Smith, M.S.W., *Shá Smith's Simple Solutions, LLC, Ann Arbor, MI*

Continued on next page

Saturday, November 10, 2012

4:00 p.m. – 6:00 p.m. **CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS**

Session 1 Location: Room 212 D/B (Convention Center)

Achieving Your Goals: Goal-Setting Strategies for Scientific and Career Success

(Recommended for Graduate Students and Postdoctoral Scientists)

Do you ever promise yourself that you'll finish that paper, or improve your presentation skills, and then don't quite get around to it? Do you have trouble setting goals…and sticking to them? Survey data has shown that trainees in the biomedical sciences who create and follow a written plan are more likely to reach their research and career goals. In this hands-on workshop, we'll get you started on creating your annual Individual Development Plan (IDP) for completing projects and developing professional skills that you'll need for success. Through this process, you will learn principles for setting achievable goals, and strategies for ensuring that you'll follow through to success.

Speakers

Bill Lindstaedt, MS, *University of California-San Francisco, San Francisco, CA*
Phil Clifford, Ph.D., *Medical College of Wisconsin, Milwaukee, WI*

Session 2 Location: Ballroom I-III (Marriott)

ABRCMS Career Skills Development Café

This session is designed to help students gain a broad appreciation for career exploration and the job search process. In a small-group, round-table setting, students can bring specific questions to appropriate experts at the meeting. The career cafes will be coordinated by the NIH Office of Intramural Training & Education and ABRCMS and staffed by career experts attending the meeting. Topics include, but are not limited to:

- **LinkedIn for Networking:** Come with questions about how to use LinkedIn effectively for your career. We will explore creating your profile, getting introduced to others, finding connections, and finding the right groups.
- **Networking:** Everyone says networking is critical, but are you worried that you don't really know what that means or, even worse, that you don't know how to network effectively? Come with questions about networking strategies. We will explore identifying your networks, making connections, and having meaningful conversations and interactions.
- **Individual Development Plan (IDP) for Undergraduate Students:** An IDP is a tool that can improve and enhance your academic and professional achievements by establishing your goals, assessing your strengths and weaknesses, identifying skills needed to reach your goals, and ascertaining gaps in your portfolio that can impede your plans to reach those goals.
- **Resume or CV:** Are you confused about the difference between a resume and a CV and what is appropriate for school and/or job applications? Come get tips on putting your best foot forward in these critical school and job search documents.
- **Putting Together Your Industry Job Package:** At this table, we will discuss how to dissect a job ad and create a cover letter and resume that will help you shine in an industry job hunt.
- **Putting Together Your Academic Job Package:** Come talk with senior faculty about the critical components of a successful academic job search package. Participants will be provided with examples of successful academic job applications in research- and teaching-intensive institutions.
- **Writing Teaching Statements:** Do you want a career that involves substantial college teaching? Come talk with faculty about the critical teaching statement that is often a critical element of a successful job search packages. Participants will be provided with examples of successful teaching statements.
- **Finding Mentors and Being Mentored Effectively:** Everyone agrees that we all need multiple mentors to help us develop as scientists and professionals, but finding mentors and developing productive mentoring relationships can be difficult. Come discuss the ins and outs of mentoring, within and outside of the research environment.
- **Time Management/Balancing Our Academic and Personal Lives:** Everyone agrees that finding time for our work and personal lives is key, but there never seems to be enough hours in the day. Come share your struggles and strategies for finding balance and making choices with colleagues and mentors.
- **Community College Student Resources:** Come with questions about making the leap to a 4-year college and finding the resources you need to thrive, not just survive. We will discuss strategies for success in a variety of science majors.
- **How to Be Successful in a Summer Internship Program:** You went to the ABRCMS session on the importance of a summer research program, but maybe you still have some questions of how to be successful over the summer. At this table, we will help make sure you know how to integrate into the lab and understand the lab dynamics (like how you work with your direct supervisor and your faculty mentor).
- **Finishing Your Dissertation:** The end of graduate school seems like a flurry of activity. This session will help you identify and overcome roadblocks, such as working with your mentor, communicating with your committee, writing your dissertation while finishing experiments, and overcoming writer's block.

Saturday, November 10, 2012

- **Picking Your Thesis Lab:** This is one of the big decisions of your early scientific career – who to work with for the next few years. At this table, we will help you navigate what types of research groups will fit best, what questions to ask of new advisors, how to use your rotations wisely, and getting help if things go wrong.
- **Studying Tips for Tests:** The GRE, MCAT, and DAT, oh my! This group will discuss general tips and techniques to prepare for admission tests.

Moderator: ***Sharon L. Milgram, Ph.D.,*** *NIH Office of Intramural Training & Education, Bethesda, MD*

Speakers
C. Gita Bosch, Ph.D., *G. Bosch & Associates, Yorktown Heights, NY*
Shauna Clark, Ph.D., *NIH Office of Intramural Training & Education, Bethesda, MD*
Lori M. Conlan, Ph.D., *NIH Office of Intramural Training & Education, Bethesda, MD*
Luis Angel Cubano, Ph.D., *Universidad Central del Caribe, Bayamon, PR*
Christine Des Jarlais, Ed.D., *University of California-San Francisco, San Francisco, CA*
Lourdes Echegoyen, Ph.D., *University of Texas at El Paso*
Victoria H. Freedman, Ph.D., *Albert Einstein College of Medicine, New York, NY*
Maria F. Lima, Ph.D., *Meharry Medical College, Nashville, TN*
Darryl Murray, Ph.D., *NIH Office of Intramural Training & Education, Bethesda, MD*
Joel D. Oppenheim, Ph.D., *New York University, New York, NY*
Saundra Oyewole, Ph.D., *Trinity Washington University, Washington, DC*
Alex Schnoes, Ph.D., *University of California-San Francisco, San Francisco, CA*
Gayle Slaughter, Ph.D., *Baylor College of Medicine, Houston, TX*
Patricia Sokolove, Ph.D., *NIH Office of Intramural Training & Education, Bethesda, MD*
Andrea Stith, Ph.D., *University of Colorado, Boulder, CO*
Erica Suchman, Ph.D., *Colorado State University, Ft. Collins, CO*

Session 3 Location: Ballroom IV-VI (Marriott)

Speed App-ing: Strategies for Navigating the Graduate School Application Process

(Recommended for undergraduates and postbaccalaureates)

Start preparing your graduate applications by networking with grad admissions faculty at this interactive session. In small group discussions, you will explore the components for constructing a compelling graduate school application package. You will participate in four sessions and address these elements:

- Personal statements – What should I include or emphasize?
- Reference letters – Whom should I select and how can I assist them in writing my letters?
- Campus visits and interviews – How should I prepare and how can I strengthen my application during my visit?
- Making your decision – I have options now, but how do I make this important decision. It's not just about $$$.

Bring your ideas. Learn some new skills. Be prepared to sharpen your game plan for applying to graduate programs this fall!

Session Moderators:
Minnetta Gardinier, Ph.D, *University of Iowa, Iowa City, IA*
Jon Gottesman, Ph.D., *University of Minnesota, Minneapolis, MN*

Faculty Facilitators:
Steve Anderson, Ph.D., *Northwestern University, Chicago, IL*
John Augusto, Ph.D., *University of Kansas, Lawrence, KS*
Joe Bull, Ph.D., *University of Michigan, Ann Arbor, MI*
Rebecca Chan, Ph.D., *Indiana University, Indianapolis, IN*
Theresa Duello, Ph.D., *University of Wisconsin-Madison, Madison, WI*
Heide Ford, Ph.D., *University of Colorado, Denver, CO*
Traci Galbaugh, Ph.D., *Northwestern University, Evanston, IL*
Arthur Gutierrez-Hartmann, Ph.D., *University of Colorado, Denver, CO*
Mark Hannink, Ph.D., *University of Missouri, Columbia, MO*
Joel Hockensmith, Ph.D., *University of Virginia, Charlottesville, VA*
Richard Laugesen, Ph.D., *University of Illinois-Urbana Champaign, Urbana, IL*
David Sept, Ph.D., *University of Michigan, Ann Arbor, MI*
Kristen Sterba, Ph.D., *University of Arkansas for Medical Sciences, Little Rock, Arkansas*
Stephanie Watawich, Ph.D., *University of Texas-Houston, Houston, TX*
Denise Yates, Ph.D., *University of Illinois-Chicago, Chicago, IL*

Continued on next page

Saturday, November 10, 2012

6:00 p.m. – 7:30 p.m. **FREE TIME! FREE TIME! FREE TIME!**

7:30 p.m. – 9:30 p.m. **BANQUET, CONFERENCE WRAP-UP, AWARDS CEREMONY**

Conference Wrap-up Location: Hall 3 (Convention Center)
John Fitzgerald Gates, Ph.D., *Criticality Management Consulting, New York, NY*

Student Presentation Awards Ceremony Location: Hall 3 (Convention Center)

Concluding Remarks Location: Hall 3 (Convention Center)
Speaker
Clifford W. Houston, Ph.D., *University of Texas Medical Branch, Galveston, TX*

9:30 p.m. – 10:00 p.m. **Photo Session for ABRCMS Presentation Award Winners** Location: Room 230 A/B (Convention Center)

10:00 p.m. – 1:00 a.m. **Dance and Social (All Are Invited)** Location: Regency Ballroom (Fairmont Hotel)

Sunday, November 11, 2012

10:00 a.m. – 5:30 p.m. **Visit the Tech Museum**
ABRCMS has arranged a special discount for attendees who visit the Tech Museum on this day. See page 3 for details.

"The quality of the abstracts keep improving year after year."

ABRCMS Exhibitor

"The reports from our students are that they had an "eye opening" experience, learning from both the mentors and students present. They also loved the opportunity to meet with exhibitors to learn about future options."

Faculty, PD, Admin

Meet and Greet Speakers

Opportunity to meet one-on-one with speakers informally to gain in depth knowledge of their research and career pathway to success.

(See program book for speaker biographies)

Thursday, November 8, 2012 2:45 p.m. – 4:30 p.m.

Alfredo Torres, Ph.D.
University of Texas Medical Branch
The Dark *E. coli* Rises

Charlotte Vines, Ph.D.
University of Kansas, Kansas City
The Roles of CCR7 in Disease Processes

Miguel Vega-Sanchez, Ph.D.
University of California, Davis/ Joint BioEnergy Institute
Larry P. Walker, Ph.D.
Cornell University
From Fossils to Living Plants: Fuelling Our Future with Plant Biomass-Based Fuels

Grace Griesbach, Ph.D.
University of California, Los Angeles
David Okonkwo, M.D., Ph.D.
University of California, Los Angeles
Traumatic Brain Injury: Hope through Research

Kenneth P. McMartin, Ph.D.
Louisiana State University Health Science Center, Shreveport
Mechanistic Mining of Glycol-Induced Renal Toxicity in Order to Dig Up New Treatments

Annie Belcourt, Ph.D.
The University of Montana, Missoula, MT
Addressing American Indian Health Disparities through Science Practice and Collaborative Education

Kimberly D. Tanner, Ph.D.
San Francisco State University
Beyond Assessing Knowledge – Card Sorting, Superheroes, and Moving Towards Measuring Biological Expertise among Undergraduates

Debra Furr-Holden, Ph.D.
Johns Hopkins University
Biomapping in the Biomedical and Social Behavioral Sciences

Luis Echegoyen, Ph.D.
University of Texas at El Paso
Carbon Materials and Serendipity: the Inside (and Outside) Story

Friday, November 9, 2012 3:45 p.m. – 5:30 p.m.

Susan Blumenthal, M.D., M.P.A.
Health and Medicine Program, Center for the Study of Presidency and Congress
Global Health Program, Meridian International
Global Health Changes and Opportunities in the 21st Century: The Role of Science Diplomacy

James Hildreth, M.D., Ph.D.
University of California, Davis
The Role of Cholesterol in HIV Infection and Pathogenesis

Stacey Blake-Beard, Ph.D.
Simmons College
Strategies for Analyzing and Developing Your Network

Robert Duke, Ph.D.
University of Texas at Austin
How We Learn… and How We Don't

Sylvia Hurtado, Ph.D.
University of California, Los Angeles
Removing Barriers to STEM Completion: Using Research on STEM Student Experiences to Inform Better Educational Practice

Speaker Biographies

Conference Speakers

Ansley A. Abraham, Jr., Ph.D.

Ansley Abraham is director of the Southern Regional Education Board (SREB) State Doctoral Scholars Program in Atlanta, Georgia. Under Abraham's direction, the SREB has established a program that is part of a nationwide effort, the Compact for Faculty Diversity, to increase the number of minority Ph.D.'s and college faculties. The SREB State Doctoral Scholars Program is one of the nation's best documented and successful programs for producing minority Ph.D.s. Abraham has also completed two widely acclaimed studies on statewide assessment and placement standards and the need for developmental education for entering colleges students in the SREB region. As a result of his research, Abraham has published numerous articles and monographs and is often quoted by major newspapers around the country. Abraham earned his bachelor's degree in sociology and psychology, and his master's and doctoral degrees in sociology (with an emphasis on education and race/ethnic relations) from Florida State University. He has been a program specialist in the Florida Sate Department of Education and a management analyst in the Florida Governor's office.

Howard G. Adams, Ph.D.

Howard G. Adams is president and founder of H. G. Adams & Associates, Inc., a consulting company that provides a full range of career, personal, and professional development services to educational, governmental, and industrial organizations. Adams served as executive director of the National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc. (the GEM program), headquartered at the University of Notre Dame. He has written extensively in the areas of workforce development, student programs, mentorship program development, and program evaluation and has authored or coauthored more than 15 self-help guides and handbooks. Adams has received numerous awards and citations recognizing his work, including the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. In 1999, he was named a 20th Century Outstanding Educator by *Black Issues in Higher Education*. Before joining GEM, Adams was vice president for student affairs at Norfolk State University. Adams holds a bachelor's degree from Norfolk State University, a master's degree from Virginia State University, and a doctorate from Syracuse University.

John Augusto, Ph.D.

John Augusto is assistant dean in the Office of Research and Graduate Studies at the University of Kansas, overseeing the graduate application processing center for the main campus. He has more than 15 years of experience with graduate admissions. Augusto authored a study with the Educational Testing Service and the National Association of Graduate Admissions Professionals on student use of the Internet in selecting graduate programs.

Joseph Barbieri, Ph.D.

Joseph Barbieri received a doctorate in microbiology from the University of Massachusetts at Amherst and was a postdoctoral fellow at the University of California, Los Angeles, and Harvard Medical School. He joined the faculty in the Department of Microbiology and Molecular Genetics at the Medical College of Wisconsin in 1986. Barbieri studies the mode of bacterial toxin action, addressing the mechanisms that make these toxins lethal for the host. His research addresses how toxins recognize their substrates and enter host cells with translational studies to develop vaccines and diagnostics against bacterial pathogens. Barbieri has served as an editor for the American Society for Microbiology and trained four M.D.-Ph.D. students. He has been the director of the Medical Scientist Training Program at the Medical College of Wisconsin (M.D.-Ph.D.) since 2005 and serves on the Association of American Medical Colleges M.D.-Ph.D. Section Communications Committee.

Cynthia Bauerle, Ph.D.

Cynthia Bauerle is senior program officer in Precollege and Undergraduate Science Education at HHMI. Bauerle manages the HHMI Professors program, which provides competitive awards to top research scientists to conduct projects in science education. By training, she is a molecular biologist whose research has focused on cellular homeostasis and enzyme assembly in yeast. She has held faculty appointments at several primarily undergraduate-serving institutions, and has 20 years of experience in science education reform and curriculum development. Bauerle served on the science faculty at Hamline University from 1992 to 2005. In 1999 and 2000, she was awarded a Fulbright Senior Scholarship for her sabbatical project consulting for a national biotechnology training program at the University of Dar es Salaam in Tanzania. Most recently, she served as biology chair at Spelman College, where she also directed the college's HHMI Undergraduate Science Education program. Bauerle earned her undergraduate degree in biology from the University of Virginia and her doctorate in molecular biology from the University of Wisconsin-Madison.

Annie Belcourt, Ph.D.

Annie Belcourt (Otter Woman) is an enrolled tribal member of the Blackfeet, Chippewa, Mandan and Hidatsa Nations. Belcourt is an assistant professor and director of health disparities initiatives in the College of Health Professions and Biomedical Sciences at the University of Montana's Pharmacy Practice/Public and Community Health Science Departments. Her doctorate is in clinical psychology, and her research priorities include mental health disparities, trauma, posttraumatic stress reactions, risk, resiliency, suicide, and psychiatric disorder within the cultural context of American Indian communities. She has published in peer-reviewed journals, including *Psychological Bulletin*, *American Psychologist*, and *Educational and Psychological Measurement*.

Stacey Blake-Beard, Ph.D.

Stacy Blake-Beard is an associate professor at the Simmons College School of Management. She is also a faculty affiliate at the Simmons Center for Gender in Organizations. Previously, Blake-Beard was a faculty member at the Harvard University Graduate School of Education. She holds a bachelor's degree in psychology from the University of Maryland, College Park, and master's and doctoral degrees in organizational psychology from the University of Michigan. Her research focuses on the challenges and opportunities offered by mentoring relationships, and on how these relationships may be changing as a result of increasing workforce diversity. Her research led to a highly publicized study

on the growing importance of women mentors, and she also studies the dynamics of formal mentoring programs in both corporate and educational settings. Blake-Beard has published research on gender, diversity, and mentoring in several publications, including the *Journal of Career Development*, *Psychology of Women Quarterly*, and *Journal of Business Ethics*. She is a consultant for a number of organizations on issues of diversity, implementing formal mentoring programs and team building for organizations such as Chase Manhattan Bank, The Compact for Faculty Diversity, and PepsiCo.

Susan J. Blumenthal, M.D., M.P.A.

Named a top doctor in women's health by the *New York Times*, Rear Admiral Susan Blumenthal was a leading U.S. government health expert and spokesperson for over 20 years. Her distinguished previous positions include Assistant Surgeon General of the United States, (first ever) Deputy Assistant Secretary for Women's Health, Senior Global and e-Health Advisor for the U.S. Department of Health and Human Services, and Chief of the Behavioral Medicine and Basic Prevention Research Branch at the National Institutes of Health. Blumenthal currently directs the Health and Medicine Program at the Center for the Study of the Presidency and Congress, where she co-chairs the center's health commission and provides leadership on a national obesity prevention research initiative. Additionally, she is a clinical professor at Georgetown and Tufts Universities, chair of the Global Health Program at the Meridian International Center, public health editor of *The Huffington Post* and senior medical advisor at amfAR (the Foundation for AIDS Research). Throughout her extensive career, Blumenthal has worked to bring understudied health and science issues, including women's health, global health, obesity, and disease and violence prevention, to increased public and scientific attention. She is the recipient of numerous honors for her contributions to public health.

C. Gita Bosch, Ph.D.

C. Gita Bosch has 20 years of academic leadership experience and a seven-year background in laboratory biomedical research. As associate dean at both Mount Sinai School of Medicine and Memorial Sloan-Kettering Cancer Center, she has served as a minority student advocate for over 20 years. Bosch has also served on an American Association of Medical Colleges (AAMC) advisory group that looks at health disparities in biomedical research and the biomedical workforce in the nation. For almost 20 years, she has been collaborating with organizations that work with underrepresented undergraduate and graduate students such as ABRCMS, Society for Advancement of Chicanos and Native Americans in Science, and MHPF. Bosch currently serves on external advisory committees for the Postbaccalaureate Research Education Program (PREP) and the MARC and RISE programs. As an elected member of the steering committee of the AAMC GREAT Group, she founded and chaired the Gateway for Aspiring Biomedical Scientists Committee, which created and launched a resource website for trainees at all levels. Bosch has a long history of leading professional development workshops on topics that include applying to graduate school, interviewing, leadership, networking, writing, time management and communications skills. She has also served as a consultant for the Case Western Reserve University Office of Inclusion, Diversity and Equal Opportunity, helping guide the preparation of a diversity strategic action plan for the University, and for the Association of UNCF/Merck Fellows, helping to establish this professional association of African American biomedical scientists as a national presence.

Loretta Brancaccio-Taras

Loretta Brancaccio-Taras is a Professor and Chairperson of the Department of Biological Sciences at Kingsborough Community College (KCC) of the City University of New York in Brooklyn. She has a bachelor's degree in biology, a master's degree in biology and a doctorate in microbiology all from St. John's University. As a result of participating in ASM's Scholars-in-Residence program in 2005, she conducted a research study on using group writing assignments as a tool to improve student learning. At Kingsborough, Brancaccio-Taras works with faculty to develop classroom research projects through the Scholarship of Teaching and Learning Program offered through KCC's Center for Teaching and Learning. She is also co-PI on two NSF funded grants: an Advanced Technological Education grant which offers KCC students as well as high school teachers laboratory biotechnology experiences and a STEM Talent Expansion Program grant involving the implementation of peer led team learning to improve retention rates in introductory biology and chemistry courses. Brancaccio-Taras is active in ASM by serving as section editor for The Journal of Microbiology and Biology Education and as a member of the Biology Scholars Program Research Residency Steering Committee.

Lori Burge, B.S.

Lori Burge is a senior grants management specialist for the Center for Bioinformatics and Computational Biology and the MORE team of NIGMS. Burge joined the NIGMS grants management team in 2002, and as a senior specialist, she is responsible for a diverse portfolio of grant awards and has signatory authority to release NIH research grant awards. Before joining NIGMS, Burge was an accountant with the U.S. Department of Health and Human Services. Burge holds a bachelor's degree in accounting from the University of Maryland.

Lori M. Conlan, Ph.D.

Trained as a biochemist, Lori M. Conlan received her bachelor's degree in biochemistry from Michigan State University and her doctorate in biochemistry and biophysics from Texas A&M University. She worked for several years as a postdoc at the Wadsworth Center, New York State Department of Health, before transitioning from the lab to focus on career issues for the next generation of scientists. Conlan started as the director of the Science Alliance, an international career development program for graduate students and postdocs sponsored by the New York Academy of Sciences. She now is at the NIH Office of Intramural Training & Education, assisting the 4,000 NIH postdocs in their personal career choices. Conlan is the director of two offices, the NIH Office of Postdoctoral Services and the NIH Career Services Center. She speaks at universities and institutions around the nation on career development topics for young scientists. Additionally, she volunteers as a board member for the National Postdoctoral Association.

Continued on next page

Shawn Drew Gaillard, Ph.D.

Shawn Drew Gaillard is a program director at the NIH NIGMS, where she manages research and research training programs aimed at increasing the number of historically underrepresented populations for leadership positions in science. Drew also manages the biostatistics T32 training grants and the R01 research grants from the Biostatistical Methods and Research Design Study Section. Before her current position, Drew was director of the NIH Academy, an intramural postbaccalaureate research training program. She holds a bachelor's degree in chemistry from Spelman College and a doctorate in biology from Howard University. Drew conducted her doctoral dissertation research and postdoctoral work at the NIH National Institute of Diabetes and Digestion and Kidney Diseases.

Robert Duke, Ph.D.

Robert Duke is the Marlene and Morton Meyerson Centennial Professor and Head of Music and Human Learning at The University of Texas at Austin, where he is also University Distinguished Teaching Professor, Elizabeth Shatto Massey Distinguished Fellow in Teacher Education, and Director of the Center for Music Learning. The most recent recipient of the National Association for Music Education's Senior Researcher Award, Duke has directed national research efforts under the sponsorship of such organizations as the National Piano Foundation and the International Suzuki Institute. His research on human learning and behavior spans multiple disciplines, including motor skill learning, cognitive psychology, and neuroscience. He is the founder of the National Forum on Research in Motor Learning and Music, and his most recent work explores procedural memory consolidation and the cognitive processes engaged during musical improvisation. A former studio musician and public school music teacher, he has worked closely with children at risk, both in the public schools and through the juvenile court system. Duke lectures frequently on the fundamental principles of human learning and behavior change, presenting workshops and teaching demonstrations throughout North America.

Michael Eric Dyson, Ph.D.

Michael Eric Dyson is one of the nation's most influential and renowned public intellectuals. An American Book Award recipient and two-time NAACP Image Award winner, Dyson is presently University Professor of Sociology at Georgetown University where, in 2011, he received widespread attention for his course "Sociology of Hip-Hop: Jay-Z." In addition to Georgetown, he has taught at some of the nation's most prestigious universities – including Brown, Chapel Hill, Columbia and the University of Pennsylvania – and his influence has carried far beyond the academy into prisons and bookstores, political conventions and union halls, and church sanctuaries and lecture stages across the world. Dyson a contributing editor of *Time* magazine and his first book, 1993's *Reflecting Black: African American Cultural Criticism*, helped establish the field of black American cultural studies. As host of "The Michael Eric Dyson Show," a news and talk program on NPR, he delivers thoughtful analysis of today's biggest stories, from pop culture to race relations. His numerous other media appearances include *The Today Show*, *Nightline*, and *The O'Reilly Factor*. *Vanity Fair* has described him as "one of the most graceful and lucid intellectuals writing on race and politics today."

Lourdes Echegoyen, Ph.D.

Lourdes Echegoyen is director of the College Office of Undergraduate Research Initiatives at the University of Texas at El Paso. Previously she held positions as global education and exchanges manager in the Office of International Activities at the American Chemical Society and as a lecturer and undergraduate research coordinator at Clemson University. A native in Caracas, Venezuela, she has taught high school science and worked as a research associate at the University of Miami. Echegoyen holds bachelor's and doctoral degrees in chemistry from the University of Miami.

Luis Echegoyen, Ph.D.

Luis Echegoyen is the Robert A. Welch Chair Professor of Chemistry at the University of Texas at El Paso. Among his notable previous positions are director of the chemistry division at the National Science Foundation, where he was instrumental in establishing new funding programs and research centers, and professor and chair of chemistry at Clemson University, where he maintained a very active research program. Echegoyen has published around 300 research articles and more than 40 book chapters. He holds a bachelor's degree in chemistry and a doctorate in physical chemistry from the University of Puerto Rico, Rio Piedras. Echegoyen was a postdoctoral fellow at the University of Wisconsin-Madison, and has been continuously funded since the start of his academic career. He is proud to have directed the research of a very large number of undergraduate and graduate students in Puerto Rico, Miami, and Clemson, all of whom have gone on to successful academic, professional, and industrial careers. Echegoyen is the recipient of numerous honors for his contributions to chemistry research.

Mary Farrow, Ph.D.

Mary Farrow is a cofounder of two ventures dedicated to developing biological technologies for sustainable chemistry: the Instituto Tecnológico de Química Verde (ITQV), a research institute in Brazil, and Provivi, Inc., a biotech company in Los Angeles, California. Farrow holds a doctorate from Harvard University and a bachelor's degree from the Massachusetts Institute of Technology. She was a postdoctoral fellow at the California Institute of Technology. Farrow has received several fellowships and awards, including a UNCF Merck Postdoctoral Fellowship, a postdoctoral grant from the Gordon and Betty Moore Foundation, and the Harvard Graduate Prize Award for Minority graduate students.

Victoria H. Freedman, Ph.D.

Victoria H. Freedman is assistant dean for graduate studies at the Albert Einstein College of Medicine, overseeing all aspects of graduate training, including recruitment, admissions, curriculum and academic affairs, career development, and alumni tracking. She also directs the Summer Undergraduate Research Program and is developing a high school science intensive. Freedman was the recipient of a Helen Hay Whitney Postdoctoral Fellowship at The Rockefeller University, where she conducted research in tumor immunology and then moved on to studying the cellular immune response to tuberculosis infection. Her long-standing interest in

graduate education and graduate student training brought her to the position she holds today. Freedman holds a doctorate from the Albert Einstein College of Medicine.

Debra Furr-Holden, Ph.D.

Debra Furr-Holden is an epidemiologist by training, with expertise in drug and alcohol dependence epidemiology, psychiatric epidemiology, prevention science and psychosocial measurement. In the last decade, her work has focused in large part on developing environmental strategies for violence, alcohol, tobacco and other drug prevention in high-risk urban settings. In 2006, Furr-Holden received the Presidential Early Career Award for Scientists and Engineers for her career accomplishments in environmental research. She is the principal investigator of the Environmental Strategies for Alcohol, Tobacco and other Drug Prevention Study funded by the National Institute on Alcoholism and Alcohol Abuse and the developer of the environment assessment tool Neighborhood Inventory for Environmental Typology. While broad in scope, her research is grounded in the rubrics of epidemiology and psychometrics and consistent with principles and practices for understanding social determinants of health and health equity and health equality. Furr-Holden is director of the Drug Investigations, Violence and Environmental (DIVE) Studies Laboratory at the Johns Hopkins Bloomberg School of Public Health, co-director of the Johns Hopkins Center for the Prevention of Youth Violence, and a faculty member at the Hopkins Center for Health Disparities Solutions. In addition, she is co-chair of the Urban Health Institute's Community-University Collaborating Committee, an executive board member of Equity Matters Baltimore, and the consulting director of Prevention for the Baltimore Substance Abuse Systems.

Minnetta Gardinier, Ph.D.

Minnetta Gardinier is Associate Dean for Graduate Recruitment and Professional Development in the Graduate College at the University of Iowa. She holds a doctorate in biochemistry and molecular biology from Louisiana State University Medical Center. Gardinier conducted postdoctoral research at the Centre Hospitalier Universitaire Vaudois in Lausanne, Switzerland. Her research interests are in the areas of central nervous system myelination and molecular neurobiology. She is also an associate professor of pharmacology and the program director for the Molecular and Cellular Biology Training Program (funded by NIGMS). Gardinier oversees the Office of Graduate Ethnic Inclusion, directs the Professional Development Seminar Series and the Principles of Scholarly Integrity course, and interfaces with the Women in Science and Engineering and the Iowa Biosciences Advantage Programs. She also directs the University of Iowa McNair Scholars Program. Gardinier is committed to partnering with departments and programs to promote efforts that foster student success and greater inclusivity across our classrooms and research laboratories.

John Fitzgerald Gates, Ph.D.

John Fitzgerald Gates is a co-founder of Criticality Consulting Management Group. Before holding this position, he served as Associate Dean for Administration and Finance at Harvard College (the undergraduate division of Harvard University) and previously he was Special Assistant to the President and the Provost and Lecturer of Higher Education at the University of Vermont (UVM). At UVM, Gates advised the executive leadership, oversaw the Diversity and Equity Unit and university events, participated on the master planning counsel, and represented the university to the public. For nearly a decade prior, Gates served New York University (NYU) in numerous capacities, including as Executive Director of Global Operations with oversight of NYU campuses in Great Britain, Italy, the Czech Republic, and Argentina. He has also served NYU as Assistant Provost, Associate Director of the Africana Studies Program and the Institute of African-American Affairs, and Associate Director of the Faculty Resource Network. He is a fellow of the British-American Project and has served on numerous organizational boards. Gates holds a bachelor's degree in English from Morehouse College, a master's degree in higher education administration from NYU, and a doctorate degree in organizational leadership from the University of London.

Maisha Gray-Diggs, Ph.D.

Maisha Gray-Diggs has been employed with Procter & Gamble for 8.5 years. She spent 3.5 years in Baby Care R&D, and then 2.5 years in the Beauty Care Analytical Division. For the last 2.5 years, Gray-Diggs has served as the Doctoral Recruiting Manager, overseeing the talent acquisition strategy of Ph.D.s from U.S. institutions for global R&D full-time, postdoctoral, and intern roles. She obtained bachelor's and doctoral degrees in Materials Science and Engineering from MIT and Northwestern University, respectively. Gray-Diggs, a 2008 YWCA Rising Star, is an alumna of the Cincinnati USA Regional Chamber's Women Excel Leadership Program and the YWCA Rising Star Leadership Program. She was recognized as a member of Cincinnati's Business Courier's 2010 Forty Under 40 class and as a YMCA 2011 Adult Black & Latino Achiever. Because Gray-Diggs truly believes that to whom much is given, much is expected, she tutors high school students in math, science, and ACT/SAT and mentors undergraduate and graduate students in the STEM disciplines, providing them with both professional and personal coaching to help prepare them for a career in academia or the corporate world. She chairs the Board of Trustees for iSPACE, a 501c3 organization whose mission is to enhance STEM education in Greater Cincinnati, Northern Kentucky, and Southeast Indiana.

Grace S. Griesbach, Ph.D.

Grace Griesbach is an assistant professor in the Department of Neurosurgery at the University of California, Los Angeles (UCLA), David Geffen School of Medicine and a member of the university's Brain Injury Research Center. She received her doctorate in behavioral neuroscience under the training of Abram Amsel at the University of Texas at Austin. Griesbach completed her postdoctoral studies with David Hovda at UCLA. She discovered that exercise-induced increases in brain-derived neurotrophic factor were dependent on the post-injury time window. Currently, Griesbach is funded by the NIH to understand the influence of post-traumatic stress on rehabilitation. She has also served in multiple study sections.

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Carlos G. Gutiérrez, Ph.D.

Carlos G. Gutiérrez grew up in Los Angeles and was educated in its public schools. After receiving his bachelor's degree at the University of California, Los Angeles (UCLA), and his doctorate at University of California, Davis, he joined the faculty at California State University, Los Angeles (CSULA), where he is the University President's Distinguished Professor of Chemistry. Gutiérrez and his students design and synthesize molecules useful in understanding iron acquisition and transport in bacteria. He has administered research training programs at CSULA for three decades, including NIGMS MARC and MBRS RISE programs. In the past eight years alone, 55 CSULA MARC and RISE alumni have completed doctorates and 135 are currently in doctoral programs. Gutiérrez was named U.S. Professor of the Year by the Carnegie Foundation for the Advancement of Teaching in 2005 and is the recipient of numerous other honors, including the ACS 2006 Stanley C. Israel Award for Advancing Diversity in Chemistry, 2005 Education Award from the Hispanic Engineer National Achievement Award Corporation, 2004 AAAS Lifetime Mentor Award, and 1996 Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring. He is a senior fellow of the California Council on Science and Technology, an elected fellow of AAAS, and a lifetime National Associate of the National Academies of Science. His animated film "Antimatter," which he produced as an undergraduate at UCLA, received an academy award from the Academy of Motion Picture Arts and Sciences in 1973.

James E. K. Hildreth, M.D., Ph.D.

James Hildreth is dean of the College of Biological Sciences at University of California, Davis. He is also a tenured professor in the university's Department of Cellular and Molecular Biology and a professor in the School of Medicine's Department of Internal Medicine. In 1975, as undergraduate at Harvard University, Hildreth became the first African American Rhodes Scholar from Arkansas. At Oxford University in England, where he graduated with a doctorate in immunology, he studied the biology of cytotoxic T cells and became an expert in monoclonal antibody technology and cell adhesion molecules. He obtained his medical degree from the Johns Hopkins University (JHU) and became the JHU School of Medicine's first African American to earn full professorship with tenure in the basic sciences. Hildreth began research on HIV and AIDS in 1986. His research has been funded through NIH grants for almost two decades, and he is internationally recognized for demonstrating the importance of cholesterol in HIV infection. A primary focus of his current research is the development of a vaginal microbicide to block HIV transmission in women. Hildreth has published more than 90 scientific articles and is the inventor on 11 patents based on his research. He has trained several junior scientists (including 19 Ph.D. students) and is the recipient of numerous honors for his efforts related to mentoring, leadership and diversity and his contributions to biomedical and behavioral research

Clifford W. Houston, Ph.D.

Clifford W. Houston is a tenured professor at the University of Texas Medical Branch (UTMB), where he is also the Associate Vice President for Educational Outreach. In addition, he is the original holder of the Herman Barnett Distinguished Professorship in Microbiology and Immunology. Houston serves or has served on many boards in the Galveston, Texas, community. He was chairman of the University of Texas System Committee on the Advancement of Minorities and is cochair of the Galveston County Science Fair. Houston has received numerous awards for his work in the community, including the UTMB Kempner Award, the Martin Luther King, Jr., Service Award, and the Presidential Award for Science, Math, and Engineering Mentoring. Funding to support the many programs and activities of Houston's office comes from the National Science Foundation, the Howard Hughes Medical Institute, the Harris and Eliza Kempner Fund, the National Institutes of Health, and the Houston Livestock Show and Rodeo as well as the UTMB President's Cabinet Award. Houston is a past president of the American Society for Microbiology (ASM) and a past chairperson of the ASM Education Board.

Sylvia Hurtado, Ph.D.

Sylvia Hurtado is a professor in the Graduate School of Education and Information Studies and Director of the Higher Education Research Institute at the University of California, Los Angeles. Hurtado has written over 100 publications focused on student development in college, sociology of education, and diversity in higher education. She is known for her publications on the campus climate as it affects different racial/ethnic groups, and has co-authored several books including *Enacting Diverse Learning Environments*, *Intergroup Dialogue*, and *Defending Diversity*. Hurtado is a past president of the Association for the Study of Higher Education. *Black Issues in Higher Education* (now *Diverse* magazine) named her among the top 15 influential faculty who personify scholarship, service and integrity and whose work has had substantial impact on the academy. Hurtado has conducted several national projects on diverse learning environments and retention, diversification of the scientific workforce, preparing students for a diverse democracy, and innovation in undergraduate education. She holds a bachelor's degree in sociology from Princeton and master's and doctoral degrees from Harvard and the University of California, Los Angeles, respectively.

Mary Sanchez Lanier, Ph.D.

Mary Sanchez Lanier is an associate dean in the College of Sciences and a professor of microbiology at Washington State University (WSU). Lanier did her postdoctoral training at the Centers for Disease Control. Following that, she accepted a faculty position at WSU. Lanier's research focuses on the pathogenesis of viruses in their interactions with humans; she has studied the role of influenza virus in Reye's syndrome and the immunosuppressive effects of measles virus. Lanier chairs the American Society for Microbiology (ASM) Committee on Minority Education and is past chair of the review committees for the ASM Robert D. Watkins Graduate Research Fellowship and the ASM Microbiology Undergraduate Research Fellowship. She is also a reviewer for the Barry M. Goldwater Scholarship and Excellence in Education Program.

Bill Lindstaedt, M.S.

Bill Lindstaedt has been helping scientists and engineers make career decisions for nearly 20 years. He is the director of the Office

of Career and Professional Development at the University of California, San Francisco (UCSF). In addition to his administrative responsibilities at UCSF, his career-advising work focuses on helping predoctoral and postdoctoral research scientists with career and professional development issues. Lindstaedt has developed particular expertise working with life and health scientists as they transition from academic positions to careers in biotech and other non-academic settings. He holds a bachelor's degree in chemical engineering from Rose-Hulman Institute of Technology and a master's degree from the joint Counseling Psychology and Higher Education/Student Affairs programs at Indiana University. Prior to coming to UCSF in 2001, Lindstaedt's career-counseling experience included work with engineering and science students at Case Western Reserve University and Rose-Hulman Institute of Technology.

Michael Mace, M.A.

Michael Mace is a grants management specialist with the NIH NIGMS MORE Division/Center for Bioinformatics and Computational Biology (CBCB) team. He joined NIGMS in 2005 and manages the business and fiscal aspects of a portfolio of grants in the MORE Division, which administers research and research training programs aimed at increasing the number of minority biomedical and behavioral scientists through three branches and the CBCB. Mace holds a bachelor's and master's degrees in Social and Public Policy from Georgetown University.

Victoria McGovern, Ph.D.

Victoria McGovern, senior program officer at the Burroughs Wellcome Fund (BWF), runs the Institutional Program Unifying Population and Laboratory Based Sciences as well as the BWF assistant professor-focused career development program in infectious diseases. She has long been involved in science policy efforts related to strengthening the scientific workforce, an interest she continues at BWF. McGovern's scientific work centered around chromosome structure and infectious diseases, and she maintains a continuing interest in the functional analysis and structure of whole genomes, including by managing BWF investments in pathogen genomics and post-genomics. McGovern earned bachelor's degrees in biology and in English literature at Washington University and a doctorate in biochemistry at the University of Alabama at Birmingham. She has taught courses ranging from biochemistry to bioinformatics at Birmingham Southern College, the University of North Carolina at Charlotte, and Davidson College. She is a member of the National Postdoctoral Association's advisory board and is the chair of the Sigma Xi Committee on the Public Understanding of Science. Macrina joined the BWF in 1997.

Kenneth E. McMartin, Ph.D.

Kenneth E. McMartin is a professor in the Department of Pharmacology, Toxicology and Neuroscience at Louisiana State University Health Sciences Center. He holds a bachelor's degree in chemistry from Coe College (Cedar Rapids, Iowa) and a doctorate in pharmacology from the University of Iowa. He was a postdoctoral fellow at the Karolinska Institute in Huddinge (Stockholm), Sweden. McMartin and colleagues recently made the surprising finding that a heretofore unknown metabolite of diethylene glycol – diglycolic acid – is the toxic metabolite responsible for the kidney failure. They are now analyzing its mechanism of toxicity and testing several ideas for drug therapies. He was selected as a fellow of the American Academy of Clinical Toxicology in 2009 and his other honors include the Kenneth Morgareidge Award in Toxicology (1988) and the Society of Toxicology Translational Impact Award (2010).

Sharon L. Milgram, Ph.D.

Sharon Milgram received a doctorate in cell biology and anatomy from Emory University in 1991 and completed postdoctoral work at The Johns Hopkins University before joining the faculty at The University of North Carolina at Chapel Hill. She is currently the director of the Graduate Partnerships Program and the Office of Intramural Training and Education at NIH, where she also runs an active research lab in the NIH Intramural Program. Milgram teaches and advises young scientists and has served on the admissions committees for several Ph.D. and M.D./Ph.D. programs.

Beronda Montgomery, Ph.D.

Beronda Montgomery is an associate professor in the Department of Biochemistry and Molecular Biology and the Department of Energy Plant Research Laboratory at Michigan State University. She earned her undergraduate degree in biology from Washington University in St. Louis, her master's degree at the University of Central Arkansas and her doctorate in plant biology from the University of California, Davis. Montgomery's research interests center on understanding the dynamic molecular processes utilized by photosynthetic organisms, including plants and cyanobacteria, for adapting to changes in their photoenvironment. She was awarded an NSF postdoctoral fellowship for her postdoctoral studies at Indiana University, and in 2007 she was awarded an NSF CAREER Award, the agency's most prestigious in support of junior faculty within the context of their overall career development. Montgomery actively trains undergraduates, graduate students and postdoctoral scientists in her own research group and is also involved in broader efforts to support and mentor individuals from groups who are underrepresented in the sciences.

David O. Okonkwo, M.D., Ph.D.

David Okonkwo is assistant professor and director of neurotrauma and director of spinal deformity at University of Pittsburgh Medical Center Presbyterian and clinical director of the Brain Trauma Research Center of the University of Pittsburgh. His clinical interests are traumatic injuries to the brain and spine as well as scoliosis and spinal deformity. Okonkwo's research involves developing novel therapeutic interventions for brain and spinal cord injury. He has published more than 60 papers in peer-reviewed journals, authored numerous book chapters, and garnered several awards for his scientific research. He is an editorial board member of *Neurosurgical Focus* and an ad hoc reviewer for the *Journal of Neurotrauma*, *Journal of Neurosurgery*, *Developmental Neuroscience*, and *Experimental Neurology*. Okonkwo completed his undergraduate work at the University of Virginia and his medical and doctoral education at the of Virginia Commonwealth University's Medical College of Virginia.

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Joel D. Oppenheim, Ph.D.

Joel Oppenheim holds a bachelor's degree in zoology and genetics from the University of Wisconsin and master's and doctoral degrees in medical microbiology from Loyola University School of Medicine. He was an NIH postdoctoral fellow at the New York University (NYU) School of Medicine in the Department of Microbiology. Oppenheim first served on the NYU School of Medicine faculty as an assistant professor and then as an associate professor of microbiology for more than 20 years. In 1994, he was appointed associate dean for graduate studies and director of NYU's Sackler Institute of Graduate Biomedical Sciences. Recently he was promoted to senior associate dean of the medical school. Oppenheim serves on the NYU School of Medicine's M.D. and M.D./Ph.D. admissions committees, and he chairs the Ph.D. admissions committee. He founded and directs the NYU Summer Undergraduate Research Program. Oppenheim is an active member of the American Society for Microbiology (ASM) and has served on a number of ASM committees. He is active in the Leadership Alliance and serves on the steering committee of the Group on Graduate Research, Education, and Training of the Association of American Medical Colleges.

Saundra Herndon Oyewole, Ph.D.

Saundra Herndon Oyewole is a professor of biology at Trinity Washington University. A member of the Trinity faculty since 198l, Oyewole has had the distinction of holding the Clare Boothe Luce Professorship in Biology and has served in a number of leadership roles at Trinity, including Dean of the College of Arts and Sciences, Dean of the Faculty, Chair of the Biology Department and founding Director of Trinity's Post-Baccalaureate Premedical Certificate Program. Prior to joining Trinity, Oyewole was an associate professor of microbiology at Hampshire College. A highlight of her career has been her service as a program director in the Division of Undergraduate Education at the National Science Foundation (1994-96). Recently, the President of the Association of American Medical Colleges appointed Oyewole to the committee conducting the Fifth Comprehensive Review of the Medical College Admissions Test. Oyewole has served as vice chair of the Board of Directors of the Aspen Institute Wye Faculty Seminar and as founding co-chair of the Committee on Minority Affairs of the National Association of Advisors for the Health Professions (NAAHP). She is a past president of NAAHP and has served on the NAAHP Board of Directors for nine years. Oyewole has served on the American Society for Microbiology (ASM) Committee on the Status of Minority Microbiologists and as chair of the ASM Committee on Minority Education. A Phi Beta Kappa graduate of Howard University with a bachelor's degree in zoology, magna cum laude, Oyewole earned her master's degree in microbiology at the University of Chicago and her doctorate in microbiology at the University of Massachusetts, Amherst.

Shelley Payne, Ph.D.

Shelley Payne received her undergraduate degree from Rice University in 1972 and completed her doctorate in microbiology at Southwestern Medical Center in 1977. She was a postdoctoral fellow with Bruce Ames at the University of California at Berkeley from 1977 to 1980. Payne joined the microbiology department (now molecular genetics and microbiology) at the University of Texas at Austin in 1980 and is now a professor in the department. She served as chair of the department from 1993 to 1997 and was named University Distinguished Teaching Professor in 2000. Payne's research interests are in the area of bacterial pathogenicity, specifically the role of iron transport and metabolism in infections caused by enteric pathogens. She is an editor for *Infection and Immunity* and a member of the *Molecular Microbiology* editorial board. She teaches a variety of courses, ranging from freshman biology and genetics to a graduate course in molecular biology of pathogens. Payne has been a member of grant review panels for the NIH and NSF, and she served as a member of the National Institute for Allergy and Infectious Diseases Council. Payne is married and has one son.

Christine Pfund, Ph.D.

Christine Pfund earned her doctorate in cellular and molecular biology, followed by postdoctoral research in plant pathology, at the University of Wisconsin-Madison. Currently, Pfund is the associate director of the Delta Program in Research, Teaching, and Learning. Through her work with both the Delta Program and formerly with the Wisconsin Program for Scientific Teaching, Pfund is focused on preparing current and future faculty to be effective teachers and research mentors. Over the past nine years, she has been integrally involved in developing, implementing, documenting, and evaluating a training seminar for research mentors. She has co-authored a manual, *Entering Mentoring*, for facilitators of this seminar and co-authored a paper documenting the effectiveness of this approach. Pfund has also led a project to adapt and enhance *Entering Mentoring* for use across STEM disciplines and develop parallel training for mentees. Most recently, she led an effort to adapt the research mentor training curriculum for use with clinical and translation science award mentors. Pfund is currently involved in a randomized research study to test the impact of research mentor training on both mentors and mentees and a study to develop a better understanding of specific factors in mentoring relationships that account for positive student outcomes.

Jeff Poet, Ph.D.

Jeff Poet is an associate professor of mathematics at Missouri Western State University (MWSU). He has collaborated with MWSU biology colleague Todd Eckdahl, Davidson College biology colleague Malcolm Campbell, and Davidson College mathematics colleague Laurie Heyer since 2006 to mentor interdisciplinary undergraduate synthetic biology research teams. Specifically, the four have mentored six groups of undergraduates in the design, construction, and testing of prototype bacterial computers — *E. coli* that solve math problems. The four are members of Genome Consortium for Active Teaching (GCAT), have facilitated synthetic biology workshops for faculty in 2010 and 2011, and will be the co-facilitators of the GCAT Synthetic Biology Workshops in 2012, 2013, and 2014.

Roberta Pokphanh, Ph.D.

Roberta Pokphanh is program coordinator for graduate student professional development in the Office of Graduate Studies at the University of Kansas (KU). She works with university departments and graduate student organizations to develop professional development training suited to the diversity of disciplines at KU,

and with faculty applying for federally funded training grants. Pokphanh received her doctorate from the University of Kansas in 2009.

Clifton A. Poodry, Ph.D.

Clifton A. Poodry is Director of the Minority Opportunities in Research Division at the National Institute of General Medical Sciences (NIGMS), National Institutes of Health (NIH). Poodry is responsible for developing and implementing NIGMS policies and plans for minority research training programs. He also serves as a liaison between NIGMS and NIH, other federal agencies, and the scientific community. Before assuming this position in April 1994, Poodry was a professor of biology at the University of California, Santa Cruz, and the principal investigator on a $1 million Howard Hughes Medical Institute grant for undergraduate biological sciences. He serves on several advisory boards (including those for the Headlands Indian Health Careers Program of the University of Oklahoma, the American Indian Science and Engineering Society, and the Society for the Advancement of Chicanos and Native Americans in Science [SACNAS]), and the advisory committee on Minority Science Education of the American Association for the Advancement of Science. Poodry is also a founding member of Open Mind, an association for the achievement of cultural diversity in higher education. He is a native of the Tonawanda Seneca Indian Reservation. Poodry earned both bachelor's and master's degrees in biology at the State University of New York at Buffalo and holds a doctorate in biology from Case Western Reserve University. He received the Ely S. Parker Award from the American Indian Science and Engineering Society for Contributions in Science and Service to the American Indian Community in 1995 and the Distinguished Professional Mentor Award from SACNAS in 2004.

Jason Rao, Ph.D.

Jason Rao recently joined the American Society for Microbiology (ASM) as director of International Affairs. Prior to his arrival at ASM, Rao was senior policy advisor for global science engagement in the White House Office of Science and Technology Policy, where his responsibilities included President Obama's Global Engagement initiative aimed at renewing science and technology partnerships. Rao also served in the U.S. Department of State, where he worked on a range of foreign assistance initiatives and global threat reduction programs to enhance global health security and scientific cooperation. During that time, Rao launched the Biosecurity Engagement Program, leading the expansion of the next generation of cooperative threat reduction programs across South and Southeast Asia as well as the Middle East, Africa, and Latin America. Rao holds a doctorate in biochemistry, cellular and molecular biology from The Johns Hopkins University School of Medicine and earned his bachelor's degree in synthetic organic chemistry from the University of California, Santa Cruz.

Jayne Reuben, Ph.D.

Jayne Stewart Reuben is Clinical Associate Professor in the Department of Biomedical Sciences at the University of South Carolina School of Medicine in Greenville (USCSOM). Prior to joining the USCSOM faculty in September 2011, Dr. Reuben was an Assistant Professor in the Deparment of Biomedical Sciences at Baylor College of Dentistry—a component of the Texas A&M Health Science Center. She is the third-year medical pharmacology course director in addition to lecturing in graduate pharmacology and in the summer predental program. Dr. Reuben is a member of the FASEB/MARC Advisory Board and the Diversity Committee for the National Postdoctoral Association (NPA). She was elected to the NPA Executive Board during her postdoctoral training at the University of Michigan in the Department of Pathology. Dr. Reuben earned her doctorate in Pharmaceutical Sciences with a specialization in Pharmacology and Toxicology from Florida Agricultural and Mechanical University (FAMU). She is the recipient of awards and fellowships from many organizations including UNCF-MERCK, the American Foundation of Pharmaceutical Education, the Delores A. Auzenne Foundation, and the FAMU Faculty Development Program. Dr. Reuben has worked as an instructor and curriculum adviser for Stanley H. Kaplan, Inc., and as a biologist in the Neuroimmunology branch at the NINDS. At Baylor, Dr. Reuben will study the effect of bisphosphonate-associated jaw osteonecrosis in addition to investigating neuroimmune mechanisms of lung and temporomandibular joint injury.

Justin Rosenzweig, M.P.A.

Justin Rosenzweig is a grants management specialist with the NIH NIGMS MORE Division/Center for Bioinformatics and Computational Biology (CBCB) team. He joined NIGMS in 2004 and manages the business and fiscal aspects of a portfolio of grants in the MORE Division and the CBCB. Rosenzweig holds a bachelor's degree in political science from the University at Albany, SUNY, and a master's degree in public administration from the American University.

Nancy B. Schwartz, Ph.D.

Nancy Schwartz is director of the Kennedy Mental Retardation Research Center at the University of Chicago, where she is also a professor in the Departments of Pediatrics and Biochemistry and Molecular Biophysics. Schwartz is active on the university's developmental biology and molecular medicine committees, as well as in numerous institutional, governmental, and national boards and organizations. These include NIH, the Association of American Medical Colleges, and the National Postdoctoral Association. She is the recipient of an Arthritis Foundation Fellowship and an American Heart Association Investigatorship, along with NIH Merit, Research Career Development, and Mentor of Excellence Awards. Schwartz holds bachelor's degrees in chemistry and master's and doctoral degrees in biochemistry from the University of Pittsburgh.

Kennie Shepherd, Ph.D.

Kennie Raviie Shepherd is an Assistant Professor in the department of Pharmacology and Toxicology at Morehouse School of Medicine, Atlanta, Georgia. He received his Ph.D. in toxicology from Florida A & M University (FAMU). At FAMU, he found that two pesticides, paraquat and methyl parathion, increased methylation and induced biochemical and behavioral deficits similar to those seen in Parkinson's disease (PD). He completed a postdoctoral fellowship in the department of Developmental Neurobiology under Richard Smeyne. At St. Jude, he received training in

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neurogenetics, and studied mouse strain susceptibilities to the experimental PD-inducing agent, MPTP. He then completed a second postdoctoral fellowship at Emory University, Atlanta, GA, under Gary Miller in the department of Environmental Health and the Center for Neurodegenerative Disease. At Emory, he studied how reduced expression of vesicular monoamine transporters alters glia cell populations, and subsequent susceptibility of dopamine neurons to experimental Parkinson's agents. Dr. Shepherd is a member of the Society for Neuroscience, Society of Toxicology, the American Society for Neurochemistry and the American Society for Pharmacology and Experimental Therapeutics. He has served as a reviewer for several journals including Brain Research, Developmental Brain Research, Molecular Brain Research, Neurotoxicology, Toxicology and Applied Pharmacology, and Neurochemical Research.

Gayle Slaughter, Ph.D.

Gayle Slaughter served as president and for six years as a board member of the Louisiana Junior Academy of Sciences. Slaughter received a bachelor's degree in chemistry from Northwestern State University of Louisiana and a doctorate from the Department of Biochemistry and Biophysics at Iowa State University. Her postdoctoral fellowship at Baylor College of Medicine was supported by an NIH National Research Service Award. Slaughter was promoted to assistant professor of cell biology at Baylor College of Medicine and continued her studies of gene expression during spermatogenesis with an R01 grant from the National Institute of Child Health and Human Development. She has been the principal investigator on more than $20 million in national grants to educate scientists and is a recipient of the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring. Slaughter is senior associate dean of Graduate Education and Diversity for the Graduate School of Biomedical Sciences and a professor of molecular and cellular biology at Baylor College of Medicine. She has become very involved in issues of training young scientists, especially those from disadvantaged and underrepresented populations. More than 2,000 college students from across the nation have participated in the Summer Medical and Research Training (SMART) Program. The SMART GRE Prep Course that Slaughter developed led to the book *Beyond the Beakers: SMART Advice on Entering Graduate Programs in the Sciences and Engineering.* Slaughter has served on the program committee for the Society for Advancement of Chicanos and Native Americans in Science, the conference organizing committee for ABRCMS, and the Advisory Board for the National Human Genome Research Institute's Minority Action Plans.

Susan F. South, M.P.A.

Susan South is a grants management specialist with the NIH NIGMS MORE Division/Center for Bioinformatics and Computational Biology (CBCB) team. She joined the NIGMS in 2009 as a fellow in the NIH Administrative Fellows Program. South manages the administrative and fiscal aspects of grants in the MORE Division and the CBCB. Prior to joining NIGMS, she worked as a program coordinator for the Office of Sponsored Programs at the Virginia Commonwealth University School of Medicine. She holds a bachelor's degree in anthropology and english, as well as a master's degree in public administration from Virginia Commonwealth University.

Michael Stephens, M.P.H.

Michael Stephens joined the Association of Schools of Public Health (ASPH) as Director of Policy in March 2010. In this role, he is responsible for efforts to enhance the partnership of the 49 accredited schools of public health with the federal government. He coordinates the association's policy activities, including supervision of the ASPH advocacy program, and is a liaison to other organizational partners who share ASPH's public health education, practice and research goals. Prior to joining ASPH, Stephens served as senior staff to the U.S. House of Representatives Appropriations Committee for over 30 years. This included service as clerk and staff director of 4 of the Committee's 12 subcommittees. He served eight years, from 1987 to 1995, as the clerk of the Labor, HHS and Education Subcommittee, where he had budget oversight responsibility for the National Institutes of Health and the Department of Education. From 2000 through 2009, he served as minority and majority clerk of the Interior Subcommittee, with oversight responsibility for the National Park Service, the Environmental Protection Agency and the National Endowments for the Arts and the Humanities. Stephens has a bachelor's degree from Duke University and a master's degree in public health from the University of North Carolina. In addition to his legislative career, he served on active duty in the U.S. Marine Corps from 1968 to 1971 and in the Marine Corps Reserves until 1993 when he separated as a lieutenant colonel. He is married to Sharman Stephens and has three children, David, Julie and Sarah.

Andrea L. Stith, Ph.D.

Andrea Stith is the new assistant director for interdisciplinary education at University of Colorado BioFrontiers Institute. Her professional interests include graduate and postdoctoral education, interdisciplinary science, broadening participation in STEM, and the internationalization of higher education. She served as a research fellow at the Graduate School of Education of Shanghai Jiao Tong University in Shanghai, China. While in Shanghai, Stith's research focused on national and institutional policies that impact the career prospects of postdoctoral researchers. Previously, she studied science and technology and higher education policies as a German Chancellor Fellow at Humboldt University in Berlin and Ludwig Maximilians University in Munich. Prior to her fellowship, Stith held program management positions at nonprofit organizations in the Washington, DC, area, including the Howard Hughes Medical Institute and the Federation of American Societies for Experimental Biology. In 2002-2003 she was an AAAS/NSF Science and Technology Policy Fellow in the Office of Legislative Affairs at the National Science Foundation. Stith received her doctorate in biophysics from the University of Virginia, and her bachelor's degree in physics from the University of Delaware. She has served as a board member of the Association for Women in Science.

Kimberly Tanner, Ph.D.

Kimberly Tanner, Ph.D., is an associate professor of biology at San Francisco State University (SFSU). Hired in January 2004 as a Biology Education Researcher, Dr. Tanner trained as a sensory neurobiologist prior to pursuing a career in science education through an NSF postdoctoral fellowship in science education (PFSMETE) and senior staff positions at the UCSF Science and Health Education Partnership (SEP). Since joining the SFSU faculty, Dr. Tanner has established SEPAL: The Science Education Partnership and Assessment Laboratory, her laboratory, which offers formal courses, partnership programs, and research opportunities to undergraduate students, graduate students, faculty, and local K-12 teachers interested in improving science education. Her research group addresses three main lines of inquiry: 1) understanding the novice-to-expert transition among undergraduate biology majors, 2) developing novel assessment approaches to revealing student conceptions in science, and 3) evaluating the effectiveness of approaches to promoting equity in science. In addition, she collaborates with research colleagues on conceptualizing and investigating Science Faculty with Education Specialties (SFES) in the U.S. She is Principal Investigator on NSF-funded GK-12, TUES, and CAREER awards, as well on an NIH Science Education Partnership award. Dr. Tanner is a founding member of the Editorial Board for CBE: *A Journal of Life Sciences Education* and has served on committees and panels for the National Research Council, the Society for Neuroscience, and the American Society for Cell Biology, as well as NSF and NIH. She was recently named the 2011-12 Outstanding Undergraduate Science Teacher Award by the Society for College Science Teachers and recently elected a Fellow of the California Academy of Sciences.

Alfredo Torres, Ph.D.

Alfredo Torres is a professor at the University of Texas Medical Branch. He has extensive experience in topics related to microbial pathogenesis, food safety, therapeutics, and vaccine development. His major research interests includes the elucidation of the mechanisms used by pathogenic *Escherichia coli* to adhere and colonize the intestinal epithelia and the characterization of the pathogenic mechanisms of *Burkholderia mallei* and *Burkholderia pseudomallei*, with the goal of developing suitable vaccines and therapeutics. He is a member of the ASM Committee on Graduate and Postdoctoral Education, an associate editor for Frontiers, and an editorial board member of *Infection and Immunity*.

Paul Turner, Ph.D.

Paul Turner received his Ph.D. in 1995 from the Center for Microbial Ecology, at Michigan State University. He was a postdoc at the National Institutes of Health, University of Valencia in Spain, and University of Maryland, College Park. Dr. Turner is currently Departmental Chair of Ecology and Evolutionary Biology at Yale University, and faculty member in the Microbiology Graduate Program at Yale School of Medicine. Dr. Turner has served as Councilor for the American Society for Microbiology and American Genetic Association, and associate editor for various scientific journals. Dr. Turner's group conducts basic research on microbial evolution, often harnessing viruses as model systems to study mechanisms of evolutionary change.

Tim Turner, Ph.D.

Tim Turner currently serves as both director of fellowships and research opportunities at the American Society for Engineering Education (ASEE) and director of the GRF Operations Center. He provides executive management of all ASEE fellowship and internship programs. For over 20 years, he has managed educational programs sponsored by U.S. Dept. of Defense (DOD), NASA and NSF. These programs provide research opportunities and financial support for high school students, undergraduates and graduate students to participate in summer research programs at the DOD laboratories; undergraduate and graduate research fellowships funded by NSF, NASA and DOD; postdoctoral research programs in government and industrial settings; and faculty research programs at DOD sites during the summer. Turner has been with ASEE since 1986.

Miguel Vega-Sánchez, Ph.D.

Miguel Vega-Sánchez is a research scientist at Lawrence Berkeley National Laboratory and deputy director of grass genetics at the Department of Energy's Joint BioEnergy Institute in Emeryville, CA. Vega-Sánchez is a plant molecular geneticist with expertise in grass cell wall biology. His research interests include a better understanding of how plant cell walls are synthesized and modified in order to generate crops more suitable for the production of cellulosic biofuels.

Charlotte M. Vines, Ph.D.

Charlotte Vines is an assistant professor in the Department of Microbiology, Molecular Genetics and Immunology at the University of Kansas Medical Center. Vines holds a doctorate from Harvard University, and as a postdoctoral scientist, she learned how G protein-coupled receptors regulate ß2-integrin-mediated adhesion of monocytes. Her research focus is understanding the regulation of trafficking and cellular signaling events, which occur in response to stimulation of the CCR7 G-protein-coupled receptor. The Vines lab has developed both *in vitro* and *in vivo* models to define differential signaling events that respond to ligation of CCR7 with CCL19 and CCL21. Their research findings have been published in the *Journal of Biochemistry* and *Journal of Immunology* among others.

Larry P. Walker, Ph.D.

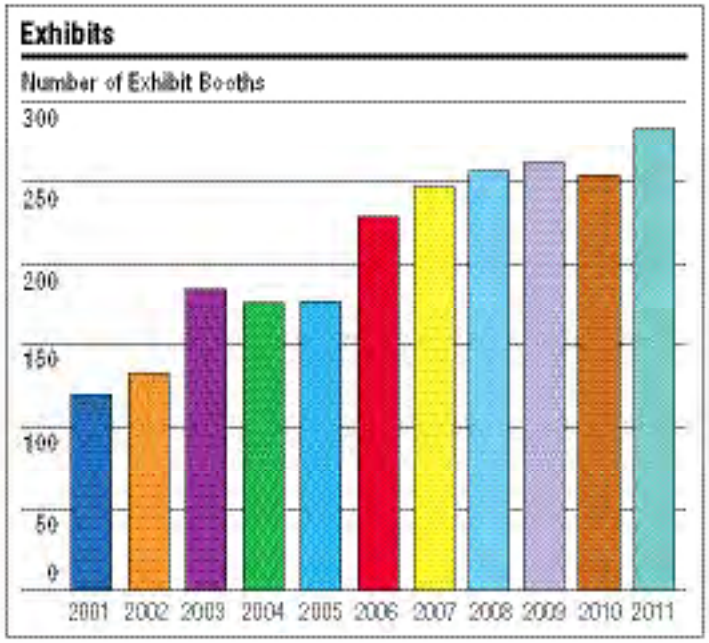
Larry Walker holds the positions of Professor and Academic Director, Biological and Environmental Engineering, College of Agriculture and Life Sciences, at Cornell University. His research interests center around agricultural and environmental bioprocess engineering, and during his 25 years at Cornell, he has been involved in a several biomass-to-energy and chemical projects. Walker directs the Northeast Sun Grant Institute of Excellence and is co-editor in chief for the journal *Industrial Biotechnology*. He holds a bachelor's degree in physics and master's and doctoral degrees in agricultural engineering from Michigan State University. In addition, Walker is the recipient of numerous honors for his contributions to biological and agricultural engineering.

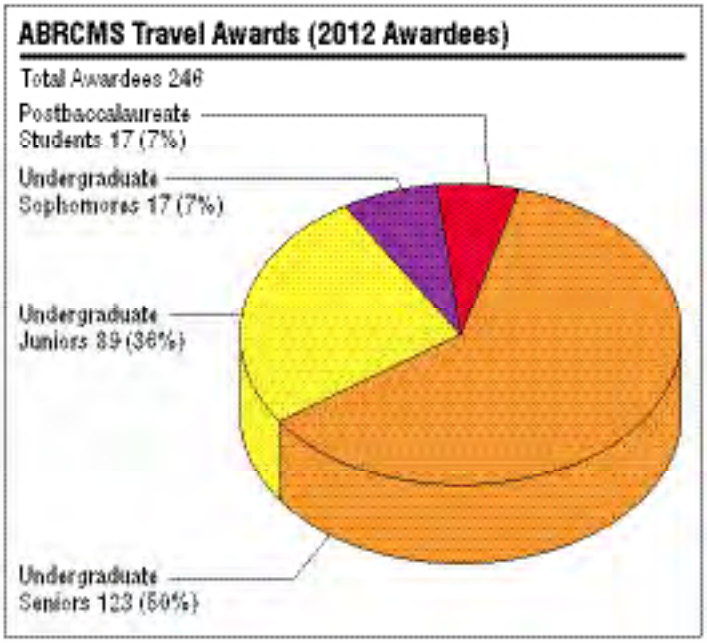
ABRCMS Statistics

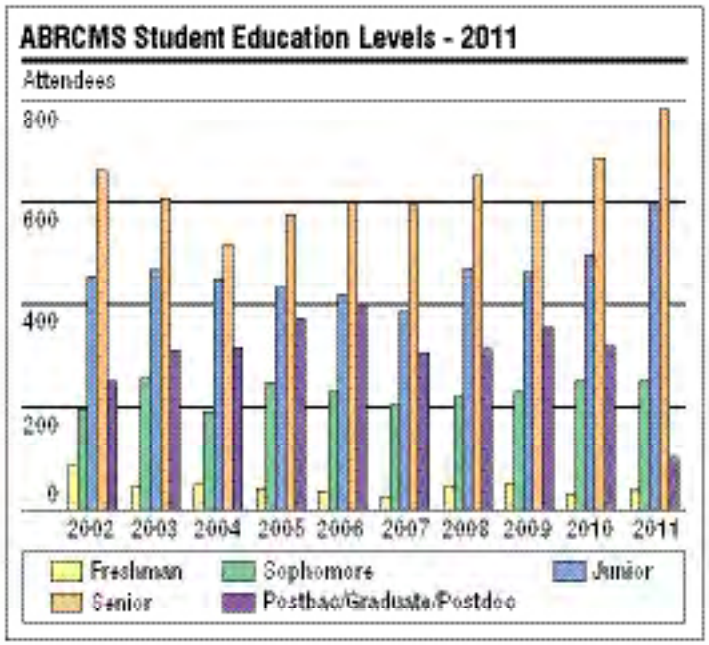
Registration

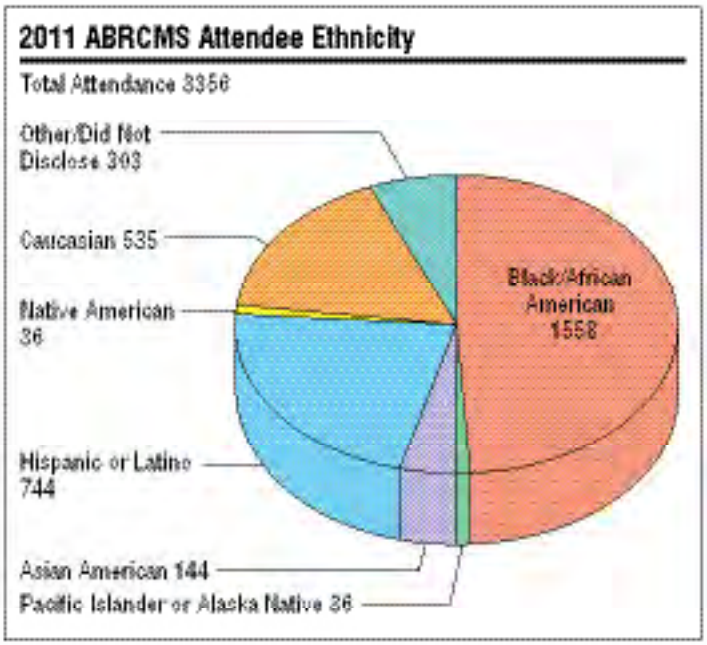
Type of Attendee	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
Students	1,157	1,646	1,694	1,580	1,667	1,633	1,525	1,788	1,755	2,008	2,097	2,057
Undergrad Students/Postbacs	863	1,395	1,383	1,264	1,296	1,233	1,290	1,494	1,462	1,713	1,788	1,766
Grad Students/Postdocs	161	251	311	316	371	400	235	294	293	295	309	291
Exhibitors	230	237	283	305	323	418	426	442	458	504	501	475
Program Directors & Faculty	304	471	464	409	423	421	503	501	445	587	588	519
Others/Admin	164	235	129	141	131	96	10	109	99	139	170	142
Total	1,855	2,589	2,570	2,435	2,544	2,568	2,464	2,840	2,757	3,238	3,356	3,193

*as of October 25, 2012





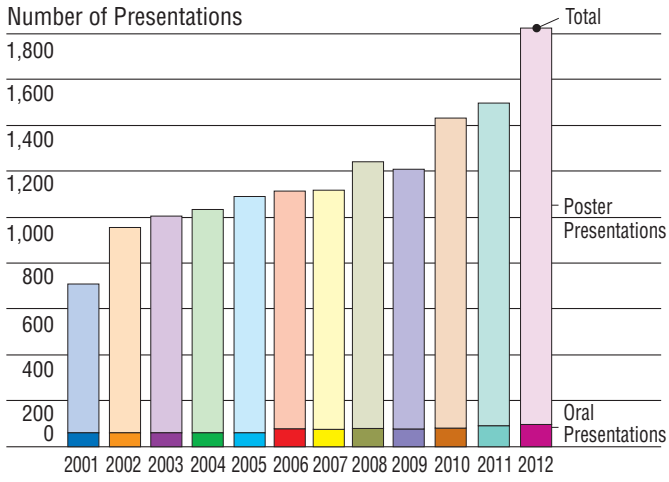




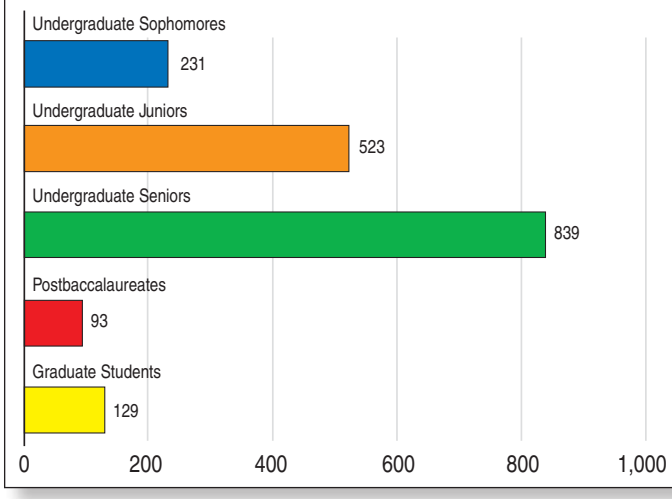
Abstracts Submitted

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Biochemistry	81	90	114	109	101	117	120	117	141	154	139	167
Cancer Biology	-	-	-	-	-	-	-	-	-	-	145	159
Cell Biology	197	303	289	215	233	198	174	189	195	232	119	157
Chemistry	93	112	125	123	135	128	141	162	148	156	166	170
Developmental Biology and Genetics	-	-	-	-	-	-	41	61	61	57	142	163
Engineering, Physics & Mathematics	19	45	37	65	80	81	51	90	73	110	130	153
Environmental Sciences	60	79	93	-	-	-	-	-	-	-	-	-
Immunology	-	-	-	-	-	-	-	-	-	-	79	81
Interdisciplinary Sciences	16	-	-	-	-	-	-	-	-	-	-	-
Microbiology	88	135	129	156	162	220	182	217	200	261	174	179
Molecular and Computational Biology	-	-	-	139	118	152	148	159	136	151	112	113
Neuroscience	-	90	85	56	121	138	138	131	130	160	145	188
Physiology	142	146	138	156	89	103	87	84	87	102	109	121
Social & Behavioral Sciences & Public Health	73	124	74	83	104	89	84	155	127	162	155	164
Total	**769**	**1,124**	**1,084**	**1,102**	**1,143**	**1,226**	**1,160**	**1,365**	**1,298**	**1,545**	**1,615**	**1,815**

Total Number of Student Presentations

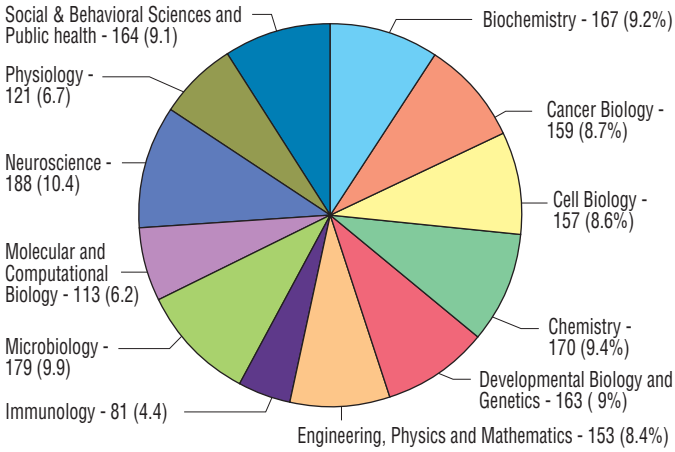


2012 ABRCMS Abstracts Submitted by Educational Level

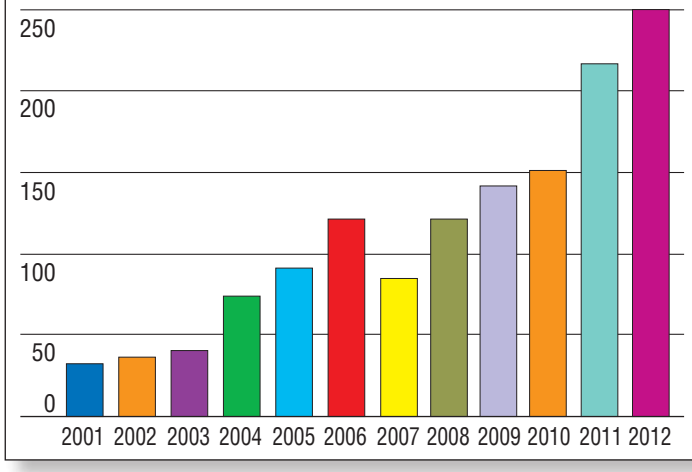


2012 Distribution of Scientific Disciplines

1,815 Total Abstracts Submitted by Students



Student Presentation Awards



"I truly enjoyed all of the networking opportunities at ABRCMS. I really felt encouraged to continue in my pursuit for a Ph.D. in STEM."

Undergraduate Student

"This was an excellent conference, and I felt that the organization was on par or better than some major conferences I've attended in the past. Bravo!"

ABRCMS Judge

Abstract Information

Abstract Information

Poster Presentation Schedule – Exhibit Halls 1 and 2

Poster Session 1 (A):
Thursday, November 8, 2:30 p.m. – 3:45 p.m.
Set-up time: 2:15 p.m. – 2:30 p.m.
Take-down time: 5:15 p.m. – 5:30 p.m.

Poster Session 2 (B):
Thursday, November 8, 4:00 p.m. – 5:15 p.m.
Set-up time: 2:15 p.m. – 2:30 p.m.
Take-down time: 5:15 p.m. – 5:30 p.m.

Poster Session 3 (C):
Friday, November 9, 11:00 a.m. – 12:15 p.m.
Set-up time: 10:45 a.m. – 11:00 a.m.
Take-down time: 12:15 p.m. – 12:30 p.m.

Poster Session 4 (D):
Friday, November 9, 3:45 p.m. – 5:00 p.m.
Set-up time: 3:30 p.m. – 3:45 p.m.
Take-down time: 6:30 p.m. – 6:45 p.m.

Poster Session 5 (E):
Friday, November 9, 5:15 p.m. – 6:30 p.m.
Set-up time: 3:30 p.m. – 3:45 p.m.
Take-down time: 6:30 p.m. – 6:45 p.m.

Poster Session 6 (F):
Saturday, November 10, 9:45 a.m. – 11:00 a.m.
Set-up time: 9:30 a.m. – 9:45 a.m.
Take-down time: 12:30 p.m. – 12:45 p.m.

Poster Session 7 (G):
Saturday, November 10, 11:15 a.m. – 12:30 p.m.
Set-up time: 9:30 a.m. – 9:45 a.m.
Take-down time: 12:30 p.m. – 12:45 p.m.

Oral Presentation Schedule

Oral Sessions 1 – 12:
Thursday, November 8, 5:30 p.m. – 6:30 p.m.

Oral Sessions 13 – 24:
Saturday, November 10, 8:30 a.m. – 9:30 a.m.

Poster Board Presentations (Sessions A-G) by Scientific Discipline & Poster Session

	Session 1 (A) Thursday 2:30 – 3:45 pm	Session 2 (B) Thursday 4:00 – 5:15 pm	Session 3 (C) Friday 11:00 am – 12:15 pm	Session 4 (D) Friday 3:45 – 5:00 pm	Session 5 (E) Friday 5:15 – 6:30 pm	Session 6 (F) Saturday 9:45 – 11:00 am	Session 7 (G) Saturday 11:15 am – 12:30 pm
Graduate Students & Previous ABRCMS Presentation Awardees	A001 – A024	B001 – B024	C001 – C038	D001 – D024	E001 – E024	F001 – F024	G001 – G024
Social and Behavioral Sciences & Public Health	A025 – A042	B025 – B042	C039 – C054	D025 – D042	E025 – E042	F025 – F042	G025 – G042
Physiology	A043 – A054	B043 – B054	C055 – C071	D043 – D054	E043 – E054	F043 – F054	G043 – G054
Neuroscience	A055 – A072	B055 – B072	C072 – C107	D055 – D072	E055 – E072	F055 – F072	G055 – G072
Molecular and Computational Biology	A073 – A083	B073 – B083	C108 – C125	D073 – D083	E073 – E083	F073 – F083	G073 – G083
Microbiology	A084 – A101	B084 – B101	C126 – C152	D084 – D101	E084 – E101	F084 – F101	G084 – G101
Immunology	A102 – A109	B102 – B109	C153 – C161	D102 – D109	E102 – E109	F102 – F109	G102 – G109
Engineering, Physics and Mathematics	A110 – A124	B110 – B124	C162 – C183	D110 – D124	E110 – E124	F110 – F124	G110 – G124
Developmental Biology and Genetics	A125 – A142	B125 – B142	C184 – C209	D125 – D142	E125 – E142	F125 – F142	G125 – G142
Chemistry	A143 – A160	B143 – B160	C210 – C228	D143 – D160	E143 – E160	F143 – F160	G143 – G160
Cell Biology	A161 – A176	B161 – B176	C229 – C255	D161 – D176	E161 – E176	F161 – F176	G161 – G176
Cancer Biology	A177 – A193	B177 – B193	C256 – C279	D177 – D193	E177 – E193	F177 – F193	G177 – G193
Biochemistry	A194 – A211	B194 – B211	C280 – C311	D194 – D211	E194 – E211	F194 – F211	G194 – G211

ABRCMS Student Presentation Chairpersons

Biochemistry
Mario G. García-Ríos, Ph.D., *Mount Ida College, Newton, MA*
Joseph Orban, Ph.D., *Southern University at Shreveport, Shreveport, LA*

Cancer Biology
Emil Bogenmann, Ph.D., *Children's Hospital Los Angeles, Los Angeles, CA*
Hao Nguyen, Ph.D., *California State University, Sacramento, CA*

Cell Biology
Brent Berwin, Ph.D., *Dartmouth Medical Center, Lebanon, NH*
Elissa Purnell, Ph.D., *Savannah State University, Savannah, GA*

Chemistry
Jerainne Johnson-Heywood, Ph.D., *Adecco at General Electric Transportation, Erie, PA*
Marco Lopez, Ph.D., *California State University, Long Beach, CA*

Developmental Biology & Genetics
Lisa Goering, Ph.D., *St. Edwards University, Austin, TX*
Judith Venuti, Ph.D., *Oakland University, Rochester, MI*

Engineering, Physics & Mathematics
Rebecca Hubbard, Ph.D., *University of Washington, Seattle, WA*
Mauricio Cabrera-Rios, Ph.D., *University of Puerto Rico-Mayaguez, Mayaguez, PR*

Immunology
David Sanchez, Ph.D., *Western University of Health Sciences, Pomona, CA*
Jayne S. Reuben, Ph.D., *University of South Carolina, Columbia, SC*

Microbiology
Patricia Baynham, Ph.D., *St. Edward's University, Austin, TX*
Alfredo Torres, Ph.D., *University of Texas Medical Branch, Galveston, TX*

Molecular and Computational Biology
Jeanette Papp, Ph.D., *UCLA, Los Angeles, CA*
Lynn S. Villafuerte, Ph.D., *University of Kansas, Lawrence KS*

Neuroscience
Elba Serrano, Ph.D., *New Mexico State University, Las Cruces, NM*
Alejandro Sanchez Alvarado, Ph.D., *University of Utah, Salt Lake City, UT*

Physiology
Bail Ibe, Ph.D., *LA Biomed at Harbor-UCLA Medical Center, Torrance, CA*
J. Derek Stone, Ph.D., *Paine College, Augusta, GA*

Social and Behavioral Sciences & Public Health
Michelle L. Linster, Ph.D., *Bennett College for Women, Greensboro NC*
Cherrie B. Boyer, Ph.D., *University of California-San Francisco, San Francisco, CA*

ABRCMS Judges' Travel Subsidy Review Committee

- Michael Ehi Ayewoh, Ph.D., *West Chester University of Pennsylvania, West Chester, PA*
- Healani K. Chang, Ph.D., *University of Hawaii at Manoa, Honolulu, HI*
- Latanya Hammonds-Odie, Ph.D., *Georgia Gwinnett College School of Science and Technology, Lawrenceville, GA*
- Phillip Ortiz, Ph.D., *Empire State College, Saratoga Springs, NY*
- Marc Tischler, Ph.D., *University of Arizona, Tucson, AZ*
- Gayle Weaver, Ph.D., *Centers for Disease Control and Prevention, Atlanta, GA*

ABRCMS Student Travel Award Review Committee

- Sherrice Allen, Ph.D., *Fayetteville State University, Fayetteville, NC*
- John Augusto, Ph.D., *The University of Kansas, Lawrence, KS*
- Charles Bevins, M.D./Ph.D., *University of California-Davis, Davis, CA*
- C. Gita Bosch, Ph.D., *G. Bosch & Associates, Yorktown Heights, NY*
- C. Ainsley Davis, Ph.D., *Bethune-Cookman University, Daytona Beach, FL*
- Marlene de la Cruz, Ph.D., *University of California-Irvine, Irvine, CA*
- Maryrose E. Franko, Ph.D., *Howard Hughes Medical Institute, Chevy Chase, MD*
- Louise Hainline, Ph.D., *Brooklyn College of CUNY, Brooklyn, NY*
- Olivia Harriott, Ph.D., *Fairfield University, Fairfield, CT*
- Alvin Holder, Ph.D., *The University of Southern Mississippi, Hattiesburg, MS*
- DiAnna L. Hynds, Ph.D., *Texas Woman's University, Denton, TX*
- Bereneice Madison, Ph.D., *International Laboratory Consultant, Tucker, GA*
- Joeli Marrero, Ph.D., *Tampa, FL*
- Beronda Montgomery, Ph.D., *Michigan State University, East Lansing, MI*
- Peter O'Day, Ph.D., *University of Oregon, Eugene, OR*
- Phillip Ortiz, Ph.D., *Empire State College, Saratoga Springs, NY*
- Ilenys Perez-Diaz, Ph.D., *USDA-ARS, Raleigh, NC*
- Laurel Southard, Ph.D., *Cornell University, Ithaca, NY*
- Cynthia van Golen, Ph.D., *Delaware State University, Dover, DE*
- Jacaranda Van Rheenen, Ph.D., *St. Jude Children's Research Hospital, Memphis, TN*

ABRCMS Judging Rubric – Poster & Oral Presentations

SCORE	HYPOTHESIS AND/OR STATEMENT OF PROBLEM	METHODS AND CONTROLS/ COMPARISON	RESULTS	CONCLUSION AND FUTURE WORK
1	• The hypothesis/statement of problem was inappropriate or was missing • Little or no background information was included or connected • Goal of project was not stated	• Methods section missing • Serious lack of controls of discussion of controls	• Results are not yet available or reproducible • Presentation of data was missing	• Conclusions were missing • There was no connection with the hypothesis
2	• A questionable hypothesis/ statement of problem was presented and was not necessarily supported • Some relevant background information was included, but not connected • Goal of project was not clear	• No discussion of choice of methods • Controls or comparative groups not adequately described; some appropriate controls or groups were missing	• Some data were lacking/not fully sufficient to address the hypothesis • Presentation of data was included, but unclear or difficult to comprehend	• Conclusions were given • Little connection with the hypothesis was apparent
3	• A questionable hypothesis/ statement of problem was presented • Background information was relevant, but connections were not made • Goal of project was stated understandably	• Little comment on why the methods were chosen and others not chosen • Adequate discussion of controls or comparative groups; some significant controls or comparative groups were lacking	• Adequate amounts of reasonably good data were presented to address the hypothesis • Presentation of data was not entirely clear	• Reasonable conclusions were given • Conclusions were not compared to the hypothesis, and their relevance was not discussed
4	• A logical hypothesis/statement of problem was presented • Background information was relevant, but connections were not clear • Goal of project was stated clearly; showed relevance beyond project	• Good explanation of choice of methods • Clear discussion of controls or comparative groups; most controls or comparative groups were included	• Sufficient amounts of good data were presented to address the hypothesis • Presentation of data was clear and logical	• Reasonable conclusions were given and supported with evidence • Conclusions were compared to hypothesis, but their relevance was not discussed
5	• A logical hypothesis/statement of problem was presented clearly • Background information was relevant and summarized well. Connections to previous literature and broader issues were clear • Goal of project was stated clearly and concisely; showed clear relevance beyond project	• Thorough explanation of why particular methods were chosen • Clear discussion of controls or comparative groups; all appropriate controls or comparative groups were included	• Substantial amounts of high quality data were presented sufficiently to address the hypothesis • Presentation of data was clear, thorough, and logical	• Reasonable conclusions were given and strongly supported with evidence • Conclusions were compared to hypothesis and their relevance in a wider context was discussed

SCORE	OVERALL PRESENTATION & HANDLING QUESTIONS	POSTER BOARD OR POWERPOINT PRESENTATION	UNDERSTANDING INTERDISCIPLINARY SCIENCES
1	• Does not demonstrate any knowledge of the research project • Reads from the poster (slide or script) all the time • Does not use the available visual aid to enhance presentation • Does not understand questions • Presentation is very confusing	• Some of the expected components are present, but poorly laid out and confusing to follow in the absence of the presenter. • The text is hard to read, messy and illegible, and contains multiple spelling or typographical errors very poor background • The figures and tables are poorly done • Visual aids are not used	Student views the problem or research question from a single discipline: • Methods developed within a single discipline • Analyses commonly used within a single discipline • Discovery results from knowledge within a discipline • Discovery advances a single discipline • Discovery impacts a single discipline
2	• Demonstrates poor knowledge of the research project • Reads from the poster (slide or script) most of the time • Does not use the available visual aid to enhance presentation effectively • Has difficulty answering questions • Presentation is unclear	• Some of the expected components are present, but layout is untidy and confusing to follow in the absence of the presenter • The text is hard to read due to font size or color and inconsistently free of spelling or typographical errors; the background may be distracting • The figures and tables are not related to the text, or are not appropriate, or are poorly labeled • Photographs/tables/graphs are limited and do not improve understanding of the project	Student views the problem or research question from another discipline: • Methods developed in another discipline, but commonly used in your discipline • Analyses developed in another discipline, but commonly used in your discipline • Discovery results from knowledge within a discipline, but influenced by different discipline • Discovery advances a single discipline, but broader influence is recognized • Discovery impacts a single discipline, but broader influence is recognized
3	• Demonstrates some knowledge of the research project • Reads from the poster (slide or script) some of the time • Uses some visual aids to enhance the presentation • Has some difficulty answering challenging questions • Presentation is generally unclear and inconsistent	• Most of the expected components are present, but layout is confusing to follow in the absence of presenter • The text is relatively clear and legible, but inconsistently free of spelling or typographical errors; the background may be distracting • The figures and tables are not always related to the text or appropriate, or are labeled incorrectly • Photographs/table/graphs do not improve understanding	Student connects the problem or research question using more than one established discipline: • Methods developed in another established discipline but connected to your discipline • Analyses developed in another established discipline but connected to your discipline • Discovery results from knowledge connecting more than established discipline • Discovery connects more than one established discipline • Discovery impacts more than one established discipline
4	• Demonstrates a good knowledge of the research project • Speaks clearly and naturally; makes eye contact • Uses visual aids to enhance the presentation • Answers most questions • Presentation is clear for the most part, but not consistently	• All expected components are present, but layout is crowded or jumbled and somewhat confusing to follow in the absence of presenter • The text is relatively clear, legible, and mostly free of spelling or typographical errors; the background is unobtrusive • Most of the figures and tables are appropriate and labeled correctly • Photographs/tables/graphs improve understanding	Student integrates the problem or research question from more than one discipline: • Methods developed in more than one discipline are integrated • Analyses developed in more than one discipline are integrated • Discovery results from knowledge integrated from more than one discipline • Discovery integrates more than one discipline • Discovery impacts more than one discipline
5	• Demonstrates a very strong knowledge of the research project • Speaks clearly, naturally and with enthusiasm; makes eye contact • Comfortably uses visual aids to enhance presentation • Answers difficult questions clearly and succinctly • Presentation is consistently clear and logical	• All expected components are present, clearly laid out, and easy to follow in the absence of presenter • The text is concise, legible, and consistently free of spelling or typographical errors; the background is unobtrusive • The figures and tables are appropriate and consistently labeled correctly • Photographs/tables/graphs improve understanding and enhance the visual appeal	Student uses more than one discipline to radically change understanding of an important or existing concept or practice or to provide pathways to new frontiers: • Methods using more than one discipline are novel • Analyses using more than one discipline are new • Discovery results from knowledge in more than one discipline transforming that discipline • Discovery integrates more than one discipline creating a new discipline • Discovery impacts more than one discipline by creating a new paradigm or frontier

Author Index

O presentation denotes oral presentations

Andoh, Afua A.	Neuroscience: Neurobiology	C096
Andrade, Brenda	Chemistry: Organic Chemistry	C019
Anguiano, Vincent A.	Physiology: Physiology	C069
Anguiano-Molina, Gabriela	Engineering, Physics and Mathematics: Bioengineering	G123
Anthony, Tamykah	Physiology: Toxicology	E052
Anugo, Davis	Biochemistry: Biochemistry	C291
Apodaca, Celina	Molecular and Computational Biology: Proteomics	C117
Aponte-Santiago, Nicole A.	Cell Biology: Molecular Imaging	D164
Archer, Keithsha A.	Neuroscience: Neurobiology	G069
Arellano, Mariana	Microbiology: Environmental Microbiology	G097
Arencibia, Jaclyn	Neuroscience: Neuroscience	F063
Arguello, Irene	Physiology: Physiology	F049
Argueta, Jocelyn	Biochemistry: Metabolism	O03
Armijo, Gabrielle N.	Biochemistry: Biochemistry	C303
Armstrong, Linda M.	Developmental Biology and Genetics: Genetics	C198
Aroh, Blessing	Biochemistry: Structural Biology	A206
Arroyo, Enidza N.	Molecular and Computational Biology: Proteomics	A074
Asare, Bethany K.	Physiology: Pharmacology	E011
Atkins, Sterling	Cancer Biology: Cancer Biology	F183
Atkinson, Tamieka	Cancer Biology: Cancer Biology	F179
Aurubin, Carlie A.	Immunology: Immunology	A109
Avila, Andrea	Physiology: Physiology	G049
Avila, Robert	Microbiology: Parasitology	B094
Avila-Garibay, Fernando J.	Molecular and Computational Biology: Proteomics	F083
Aviles-Pagan, Emir E.	Developmental Biology and Genetics: Developmental Biology	D133
Awe, Olubusayo A.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	D014
Ayala, Jesus A.	Microbiology: Environmental Microbiology	E098
Ayala, Marcos J.	Developmental Biology and Genetics: Developmental Biology	G136
Ayala Figueroa, Jesus Manuel	Developmental Biology and Genetics: Genetics	G010
Ayala-Morant, Ana V.	Chemistry: Organic Chemistry	B154
Babiker, Leena	Cancer Biology: Cancer Biology	G179
Bacon, Cedrica	Engineering, Physics and Mathematics: Bioengineering	C162
Badillo, Joseph J.	Chemistry: Organic Chemistry	B018
Badillo-Rivera, Keyla M.	Developmental Biology and Genetics: Genetics	B137
Baez-Del Valle, Christian D.	Microbiology: Environmental Microbiology	D100
Balasubramanyam, Sadhana	Biochemistry: Biochemistry	E205
Balogun, Ademayowa T.	Cell Biology: Cell Biology	E174
Balsara, Charmi	Neuroscience: Neurobiology	C083
Banks, Robert L.	Social and Behavioral Sciences and Public Health: Psychology	C054
Bannon, Sarah M.	Social and Behavioral Sciences and Public Health: Psychology	B040
Banuelos, Maria	Microbiology: Environmental Microbiology	E084
Barham, Morgan S.	Cell Biology: Plant Biology	A166
Baric, Boryana	Microbiology: Microbial Physiology	E089
Barkley, Nicole	Cancer Biology: Cancer Biology	C003
Barlow, Brandi B.	Microbiology: Bacteriology	E100
Barmore, Mayghen S.	Social and Behavioral Sciences and Public Health: Psychology	B031
Barmore, Nyema	Molecular and Computational Biology: Computer Sciences	G081
Barnes, Caryn W.	Immunology: Immunology	C153
Barr, Tasha M.	Immunology: Immunology	B104
Barragan, Eden	Microbiology: Bacteriology	G084
Barrera, Dimitrios	Engineering, Physics and Mathematics: Biophysics	B123
Barrie, Umaru	Cell Biology: Cell Biology	E175
Barry, Elijah H.	Biochemistry: Biomolecules	F211
Bartolotta, Elesha	Cell Biology: Cell Biology	F169
Baruti, Omari A.	Engineering, Physics and Mathematics: Bioengineering	E020
Basham, Kenneth A.	Biochemistry: Metabolism	A201
Bata, Shamim	Cancer Biology: Cancer Biology	C279
Batra, Neale	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	A037
Battle, Domonique D.	Physiology: Systems Biology	C063

Broadnax, Alexandria L.	Microbiology: Virology	G015
Brooks, Dwayne M.	Engineering, Physics and Mathematics: Mathematics	D120
Brooks, Jessica N.	Neuroscience: Neurobiology	C090
Brooks, Kayla J.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	A008
Brooks, Lavida	Molecular and Computational Biology: Bioinformatics	O36
Brooks, Xian R.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	G026
Brown, Aná	Microbiology: Bacteriology	C136
Brown, April L.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	A002
Brown, China	Social and Behavioral Sciences and Public Health: Psychology	C043
Brown, Cookie	Biochemistry: Biochemistry	G207
Brown, Darius D.	Cancer Biology: Cancer Biology	D181
Brown, Harriett	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	D032
Brown, Jazmine	Engineering, Physics and Mathematics: Bioengineering	C168
Brown, Lionel	Cancer Biology: Cancer Biology	E187
Brown, Marsalis C.	Neuroscience: Neurobiology	B011
Bruno, Launie	Chemistry: Organic Chemistry	B152
Bryant, Jasmine R.	Physiology: Pharmacology	D047
Bryant, Relena R.	Cancer Biology: Cancer Biology	B183
Bucca, Nadine	Biochemistry: Structural Biology	D208
Buffone, Cindy	Molecular and Computational Biology: Proteomics	F004
Bui, Ngoc T. H.	Biochemistry: Structural Biology	B208
Buo, Atum M. L.	Cell Biology: Cell Biology	C014
Burnett, Nicketa C.	Cancer Biology: Cancer Biology	D193
Burris, Nijah M.	Biochemistry: Biochemistry	E209
Burton, Shavona A.	Biochemistry: Metabolism	F194
Butcher, Michelle	Microbiology: Virology	G100
Byrd, Crystal	Physiology: Physiology	G005
Byrd, Darrica	Chemistry: Environmental Chemistry	F157
Byrd, Kia L.	Immunology: Immunology	E102
Cabral, Marleny A.	Microbiology: Mycology	E099
Cabrera, Daniel	Neuroscience: Neuroscience	O39
Cabrera, Daniel	Engineering, Physics and Mathematics: Nanotechnology	C022
Cadena, Cristhian	Microbiology: Virology	E087
Cain, Antia	Immunology: Immunology	F006
Cajamarca, Steven A.	Biochemistry: Biomolecules	B202
Calderon, Maripaz A.	Chemistry: Physical Chemistry	D143
Caldwell, Keirsten S.	Chemistry: Analytical Chemistry	C217
Calhoun, Candace	Molecular and Computational Biology: Computer Sciences	E081
Callejas, Andrei	Chemistry: Organic Chemistry	O62
Camacho, Francine R.	Molecular and Computational Biology: Bioinformatics	O34
Camacho-Monclova, Kamille V.	Biochemistry: Metabolism	A202
Campbell, Jordan A.	Engineering, Physics and Mathematics: Mathematics	F112
Campbell-Peterson, Kadeine M.	Developmental Biology and Genetics: Genetics	C035
Campos, Herman	Developmental Biology and Genetics: Evolution and Developmental Biology	B126
Canales-Oppenheimer, Andrea	Neuroscience: Neuroscience	B058
Canionero, DeeDee	Physiology: Endocrinology	G018
Canizares-Otero, Maria	Cell Biology: Cell Biology	G167
Canlas, Mary Rose	Immunology: Immunology	B106
Capanna, Christian	Chemistry: Inorganic Chemistry	D155
Cardenas, Jessica	Immunology: Immunology	O76
Cardinal-De Casas, Adrianna	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	D038
Carlos, Kathleen M.	Neuroscience: Neurobiology	E059
Carmona, Jessica A.	Social and Behavioral Sciences and Public Health: Psychology	E029
Caro Monroig, Angeliz	Molecular and Computational Biology: Genomics	B081
Carranza, Francisco	Molecular and Computational Biology: Genomics	C125
Carrizales, Jorge	Cell Biology: Molecular Imaging	F162
Carter, Devon J.	Engineering, Physics and Mathematics: Biophysics	G114
Carter, NaTasha M.	Chemistry: Analytical Chemistry	F158
Cartwright, Zachary M.	Physiology: Systems Biology	C057

Contreras, Diana C.	Immunology: Immunology	A107
Contreras, Jo G.	Immunology: Immunology	E106
Cooke, Kierra	Cancer Biology: Cancer Biology	C261
Coombs, Gavin M.	Microbiology: Virology	F088
Cooper, Dominique N.	Developmental Biology and Genetics: Genetics	F125
Coradin, Mariel	Microbiology: Environmental Microbiology	E101
Corbett, Eric	Engineering, Physics and Mathematics: Mathematics	B016
Cordero, Yanira	Microbiology: Parasitology	C126
Corneille, Tasha A.	Engineering, Physics and Mathematics: Biostatistics	E123
Corona, Armando L.	Biochemistry: Structural Biology	E199
Coronel, Andreina	Physiology: Pharmacology	E043
Corpuz, Maia L.	Neuroscience: Neurobiology	B060
Correa, Ana I.	Engineering, Physics and Mathematics: Bioengineering	D117
Correa, Michelle	Microbiology: Environmental Microbiology	G098
Cortazar, Carmen D.	Molecular and Computational Biology: Computational Biology	C119
Coste, Carla	Chemistry: Inorganic Chemistry	F150
Cotton, Amber	Social and Behavioral Sciences and Public Health: Psychology	D040
Cowins, Janet V.	Engineering, Physics and Mathematics: Nanotechnology	D021
Cox, Kevin T.	Cell Biology: Cell Biology	C240
Craddock, Deborah D.	Neuroscience: Neuroscience	E060
Crawford, Kristopher V.	Chemistry: Organic Chemistry	F008
Crews, DeMarcus K.	Chemistry: Pharmaceutical Chemistry	F148
Crocker, Kassi L.	Developmental Biology and Genetics: Developmental Biology	B130
Cruz, Edgar	Molecular and Computational Biology: Computer Sciences	F080
Cruz, Owen R.	Neuroscience: Neurobiology	G066
Cruz-Acuña, Ricardo	Engineering, Physics and Mathematics: Bioengineering	B013
Cruz-Torres, Ivelisse	Neuroscience: Neuroscience	D060
Cuebas-Irizarry, Mara F.	Microbiology: Environmental Microbiology	C151
Cuevas, Miguel A.	Microbiology: Mycology	C140
Cumberbatch, Laurie C.	Engineering, Physics and Mathematics: Biophysics	D011
Currington, Rashalai A.	Immunology: Immunology	A108
Dacosta, Deandra	Cancer Biology: Cancer Biology	G183
Dalmeus, Presnel	Biochemistry: Biochemistry	G198
Dalton, Cedricka	Engineering, Physics and Mathematics: Nanotechnology	F110
Damptey, Ransford K.	Molecular and Computational Biology: Computational Biology	F076
Dang, Linh	Developmental Biology and Genetics: Developmental Biology	A135
Daniel, Brian M.	Neuroscience: Neuroscience	A064
Daniel, Shawnée N.	Cancer Biology: Cancer Biology	A191
Dasi, Erica A.	Cell Biology: Cell Biology	D171
Dasrat, Parmanand	Engineering, Physics and Mathematics: Nanotechnology	O69
Davatolhagh, Mariexcel F.	Neuroscience: Neurobiology	C073
Davidson, Joshua I.	Engineering, Physics and Mathematics: Nanotechnology	E119
Dávila-Vázquez, Yarely C.	Neuroscience: Neurobiology	B056
Davis, Deangie A.	Social and Behavioral Sciences and Public Health: Psychology	G028
Davis, Marissa C.	Cell Biology: Cell Biology	D162
Davis, Morgan J.	Microbiology: Bacteriology	G096
Davis, Stephanie J.	Neuroscience: Neuroscience	B059
Davis, Toria	Neuroscience: Neurobiology	A057
de Alba, Sophia	Biochemistry: Biochemistry	G202
Deese, Nia R.	Developmental Biology and Genetics: Genetics	C184
Deese, Reyna J.	Engineering, Physics and Mathematics: Bioengineering	A112
Dejene, Beruh T.	Developmental Biology and Genetics: Developmental Biology	E139
De Jesus, Elizabeth M.	Social and Behavioral Sciences and Public Health: Psychology	B025
De Jesus, Kevin	Molecular and Computational Biology: Proteomics	G080
de la Cruz, Carmen Renee	Physiology: Toxicology	A048
De La Rosa-Reyes, Valeria	Developmental Biology and Genetics: Developmental Biology	F128
Delgado, Jessica P.	Social and Behavioral Sciences and Public Health: Psychology	C051
Delgado, Loruhama M. R.	Chemistry: Organic Chemistry	D146
Del Rio, Isaac P.	Social and Behavioral Sciences and Public Health: Psychology	D041

Ehivet, Sonia C.	Immunology: Immunology	B108
Ekeledo, Obioma J.	Neuroscience: Neuroscience	C078
Elizaga, Norma	Physiology: Endocrinology	G043
Ellis, Ashley N.	Cancer Biology: Cancer Biology	G190
Ellis, Jaclyn	Developmental Biology and Genetics: Genetics	A010
Elzanie, Ashraf S.	Cell Biology: Molecular Imaging	B166
Elzein, Arijh	Physiology: Pharmacology	G053
Embretson, Kirsten N.	Microbiology: Virology	C141
Encarnación, Gilbert A.	Chemistry: Pharmaceutical Chemistry	C221
Eni, Pearl	Cancer Biology: Cancer Biology	F190
Enriquez, Nathaniel	Chemistry: Pharmaceutical Chemistry	F012
Epps, Ayunna K.	Chemistry: Organic Chemistry	F156
Escalante, Leah	Molecular and Computational Biology: Genomics	D075
Espinoza, Erika R.	Developmental Biology and Genetics: Evolution and Developmental Biology	A128
Esquivel, Laura I.	Social and Behavioral Sciences and Public Health: Psychology	C052
Esquivel, Steven	Microbiology: Bacteriology	O78
Estabridis, Horacio M.	Engineering, Physics and Mathematics: Biophysics	G120
Estevez, Jaymie A.	Developmental Biology and Genetics: Developmental Biology	A132
Estrada, Elvin J.	Cancer Biology: Cancer Biology	A180
Estrada, Zoila M.	Biochemistry: Biochemistry	A199
Etcheverry, Adriana	Microbiology: Virology	F096
Etienne, Nichole	Molecular and Computational Biology: Computer Sciences	O33
Evans, Edward L.	Developmental Biology and Genetics: Evolution and Developmental Biology	C189
Eythrib, Farid J.	Physiology: Physiology	D045
Eyualem, Eyob A.	Chemistry: Analytical Chemistry	C214
Ezekwe, Nneamaka C.	Developmental Biology and Genetics: Genetics	A130
Faiai, Mata'uitafa T.	Biochemistry: Metabolism	G210
Fairley, Amber S.	Cell Biology: Cell Biology	C238
Falcone, Lauryn	Cell Biology: Cell Biology	A170
Faltine-Gonzalez, Dylan Z.	Developmental Biology and Genetics: Developmental Biology	E130
Far, Rowan	Chemistry: Inorganic Chemistry	B144
Farah, Nuha I.	Social and Behavioral Sciences and Public Health: Psychology	E027
Farmer, Brittney R.	Physiology: Toxicology	C065
Farrell, Bianca C.	Neuroscience: Neurobiology	C105
Farrell, Lynisha	Chemistry: Environmental Chemistry	D158
Feeney, Nora B.	Cancer Biology: Cancer Biology	D177
Felder, Alexandria L.	Immunology: Immunology	B102
Felder, Diamonique A.	Physiology: Physiology	B007
Feliciano-Muniz, Zaide	Engineering, Physics and Mathematics: Material Sciences	C169
Feliciano-Santiago, Zarielys	Biochemistry: Biochemistry	D198
Ferguson, Danielle	Cancer Biology: Cancer Biology	C266
Fernandez, Courtney M.	Cell Biology: Cell Biology	A165
Fernandez, Misael	Molecular and Computational Biology: Bioinformatics	O84
Fernandez, Ricardo J.	Neuroscience: Neuroscience	E065
Fernandez, Robert W.	Neuroscience: Neuroscience	C085
Fernández-Cuervo, Gabriela	Chemistry: Pharmaceutical Chemistry	A144
Fernandez Davila, Natalia S.	Immunology: Immunology	C159
Fernandez Garcia, Emily	Neuroscience: Neuroscience	B067
Field, Conroy	Developmental Biology and Genetics: Developmental Biology	F137
Fields, Jamille A.	Chemistry: Organic Chemistry	E145
Fields, Virgie S.	Developmental Biology and Genetics: Developmental Biology	A134
Figueroa, Miriam A.	Molecular and Computational Biology: Bioinformatics	F074
Fisher, Lauren N.	Developmental Biology and Genetics: Genetics	F138
Fisiru, Bintou	Chemistry: Pharmaceutical Chemistry	A159
Fitch, Briana	Cancer Biology: Cancer Biology	D185
Fitwi, Binyam	Physiology: Endocrinology	C070
Fleites, Vanessa	Developmental Biology and Genetics: Developmental Biology	G139
Fleming, Nicole D.	Cell Biology: Cell Biology	A162
Fleming, Renee	Cancer Biology: Cancer Biology	A187

Gomez, Alan W.	Developmental Biology and Genetics: Genetics	O67
Gomez, Anastassia	Biochemistry: Biomolecules	C284
Gomez, Arianna	Developmental Biology and Genetics: Evolution and Developmental Biology	D135
Gomez, Daniela	Cell Biology: Cell Biology	E161
Gomez, Estella	Microbiology: Bacteriology	C133
Gómez, Lyanne	Biochemistry: Structural Biology	C280
Gomez, Maria	Neuroscience: Neurobiology	G068
Gomez, Matthew J.	Developmental Biology and Genetics: Genetics	E135
Gonzalez, Aneysis M.	Neuroscience: Neurobiology	A065
Gonzalez, Brenda	Developmental Biology and Genetics: Genetics	B138
Gonzalez, Carolina M.	Neuroscience: Neuroscience	G070
Gonzalez, Jessica M.	Immunology: Immunology	G108
Gonzalez, Johnny	Engineering, Physics and Mathematics: Material Sciences	B122
Gonzalez, Martin J.	Physiology: Physiology	O90
Gonzalez, Paulette	Developmental Biology and Genetics: Evolution and Developmental Biology	A127
Gonzalez, Pedro R.	Cell Biology: Plant Biology	E162
Gonzalez, Sandra I.	Chemistry: Analytical Chemistry	G145
Gonzalez, Veronica	Neuroscience: Neuroscience	D068
Gonzalez-Morales, Madeline	Physiology: Pharmacology	A052
González Rivera, Alba Katiria	Biochemistry: Biochemistry	A198
Gonzalez-Rivera, Bryan L.	Physiology: Pharmacology	A051
Gonzalez Vega, Magdalis	Cancer Biology: Cancer Biology	C272
Goodman, Kerestin E.	Biochemistry: Biochemistry	C009
Gordon, Darren M.	Physiology: Physiology	B048
Gorham, Jackie	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	A006
Graham, Brandel R.	Engineering, Physics and Mathematics: Material Sciences	F117
Graham, Joseph G.	Microbiology: Bacteriology	E016
Graham, Kia L.	Molecular and Computational Biology: Computer Sciences	G083
Graniel, Jacqueline V.	Developmental Biology and Genetics: Developmental Biology	C208
Grant, Michael R.	Biochemistry: Biochemistry	E196
Grant, Oneil E.	Biochemistry: Metabolism	E201
Gray, Essanna S.	Immunology: Immunology	E015
Gray, Justin	Chemistry: Organic Chemistry	C211
Gray, Ricardo	Molecular and Computational Biology: Genomics	D082
Grays, Chardai	Biochemistry: Biochemistry	C294
Green, Erica S.	Cancer Biology: Cancer Biology	A183
Griffith, Shelton D.	Microbiology: Bacteriology	E002
Groeling, Johnny M.	Cell Biology: Cell Biology	A175
Grooms, Gregory M.	Chemistry: Physical Chemistry	C219
Grygorenko, Mariya	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	A022
Guardia, Talia	Developmental Biology and Genetics: Genetics	E137
Guemes, Miriam E.	Developmental Biology and Genetics: Developmental Biology	A139
Guevara Zuluaga, Sebastian	Chemistry: Organic Chemistry	E160
Guillaume, Georges I.	Immunology: Immunology	F107
Guillen, Frank	Social and Behavioral Sciences and Public Health: Psychology	G041
Guin, Erika M.	Microbiology: Bacteriology	D006
Gullo, Arfassa	Immunology: Immunology	A102
Guthery, Tameisha S.	Engineering, Physics and Mathematics: Biophysics	C174
Gutierrez, Abraham	Developmental Biology and Genetics: Developmental Biology	C196
Gutierrez, Daniel A.	Cancer Biology: Cancer Biology	A192
Gutierrez-Vargas, Cristina	Microbiology: Parasitology	B092
Guzman, Michael S.	Microbiology: Environmental Microbiology	A099
Gwengi, Martha	Engineering, Physics and Mathematics: Biophysics	B116
Gyan, Kofi E.	Microbiology: Bacteriology	D097
Hackett, Britné	Developmental Biology and Genetics: Evolution and Developmental Biology	C187
Haider, Syed F.	Engineering, Physics and Mathematics: Bioengineering	O70
Haile, Samuel	Immunology: Immunology	C021
Hale, Quarail	Engineering, Physics and Mathematics: Mathematics	O22
Hall, Chaundra	Microbiology: Virology	F087

Holland, Leslie	Cell Biology: Plant Biology	A173
Holley, Lenton	Cancer Biology: Cancer Biology	E191
Hollman, Antoinesha	Microbiology: Bacteriology	D004
Holloway, Janell	Microbiology: Bacteriology	D092
Holt, Brittany M.	Microbiology: Environmental Microbiology	F098
Hong, Robert	Cell Biology: Cell Biology	F013
Hood, Keevin J.	Engineering, Physics and Mathematics: Nanotechnology	E124
How, Javier J.	Developmental Biology and Genetics: Developmental Biology	G142
Howard, Canisha S.	Cancer Biology: Cancer Biology	D187
Huang, Debbie Yan Qun	Engineering, Physics and Mathematics: Biostatistics	D123
Hughes, Catherine	Developmental Biology and Genetics: Developmental Biology	B141
Humphries, Kelley	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	A025
Hurst, Ashley S.	Cell Biology: Cell Biology	E168
Hurtado, Pastor	Biochemistry: Biochemistry	F197
Hurtado De Mendoza, Bolivia A.	Engineering, Physics and Mathematics: Bioengineering	E110
Hutson, Jerè L.	Immunology: Immunology	E108
Ibad, Aliza	Cancer Biology: Cancer Biology	C017
Ibarra, Eugenio	Cell Biology: Plant Biology	G166
Ibrahim, Merna S.	Developmental Biology and Genetics: Genetics	F133
Ibrahim, Sara	Molecular and Computational Biology: Bioinformatics	A078
Idassi, Ombeni	Cancer Biology: Cancer Biology	G182
Igwacho, Erica M.	Microbiology: Virology	D098
Igwebuike, Chinaemere	Cell Biology: Cell Biology	F168
Inderbitzin, Sonya J.	Cancer Biology: Cancer Biology	D190
Ingram, Lishann M.	Cancer Biology: Cancer Biology	B187
Ingram, Rena	Biochemistry: Biomolecules	E208
Irizarry, Luis E.	Molecular and Computational Biology: Bioinformatics	F075
Isaad, Noel J.	Neuroscience: Neuroscience	F066
Islam, Mohameed N.	Immunology: Immunology	F104
Islam, Tasfia	Chemistry: Organic Chemistry	D153
Isme, Mardochee	Developmental Biology and Genetics: Genetics	D134
Ivey, Amber	Microbiology: Parasitology	C127
Iyiewuare, Praise	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	F031
Jackson, Asti	Neuroscience: Neuroscience	C092
Jackson, Jeremiah	Cell Biology: Plant Biology	B162
Jackson, Jessica	Microbiology: Bacteriology	A096
Jackson, Kari A.	Social and Behavioral Sciences and Public Health: Psychology	F026
Jackson, Kelly	Neuroscience: Neurobiology	G065
Jacobo, Christina M.	Physiology: Pharmacology	C061
Jaffery, Sana	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	C024
Janvier, Maria A.	Social and Behavioral Sciences and Public Health: Psychology	G038
Jean-Guillaume, Claude B.	Developmental Biology and Genetics: Evolution and Developmental Biology	G135
Jean-Jacques, Tatiana H.	Cancer Biology: Cancer Biology	C256
Jenkins, Jaborey	Microbiology: Parasitology	B095
Jenkins, Jessica	Cancer Biology: Cancer Biology	A013
Jenkins, Laura M.	Microbiology: Bacteriology	C004
Jennings, Sierra L.	Biochemistry: Biochemistry	D199
Jerez, Emilia	Developmental Biology and Genetics: Evolution and Developmental Biology	G127
Jimenez Collazo, Johannys	Chemistry: Environmental Chemistry	B157
Joe, Valerisa	Microbiology: Environmental Microbiology	B100
Johnson, Amber	Molecular and Computational Biology: Bioinformatics	A019
Johnson, Dwiesha	Biochemistry: Biochemistry	E207
Johnson, Erika A.	Developmental Biology and Genetics: Developmental Biology	D138
Johnson, Martha S.	Biochemistry: Biochemistry	B014
Johnson, Nyeasha N.	Microbiology: Bacteriology	G086
Johnson, Ryan W.	Chemistry: Environmental Chemistry	A156
Johnson, Syundai	Physiology: Physiology	F045
Johnson, Tera P.	Chemistry: Environmental Chemistry	E155

La Rosa Aranda, Maria	Physiology: Systems Biology	G051
Lake, Thalia C.	Developmental Biology and Genetics: Genetics	F134
Lalanne, Genevieve A.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	F025
LaMarche, Nelson M.	Developmental Biology and Genetics: Developmental Biology	O18
Lambebo, Ashenafi T.	Engineering, Physics and Mathematics: Bioengineering	O71
Lamboglia, Ivana	Biochemistry: Biochemistry	B201
Lana, Oluwabusayo	Cell Biology: Cell Biology	G164
Lanauze, Claudia B.	Developmental Biology and Genetics: Genetics	A133
Lark, Arianna R.	Neuroscience: Neurobiology	D022
Lathan, Nichole A.	Chemistry: Environmental Chemistry	C213
Lau, Cindy T.	Microbiology: Bacteriology	A094
Lauharatanahirun, Nina	Neuroscience: Psychobiology	C030
Laureano-Ruiz, Alejandra S.	Neuroscience: Neurobiology	F060
Lauron, Elvin J.	Microbiology: Virology	D002
Lawless, Nathan	Molecular and Computational Biology: Computational Biology	F078
Lawrence, Ryan D.	Chemistry: Environmental Chemistry	C227
Lawson, Leondra	Chemistry: Inorganic Chemistry	G011
Layne, Brandon J.	Neuroscience: Neurobiology	C099
Le Blanc, Jayden	Cell Biology: Cell Biology	F175
Leath, Chelesie	Molecular and Computational Biology: Proteomics	G077
LeBlanc, Crystal N.	Immunology: Immunology	F103
Lecky, Ariel F.	Microbiology: Environmental Microbiology	D099
Ledford, Lakenvia	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	G037
Lee, Briana	Cell Biology: Plant Biology	B168
Lee, Christian	Microbiology: Environmental Microbiology	F092
Lee, Shernita	Molecular and Computational Biology: Computational Biology	B020
Lee Barrios, Erica	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	G032
Leggette, Joshua H.	Cancer Biology: Cancer Biology	E185
Lema, Franklin	Neuroscience: Neurobiology	D065
Lennon, James	Engineering, Physics and Mathematics: Bioengineering	A119
Leon, Frank	Cell Biology: Molecular Imaging	C233
Leon, Rosa M.	Immunology: Immunology	O28
Leon-Ricardo, Brian X.	Molecular and Computational Biology: Genomics	C111
Letang, Blanche	Immunology: Immunology	A105
Lett, Lanair	Developmental Biology and Genetics: Developmental Biology	E132
Leung, Alice	Developmental Biology and Genetics: Evolution and Developmental Biology	B128
Leung, Laura K.	Cancer Biology: Cancer Biology	O07
Levy, Denise	Biochemistry: Biochemistry	C282
Lewis, Darryl D.	Cell Biology: Plant Biology	D176
Lewis, Jainee	Microbiology: Bacteriology	F016
Lewter, Lakeisha	Neuroscience: Neuroscience	C095
Li, Shiqiu	Developmental Biology and Genetics: Developmental Biology	A138
Lilly, Lauren M.	Immunology: Immunology	E017
Lin, Mengjia	Developmental Biology and Genetics: Developmental Biology	E136
Linares, Christina	Cell Biology: Cell Biology	O59
Lindsey, Lauren A.	Cancer Biology: Cancer Biology	G003
Lipscomb, David	Neuroscience: Neurobiology	F065
Lira, Michelle	Cancer Biology: Cancer Biology	A178
Little, Dezerae L.	Engineering, Physics and Mathematics: Mathematics	C179
Little, Maria D.	Chemistry: Analytical Chemistry	G159
Liu, Christine	Neuroscience: Neurobiology	O38
Liu, Jie Bin	Neuroscience: Neuroscience	A063
Lomeli, Naomi	Neuroscience: Neuroscience	D064
Long, Janet	Cell Biology: Cell Biology	E009
Longshore, Dorian G.	Cancer Biology: Cancer Biology	E188
Lopez, Cesar A.	Microbiology: Virology	D101
Lopez, Christina	Chemistry: Organic Chemistry	B158
Lopez, Jose L.	Biochemistry: Biochemistry	G204
Lopez, Justin	Neuroscience: Neuroscience	A059

Martinez, Diana	Cell Biology: Cell Biology	G170
Martinez, Michael	Chemistry: Physical Chemistry	B156
Martinez, Regina	Cancer Biology: Cancer Biology	F192
Martinez-Cassmeyer, Victor S.	Cell Biology: Plant Biology	D173
Martinez-Soto, Eduan E.	Engineering, Physics and Mathematics: Biophysics	D122
Martínez-Traverso, Idaliz M.	Engineering, Physics and Mathematics: Bioengineering	C178
Marty Santos, Leilani M.	Developmental Biology and Genetics: Developmental Biology	F017
Mason, Kiara S.	Chemistry: Organic Chemistry	B146
Mathis, Victoria	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	A042
Matias-Lopez, Desiree	Chemistry: Organic Chemistry	D147
Matthews, Kiera	Chemistry: Physical Chemistry	C225
Matthews, Nyeelah	Social and Behavioral Sciences and Public Health: Psychology	F032
Matthews, Rachael	Chemistry: Organic Chemistry	B160
Mbamelu, Brian	Immunology: Immunology	E022
McCaskill, Shaina	Developmental Biology and Genetics: Developmental Biology	C200
McClain, Courtney	Physiology: Nutrition	D053
McClain, Mariah E.	Immunology: Immunology	C161
McClurkin, Michael	Neuroscience: Neuroscience	C082
McComb, Jacqueline Q.	Microbiology: Environmental Microbiology	A004
McCoy, Nareé R.	Microbiology: Bacteriology	C137
McGann, Sharay	Chemistry: Organic Chemistry	A145
McGraw, TaiNeah	Microbiology: Environmental Microbiology	C147
McKinley, Raechel	Neuroscience: Neurobiology	O88
McLaurin, Tony D.	Microbiology: Virology	A098
McLean, Eric L.	Biochemistry: Biochemistry	A209
McManus, Daniel T.	Immunology: Immunology	O27
McMichael, Ashley B.	Immunology: Immunology	E109
McMillan, Tiarra	Physiology: Physiology	C056
McMorris, Adrienne M.	Microbiology: Virology	A092
McNairy, LaDerica T.	Cell Biology: Cell Biology	A161
McNeal, Sa'Rah	Microbiology: Environmental Microbiology	A100
McPherson, Azure D.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	A038
Mehta, Mansi S.	Biochemistry: Structural Biology	D210
Meijome, Tomas E.	Immunology: Immunology	O73
Mekile, Allatah	Microbiology: Virology	B098
Melendez-Contes, Yazmary	Chemistry: Organic Chemistry	A155
Meléndez-Matos, Jeishla L.	Chemistry: Organic Chemistry	F143
Mendez, Omayra	Microbiology: Virology	D091
Mendoza, Ileana	Cell Biology: Cell Biology	C255
Mendoza, Nicole L.	Chemistry: Pharmaceutical Chemistry	C228
Menocal, Laura A.	Cancer Biology: Cancer Biology	C270
Mercer, Darrell H.	Social and Behavioral Sciences and Public Health: Psychology	C053
Merchant, Diana M.	Cancer Biology: Cancer Biology	B180
Mercredi, Peter Y.	Biochemistry: Structural Biology	A018
Mesfin, Mikki	Cell Biology: Molecular Imaging	B169
Meza-Acevedo, Rosa	Cell Biology: Molecular Imaging	A163
Mhaber, Ismail	Chemistry: Environmental Chemistry	G144
Millar, Jess A.	Microbiology: Environmental Microbiology	C138
Miller, Jernelle	Cell Biology: Cell Biology	D174
Million, Rakeb	Physiology: Endocrinology	B049
Mills, Alphonso G.	Social and Behavioral Sciences and Public Health: Psychology	O93
Mills, Gloria J.	Social and Behavioral Sciences and Public Health: Sociology	A040
Mills, Miriam	Developmental Biology and Genetics: Evolution and Developmental Biology	B142
Mills, Sanchia V.	Immunology: Immunology	B107
Milton, Jaclyn	Engineering, Physics and Mathematics: Nanotechnology	C180
Miranda, Matilde	Developmental Biology and Genetics: Developmental Biology	B139
Mitchell, Alandra	Microbiology: Mycology	A093
Mitchell, Andrew	Neuroscience: Neurobiology	C077

Nguyen, Matthew K.	Chemistry: Pharmaceutical Chemistry	E144
Nguyen, Nathan N.	Engineering, Physics and Mathematics: Bioengineering	A124
Nguyen, Quynh L.	Chemistry: Physical Chemistry	E149
Nguyen, Sang M.	Cancer Biology: Cancer Biology	F185
Nguyen, Thien Thanh K.	Physiology: Physiology	E050
Nguyen, Tiffany	Biochemistry: Biochemistry	O50
Nichols, India	Neuroscience: Neuroscience	B008
Nieves, Hector	Immunology: Immunology	G107
Nieves Jurado, Lorraine	Neuroscience: Neuroscience	B063
Nimarko, Akua F.	Neuroscience: Neurobiology	F069
Ningbinnin, Nouriath	Biochemistry: Biochemistry	G199
Njie, Cheikh T.	Physiology: Physiology	B046
Nnodi, Chinyere	Biochemistry: Biomolecules	A208
Noble, Kenyaria V.	Cell Biology: Cell Biology	C232
Noriega, Danielle W.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	C048
Novacek, Derek	Social and Behavioral Sciences and Public Health: Psychology	G030
Nowotny, Carlos	Biochemistry: Biochemistry	E210
Nuamah, Kwaku	Cell Biology: Plant Biology	F172
Nuhar, Ahmed	Physiology: Toxicology	E047
Nunez, Francisco J.	Engineering, Physics and Mathematics: Mathematics	E115
Núñez-Medina, Dariana M.	Developmental Biology and Genetics: Developmental Biology	B136
Nunn, Kenetta L.	Microbiology: Virology	F019
Nwachukwu, Kala N.	Biochemistry: Biochemistry	A194
Nwaopara, Amanda	Physiology: Endocrinology	O41
Nwosu, Joshua	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	O47
Nyandjo, Maeva S.	Neuroscience: Neurobiology	F072
Nyanhete, Tinashe E.	Cell Biology: Cell Biology	O11
Nyarko, Alexander	Chemistry: Environmental Chemistry	O63
O'Donnell, Stephen P.	Neuroscience: Neuroscience	F061
O'Hara-Hulett, Marielle P.	Biochemistry: Biomolecules	D207
O'Neill, Lauren	Physiology: Pharmacology	C071
Oakgrove, Khouanchy S.	Microbiology: Parasitology	D016
Oberoi, Michelle K.	Neuroscience: Neurobiology	G062
Obinwanne, Vera C.	Physiology: Toxicology	B052
Ochola, Donasian O.	Cell Biology: Molecular Imaging	F022
Ogbuehi, Matthew	Biochemistry: Metabolism	B197
Ogunmokun, Olabimpe	Microbiology: Bacteriology	G085
Ogunrinde, Elizabeth	Microbiology: Bacteriology	E090
Oh, Cho Rok Christiana	Cancer Biology: Cancer Biology	F193
Ojeda, Karen	Social and Behavioral Sciences and Public Health: Psychology	G029
Okechukwu, Charles	Cancer Biology: Cancer Biology	E183
Okojie, Oseogie	Immunology: Immunology	O25
Okonkwo, Nonye N.	Biochemistry: Biochemistry	C297
Okonkwo, Shawntel U.	Developmental Biology and Genetics: Genetics	F141
Okoreeh, Michelle	Cancer Biology: Cancer Biology	B178
Okoro, Uchenna C.	Neuroscience: Neurobiology	A069
Okoronkwo, Michael	Cancer Biology: Cancer Biology	G180
Okot-Kotber, Cynthia	Molecular and Computational Biology: Proteomics	E082
Okoye, Ejike V.	Cancer Biology: Cancer Biology	G186
Okungbowa-Ikponmwosa, Jennifer	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	E040
Oliva, Octavio M.	Cell Biology: Cell Biology	D018
Olivares, Adan	Neuroscience: Neurobiology	G060
Olivas, Joanna	Immunology: Immunology	G106
Olivero, Carlos E.	Engineering, Physics and Mathematics: Bioengineering	B117
Oliveros, Alfredo	Neuroscience: Neuroscience	E014
Onyimba, Royce E.	Immunology: Immunology	O26
Opara, Chinonso	Engineering, Physics and Mathematics: Nanotechnology	F121
Opoku, Rachael	Physiology: Toxicology	B010
Ordonez, Dalila G.	Neuroscience: Neuroscience	D063

Perez, Sebastian U.	Physiology: Pharmacology	O92
Perez, Sidney	Neuroscience: Neuroscience	C107
Perkins, Kedar M.	Chemistry: Pharmaceutical Chemistry	D156
Perreira, Sherry	Developmental Biology and Genetics: Evolution and Developmental Biology	G129
Perry, Gabrielle A.	Chemistry: Organic Chemistry	G155
Peterson, Deforest M.	Cell Biology: Cell Biology	C241
Pettiford, Edie	Neuroscience: Neuroscience	E069
Pickett, Chillian	Neuroscience: Neuroscience	C098
Pickner, Wyatt	Cancer Biology: Cancer Biology	C263
Pietri, Maria C. P.	Microbiology: Environmental Microbiology	C132
Pina, Yolanda R.	Biochemistry: Biomolecules	G203
Piracha, Yumna	Cancer Biology: Cancer Biology	G178
Pires, Elena	Chemistry: Organic Chemistry	E159
Pittman, Shonkela	Developmental Biology and Genetics: Evolution and Developmental Biology	E138
Placeres, Angel L.	Biochemistry: Biomolecules	F196
Planas-Costas, Githzette M.	Microbiology: Environmental Microbiology	D023
Plante, Wendy Y.	Neuroscience: Neuroscience	O40
Pleasant, Stephanie K.	Molecular and Computational Biology: Genomics	O83
Polanco García, Jessie	Engineering, Physics and Mathematics: Material Sciences	C171
Pollard, Marquese	Engineering, Physics and Mathematics: Material Sciences	E114
Porter, Keyana N.	Chemistry: Pharmaceutical Chemistry	B151
Porter, Nicholas K.	Physiology: Physiology	B045
Potter, Jennifer M.	Molecular and Computational Biology: Genomics	E077
Poventud-Fuentes, Izmarie	Engineering, Physics and Mathematics: Bioengineering	B001
Powell, Fontasha J.	Neuroscience: Neurobiology	F059
Pozzi, Vanessa G.	Biochemistry: Biochemistry	C289
Prajapati, Indira	Chemistry: Analytical Chemistry	E156
Pratt, Allison D.	Physiology: Systems Biology	D049
Preciado, Jessenia M.	Developmental Biology and Genetics: Evolution and Developmental Biology	G138
Prieto, Camila	Cell Biology: Cell Biology	A164
Primacio, Rachel M.	Cancer Biology: Cancer Biology	C276
Prince, Timothy	Cancer Biology: Cancer Biology	D178
Proctor, Valencia P.	Neuroscience: Neuroscience	E061
Pu, Ruoyi	Biochemistry: Biochemistry	F204
Pullen-Colon, Melanie Y.	Neuroscience: Neurobiology	D067
Pursell, Erica	Engineering, Physics and Mathematics: Biophysics	D121
Quarles, Derrius L.	Immunology: Immunology	D104
Que, Lauren E.	Biochemistry: Biomolecules	B017
Quenum Zangbede, Fredice O.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	A027
Quijano Cardé, Eva Marie	Biochemistry: Biochemistry	C290
Quinones, Linda S.	Cancer Biology: Cancer Biology	F187
Quinones, Victoria E.	Social and Behavioral Sciences and Public Health: Psychology	E038
Quinones-Rivera, Andrea	Developmental Biology and Genetics: Developmental Biology	O20
Quintana, Dominic D.	Immunology: Immunology	D103
Quintana, Rosana	Microbiology: Bacteriology	E093
Quiroz, Jose	Cell Biology: Cell Biology	C237
Rabe, Amanda	Developmental Biology and Genetics: Developmental Biology	C199
Ragin, Bobby	Cell Biology: Plant Biology	C245
Raimundo, Erik A.	Developmental Biology and Genetics: Evolution and Developmental Biology	F142
Rains, Steven L.	Developmental Biology and Genetics: Developmental Biology	B129
Raji, Olatunde	Cancer Biology: Cancer Biology	E010
Ramdass, Tejanand	Developmental Biology and Genetics: Evolution and Developmental Biology	G134
Rameau, Rachele D.	Molecular and Computational Biology: Genomics	C029
Ramirez, Adrian	Cancer Biology: Cancer Biology	E184
Ramirez, Alyson N.	Neuroscience: Neurobiology	F064
Ramirez, Ivan	Cancer Biology: Cancer Biology	C275
Ramirez, Kasandra L.	Engineering, Physics and Mathematics: Bioengineering	F114
Ramlall, Jasodra	Cell Biology: Cell Biology	G163

Rodríguez, Yariana E.	Physiology: Pharmacology	F043
Rodriguez-Cruz, Vivian	Neuroscience: Neurobiology	D058
Rodriguez-Laureano, Lucelenie	Neuroscience: Neurobiology	D071
Rogers, Christian S.	Cancer Biology: Cancer Biology	A003
Rogers, Keisha	Physiology: Toxicology	D054
Rolle, Tiffany	Developmental Biology and Genetics: Genetics	A136
Roman, Chrisitna A.	Biochemistry: Biochemistry	F198
Romero, Diana K.	Microbiology: Microbial Physiology	D088
Romero, Dino	Microbiology: Bacteriology	B090
Romo-Fewell, Octavio	Neuroscience: Neuroscience	D066
Roncase, Emily J.	Biochemistry: Biochemistry	D202
Rosado, Edwin A.	Biochemistry: Biochemistry	B009
Rosado, Karolyna	Biochemistry: Biochemistry	O01
Ross, Naima	Neuroscience: Psychobiology	O87
Rotibi, Mojisola	Physiology: Toxicology	G054
Rowles, Joe L.	Cancer Biology: Cancer Biology	G191
Rudd, Natasha	Physiology: Toxicology	A045
Ruffner, Lydia A.	Cancer Biology: Cancer Biology	F181
Ruiz, Christian F.	Engineering, Physics and Mathematics: Nanotechnology	D110
Ruiz, Jonathan	Biochemistry: Structural Biology	O52
Ruiz, Nicole C.	Biochemistry: Biochemistry	F205
Ruiz, Vanessa	Chemistry: Pharmaceutical Chemistry	E157
Ruiz, Victor	Molecular and Computational Biology: Computational Biology	G024
Rush, Leah	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	G036
Rutledge, Nakisha S.	Cancer Biology: Cancer Biology	C260
Ryan, Breanna L.	Neuroscience: Neuroscience	C072
Rylander Zohni, Alexis L.	Engineering, Physics and Mathematics: Bioengineering	E121
Sadagopan, Supriya	Engineering, Physics and Mathematics: Nanotechnology	G119
Sadberry, Nicole	Chemistry: Analytical Chemistry	C220
Saenz, Marissa	Neuroscience: Neurobiology	C006
Saini, Tanisha	Microbiology: Bacteriology	O32
Saint-Ange, Emmanuel	Chemistry: Organic Chemistry	A152
Sak, Sophana	Physiology: Anatomy	D046
Salameh, Wes	Biochemistry: Biochemistry	D195
Salantes, Danielle Brenda	Immunology: Immunology	A104
Salas, Eduardo	Neuroscience: Neuroscience	G072
Salazar, Raul	Developmental Biology and Genetics: Evolution and Developmental Biology	E133
Salcedo, Eugenia	Microbiology: Mycology	C143
Saleh, keroles A.	Biochemistry: Structural Biology	B203
Sam, Pingdewinde N.	Neuroscience: Neurobiology	B066
Samlalsingh, Alyssa	Developmental Biology and Genetics: Developmental Biology	B132
Sampson, Alana C.	Engineering, Physics and Mathematics: Bioengineering	F015
Samuel, Joshua	Neuroscience: Neurobiology	A055
San, Kaung M.	Cell Biology: Cell Biology	G172
Sanchez, Angelica	Developmental Biology and Genetics: Developmental Biology	D024
Sanchez, Cristian J.	Chemistry: Organic Chemistry	C223
Sanchez, Jennifer	Chemistry: Pharmaceutical Chemistry	G158
Sanchez, Kathryn E.	Microbiology: Bacteriology	G094
Sanchez, Sebastian G.	Cell Biology: Cell Biology	C230
Sanford, Nathan E.	Chemistry: Organic Chemistry	A143
Sankoh, Mariam	Molecular and Computational Biology: Bioinformatics	F081
Santana-Rodriguez, Zuleirys	Neuroscience: Neuroscience	F067
Santiago, Angel J.	Chemistry: Inorganic Chemistry	E158
Santiago, Ismael D.	Biochemistry: Biochemistry	D196
Santiago, Ivan J.	Neuroscience: Neurobiology	C015
Santiago-Miranda, Adriana N.	Engineering, Physics and Mathematics: Bioengineering	C176
Santos, Patricia Mae G.	Neuroscience: Neuroscience	C007
Santos, Rosmery	Neuroscience: Neuroscience	G063
Santos-Marrero, Melanie	Cancer Biology: Cancer Biology	B181

Smith, Tennyson A.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	E025
Soliman, Mary	Cell Biology: Cell Biology	E163
Solis, Ryan	Cell Biology: Cell Biology	C249
Solomon, Caleb	Chemistry: Organic Chemistry	E146
Song, Min	Chemistry: Organic Chemistry	D144
Sorinmade, Darcye T.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	F030
Sosa, Abraham E.	Developmental Biology and Genetics: Evolution and Developmental Biology	C193
Sosa, Neto D.	Microbiology: Bacteriology	F089
Soto, Carlos	Cancer Biology: Cancer Biology	C258
Soto-Soto, Emilio E.	Developmental Biology and Genetics: Developmental Biology	D137
Sough, Ashley M.	Developmental Biology and Genetics: Developmental Biology	C191
Spafford, Zoe	Chemistry: Analytical Chemistry	G150
Spear, Melissa L.	Immunology: Immunology	O74
Spence, Ashley N.	Neuroscience: Neurobiology	C102
St. Germain, Commodore P.	Biochemistry: Biochemistry	D205
Stanford, Kevon	Biochemistry: Biochemistry	F208
Stanford, Lindsay	Molecular and Computational Biology: Proteomics	G079
Stapleton, Melissa	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	E036
Stern, Alan	Molecular and Computational Biology: Proteomics	D078
Stewart, Dominique	Developmental Biology and Genetics: Evolution and Developmental Biology	G141
Stewart, Jaimie M.	Engineering, Physics and Mathematics: Bioengineering	E111
Straughn, Chelsea A.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	C040
Stringfield, Margie	Cell Biology: Plant Biology	D175
Sturdivant, Laporsha C.	Microbiology: Microbial Physiology	G091
Sudler, Sydney R.	Cancer Biology: Cancer Biology	F184
Sultani, Hawa	Cancer Biology: Cancer Biology	E177
Summers, Ashley	Chemistry: Organic Chemistry	A150
Sumter, Thomas A.	Engineering, Physics and Mathematics: Material Sciences	C167
Sundar, Jesse	Engineering, Physics and Mathematics: Material Sciences	A113
Swait, Brittany L.	Cell Biology: Cell Biology	B161
Syed, Jahangir A.	Cancer Biology: Cancer Biology	A193
Sylvain, Darlene	Physiology: Systems Biology	E046
Taitano, Daniel C.	Physiology: Endocrinology	F053
Taitano, Sophina H.	Cell Biology: Cell Biology	F009
Tapanes, Daniel J.	Immunology: Immunology	C160
Tate, Tia A.	Molecular and Computational Biology: Computational Biology	C120
Taylor, Christy	Developmental Biology and Genetics: Developmental Biology	C203
Taylor, Doris	Biochemistry: Biochemistry	F210
Taylor, Evan	Social and Behavioral Sciences and Public Health: Sociology	G031
Taylor, James	Engineering, Physics and Mathematics: Bioengineering	E118
Taylor, Jessica N.	Engineering, Physics and Mathematics: Material Sciences	E001
Taylor, Niara	Neuroscience: Neuroscience	D056
Tchokouani, Kevin	Microbiology: Microbial Physiology	F085
Tchomobe, Ghislain B.	Chemistry: Pharmaceutical Chemistry	O15
Tellez, Krissie	Developmental Biology and Genetics: Developmental Biology	E141
Tenezaca, Luis	Neuroscience: Neurobiology	E055
Teno, Jameycia	Chemistry: Environmental Chemistry	A160
Tewelde, Blossom	Biochemistry: Biochemistry	D203
Thakur, Tanya	Molecular and Computational Biology: Genomics	F077
Theodore, Shaniece	Cancer Biology: Cancer Biology	A011
Thermozier, Stephanie	Neuroscience: Neuroscience	D061
Thomas, Briannica	Biochemistry: Biomolecules	E204
Thomas, Charne	Cell Biology: Plant Biology	C254
Thomas, Jessica R.	Neuroscience: Neurobiology	D005
Thomas, Orianna	Chemistry: Organic Chemistry	G154
Thomas, Paul A.	Cancer Biology: Cancer Biology	E186
Thomas, Phillip	Physiology: Pharmacology	F052
Thomas, Shanell C.	Physiology: Endocrinology	F048

Vera, Juhnnel	Engineering, Physics and Mathematics: Biophysics	E112
Veras, Jofiel M.	Chemistry: Inorganic Chemistry	E154
Vernon, Kasey	Cancer Biology: Cancer Biology	B182
Vicente, Bryan A.	Immunology: Immunology	C154
Vieta, Emile R.	Engineering, Physics and Mathematics: Nanotechnology	D017
Villacorta, Jessica A.	Molecular and Computational Biology: Proteomics	A081
Villafane, Joseph	Neuroscience: Psychobiology	E063
Villafuerte, David B.	Physiology: Anatomy	E053
Villarreal, Jannelly J.	Neuroscience: Neurobiology	D055
Vilme, Mike	Cell Biology: Cell Biology	E167
Vincent, Jennel	Microbiology: Virology	F093
Viramontes, Karla M.	Microbiology: Virology	D094
Viramontes, Omar	Neuroscience: Neuroscience	B072
Visconti, Florencia	Developmental Biology and Genetics: Genetics	D140
Vizcarrondo, Giovann G.	Physiology: Pharmacology	A044
Vo, Tammy	Immunology: Immunology	B103
Von Behr, Johan A.	Engineering, Physics and Mathematics: Material Sciences	G122
Walker, Arielle	Molecular and Computational Biology: Bioinformatics	C124
Walker, Joy	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	O46
Walker, Kayla J.	Physiology: Anatomy	C062
Walker, Kimberly	Microbiology: Environmental Microbiology	A086
Walker, Winter C.	Chemistry: Analytical Chemistry	E007
Walker, Zachary	Biochemistry: Structural Biology	C311
Wallace, Kelsey R.	Physiology: Endocrinology	G006
Wallace, LaShanale M.	Cancer Biology: Cancer Biology	A181
Waller, Charles	Cell Biology: Plant Biology	D172
Walls, Sheri	Cancer Biology: Cancer Biology	G184
Ward, Aaron D.	Biochemistry: Biochemistry	B200
Ware, Lauren	Microbiology: Parasitology	O77
Warren, Melanie R.	Molecular and Computational Biology: Informatics	E074
Warren, Nyeisha S.	Chemistry: Analytical Chemistry	B143
Washington, Cherise N.	Physiology: Physiology	C067
Waterton, Collin E.	Engineering, Physics and Mathematics: Bioengineering	E122
Webb, Ahura E.	Cell Biology: Plant Biology	B163
Webb, Curtis L.	Social and Behavioral Sciences and Public Health: Sociology	E028
Webb, Jessica D.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	E005
Webb, Marc	Chemistry: Organic Chemistry	G147
Weeks, Brannon	Microbiology: Virology	A091
Welch, Christina	Chemistry: Physical Chemistry	C212
Wells, Alan D.	Chemistry: Analytical Chemistry	D157
Wesley, Willie G.	Engineering, Physics and Mathematics: Nanotechnology	E018
Wheeler, Eric J.	Molecular and Computational Biology: Bioinformatics	C118
Wheeler, Jsanai	Immunology: Immunology	F102
White, Jackie	Developmental Biology and Genetics: Genetics	C185
White, Oberziner	Immunology: Immunology	E021
White, Terrance R.	Cancer Biology: Cancer Biology	D180
Whorms, Debra S.	Biochemistry: Metabolism	C308
Wicker, Jayson	Engineering, Physics and Mathematics: Nanotechnology	A116
Wicks, Ticara L.	Social and Behavioral Sciences and Public Health: Public Health and Epidemiology	C047
Wiggins, John C.	Biochemistry: Metabolism	A196
Wilkes, Charles E.	Engineering, Physics and Mathematics: Mathematics	D114
Wilkinson, Michael	Cell Biology: Cell Biology	G165
Wilkinson, Shawn	Molecular and Computational Biology: Computer Sciences	A077
Willett, Hadassah	Molecular and Computational Biology: Bioinformatics	G082
Williams, Alexandria L.	Developmental Biology and Genetics: Developmental Biology	D127
Williams, Alexis	Social and Behavioral Sciences and Public Health: Psychology	G034
Williams, April N.	Social and Behavioral Sciences and Public Health: Psychology	D028
Williams, Charles E.	Engineering, Physics and Mathematics: Bioengineering	A123

Exhibits Program

Exhibitor By Booth Number

101	St. Jude Children's Research Hospital, Postdoctoral Recruitment Office
102	National Institutes of Health, National Institute of General Medical Sciences (NIGMS), Grants Management
103	University of Florida College of Medicine, IDP in Biomedical Sciences
107	Virginia Commonwealth University, School of Medicine/ Graduate Education Program
109	Harvard Medical School, Center for Biomedical Informatics
117	Mount Sinai School of Medicine, Graduate School of Biomedical Sciences
119	Morehouse College, Public Health Sciences Institute
121	University of Miami Miller School of Medicine, Graduate & Postdoctoral Studies
123	The George Washington University, School of Public Health and Health Services and School of Medicine and Health Sciences
127	Texas Chiropractic College, Admissions
129	University of Pittsburgh, Kenneth P. Dietrich School of Arts and Sciences
135	Saint Louis University, Pharm/Phys Science
200	Virginia Tech, Multicultural Academic Opportunities Program
201	Virginia Tech, Virginia Bioinformatics Institute/PREP Program
202	Virginia Tech, Wake Forest School of Biomedical Engineering and Sciences, Biomedical/Engineering
203	University of Colorado, Colorado Diversity Initiative
206	University of Nebraska Medical Center, MD/PhD Scholars Program
207	Hunter College, City University of New York, Center for Study of Gene Structure and Function
208	University of Nebraska-Lincoln, Office of Graduate Studies
209	University of Southern California, Programs in Biomedical and Biological Sciences
210	University of Medicine and Health Sciences, St. Kitts, Admissions
211	UMDNJ-School of Osteopathic Medicine, Office of Admissions
212	New York Medical College, Graduate School of Basic Medical Sciences
213	Nova Southeastern University, College of Pharmacy
214	Tuskegee University, Integrative Biosciences
215	University of Massachusetts Amherst, STEM Diversity Institute/Graduate School
216	The Graduate Center, CUNY, Office of the Provost
217	The Jackson Laboratory, Educational Programs
218	University of Arizona, Graduate College
219	The University of Arizona, Biomedical Engineering/ Engineering
220	University of Texas Health Science Center, MD/PhD Program
221	University of Texas at Austin, Institute for Cell & Molecular Biology
222	University of Alabama at Birmingham, Vision Science
223	MIT, Biology, Brain & Cognitive Science, Computational and Systems Biology
226	Boston University, Graduate Programs in Bioinformatics, Biomedical Engineering, Engineering, Graduate Medical Sciences at the BU School of Medicine and the Training Program in Quantitative Biology and Physiology
227	University of Pennsylvania, Biomedical Graduate Studies
228	The Princeton Review
229	University of Pennsylvania, Biomedical Postdoctoral Programs
230	Cedars-Sinai Medical Center, Biomedical Sciences
231	The Wistar Institute, Training Office
232	University of North Carolina at Chapel Hill, Master of Accounting
233	The Children's Hospital of Philadelphia Research Institute, Office of Postdoctoral Affairs
234	North Carolina Agricultural and Technical State University, Graduate Studies/Biology
235	Clark Atlanta University, Office of Graduate Studies
300	National Science Foundation, Molecular & Cellular Biosciences
301	Center to Reduce Cancer Health Disparities, National Cancer Institute
302	California Institute of Technology, Caltech Student Affairs/ Diversity
303	Medical University of South Carolina, College of Graduate Studies
306, 308	UCLA, ACCESS Biosciences Program
307	Cincinnati Children's Research Foundation & University of Cincinnati College of Medicine, Office of Research and Graduate Education
309	Stony Brook University, Center for Inclusive Education
310	UCLA, Graduate Division
311	Michigan State University, The Graduate School
312	American Society for Cell Biology, Minorities Affairs Committee

313	Meharry Medical College, School of Graduate Studies and Research
314	University at Buffalo (State University of New York at Buffalo)
315	Philadelphia College of Osteopathic Medicine, Office of Admissions
316	National Research Council of the National Academies, Fellowship Programs
317	Georgetown University, Biomedical Graduate Education
318	Ross University, Admissions
319	University of Toledo, Office of Diversity
320	Wayne State University, Physiology
321	Carnegie Mellon University, Mellon College of Science
322	Medical College of Wisconsin, Graduate School of Biomedical Sciences
323	Mayo Clinic, Mayo Graduate School & Mayo Medical School
326	University of Wisconsin, Biology/Chemistry
327	Broad Institute of MIT and Harvard
328	UNCF Special Programs Corporation
329	The Scripps Research Institute, Kellogg School of Science and Technology
330	University of South Carolina, The Graduate School
331	SUNY Downstate Medical Center, School of Graduate Studies
332	Princeton University, Department of Molecular Biology
333	University of Wisconsin-Madison, Cellular & Molecular Biology Graduate Programs
334	Washington State University, Graduate School
335	University of Wisconsin, Madison, Biosciences
400	University of South Florida
401	Drexel University College of Medicine, Biomedical Graduate Studies
402	National Cancer Institute/NIH, Program: Introduction to Cancer Research Careers Program
403	Scholars Information Services, Inc., Alumni & Contact Center
406	National Institutes of Health, National Institute of General Medical Sciences
407	Johns Hopkins University, School of Medicine
408	National Institute of Neurological Disorders and Strokes, Division of Extramural Research
409	Johns Hopkins Bloomberg School of Public Health, Student Affairs/Admissions
410	National Institutes of Health, Office of Intramural Training & Education
411	Johns Hopkins University School of Medicine, MSTP/MD-PhD Program
412	National Institute of Mental Health, Office of Fellowship Training
413	Johns Hopkins University, Arts and Sciences
414	National Institutes of Health, NIAMS
415	University of Pittsburgh, Medical Scientist Training Program
416	Office of Minority Health and Research Coordination/ NIDDK, NIH
417	University of Pittsburgh, Biomedical Graduate Programs
418	National Institutes of Health, National Human Genome Research Institute
419	University of Pittsburgh, Health Sciences
420	National Institutes of Health, NIDCR
421	University of Alabama at Birmingham, Graduate Biomedical Sciences
422	National Institutes of Health, National Heart Lung and Blood Institute
423	University of Alabama at Birmingham, Medical Scientist Training Program (MD/PhD Program)
426	U.S. Environmental Protection Agency, Office of Research and Development/NCER
427	Vanderbilt University Medical Center, Office of Biomedical Research Education and Training
428	U.S. Environmental Protection Agency, National Health & Environmental Effects Research Lab
429	Vanderbilt University School of Medicine, Office for Diversity in Medical Education
430	National Institute of Allergy and Infectious Diseases
431	American Association of Colleges of Osteopathic Medicine (AACOM)
432	National Institutes of Health/NIEHS, Office of Science Education & Diversity
433	Society for Neuroscience: Neuroscience Scholars Program (NSP)
434	American Society for Microbiology, Membership Department
435	American Society for Microbiology, Education Department
500	UNCF, UNCF/Merck Science Initiative
502	American Chemical Society, Department of Diversity Programs
506	Procter & Gamble, Recruiting
507	American Heart Association/American Stroke Association, Health Equity
508	Duke University, School of Medicine, Office of Biomedical Graduate Diversity

Exhibitor By Booth Number (continued)

509	North Carolina State University (NCSU), The Graduate School
510	Duke University, Graduate School
511	Colorado State University, Graduate School
512	Cornell University, Graduate School
513	Brown University, Graduate School/Leadership Alliance
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814	Association of Biomolecular Resource Facilities
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1009	MIT, Department of Biological Engineering
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Exhibition Hall Floor Plan

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San Jose

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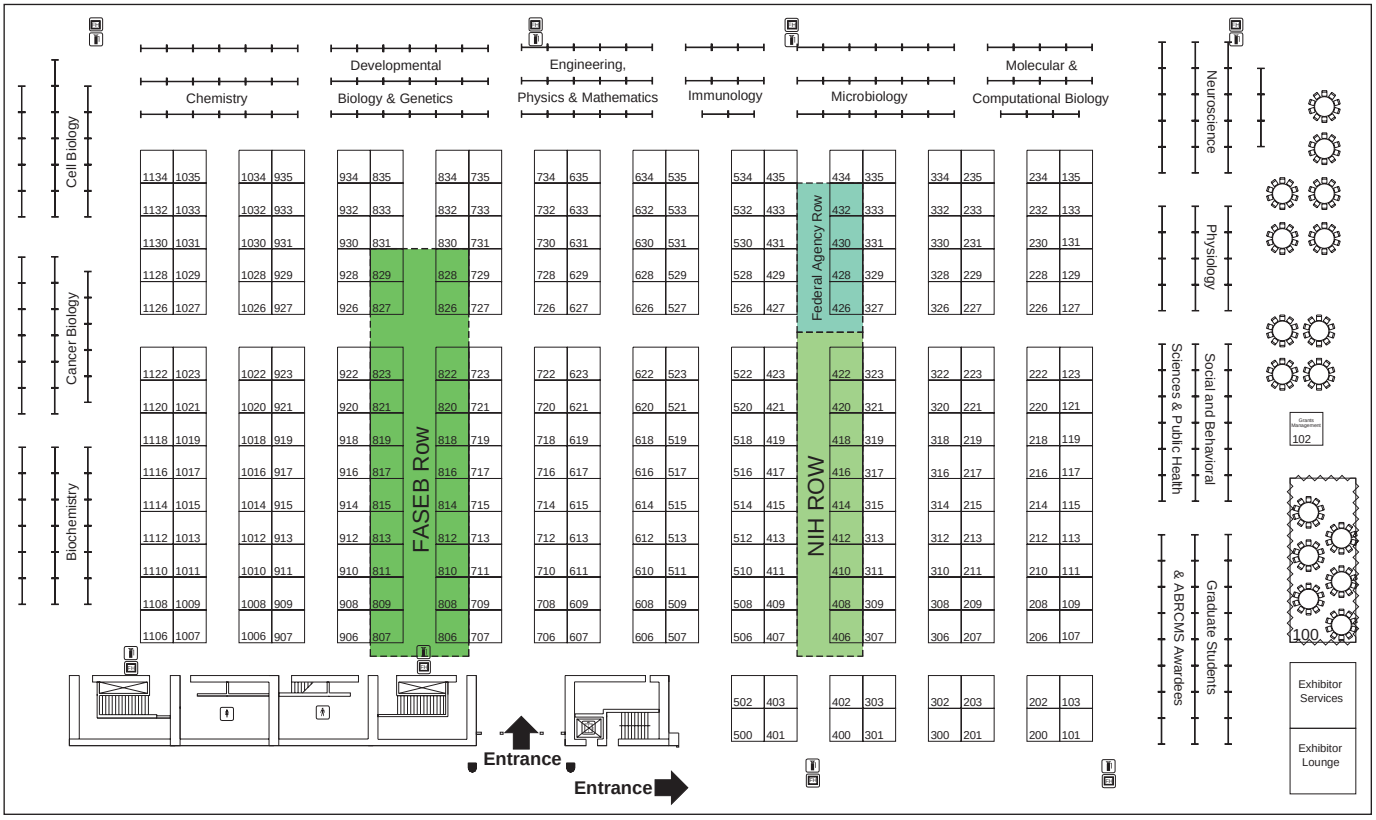

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Convention Center Floor Plan

Notes

Reflections/Take Home Message

The Annual Biomedical Research Conference for Minority Students (ABRCMS) is the largest multidisciplinary national student conference designed to encourage students to pursue advanced education and training in the biomedical or behavioral sciences, including mathematics, and provide faculty mentors and advisors with resources for facilitating student success. Approximately 3,500 individuals, including undergraduate students, graduate students, postdoctoral scientists, and faculty and administrators attend the conference.

One of the main goals of the ABRCMS is to challenge everyone to learn new information and to ask questions about the new information. Each day, take a few moments to share your newly acquired knowledge with another student, faculty member, director, or colleague.

Reflections – All ABRCMS Participants...

Regarding a scientific session…

- What was the speaker's primary message?
- What was the problem or the question under study? How did the speaker resolve the problem or answer the question under study?
- What information is known or unknown about this topic?
- What impact does the research have on improving health and well-being of population?
- Are there any "next steps" to study?

Reflections – Students...

Regarding a professional development session…

- What was the speaker's primary message?
- How could you apply this message in your planning next month, in six months?
- What tools, resources, and/or people do you need to advance further?
- Where can you find these tools, resources, and people?

Reflections – Program Directors, Faculty, Exhibitors, and Program Administrators

It Takes the Community to Raise a Child

According to *MentorNet News* (September 06 issue), advisors of graduate students (and prospective graduate students) should

- "Take students to conferences and introduce them to colleagues. Do not assume that they know how to network; they will need help to develop this vital skill."
- "Encourage students to present posters at a conference starting from their first year. Make them rehearse until they are comfortable with the material and the background. Ask them 'why' they did the work. Ask them questions that you know might be asked. Bring colleagues over to their poster and introduce them. Then stand back and let them do the presentation; step in only if they need you."

Beyond ABRCMS, Moving On

Participating in ABRCMS is a critical juncture for students. It serves as both an end point for a single research experience and a starting point for the journey towards becoming a scientist. For students who conducted research and presented at ABRCMS, it is a time to rejoice and celebrate accomplishments. However, when students leave ABRCMS, they must take the next steps in their journey. These should include continuation of their research experiences, presentations at disciplinary society meetings, and networking with new colleagues.

Students, consider the following:

- Identify six steps to move you along your journey,
- Identify how and when you will complete the first step, second step, etc.,
- Identify the people and resources required to complete the first step, second step, etc.,
- Write an outline of your plan and revisit it regularly.

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