



Conference

Program

Wednesday, November 2

Keynote Address

8:15 p.m. - 9:00 p.m.

“Solving the Mystery of Racial and Ethnic Health Disparities: The Need for Interdisciplinary Research”



Norman B. Anderson, is the Executive Vice President and Chief Executive Officer of the American Psychological Association (APA). Trained as a practitioner and a scientist, Dr. Anderson has dedicated much of his professional life to studying the relationships between health and behavior, and health

and race. Prior to joining APA, Dr. Anderson was Professor of Health and Social Behavior at the Harvard University School of Public Health. Norman Anderson is widely known as the former Associate Director of the National Institutes of Health (NIH) for Behavioral and Social Sciences Research, and the first Director of the NIH Office of Behavioral and Social Sciences Research (OBSSR). Prior to going to NIH, Dr. Norman Anderson was Associate Professor in the Department of Psychiatry and Psychology at Duke University. He received several awards for his research, including: the 1986 New Investigator Award from the Society of Behavioral Medicine, the 1991 Award for Outstanding Contributions to Health Psychology from the American Psychological Association and a Research Scientist Development Award from the National Institute of Mental Health. Anderson is a Fellow of the American Psychological Association, the American Psychological Society, the Society of Behavioral Medicine, and the Academy of Behavioral Medicine Research, and is a Past-President of the Society of Behavioral Medicine. He is also Past-President of the Board of Directors for filmmaker Steven Spielberg's STARBRIGHT Foundation of Los Angeles. He serves on several advisory boards. He is Editor-in-Chief of *The Encyclopedia of Health and Behavior* (Sage, 2004). In addition, Anderson and his wife, health and fitness writer P. Elizabeth Anderson have co-authored a book for lay audiences entitled, *Emotional Longevity: What Really Determines How Long You Live* (Viking, 2003).

Thursday, November 3

Plenary Scientific Session: NIH Roadmap Topic

8:15 a.m. - 8:45 a.m.

“Biomedical Research: Examining the Pieces and Putting Them Together”



Jeremy M. Berg became director of the National Institute of General Medical Sciences (NIGMS) in November 2003. He oversees a \$1.9 billion budget that funds basic research in the areas of cell biology, biophysics, genetics, developmental biology, pharmacology, physiology, biological chemistry,

bioinformatics, and computational biology. Prior to his appointment as NIGMS director, Dr. Berg directed the Institute for Basic Biomedical Sciences at The Johns Hopkins University School of Medicine in Baltimore, MD, where he also served as professor and director of the Department of Biophysics and Biophysical Chemistry. In addition, he directed the Markey Center for Macromolecular Structure and Function and co-directed the W.M. Keck Center for the Rational Design of Biologically Active Molecules at the university. Dr. Berg's research focuses on the structural and functional roles that metal ions, especially zinc, have in proteins. His honors include a Presidential Young Investigator Award (1988-1993), the American Chemical Society Award in Pure Chemistry (1993), the Eli Lilly Award for Fundamental Research in Biological Chemistry (1995), and the Maryland Outstanding Young Scientist of the Year (1995). He also received teaching awards from both medical students and graduate students and served as an advisor to the Johns Hopkins Postdoctoral Association since its founding. Dr. Berg received B.S. and M.S. degrees in chemistry from Stanford University in 1980 and a Ph.D. in chemistry from Harvard University in 1985. He is a coauthor of more than 120 research papers and three textbooks, *Principles of Bioinorganic Chemistry*, *Biochemistry (5th Edition)*, and *A Clinical Companion to Accompany Biochemistry*.

Thursday, November 3 (continued)

Plenary Scientific Session: NIH Roadmap Topic

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

"Horizons in Cellular and Molecular Imaging"



Roderic Pettigrew began as the director of the National Institute of Biomedical Imaging and Bioengineering in September 2002. Prior to his appointment at NIBIB, he was a Professor of Radiology, Medicine (Cardiology) and Bioengineering and Director of the Emory Center for MR Research, Emory University School of Medicine, Atlanta, Georgia. Dr. Pettigrew is known for his pioneering work at Emory University involving dynamic three-dimensional imaging of the heart using magnetic resonance (MRI). He also was co-developer of the first computer software package specifically designed for cardiac imaging using MRI. Dr. Pettigrew graduated cum laude from Morehouse College with a B.S. in physics, where he was a Merrill Scholar; has an M.S. in nuclear medicine and engineering from Rensselaer Polytechnic Institute; and a Ph.D. in applied radiation physics from the Massachusetts Institute of Technology, where he was a Whitaker Harvard-MIT Health Science Scholar. After completing his Ph.D., he received an M.D. from the University of Miami School of Medicine in an accelerated two-year program. He did his internship and residency in internal medicine at Emory University and completed a residency in nuclear medicine at the University of California, San Diego. Dr. Pettigrew spent a year as a clinical research scientist with Picker International, the first manufacturer of MRI equipment. In 1985, he joined Emory as a Robert Wood Johnson Foundation Fellow with an interest in non-invasive cardiac imaging. Dr. Pettigrew, is the recipient of numerous awards, including the Benjamin E. Mays for Achievement in 1989. In 1990, he was named the Most Distinguished Alumnus of the University of Miami. He has served as chairman of the Diagnostic Radiology Study Section, Center for Scientific Review, NIH, and has received multiple grants from the NIH for his research on cardiac imaging. He is on numerous editorial boards, scientific societies' Boards of Directors, and is a frequent invited lecturer at international scientific meetings. Dr. Pettigrew has also been elected a Fellow of the American Heart Association and the American College of Cardiology.

Plenary Scientific Session: NIH Roadmap Topic

9:20 a.m. - 9:50 a.m.

"Drug Abuse and Addiction Research Review; Opportunities in the NIH Roadmap"



Donald Vereen, Jr., is the Special Assistant to the Director of the National Institute on Drug Abuse (NIDA) at the National Institutes of Health (NIH). Dr. Vereen works on the development of new research strategies to address public health issues such as violence, drug abuse, addiction, and mental illness. From 1992 to 1994 while at the National Institute of Mental Health, he was charged with the development of community-based research projects on violence. Dr. Vereen carried this interest over to NIDA in 1994, where he worked on interdisciplinary research projects dealing with the causes and consequences of drug abuse. Dr. Vereen was appointed to represent NIH on the District of Columbia Task Force on Health Affairs and advised the District of Columbia Mayor's Health Policy Council. From 1998 to 2001, Dr. Vereen served as Deputy "Drug Czar." As the Deputy Director of the Office of National Drug Control Policy at the White House, Dr. Vereen applied science-based principles to the formation and execution of drug policy. Duties included overseeing National Youth Anti-Drug Media Campaign, overseeing the development and adoption of new methadone treatment regulations, testifying to the U.S. Congress on drug policy issues, contributing to and representing the U.S. in international demand reduction activities. The latter activity included work on anti-doping in sports. In 2001, he returned to NIDA to oversee the coordination of drug abuse clinical research and spent one year as the Acting Chief of the Special Populations Office until his current position. Dr. Vereen graduated from Harvard College in 1980 with an A.B. degree in biology, Tufts University School of Medicine with an M.D. degree, and the Harvard School of Public Health with a Masters in Public Health degree. He completed an internship in internal medicine at Salem Hospital, followed by a residency in psychiatry at Massachusetts General Hospital, where he was appointed Chief Resident.

Session Highlights Keynote, Plenary and Concurrent Scientific

Thursday, November 3 (continued)

Plenary Scientific Session

(Sponsored by The American Society for Cell Biology)
1:00 p.m - 2:00 p.m.

"How Does the Breast Remember It is a Breast and How May It Forge and Become Breast Cancer"



Mina Bissell is a world renowned leader in the area of the role of extracellular matrix (ECM) and microenvironment in regulation of tissue-specific function with special emphasis in breast cancer where she has changed some established paradigms. She earned an A.B. with honors in chemistry from

Harvard/Radcliffe College and a Ph.D. in bacterial genetics from Harvard University. She joined the Lawrence Berkeley National Laboratory in 1972, became a Senior Scientist in 1977, the Director of Cell & Molecular Biology in 1988 and was appointed Director of all of Life Sciences in 1992. She was named Distinguished Scientist (one of seven, the only woman, and the only life scientist to achieve this status) and Senior Advisor to the Laboratory Director on Biology in 2002.

Dr. Bissell has authored more than 250 publications and sits on editorial board of many scientific journals, most recently *Science* magazine. She also sits on a number of national and international scientific and government boards. She has received numerous awards and citations and has given more than 70 'named' lectures. She was a Fogarty Fellow in 1984, a Guggenheim fellow in 1992 and was elected an AAAS fellow in 1994. She received the 1996 Ernest Orlando Lawrence Award and medal, the highest honor of the US Department of Energy. In 1997, she was elected to the Institute of Medicine of the National Academy of Sciences and served as President of the American Society for Cell Biology. In 1998, she received the Mellon Award from the University of Pittsburgh and was the 1999 recipient of the Eli Lilly/Clowes Award of the American Association for Cancer Research. In 2001, Dr. Bissell received both an honorary doctorate from the Pierre & Marie Curie University in Paris, and the first Innovator Award of the US Army breast cancer program. In 2002, she was elected to the American Academy of Arts and Sciences and was the President of the International Society of Differentiation. In 2003, she received the Brinker Award from the Susan G. Komen Breast Cancer Foundation. In 2004, Dr. Bissell, was among the 13 recipients of the first Discovery Health Channel Medical Honor and received another honorary doctorate from the University of Copenhagen. In 2005, she became the first OBER/DOE Distinguished Scientist Fellow in Life Sciences and received a \$1.25 million award for 5 years.

Friday, November 4

Plenary Scientific Session

8:15 a.m. - 9:00 a.m.

"Using Genomics to Study Biology at the Systems Level"



David Botstein received his A.B degree from Harvard University in 1963 and his Ph.D degree from the University of Michigan in 1967. He then joined the faculty of the Massachusetts Institute of Technology, where he rose through the ranks from Instructor to Professor of Genetics. In 1987

he moved to Genentech, Inc. as Vice President - Science, and in 1990 he joined Stanford University's School of Medicine as the Stanford W. Ascherman, MD, Professor and Chairman of the Department of Genetics. On July 1, 2003 he became Director of the Lewis-Sigler Institute of Integrative Genomics at Princeton University. Dr. Botstein's research has centered on genetics, especially the use of genetic methods to understand biological functions. In the early 1970's Dr. Botstein turned to budding yeast (*Saccharomyces cerevisiae*) and devised novel genetic methods to study the functions of the actin and tubulin cytoskeletons. Other scientific interests of the Botstein laboratory include protein secretion (both in bacteria and yeast) and the use of localized random mutagenesis technologies to understand protein structure/function relationships. Finally, Dr. Botstein began his theoretical contributions on linkage mapping of the human genome beginning in 1980 by suggesting, with collaborators, that restriction fragment length polymorphisms (RFLPs) could be used to produce a linkage map of the human genome and to map the genes that cause disease in humans. Recent research activities include studies of yeast genetics, genomics and cell biology including the development (with J. Michael Cherry) of the *Saccharomyces* Genome Database; and (with P. O. Brown) the development of DNA microarray technology and analysis methods and their application to classifying and understanding human cancers. Dr. Botstein was elected to the U.S. National Academy of Sciences in 1981 and to the Institute of Medicine in 1993. He has won several awards, notably the Eli Lilly Award in Microbiology (1978), the Genetics Society of America Medal (1988) and the Allen Award of the American Society of Human Genetics (1989). He served on many policy-making and peer-review committees, most recently the NAS/NRC study on the Human Genome Project (1987-88), the NIH Program Advisory Panel on the Human Genome (1989-90) and the Advisory Council of the National Center for Human Genome Research (1990-1995).

Friday, November 4 (continued)

Concurrent Scientific Sessions

10:30 a.m. - 11:15 a.m.

"Identifying Optimal Surface Properties of Biomaterials for Stem Cell Tissue Engineering"



Treena Livingston Arinzeh a young professor who last year won a Presidential Award, the nation's highest scientific honor, is bringing the promise of stem cell research one step closer to reality. Arinzeh, assistant professor of biomedical engineering at New Jersey Institute of Technology, is research-

ing the use of stem cells to induce bone repair. Her research will help diabetics whose impaired bones will not properly heal. She is using adult stem cells, in combination with allografts – donated bone tissue - to regenerate and repair the patients' damaged bones. She is performing tests on diabetic animals, after which she'll test patients at the clinical level. Arinzeh is collaborating on the research with Sheldon L. Lin, MD, an assistant professor of orthopaedics at the University of Medicine and Dentistry of New Jersey, Newark. Arinzeh has received a \$100,000 grant from the Musculoskeletal Transplant Foundation to support the team's research. Her research has also led to two major stem-cell discoveries: one showing that stem cells, when mixed with biomaterials known as scaffolds, can help regenerate bone growth; and another proving that stem cells taken from one person can be successfully implanted into another. A list of conditions for which stem-cell treatment holds promise grows almost daily: It now includes Parkinson's, diabetes, Alzheimer's, cancer and traumatic brain injury. Arinzeh's drive to advance the science of stem cell research has gained her national recognition. In the fall, she earned the highest honor given to a young researcher by President Bush: The Presidential Early Career Award for Scientists and Engineers.

"Regulation of the Immune Response by Tec Family Kinase ITK"



Avery August graduated with a bachelor's degree in medical technology from the California State University at Los Angeles, where he was part of the RIMI program. Following a year in the biochemistry masters program, he started graduate school at Cornell University's Weill Graduate School

of Medical Sciences in New York City in the Immunology Program. Working with Dr. Bo Dupont at the Memorial Sloan Kettering Institute, he investigated the molecular basis for T cell activation, and received his PhD for work on analyzing T cell Receptor and CD28 costimulatory receptor signals. He then worked as a post-doctoral fellow in the laboratory

of Dr. Hidesaburo Hanafusa at the Rockefeller University, working in various areas including analysis of the BRCA1 breast cancer susceptibility gene, as well as signaling by Src tyrosine kinases. During this time, he was a NSF Minority Post-Doctoral Fellow. After working for 2 years at the pharmaceutical company Johnson & Johnson, he took a position at the Pennsylvania State University, where is an Associate Professor of Immunology, and Co-Director of the Graduate Program in Molecular Medicine. He has won a number of awards including the ASHI Scholar in Basic Sciences. He serves on several NIH study section panels and on the editorial board of the International Journal of Biochemistry and Cell Biology.

"Albumin, a Therapeutic Agent for Spinal Cord Injury"



Lisa D. Cain is assistant professor in the Department of Neurosciences and Cell Biology in Galveston, Texas. She is also a member of the TIRR Foundation in Houston, Texas. The TIRR Foundation is comprised of scientists who are dedicated to researching spinal cord and brain injury. The

main focus of her research has investigated factors involved in central nervous system neuron development, injury and survival. She performed postdoctoral studies in neuron development and survival at Robert Wood Johnson Medical School and the Center for Advanced Biotechnology and Medicine in Piscataway, New Jersey. At the University of Texas Medical Branch at Galveston, her lab was one of the first to state the importance of basic fibroblast growth factor in the survival of basal forebrain cholinergic neurons, a population of neurons that degenerate in Alzheimer's disease. Presently she is involved defining factors that promote the survival of spinal cord neurons within 18 hours after injury to the spinal cord. She has been very active not only in research but in graduate and medical education. She is presently a co-director of the cell biology course in the Graduate School of Biomedical Sciences at UTMB-Galveston.

"Nucleotide Receptor Signaling in Astrocytic Cells"



Fernando A. González is a professor of biochemistry at the Río Piedras Campus of the University of Puerto Rico, an adjunct professor at the School of Medicine of the UPR, and director of the Alliance for the Advancement of Biomedical Research Excellence in Puerto Rico (sponsored by the

National Center for Research Resources of the NIH). His research focuses on signal transduction of purinergic receptors (receptors for extracellular nucleotides) and their role in glial function. Dr. Gonzalez has received a number of

Friday, November 4 (continued)

Concurrent Scientific Sessions (Cont'd)

10:30 a.m. - 11:15 a.m.

honors and awards including a Glaxo Wellcome Research Award in 2000, an Alfred P. Sloan Foundation Research Fellowship in Neuroscience (1994-1996), and an Oak Ridge Associated Universities (ORAU) Junior Faculty Enhancement Award in 1993.

"Signaling Complexes and the Regulation of Calcium Influx in Neurons"

Photo
not
available

Maria Diversé Pierluissi is currently assistant professor of Pharmacology at Mount Sinai School of Medicine in New York. Her research focuses on the integration of the multiple signaling pathways that converge to modulate calcium channel activity and how they could ultimately alter the timing of

signaling in the nervous system. Her research is supported by various grants from the National Institutes of Health. Dr. Diversé-Pierluissi has received many honors and awards including Mount Sinai Dean's Lecture Series, Faculty Council Award for Academic Excellence, Hirschl Trust Fund Career Award, New York Speaker's Fund for Biomedical Research Award. In 2005, she received the Excellence in Teaching Award at Mount Sinai School of Medicine. She serves on many committees at her institution including the Ph.D Admissions Committee. She has published in many scientific journals and has been invited to give talks at many conferences and symposia. She received her Ph.D in molecular and cellular biology from the University of Massachusetts at Amherst, M.S. in biochemistry from Purdue University and B.S. in chemistry from Catholic University of Puerto Rico. She pursued her postdoctoral training at Tufts Medical School in Boston, Massachusetts. She was a MARC fellow as an undergraduate and graduate student.

Plenary Session

2:15 p.m. - 3:00 p.m.

"Dishing the Talent Pool: Scientists for the 21st Century"



Shirley Malcom is head of the Directorate for Education and Human Resources Programs of the American Association for the Advancement of Science (AAAS). The directorate includes AAAS programs in education, activities for underrepresented groups, and public understanding of science

and technology. Dr. Malcom was head of the AAAS Office of Opportunities in Science from 1979 to 1989. Between 1977 and 1979, she served as program officer in the Science Education Directorate of the National Science Foundation (NSF). Prior to this, she held the rank of assistant professor of biology, University of North Carolina, Wilmington. Other work experience includes two years as a high school science teacher. Dr. Malcom received her doctorate in ecology from the Pennsylvania State University; master's degree in zoology from the University of California, Los Angeles; and bachelor's degree with distinction in zoology from the University of Washington. In addition, she holds eight honorary degrees. Dr. Malcom serves on several boards, including American Museum of Natural History, Carnegie Corporation of New York, and National Center on Education and the Economy. She serves as a trustee of Adelphi University, as a Regent of Morgan State University and as a trustee of Caltech. In addition, she has chaired a number of national committees addressing education reform and access to scientific and technical education, careers, and literacy. In 1995, Dr. Malcom was elected a fellow of the American Academy of Arts and Sciences. She was a member of the National Science Board, the policymaking body of the National Science Foundation from 1994 to 1998, and currently serves on the President's Committee of Advisors on Science and Technology.

Saturday, November 5

Closing Remarks

8:00 p.m. - 8:30 p.m.

"A Conversation About Learning and the Latest Brain Research"



Kenneth Wesson delivers keynote addresses on the neuroscience of learning for educational organizations and institutions throughout the United States and overseas. His audiences range from pre-school and early childhood specialists to college and university-level faculty members and administrators. Wesson regularly addresses educational organizations, counseling associations, school districts and civic groups, as well as parenting organizations on establishing "brain-considerate" learning environments. In addition to his speeches on the neuroscience of learning, Wesson also speaks on the subjects of early brain development, emotional intelligence, the neuropsychology of prejudice, contextual learning, diversity in learning, design and engineering, and curriculum development. He has been a keynote speaker for several of the leading international educational organizations for American and International schools, including the Association of International Schools in Africa (AISA), the Association of American Schools in South America (AASSA), the Central and Eastern European Schools Association (CEESA), the National Association of Independent Schools (NAIS), East Asia Regional Council of Overseas Schools (EARCOS), the Near East South Asia schools (NESA), along with numerous American educational organizations, school districts, and colleges. He has been profiled in "Who's Who in Science and Engineering," "Who's Who in American Education," and "Who's Who in America". Wesson's most recent articles on the brain include: "What Recent Brain Research Tells Us About Learning," "Where is God in the Brain?" (The Neurophysiological Correlates of Religiosity) and "Memory and the Brain." He has served as a science writer for Science IQ contributing articles on brain research. He is an active or former member of many organizations including Society for Neuroscience, the Organization for Human Brain Mapping, the American Association for the Advancement of Science. He was a founding member of the National Association of Black Psychologists.

Conference Program

Wednesday, November 2, 2005

12:00 noon - 8:00 p.m.	Registration Open	<i>Location: Centennial Ballroom Level</i>
12:00 noon - 4:00 p.m.	EXPLORE ATLANTA ON YOUR OWN!!!	
1:00 p.m. - 4:00 p.m.	<p>Campus Tours: Morehouse School of Medicine, Clark Atlanta University and Emory University</p> <p>Tours will be offered concurrently from 1:00 p.m.-4:00 p.m.. This is a great opportunity to learn about graduate programs and research opportunities at these institutions. Tours include visits to research laboratories and visits with research faculty and graduate students. Space is available on a first come, first serve basis. Bus transportation will be provided. Sign up on the on the Centennial Ballroom Level.</p>	
2:00 p.m. - 8:00 p.m.	Exhibit Set-up	<i>Location: Hanover Hall & Grand Hall</i>
5:00 p.m. - 6:15 p.m.	<p>CONFERENCE ORIENTATION: <i>Mandatory for all student attendees</i></p> <p>The orientation prepares participants to take advantage of the many opportunities available during the ABRCMS. The orientation sets the conference tone for attendees. Presentations cover (i) program making the best of a scientific meeting, (ii) establishing mentoring relationships and networking opportunities, and (iii) effectively utilizing the Just Garcia Hill online network to sustain and enhance career development interactions established at national conferences.</p> <p>Program Overview and Making the Best of a Scientific Meeting <i>Speaker</i> Sandra Murray, Ph.D. Professor, Department of Cell Biology and Physiology University of Pittsburgh Medical School, Pittsburgh, PA</p> <p>Establishing Mentoring Relationships and Networking at a National Meeting <i>Speaker</i> Howard Adams, Ph.D. <i>Consultant</i> <i>H. G. and Associates, Richmond, VA</i></p> <p>Enhancing Professional Development through Effective Networking and Internetworking <i>Speakers</i> Robert P. Dottin, Ph.D. <i>Director, JustGarciaHill.org</i> <i>Program Director, Center for Study of Gene Structure and Function</i> <i>Professor of Biology, Hunter College, City University of New York</i></p> <p>Mekbib Gameda <i>Director, Office of Diversity Affairs</i> <i>New York University School of Medicine</i> <i>Director, Communications and Outreach, JustGarciaHill.org</i></p>	<i>Location: Regency V, VI, VII</i>
6:30 p.m. - 7:30 p.m.	<p>Dinner <i>(Performance by Spelman College Glee Club)</i></p>	<i>Location: Centennial Ballroom</i>

Wednesday, November 2, 2005

7:30 p.m. - 9:00 p.m.	<p>CONFERENCE OVERVIEW, OPENING REMARKS, AND KEYNOTE ADDRESS</p> <p>Conference Overview <i>John Fitzgerald Gates</i> <i>Associate Dean, Harvard College, Harvard University Cambridge, MA</i></p> <p>Opening Remarks <i>Clifford W. Houston, Ph.D.</i> <i>Chairperson, ABRCMS and ASM Education Board Professor of Microbiology and Associate Vice President for Educational Outreach University of Texas Medical Branch at Galveston, TX</i></p> <p>Conference Welcome <i>Clifton Poodry, Ph.D.</i> <i>Director, Minority Opportunities in Research Division National Institute of General Medical Sciences National Institutes of Health, Bethesda, MD</i></p> <p>Keynote Address Solving the Mystery of Racial and Ethnic Health Disparities: The Need for Interdisciplinary Research <i>Speaker</i> <i>Norman Anderson, Ph.D.</i> <i>President and Chief Executive Officer, American Psychological Association, Washington, D.C. Adjunct Professor of Society, Human Development and Health Harvard School of Public Health, Cambridge, MA</i></p>	<i>Location: Centennial Ballroom</i>
9:15 p.m. - 10:00 p.m.	<p>BRIDGES Students Orientation</p> <p><i>Moderator</i> <i>Tom Landefeld, Ph.D.</i> <i>MARC/MBRS President and BRIDGES President California State University, Dominguez Hills, CA</i></p>	<i>Location: Dunwoody</i>

Thursday, November 3, 2005

7:00 a.m. - 5:00 p.m.	Registration Open	<i>Location: Ballroom Level</i>
7:00 a.m. - 8:00 a.m.	Networking Breakfast	<i>Location: Centennial Ballroom</i>
8:15 a.m. - 10:00 a.m.	<p>PLENARY SCIENTIFIC SESSION</p> <p>NIH Roadmap Topics: Pathways to New Discoveries</p> <p>Biomedical Research: Examining the Pieces and Putting Them Together Biological systems function through complicated interactions between many components. Understanding such systems requires an understanding both of the individual components and of their interactive networks. Research initiatives, including some components of the NIH Roadmap for Medical Research, are directed toward enhancing the tools available for tackling these challenges.</p> <p><i>Speaker</i> <i>Jeremy M. Berg, Ph.D.</i> <i>Director, National Institute of General Medical Sciences National Institutes of Health, Bethesda, MD</i></p>	<i>Location: Centennial Ballroom</i>

Horizons in Cellular and Molecular Imaging

Developments in cellular and molecular imaging should underpin the growth of personalized medicine. Advances in molecular imaging come from work on nanometer-scale target-specific homing and signaling systems that can detect cells and molecular targets and deliver novel therapeutic agents. These systems can exploit the advantages of multiple modalities—nuclear, optical, and magnetic resonance imaging—and may expand understanding of pathophysiology through monitoring of molecular events. Such agents that target specific biomarkers will play a critical role in disease understanding, detection, and the delivery and assessment of therapy.

Speaker

Roderic I. Pettigrew, Ph.D., M.D.

*Director, National Institute of Biomedical Imaging and Bioengineering
National Institutes of Health, Bethesda, MD.*

Drug Abuse and Addiction Research Review: Opportunities in the NIH Roadmap.

This presentation will review the scientific basis and understanding of drug abuse (a preventable behavior) and addiction (a treatable brain disease). The neurobiology of intoxication and addiction will be presented in a way to highlight potential areas of scientific inquiry for young investigators within the NIH Roadmap.

Speaker

Donald Vereen, M.D. M.P.H.

*Deputy Director, National Institute on Drug Abuse
National Institutes of Health, Bethesda, MD*

Session Moderator

Clifton Poody, Ph.D.

*Director, Minority Opportunities in Research Division
National Institute of General Medical Sciences
National Institutes of Health, Bethesda, MD*

10:15 a.m. - 11:15 a.m.

**CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS
(OPTION OF 3 SESSIONS)**

SESSION 1

Location: Regency VI and VII

Ph.D. and M.D. /Ph.D. Training Opportunities, Highlighting NIH-funded Biomedical Research Training Programs

(Recommended for Undergraduate Students)

How does an undergraduate student decide on a career in biomedical research, medicine, or a combination of both? A panel discussion will give an overview of the challenges, rewards and opportunities of training for a biomedical research career, as well as information on Ph.D. and M.D./Ph.D. training programs funded by the National Institutes of Health (NIH). The NIH supports roughly 500 interdisciplinary Ph.D. programs at hundreds of institutions from coast to coast. These programs are highly diverse in the areas of science they represent and are amongst the best in the nation. Students who are accepted to these programs are supported throughout their graduate training. In addition, all training programs supported by the NIH have a requirement to recruit and train underrepresented minority students and they aggressively seek minority applicants. Specific topics will include: how to select the right graduate program, the application and admissions process, and how a training program prepares its trainees for a successful career in biomedical science; a description of the scientific areas and the special features of NIH-supported training programs; career opportunities for Ph.D. graduates; a student's perspective of what it's like to be a graduate student, a member of a training program, and an aspiring research scientist. This session will be of special interest to undergraduates contemplating research careers in biology, chemistry, biophysics, computational biology, the biomedical sciences, molecular medicine and clinical research.

Panel Members

Sharon Milgram, Ph.D.

Professor of Cell and Developmental Biology and Director
University of North Carolina Graduate Program in Cellular and Molecular Biology, Chapel Hill

Bert Shapiro, Ph.D.

Program Director, Medical Scientist Training Program
National Institute of General Medical Sciences (NIGMS), Bethesda, MD

Marion Zatz, Ph.D.

Program Director, Cellular, Molecular and Biochemical Sciences Training Program,
National Institute of General Medical Sciences (NIGMS), Bethesda, MD

Yvette Langdon, Ph.D. candidate

Department of Molecular Biology, University of North Carolina, Chapel Hill

SESSION 2

Location: **Regency V**

Effective Practices in Graduate Education

(Recommended for Graduate Students)

This presentation will describe the efforts of the Compact for Faculty Diversity, a partnership of the Southern Regional Education Board, the New England Board of Higher Education, and the Western Interstate Commission for Higher Education designed to recruit, retain, and graduate minority doctoral students who aspire to careers in the professoriate. Through a combination of long-term financial support, mentoring, professional development, and effective networking, the Compact has succeeded in retaining and graduating 90% of the 600+ minority doctoral students enrolled in the program since its inception in 1994. This compares to a 45% retention rate of students in doctoral programs nationwide. The presenters will discuss how elements of this highly successful program are transferable to any graduate level program.

Speakers

Ansley Abraham, Ph.D.

The Compact for Faculty Diversity
Southern Regional Education Board, Atlanta, GA

SESSION 3

Location: **Learning Center**

How to Get Published in Science

(Recommended for Postdoctoral Scientists and Faculty)

This session will provide an overview of how to get published in *Science*. The presenter will walk through the process of submitting a paper and provide an overview of the review and final publication process, including a look at what types of papers are suitable for *Science*. Any scientist interested in being published in *Science* should plan to attend.

Moderator

Yolanda S. George, M.S.

Deputy Director, Directorate for Education and Human Resources
American Association for the Advancement of Science, Washington, D.C.

Speaker

Katrina Kelner, Ph.D.

Deputy Editor of *Science*
American Association for the Advancement of Science, Washington, D.C.

10:15 a.m. - 11:15 a.m.

Judges Orientation

(Recommended for Student Presentation Judges)

Expectations of judges and ABRCMS judging process will be discussed. Judges packets will be distributed during the orientation. All judges are strongly encouraged to attend. If due to circumstances beyond ones control, one cannot attend, he/she should pick up their packet at the ABRCMS booth.

Judges Orientation: Microbiological Sciences

Location: **Courtland**

Thursday, November 3, 2005

	Judges Orientation: Chemical Sciences	<i>Location: Inman</i>
	Judges Orientation: Biochemical Sciences	<i>Location: Vinings</i>
	Judges Orientation: Cell & Developmental Biological Sciences	<i>Location: Dunwoody</i>
	Judges Orientation: Molecular Biological Sciences	<i>Location: Spring</i>
	Judges Orientation: Neuroscience	<i>Location: Baker</i>
	Judges Orientation: Social and Behavioral Sciences	<i>Location: Kennesaw</i>
	Judges Orientation: Quantitative Sciences	<i>Location: Piedmont</i>
	Judges Orientation: Physiological Sciences	<i>Location: Techwood</i>
11:30 a.m. - 1:00 p.m.	EXHIBITS OPEN	<i>Location: Hanover Hall & Grand Hall</i>
11:30 a.m. - 12:45 p.m.	POSTER SESSION 1: Poster Presentations	<i>Location: Hanover Hall & Grand Hall</i>
1:00 p.m. - 2:00 p.m.	Lunch	<i>Location: Centennial Ballroom</i>
2:15 p.m. - 3:00 p.m.	<p>PLENARY SCIENTIFIC SESSION (Sponsored by The American Society for Cell Biology)</p> <p>How Does the Breast Remember It Is a Breast and How May It Forget and Become Breast Cancer</p> <p>Speaker Mina Bissell, Ph.D. <i>Distinguished Scientist, Life Sciences Division Ernest Orlando Lawrence Berkeley National Laboratory, Berkeley, CA</i></p> <p>Introduction of Speaker Sandra Murray, Ph.D. <i>Professor, Department of Cell Biology and Physiology University of Pittsburgh Medical School, Pittsburgh, PA</i></p>	<i>Location: Centennial Ballroom</i>
3:00 p.m. - 6:00 p.m.	EXHIBITS OPEN	<i>Location: Hanover Hall & Grand Hall</i>
3:15 p.m. - 4:30 p.m.	POSTER SESSION 2: Poster Presentations	<i>Location: Hanover Hall & Grand Hall</i>
4:30 p.m. - 5:45 p.m.	POSTER SESSION 3: Poster Presentations	<i>Location: Hanover Hall & Grand Hall</i>
6:00 p.m. - 7:00 p.m.	Dinner	<i>Location: Centennial Ballroom</i>
7:15 p.m. - 8:45 p.m.	<p>CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS (OPTION of 5 SESSIONS)</p> <p>SESSION 1</p> <p>The Graduate School Application Process (Recommended for Freshmen, Sophomores, and Community College Students)</p> <p>This session is designed for freshmen, sophomores, and community college students as they prepare for the graduate school application process. Discussion will focus on course selection during undergraduate education, summer program experience, personal development skills, and the application process and admissions process.</p> <p>Speaker C. Gita Bosch, Ph.D. <i>Associate Dean, Graduate School Gerstner Sloan-Kettering Graduate School of Biomedical Sciences, Memorial Sloan-Kettering Cancer Center, New York, NY</i></p>	<i>Location: Regency VI</i>

SESSION 2

Location: Regency VII

The Graduate School Application Process

(Recommended for Juniors)

This session is designed for students seeking admission in fall 2006 who have not yet submitted an application. Discussion will focus on personal development skills necessary for the application process, researching graduate schools, preparing for the GRE, completing the application form, getting letters of recommendation, writing the personal statement, preparing for the interviewing process, making the right graduate school selection, and financing graduate education.

Speaker

Cecilio Barrera, Ph.D.

*Associate Dean, Graduate School
University of Texas, San Marcos, San Marcos, TX*

SESSION 3

Location: Regency V

The Graduate School Application Process

(Recommended for Seniors and Postbaccalaureates)

This session is for senior-level undergraduate and postbaccalaureate students who are pursuing graduate education, either immediately or in the future. Discussion will focus on interviewing, selecting the right graduate school after acceptance or reviewing options if not accepted into graduate school, preparing for the GRE, and financing your graduate education.

Speaker

John Augusto, M.Ed

*Assistant Dean, Graduate School
University of Kansas, Lawrence, KS*

SESSION 4

Location: International Ballroom North

**The Mentoring Seminar for Graduate Students and Postdoctoral Researchers:
Mentoring a New Generation of Scientists**

(Recommended for Graduate Students & Postdoctoral Scientists)

Often, young scientists do not recognize the value of and need for mentoring by more senior, respected individuals. To assure that the advice you receive is of reasonable quality, young scientists should align themselves with faculty to talk about issues. Regardless of aspirations for a position within or outside the academy, a young scientist achieves success understanding the essential rules that must be followed. This interactive session will be introduced first with a presentation followed by hands on case studies.

Speakers

John Alderete, Ph.D.

*Professor, Department of Microbiology
University of Texas Health Sciences Center in San Antonio, TX*

Jo Handelsman, Ph.D.

*Professor, Department of Plant Pathology
Howard Hughes Medical Institute Professor
University of Wisconsin, Madison, WI*

SESSION 5

Location: International Ballroom South

NIH Grants Management

(Recommended for Program Directors and Faculty)

THIS SESSION WILL NOT BE REPEATED

This session will cover (i) NIH-MORE update, including current budget information, (ii) use of human subjects: clarification of requirements, (iii) use of the SNAP application process, and (iv) areas of interest in MBRS and MARC.

Thursday, November 3, 2005

Speakers

Toni Holland, M.Ed., M.A.S.

NIGMS Grants Management Office
National Institute of General Medical Sciences
Bethesda, MD

Mario Martinez, M.P.H.

NIGMS Grants Management Office
National Institute of General Medical Sciences
Bethesda, MD

Lori Burge, B.S.

NIGMS Grants Management Office
National Institute of General Medical Sciences
Bethesda, MD

Jeffri Bell, B.S.

NIGMS Grants Management Office
National Institute of General Medical Sciences
Bethesda, MD

9:00 p.m. - 10:00 p.m.

Graduate Students and Postdoctoral Scientists Social and Networking Hour

Location: Executive Suite 219-226

An opportunity for graduate students and postdoctoral scholars to get together to share experiences and network. Recruiters of postdoctoral positions are invited to attend.

Friday, November 4, 2005

7:00 a.m. - 5:00 p.m.

Registration Open

Location: Centennial Ballroom Level

7:00 a.m. - 8:00 a.m.

Networking Breakfast

Location: Centennial Ballroom

8:15 a.m. - 9:00 a.m.

PLENARY SCIENTIFIC SESSION

Location: Centennial Ballroom

Using Genomics to Study Biology at the Systems Level

Genomic sequences provide direct evidence that the basic cellular functions of all organisms are carried out by genes and proteins whose primary sequences are simply related by evolutionary descent (orthology). The genome sequences also allow us to study all genes of a single organism simultaneously. We use DNA microarrays to study patterns of genes expression and genome rearrangements in yeast and human cells, tissue and tumors. These experiments, and the new computational and statistical methods required to analyze them, facilitate understanding not only of individual genes and proteins, but also how these function together at the system level

Speaker

David Botstein, Ph.D.

Anthony B. Evnin Professor of Genomics
Director, Lewis-Sigler Institute of Integrative Genomics
Princeton University, Princeton, NJ

Introduction of Speaker

J.K. Haynes, Ph.D.

Dean of Biology Department, Morehouse College
Atlanta, GA

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

CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS
(OPTION OF 3 SESSIONS)

SESSION 1

Location: Regency VII

Upcoming Changes in GRE: Preparing to Do Your Best in the GRE

(Recommended for Juniors, Seniors, Postbaccalaureates)

The workshop will emphasize the structure of the GRE (Graduate Record Exam), anticipated changes in the GRE that will take effect on the October GRE and strategies to do your best on the GRE. The resources that will be discussed and strategies that will be presented have been used by hundreds of students to improve their GRE scores. Material from the developers of the GRE and pointers for improving your GRE skills and scores will be available at the workshop.

Speaker

Gayle Slaughter, Ph.D.

*Graduate School of Biomedical Sciences
Baylor College of Medicine, Houston, TX*

SESSION 2

Location: Regency VI

Writing a Successful Personal Statement and Abstract—Telling your Story!

(SESSION WILL BE REPEATED ON SATURDAY, NOVEMBER 5)

(Recommended for Undergraduate Students)

Abstracts and personal statements should tell a story—either about your work or about you. Condensing all of the work that you have done or all of the experiences that have made you who you are is a difficult task. One thing is clear—the more you think about and work on your writing, the better it will be. This is the opportunity for you! Come to this session to get help from presenters who during their careers have written many abstracts and statements, have read thousands of submitted statements, and have helped students early in their careers to write great statements. Bring a copy of an abstract and/or a personal statement that you are working on.

Conveners

Laurel Southard, Ph.D.

*Director, Undergraduate Research
Cornell University, Ithaca, NY*

Joel Oppenheim, Ph.D.

*Senior Associate Dean, Graduate Studies and Medical School
New York University, New York, NY*

Jocelyn Spragg, Ph.D.

*Faculty Director, Diversity Programs
Harvard University Medical School, Boston, MA*

SESSION 3

Location: Learning Center

Pathway to the Professoriate: Starting your Own Research Laboratory

(Recommended for Graduate Students, Postdoctoral Scientists and Junior Faculty)

Achieving success in academia is complex. A young faculty member must learn how to successfully run a laboratory, develop an independent research program with an adequate publishing record, become known nationally as a scholar, and have good credentials as a teacher. There are many choices along the way that can influence the outcome of the tenure process.

Speaker

John Alderete, Ph.D.

*Professor, Department of Microbiology
University of Texas Health Sciences Center at San Antonio, TX*

10:30 a.m. - 11:15 a.m.

CONCURRENT SCIENTIFIC SESSIONS
(OPTION OF 5 SESSIONS)*Location: Regency VII***SESSION 1****Identifying Optimal Surface Properties of Biomaterials for Stem Cell Tissue Engineering**

The emerging technology of tissue engineering has the potential of becoming the therapy of choice for the regeneration of a number of damaged or diseased tissues and organs. At the forefront of investigation is the use of stem cells because of their ability to differentiate into various cell types and thus, promote the regeneration of the damaged or diseased tissue of interest. Mesenchymal stem cells (MSCs) are multipotential cells that are capable of differentiating along several lineage pathways. MSCs, which are obtained from adult bone marrow and expanded in culture, are believed to be valuable as a readily available and abundant source of cells in the tissue-engineering field. However, for treating damaged or diseased connective tissues, such as large bone fracture, osteoarthritis, tendon and ligament injuries, and spinal cord injury, MSCs must be combined with an appropriate scaffold material that promotes attachment and differentiation. For this technology to advance into clinical application, the development of improved scaffold materials is needed. We have investigated in a systematic fashion the optimal surface properties and characteristics of materials that promote stem cell differentiation.

Speaker**Treena Livingston Arinzeh, Ph.D.***Assistant Professor of Biomedical Engineering
New Jersey Institute of Technology, Newark, NJ***Introduction of Speaker****Shawn Drew, Ph.D.***National Institute of General Medical Sciences
Bethesda, MD***SESSION 2***Location: International North***Nucleotide Receptor Signaling in Astrocytic Cells**

The talk will describe our studies on the structure and function of the P2Y2 nucleotide receptor in astrocytic cells. The heptahelical P2Y2 nucleotide receptor couples to the activation of mitogen-activated protein kinases (MAPK), the mobilization of intracellular stores of calcium, the activation of phospholipase C-beta, protein kinase C isoforms, focal adhesion kinase, and c-Src kinase, and has been implicated in a number of physiological and pathological processes including inflammation, reactive astrogliosis, and neuroprotection. Several different lines of evidence point to a potentially important but not well-understood association between the release of nucleotides and gliotic responses.

Speaker**Fernando A. Gonzalez, Ph.D.***Professor of Biochemistry
University of Puerto Rico, Río Piedras and Medical Sciences Campuses***Introduction of Speaker****Adolphus Toliver, Ph.D.***Branch Chief, MARC, National Institute of General Medical Sciences
Bethesda, MD***SESSION 3***Location: Regency V***Regulation of the Immune Response by Tec Family Kinase ITK**

An effective T-cell immune response is critical in controlling overall immunity to pathogenic challenge. However, overactive T-cell responses can result in the development of autoimmune disease. Understanding the signals that regulate T-cell activation will eventually allow us to be able to better manipulate these responses. Following activation, T cells can differentiate into Th1 or Th2 cell types,

which make different cytokines. Allergic asthma patients have hallmarks of an overactive Th2 response, including an increase in the role of eosinophils and mast cells. The Tec family nonreceptor tyrosine kinase ITK can regulate the activation of T cells, as well as their differentiation and/or the function of Th2-type cells. Data will be presented discussing the role of this tyrosine kinase in regulating the development of allergic asthma, as well as controlling the primary immune response to antigenic challenge.

Speaker

Avery August, Ph.D.

*Associate Professor of Immunology
The Pennsylvania State University, University Park, PA*

Introduction of Speaker

Mary Sanchez-Lanier, Ph.D.

Washington State University, Pullman, WA

SESSION 4

Location: Regency VI

Albumin, a Therapeutic Agent for Spinal Cord Injury

Spinal cord injury (SCI) produces permanent loss of function. Only one treatment, methylprednisolone, is clinically available, and it is marginally effective. Damage by secondary processes, such as the elevated release of glutamic acid, contribute to the permanent impairments produced by SCI. This secondary damage provides a target for pharmaceutical intervention. Recently, we demonstrated that human recombinant albumin protects spinal cord cells against serum deprivation and glutamate toxicity. A serum fraction containing albumin also improved recovery in rats after SCI. Given albumin's effectiveness, we are optimizing the parameters for administering albumin as a therapeutic agent in human clinical trials.

Speaker

Lisa Cain, Ph.D.

*Assistant Professor, Department of Neuroscience
University of Texas Medical Branch, Galveston, TX*

Introduction of Speaker

Gayle Weaver, Ph.D

*Assistant Professor, Department of Neuroscience
University of Texas Medical Branch, Galveston, TX*

SESSION 5

Location: International South

Signaling Complexes and the Regulation of Calcium Influx in Neurons

Calcium regulates a wide range of physiological processes such as synaptic transmission, muscle contraction, gene transcription and membrane excitability. Influx through voltage-dependent calcium channels is the primary trigger for electrically evoked release of chemical transmitters in the nervous system; therefore understanding the molecular components underlying calcium channel regulation is central to the development of a mechanistic picture of key events in neuronal signaling. Defects in the timing and modulation of calcium channels can result in epilepsy, ataxia and hemiplegic familial migraine. Recently, we have found a novel mechanism for G protein-mediated modulation of neuronal voltage-dependent calcium channels that involves the destabilization and subsequent removal of calcium channels from the plasma membrane. Imaging experiments in living sensory neurons show that calcium channels are cleared from the membrane and sequestered in clathrin-coated vesicles. The direct interaction of calcium channels with ankyrin B and the cell adhesion molecule L1-CAM under basal conditions is abrogated by G protein-coupled receptor activation. Disruption of the L1-CAM-ankyrin B complex with the calcium channel reduces calcium influx and decreases secretion of Substance P, a mediator of pain transmission. Our results suggest that G protein-induced removal of plasma membrane calcium channels is a consequence of disrupting channel-cytoskeleton interactions and might represent a novel mechanism of presynaptic inhibition.

Friday, November 4, 2005

Speaker

Maria Diverse-Pierluissi, Ph.D.

*Assistant Professor, Department of Pharmacology and Chemistry
Mount Sinai School of Medicine, New York, NY*

Introduction of Speaker

Hinda Zlotnik, Ph.D.

*Branch Chief, MBRS,
National Institute of General Medical Sciences, Bethesda, MD*

11:30 a.m. - 1:00 p.m. **Exhibits Open** *Location: Hanover Hall & Grand Hall*

11:30 a.m. - 12:45 p.m. **POSTER SESSION 4: Poster Presentations** *Location: Hanover Hall & Grand Hall*

1:00 p.m. - 2:00 p.m. **Networking Lunch** *Location: Centennial Ballroom*

2:15 p.m. - 3:00 p.m. **PLENARY SESSION** *Location: Centennial Ballroom*

Dishing in the Talent Pool: Scientists for the 21st Century

Speaker

Shirley Malcom, Ph.D.

*Director, Directorate for Education and Human Resources
American Association for the Advancement of Science, Washington, D.C.*

Introduction of Speaker

John Fitzgerald Gates

*Associate Dean, Harvard College, Harvard University
Cambridge, MA*

3:00 p.m. - 6:00 p.m. **EXHIBITS OPEN** *Location: Hanover Hall & Grand Hall*

3:15 p.m. - 4:30 p.m. **POSTER SESSION 5: Poster Presentations** *Location: Hanover Hall & Grand Hall*

4:30 p.m. - 5:45 p.m. **POSTER SESSION 6: Poster Presentations** *Location: Hanover Hall & Grand Hall*

6:00 p.m. - 7:00 p.m. **“BIRDS OF A FEATHER” SMALL GROUP DISCUSSIONS**
(OPTION OF 6 GROUPS)

This is a wonderful opportunity for undergraduate students to meet one-on-one with graduate students, postdoctoral scientists and faculty to seek advice on selected topics.

Group 1

Location: Vinings

Developing a Budget and Managing Your Finances in Graduate School

Discussion Leader

Earnestine Baker, M.A.

*University of Maryland, Baltimore County (UMBC)
Baltimore, MD*

Group 2

Location: Courtland

Graduate School Process: Identifying a Program, Applying and Selecting a Graduate School: a Graduate Student's Perspective

Discussion Leader

Nikia Laurie, Ph.D.

*Postdoctoral Fellow
St. Jude Children's Research Hospital, Memphis, TN*

Group 3

Identifying and Selecting a Summer Research Program

Discussion Leader

Zakee Sabree (Ph.D candidate)

University of Wisconsin, Madison, WI

Location: Dunwoody

Group 4

Balancing Your Professional and Personal Life

Discussion Leaders

Asiya Gusa (Ph.D candidate)

Emory University, Atlanta, GA

(Recently Became a Mother)

Location: Baker

Danielle Thompson, (Ph.D candidate)

Emory University, Atlanta, GA

(Single Parent and Mother)

John Pulliam (Ph.D candidate)

Kanika Pulliam (Ph.D candidate)

Emory University, Atlanta, GA

(Husband and Wife team)

Group 5

Location: Spring

Medical School or Graduate School: Factors Leading To My Decision

Discussion Leaders

Karla Vincent (Ph.D candidate)

Georgia Technical Institute, Atlanta, GA

Carmelle Tabitha Novice (MD/Ph.D candidate)

Columbia University

Group 6

Location: Inman

The Difference Between Undergraduate and Graduate School

Discussion Leader:

Christopher Jones, M.S.

Massachusetts Institute of Technology, Cambridge, MA

6:00 p.m. - 7:15 p.m.

**PROGRAM DIRECTORS, SPEAKERS,
JUDGES, and EXHIBITORS RECEPTION**

Location: International North and South

7:00 p.m. - 8:00 p.m

MORE/NIGMS Program Directors Meeting
(All Programs Except BRIDGES)

Location: Regency V

7:00 p.m.

FREE TIME! FREE TIME! FREE TIME!

Saturday, November 5, 2005

7:00 a.m. - 12:00 noon	Registration Open	<i>Location: Centennial Ballroom Level</i>
7:00 a.m. - 8:00 a.m.	Networking Breakfast	<i>Location: Centennial Ballroom Level</i>
7:30 a.m. - 8:00 a.m.	Open Forum for Feedback	<i>Location: Centennial Ballroom Level</i>
8:15 a.m. - 9:15 a.m.	<p>CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS (OPTION OF 2 SESSIONS)</p> <p>SESSION 1 <i>Location: Regency VII</i></p> <p>The Undergraduate Research Experience: Examining Roles, Responsibilities, Strategies, and Actions for Forming Effective Mentorship Alliances (Recommended for Undergraduate and Postbaccalaureate students)</p> <p>This session is designed to provide students with an overview of the definition and philosophy of mentoring. It examines the nature of mentoring from the perspective of nurturing and supporting students; assessing their needs; the problems they face; and the role faculty play in helping students achieve academic, career and professional success. The session will address questions such as: Why mentoring? What's involved in mentoring? How should the mentoring alliance be structured? What are the mentor protégé roles and responsibilities? What factors/issues should be considered in seeking a mentor? It examines the myths and issues behind these questions and provides strategies for developing and implementing effective alliances.</p> <p><i>Speaker</i> Howard Adams, Ph.D. <i>Consultant</i> H. G. and Associates, Marietta, GA</p> <p>SESSION 2 <i>Location: Regency V</i></p> <p>TADA! Thesis and Dissertation Accomplished: Practical Steps to Completing a Master's Thesis or Dissertation (Recommended for Graduate Students)</p> <p>This workshop is recommended for any graduate student who is required to write a master's thesis and/or doctoral dissertation. A range of issues related to the thesis and dissertation process will be covered, including: how to choose a topic, what is the role of the advisor, how to set a deadline, how to keep working daily when you are tired and depressed, preparing for costs that you may not be aware of, how to finish the document, how to prepare for the dissertation defense, how to proceed if your professor is out of town and you need his or her signature, and much more....</p> <p><i>Speaker</i> Wendy Carter, Ph.D. <i>Assistant Professor of Sociology, University of Maryland, University College and The Carter Group, Beltsville, MD</i></p>	
8:15 a.m. - 9:15 a.m.	BRIDGES Program Director Meeting	<i>Location: Dunwoody</i>
9:15 a.m. - 12:00 noon	Exhibits Open	<i>Location: Hanover Hall & Grand Hall</i>
9:30 a.m. - 10:45 a.m.	POSTER SESSION 7: Poster Presentations	<i>Location: Hanover Hall & Grand Hall</i>
11:00 a.m. - 1:00 p.m.	<p>ORAL PRESENTATIONS:</p> <p>Oral Session 1: Biochemical Sciences <i>Location: Vinings</i></p> <p>0-1 A Role for Vitamin C in Muscle Glucose Metabolism Raul C. Serrano, Jr. <i>San Diego Mesa Community College, San Diego, CA</i></p>	

- 0-2** Dynamic Studies of HuD Protein
Jonathan B. Leano, III
University of Washington, Seattle, WA
- 0-3** Antimicrobial Peptides as Recognition Tools for Toxins and Pathogens
Kourtney Marshall
University of Maryland Eastern Shore, Princess Anne, MD
- 0-4** Functional Studies of *Mycoplasma arthritidis* Mitogen Mutants and Determination of Their Affinities to Receptor: HLA DR1
Nyamekye Obeng-Adjei
University of Maryland Eastern Shore, Princess Anne, MD
- 0-5** Developing a More Sensitive Assay to Analyze Fatty Acid Release from Human Fat Cells: Preliminary Results of Normal and Glucose Intolerant Women
Samuel Antwi-Boasiako
Virginia Union University, Richmond, VA
- 0-6** Red Cell Oxidative Stress in Healthy Aging in Neighborhoods of Diversity across the Lifespan (HANDLS) Subjects
Adrienne K. Jones
University of Maryland Eastern Shore, Princess Anne, MD

Session Moderator

Philip Ortiz, Ph.D

Empire State University, Saratoga Springs, NY

Oral Session 2: Cell and Developmental Biological Sciences *Location: Dunwoody*

- 0-7** Achaete-scute Like-3 (ascl3) Involvement in Vsmc Proliferation
Anthony Brundage
Morehouse College, Atlanta, GA
- 0-8** Doxorubicin Exposure Leads to Mitochondrial Superoxide Production in Culture Rat Cardiomyocytes
Dorothiea L. Skinner
University of Florida, Gainesville, FL
- 0-9** Effect of Cortactin on Cell Migration and v-Src Transformation
Nicole B. Ramsey
Howard University, Washington, DC
- 0-10** Establishing a Lateral Targeting Patch at the Site of Initial Cell-Cell Adhesion in Epithelial Cells
Laura E. Edgington
Transylvania University, Lexington, KY
- 0-11** Antiproliferative Effects of Chuchupate on Breast Cancer Cells
Marisa L. Bautista
California State University, Sacramento, CA
- 0-12** Therapeutic Effects of a Cox-2 Inhibitor, R109339, on Biliary Tract Cancer in BK5.erbB2 Transgenic Mice
Eginia Franco
Mount St. Mary's College, Los Angeles, CA

Session Moderator

Arthur Washington, Ph.D.

Florida A & M University, Tallahassee, FL

Oral Session 3: Molecular Biological Sciences

Location: Spring

0-13 Variants in the Retinoid X Receptor Alpha (RXRA) Gene and Response to Pioglitazone

Naina Bagrodia

Translational Genomics Research Institute, Phoenix, AZ

0-14 Genetic Variants in the Gene Encoding SERPINE1 and Susceptibility to Diabetic Nephropathy in Pima Indians

Shahil B. Rais

Translational Genomics Research Institute, Phoenix, AZ

0-15 Phylogeographic Study of the Effect of Tectonic Plate Movement on the Distribution of Genetic Variability in the Western Fence Lizard, *Sceloporus occidentalis*

Marc Oliver D. Quijano

California State University, Long Beach, CA

0-16 Proteolytic Dig Down Through the Vaccinia Virus Proteome

Enosh Cohen

University of California, Irvine, CA

0-17 Mechanism of Activation of a Nonexonic Recursive Splice Site

Claudia Lins

Montclair State University, Nutley, NJ

0-18 Analysis of DNA Repair Activities in Human Embryonic Stem Cells

Patrice N. Cook

University of Maryland Eastern Shore, Princess Anne, MD

Session Moderator

Lasse Lindal, Ph.D

University of Maryland, Baltimore County (UMBC), Baltimore, MD

Oral Session 4: Chemical Sciences

Location: Inman

0-19 Comparison of Heavy Metal Accumulations in Modern Day and Fossil Shells of the Eastern Oyster *Crassostrea virginica* in Jamaica Bay, New York

Pedro Herrera

Kingsborough Community College, Brooklyn, NY

0-20 Molecular Tools for Proteomic Profiling

Laurence O. James

City University of New York, Hunter College, New York, NY

0-21 Fabrication of Nickel Magnetic Rings Using Self-Assembled 'C7' Bolaamphiphile Template

An Chen

Hunter College, New York City, NY

0-22 Mechanistic Studies to Improve the Targeting of Tubulin-Binding Agents

Adaora Ikwuagwu

Delaware State University, Dover, DE

- 0-23** Synthesis of a Ruthenium Nitrosyl Using a Neutral N₅ Schiff-Base Ligand: Photolability and Reactivity of a Novel NO Donor

Eric A. Alcid

University of California—Santa Cruz, CA

- 0-24** Licorice Constituent, Dibenzoylmethane, as a Therapeutic Objective in Race-Specific Prostate Cancer

Latasha N. Cox

Spelman College, Atlanta, GA

Session Moderator:

Claude Lamb, Ph.D

North Carolina A & T University, Greensboro, NC

Oral Session 5: Microbiological Sciences

Location: Courtland

- 0-25** Determining Operon Presence in the Cag Pathogenicity Island of *Helicobacter pylori*

Jennifer L. Hammel

Cosumnes River College, Elk Grove, CA

- 0-26** Electric Field Irradiation for Controlling Bioaerosols

Joan G. Marcano Velásquez

University of Puerto Rico, Mayaguez, PR

- 0-27** Identification of Major Histocompatibility Complex Class I Alleles in Chinese-Origin Rhesus Macaques

Alena C. Jaime-Ramirez

California State University, San Marcos, CA

- 0-28** Unique Transcription Mechanism of *Giardia lamblia*

Ignacio Sarria

St. Thomas University, Miami, FL

- 0-29** Understanding the Effect of LANA and RTA on the Lytic Gene K1

Bernadine Akukwe

City University of New York, Hunter College, New York, NY

- 0-30** Discovery and Functional Characterization of Subdominant CD8⁺ T-Cell Epitopes in *Trypanosoma cruzi* Infection

Melissa Cabinian

University of Georgia, Athens, GA

Session Moderator

Sherrice Allen, Ph.D

Fayetteville State University, Fayetteville, NC

Oral Session 6: Neuroscience

Location: Baker

- 0-31** Cholecystokinin (CCK) Injections into the Taste Area of the Parabrachial Nucleus Alter Oromotor Behaviors to Intraoral Infusions of Quinine in Conscious Rats

Lance A. Maddox

Daytona Beach Community College, Daytona Beach, FL

- 0-32** Nerve Growth Factors in Blood Vessels

Dominique D. Ousley

Western Michigan University, Kalamazoo, MI

- 0-33** Relative Cerebral Glucose Metabolism and Behavioral Studies of Toluene Abuse Using 18FDG in Toluene-Exposed Rats

Joseph Carrion

City College of New York—Brookhaven National Laboratory, New York, NY

- 0-34** Serotonin Projections to the Inferior Colliculus: A Retrograde Tracing Analysis of Raphe Nuclei in Mice

Aitalohi Amaize

Princeton University, Princeton, NJ

- 0-35** Pharmacological Modulation of Thalamic Oscillations in Generalized Absence Epilepsy

Gunnar F. Kwakye

University of Maryland Eastern Shore, Princess Anne, MD

- 0-36** Associative Learning and Memory in ZDHHC8 Knockout Mice: Fear Conditioning

Elizabeth Rodriguez

Hunter College, Brooklyn, NY

Session Moderator

Ann Christensen, Ph.D.

Pima Community College, Tucson, AZ

Oral Session 7: Physiological Sciences

Location: Techwood

- 0-37** Proteasome Response to Traumatic Brain Injury: Measurement of Ubiquitin and Cullin 5 Proteins by Western Blotting

Gloria N. Laryea

University of Maryland Eastern Shore, Princess Anne, MD

- 0-38** Intermittent Hypoxic Conditioning Suppresses Postischemic Nitric Oxide Synthesis in Canine Myocardium

Kevin N. Oguayo

University of Texas at Arlington, Arlington, TX

- 0-39** Exercise-Induced Skeletal Muscle Fatigue and RyR1

Julius D. Arijeloye

City University of New York, Hunter College, New York, NY

- 0-40** The Survival of the American Oyster, *Crassostrea virginica*, in Jamaica Bay, New York

Jonven Attia

Medgar Evers College, Brooklyn, NY

- 0-41** Increases in Apoptosis and Declines in Bcl-X_L Protein Characterize Testicular Regression in American Crows (*Corvus brachyrhynchos*)

Luwanda K. Jenkins

California State University, Long Beach, CA

- 0-42** Role of MuRF-1 and MAFbx Genes in Tail Muscle Degradation during Metamorphosis in *Xenopus laevis*

Patrick R. Visperas

University of California, Davis, CA

Session Moderator

Margaret Colden-Stanfield, Ph.D

Spelman College, Atlanta, GA

Oral Session 8: Quantitative Sciences

Location: Piedmont

- 0-43** The Effect of *Ilyanassa obsoleta* Population Density on Other Organisms in Its Habitat
Jason Nandoo
Kingsborough Community College, Brooklyn, NY
- 0-44** Impact of the Center of Mass-Center of Pressure Angular Relationship on Balance
Joann Moreno
University of Texas at San Antonio, TX
- 0-45** Evolutionary Modification of Methionine Biosynthesis in Bacteria at High Temperatures
Vladimir E. Ochoa
University of California, Irvine, TX
- 0-46** Environmental Factors Associated with Disproportionately Occurring Low Birth Weight among African-American Infants in High-Risk Virginia Regions
Chaz Harrington, Jr.
Virginia Union University, Richmond, VA
- 0-48** Analyzing Phase Behavior in Membrane Mixtures Containing Cholesterol
Krystle J. Williams
Colgate University, Hamilton, NY

Session Moderator

Michael Ayewoh, Ph.D
Hofstra University, LongIsland, NY

Oral Session 9: Social and Behavioral Sciences

Location: Kennesaw

- 0-49** Patient Preferences Regarding Prolonged Life Support and Withdrawal of Care
Nicole L. Mayard
Yale University, New Haven, CT
- 0-50** Validation of the Distraction Coaching Index
Latisha D. Myers
University of Iowa, Iowa City, IA
- 0-51** Acculturation, Fruit and Vegetable Consumption, and Percent Energy from Fat in Filipino-American Women
C. Iva G. Macaspac
San Diego State University, San Diego, CA
- 0-52** Risk Assessment: Examining Treatment Options of Juvenile Offenders Based on Recidivism Risk and Profile Type
Christina A. Campbell
San Diego State University, San Diego, CA
- 0-53** Food Intake among African American Girls: a Qualitative Analysis
Anthony James
Morehouse College, Atlanta, GA

0-54 Exploration of Advice and Treatments Given at Health Facilities in Cusco, Peru for Common Illnesses in Infants

Gloria M. Espinosa

California Polytechnic State University, San Luis Obispo, CA

Session Moderator

Gayle Weaver, Ph.D

University of Texas Medical Branch at Galveston, Galveston, TX

1:00 - 2:00 p.m.

Networking Lunch

Location: Centennial Ballroom

2:15 p.m. - 3:45 p.m.

CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS

(OPTION OF 2 SESSIONS)

SESSION 1

Location: Regency VII

Graduate School Experience: My Personal Story

(Recommended for Undergraduates and Post baccalaureate Students)

Graduate students and postdoctoral scientists share their graduate School experiences. Discussions will include goal setting, selecting a mentor, time management, and balancing academics and social life.

Panel Speakers

Juan Carmona (Ph.D candidate)

Harvard University, Cambridge, MA

Carmelle Norice (MD/Ph.D candidate)

Columbia University, New York, NY

Zakee Sabree (Ph.D candidate)

University of Wisconsin, Madison, WI

Nikia Laurie, Ph.D

Postdoctoral Fellow

St. Jude Children's Research Hospital, Memphis, TN

Moderators

Joel Oppenheim, Ph.D.

Senior Associate Dean, Graduate Studies and Medical School

New York University, New York, NY

Jocelyn Spragg, Ph.D.

Faculty Director, Diversity Programs

Harvard University Medical School, Boston, MA

SESSION 2

Location: Learning Center

Postdoctoral Training Experience and Beyond: Nuts & Bolts

(Recommended for Graduate Students and Postdoctoral Scientists)

Postdoctoral scientists and junior faculty share experiences about their career paths in the biomedical sciences.

Panel Speakers

Peter Velazquez, Ph.D

Postdoctoral Fellow

New York University, New York, NY

Sonya Greene, Ph.D
Postdoctoral Fellow
Emory University, Atlanta, GA

Maria Alvarez, Ph.D
Faculty
El Paso Community College, El Paso, TX

Moderator
Ansley Abraham, Ph.D
Compact for Faculty Diversity
Southern Regional Education Board, Atlanta, GA

4:00 p.m. - 5:00 p.m.

CONCURRENT PROFESSIONAL DEVELOPMENT SESSIONS
(OPTION OF 3 SESSIONS)

SESSION 1

Location: Regency VI

Strategies for Taking Standardized Admissions Tests

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

Speaker
Jayne Reuben, Ph.D.
Postdoctoral Fellow
Instructor, Kaplan Testing
University of Michigan, Ann Arbor, MI

SESSION 2

Location: Regency VI

Writing a Successful Personal Statement and Abstract—Telling your Story! (REPEAT)

Abstracts and personal statements should tell a story—either about your work or about you. Condensing all of the work that you have done or all of the experiences that have made you who you are is a difficult task. One thing is clear—the more you think about and work on your writing, the better it will be. This is the opportunity for you! Come to this session to get help from presenters who during their careers have written many abstracts and statements, have read thousands of submitted statements, and have helped students early in their careers to write great statements. Bring a copy of an abstract and/or a personal statement that you are working on.

Conveners
Laurel Southard, Ph.D.
Director, Undergraduate Research
Cornell University, Ithaca, NY
Joel Oppenheim, Ph.D.
Senior Associate Dean, Graduate Studies and Medical School
New York University, New York, NY
Jocelyn Spragg, Ph.D.
Faculty Director, Diversity Programs
Harvard University Medical School, Cambridge, MA

SESSION 3

Location: Learning Center

Survival Skills: Preparing for and Marketing Yourself for Your Next Position or Appointment
(Recommended for Graduate Students and Postdoctoral Scientists)

This session will focus on career evolution, providing a fitness guide for surviving the transition from graduate school to a postdoctoral position or faculty position. From making choices to selling

yourself, this session provides a compilation of helpful and practical tips on landing your dream postdoctoral position or academic job. Discussion will focus on designing a résumé for the job of your choice, learning interviewing skills for scientists, making the right job selection, negotiating the salary, and balancing personal and professional life.

Speaker

Wendy Carter, Ph.D.

*Assistant Professor of Sociology,
University of Maryland, University College and the Carter Group, Beltsville, MD*

5:00 p.m. - 7:00 p.m.

FREE TIME! FREE TIME! FREE TIME!

7:00 p.m. - 9:30 p.m.

**BANQUET, CLOSING REMARKS,
AND AWARDS CEREMONY**

Location: Centennial Ballroom

Moderator

John Fitzgerald Gates

Harvard College, Harvard University, Cambridge, MA

Closing Remarks

A Conversation About Learning and the Latest Brain Research
The architecture of the brain is forever changing and elegantly simple in some ways, and predetermined and extremely complex in others. The human brain is composed of over one trillion cells with more than one quadrillion interconnections that constantly rearrange themselves “on the fly.” The precision engineering of the brain renders it unlike even the most sophisticated of mechanical objects, although comparisons to computers abound. In this brief conversation about the brain, we will discuss some of the myth-breaking implications from the latest discoveries in neuroscience.

Speaker

Ken Wesson, Ph.D.

Education Consultant, Neuroscience, San Jose, CA

Awards Ceremony

Conference Wrap-Up

Speaker

Clifford Houston, Ph.D.

*Chairperson, ABRCMS and ASM Education Board
Associate Vice President for Educational Outreach
University of Texas Medical Branch at Galveston, TX*

9:30 p.m. - 1:00 a.m.

ABRCMS Dance and Social (All Are Invited)

Location: Regency Ballroom