

## 2006 Biomedical Science Careers Student Conference

THE EIGHTH BIENNIAL BIOMEDICAL Science Careers Student Conference, sponsored by the Biomedical Science Careers Program, took place in Boston on March 10 and 11 with more than 800 post-doctoral fellows; medical, dental, graduate and college students; and high school seniors and juniors registered from 257 institutions in 27 states, the District of Columbia, Puerto Rico, Mexico and Canada. The goal of the conference is to encourage students to pursue and complete advanced studies.

This year's keynote speakers were Frank L. Douglas, Ph.D., M.D., executive director of The Center for Biomedical Innovation and professor of Practice at the Schools of Management, Engineering and Science at the Massachusetts Institute of Technology (MIT) and Harvard-MIT Division of Health Sciences and Technology; Emery Neal Brown, M.D., Ph.D., anesthesiologist and director of the Neuroscience Statistics Research Laboratory in the Department of Anesthesia and Critical Care at Massachusetts General Hospital and professor of Computational Neuroscience and Health Sciences and Technology in the Department of Brain and Cognitive Sciences in the Harvard-MIT Division of Health Sciences and Technology, and associate professor of Anesthesia at Harvard Medical School; and Carolyn M. Clancy, M.D., director of the Agency for Healthcare Research and Quality at the United States Department for Health and Human Services.

Clancy, who also holds an academic appointment at George Washington University School of Medicine and serves as senior associate editor of *Health Services Research*, received the H. Richard Nesson, M.D. award. This award is given in recognition of a commitment to excellence through diversity and leadership in expanding academic and career opportunities for all. It was first awarded to Dr. Nesson in 1998.



TED AND LOIS NESSON WITH THE H. RICHARD NESSON, M.D. AWARDEE AND KEYNOTE SPEAKER CAROLYN M. CLANCY, M.D.



YVONNE GOMEZ-CARRION, M.D., F.A.C.O.G. WITH BSCP STUDENTS

Workshops and panel discussions for students included "Options After Graduate School," "Constructing Your Career Agenda," "Funding Resources for Students, Trainees and Faculty," and "Transitioning from the University to the Workplace." There were additional sessions geared to every educational level from high school on up.

For the breakfast and lunchtime sessions, students were assigned to tables with mentors, which provided some with their first networking opportunities and others with the chance to build on relationships formed at previous conferences and in past internships. For students leaving the conference with a little more knowledge than they came in with, and even one or two more contacts, it was a great success. ■

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### SPECIAL THANKS TO

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## EVENING OF HOPE

THE NINTH ANNUAL BSCP Evening of Hope will take place on April 27 at The Boston Park Plaza Hotel, bringing together leaders from the bioscience, health care and education communities to raise money for BSCP programs, which are always offered at no cost to the students, and to celebrate BSCP successes.

Wendell J. Knox, president and chief executive officer of Abt Associates Inc., and Kathleen O'Loughlin, president and chief executive officer of Delta Dental of Massachusetts, will be honored for their work in promoting justice, fairness and the advancement of youth, particularly on behalf of minorities and the disadvantaged. Four people who have tirelessly devoted their energies to the BSCP over the years have been named to the 2006 Honor Roll: Thomas L. Delbanco, M.D., founding chief (until 2001)-internist, Division of General Medicine and Primary Care at Beth Israel Deaconess Medical Center; Jose R. Lemos, Ph.D., professor, Departments of Physiology and Pharmacology at the University of Massachusetts Medical School; Marshall A. Wolf, M.D., vice chair for Medical Education and physician, Department of Medicine at Brigham and Women's Hospital, and Joan C. Wood, M.Ed., vice president, Leadership and Organization Development, at Genzyme Corporation.

Six students will be awarded Hope Scholarships at the event. Each of the students will receive

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## Mentor Profile

*Emery Neal Brown, M.D., Ph.D.*

GROWING UP IN OCALA, FLORIDA, ON land that his grandfather inherited after being liberated from slavery, Emery Brown, M.D., Ph.D., the son of high school and junior high school math and science teachers, inherited his parents' academic strengths. And from a very young age, he wanted to be a physician. But his real passion was for the study of foreign languages.

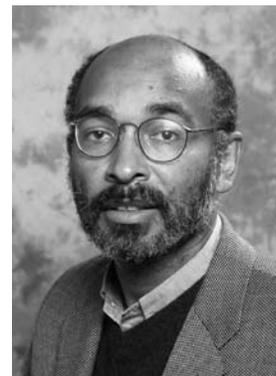
Brown studied Spanish in the seventh and eighth grades. When he entered ninth grade he switched to French, and spent the following summer in France. In his junior year of high school, Brown left Florida to attend Phillips Exeter Academy in New Hampshire. There he studied French and Spanish, and spent his last semester of high school in Barcelona, Spain.

At Harvard University the next year, Brown knew he wanted to follow a pre-med course, but he elected to concentrate in romance languages. "I didn't like the idea that American intellectuals could only speak one language," he says. By junior year, however, Brown had "migrated back to math," ultimately majoring in applied mathematics because he found that he had an affinity for statistics.

After graduating in 1978, he combined his two loves and spent a year studying mathematics at the Fourier Institute for Pure and Applied Mathematics in Grenoble, France, on an International Rotary Foundation Fellowship. He returned to Harvard in 1979 to enter the M.D./Ph.D. program. He received his Master's and Ph.D. in Statistics from Harvard University, and his M.D. with high honors from Harvard Medical School.

Today Brown is an anesthesiologist at Massachusetts General Hospital (MGH). He also founded and runs a Neuroscience Statistics Research Laboratory at MGH that focuses on developing signal processing algorithms and statistical methods to study how the brain and nervous system represent and transmit information, and what happens to people's brains when they go to sleep under anesthesia for surgery. He teaches at Harvard Medical School and the Massachusetts Institute of Technology (MIT) — one of only a few people who have joint professorial appointments at both

Harvard and MIT. And he directs a summer course on neuroinformatics at the Woods Hole Oceanographic Institution.



EMERY NEAL BROWN, M.D., PH.D.

"My concept of a physician was to be a primary care physician," Brown says. "That was always my plan. Some of the best times I had were going to my doctor. When I looked back, in retrospect, he respected me. I was interested in science, but [where I grew up] there weren't a lot of science opportunities."

He advises students interested in science and medicine to "get exposure to science. Try to get research experience so you have an idea of what it will be like. From where I sit, there are tons of really cool opportunities for students that weren't there when I was a student," he says. "Joan's program [BSCP] is a perfect example of that."

Brown also stresses the importance of "good work habits and persistence. People talk a lot about the Michael Jordans and the rap stars," he says. "But they never talk about the time they put in to get where they are. There's no substitute for hard work. The benefit of that can't be underestimated.

"The other part of being successful is you have to believe that you can succeed," he says. "On some level, I could never believe that I wouldn't succeed."

Summer research programs, like those at Harvard and MGH; programs for underrepresented minority students like the one at Codman Academy in Dorchester, Massachusetts; and other programs throughout the country provide invaluable opportunities for students interested in biomedical sciences and research. Brown, who was a keynote speaker at the Biomedical Science Careers Student Conference, other BSCP mentors, and advisors at high schools, colleges, medical and graduate schools are happy to help students find these programs and work with them once they are in. For more information, visit [www.bscp.org](http://www.bscp.org). ■

## Student Profile

Bruno C. Chazaro

A SECOND YEAR STUDENT IN THE M.D./Ph.D. program at Stanford University School of Medicine and the Stanford Immunology Program, Bruno C. Chazaro is not sure whether he is going to concentrate on research and dedicate a few hours a week to clinical practice, or be a full-time physician conducting translational research on the side. "I love the practice of medicine a lot," he says. "But I definitely want to be involved in both fields."

When the Mexico City native arrived at the University of New Hampshire (UNH) as a freshman in 1996, practicing medicine could not have been further from his thoughts. He elected to come to college in the U.S. because he received a scholarship from the UNH Dean of Life Sciences and Agriculture. However, as an international student, studying medicine was not a choice he could pursue. He elected to major in Zoology and obtain a minor in Genetics. In 2000, Chazaro graduated *Summa Cum Laude* with presidential honors.

During the course of his undergraduate studies, Chazaro also considered Veterinary Medicine. Through a summer orientation program at the Tufts University School of Veterinary Medicine, he applied to his first Biomedical Science Careers Student Conference in 2000, which he found illuminating. "Dr. Francis Collins was talking about diversity in science and medicine. He talked about M.D./Ph.D. programs and the close relationship between the Human Genome Project and its implications in the future of medicine." That got Chazaro thinking about medical school.

After graduation, he began a job as a research assistant the Sequencing Laboratories of Genome Therapeutics Corporation. From there, he joined Eric S. Lander's team of computational biologists at the Whitehead Institute/Center for Genome Research (now the Broad Institute), where he became involved with the completion of the Human Genome Project. In 2002, he moved to a different position at the Whitehead Institute, and he decided to apply to medical school.

Chazaro admits that coming to college in a small town in New Hampshire from a city of nearly 20 million in Mexico presented its

challenges. "I was a member of ADELA, the Latino organization at UNH, where I met my future wife. It was a very close group. That helped a lot," he says. The fact that English was his third language also helped. "I went to a German school in Mexico. It helped me a lot that I had been learning science in a different language, even if it wasn't English."

He says as a student in a similar situation, you should "surround yourself with people who believe in you, people who can push you towards your goals. Advisors, mentors who understand are key."

"BSCP opened many doors [for me]," he says. "It helped me understand the health care needs of the minority populations in this country, and it was a great first step to identify funding sources, scholarships and mentors. These conferences are great places to meet people, to get to the next step in your career."

Though his studies and volunteer work at community service clinics keep him busy, Chazaro is active in the Latino Medical Student Association (LMSA) at Stanford. LMSA is leading the way to increase the number of Latino students gaining acceptance into medical schools across the country. He is also a member of the National Network of Latin American Medical Students (NNLAMS), which is affiliated with the Hispanic National Medical Association, and helped organize its first national meeting in Washington, D.C. this past March.

Chazaro has several years of school ahead of him. However, he is always thinking of the future. He is interested in studying the intimate relationship between cancer and the immune system. He plans to use his knowledge to treat cancer in minority patient populations in the U.S. "In Mexico, I found that the resources were a little bit limited in terms of the science, so I envision staying here and contributing to my country in other ways," he says. ■



BRUNO C. CHAZARO

## NEW ENGLAND SCIENCE SYMPOSIUM

THE FIFTH ANNUAL NEW England Science Symposium, co-sponsored by the Harvard Medical School Office of Diversity and Community Partnership, the Minority Faculty Development Program and the Biomedical Science Careers Program (BSCP), took place on March 12 at The Conference Center at Harvard Medical in Boston. Students from more than 85 institutions came from 27 states, including Hawaii, plus Puerto Rico, Barbados and Mexico.

Joan Y. Reede, M.D., M.P.H., M.S., dean for Diversity and Community Partnership, associate professor of Medicine at Harvard Medical School and president and chair of BSCP, opened the conference. Kenneth L. Wiley, Ph.D., a postdoctoral fellow in Molecular and Cellular Biology at Harvard University, also welcomed students. There were 12 oral presentations of scientific research from undergraduates, medical students, Ph.D. candidates and post-doctoral fellows. The presenters were introduced by Jaime Imitola, M.D., an instructor in Neurobiology at Harvard Medical School and the Center for Neurologic Disease, Department of Neurology at Brigham and Women's Hospital in Boston; Shauna R. Hutchinson, a BSCP student and M.D./Ph.D. candidate at Tufts University School of Medicine; and Danny Liang-Yee Ooi, a Ph.D. candidate

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\$7,500 over two years to be used for academic purposes. Funding for the scholarships came from AstraZeneca R&D Boston, Biogen Idec Foundation, Boston Scientific Corporation, Genzyme Corporation and The Fleming Family Foundation.

Hope Benefactors, each donating \$35,000 to the organization this year, are Biogen Idec Foundation and Genzyme Corporation. BSCP Corporate Leaders, each donating \$25,000, are Boston Scientific Corporation, Delta Dental of Massachusetts and Waters Corporation. Goldman, Sachs & Co., donating \$20,000, is

a Major Benefactor. Abt Associates Inc., AstraZeneca R&D Boston, Eastern Bank Charitable Foundation, HealthCare Ventures, Massachusetts BioTech Council and MassBioEd, Novartis Institute for BioMedical Research and Randstad US are all Benefactors, donating \$10,000 each. ■

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## NEW ENGLAND SCIENCE SYMPOSIUM

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in the Department of Systems Biology at Harvard Medical School.

Judah Folkman, M.D., Andrus professor of Pediatric Surgery and professor of Cell Biology at Harvard Medical School, and director of the Vascular Biology Program at Children's Hospital Boston, delivered the keynote presentation on "Angiogenesis as an Organizing Principle in Biology." Folkman is the founder of the field of angiogenesis research, having made seminal discoveries on the mechanism of angiogenesis that have opened a field of investigation that is pur-

sued worldwide. His hypothesis that solid tumors are angiogenesis-dependent initiated studies of angiogenesis in tumor biology and in disciplines as diverse as developmental biology, ophthalmology and dermatology.

The afternoon poster session featured 61 presentations, which had been selected from more than 120 abstracts. Dr. William Silen presented the Ruth and William Silen, M.D. awards for best oral and poster presentations. ■