

## New England Science Symposium Roderic Ivan Pettigrew, Ph.D., M.D., Keynote Speaker

AT THE END OF THE SCHEDULED activities at last month's New England Science Symposium, his first BSCP event, Roderic I. Pettigrew, Ph.D., M.D., took a deep breath. "I have been both stimulated and consumed by the plethora of young energy," he said. "It's been a very full day, with a lot of bright, serious students from all over doing great work."

Pettigrew, who is director of the National Institute of Biomedical Imaging and Bioengineering (NIBIB) at the National Institutes of Health (NIH), was the keynote speaker at the symposium. BSCP founder and president, Joan Y. Reede, M.D., M.P.H., M.S., who knows Dr. Pettigrew from previous interactions with the NIH, invited him to speak. "If we want the world to improve, then we should mentor," Pettigrew says. "I try to give back. I want to do for all the people following me what those who I followed did for me."

The NIBIB supports cutting-edge research in the physical and biological sciences. The Institute's goal is to guide technological development that will ultimately improve the diagnosis, treatment and prevention of disease. The theme of Pettigrew's keynote address was the promise of "Emerging Technologies in 21st Century Medicine."

He explained that currently, medicine is practiced in a "reactive mode" — physicians diagnose their patients' diseases or other conditions in response to observed symptoms, and then try to heal them. He added that medicine is moving toward a "proactive mode," in which scientists are studying the molecular and cellular basis of disease and using technologies to predict what will happen and prevent them from occurring — or at least prevent diseases from developing to a stage where they cannot be cured.

Drawing on the work of his Institute, Pettigrew offered the audience a glimpse of the promising developments that he hopes will be part of medical practice in the not-too-distant future. Some of the advances he shared include:

- Contact lenses with built-in biosensors that can detect the level of glucose in the wearer's tears. The lens is embedded with a glucose-sensitive crystal that reflects light and changes color depending on the glucose level — sort of like a mood ring for the eye. This lens allows patients with diabetes to monitor themselves in a less invasive way than having to take several blood samples per day, and should enable them to administer a more consistent level of insulin in response to their changing glucose levels.

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RODERIC I. PETTIGREW, CENTER, WITH NEW ENGLAND SCIENCE SYMPOSIUM PLANNING COMMITTEE MEMBERS

## 2007 EVENING OF HOPE

THE 10TH ANNUAL BSCP Evening of Hope took place on April 11 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 students, and to celebrate BSCP successes.

Joan Y. Reede, M.D., M.P.H., M.S., president and chair of BSCP and dean for diversity and community partnership at Harvard Medical School, was honored for her vision, leadership and tireless effort to help students achieve their career goals in the biomedical sciences and other science-related fields.

Four people who have devoted their energies to the BSCP over the years were named to the 2007 Honor Roll: J. Jacques Carter, M.D., M.P.H., attending physician at Beth Israel Deaconess Medical Center and assistant professor at Harvard Medical School; Joseph A. Scott, V.M.D., associate director, Laboratory Animal Research Center, Rockefeller University; William Silen, M.D., Johnson and Johnson distinguished professor of surgery emeritus, Harvard Medical School, and surgeon-in-chief emeritus, Beth Israel Hospital; and Robert T. Woodland, Ph.D., M.S.D., chair of the Immunology and Virology Program, and associate professor of genetics and microbiology, University of Massachusetts Medical School.

## 10th Annual Evening of Hope Evolution of BSCP

APRIL 11 MARKED THE 10TH ANNIVERSARY of Evening of Hope, and this year the fundraiser that benefits the Biomedical Science Careers Program (BSCP) honored Joan Y. Reede, M.D., M.P.H., M.S., BSCP founder, president and chair, and dean for diversity and community partnership at Harvard Medical School (HMS). A few weeks before the event, we caught up with Reede — not an easy thing to do — and spoke with her about changes in the BSCP since its founding in 1991.

According to Reede, BSCP was formed when there was a realization that there were “a lot of bright students making uninformed career choices [because they] were uninformed about how to navigate a career path.” A pediatrician and child psychiatrist, Reede was seeing these kids in her practice before she came to Harvard. She was also teaching high school students on Saturdays. “In my pediatric clinical practice, I attached questionnaires asking kids what they wanted to do [when they grew up]. If they said ‘lawyer,’ I asked, ‘Do you know a lawyer?’” she recalls.

Reede saw firsthand how many kids were missing out on opportunities, but she also saw that schools and potential employers were missing out on opportunities, too, because there were a lot of talented kids out there who weren't being discovered.

“One of the first meetings I held was bringing together foundations to discuss ‘what are the issues?’” she says. “One is a lack of communication among institutions of higher learning. We had to figure out how to keep students in the pipeline and nurture their potential.”

Reede maintains that since it was founded, the fundamental nature of the BSCP has not

changed. It is still a collective community. But “over the years there have been changes in our country — widespread anti-affirmative action and a lack of preparedness to pursue science. So there's more of a need for BSCP,” she says.

And the group has grown. Today there are 6,000 BSCP students from all over the country, Canada and Puerto Rico. And in a real testament to the organization's value, students

return to BSCP events year after year — some as mentors with their own students.

Reede believes that BSCP's continued success “is a testament to the fact that a community can come together to support its youth — industry, academe, law firms, accounting firms... It's a model of how a community can come together.”

When asked what her goals are for the future, Reede laughs —

because the goals for any nonprofit are always to find the funding to keep going. But on a more serious note, she says, “I see us better understanding the needs of kids in changing times and a changing political landscape. How do we make sure BSCP stays fresh in understanding the needs of the day? As a nation, we cannot afford to lose the talent that's out there. [Our students] have to understand that they're of value; that there's hope.”

In 16 years of conferences and symposia, one moment stands out for Reede as capturing the essence of what the organization is trying to accomplish. At a Biomedical Careers Student Conference several years ago, a student walked out of a conference room at the end of a session and said to herself, quietly but audibly, “I'm special.”

Mission accomplished. ■



JOAN Y. REEDE, M.D., M.P.H., M.S.

## Student Profile

### Leslie Jones

WITH STUDENTS COMING FROM 23 states, Puerto Rico and Canada, representing 80 academic institutions, the 2007 New England Science Symposium, which took place in Boston on March 2, was one of the most diverse yet. There were community college, college, graduate school, and dental and medical school students; post-baccalaureates and postdoctoral fellows. And they spanned a range of ages.

Leslie Jones, a sophomore at Cuyahoga Community College in Ohio, delivered an oral presentation on behavioral changes of pre-term infants at the symposium. Jones is a member of the Bridges to Success in Sciences program at Cuyahoga, which matches students to mentors. She attributes much of her success to the program, which made it possible for her to attend the symposium. Jones will enter the nursing program at Case Western Reserve in the summer.

A 45-year-old divorced mother of three, Jones decided to become a full-time student after working in hospitals for 15 years. "I decided if I'm going to work this hard, I want to work this hard doing something I really like," she says. "I enjoy going to school so much. I have yet to miss a day. [And unlike work], I don't have to wear heels. I don't have to worry about my hair or my lipstick."

For Jones, the decision to quit her job and go to school was not an easy one, but she has had the unqualified support of her family — a 25-year-old daughter, who is a graduate student; a 19-year-old son, who is in college; and her mother, who takes care of Jones' three-year-old daughter. She said she tried five or six times to go to school while she was working, but she could never manage to juggle a job, her studies and single motherhood. "I don't have money, but... people behind me, like my mentor [Dr. Marilyn J. Lotas at Case Western Reserve], say... 'you'll be rich in so many other ways.' It was scary at first, but I'm in it for the duration."

Similarly, Jones says the idea of coming to speak before an audience at Harvard Medical



LESLIE JONES

School was daunting. But not only did she come through her presentation comfortably, the day she spent in Boston, she says, "impacted me in a way I didn't expect it to. After leaving Harvard, I thought 'maybe I should go on to get a Ph.D. in nursing.' There are so many options open to me that I didn't realize were there."

For now, Jones' interest is in psychiatric nursing. Her family had some experience with bipolar disease that led her to really think about the importance of mental health. She says that's why she did her research on the neuro-development of infants, citing the similarities between the very young and the elderly.

Jones says everybody she met at the Symposium was helpful. "[The Planning Committee members] encouraged us to keep going and to keep in contact with them. I went there to get something, and I got it. I would love to return next year." ■

"I thoroughly enjoyed the New England Science Symposium... All of the staff and event planners did an excellent job at pulling this conference together. I was impressed by the willingness of the students... to talk to us, give us advice, and just be there. I didn't feel like I was in over my head while in their presence."

— Tashara L. Banks

*First Prize Winner, Poster Presentations  
(College — Community College — Post-Bac)  
Cuyahoga Community College*

"I thought there were some great posters. The participants had a wide range of levels of training. There's always a very wide range [of subjects], which I think is great because everybody learns more that way."

— Nancy C. Andrews, M.D., Ph.D.

*Poster Judge  
Senior Associate in Medicine, Department  
of Pediatrics, Children's Hospital Boston;  
George Richards Minot Professor of  
Pediatrics and Dean for Basic Sciences and  
Graduate Studies,  
Harvard Medical School*

"My general impressions were that the posters were of the same high quality that you would see at any national scientific meeting. In some ways this is to be expected, as much of the work came from very well known institutions and labs. What was even more impressive to me were the posters from the community college and undergraduate students. They were of the same quality and the students did a great job of explaining their hypotheses and the data they generated."

— Richard J. Gregory, Ph.D.

*Poster Judge  
Senior Vice President and Head of  
Research, Genzyme Corporation*

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## NEW ENGLAND SCIENCE SYMPOSIUM

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- An NIH-funded, UCLA-developed “Uro-sensor” — a chip that can diagnose the bacterial source of a urinary tract infection definitively, within a matter of minutes, from just a drop of urine, using electrochemical sensing

In the area of regenerative medicine, Pettigrew talked about transformative technologies and the ability to regenerate diseased tissues. At Columbia University, two researchers were able to regenerate a functioning patch of myocardium using stem cells and scaffolding, a nutrient-filled material to which the heart cells adhere, fuse together, and grow to form actual tissue.

Pettigrew closed his talk with a call to students “to be better than we are.” He quoted Benjamin E. Mays, former president of Morehouse College

(Pettigrew’s alma mater), who always urged students to dream big, aim high, and reach for the stars, with the stirring admonition that “not failure, but low aim is sin.” ■

### SAVE THE DATES

**Biomedical Science Careers Student  
Conference**

**APRIL 4 and 5, 2008**

**New England Science Symposium**

**APRIL 6, 2008**

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## William Silen, M.D.

THE PRESENTATION OF THE RUTH AND WILLIAM SILEN, M.D., AWARDS at the New England Science Symposium has been a tradition since 2004, when Dr. Silen made funds available for students. Joan Y. Reede, M.D., M.P.H., M.S., BSCP president and chair, thought naming an award for the man who had given so much would be an appropriate way to recognize him.

Before he “retired,” Silen was surgeon-in-chief at Beth Israel Hospital and a professor of surgery at Harvard Medical School (HMS) from 1966 to 1994. He was the first dean for faculty development and diversity at HMS, and took part in every BSCP conference since the program was founded. In his retirement, Silen continues to teach and mentor students at HMS and at Brandeis University.

In addition to teaching, Silen has always mentored students, perhaps the result of his exasperation with poor mentoring and advice he received as a student. Harvard Medical School has established three mentoring awards, one of which is the William Silen Lifetime Achievement in Mentoring Award.

When he was a student and a young physician, Silen says, “There was no one to turn to, so I emulated my role model.” He advises minority students today to look for mentors. “While there is a lack of minority role models, this should not limit students, since there are role models such as I who are available. Students need to seek us out.” ■