

Keynote Speaker Profile

Francis S. Collins, MD, PhD

AT HIS LUNCHEON KEYNOTE address at the 2010 Biomedical Science Careers Student Conference, Francis S. Collins, MD, PhD, director of the National Institutes of Health (NIH), told the roomful of students and postdoctoral fellows in attendance, "This is a wonderful time to be getting engaged in biomedical research."

The leader of the nation's medical research agency explained that, at the NIH, "We're trying to recruit and retain individuals from diverse backgrounds. Research is impoverished if we don't have representation from all groups whose health we're trying to help." He said of the conference, "This gathering is critical."

Collins outlined the NIH's major opportunities:

- Applying high throughput technologies to understanding fundamental biology and uncovering the causes of specific diseases
- Translating basic science discoveries into clinical benefits
- Putting science to work for the benefit of health care reform (i.e., which treatments work best? what are the causes of health discrepancies among different populations, and what can be done about them?)
- Encouraging greater focus on global health (i.e., AIDS, TB, malaria, neglected tropical diseases)
- Reinvigorating and empowering the biomedical research community and encouraging interested people to find an onramp; and pushing a diversity agenda so the workforce will be representative of the population

On this last point, Collins explained after his speech that there is evidence showing that, when doing clinical

research, having investigators from the community being studied is very important to the outcome. As an example, he cited a prostate cancer study among African-American males in which African-American urologists were the principal investigators. The study was highly successful because the people being studied could relate to the doctors, who they viewed as part of their community.

Collins, who also received the H. Richard Nesson, MD, Award "in recognition of commitment to excellence through diversity and leadership in expanding academic and career opportunities for all," is a physician-geneticist. He led the Human Genome Project and served as the director of the National Human Genome Research Institute at the NIH from 1993 to 2008. Under his leadership, the project completed a finished sequence of the human DNA

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SPECIAL THANKS TO

Mintz, Levin, Cohn, Ferris,
Glovsky and Popeo, P.C., and the
Massachusetts Medical Society
for their support of this newsletter.



FRANCIS S. COLLINS, MD, PHD, SPEAKING AT THE CONFERENCE WITH EYDITH COMENENCIA ORTIZ, PHD CANDIDATE AT THE SACKLER SCHOOL OF BIOMEDICAL SCIENCES, TUFTS UNIVERSITY SCHOOL OF MEDICINE

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instruction book. In August 2009, he was appointed director of the NIH. In his research laboratory, Collins has discovered several important genes, including those responsible for cystic fibrosis, neurofibromatosis, Huntington's disease, and several for type 2 diabetes.

He received a BS in chemistry from the University of Virginia, a PhD in physical chemistry from Yale University and an MD with honors from the University of North Carolina at Chapel Hill. Before joining the NIH, he spent nine years on the faculty of the University of Michigan, where he was a Howard Hughes Medical Institute investigator.

Speaking after his address, Collins said of the NIH's efforts to recruit underrepresented minorities, "We've made progress in the last few years, but we have a lot more to do. We have not figured out the best way to recruit minorities."

Based on advice from Joan Y. Reede, MD, MPH, MBA, and others, Collins said that, in 2002, the National Human Genome Research Institute added a stipulation for institutions seeking

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Keynote Speaker Profile

Robert L. Satcher, Jr., PhD, MD

A LOT OF YOUNG BOYS SAY THEY want to be astronauts when they grow up. A small percentage of them actually do it. Even fewer after successful careers as oncologists and orthopedic surgery professors. But that's just what Robert L. Satcher, Jr., PhD, MD, NASA astronaut at the Lyndon B. Johnson Space Center has done. And he's loving it. Satcher was a keynote speaker at the 2010 Biomedical Science Careers Student Conference.

"It's something I always wanted to do," he says of being an astronaut. But he never really thought it was a plausible career move until he met a couple of physician-astronauts. Having worked as an orthopedic surgeon at Children's Memorial Hospital in Chicago, specializing in musculoskeletal oncology, and serving as a professor of orthopedic surgery at The Feinberg School of Medicine, Northwestern University, Satcher submitted an application to NASA in 2001. But after the Columbia space shuttle disaster, the organization stopped considering applications. They began taking new members in 2003, and he was accepted into the 2004 training class.

"I'm an astronaut who happens to be a physician," Satcher notes, adding that NASA "takes advantage of the fact that I have an expertise in the musculoskeletal system." On a mission to the International Space Station last November, he served as the crew's medical officer. Despite his expertise as a musculoskeletal oncologist, "That was more like being an internist. There is a medical branch within NASA, and I'm part of that, too," he says.

Satcher concedes that "of course" he misses medicine. "You have more than one really great choice. The really great choice here — flying in outer space — was worth the trade-off." He notes that many people at NASA have come from other fields, and some, after "doing the astronaut thing for

a while," go back to their first profession. He does not rule out that possibility.

Satcher, who is married to a pediatrician and has a five-year-old daughter and two-year-old son, received a BS and PhD in chemical engineering from the Massachusetts Institute of Technology and an MD from Harvard Medical School. Mentors were always important to Satcher, and he advises students in the biomedical sciences to "find people who can help you prepare yourself and refine your thoughts about your field of interest. They might not seek you out." He also recommends, "Do the most with your undergraduate education... Find what you really like."

It could take you to places you never imagined. ■



ROBERT L. SATCHER, JR., PHD, MD, (RIGHT) AT THE CONFERENCE IN FEBRUARY WITH TANEKA MARSHALL FROM BOWIE STATE UNIVERSITY (CENTER) AND HISHAM YOUSIF FROM THE UNIVERSITY OF ARIZONA (LEFT)

2010 Conference Students Speak

JOAN REEDE'S WORDS RANG throughout the 2010 Biomedical Science Careers Student Conference at the Westin Copley Place in late February, "You can dream, and you can work with your friends. You can build things such as this." Her comments were all the more resonant because Reede, MD, MPH, MBA, dean for Diversity and Community Partnership at Harvard Medical School and Biomedical Science Careers Program (BSCP) president and chair, founded the BSCP in 1992. "It's particularly exciting because many of our advisors that you see here today first came to us as BSCP students a long time ago... There are people here that will assist you [and] see the potential in you" she said.

Reede also stressed the importance of "looking back" and "giving back" as BSCP participants advance in their careers. This program thus creates an infinite circle of support projecting out in multifaceted forms of progress in society.

The Saturday morning keynote speaker, Alfredo Quinones-Hinojosa, MD, (see the September 2009 "In Touch with BSCP"), a laboratory researcher and world-renowned neurosurgeon, encouraged participants to contrive the "road" of their own destiny.

"You have to look for those chances, and that's the reason you are here..." he advised everyone.

The students questioned agreed that this year's conference was a positive experience. Sandra Torres of Brown University said she was encouraged to start "talking to people, which is usually kind of a problem for me because I am shy." According to Patrice A. Cohen, a PhD candidate at the Albert Einstein College of Medicine who is applying to medical school, the program "was quite inspirational and uplifting, and I walked away excited and optimistic about my future career path... It really does make a difference in the lives of the students."

"My emotions vacillated amidst intimidation, encouragement and challenge throughout

the entire conference. Attending the BSCP was my catharsis," said Christalyn Sims, a University of North Texas graduate working toward a premedical studies certificate at the University of New England. Arthur Boyd III, who is a master's degree candidate in liberal arts at Harvard University Extension School (before applying to medical school), noted, "I believe the conference was not only inspirational but showed us how, when everyone works together, the result can be dynamic." Felicia Smith, a student at Boston University Graduate School of Medical Sciences, found the conference "very informative; [it] gave me a better perspective on what to expect when applying to schools."

Alyssa Rose Huebner, an undergraduate at Florida Southern College, said, "I was inspired by all of the take-home messages — create your own path when developing your own career, mentorship is key, and network, network, network."

As for my take-home message, I would have to concur with Lauren Simmons, of the Massachusetts Institute of Technology, who noted, "There [are] no limitations as to what I can do." ■

*By Marisa A. Villarroel, BSCP Student
Master's of Medical Science Candidate
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funding that, in order to qualify for grants, they must have a plan to increase recruitment of underrepresented minorities. It was one of the first times the NIH had made funding dependent on a requirement of that nature. "Some of the institutions that seemed most bothered by the requirement became converts," he said.

The NIH offers many programs that are aimed at helping with the recruitment effort, available to all levels from high school students through faculty. They range from onsite internships to loan repayment programs. Information is available at www.nih.gov/Training.htm.

"We would move heaven and earth" to do what we can to help your careers, Collins told the audience. "We want you." ■



DR. ALFREDO QUINONES HINOJOSA (FAR RIGHT) TALKS TO BSCP STUDENTS STEPHANIE CANTU (LEFT) AND SERGIO DAVILA (RIGHT) AT THE CONFERENCE.

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2010 Evening of Hope

THE 13TH ANNUAL EVENING OF HOPE fundraiser will take place on April 29 at The Fairmont Copley Plaza Hotel. The event, which raises money for BSCP programs and celebrates the organization's successes, will be chaired by Tuan Ha-Ngoc, president and chief executive officer of AVEO Pharmaceuticals, Inc., and J. Keith Motley, PhD, chancellor of the University of Massachusetts, Boston.

The 2010 Honorees will be Gary L. Gottlieb, MD, MBA, president and chief executive officer, Partners HealthCare System, Inc., and

Michael Rosenblatt, MD, executive vice president and chief medical officer, Merck & Co., Inc.

Four people who have devoted their energies to the BSCP over the years will be named to the 2010 Honor Roll — Jabbar R. Bennett, PhD, Brown University; Daniel A. Goodenough, PhD, Harvard Medical School; Nancy E. Norman, MD, MPH, Boston Public Health Commission; and Malcolm K. Robinson, MD, FACS, Brigham and Women's Hospital. ■