

# BSCP

IN TOUCH WITH

BIOMEDICAL SCIENCE CAREERS PROGRAM

April 2003 Volume 8 Number 2

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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.



(left to right) John D. Carpten, PhD, keynote speaker, Alfred C. Johnson, PhD, and Russ Lopez, oral presenter.

## New England Science Symposium

You could practically see the minds whirring, as undergraduate and graduate students, and postdoctoral fellows, from colleges and universities throughout New England, New York and even Maryland packed The Longwood Galleria Conference Center on March 7 for the 2003 New England Science Symposium.

The program, in its second year, was cosponsored by BSCP and the Minority Faculty Development Program, part of Harvard Medical School's (HMS) Office for Diversity and Community Partnership, with support from the National Institutes of Health (NIH). In addition to HMS and BSCP staff, the event's planning committee was made up of current and former BSCP students and scholarship recipients – Jason Badrinarain, J. Angelo Green, Mayra E. Lorenzo, Hector Martinez-Wilson, Raymond R. Montoya, II, and Carl E. Reid, PhD.

From 9:00 a.m. until just after 5:00 p.m., attendees — many of whom braved snow and cold to make it to Boston — were treated

to a series of fascinating oral presentations of scientific research, in panels moderated by BSCP students and scholarship recipients. The presenters were undergraduate, graduate and medical students, PhD candidates and research fellows. Topics ranged from “Customized Resurfacing of the Knee:

Design of the Shell Knee Replacement” to “Targeting Hypoxia to Improve Cancer Therapy.” In the afternoon, participants attended a Poster Session, where the scientific work of 35 students and research fellows was on display.



The poster session.

John David Carpten, PhD, section head of the Cancer Genetics Branch of the NIH's National Human Genome Research Institute, delivered the keynote address, discussing research his team is doing on the genetics of prostate cancer.

The day's final activity, after the Poster Session, was a panel discussion entitled “Road to Science: Navigating Your Career.” In addition to moderator Carl E. Reid, PhD, a scientist at Biogen, panelists included Alfred C. Johnson, PhD, from NIH; Kenneth I. Maynard, MSc, PhD, from Aventis Pharmaceuticals, Inc.; Louise Ryan, PhD, from Harvard School of Public Health; and Matthew Walker, III, PhD from Harvard Medical School and the Massachusetts Institute of Technology.

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# Opportunities in Biotechnology

by Craig Eric Schneier, Ph.D., Executive Vice President, Human Resources, Biogen, Inc.

Now, more than ever, is an exciting time to work in biotechnology. We are only just beginning to see the promise of the industry and its effect on the delivery of health care. Many believe that in the next several decades we will see new advancements in life sciences that will revolutionize the kind of therapeutics and the quality of care people receive around the world.



Craig Eric Schneier, Ph.D.

Massachusetts – the greater Boston area in particular – is one of the world's most dynamic health care and biotechnology regions. Academic medical centers,

some of the country's top universities, and many leading biotechnology companies provide a dynamic combination that make Massachusetts a leader in the industry. Today there are 280 companies employing 30,000 people in the state. These companies are discovering new therapies, manufacturing products, and providing medicines to doctors and patients around the world.

Companies like Biogen, Inc., in Cambridge, are looking for well-qualified people to come work in a field that offers the opportunity to help improve the quality of patients'

lives. A variety of rewarding career opportunities exists in biotechnology. The following are representative of positions at biotechnology companies that are available for individuals with advanced degrees:

Individuals with a medical degree conduct **Medical Research** and provide medical guidance to the clinical development process. Positions in **Medical Affairs** work in coordination with physicians to increase the medical and scientific knowledge of the health care community.

Candidates with a Ph.D. can work in **Research and Development** in areas including biochemistry, immunology, medicinal and organic chemistry, and microbiology.

**Entry-level, Associate Scientist** positions in Research and Development are also available. These require at least a bachelor's degree in one of the life sciences, with 0-2 years experience.

While most other kinds of opportunities call for at least a bachelor's degree, some do not. A few specific functions available for qualified people are:

**Manufacturing Associates**, working in the production areas where companies make their products. Qualifications include a high school diploma and a biotechnology certificate.

**Customer Support Specialists**, providing telephone support to patients and health care professionals. These positions require a B.S. in biology or communications, along with great listening skills.

Candidates with a B.S. in nursing or pharmacy may find a career as a **Drug Safety and Medical Information Specialist**, monitoring the safety and potential side effects of drug products.

There are several career paths for individuals with chemical engineering degrees. **Development Engineers** take products from the laboratory to the manufacturing environment; while **Process and Project Engineers** design and build manufacturing facilities.

Biotechnology companies also offer opportunities in many other business areas, including **Sales and Marketing, Business Development**, and **Information Technology**.

Career opportunities are available through company Web sites, such as [www.biogen.com](http://www.biogen.com), and through the BSCP Web site, [www.bsccp.org](http://www.bsccp.org). Consider becoming part of an industry that has an exciting future in its charge to improve the quality of health care with breakthrough science and technology. ♦

## Science Symposium

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Reid's message encouraging students to find mentors struck a chord with the audience. Both Reid and Maynard, another former BSCP student, spoke of how much their involvement with BSCP helped them in their careers, and encouraged audience members to visit the BSCP Web site for a wealth of information. Johnson discussed the "Triple A" – aptitude, attitude and altitude, which he says form the foundation for success. Ryan encouraged anyone with strong math or computer science skills to consider careers either in

biostatistics or epidemiology. And Walker talked about the importance of finding a synergy between one's efforts and personal satisfaction.

In addition to the presentations and panel discussions, representatives from NIH, HMS and Biogen were on hand, talking to students about possible summer internships and job opportunities. So attendees came away not only with new scientific knowledge, but with contacts and

valuable information for pursuing their career goals as well.

Marc S. Horowitz, J.D., Director of Loan Repayment and Scholarship at NIH said, "I travel across the country, attending many scientific symposia, and this is the best-run student-organized and -managed event that I have attended in years." NIH has already committed to support the New England Science Symposium next year, which will be held in Boston on February 27, 2004. ♦



Marc S. Horowitz, JD

# Massachusetts College of Pharmacy and Health Sciences

With its distinguished history and international reputation, the Massachusetts College of Pharmacy and Health Sciences (MCPHS) is helping to redefine the role of pharmacists, physician assistants, dental hygienists, and other health care professionals in health care delivery. The College's unique programs integrate theoretical and applied knowledge in the health professions with general education in the arts and sciences, so its graduates may become enlightened citizens as well as competent practitioners.

The curriculum at MCPHS is designed to develop active thinkers and learners who are prepared for changing professions and a complex world. A core of liberal arts and sciences courses is built into all bachelor's degree programs. Developed by educators and working professionals, these courses are often custom-tailored to give students practical information and valuable insights into today's health care concerns.

Undergraduate degree programs offered at the Boston campus include chemistry, health psychology, pre-medical studies, pharmaceutical

sciences, pharmaceutical marketing and management, dental hygiene (Forsyth Program), and radiologic sciences. First professional degrees are offered in pharmacy and physician assistant studies. Graduate programs are offered in drug regulatory affairs, drug discovery and development, chemistry, pharmaceuticals, and pharmacology. Each of these programs combines the basic sciences with the humanities and provides an education for lifelong enrichment.

MCPHS offers an accelerated, three-year PharmD program at its campus in Worcester, Massachusetts, the second largest city in New England, well known for its premier educational and health care institutions. The Worcester program provides a state-of-the-art facility for students who have already completed two years of preprofessional requirements at MCPHS Boston or at another undergraduate institution.

In May 2002, MCPHS acquired the Graduate Physician Assistants Program from the now closed Notre Dame College in Manchester, New Hampshire. It is a 24-month program housed in a 32,000

square foot building located at 1260 Elm Street in Manchester, New Hampshire. In the future, the College will explore the possibility of offering some of its established Boston programs – including dental hygiene, radiologic sciences, pharmacy, and certificate and continuing education programs – in satellite locations.

The externship/clinical experience is a very important part of an MCPHS education and is built into most programs. The programs place students in professional settings for firsthand learning and guidance, as they work with a mentor from sponsoring institution's staff. Students may choose from among more than 55 hospitals and 100 community practice sites in and around Boston. The College's affiliations with Boston's world-class medical centers, top teaching hospitals, and pharmacies ensure students the highest quality experience.

For more information, contact MCPHS at 179 Longwood Avenue, Boston, MA 02115, [www.mcp.edu](http://www.mcp.edu). For admissions information, e-mail [admissions@mcp.edu](mailto:admissions@mcp.edu). ♦

## CAREER DEVELOPMENT SERIES

### Getting Published, Getting Started

As part of its ongoing Career Development Series, the BSCP hosted a seminar entitled "Getting Published, Getting Started" on April 10 at The Longwood Galleria Conference Center in Boston. The purpose of the event was to help physicians in postdoctoral training, junior faculty, and residents understand the world of publishing in professional journals, which is so important to so many careers.

An impressive roster of speakers included Jeffrey Drazen, MD, Editor-in-Chief of the *New England Journal of Medicine*, and Bodo Stern, PhD, Scientific Editor at Cell Press.

Stern gave attendees a look at Cell Press from the inside. A panel

discussion among Harvard Medical School (HMS) staff and faculty, and physicians from Children's Hospital Boston and Beth Israel Deaconess Medical Center addressed outside reviewers and what they look for in a manuscript. Drazen presented an overview of what journals want from authors. Thomas P. Reynolds, Writer and Editor in the Office of the Dean at HMS, offered some tools of the trade for would-be authors.

Following the presentations, attendees and presenters stayed for dinner and networking. ♦

## ATTENTION ALL STUDENTS

Please send us your e-mail address and any new permanent or campus addresses:

### Biomedical Science Careers Program

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or go to: [www.bscp.org](http://www.bscp.org)

## RESUME

Remember to put your resumes into the BSCP Web site's searchable database.

Go to [www.bscp.org](http://www.bscp.org), select "Internships and Employment Opportunities," then "Students-Update Resume" (left column).

Also, remember to include BSCP Membership on the hard copy of your resume.

### Save the Date

*NEBHE Science  
Network at MIT*

Saturday, October 4, 2003

7:30 a.m. – 6:00 p.m.

MIT Stratton Student Center

Cambridge, MA

For information, visit

[www.nebhe.org/  
sciencenetwork.html](http://www.nebhe.org/sciencenetwork.html)

## An Evening of Hope 2003

The Biomedical Science Careers Program's (BSCP) sixth annual fundraiser, An Evening of Hope,

will take place on May 1, 2003, at The Boston Park Plaza Hotel. As of print time, the fundraiser's corporate leaders are Biogen, Inc.; Boston Scientific Corporation; and Genzyme Corporation. The Mass Biotech Council and MassBioEd are benefactors, along with Pfizer Inc. Corporate sponsors are ARIAD Pharmaceuticals, Inc.; Boston Consulting Group; Children's Hospital Boston; Dana-Farber Cancer Institute; Eastern Bank; Eli Lilly and Company; Harvard

Medical School; Harvard Pilgrim Health Care Foundation; Massachusetts General Hospital; Massachusetts Medical Society; Mintz Levin Cohn Ferris Glovsky and Popeo, P.C.; PAREXEL International Corporation; Partners HealthCare System, Inc.; Ropes & Gray; and Turner Construction Company.

The Evening of Hope is an occasion to honor students devoted to

the study of biomedical sciences, as well as to recognize people who have given of themselves to the BSCP over the years. Each year, five to seven students receive Hope Scholarships at the event.

For their commitment to diversity and the advancement of underrepresented minorities in the biomedical sciences, BSCP will recognize John V. Heffernan, Senior Vice President, Genzyme Corporation, and James J. Mongan, MD, President and Chief Executive Officer, Partners HealthCare System, Inc.

John T. Potts, Jr., MD, Director of Research, Massachusetts General Hospital; Henri A. Termeer, President, Chief Executive Officer

and Chairman, Genzyme Corporation; and Jeffrey M. Wiesen, Esquire, Chairman, Biotechnology Group, Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., will chair this year's Evening of Hope dinner.

Honor roll members who will be cited for their repeat contributions to the organization and the students it serves are: **James C. Hogan, Jr., PhD**, Connecticut State Department of Public Health; **Marie C. McCormick, MD, ScD**, Harvard School of Public Health; **William J. Ohley, PhD**, University of Rhode Island; **Judith S. Palfrey, MD**, Children's Hospital Boston; and **Hillary D. White, PhD**, Dartmouth Medical School. ♦



**John V. Heffernan**



**James J. Mongan, MD**

## Hope Scholarship Winner – 1998

Ricardo M. Zayas, PhD, who was a BSCP Hope Scholarship recipient in 1998, received his PhD in Biology from Tufts University in February 2003. He is now living out his long-term goal – to conduct research in a university setting – as a postdoctoral fellow in the laboratory of Philip A. Newmark, PhD, in the Department of Cell and Structural Biology at the University of Illinois at Urbana-Champaign.

Under Dr. Newmark, Zayas' research involves investigating the molecular basis of regeneration and plasticity in the nervous system using planarian flatworms. For now, Zayas is content to focus on science, but he is also excited by the possibility of human application of his research. ♦



**Ricardo M. Zayas, PhD**