

DIVISION of MEDICAL SCIENCES

Alumni Newsletter

Summer/Fall 2003

Message from the Chairman

Dear Alums,

Well, things are once again changing rapidly here at the Medical School. On September 24th we celebrated both the one hundredth anniversary of the original Quad ground-breaking and the opening of the "new" campus, just across Longwood Ave. The "new" campus is a 500,000 square foot building built to house research labs. It will become the North Quad while the Quad we are familiar with is now the South Quad. Two departments, genetics and pathology, have already started moving into this new facility. By the way, the North Quad is the biggest single building project in Harvard's history. Speakers at the opening included President Summers, who emphasized that medical sciences will play a central role in Harvard's future, as it plays a central role in our day-to-day lives. He reflected on when he had a serious illness that was successfully treated (at HMS) with a therapy developed only a decade earlier. The crucial timing involved had a great impact on him. Dr. Summers expects that innovative research performed at this yet to be named facility will lead to new disease therapies.

Your alumni association was asked to say a few words at the opening as well. It may surprise you to learn that the DMS now has over 600 Ph.D. candidates (and growing) and 1500 alumni. All of Harvard has on the order of 3500 Ph.D. candidates so it can already be said that Harvard has made a major commitment to the medical sciences. We explained that it is the graduate students, in that new building, who will be focusing on discovery of new knowledge and it is their training that will result in an impact on not just other academic institutions, but all of the life sci-

ences including biotech and pharmaceutical companies, legal, consulting and even investment arenas. Our reach is very broad.

We are about to launch a new year of fundraising. As the number of students in the DMS increases, so do the financial needs to support these students. There are three funds to which donations can be applied. The first of these funds is the DMS Financial Aid Fund, which will be used to support our students. The second is the DMS Annual Fund which will be allocated annually to those areas with the greatest need. The third is a fellowship fund established in 2001, which honors Professor Emeritus and DMS alumnus ('52) Harold Amos, who passed away last February. This year's phonathon ran from October 27th through November 25th. The callers were all DMS students. While they were happy to take your donations, they were also very interested in hearing about your thoughts and experiences. And hopefully they were able to answer any questions you had about life in the DMS today. My hope is that in the coming years we will be able to be as independently financially supportive of our students as other schools at Harvard are for theirs.

Best regards,

Dennis Vaccaro

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DMS SYMPOSIUM JUNE 4, 2003**Speakers Discuss Biotech's Path Toward New Therapies***Cellular and Systems Engineering Are Driving Change in the Industry**(Reprinted with permission from the June 20, 2003 Focus issue)*

Drug research costs increase every year, but in the last five years, the number of new drugs making it to market has declined. Drug discovery techniques are improving daily, but speakers at the June 4 Division of Medical Sciences Symposium agreed that the kind of drugs being sought and the way they are pursued have to change.

"We need new disease therapy technology," said Dennis Vaccaro, DMS '77, chairman and cofounder of BioPhysics Assay Laboratory, Inc. Vaccaro, who moderated the discussion on the changing role of biotechnology in treating disease, spoke about new cellular and microbial therapies his company has been developing.

The Cellular Tune-up

Cellular therapies involve the transplant of patients' own cells that have been modified and amplified outside the body. Clinical trials are under way to extract adult stem or skeletal muscle cells from patients with damaged heart tissue and deliver the healthy cells to the heart. If successful, these therapies could reduce the need for organ transplants and control diseases like diabetes and Parkinson's, as well as spinal cord injuries.

In developing these new cellular therapies, the company has created a labeling technology that allows tracking of cells in vivo, said Vaccaro. The process uses neutron beams to target cells in the body, which will enable measurement of organ function.

Vaccaro also described new microbial therapies that involve the manipulation of microorganisms normally in the body to produce mammalian biological products. Researchers are working on modifying the protozoan *Leishmania* (which usually lives in macrophages) to produce mammalian enzymes that could restore function in patients suffering from lysosomal diseases. Controlling such nonpathogenic microbes could help treat a variety of diseases caused by enzyme deficiencies without altering the human genome.

Vaccaro said these new therapies come at a time when existing disease treatments such as organ transplants and gene therapy have been on the decline. "I believe that biological or physiological solutions are going to be the answer as we move forward for many diseases."

Business Trim

Kevin Pang, DMS '91, vice president of Decision Resources, Inc., a drug marketing and research company, addressed a new business model for the biotechnology industry. "We live in a cost-conscious world," he said, explaining the need to diminish production costs in the search for new treatments. He proposed a drug development model that focuses on lowering costs for clinical trials and treating more specific patient populations.

Pang added that the drugs pharmaceutical companies are developing today are geared mostly toward chronic rather than acute disorders. He gave the example of Fuzeon, a viral-fusion inhibitor for chronic AIDS patients. These kinds of drug rely on highly specific patient pharmacogenetic profiles.

Speaking about the technological innovations of drug development, Kathryn Hall, DMS '94, associate director of corporate informatics at Millennium Pharmaceuticals, discussed the company's move from biotechnology to pharmaceuticals, where research has gone from identifying drug targets to developing drug products. "Our technology has shifted from being able to build it to being able to buy it," said Hall.

This shift required integrating existing technologies and encouraging teamwork. "We needed to look at the company as a system and not as an individual unit," said Hall. She added that for the company's new drug development model to work, management needs to develop an overall balance between innovation and production.

--Gaia Remerowski

Congratulations New Alumni!

2002-2003 Ph.D. Degree Recipients

<u>NAME</u>	<u>DEGREE(S)</u>	<u>DMS PROGRAM</u>
Scott Travis Baur	Ph.D.	BBS-Genetics
Anna Borodovsky	Ph.D.	BBS-Biological Chemistry and Molecular Pharmacology
Alex R. Carter	M.D./Ph.D.	Neuroscience
Lisa Anne Catapano	M.D./Ph.D.	Neuroscience
Mark James Mondero Cayabyab	Ph.D.	Biological Sciences in Public Health
Alissa Arshalous Chackerian	Ph.D.	Immunology
Aaron Nakwon Chang	Ph.D.	BBS-Genetics
Tammy T. Chang	M.D./Ph.D.	Immunology
Thomas Clayton Chou	Ph.D.	Neuroscience
Steven Michael Claypool	Ph.D.	Immunology
Wanda M. P. Coston	Ph.D.	Immunology
Cheryl Liane Day	Ph.D.	Virology
Bimal N. Desai	Ph.D.	Immunology
Ingrid Lea Dodge	Ph.D.	Immunology
Amy Melissa Doling	Ph.D.	BBS-Microbiology and Molecular Genetics
Ridgely M. Fisk	Ph.D.	BBS-Genetics
Benjamin Elison Gewurz	M.D./Ph.D.	Immunology
Michael Jeffrey Hansen	Ph.D.	BBS-Cell and Developmental Biology
Judith Niamh Haslett	Ph.D.	BBS-Genetics
Mark John Hickman	Ph.D.	Biological Sciences in Public Health
Cintia Fabiana Hongay	Ph.D.	BBS-Genetics
Kimberly C. Howland	Ph.D.	Immunology
Craig Davis Kaplan	Ph.D.	BBS-Genetics
Peter Whangsik Kim	Ph.D.	BBS-Biological Chemistry and Molecular Pharmacology
Sara René Klucking	Ph.D.	Virology
Jason Alphonse LaBonte	Ph.D.	Virology
Michelle Lynn LaBonte	Ph.D.	Virology
Mykol Larvie	M.D./Ph.D.	BBS-Biological Chemistry and Molecular Pharmacology
Benjamin Simon Leader	M.D./Ph.D.	BBS-Genetics
Michelle Ann Lee	M.D./Ph.D.	BBS-Cell and Developmental Biology
Elissa Philyn Lei	Ph.D.	BBS-Cell and Developmental Biology
Hanjun Li	Ph.D.	BBS-Biological Chemistry and Molecular Pharmacology
Jeffrey Pai-Chin Lin	M.D./Ph.D.	Virology
Michael Lin	Ph.D.	BBS-Genetics
Laurie Elizabeth Littlepage	Ph.D.	BBS-Cell and Developmental Biology
Heather Christina Losey	Ph.D.	BBS-Biological Chemistry and Molecular Pharmacology
Liza Makowski Hayes	Ph.D.	Biological Sciences in Public Health
Gaël-Christophe McGill	Ph.D.	BBS-Biological Chemistry and Molecular Pharmacology
Magdalene Maristella Moran	Ph.D.	Neuroscience
Mireya Nadal-Vicens	M.D./Ph.D.	Neuroscience
Bryce Edward Nickels	Ph.D.	BBS-Microbiology and Molecular Genetics
Elizabeth Ann Nigh	Ph.D.	Neuroscience
Marina P. On	Ph.D.	Immunology
Rachel Elizabeth Palmer	Ph.D.	BBS-Genetics
Hiten M. Patel	Ph.D.	BBS-Biological Chemistry and Molecular Pharmacology
Charles Arthur Paulding	Ph.D.	BBS-Pathology
Aimee Marie Powelka	Ph.D.	BBS-Cell and Developmental Biology
John Cranston Wall Randell	Ph.D.	Virology

Clark Friedrich Schierle	M.D./Ph.D.	BBS-Microbiology and Molecular Genetics
Douglas Wayne Selinger	Ph.D.	BBS-Genetics
Kim Allan Seth	Ph.D.	Neuroscience
Nicholas Stavropoulos	Ph.D.	BBS-Genetics
Pascal André Stein	Ph.D.	BBS-Cell and Developmental Biology
Nathan William Swilling	Ph.D.	BBS-Biological Chemistry and Molecular Pharmacology
Abraha Taddese	M.D./Ph.D.	Neuroscience
Sohail Tavazoie	M.D./Ph.D.	Neuroscience
Nicola Jean Tolliday	Ph.D.	BBS-Cell and Developmental Biology
Jonathan Cyboski Trinidad	Ph.D.	Neuroscience
Ai-Sun Tseng	Ph.D.	BBS-Cell and Developmental Biology
Kevin Chun-Kai Wang	Ph.D.	Neuroscience
David LeRoy Wensel	Ph.D.	Virology
Juliana Megan Woda	Ph.D.	BBS-Cell and Developmental Biology
Donny Wong	Ph.D.	Biological Sciences in Public Health
Channing Yu	M.D./Ph.D.	BBS-Genetics
Ying Zhang	Ph.D.	Neuroscience

November 2003 Ph.D. Degree Recipient

Bence Patrik Olveczky	Ph.D.	Neuroscience
Dennis Chung-Ping Chang	Ph.D.	Neuroscience
Wen Grace Chen	Ph.D.	BBS-BCMP
Glenn Spencer Cowley	Ph.D.	BBS-Genetics
Darryll D. Dudley	Ph.D.	Immunology
Tracey Lyn Fisher	Ph.D.	BBS-Cell and Developmental Biology
Shelly Mia Fujikawa	Ph.D.	BBS-Genetics
Amy Lee Hitchcock	Ph.D.	BBS-Biological Chemistry and Molecular Pharmacology
Esther Wei-Yun Landhuis	Ph.D.	Immunology
Micah Alan Luftig	Ph.D.	Immunology
Maria Angelica Martinez Gakidis	Ph.D.	BBS-Cell and Developmental Biology
Alissa Myrick	Ph.D.	BPH
Renée M. Ned	Ph.D.	BBS-Genetics
Bence Patrik Olveczky	Ph.D.	Neuroscience
Sean Edward Rooney	Ph.D.	Immunology
Sheldon Stanley Rowan	Ph.D.	BBS-Genetics
Deborah Catherine Solymar	Ph.D.	Immunology
Abraha Taddese	M.D./Ph.D.	Neuroscience
Jason Chaim Tanny	Ph.D.	BBS-Cell and Developmental Biology
Kevin Chun-Kai Wang	Ph.D.	Neuroscience

2003-2004 & 2004-2005 M.D./Ph.D. Degree Recipients

Sandeep Robert Datta	M.D./Ph.D.	BBS-Microbiology and Molecular Genetics
Andrew Eugene Hermann Elia	M.D./Ph.D.	BBS-Cell and Developmental Biology
Anna Greka	M.D./Ph.D.	Neuroscience
Rahul Manu Kohli	M.D./Ph.D.	BBS-Biological Chemistry and Molecular Pharmacology
Gisela Maria Rodriguez Sandoval	M.D./Ph.D.	Neuroscience

Keep in touch with other alumni!

Visit <http://post.harvard.edu> to register for Post.Harvard a website featuring many services and tools specifically for Harvard alumni.

ANNUAL APPEAL

Dear Fellow DMS Alumnus/a,

As a graduate of the Division of Medical Sciences, you already know that your connection to Harvard is unique. Your student experience was tied simultaneously to the Graduate School of Arts and Sciences in Cambridge and to Harvard Medical School in Boston's Longwood Medical area. We hope you have enjoyed the increase in communication from DMS these past few years, through this newsletter, quarterly Focus bringing you news from the quadrangle, and the HMS Alumni Bulletin. Please watch for your fall issue of Focus—the latest HMS Facts and Figures booklet will be enclosed.

Do keep sending in Class Notes about yourself and your classmates—we appreciate hearing from you. We have enclosed a reply envelope for you to write to us or if you would like to make your 2003-2004 HMS-DMS gift at this time. (Keep in mind that your (or your spouse's) employer may be able to enhance your generosity through a matching gift program, and you will receive credit for the match.) Some of you may have already given through the student phonathon going on throughout November—thank you!

The DMS Financial Aid Fund continues to support students, and the DMS Annual Fund is allocated annually to those areas with the greatest need. It is my hope that you will be a partner with us in working to strengthen our financial base as we approach our 100th anniversary.

Please do be in touch and share your feedback about the program.

Sincerely yours,

Thomas M. Roberts, Ph.D. '76
Chair, Division of Medical Sciences

Fund Year: July 1, 2003 — June 30, 2004

SAVE THE DATE!

*The 2004 Division of Medical Sciences Sponsored Alumni Symposium will be held on **June 9th from 3:00 pm to 5:00 pm.***

Details will follow in future newsletters.

More Facts & Figures

By Tom Fox, Ph.D.

The Facts and Figures 2003-2004 brochure you should have received with the special edition of Focus shows the numbers of students in respective populations at Harvard Medical School. As this academic year began, 612 students were enrolled in DMS. Of this total, 55 are MD-PhD students in the research training phases of their studies here and the rest are PhD students.

One very positive aspect of the gradual rise in the population of DMS students is that they are now a quite visible presence on the campus, both in the quad and in the hospitals and centers. As this newsletter goes to press, the departments of Genetics and of Pathology are moving from the "old" quad, or South Quad to the "new" or North Quad, just behind Vanderbilt Hall and adjacent to the relatively recent Harvard Institutes of Medicine (formerly English High School, across Louis Pasteur Avenue from Boston Latin). Our students are an important binding unit for all the campus components at HMS.

For the past decade and continuing today a majority (55-60%) of our students conduct thesis work in the laboratories of our faculty who are located in Harvard Medical School's affiliated hospitals and research centers. As the faculty and the student body have grown over the past two decades, students have conducted laboratory rotations throughout the school and with some faculty in Cambridge and have chosen a variety of laboratories for thesis work. During recruitment students perceive that there are many good choices of laboratories and that students are distributed without bottlenecks in only a small number of labs.

Just under two thirds of students are enrolled in the Biological and Biomedical Sciences Program and conduct rotations in the basic science labs and those of affiliated faculty in the other centers. In choosing thesis projects, they continue to distribute among the broad disciplines that are represented in our preclinical and clinical departments. The other students likewise have broad access to faculty in the Immunology (10%), Neuroscience (17%), and Virology (10%) Programs at locations in the medical school campus, the affiliated centers, and the departments in Cambridge. Harvard's strong research training opportunities in cancer, HIV, and many other human diseases serve as parallel beacons for students along with the traditional strengths in basic biological science and a multitude of model systems.

Currently, as has been true for several years, our students are nearly equal in numbers of women and men. At the start of this year, 51% are women. Some years more women than men matriculate and other years more men. But the totals have remained nearly the same since the early 1990's. Our student body has between 10-15% international students and a similar proportion of US citizens self identifying as from underrepresented minority populations. Increasingly our students come from a broader range of undergraduate institutions and majors. In the past five years, we have matriculated 80-100 students annually with over 65 undergraduate institutions represented each year.

Get access to Countway!

BOSTON AREA ALUMNI:

**Stay tuned for information on the 2003-2004
Holiday Party in early January!**

HMS/HSDM/HSPH ALUMNI

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Preferred Contact Address: Business Home

Important information we should know (or news to share with your fellow alums in our DMS Alumni Newsletter): _____

May we print this in the next Newsletter? Yes No

Do you have information for a "missing" DMS graduate?

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