October 31, 1996

Course X "Highlights"...

Faculty Distinctions

• Professor Douglas A. Lauffenburger presented the 2nd Britton Chance Lecture at the University of Pennsylvania, Department of Chemical Engineering and Institute for Engineering & Medicine at the University of Pennsylvania on October 28, 1996; entitled "Engineering, Cell Biology, and Molecular Medicine."

May 30 Conference Report

Jean-Francois Hamel organized and chaired a colloquium on The Future of Biotechnology as We Approach the 21st Century at the Whitehead Institute on May 30, 1996. The colloquium was sponsored by the New England Society for Industrial Microbiology. Amid the many professional talks, the highlight of the day were several contributions by our undergraduate students in the Department. Six of our undergraduate students spoke and presented four posters. Our students were: Dennis Yancey (97), James Marchetti (96), Maggie Raphael (96), Jerry Tsong (97), Gara Mendez (98) and Charles Armesto (97). They did beautifully! It was a good career development opportunity for our students.

• The morning session was lead off by Dr. Lynne Browne, Senior Vice President of the Federal Reserve Bank of Boston. Next, was Dr. Richard Callahan, President of the Center For Technology Commercialization in Westboro. He spoke on the renewed need for technology transfer in New England for the coming decade. Dr. Steven Chubb, President of Matritech described burgeoning opportunities in the diagnostics field. He suggested
major diagnostic opportunities were in infectious diseases, auto-immune diseases and cancer and that developmental approaches be primarily based on intervention. He also emphasized the potential for new diagnostic methods based on nuclear matrix proteins released during cell breakdown. The last speaker was Mr. Ray Cardin, Associate Director of Fermentation for Genzyme. He emphasized new interface challenges between research and manufacturing.

- An afternoon panel, *Learning Through Experience* was moderated by Dick Mudgett, Professor Emeritus of the Food Science Department at the University of Massachusetts in Amherst.
- Sonia Wallman, Director of Biotechnology at New Hampshire Technical College in Stratham discussed the Colleges Advanced Technology Program, which trains technicians and gives two years of practical experience in biotechnology. Randy Schwartz, Professor and Director, of the Bioprocess Development Center at the University of Massachusetts, Lowell described a program leading to a Certificate in Biotechnology and Bioprocessing granted upon completion of four courses at the Center. Veronica Porter, Professor of Cooperative Education at Northeastern University in Boston, described the history of cooperative education in which students participate in alternating full time academic and industrial work periods on a rotating quarterly basis. Norma McGovern-Norland, Director of MITÔs Undergraduate Research Opportunities Program (UROP), reviewed the programÔs origins and its major operational aspects. The program was the brainchild of Edwin Land, founder of the Polaroid Corporation, and was led for many years by Professor Margaret MacVicar. A major program at MIT it involves some 80 percent of undergraduates in genuine research projects. Nick Wan, Associate Director of Fermentation at Genzyme, addressed industryÔs needs and student education. He emphasized the need for experience in fermentation, engineering, scale up, laboratory and manufacturing practice (GLP, GMP), quality assurance, regulatory matters, product and process validation and safety. Finally, Frank Cannon, Professor and Chair of Microbiology and also Director of Biotechnology at the University of Massachusetts, Amherst, described the undergraduate life science courses at the University. Several new programs involve undergraduate research in faculty laboratories, summer research experience for undergraduates, a fellowship program for top undergraduates and an outreach program for high schools in Boston and Springfield. All of these programs have been designed to be integrated in a 5 year combined bachelor/masters degree program. The day ended with a lively poster session by students from a number of New England colleges and universities: 62 students and faculty from Boston University, Dartmouth, New Hampshire Technical College, Northeastern, UMass Amherst, UMass Lowell, Wellesley College, Worcester Polytechnic Institute and including 20 MIT students.

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**GSO Updates**

*HAVE YOU EVER DREAMED OF A CAREER IN TELEMARKETING?* Well, quite a few ChemE graduate students got the chance to pursue that dream on the evening of October 1st, when they gathered for the annual Department Telethon for the Alumni/ae Fund. Callers were treated to a catered dinner, along with an inspiring speech and training session by the Alumni/ae Program Staff. Prof. Robert Armstrong also made a few
comments before the callers hit the phones. Calls were made to many Chemical Engineering graduate program alumni/ae around the United States and Canada. While a few callers could tell tales of rejections and awkward hangups, for the most part those called were GRACIOUS and GENEROUS. For all of their hard work, callers received a Phoneathon tee-shirt and wine glass. The evening's top caller was first-year grad student Seif-Eddeen Fateen, who received 16 specified pledges and 2 upgrades. The total amount raised was $28,313, shattering the goal for the evening of $21,000. Seif received a new backpack in appreciation of his success and outstanding powers of persuasion. Thanks to the GSC for once again organizing this event - Jenny Fujii, Pat Walton, and Rebecca Carrier. And thanks to all of the first-year graduate students who turned out - Brian Goodlin, Chandra Papudesu, Jeff Martin, Tamara Floyd, Stephanie Stine, Chad Davis, Amir Nashat, Zhen Gu, Lily Horng, Mike Caplan, Shantha Krishnamurthy, Seif-Eddeen Fateen, Jason Suen, Betty Yu, Peter Moore, Mitch Anthamatten, Duane Myers, Dave Kale, and Mike Mulqueen. All participants have been invited to a dessert reception at the Museum of Science, followed by a screening of the Omni Theatre movie, Special Effects. Thanks All!

by Janet Fischer

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Computer Corner

THE EUDORA-NATOR

The move from TechMail to Eudora is in full swing. This is important, because TechMail is no longer supported in the Department. Let me repeat that: TechMail is no longer supported here in Chemical Engineering. If you have a problem with TechMail, the fix is Eudora.

Brad Ricketson is in charge of converting the ChemE masses (or at least their computers). Brad is the right person for this mission, because he's patient, competent, and congenial; if he did windows, he'd be too good to be true.

Earlier, Brad E-Mailed everyone about installing Eudora. If you didn't get it, or couldn't respond, you get top priority. If you need Eudora installed, make sure you let him know. How? By E-Mail (of course) at brick@mit.edu. If you can't E-Mail (see 'top priority', earlier), have a friend send it. Because Brad is so dedicated, he'll come right to your lab or office to do the installation and show you how to use Eudora. If you're a Mac user, Brad will also convert your existing mail and aliases; that's the kind of guy he is.

So, make the switch. Eudora has some advanced features (see the Eudora home page at http://web.mit.edu/tps/www/Eudora/); besides, it's the only game in town! by Peter Maloof
Visitor Profiles

Welcome to Raquel de Lima Camargo and Roberto de Campos Giordano who have recently joined Prof. Cooney's laboratory.

Our new members are wife and husband, and have come with their two children Juliana and Bruno. They are from Itapetininga in the State of Sao Paulo, Brazil, and hold faculty positions in the Chemical Engineering Department of the Federal University of Sao Carlos, a 5,000-student campus.

In Brazil, Raquel teaches biochemical engineering, industrial chemical processes and design of homogenous reactors while Roberto teaches chemical thermodynamics, analysis and simulation of chemical processes and design of heterogeneous reactors. Raquel's research interests are in the areas of enzymatic synthesis of ampicillin, continuous and membrane reactors for production of commodity products or antibiotics. Roberto's research emphasis is on the use of simulation tools to control and optimize reactors using neural networks.

At MIT, Raquel and Roberto are working jointly to study enzymatic reactions in vortex flow reactors. They can be found in lab 16-114 (ext. 3-0470) or in their office in Room 16-443 (ext. 8-7207). Please, join me in welcoming Raquel and Roberto to our Department.

Welcome to Miguel Prazeres who has recently joined Prof. Cooney's laboratory.

Miguel is from Lisbon, Portugal where he is an Assistant Professor in the Chemical Engineering Department of the Instituto Superior Técnico. Miguel's research interests are in the areas of membrane reactors, catalysis in organic media, synthesis of dipeptides, hydrolysis of triglycerides and phospholipids, production of aldehydes and biocatalyst immobilization.

At MIT, Miguel is working jointly with Dr. Thomas Schluep in the recovery of DNA vectors for gene therapy. He can be found in lab 16-114 (ext. 3-0470). Please, join me in welcoming Miguel to our Department.

Dr. Sudhakar Balijepalli has joined the research group of Professor Gregory Rutledge. He is from India and did his undergraduate studies there, recently completing his Ph.D. in Chemical Engineering at the University of Delaware. Dr. Balijepalli also has several years experience as a process engineer working at the Regional Research Laboratory in Trivandrum, India.
While he is here, Dr. Balijepalii notes he hopes to be doing simulation of crystal/amorphous interfaces in polymer systems, specifically the use of Monte Carlo techniques to construct the interface and to look at structure/property relationships of the interface. If you have not already introduced yourself, please stop by and welcome Dr. Sudhakar Balijepalii to the Department! [He is located in Room 66-064.]

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Submissions for the Course X News should be sent to Darlene Messmer-Slagle, dms@mit.edu.