We are now past the midterm hump and well into the second half of the term, so my belated welcome back to everyone who was away from campus this summer and a special welcome to new students, staff, and faculty members who are just joining our growing community. I had a great opportunity to meet with new undergraduate and graduate students in September during our annual BBQ lunches for incoming students. Enrollment in both programs continues to climb, reflecting a sustained interest in Biochemistry. This signals that our ongoing efforts to remain focused on training scientists and preparing students for excellent careers continues to be successful.

During my annual meeting with new incoming 2nd year undergraduate students, I reminded them that we are all here because of a love of discovery, often kindled when we were children, and an opportunity to explore. Testimony to this is the continued high quality of research that researchers in the department have reported over the summer including John Hassell’s and Natasha Kurpios’s work on control of gene expression in spermatogonial stem cells that was published in the August 18th issue of *Nature*.

We welcome a new faculty member to the Department, Paulina Dlugosz, who is taking up responsibility for the undergraduate laboratory program. Paulina received both her BSc and MSc from our Department and is working with the Undergrad Curriculum Committee to develop a new and invigorated laboratory experience. Chief among this effort is a move to implement our 1st labs in level II instead of level III and to expand our inquiry-based labs in level III. This will make our laboratory program among the most innovative and practical in the country.

As we move inexorably towards the colder months I’m reminded of a Japanese proverb that states ‘One kind word can warm three winter months’; think of this when the person in front of you recklessly cuts you off after the first snow storm of the year.

Cheers,

Gerard D. Wright, Chair
Undergraduate Program Update

In September, the Department of Biochemistry and Biomedical Sciences hosted its second annual Welcome Barbecue. We welcomed back all of our undergraduate students including 100 new students to level II of our programme. Students had the opportunity to mingle with faculty, staff and the Undergraduate Biochemistry and Biomedical Sciences Society who were flipping burgers, serving up cake and handing out welcome packages to our new students. We would like to take this opportunity to thank the businesses who have helped support this event through generous donations:

- MBI Fermentas
- Beckman Coulter Canada, Inc.
- Bio-Rad Laboratories Canada Ltd.
- VWR International Ltd.
- New England Biolabs, Ltd.
- Brinkman
- Mandel Scientific Co. Inc.

At the same time, the Department is very pleased to welcome Paulina Dlugosz, one of the newest members of the faculty who will be coordinating the education and development of the laboratory curriculum.

As a result of the Undergraduate Faculty Education Retreat held in May, the laboratory curriculum and inquiry-based approach to learning will be the main focus of education development over the next few years. This endeavour is a continuation of the Imperial Oil Learning and Innovation Grant that was awarded to the Department two years ago.

In October, the Department hosted its “Twist and Turns” event for the fourth year, as part of the Engineering and Science Olympics. Over 900 high school students converged on campus to participate in a variety of events to compete for McMaster University entrance awards. Thank you to Dr. Murray Junop, Mary Margaret Strong and the many graduate students who coordinated the event!

In the throws of mid-term exams, it seems premature to be making plans for next September. However, Level III and IV students will need to give some thought to their future if they will be registering for a fourth year thesis or considering application to graduate school with deadlines looming in the new year. Please consult the Department’s website for detailed information on undergraduate and graduate study requirements.

On behalf of all of the faculty and staff in the Department of Biochemistry and Biomedical Sciences we wish you much success!

Michelle MacDonald
Undergraduate Coordinator

Graduate Program Update

For Fall of 2005, the Department of Biochemistry and Biomedical Sciences had a successful graduate recruitment with 18 new students accepted into the program. Several students were on scholarship and the graduate population at BBS is now one quarter supported by scholarship, which is a testament to the exceptional quality of students in the program. Several changes have been made to the department website in terms of graduate studies to reflect concerns of new students and frequent inquiries to the department. The department is gearing up for its Graduate Studies Open House in February. This year features the addition of a 1:1 session between graduate students and prospective students, in the absence of Faculty, to allow frank questions about grad life and studies at McMaster BBS and feedback from the graduate students perspective. With the increasing faculty complement and well-funded research in BBS, we look forward to the continued growth and success of our graduate training program into 2006.

Ray Truant, Graduate Coordinator (Acting)

GRADUATE AWARDS

M.Sc Defense

Ph.D Defense


Transitions

John Capone has taken on the challenge of running the Faculty of Science as its new Dean, starting July 1, 2005 after finishing a very successful 5 year term as Associate Dean of Research in the Faculty of Health Sciences. We wish him much success!

Evert Nieboer officially retired on June 30, 2005 but will continue his internationally recognized research program. He has just been awarded a $1 million grant to study population health in the Cree Nation in Quebec.

In recognition of their contributions to the Department, a dinner celebration took place in July.

L to R: John Capone, Gerry Wright, Evert Nieboer

Faculty Highlights

Brown Lab Graduate student Mark Pereira was awarded the Karl Freeman Prize for top graduate student seminar in the department. Graduate students Amit Bhavsar and Jeff Schertzer have had back-to-back papers on wall teichoic acid polymerization accepted for publication in a fall issue of The Journal of Biological Chemistry. Eric Brown presented keynote lectures at the Annual General Meeting of the National Research Council’s Genomics in Health Initiative and at the inaugural symposium of the Groupe de Recherche Universitaire sur le Médicament of the Université de Montréal. The Brown lab retreat was held in Temagami again this year at the end of September. Terrific scientific discussion and great weather combined to make the event a real success.

Richard Epand was an invited speaker at the Workshop on Biological Membranes: Structure and Function. Ohio Center for Technology and Science, Columbus, Ohio (Oct 8-11, 2005) and an invited symposium speaker at the meeting “Membrane Biophysics of Antimicrobial Peptides”, Ann Arbor, MI (Sept. 24-25, 2005). He also gave invited talks at the Dept. of Physics, Univ. Washington, Seattle (Aug, 2005); the Dept of Molecular Biology and Biochemistry, Simon Fraser University, Vancouver, BC (Aug, 2005), the Institute for Cell Biology, ETH Hoenggerberg, Zurich, Switzerland, the Burnham Institute, La Jolla, CA (May, 2005) and Roswell Park Memorial Institute, Buffalo, NY (May, 2005).

Alba Guarné received a New Investigator award from CIHR and a 5-year maintenance grant for the X-ray equipment, also from CIHR. The success ratio for the maintenance grants was high (44%) but only two 5-year grants were awarded for 5-year and ours was the largest ($40,000/year while the other one was $8,000/year). I would also like to include that the lab welcomes Yu Seon Chung as a graduate student.

John Hassell and his PhD student, Natasza Kurpios had a paper published in Nature (436:1030-1034).
Paul Higgs (McMaster) and Teresa Attwood (Manchester, UK) have written a textbook on the twin themes of Bioinformatics and Molecular Evolution. This was published in January 2005 by Blackwell. The book is used as the course material for the current course on Computational Biology.

The book and course explain the need for computational methods in the current era of complete genome sequences and high-throughput experiments. How is bioinformatics used for analysis of microarray and proteomics data? How do gene sequences evolve, and how can we use sequences to construct phylogenetic trees? How do we identify homologous genes in different genomes? What have we learned about genome evolution now we have hundreds of bacterial genomes available?

Yingfu Li attended several international meetings during the summer months including 2005 IUPAC Congress in Beijing (invited speaker) and the 4th International Symposium on Nucleic Acids Chemistry in Fukuoka (Keynote speaker). Graduate students Casey Fowler and Razvan Nutiu each won a poster award at the 2005 RiboClub Opening Session in Sherbrooke, Quebec. Graduate student Razvan Nutiu won an Runner-up award in the NSERC Innovation Challenge competition and $5000.

Dr. Truant’s laboratory has published three manuscripts this year to date involving imaging collaborations. In January, Dr. Truant and Dr. John Capone published a study on the PPARα nuclear hormone receptor binding protein, Cap350 in the J Cell Science. The same issue of the journal had an independent study on ataxin-1 protein of spinocerebellar ataxia type 1 from the Truant lab. In August, the labs of Truant and Dr. Eric Brown published a collaborative work involving bacterial imaging and GFP fusion proteins in bacillus species, with Amit Bhavsar as first author in the J Biol Chem. Dr. Truant also recently published a collaborative manuscript with the lab of Dr. Steven Ferguson at the Robarts Institute at the University of Western Ontario in the J Biol Chem on the role of a huntingtin binding protein in triggering one type of glaucoma in the absence of Huntington’s disease. These high-impact manuscripts demonstrate the success of intra-departmental collaborations, even within groups of very diversified interests, and can predict the future of research successes for Biochemistry and Biomedical Sciences laboratories with the imminent opening of the McMaster Biophotonic Imaging Facility on the 4th floor.

New Textbook on Bioinformatics and Molecular Evolution is the basis for the course BIOCHEM 4Y03/6Y03 (Computational Biology)

Science Career Services (SCS) would like to thank our alumni; staff and faculty who have helped make the past year a success! This year we held our first Job Shadow week, where students had the opportunity to shadow Career Hosts and gain hands on career experience. Our Hosts included a Pediatric Surgeon, a Clinical Trials Coordinator and a Forensic Scientist. This past February Biochemistry students had the opportunity to mingle with alumni and employers at their annual Career Night. Students learned about careers in genetics technology, forensics and product development. There was also a PhD student on hand to discuss grad school options. Did you know that as an alumnus you have access to McMaster’s eRecruiting website: http://careers.mcmaster.ca/

If you would like more information regarding how you can participate in our events, post a position or apply to positions please contact Susan Fekecs, SCS Coordinator, at fekecs@mcmaster.ca.

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