



# Biochemistry & Molecular Biology

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## UNDERGRADUATE NEWSLETTER



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### A word from the editor

With this issue, *Undergraduate Newsletter (UN)* interrupts its ongoing series of interviews with BMB faculty to remind undergraduate students of the opportunities and the process for becoming involved in the research programs in the BMB Department.

A primary function of academic institutions, and particularly of graduate degree-granting institutions, is to conduct research that contributes new knowledge or new insights to humankind's understanding of the sciences, arts, humanities and social sciences. At a university the size of Penn State, research is a highly visible and significant effort of the faculty. BMB undergraduate students are fortunate to have extensive opportunities to participate in faculty-initiated research projects. Obviously, not every student is interested in or has the time to commit to the sustained effort required for research. But, for those who wish to get their "feet wet" doing research, the faculty of the BMB Department welcome the participation of undergraduates. In fact, most BMB faculty have several undergraduate students working on some aspect of a research project in any given semester or over the summer. Currently, 79 students are enrolled in BMB/Micrb 496 projects in the department with additional students working in other departments under faculty who have joint appointments in BMB or who have membership on the BMMB graduate faculty.

**How can I be considered for an undergraduate research position?** Students may apply for BMB/Micrb 496 positions each semester. In Spring semesters, applications are made for both summer and fall positions. Students interested in doing research should begin by thinking about their specific interests in the field. To find the best possible match between one's interests and ongoing research programs, students are advised to visit the BMB Department's home page where they can find a *Faculty Research* link that will take them to a list of BMB faculty and one line descriptions of their research. For additional information, one just needs to click on the name of the faculty member and a picture of the faculty member will appear along with a more detailed description of the research and a list of some recent publications. To really impress a faculty member, check out a few of those publications. It may be difficult to understand all a paper has to say, but having an idea of the kinds of questions the research is attempting to answer can make all the difference in a personal interview situation.

The application form lists all faculty who have open 496 positions along with any additional requirements the faculty member has set for those who might seek to do research in his/her lab. Finally, one should remember that experience in research is a very important consideration for admission to graduate and professional schools.

So many reasons to engage in research..... Why not check it out today?

# Have *YOU* thought about Cooperative Education??

**S**usan Knell in the ECOS' Co-op Office in 520 Thomas has these words of advice for students who might have an interest in undertaking a cooperative education experience:

We currently are working with students who are seeking summer and/or fall semester co-op positions. While some company application deadlines have passed, many organizations are just finalizing funding for the upcoming semesters and beginning to contact students about positions. So...it's not too late! If you are thinking about co-op, but just have not yet gotten around to coming to the Co-op Office, we encourage you to visit us in 520 Thomas Building **right away**.

Many of your peers took advantage of the co-op program last semester and others are using the opportunity this semester. If you know any of the following students, you may want to discuss their experiences with them to help finalize your own decision. Again, Susan Knell reports the following list of Co-op students from the BMB Department:

## Fall 2003 Co-op Students

<b>Name</b>	<b>Major</b>	<b>Co-op Employer</b>
Nicole LeFur	BIOT	Johnson & Johnson Pharmaceutical Research and Development
Sarah Humphries	BMB	Walter Reed Army Institute of Research
Sarah Burney	BMB	ViroPharma, Inc.
Kim Allen	BMB	Johnson & Johnson Pharmaceutical Research and Development
Matt Molusky	BMB	McNeil Consumer and Specialty Pharmaceuticals
Adam Pepperney	BMB	Walter Reed Army Institute of Research
Valerie Stover	MICRB	CCDA Waters, LLC
Morgan Boyer	MICRB	Children's Hospital of Philadelphia
Adam Joelsson	MICRB	McNeil Consumer and Specialty Pharmaceuticals
Kristin Smith	MICRB	GlaxoSmithKline
Kelly Fisher	MICRB	GlaxoSmithKline
Brad Leyshon	MICRB	University of South Alabama
Matt Miller	MICRB	GlaxoSmithKline
Deanna Tarwacki	MICRB	McNeil Consumer and Specialty Pharmaceuticals
Miles Davin	MICRB	Walter Reed Army Institute of Research
Katie Kubek	MICRB	Johnson & Johnson Pharmaceutical Research and Development

## Spring 2004 Co-op Students

<b>Name</b>	<b>Major</b>	<b>Co-op Employer</b>
Kyle Hayes	BIOT	J & J Merck at McNeil Consumer and Specialty Pharmaceuticals
Scott Crain	BIOT	McNeil Consumer and Specialty Pharmaceuticals
Donna Tran	BIOT	Walter Reed Army Institute of Research
Tom Bodenshtine	BIOT	Children's Hospital of Philadelphia
Nicole Brauchle	BMB	GlaxoSmithKline
Diane Calinski	BMB	Walter Reed Army Institute of Research
Tracy Mandichak	BMB	GlaxoSmithKline
Jon Stiffler	BMB	Polysciences, Inc.
Mark Jewell	BMB	Walter Reed Army Institute of Research
Laura Di Nardo	MICRB	University of South Alabama
Brian Peters	MICRB	Walter Reed Army Institute of Research
Charles Esenwa	MICRB	GlaxoSmithKline
Kristin Smith	MICRB	GlaxoSmithKline

# You know, you *really* ought to think about Study Abroad!

The college years are perhaps one's best opportunity to experience life from a different perspective. What is it like to live in another country and to study in a different educational system? How much are you willing to be challenged to grow as a person? Would it not be a good thing to expand your cultural awareness and to appreciate how other cultures view American society? These and so many other opportunities await students who participate in Penn State's *Study Abroad* program.

A total of 35 ECoS students studied abroad in the 2003-04 academic year. 6 of these 35 students are students in the BMB Department. Three BMB students studied at one of our 11 science 'partner' institutions – a collection of (mostly) European universities with which Penn State has formal exchange agreements. These 11 institutions are:

<b>Institution</b>	<b>Location</b>
University of Bath	Bath, England
University of Essex	Colchester, England
Lancaster University	Lancaster, England
University of Leeds	Leeds, England
Université Louis Pasteur	Strasbourg, France
McGill University	Montréal, Canada
Phillips Universität	Marburg, Germany
University of Sussex	Brighton, England
University of Wales at Aberystwyth	Aberystwyth, Wales

The good news is that the BMB Department makes every effort to assist students who wish to study abroad with the selection of courses at the host institution that will enable them to make normal academic progress toward their baccalaureate degree. Most students elect to study abroad during the sophomore or junior years. Considerable lead time is necessary to prepare the required paperwork and plan course schedules, so the earlier one begins the process, the better. The application deadline for students interested in studying abroad for **Spring 2005** is April 1, 2004. Students should visit [www.science.psu.edu/coop/sciab.htm](http://www.science.psu.edu/coop/sciab.htm) or [www.international.psu.edu](http://www.international.psu.edu) for more information on the partner institutions, as well as all other study abroad opportunities. Students who have questions about studying at one of the *partner institutions* should visit 520 Thomas and speak with Susan Knell, who also coordinates the Study Abroad program for the College. Information about other host institutions is available through the University's Office of Education Abroad in 410 Boucke or on the International Programs web site given above.

Another good source of information is to chat with students who have taken advantage of the opportunity to study abroad. The following students have studied or are studying abroad:

## **BMB/Micrb Students Studying Abroad**

### **Academic Year 2003-04**

Anna Magracheva	BMB	University of Leeds, England
Jason Trusa	BMB	University of Wales at Aberystwyth

### **Fall 2003**

Mary Grabowski	Microbiology	CIEE, Cape Town, South Africa
Amanda Otto	Microbiology	IES Paris, France

### **Spring 2004**

Amanda Otto	Microbiology	University of Leeds, England
Solomon Shockman	Microbiology	University of Queensland, Australia
Susan Sieminski	BMB	University of Melbourne, Australia

## First year students... need help with your study skills??

The following announcement comes to you from the University Learning Centers in Johnston Commons.

Having trouble studying for your tests? Do you seem to be missing important concepts when taking notes or reading for classes? Can't seem to find time in your schedule to do everything that needs to be done? The University Learning Centers offer free tutoring in study skills areas such as: note taking, reading comprehension, test taking and anxiety, and time management. To schedule an individual appointment for study skills visit [www.ulc.psu.edu/tut\\_request.htm](http://www.ulc.psu.edu/tut_request.htm) or drop by 206 Venus Room in Johnston Commons of East Halls during our scheduled hours from Monday-Thursday 2:30-5:30, Sunday 7:00-9:00. If you have any questions, please contact us at 865-1325.

**And for those of our readers who have 3<sup>rd</sup> semester or higher standing**, the same assistance is available to you in the University Resource Learning Center on the second floor of Boucke Building.

## ...and a word about Summer Internships

The Co-op Program office also has this word for students who are looking for summer internships. First, the college does *not* have a formal 'internship office'. Second, there may be a *lot* of competition for internship positions (students may apply from any and every college or university). So, if summer is all you wish to consider, check out the resources at Career Services for developing a resume, conducting a job search, etc. But, if after checking out the job postings in Career Services you should change your mind, the Co-op office stands ready and would be happy to speak to you about beginning a co-op program in summer that would extend through Fall semester. The second portion of the co-op experience could then be taken the following summer, which would provide 2 consecutive summers of work with the obvious benefit that the work experience would also be in one's field of study. Realize, too, that co-op experiences can involve research.

## Justin Brumbaugh to study in Germany



The Undergraduate Fellowship Office recently announced that Justin Brumbaugh (BMB 04) has been named the recipient of a German Academic Exchange Service graduate scholarship for study and research in Germany for the 2004-2005 academic year. Justin will be part of a research effort to develop technology to monitor lipid-mediated protein translocation and cellular signaling. He will conduct his research at the European Molecular Biology Laboratory under the direction of Dr. Carsten Schultz. Justin will, at the same time, attend the University of Heidelberg. Currently, Justin is doing research in molecular genetics for his senior honors thesis under the direction of Dr. Sarah Ades. Readers of the *Newsletter* will recall that Justin was a recipient of a Pfizer Undergraduate Research Fellowship last year. This will not be the first time Justin studies outside the United States. In SP02, he studied at the University of Melbourne, Australia. **CONGRATULATIONS, Justin!**

## New machines arrive in student computer lab



Seven new Dell computers have arrived in the student computing lab in 122 S. Frear. These PCs are faster and have much more memory than the machines they replace. In addition, 4 used, but much faster machines than the original computers have also been installed, and among these is one eMac. A scanner is now available in the laboratory, too. Why wait for a machine at the common computer labs when new machines are available from 8 a.m.-5 p.m. every weekday right here in the BMB Department? The lab is just a short walk down the hall from the Undergraduate Study Center in 101 S. Frear.

This publication is available in alternative media on request.

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