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Biology Newsletter: February 2012

The College at Brockport

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The Department of Biology at The College at Brockport, State University of New York

Lennon Hall, 350 New Campus Drive, Brockport, NY 14420

Volume 3, Issue 1

February, 2012

The State of the Department



Welcome back for the Spring semester. Hopefully

everyone is rested and excited to get back to the task of learning and instructing. As many of you know, the department is currently in the process of hiring another faculty member to help with the instruction of the Anatomy and Physiology I and II courses. This position will start in the Fall semester. The person we hire will also add to the number of upper level courses we offer as well as provide more research opportunities for

both undergraduate and masters students.

While on the subject of undergraduate research opportunities, Dr. Bonnie Bower, an alumnus of the Department of Biology, and her husband have pledged to continue support for the next three years of the Paul and Agnes Bower Summer Undergraduate Research Program. The announcement and application form was sent to you via Angel email. This research opportunity is very similar to Brockport's Summer Undergraduate Research Program that is

sponsored by the college. Both of these programs support undergraduate research over the summer here at Brockport. These programs with respect to the Dept. of Biology are geared towards students interested in pursuing careers in research or the health professional fields.

On a final note, I'd like to remind the Biology majors to support their fellow students at the upcoming Scholar's Day. Have an enjoyable and productive semester.

-Rey Sia, Assoc Professor and Chair

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Special Notes: *Save the date! Brockport's 28th Annual Scholar's Day is April 11th! Several of our undergraduate and graduate students will be showcasing their research so please mark your calendars!*

Student Awards/Nominations Announced

Katrina Haude is the Department's nominee for Chancellor's Award and President's Citation Award. We have nominated both **Luke Krembs** (undergraduate) and **Hannah Cushman** (graduate) for the School of Science and Mathematics Award. **Bridget Cooney** will receive the Henry Gould Award. Congratulations for a job well done!

Honors Program in Biology

We are continuing to accept applications from students who wish to join the Departmental Honors Program. In order to join, you must hold a 3.25 GPA overall and in your major, and be willing to conduct a multi-semester research project with a faculty member. Successful completion of a written thesis allows students to graduate with the "Departmental Honors" distinction on their academic transcript. For more information, please contact Dr. Laurie Cook at lcook@brockport.edu.

Brockport's Omega Upsilon Chapter of the Beta Beta Beta Biological Honor Society Is Seeking New Inductees

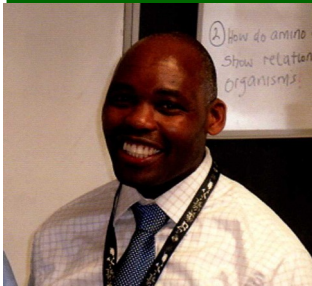
Academic requirements:

- At least 3 semesters of biology coursework;
- a cumulative GPA of 3.0;
- a Biology GPA of ≥ 3.25 ; and
- be an active member, or plan to be an active member of the biology club

Interested individuals should contact Dr. Stuart Tsubota at stsubota@brockport.edu.



Graduate Student Profile: Dominic Munini



My name is Dominic Munini. I am a native of Kenya in East Africa and am currently in

my last semester of the M.S. program in Biology. I applied to Brockport in order to pursue research with Dr. Michel Pelletier on *Trypanosoma brucei*, which is a protozoan parasite that causes African sleeping sickness. In Africa, sleeping sickness is a devastating illness. The effects of other parasite-related diseases, such as Malaria, are equally heart-breaking. I have witnessed first-hand the suffering and pain which patients endure when infected by such pathogens. Dr. Pelletier's research will ultimately

aid in the design of less toxic drugs or possibly vaccination for the treatment of African sleeping sickness. His efforts motivated my interest to be part of his research team.

My research goal has been to characterize the *in vitro* and *in vivo* enzymatic activity of TbLpn and its role in phospholipid biosynthesis in *Trypanosoma brucei*. The Lipin protein family has been identified in many organisms including mammals, yeast, plants and protozoa. Lipins catalyze the biosynthesis of phospholipids, especially phosphatidylcholine and phosphatidylethanolamine. Trypanosomes synthesize phospholipids *de novo*. This biosynthesis machinery is the target for design of new drugs. Since TbLpn has all the characteristics of other Lipin protein family members, it should have the same enzymatic activity. We have been able to observe the expression of TbLpn *in vitro* and

in vivo. We are continuing to work on determining the enzymatic activity of the TbLpn protein using phosphatidic acid phosphatase assays.

This research experience has been a very rewarding academic activity. I am more confident in my research skills and academic skills gained from MS program. My goal is to continue apply to a doctoral program in Microbiology and Immunology. My plan is to be involved in teaching and doing research on diseases especially those common in Africa. I feel that Brockport has prepared me adequately for the doctoral program and for future academic life. Dr. Pelletier has been very instrumental in his guidance especially on research skills. I deeply appreciate his generosity. The faculty of Biology is very friendly and I appreciate that friendship.

Undergraduate Student Profile: Matthew Halloran



Hey everybody! I hope everyone is enjoying their spring semester at Brockport! Also, congratulations to the seniors who are about to graduate in May and are about to begin the next chapter of their life. To anyone reading this who does not already know me, however impossible that is, here is a little background info about myself. I am 27 and am currently finishing up my second bachelors degree this May. My degree will be in Biological Sciences and I will also receive an initial teaching certification. I will be certified to teach biology for grades 9-12, general science 5-7, and special education 7-12. I received my first degree wayyyy back in 2007 in Marine Vertebrate Biology from SUNY Stony Brook, a school located on Long Island. I grew up wanting to be a marine biologist because I

was always fascinated by Shark Week and any other ocean themed programming that I could find. My senior year at Stony Brook I participated in an education internship at the Long Island Aquarium and Exhibition Center (formerly Atlantis Marine World). I discovered during my time there that I enjoyed interacting with people and giving talks much more than I enjoyed actually performing science (no offense to any of the scientists that are currently reading this newsletter). I bounced around jobs for a few years after that first degree and then finally decided to act on my newly discovered passion for teaching. I grew up in Rochester and had been living here for a few years after Stony Brook so when I decided I wanted to be a teacher, Brockport ended up being the place to go. I would recommend the teaching program here at Brockport to anyone interested in going into teaching as a profession. The classes are fun, professors are engaging, and as a student I feel much more prepared than the education students at some of the other area colleges. Those colleges will remain nameless but I must say that my opinion that Brockport students are

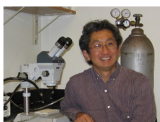
the most prepared teacher candidates has been echoed in all of the schools that I have had the opportunity to work in. For undergraduate students, there is an application involved with getting into the education program. Once accepted, there is a two year long process (junior and senior year) that involves classes in your major, education classes, field experiences of 50 hours at a local school each semester, and a culminating full time student teaching experience your last semester. It is also possible to get teaching certified at the college through the Masters route, which I would recommend to anybody that is a junior or senior and does not feel like entering into the undergraduate education program late in the game. Most of the education classes are the same, although some may require an extra paper for the graduate students. I currently am in my student teaching experience at Penfield High School for the special education portion of my teaching certification and will start the Biology portion at Pittsford Sutherland High School in the middle of March. If anybody who reads this has any questions or is interested in getting into teaching shoot me an e-mail at mhall4@brockport.edu.

Department Achievements

Faculty Updates



Dr. Laurie Cook has a fantastic team of two graduate students and seven undergraduate students working with her this semester. They have been busy presenting our work at a variety of local and national forums. She welcomes **Nico Covello, Stacy Wicks and Colin King** to the lab this Spring. She also would like to congratulate **Andrew Goodspeed, Austin Olek, Casey Donovan and Matt Morasco** for submitting a grant proposal to the Rochester Academy of Sciences and winning a \$250 award to fund their Simple Green study for the semester! **Lauren Field** presented a poster with Dr. Cook at the ASCB meeting in Denver, CO in December. Also, we'd like to congratulate her on her acceptance into a PhD program in Biomedical Engineering at U Maryland! Congratulations to **Jay Moden** who successfully defended his M.S. thesis in January!



Dr. Stuart Tsubota submitted an R15 AREA grant application to fund his research program.

Lisa Dishaw, a graduate PSM student in his lab had an interview with Bausch and Lomb, a biotech company in Utica. Also, he is working to establish a relationship with The Medingen Group, LLC in Rochester to host a summer internship for **Matt Crosby**, another PSM graduate student in his laboratory. If you get the chance, be sure to see **Dr. Tsubota** performing with BIO-DANCE on March 9, 2012 at 7:30pm at the Hochstein Performance Hall.

Student Presentations

- **Lauren Field** (presented) **Jay Moden** (M.S. 2012) and **Katrina Haude** co-authored a poster at the 51st Annual American Society for Cell Biology Meeting in Denver, CO December, 2011.
- **Andrew Goodspeed, Casey Donovan, Austin Olek, Matt Morasco, Robert Carroll, Katrina Haude, Bridget Cooney, Melissa Colon, Laura Pankowski, Kyle Walker, and Luke Krembs** all presented posters at the Rochester Academy of Sciences Fall Annual Paper Session hosted by MCC, November 2011.
- **Lauren Field** gave an oral presentation at the Rochester Academy of Sciences Fall Annual Paper Session hosted by MCC November 2011.
- **Andrew Goodspeed** was invited to present their research at the National Council for Undergraduate Research at Weber State University in Ogden, UT this March, 2012.

Summer Research Opportunity

The Department of Biology is pleased to announce that alumna Dr. Bonnie Bower '75 BS, '78 MS has established a summer research award in honor of her parents to support one Brockport student to conduct research during the summer. Applicants should: Have a 3.25+ GPA in the major and overall, have completed BIO 301 Cell Biology & BIO 302 Genetics, be available for 8 weeks of full-time work, continue the research in 2012-2013, and intend to seek an advanced degree in the biomedical sciences. Applications are available in the Department Office and are **Due March 1st**.

PSM News

The College at Brockport is in the process of joining MedTech (www.medtech.org). This is an organization that serves to link the upstate biotech community. The membership will allow all members of the university access to their resources. The membership is being paid through a Sloan Foundation grant to support the development of Professional Science Master's programs in the SUNY system.



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Student Successes

- **Jay Moden** (M.S. 2012) is now working at Johnson and Johnson.
- **Lauren Field** (M.S. expected 2012) has been offered a spot at both RPI and U Maryland's Ph.D. Programs in Biomedical Engineering.
- **Nate Scharf** (B.S. expected 2012) has been offered a spot in USC's Ph.D. program in Biochemistry and Molecular Biology.
- **Hannah Cushman ('11)** was hired as a research assistant at the University of Rochester Medical Center.
- **Patrick Donohue ('10)** is working at Strong Hospital.
- **Carrie Labombard ('11)** accepted a full-time position in a cancer lab in Yonkers, Aureon Biosciences as a medical reporter.
- **Christina Gliwa ('10)** was accepted into the dental program at the University at Buffalo School of Dental Medicine.

Spring Semester Announcements

- Brockport's Annual Scholar's Day is April 11th, 2012. Mark your calendars!
- Applications for Biology's Graduate Program in are accepted on a rolling basis. Applying early ensures best consideration for paid Teaching Assistantships.
- Faculty research labs are actively recruiting for undergraduates interested in independent research (BIO 424) experiences and graduate students working towards a M.S. degree. If you are interested, contact each faculty member directly.