

Department of Biological Sciences Newsletter

"from biomolecules to the biosphere"



No. 1

January 6, 2012

Announcements



Hello / Goodbye - The New Year brings a change of face to the administrative structure of the Department. As of January 1st we have a new Associate Head (Research). On behalf of the Department I extend appreciation and gratitude to André Buret for his excellent service in this role over the last 3 years. As you know, André has taken up a new, and very challenging, role as one of the Associate Vice-Presidents (Research). André was gracious enough to continue in his role as Associate Head (Research) even though his Associate Vice-President role began on November 1st. André's role as Associate Head (Research) has been assumed by Doug Muench. Doug has just returned from Research and Scholarship leave, but sat in on various meetings in the Fall Session to get his feet wet. Doug's learning curve will be steep, so bear with him as he becomes familiar with his new role.

Thank you André; welcome Doug! - Tony

Tri-Council financial monitoring visit - In the week of January 30, 2012 Tri-Council (NSERC, CIHR, SSHRC) officials will be visiting the University of Calgary to conduct financial monitoring. The team will be reviewing the University's financial systems and the effectiveness of its policies, procedures and controls as they relate to Tri-Council matters. This review will apply to research transactions for the fiscal year 2010-2011. The Tri-Council team will contact, at random, selected Tri-Council project holders regarding questions relating to their grants/awards. - Tony



Keeping track of equity.... Our Department has an Equity Issues Committee! The mandate of the EIC is to help ensure equal opportunity for all members of the Department, including undergraduates, graduate students, staff and faculty. The EIC has collected information and resources pertinent to the Department and seeks to identify initiatives that may improve the work environment for all members. The EIC is concerned about any group whose identity might influence individuals' opportunities to succeed in their careers. See our BioSci website under Contact Us where we have posted reports about our Department and provided pertinent links: http://bio.ucalgary.ca/contact/EIC_committee.html

The EEB New years potluck event will be held on Jan 21 2012 at the Scandinavian Centre - see pg 7 for more details.

There will be a DNA and Proteins Basics workshop held in HSC 2525 on Jan 3-8, 2012. See pg 9 for more details.

Personal Protective Equipment and Other Lab Rules

One of the more common issues that I regularly deal with pertains to Item 4 of the University of Calgary's Laboratory Safety Rules, which states that "You must wear a laboratory coat and personal protective equipment, as appropriate, when in the laboratory."

Many people have asked me why they have to comply with this, unaware of the possible consequences. The article (see page 10) emphasizes the potential for tragedy when this rule is not followed. Although this is an extreme incident, and your lab may not use pyrophoric chemicals, lab coats provide protection from exposure to less obvious hazards, and when not worn these may end up on your skin and/or clothing.

The Alberta Occupational Health and Safety Code requires that employers identify the requirement for personal protective equipment and ensure that workers wear it. It is the responsibility of front line supervisors, which includes Principal Investigators, who direct the work in their laboratories and act as the University's agent in enforcing these rules. Whereas the article referred to relates to an incident that occurred in the United States, in Canada Bill C45, an amendment to the Criminal Code, similarly allows for supervisors to be charged for negligence leading to death. Accidents in the workplace have far reaching consequences. There is the obvious tragedy of a person killed or injured. But additionally there is the suffering of the family, friends and co-workers, and the consequences for all involved in the supervisory chain. Serious accidents have an impact on the reputation of the institution and the individuals who are implicated. Taking all of this into account, it seems to be a very small thing to ask that everyone follows, at a minimum, the twelve safety rules that are meant to be posted in every lab. - Fred Doré

Recent Publications



Åsa Fahlman, Nigel Caulkett, Jon M. Arnemo, **Peter Neuhaus**, **Kathreen E. Ruckstuhl** (2012): Efficacy of a portable oxygen concentrator with pulsed delivery for treatment of hypoxemia during anesthesia of wildlife. *Journal of Zoo and Wildlife Medicine* 43 (1): 67-76.

Proctor, M.F. et al. (including **R.M.R. Barclay**). 2012. Population fragmentation and inter-ecosystem movements of grizzly bears in western Canada and the northern United States. *Wildlife Monographs* 180:1-46.



Seminars



EEB seminars - Fridays at 11h00 in BI 211

January 13 - Jon Mee- Understanding the coexistence of sperm-dependent asexuals and their sexually reproducing host species

BCEM 601 seminars - Mondays at 16h00 in BI 211

January 9 - Raymond Chew - Effect of two purification methods on the biophysical and biochemical properties of EmrE, a small multi-drug resistance transporter.

CDP 601 seminars - Wednesdays at 16h00 in MS 319
January 18 - Samuel Abassah-Oppong - TBA

EEB 601 seminars - Mondays at 12h00 in BI 211
Jan 9 - Erick Elgin - Seasonal variables of shallow lakes

Micro 601 seminars - Wednesdays at 11h00 in BI 211
TBA

Scholarships



Alberta Innovates Technologies Futures (AITF) ENTRANCE: Department deadline **January 15**. NOTE: this competition is for incoming students only - http://www.grad.ucalgary.ca/awards/award_competitions/graduate_award_competition/aitf

Alberta Doctoral Awards for Chinese Students: Department deadline **January 15** - http://www.grad.ucalgary.ca/awards/award_competitions/adacs

Graduate Award Competition: Department deadline 18 January.

Alberta Innovates Technologies Futures (AITF): Department deadline **18 January**. NOTE: this competition is for continuing and incoming students - http://www.grad.ucalgary.ca/awards/award_competitions/graduate_award_competition

Please contact Sophia George (georges@ucalgary.ca) for details.

Foreign Government Awards – France, competition open - Application Deadline: March 15, 2012 This may be helpful to Supervisors with students considering a Cotutelle.

The Government of France, through the Office for Science and Technology at the Embassy of France in Canada offers scholarships to increase the mobility of Canadian students and post-doctoral researchers to France. These scholarships are based on reciprocal agreements between the governments of France and Canada. For more information, visit: http://www.scholarships-bourses.gc.ca/scholarships-bourses/can/fga_france-bge_france.aspx?lang=eng&view=d



Did you know....

RESEARCH PROPOSALS

Research Proposals and research proposal meetings are required for all M.Sc. and Ph.D. students in Biological Sciences.

The purpose of the Proposal Meeting is for you, the student, to:

- **Summarize the literature and history related to your research problem and provide a critical evaluation of any studies which were previously completed.
- **Stress the means and methods by which you propose to pursue your research project.
- **Indicate the contribution to existing scientific knowledge which you expect to make from your particular research project.

Research Proposals are due no later than the 12 months after the student's initial registration in their graduate program.

M.Sc. research proposals should not exceed 10 pages double-spaced (8 ½ x 11)

Ph.D. research proposals should not exceed 20 pages, double-spaced (8 ½ x 11)

Seven days prior to the proposal meeting, Karen (Bio 186), and the committee members require a paper copy of the proposal. After receiving a copy of the student's Research Proposal, it is the supervisory committee's responsibility to:

- **ensure that the student's course work is complete, or indicate which additional courses will be required or will benefit the student's research project
- **ensure that the research project is suitable for the M.Sc. or Ph.D. program that the student is enrolled in. If not, recommendation should be made to the Graduate Supervisor and the Graduate Director.
- **ensure that the student is qualified and prepared to continue with their research.

IF, for whatever reason, you cannot meet the specified deadline of 12 months after initial registration for your research proposal, you or your supervisor, must provide a written request explaining the reason for the delay. The Graduate Director will review this request.

Research Proposals

none scheduled

Ph.D. Candidacy Oral Examinations - Candidacy Exams are Closed Exams.

Hillary Ward (Supervisor: J.R. Post), will be holding her Ph.D. Candidacy Examination, in the area of "Fisheries Ecology & Management", on January 30, 2012 @ 2:30 p.m. in BioSciences room 389. (Neutral Chair: J. Fox).

Thesis Oral Examinations - Exams are "Open" unless otherwise noted.

Please note: *Pre-defense seminars are a degree requirement for all M.Sc. and Ph.D. students in Biological Sciences. Typically, the seminar will take place immediately preceding the Oral Defense Exam.*

It is the student's responsibility to book the necessary com-media equipment with either Christine (220-3578) or David (220-8307) for their examination. Please book the equipment as soon as you have the date set for your exam/proposal meeting. (defense seminars are held one hour before the stated defense time in BI 211 unless noted otherwise)

Hao Ding (Supervisor: M.F. Hynes), will be defending his Ph.D. Thesis, in the area of "Bacterial Genetics", on January 19, 2012 at 10:00 a.m. in BioSciences room 389. (Neutral Chair: M. Fraser). **CLOSED EXAM**

Jacson Laliberte (Supervisor: J. Post), will be defending his M.Sc. Thesis, in the area of "Fish Ecology", on February 1, 2012 at 2:00 p.m. in BioSciences room 499. (Neutral Chair: TBA).

Lorraine Adderley (Supervisor: J. Vamosi), will be defending her M.Sc. Thesis, in the area of "Plant Reproductive Ecology" on February 29, 2012 at 10:00 a.m. in BioSciences room 499. (Neutral Chair: TBA).

Positions / Opportunities



Faculty of Medicine National Graduate Student Recruitment Drive

Deadline: **January 9, 2012** <http://www.medicine.ucalgary.ca/grad/recruitment>

We are looking for highly motivated and qualified graduate students (finishing their MSc program) interested in doctoral research in one of our 8 Graduate Programs at the University of Calgary.

Biotech Job Bank (www.bhrc.ca) has current employment opportunities in the biotechnology industry in Canada. The Biotech HR Pulse is available in PDF format at: www.bhrc.ca/Pulse/index.html. Phone 519-457-1470, Ext 268, Fax 519-457-3997.

University Affairs Career Ads. Current employment opportunities, including all facets of the biological sciences, in Canadian universities may be found at the University Affairs website: www.universityaffairs.ca. Career ads are available in HTML format at: http://www.universityaffairs.ca/career_ads/index.html

ISEEE and Graduate Programs - As previous years, ISEEE is currently receiving a large number of applications from potential students to do thesis-based graduate degrees in the area of Energy and Environmental Systems research. Many of these applicants have not yet contacted individual Faculties, Schools, or Departments about graduate study. So, we will continue to work with these students to try to match them with appropriate graduate programs (and supervisors), through which they may also enroll in the ISEEE Energy and Environmental Systems (EES) Graduate Specialization.

However, we also recognize that many of you are also actively recruiting students to work on projects relevant to energy systems research, and that your students could benefit from the interdisciplinary environment that we offer within the EES Specialization (<http://www.iseee.ca/for-students/>).

To this end, we wanted to let you know that ISEEE is interested in working with you to create attractive recruiting packages for potential students. Specifically, ISEEE can help to provide scholarships for graduate students, office space, and administrative support to students that you may be recruiting to your own programs or as part of the U of C's revised Interdisciplinary Graduate Program (IGP, <http://www.ucalgary.ca/pubs/calendar/grad/current/interdisciplinary-graduate-program-igp.html>).

If you are interested in taking advantage of this opportunity, please send a brief description of your request to Dr. Joe Arvai (Jarvai@ucalgary.ca) (Chair, ISEEE Graduate Specialization Committee) as soon as possible, but before 28 Feb. 2012. Your description should include:

- * the name of the student that you are recruiting;
- * the program you are recruiting the student for;
- * a brief description of the energy systems project that is being proposed for the student;
- * the name of the supervisor (including any co-supervisors) and proposed committee members;
- * the amount of student funding you are requesting.

Those wishing to recruit students as part of the U of C's revised Interdisciplinary Graduate Program should send in their information prior to January 15, 2012.

Graduate students who receive support through this initiative must commit to enrolling in, and following the requirements of, ISEEE's Energy and Environmental Systems (EES) Graduate Specialization (see <http://www.iseee.ca/for-students/>).

EEB New Years potluck and tacky gift exchange

- January 21st 2012 @ the Scandinavian Center
 - 739 20 Ave NW (map below)
- 5pm to 11:30 w/ cocktails @ 5 and dinner at 7
- Tickets - \$12 per person (\$10 if purchased before Dec 20th!)
 - Guests welcome; kids free
 - Pay Geoff Legault (Fox lab - Biol 275)
- Potluck style
 - Signup w/Geoff to bring an appetizer, side, main, or desert
- Norse themed New Years! (Norse drinks/food/dress etc.)
 - Grab your horned cap and your biggest goblet!
- All dinnerware provided; bring iPods to play music and an unwanted gift for the tacky gift exchange
- Bring a non-perishable item for the UCalgary food bank
- BYOB – Remember to bring receipts for all your booze!!!



ASPB 2012 Conference

Exploring the Boreal Forest: Oil Sands in Alberta



At the
Hyatt Regency, Calgary, AB
On
April 18 and 19, 2012

**Join ASPB at our 2012 conference, as we
explore the Boreal Forest in Alberta.**

Potential topics include biophysical characteristics of the boreal forest, new legislation/regulations and regional plans, reclamation and closure, wetlands and water issues, species at risk and rare species, cumulative effects, and mitigation and monitoring.

For details, check out the [conference webpage](#).

We offer the following opportunities to get involved in this conference:

- [Submit an abstract or poster](#)
- [Rent a tradeshow table](#)
- [Sponsor the event](#)





We have attached a [poster](#) that can be printed off and posted in your lunch room.

If you have any questions, please contact us at pbiol@aspb.ab.ca.

We look forward to hearing from you,
ASPB Conference Organizing Committee

DNA and Proteins Basics Workshop

Hands-on techniques workshops for students, graduate students, post-docs, faculty, and technicians

	Nucleic Acids Basics Workshop	}	Jan 3 – 7, 2012
	Proteins Basics Workshop		
	Web-based Bioinformatics		
	ELISA and Immunoassays		Jan 7 – 8, 2012

Our workshops are designed to cover the basics of all protocols listed below, including lecture/discussion to cover standard methods, hands-on application of all techniques, with helpful advice on how to troubleshoot your protocols through an understanding of technique theory. The workshops will be of interest to undergraduate students doing research projects over the summer, new graduate students, technicians, lab technologists, post-docs or faculty looking to expand their repertoire of techniques.

Module Descriptions:

DNA Basics: DNA isolation and quantitation; PCR and gel electrophoresis. How DNA and RNA isolation work, PCR design and optimization such as RT-PCR, K-PCR, Q-PCR, arrays and primer probes. Restriction digests ligation, transformation and screening, sequencing, theory of cloning strategies and other molecular reactions.

Proteins Basics: Expression of recombinant proteins, isolation/purification/quantitation of proteins, functional studies, SDS-PAGE, Westerns, antibodies as reagents.

Bioinformatics: Use of web-based resources for sequence identification, alignment, restriction mapping, translation, and more.

ELISA and Immunoassays: Variations [direct, indirect, and sandwich], design and standardization, curve analysis, other immunoassay platforms, dot assays, antibodies as reactants. Note: one lecture overlaps with the Proteins workshop.

Topic	January Bock week	Days	Cost
DNA Basics	Jan 3 & 4	2	\$300
Bioinformatics Basics	Jan 5 AM	1/2	\$100
Protein Basics	Jan 5 PM to Jan 7	2.5	\$375
ELISA and Immunoassays	Jan 7 & 8	2	\$300
Total Package		6	\$900

To register: Email workshop@ucalgary.ca. Registration due by Dec 31, 2011.

Payment: By check or by UofC accounting string (training grants will cover this workshop).

Where: O'Brien labs, 2525 Health Science Centre, Faculty of Medicine.

C&EN news of the week

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CHARGES BROUGHT IN UCLA LAB DEATH

LAB SAFETY: UC system, professor face felony counts in death of Sheri Sangji

THE LOS ANGELES County District Attorney's Office filed charges against the University of California and UC Los Angeles chemistry professor Patrick Harran on Dec. 27, 2011, for felony violations of California labor laws in the death of a staff research assistant three years ago.

Sheharbano (Sheri) Sangji, 23, died on Jan. 16, 2009, from injuries sustained in a fire 18 days earlier in a UCLA chemistry laboratory. Working with *tert*-butyllithium, which ignites spontaneously in air, she was drawing the chemical from a bottle into a syringe when the plunger came out of the syringe barrel (C&EN, Aug. 3, 2009, page 29). Sangji was not wearing a lab coat, and the chemical splashed onto her clothes and set them on fire. Sangji was burned on her torso, arms, and hands.

The charges center on a section of the California labor code that makes it a crime for any employer or employee manager to willfully violate any occupational safety or health standard in a way that causes death or prolonged injury to an employee. According to the California penal code, "willfully" means that the employer's actions were not accidental, although it does not imply that the employer intended to break the law or injure an employee.

The charges specifically cite regulations involving failure to correct unsafe workplace conditions and procedures in a timely manner, failure to require work-appropriate clothing and personal protective equipment, and failure to provide chemical safety training to employees.

The California Division of Occupational Safety & Health cited UCLA's department of chemistry and biochemistry in 2009 for violating the same regulations and fined the university a total of \$31,875 (C&EN, May 11, 2009, page 7).

If convicted of the felony charges, Harran faces up to four-and-a-half years in state prison, district attorney spokeswoman Jane Robison says.

A warrant was issued for Harran's arrest. Harran is

out of town for the holidays and will surrender to authorities as soon as he returns, says Thomas P. O'Brien, Harran's attorney. O'Brien declined to comment further on the case.

The university faces fines of as much as \$4.5 million and is scheduled to be arraigned on Jan. 12, Robison says.

Calling the charges "outrageous," UCLA Vice Chancellor for Legal Affairs Kevin S. Reed says that the university will defend itself "with a great deal of vigor."

Sangji's death was an "unspeakable tragedy, but it's not a crime," Reed adds. "What happened that day was not the fault of UCLA acting willfully in violation of workplace safety standards." Reed fears that the charges will have a chilling effect on the ability of California institutions to attract research scientists.

Since Sangji's death, UCLA has increased laboratory training and inspections, purchased flame-resistant lab coats for researchers who use flammable reagents, and established a center to promote research into lab safety programs (C&EN, April 4, 2011, page 11).

Sangji's sister, Naveen Sangji, says the charges are "the first step to hold UCLA and Harran accountable for the excruciating pain and the suffering they put Sheri through." Naveen and her family hope that there won't be a plea bargain

and that the case will go to trial, she says, adding that "we hope that this will keep other people safe from harm and keep other families from being hurt the way ours has been." —JYLLIAN KEMSLEY

& MORE ONLINE

Read the court document at cenm.ag/uclacharges.



Harran

COURTESY OF PATRICK HARRAN



Sangji

COURTESY OF NAVEEN SANGJI