



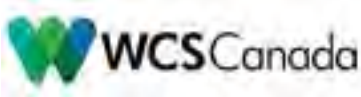
Department of Biological Sciences Newsletter

"from biomolecules to the biosphere"

No. 2

January 15, 2016

Scholarships



• **WCS Canada** 2016 W. Garfield Weston Graduate Fellowship Program

Application Deadline: 24 February 2016

<http://www.wcscanada.org/Fellowships.aspx>

Recent Publications



Wilson, K. L., B. G. Matthias, A. B. Barbour, R. N. M. Ahrens, T. Tuten, and M. S. Allen. 2015. Combining samples from multiple gears helps to avoid fishy growth curves. *North American Journal of Fisheries Management*, 35, 1121-1131.

Seminars



EEB 601 Seminar - Mondays 12h00 in BI 211

Jan 18 - **Lauren Sawich** - The Effect of Population Size/Density on Reproductive Success and Resource Allocation in the Rewardless Orchid *Cypripedium parviflorum*



BCEM 601 Seminar - Mondays 16h00 in BI 211

Jan 18 - **Rajnigandha Pushpker** - The Biosynthesis of Natural Rubber: An Investigation of Guayule CPTs and CSF



EEB 601 Seminar - Tuesday 12h00 in BI 211

Jan 19 - **Marco Musiani** - Behaviour, ecology, genetics and population structure despite gene flow in wolves and caribou

Important Dates

Jan 18 - Head selection committee election ballots due

Jan 28 - Department meeting - 13h00 - 15h00 - BI 211





Micro 601 Seminar - Wednesdays 12h00 in BI 211
Jan 20 - **Oscar Montoya** - Metabolism of Bitumen Compounds by Indigenous Microorganisms From Oil Sands and Canadian Arctic Ocean



EEB Seminar - Friday 12h00 in BI 211
Jan 22 - **Adam Ford** - Testing the trophic cascade hypothesis in an African savanna

Graduate Student Affairs



Research Proposals

The M.Sc. Research Proposal for **Dilini Atugula**, in the area of “Biochemistry”, was accepted by her Supervisory Committee on January 6, 2016.

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

Annie An (Supervisor: G. Voordouw), will be holding her Candidacy Examination, in the area of “Environmental Microbiology”, on February 2, 2016 at 9:00 a.m. in Biological Sciences room 312. (Neutral Chair: M. Hynes).

Maxwell Chilije (Supervisor: V. Zaremborg), will be holding his Candidacy Examination, in the area of “Biochemistry” on February 16, 2016 at 1:00 p.m. in Biological Sciences room 312. (Neutral Chair: Dr. E. Lohmeier-Vogel).

Tegan Barry (Supervisor: S. Rogers & H. Jamniczky), will be holding her Candidacy Examination, in the area of “Evolutionary Biology”, on March 24, 2016 at 10:00 a.m. in Biological Sciences room 389. (Neutral Chair: H. Habibi).

Thesis Oral Examinations - Exams are “Open” unless otherwise noted.

None currently scheduled

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

Clever Acronyms: the Holy Grail of Academia

Step 1

Use the loose definition of the word "acronym"

Step 2

Missing a letter? Pull out an obscure buzzword that fits!

Step 3

Desperate? Just pick letters from the middle. I'm sure no one will notice.

ACTUALLY RANDOM ONOMASTIC INITIALS YOU MAKE (UP)

Step 4

Is it coherent? Does it makes sense? What matters is that it sounds cool.

Step 5

Ignore words that don't contribute. Kind of like your part in the project.

Types of Acronyms:

- **Folksy Names:** a cheery name will distract people from the fact your project cost millions

A.L.I.C.E.
B.O.B.
D.A.V.E.



A.D.O.L.F.
Z.I.P.P.O.
S.I.G.M.U.N.D.



- **Aggressive verb/predatory animal:** a requirement for getting military funding

K.I.L.L.
S.H.A.R.K.
W.O.L.F.



O.B.L.I.T.E.R.A.T.E.
(too many words)
B.U.N.N.Y.



- **Greek names:** nothing says "Sci-Fi" like a good greek name

Ω.M.E.G.A.
Α.L.P.H.A.
Σ.I.R.I.U.S.



T.O.G.A.
P.I.T.A.
T.Z.A.T.Z.I.K.I.



Remember:

Acronyms cleverly reveal one's nimble youthful mastery abbreviating construed rigidly opted nomenclature, yielding monetary awards contracting research overtures not yet manifested!

Bonus points: make your acronym recursive!

JORGE CHAM © 2008

WWW.PHDCOMICS.COM

"Piled Higher and Deeper" by Jorge Cham
www.phdcomics.com

CFD & BGSA Graduate Student Ski Trip 2016



February 26th-28th, 2016
Fernie Ski Resort



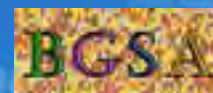
	PRICE
2 Lift Tickets	\$270
1 Lift Ticket	\$210
Bus and Room Only	\$160

Limited spaces available!
Tickets for sale until Friday Jan 22nd from
Shaun Moore (shmoore@ucalgary.ca)
/Ramya Singh (ramsingh@ucalgary.ca)
and at TGIF every Friday!

Includes 2 nights accommodation
+ round-trip bus travel!



Cheques made payable to "Council of Foothills DGA"



committed to the promotion of excellence in the practice of biology

BIOTA Current Research - Submission Requirements

- Grad student submissions can be sent to alexander.s.elliott@gmail.com
- Total of 500 words or less (not including your title). This includes your research and a short biography. Both MUST be included in order to be considered for publication.
- Write your article as if you were describing your research to another student
- Your biography should tell who you are, what school and which department/lab you are working in
- Please submit your article as a Word document. (No internet software please)
- Include a picture
 - 150 dpi resolution, small size (even from a Smartphone), generally speaking, a .jpg photo anywhere from 200kb and up is okay for internet
- If you are using other grad students names or sharing their research in your article, please make sure you have their consent prior to submitting and that their research topic is portrayed accurately
- **Submission DEADLINE: Friday, March 8, 2016**

Thank you for your submission!



2016 CONFERENCE & ANNUAL GENERAL MEETING ALBERTA CHAPTER OF THE WILDLIFE SOCIETY

4-6 March 2016
Drumheller, Alberta, Canada
Badlands Community Facility

Evolution in a rapidly changing environment: Can lessons from the past direct future wildlife conservation?

- *How can understanding past extinctions provide context for current conservation issues in the Anthropocene?*
- *How are wildlife evolving within our rapidly changing environment, and how does this understanding inform our expectations for the future?*
- *How are wildlife management/conservation organizations adapting to modern challenges, or how should they be?*

Keynote Presentation: “Wild Spaces and Urban Places: making the habitat conservation connection” by Dr. Jennie Moore

Director of Sustainable Development and Environmental Stewardship
British Columbia Institute of Technology

Plenary Speakers

Theresa Burg (U. Lethbridge), David Coltman (U. Alberta), David Eberth (Royal Tyrrell)
Marco Festa-Bianchet (U. Sherbrooke), Lorne Fitch (Alberta), Stan Boutin (U. Alberta)

Draft Meeting Schedule

Friday, 4 March 2016 0900 - 2300	Saturday, 5 March 2016 0900-2400	Sunday, 6 March 2016 0900-1600
<i>Field Trip: Handhills and Tyrell Museum</i>	<i>Plenary Session</i>	<i>Concurrent Sessions</i>
<i>Workshops: Wildlife Disease Training, Building Bat Houses</i>	<i>Keynote Address</i>	<i>Poster Sessions</i>
<i>Annual General Meeting</i>	<i>Concurrent Sessions</i>	<i>Student Awards</i>
<i>Student Conclave</i>	<i>Banquet & Awards</i>	<i>Grande Finale</i>
<i>Social Mixer</i>	<i>Auction & Dancing</i> (with DJ Luke England)	

Early registration deadline: 15 January 2016

Accommodation: Reserve online and early at convenient choices within walking distance of the Badlands Community Facility, such as Ramada Inn, Super 8, and Quality Hotel (no specific blocks reserved)

Website: actws.ca

Facebook: <https://www.facebook.com/theactws>

Twitter: @theACTWS



UNIVERSITY OF
CALGARY

Centre for Molecular Simulation

All-atom molecular simulations of intrinsically disordered proteins:
force fields, and experimental interpretation.

January 19, 2016 11:45 am – 1:00 pm Free Pizza! BI # 587



Robert Best
Investigator
Laboratory of Chemical
Physics
National Diabetes and
Digestive and Kidney
Diseases National
Institutes of Health

Abstract: Intrinsically disordered proteins (i.e. those which do not ordinarily fold into a specific structure) have recently emerged as important players in biology. However, obtaining detailed information on such systems is very challenging experimentally because most experimental signals are ensemble averaged and the available conformational space for an unfolded chain is vast. Molecular simulations should be a powerful tool to augment experimental data in such a situation, but are limited by a common deficiency of current force fields: disordered proteins tend to be much too collapsed. I will introduce a simple approach for refining force field models using experimental data on disordered proteins, which is subsequently validated by other experimental data. We have extended the methodology to optimize force fields for chemical denaturants, which are commonly used to perturb protein folding equilibria and the dimensions of unfolded states. The resulting combined force field is found to be in excellent agreement with both single molecule FRET data on intramolecular distances, as well as from small-angle X-ray scattering data. These results may help to resolve some of the controversy about the degree of collapse in unfolded proteins, caused by apparent differences coming from different experimental methods.

Host: Dr. Peter Tieleman

Centre for Molecular Simulation





KEEP
CALM
AND
CARRY
A
PIPETTEMAN

THE MICHAEL SMITH LABS PRESENT OUR

MOLECULAR BIOLOGY WORKSHOP

2016 Spring Session *University of British Columbia, Vancouver, Canada.*

ONE WEEK VERSION - MOLECULAR BIOLOGY WORKSHOP

April 4th to 8th, 2016 (CAN\$1500)

DESCRIPTION: This intense 5 day workshop will focus on a myriad of different techniques used in the molecular manipulation of DNA, RNA and protein, as well as inclusion of lectures of high throughput genomic techniques. Primarily aimed at researchers who are new to the area, familiar but require a quick updating, or would like more practical bench training.

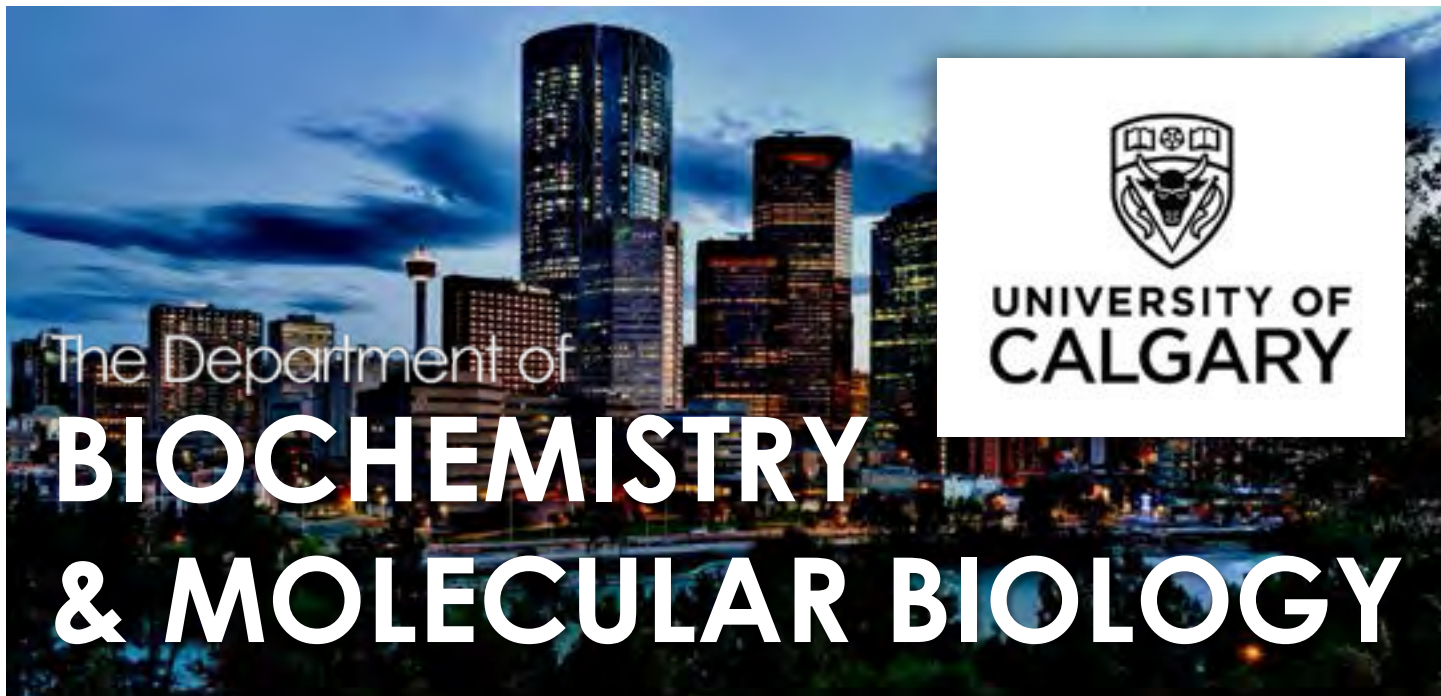
Hands on techniques covered include: *Various nucleic acid purification methodologies (silica bead, organic, and/or pl based), restriction digests, ligations, dephosphorylation assays, agarose gel electrophoresis, transformation (including electroporation), PCR, reverse transcriptase assay, real time qPCR, SDS-PAGE, Western blot analysis, Isoelectric focusing strips, and 2D protein gels. This April session will also include new theoretical and practical content on Next Gen Sequencing (Ion Torrent set up will be used in class).*

To register or inquire about the workshop, please contact Dr. David Ng at db@mail.ubc.ca or 604-822-6264. More information can be found at bioteach.ubc.ca

REVIEWS FROM PREVIOUS SESSIONS:

"This workshop is perfect for both scientists who are new to molecular biology, as well as scientists who want a refresher. Dave has a unique ability to explain every method in a logical way. The atmosphere is absolutely amazing in the workshop. I strongly recommend this course!"
Søs Skovsø, Postdoctoral Fellow, Department of Cellular and Physiological Sciences, University of British Columbia.

"An excellent course that came highly recommended. David is a highly engaging teacher who has taken the time and effort to use all of those teaching engagement techniques that we know are good practice, but are rarely able to accommodate. It is a high intensity course, but I was engaged for the entire length!"
Anthony Fairbanks, Professor and Head, Department of Chemistry, University of Canterbury, NZ



The Department of

BIOCHEMISTRY & MOLECULAR BIOLOGY

IS RECRUITING GRADUATE STUDENTS

TO BECOME THE NEXT GENERATION OF CUTTING-EDGE RESEARCHERS

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Shortlisted candidates **win a free trip to Calgary** for interviews in March 2016

ucalgary.ca/bmb/recruits



RESEARCH PROJECTS AVAILABLE IN:

*INFECTION • BIOINFORMATICS • CANCER BIOLOGY
ORGAN REGENERATION • CARDIOVASCULAR DISEASE*

DEADLINE OF THIS SPECIAL COMPETITION: JANUARY 31ST, 2016



Native Plant Solutions Conservation Technicians

Ducks Unlimited Canada's Native Plant Solutions is seeking Conservation Technicians to work out of our Winnipeg office from May-August 2016.

Native Plant Solutions is looking for Conservation Technicians to help us deliver our wetland and upland native grassland projects in Winnipeg. We are seeking students with Biology, Agronomy, and Science related disciplines as well as General Labourers without related disciplines to fill these positions. Your coursework and/or relevant work experience will enable you to confidently handle yourself in the field under a variety of weather and field conditions. You consider yourself motivated, innovative, creative, and welcome the opportunity for physical work either in a team environment or confidently on your own. You are flexible and willing to pick up other duties as assigned.

Requirements:

- Enrolled in the programs of, or a completed degree or diploma in, biology, ecology, environmental sciences, agriculture, agroecology, plant science, soil science or other post-secondary course work;
- A good understanding of the basics of plant ecology, soil science, and/or wetland ecology is beneficial;
- Relevant work experience in one or more of the science specialties listed is an asset;
- Practical field skills, with demonstrated strength in organization, data acquisition and protection, supervision of personnel and management of multiple tasks with good communication skills;
- Experience with data entry, and the use of Excel and other Microsoft Office products is considered an asset;
- Experience in plant identification, weed management, herbicide handling and application, soil erosion management, performing transect surveys, collecting water and soil samples, establishment of annual and perennial crops, working with First Nations communities, or participating in a field program is considered an asset;
- Ability to perform rigorous physical fieldwork under a variety of weather conditions, lift 50lbs, and crouch, bend, stretch, or stand for extended periods of time, and willing to work flexible hours, including overtime, evenings or weekends;
- Good communication skills and able to work independently or as part of a team;
- Experience with or willingness to operate a variety of farm and/or field equipment (tractors, seeders, ATVs, sprayers) is considered an asset;
- Enthusiasm for the outdoors, wildlife and environmental conservation; and
- Must hold a valid driver's license. First aid and CPR certification is considered an asset.

Applicants with experience in plant ecology, wetlands, agriculture/farming, greenspace management, plant science, or soil science will be given preference. The wage for these summer positions is \$15.00/hr. **Deadline for applications is February 12, 2016.**

If you are qualified and interested in this opportunity, please state which category you are applying under (Biology/Agronomy/Science or General Labourer) and forward your cover letter (including date of availability for work), resumé, and three references by email for confidential consideration to the attention of:

CONTACT: SACHELLE JOHNSTON

EMAIL: s_johnston@ducks.ca

NATIVE PLANT SOLUTIONS – DUCKS UNLIMITED CANADA

UNIT A, 1238 CHEVRIER BLVD, WINNIPEG, MB R3T 1Y3

While Native Plant Solutions would like to thank all applicants, only those considered for an interview will be contacted.



Native Plant Solutions is a consulting branch of Ducks Unlimited Canada and draws on over 75 years of wetland and native grassland knowledge, research and restoration experience. We use sound science to restore and create sustainable landscapes. See www.nativeplantsolutions.ca for more info.

