

## Appendix I

CVs of Laboratory Instructors and Faculty in the Dept of Biology. The CVs focus on the time period 2006 to present.

## Neil William Ashton

Professor

Associate Member of the Dept. of Chemistry & Biochemistry

nwashton@gmail.com (306) 585-4145

### Education and Professional Development

- 1975 – M.A. Degree; Ph.D. Degree
- 1970 – 1974 Research in Genetics at the Department of Genetics, University of Cambridge
- 1970 – B.A. Degree

### Employment History

- 1993 – 2016 Professor, Biology Department, University of Regina
- 2007 – 2013 Head of Physics Department, University of Regina

### Teaching History

- Biology 288 – Cell Biology
- Biology 305 – Genetics
- Biology 405/Biochemistry 423 – Molecular Genetics
- Physics 490 – Physics Seminar

### Student Supervision

Name	Position	Dates of supervision
<b>Elizabeth Barker</b>	PhD	2005 - 2011
<b>Shawn Robinson (CGS-M recipient)</b>	MSc	2011-2015
<b>B. Inglis NSERC USRA</b>	BSc	2012
<b>K. Brabant NSERC USRA</b>	BSc	2011
<b>Shawn Robinson NSERC USRA</b>	BSc	2009-2010
<b>Solveig Nilson Technician/Research</b>	BSc	2012-2013

<b>Assistant</b>		
<b>Alissa Dancsok Technician/Research Assistant</b>	BSc	2012

University Service

- Associate Member of Chemistry and Biochemistry Department, University of Regina
- Reviewer for NSF, Plant Physiology, Bryologist, Canadian Journal of Microbiology, Plant Cell Reports, PLoS ONE.

Scholarly Research

Refereed Publications

1. Daku, R.M., F. Rabbi, J. Buttigieg, I.M. Coulson, D. Horne, G. Martens, **N.W. Ashton**, D.-Y. Suh. (2016) PpASCL, the *Physcomitrella patens* anther-specific chalcone synthase-like enzyme implicated in sporopollenin biosynthesis, is needed for integrity of the moss spore wall and spore viability. *PLoS ONE* 11(1):e0146817. The online version of this article (doi:[10.1371/journal.pone.0146817](https://doi.org/10.1371/journal.pone.0146817)) contains [supplementary material](#).
2. Barker, E.I. & **N.W. Ashton**. (2016) Ancestral and more recently acquired syntenic relationships of MADS-box genes uncovered by the *Physcomitrella patens* pseudochromosomal genome assembly. *Plant Cell Rep.* 35:505-512. The online version of this article (doi:[10.1007/s00299-015-1898-2](https://doi.org/10.1007/s00299-015-1898-2)) contains [supplementary material](#). Published online: 14 November 2015.
3. Barker, E.I. & **N.W. Ashton**. (2013) A parsimonious model of lineage-specific expansion of MADS-box genes in *Physcomitrella patens*. *Plant Cell Rep.* 32 (8): 1161-1177. The online version of this article (doi:[10.1007/s00299-013-1411-8](https://doi.org/10.1007/s00299-013-1411-8)) contains [supplementary material](#). Published online: 23 March 2013.
4. Barker, E.I. & **N.W. Ashton**. (2013) Heteroblasty in the moss, *Aphanoregma patens* (*Physcomitrella patens*), results from progressive modulation of a single fundamental leaf developmental programme. *J. Bryol.* 35 (3): 185-196.
5. Gramzow, L., E. Barker, C. Schulz, B. Ambrose, **N. Ashton**, G. Theißen & A. Litt. (2012) *Selaginella* genome analysis – entering the “homoplasy heaven” of the MADS world. *Front. Plant Sci.* 3: 1-14.
6. Banks, J.A. *et al.* (103 authors including E. Barker & **N.W. Ashton**) (2011) The *Selaginella* genome identifies genetic changes associated with the evolution of vascular plants. *Science* 332: 960-963.
7. Prigge, M.J., M. Lavy, **N.W. Ashton** & M. Estelle. (2010) *Physcomitrella patens* auxin-resistant mutants affect conserved elements of an auxin-signaling pathway. *Current Biology* 20 (21):1907-1912. (Plus 14 pages of supplemental information including methods and 3 figures)
8. Koduri, P.K. Harshavardhan, G.S.Gordon, E.I. Barker, C.C. Colpitts, **N.W. Ashton** & D.-Y. Suh. (2010) Genome-wide analysis of the chalcone synthase superfamily genes of *Physcomitrella patens*. *Plant Mol Biol* 72 (3): 247-263.

9. Singer, S.D. & **N.W. Ashton**. (2009) MADS about MOSS. [\*Plant Signaling & Behavior\* 4 \(2\): 111-112](#)
10. Rensing, S.A. *et al.* (70 authors including E. Barker & **N.W. Ashton**) (2008) The *Physcomitrella* genome reveals evolutionary insights into the conquest of land by plants. [\*Science\* 319: 64-69](#).
11. Wyatt, H.D.M., **N.W. Ashton** & T.E.S. Dahms. (2008) Cell wall architecture of *Physcomitrella patens* is revealed by atomic force microscopy. [\*Botany\* 86 \(4\): 385-397](#).
12. Singer, S.D., N.T. Krogan & **N.W. Ashton**. (2007) Clues about the ancestral roles of plant MADS-box genes from a functional analysis of moss homologues. [\*Plant Cell Rep.\* 26 \(8\):1155-1169](#).
13. Singer, S.D. & **N.W. Ashton**. (2007) Revelation of ancestral roles of KNOX genes by a functional analysis of *Physcomitrella* homologues. [\*Plant Cell Rep.\* 26 \(12\): 2039-2054](#).

#### Conference Presentations

1. **Ashton, Neil W.** & Elizabeth I. Barker. (2016) C11-04: Using the *Physcomitrella* pseudochromosomal genome assembly as a tool to probe the duplication history of this plant's MADS-box gene family. Euro Evo Devo 2016. July 26-29, 2016, Uppsala, Sweden.
2. Barker, E.I. & **N.W. Ashton**. (2011) T29: Growth patterns contributing to leaf morphology in *Physcomitrella*. Moss 2011. Black Forest, Germany, September 11-14, 2011.
3. Barker, E.I. & **N.W. Ashton** (2010) Annotating MADS-box genes and KNOX genes in the *Physcomitrella* genome. Third Annual Cosmoss Workshop. Sept. 13-14, 2010. Freiburg, Germany.
4. Fracchia, F.D., J. Hanan, E.I. Barker & **N.W. Ashton**. (2008) A visualization tool for studying the development of *Physcomitrella*. *Physiol.Plant.* **133** (3): M5-3.
5. Singer, S.D., E.I. Barker & **N.W. Ashton**. (2008) KNOX functions in *Physcomitrella* and the evolution of terrestrial plants. *Physiol.Plant.* **133** (3): M7-1.
6. Barker, E.I. & **N.W. Ashton**. (2008) Are the leaves of *Physcomitrella* homologues or analogues of vascular plant leaves? *Physiol.Plant.* **133** (3): M8-1.
7. Barker, Elizabeth I. & **Neil W. Ashton**. (2007) A genome-wide analysis of MADS-box genes in *Physcomitrella patens*. Moss 2007. August 2-5, 2007, Seoul, Korea.
8. Barker, Elizabeth & **Neil W. Ashton** (2007) Mining the *Physcomitrella patens* genome. Prairie Universities Biological Symposium 2007. February 22-24, 2007, University of Regina, Regina, Canada.
9. Singer, Stacy D., Naden T. Krogan & **Neil W. Ashton**. (2006). MADS about MOSS. **Invited speaker** at Moss 2006. June 28-July 1, 2006, University of California, Berkeley, USA.

R. Mark Brigham  
 Professor

[mark.brigham@uregina.ca](mailto:mark.brigham@uregina.ca), (306) 585-4255

B.Sc.(Hons., Biology), First Class, Queen's Univ. April 1983.

M.Sc. (Biology) Carleton University. April 1985.

Ph.D. (Biology) York University. July 1988.

NSERC Post-doctoral fellowship. University of Calgary. Aug 1988-Jul 1990.

Full Professor, University of Regina, July 1999 - present.

**Biology 100:** Intro Biology 1. Team taught with H. Weger: Fall 2008, 2014, 2016

**Biology 201:** Biology of Sex: Winter 2009, 2010

**Biology 275.** Introductory Ecology: Fall 2006, 2015

**Biology 380.** Animal Behav.: Fall 2006, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2016

**Biology 396:** One semester directed research: Spring 2014, Winter 2016

**Biology 385:** Vertebrate Animal Biology: Winter 2007, 2012, 2013, 2014, 2016

**Biology 4zz:** Directed reading classes: Spring 2006, Winter 2009, Fall 2013, Winter 2014,

**Biology 803:** Biology Grad student course: Fall 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2016

**Non-credit tutorial for undergrads:** Winter 2008, 2009, 2010, 2012, 2013, 2014, 2015, 2016

Name	Position	Dates of supervision
Devin W. Arbuthnott	Honours	2005-06
Leah C. Kovatch	Honours	2006-07
Kristen A. Martin	Honours	2006-07
Jared B. Clarke	Honours	2007-08
Teslin G. Donald	Honours	2008-09
Cole B.S. Kirkham	Honours	2009-10
Emily J. Boutilier	Honours	2009-10
Jennifer T. Leslie	Honours	2011-12
Gabriel J. Foley	Honours	2012-13
Jackie D. Metheny	M.Sc. (UNC-Greensboro; co-supervised)	2004-06
Kristin J. Bondo	M.Sc.	2006-08
Susan M. Rever	M.Sc.; co-supervised	2006-09
Janet W. Ng	M.Sc.	2006-09
Kim M. Dohms	M.Sc.; co-supervised	2006-09
Samuel L. Skalak	M.Sc.	2008-10
R. Julia Kilgour	M.Sc.	2008-10
Yvonne A. Dzal	M.Sc.	2008-10
Holly J. Kayln-Bogard	M.Sc.; co-supervised	2008-11
Dawn Cory Toussaint	M.Sc. (U Pretoria; co-supervised)	2009-12
Sarah M. Ludlow	M.Sc.; co-supervised	2010-13
Carolyn A.D. Gaudet	M.Sc.; co-supervised	2010-13

<b>Jody L.P. Rintoul</b>	M.Sc.	2011-13
<b>Nathan D. Clements</b>	M.Sc.; co-supervised	2011-14
<b>Paul J.E. Preston</b>	M.Sc.	2013-15
<b>Jason H. Unruh</b>	M.Sc.; co-supervised	2013-15
<b>Kayla L. Balderson</b>	M.Sc.; co-supervised	2013-16
<b>Shelby J. Bohn</b>	M.Sc.	2014-present
<b>Andrea Sidler</b>	M.Sc.	2015-present
<b>Philip K. Rose</b>	M.Sc.; co-supervised	2015-present
<b>Gabriel J. Foley</b>	M.Sc.	2015-present
<b>Charlie P. Bailey</b>	M.Sc.; co-supervised	2015-present
<b>Audrey Lauzon</b>	M.Sc.	2016-present
<b>Lisa I. Doucette</b>	PhD (U. New England; co-supervised)	2004-08
<b>Miranda B. Dunbar</b>	PhD	2005-09
<b>Ryan J. Fisher</b>	PhD; co-supervised	2006-10
<b>Brandon J. Klüg-Baerwald</b>	PhD	2012-present
<b>Ryan S. O'Connor</b>	PhD (U. Pretoria; co-supervised)	2013-present
<b>Zenon J. Czenze</b>	PhD (U. Auckland; co-supervised)	2014-present
<b>Elly C. Knight</b>	PhD (Alberta; co-supervised)	2015-present
<b>Christopher M. Somers</b>	Postdoc	2004-06
<b>Erin H. Gillam</b>	Postdoc	2007-08
<b>Miranda B. Dunbar</b>	Postdoc	2010

- Jan 2006. Appointed Co-chair of the Federal Terrestrial Mammals Species Specialist Group for the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).
- Apr. 2006. External Examiner for Honours thesis of B.R. Tutty (Saint Mary's Univ.).
- May 2006. University of Regina Alumni Association Award for Excellence in Teaching.
- Sept. 2006. External Examiner for Ph.D. thesis of Mr. Damien Milne, (James Cook Univ., Townsville, Australia).
- Sept. 2006. External Examiner for M.Sc. thesis of Ms. Maryalice Walker (Univ. Capetown).
- Oct. 2006. Won Gerrit S. Miller Award by North American Symposium on Bat Research for "Outstanding service and contributions to the field of bat biology".
- June 2008. Won Joseph Grinnell Award by American Society of Mammalogists for "Service to education in mammalogy". First ever Canadian winner.
- Oct 2008. Faculty of Science Research Gala: *Breaching the stereotype: vampires to drugs*.
- Oct 2008. Sask. Science Network. Saskatoon meeting. *How to achieve Science outreach*.
- Nov 2008. Canadian Council of University Biology Chairs (CCUBC). 2<sup>nd</sup> Vice President.
- Nov. 2009. 1<sup>st</sup> Vice President of CCUBC.
- Jan 2009 Re-appointed Co-chair of COSEWIC TMSSC for a 1 year term (to 31 Dec. 2010).
- Mar 2010 Invited by VP-Academic to co-host Town Hall debate (with Jeanne Shami) on the value of Tricouncil funding "Is the Science model right".
- Nov. 2010 Elected President of CCUBC.
- Jan. 2011. External Examiner for PhD Thesis Bruce Thomson. U. Queensland, Australia.

- July 2011 Appointed Academic Editor for PLoS ONE.
- July 2011 External Examiner for PhD Thesis Maria Napal. Univ. of the Basque Country.
- Sept. 2011 External Examiner for M.Sc. Thesis of Adrienne Contasti. Univ. of Sask.
- Dec.. 2011 External Examiner for PhD. Thesis of Caragh Threlfall. Univ. of NSW, Australia.
- June 2011 Supervised 8 month research internship. Mr. Tom Allen, Cardiff Univ.
- Nov. 2012 CCUBC. Asked to serve as past president for an extra year.
- Apr. 2013. External Examiner of PhD for Lionel Leston, University of Manitoba.
- Apr. 2013 Provided external review of proposed Univ. Winnipeg PhD program.
- Jun. 2013. Evaluated case for promotion to full professor by D.A. Kelt. Univ. Calif. Davis.
- Aug. 2013. Hosted 8 month research intership by Mr. Louis E. Gower, Univ. of Cardiff.
- Aug. 2013 Hosted 8 week visit by PhD student Ms. Ioanna Salvarina, Univ. Constance.
- Oct. 2013. Provided greetings from Faculty and staff at Fall 2013 Convocation for installation of Chancellor Jim Tomkins.
- Feb. 2014. Assoc. Chief Judge for Regina Regional Science Fair and member of organizing committee for Canada Wide Science Fair 2017.
- Apr. 2014. Won inaugural UR Alumni Association “Graduate student mentoring” award.
- Nov. 2014. External Examiner for PhD thesis of Ms. Cortney Watt. Univ. Manitoba.
- Dec. 2014. External Examiner for PhD thesis of Mohammed Salim. Univ. of Veterinary and Animal Sciences, Lahore, Pakistan.
- Jun. 2015. Elected to Board; Friends of the Royal Saskatchewan Museum.
- Jun. 2015. Evaluated file for promotion to full professor. C. Miller-Butterworth. Penn State (Beaver Campus).
- Jun. 2015. Reviewed Tenure application file Dr. L.D. Murray. Penn State (Abington).
- Sep. 2015. External Examiner for M.Sc. thesis of Mr. C. Asante; Biology, Univ. of Sask.
- Oct. 2015. Performed “Professional Accomplishment Evaluation” of Dr. Rachel Page, staff Scientist for the Smithsonian Tropical Research Institute.
- Jan. 2015. Appointed Co-Editor for Can. J. Zoology.
- Jul. 2016. Gave presentaion for UR Int. to visiting Chinese Faculty. Mentoring grad. students.

### **University Committees**

Executive of Council: July 2005 – June 2010, July 2012-June 2014, July 2015- June 2017.  
 Animal Care: July 2006 – June 2010, July 2011- June 2014.  
 Council Committee on Student Appeals: Jan. 2007 – June 2008; July 2012 – Dec. 2014.  
 Council Comm. on Admissions and Studies: July 2005- Dec. 2006, Chair Jan 2007 – June 2008.  
 Council Committee on Research, July 2012 – Dec. 2014.  
 Alumni Awards Selection Committee: Jan 2006 – June 2007.  
 UR President’s Research Committee (appointed). October 2005 – Dec 2009  
 VP Academic Search Committee Jan-Apr 2008  
 Dean of Nursing Search Committee Jan-Feb 2010  
 KHS Chiropractic Chair Search Committee Jan-Apr 2010.  
 KHS Exercise Physiologist Search Committee Sept 2010.  
 Campus Promotion Committee – April 2010.  
 Board of Governors (elected) – July 2011-June 2017.

Office of Research Services – Grants Officer(s) Search committee 2011.  
 Office of Research Services – Legal counsel Search committee Jan. 2011.  
 Council Committee on Research 1 July 2012-31 Dec. 2014. Chair 1 Jan 2014- 31 Dec. 2014.  
 KHS Exercise Physiologist (Assist prof and lecturer) Search Committee Jan.-April 2013  
 Dean of FGSR Search Committee Jan-April 2013.  
 Dean of Science Search Committee June 2015 – ?  
 Education Science Faculty member search June 2015- Dec. 2015.

**Faculty of Graduate Studies and Research Committees**

PhD Committee: Chair July 2012-Dec. 2014; July 2015-Sept. 2016.  
 NSERC PGS, Nov. 2011.  
 NSERC Doctoral Scholarship. Oct. 2015.

**Faculty of Science Committees**

Public Relations Committees: July 2004-2010.  
 Faculty Review Committee (elected), Oct. 2005-May 2006.  
 CRC Search Chair, Nov. 2005 – Sept. 2006.  
 Head, Dept. of Geology 1 July 2009 – 30 June 2010.  
 Search Committee for term Microbiology Technician Feb –Mar 2012.

**Department of Biology Committees**

Head of Dept., 1 July 2006 – 30 June 2010; 1 July 2011-30 June 2014.  
 Seminar coordinator: Jan.-Apr 2006, Sept. – Dec. 2009.  
 Microbiologist Search Committee 2008  
 Term LI and Term Instructor Search Committees 2009.  
 Biology tenure track lab instructor Search Committee 2012.  
 Biology tenure track lecturer Search Committee 2013.  
 Biology tenure track lab instructor Search Committee 2013-14.  
 Biology tenure track Plant Ecology Faculty Search Committee 2013-14.  
 Timetabling 1 July 2014-

104. Geiser, F., W. Westman, B.M. McAllan and **R.M. Brigham**. 2006. Development of thermoregulation and torpor in a marsupial: energetic and evolutionary implications. *J. Comp. Physiol. B.* 176:107-116.
105. Psyllakis, J.M. and **R.M. Brigham**. 2006. Characteristics of diurnal roosts used by female *Myotis* bats in sub-boreal forests. *Forest. Ecol. Manage.* 223:93-102.
106. Poulin, R.G., L.D. Todd, T.I. Wellicome and **R.M. Brigham**. 2006. Assessing the feasibility of release techniques for captive-bred burrowing owls. *J. Raptor Res.* 40:142-150.
107. Willis, C.K.R., C.M. Voss and **R.M. Brigham**. 2006. Roosting ecology of female big brown bats assessed using an alternative to the roost versus random tree approach. *J. Mammal.* 87:345-350.
108. Willis, C.K.R., **R.M. Brigham** and F. Geiser. 2006. Deep, prolonged torpor by pregnant, free-ranging bats. *Naturewissenschaften.* 93:80-83.



109. Phillips, I.D., T.P. Cobb, J.R. Spence and **R.M. Brigham**. 2006. Salvage logging, edge effects and carabid beetles: connections to conservation and sustainable forest management. *Environ. Entomol.* 35:950-957.
110. Somers, C.M., V.A. Kjos and **R.M. Brigham**. 2007. American white pelicans force copulations with nestlings. *Wilson J. Ornithology* 119:279-283.
111. Swystun, M.B., J.E. Lane and **R.M. Brigham**. 2007. Cavity roost site availability and habitat use by bats in different aged riparian cottonwood stands. *Acta Chiropt.* 9:183-191.
112. McKechnie, A.E., R.A.M. Ashdown, M.B. Christian and **R.M. Brigham**. 2007. Torpor in an African caprimulgid, the Freckled Nightjar *Caprimulgus tristigma*. *J. Avian Biology* 38:261-266.
113. Arbuthnott, D. and **R.M. Brigham**. 2007. The influence of a local temperature inversion on the foraging behaviour of big brown bats, *Eptesicus fuscus*. *Acta Chiropt.* 9:193-201.
114. Willis C.K.R. and **R.M. Brigham**. 2007. Social thermoregulation, not cavity microclimate, explain forest roost preferences in a cavity-dwelling bat. *Behav. Ecol. Sociobiol.* 62:97-108.
120. Todd, L.D., R.G. Poulin, **R.M. Brigham**, E.M. Bayne and T.I. Wellicome. 2007. Pre-migratory dispersal by juvenile Burrowing Owls in a patchy landscape. *Avian Cons. and Ecology* 2: 4. [online] URL: <http://www.ace-eco.org/vol2/iss2/art4/>
121. Cooper, C.E., G. Körtner, **R.M. Brigham** and F. Geiser. 2008. Body temperature and activity patterns of free-living laughing kookaburras (*Dacelo novaeguineae*): The largest kingfisher is heterothermic. *Condor* 110:110-115.
122. Metheny, J.D., M.C. Kalcounis-Rüppell, K.A. Kolar, C.K.R. Willis and **R.M. Brigham**. 2008. Genetic relationships of roost-mates in a fission-fusion society of tree-roosting big brown bats. *Behav. Ecol. Sociobiol.* 62:1043-1051.
123. Rambaldini, D.A. and **R.M. Brigham**. 2008. Torpor use by free-ranging pallid bats (*Antrozous pallidus*) at the northern extent of their range. *J. Mammal.* 89: 933-941.
124. Woods, C.P. and **R.M. Brigham**. 2008. Common poorwill activity and calling behavior in relation to moonlight and predation. *Wilson J. Ornithology* 120:505-512.
125. Metheny, J.D., M.C. Kalcounis-Rüppell, K.J. Bondo and **R.M. Brigham**. 2008. A genetic analysis of group movement in an isolated population of tree-roosting bats. *Proc. Royal Soc. B. May* 275: 2265-2272.
126. Burles, D.W., **R.M. Brigham**, R.A. Ring and T. E. Reimchen. 2008. Diet of two insectivorous bats, *Myotis lucifugus* and *Myotis keenii*, in relation to arthropod abundance in a temperate northwest Pacific rainforest environment. *Can. J. Zool.* 86:1367-1375.
127. White, C.L., **R.M. Brigham** and S.K. Davis. 2009. Accidental egg removal by incubating Piping Plovers. *Wilson J. Ornithology.* 121:171-173.
128. Burles, D.W., **R.M. Brigham**, R.A. Ring and T. E. Reimchen. 2009. Influence of weather on two insectivorous bats in a temperate Northwest Pacific rainforest. *Can. J. Zoology* 87:132-138.
129. Willis, C.K.R., R.M.R. Barclay, J. G. Boyles, **R.M. Brigham**, V. Brack Jr., D.L. Waldien and J. Reichard. 2010. Bats are not birds and other problems with Sovacool's (2009) analysis of animal fatalities due to electricity generation. *Energy Policy* 38:2067-69.

130. **Brigham, R.M.** 2010. Talking the talk: Giving oral presentations about mammals for colleagues and general audiences. *J. Mammal.* 91:285-292.
131. Martin, K.A., S.K. Davis, R.J. Fisher and **R.M. Brigham.** 2010. Song rate variation in Sprague's Pipits (*Anthus spragueii*). *Northw. Naturalist.* 91:329-330.
132. Dunbar, M.B. and **R.M. Brigham.** 2010. Thermoregulatory variation among populations of bats along a latitudinal gradient. *J. Comp. Physiol. B* 180:885-893.
133. Somers, C.M., J.L. Doucette, D.V.C. Weseloh, V.A. Kjoss and **R.M. Brigham.** 2011. Interactions between Double-crested Cormorants and other ground-nesting species. *Waterbirds.* 34:168-176.
134. Smit, B., J.G. Boyles, **R.M. Brigham,** and A.E. McKechnie. 2011. Torpor in dark times: lunar cycle predicts heterothermy in a nocturnal bird. *J. Biol. Rhythms* 26:241-248.
135. Gillam, E.H., T.J. O'Shea, and **R.M. Brigham.** 2011. Non-random patterns of roost emergence in big brown bats, *Eptesicus fuscus*. *J. Mammal.* 92:1253-1260.
136. Rambaldini, D.A. and **R.M. Brigham.** 2011. Pallid bat (*Vespertilionidae: Antrozous pallidus*) foraging over native and vineyard habitat in British Columbia, Canada. *Can. J. Zoology* 89:816-822.
137. Doucette, L.I., **R.M. Brigham,** C.R. Pavey, and F. Geiser. 2011. Roost type influences torpor use by Australian Owlet-nightjars. *Naturwissenschaften* 98: 845-854. DOI: 10.1007/s00114-011-0835-7
138. **Brigham, R.M.,** C.K.R. Willis, F. Geiser and N. Mzilikazi. 2011. Baby in the bathwater: Should we abandon the use of body temperature thresholds to quantify expression of torpor? *J. Therm. Biol.* 36:376-379.
139. **Brigham, R.M.,** Janet Ng, R.G. Poulin and S.D. Grindal. 2011. Common Nighthawk (*Chordeiles minor*), *The Birds of North America Online* (A. Poole, ed.). Ithaca: Cornell Lab of Ornithology; *Birds of North America Online*: <http://bna.birds.cornell.edu/bna/species/213>
140. Doucette, L.I., **R.M. Brigham,** C.R. Pavey and F. Geiser. 2012. Prey availability affects daily torpor by free-ranging Australian Owlet-nightjars (*Aegotheles cristatus*). *Oecologia* 169: 361-372.
141. Skalak, S.L., R.E. Sherwin and **R.M. Brigham.** 2012. Effective inventory of bat species richness using acoustic detectors. *Methods in Ecol. Evol.* 3:490-502.
142. **Brigham, R.M.** and F. Geiser. 2012. Do red squirrels (*Tamiasciurus hudsonicus*) use daily torpor during winter? *Ecoscience* 19:127-132.
143. Cory Toussaint, D., **R.M. Brigham** and A.E. McKechnie. 2013. Thermoregulation in free-ranging *Nycteris thebaica* (Nycteridae) during winter: no evidence of torpor or hibernation. *Mammal. Biology* 78:365-368.
144. Dzal, Y. and **R.M. Brigham.** 2013. The tradeoff between torpor use and reproduction in little brown bats (*Myotis lucifugus*). *J. Comp. Physiol. B.* 183:279-288.
145. Kilgour, R.J. and **R.M. Brigham.** 2013. The relationships between behavioural types, social context and seasonal period in the gregarious big brown bat (*Eptesicus fuscus*). *Ethology* 119: 189-198.
146. Davis, S.K., R.J. Fisher, S.L. Skinner, T.L. Shaffer and **R.M. Brigham.** 2013. Songbird abundance in native and planted grassland varies with type and amount of grassland in the surrounding landscape. *J. Wildl. Manage.* 77: 908-919.

147. Kilgour, R.J., P. Faure, and **R.M. Brigham**. 2013. Evidence of social preferences in big brown bats (*Eptesicus fuscus*). *Can. J. Zoology* 91:756-760.
148. Clare, E.L., W.O. Symondson, H. Broders, F-H. Fabianek, E. Fraser, A. Mackenzie, A. Boughen, R. Hamilton, C. Willis, F. Martinez, A. Menzies, K. Norquay, **M. Brigham**, J. Poissant, J. Rintoul, R. Barclay and J. Reimer. 2014. The diet of *Myotis lucifugus* across Canada: assessing habitat quality and dietary variability. *Molecular Ecol.* 23:3618-3632.
149. Burles, D.W., M.B. Fenton, R.M.R. Barclay, **R.M. Brigham** and D. Volkers. 2014. Aspects of the winter ecology of bats on Haida Gwaii, BC. *Northw. Naturalist* 95:289-299.
150. Rintoul, J.L.P. and **R.M. Brigham**. 2014. The influence of reproductive condition and concurrent environmental factors on torpor and foraging patterns in female *Eptesicus fuscus*. *J. Comp. Physiol. B.* 184:777-787.
151. Ludlow, S.M., S.K. Davis and **R.M. Brigham**. 2014. Nesting ecology of grassland songbirds: Effects of predation, parasitism, and weather. *Wilson J. Ornithology* 126:686–699.
152. Alberdi, A., J. Aihartza, O. Aizpurua, E. Salsamendi, **R.M. Brigham** and I. Garin. 2015. Living above the treeline: roosting ecology of the alpine bat *Plecotus macrobullaris*. *European J. Wildl. Res.* 61:17-25.
153. Ludlow, S.M., **R.M. Brigham** and S.K. Davis. 2015. Oil and gas development has mixed effects on the density and reproductive success of grassland songbirds. *Condor* 117: 64-75.
154. Somers, C.M, L.M. Heisler, J.L. Doucette, V.A. Kjoss and **R.M. Brigham**. 2015. Lake use by three avian piscivores and humans: implications for angler perception and conservation. *Open Ornithology Journal* 8:10-21. DOI 10.2174/1874453201508010010
155. Klüg, B.J. and **R.M. Brigham**. 2015. Changes to metabolism and cell physiology that enable mammalian hibernation. *Springer Science Reviews* 3:39-56.
156. Thompson, R.H., A.R. Thompson and **R.M. Brigham**. 2015. A flock of *Myotis* bats at sea. *Northeastern Naturalist* 22: N27-N30.
157. Bondo, K.J. and **R.M. Brigham**. 2016. Plasticity by migrant Yellow-rumped Warblers: foraging indoors during unseasonable cold weather. *Northw. Naturalist* 97:139-143.
158. Webber, Q. M.R., **R.M. Brigham**, A.D. Park, E. H. Gillam, T.J. O’Shea and C.K.R. Willis. 2016. Social network characteristics and predicted pathogen transmission in summer colonies of female big brown bats (*Eptesicus fuscus*). *Behav. Ecol. Sociobiol.* 70:701-712.
159. Czenze, Z.J., **R.M. Brigham**, A.J.R. Hickey, and S. Parsons. 2016. Cold and alone?: roost choice and season affect torpor patterns in lesser short-tailed bats. In press. *Oecologia*.
160. Klüg-Baerwald, B.J., L. Gower, C.L. Lausen and **R.M. Brigham**. 2016. Environmental correlates and energetics of winter flight by bats in southern Alberta, Canada. In press. *Can. J. Zoology*.
161. Florko, K.R.N., S.J. Bohn, M.C. Kalcounis-Rueppell and **R.M. Brigham**. A 23-year old little brown bat (*Myotis lucifugus*) record from southwest Saskatchewan, Canada. In press. *Northw. Naturalist*.

#### Refereed Conference presentation

- Bjorndahl, J., A. Herman, R. Hamilton, H.J. Hamilton and **R.M. Brigham**. 2015. Discovery of parameters for animation of midge swarms. *International Conference on Discovery Science (DS 2015)*, Banff, Canada, October 4-6, 2015.

### Refereed Book Chapter

**Brigham, R.M.** and A. E. McKechnie. Heterothermy in Birds. In C. L. Frank (Ed.)  
Hibernation and Daily Torpor in Vertebrates. In press. Johns Hopkins Univ. Press.

### Refereed Conference Proceedings

**Brigham, R.M.**, C.P. Woods, J.E. Lane, Q.E. Fletcher and F. Geiser. 2006. Ecological correlates of torpor use among five caprimulgidiform birds. *Acta Zoologica Sinica (suppl.)* 52:401-404. Proceedings of IOC Beijing, China. August 2002.

**Brigham, R.M.** 2007. Forest-living Bats: What we know and what we need to learn. Pp. 1-15 In: *Bats in forests: conservation and management* (M.J. Lacki, J.P. Hayes and A. Kurta, eds.), Johns Hopkins University Press, Baltimore, MD.

Geiser, F. N. Christian, C. E. Cooper, G. Körtner, B. M. McAllan, C.R. Pavey, J. M. Turner, L. Warnecke, C. K.R. Willis and **R.M. Brigham**. 2008. Torpor in Marsupials: Recent Advances. Pp. 297-306 In *Hypometabolism in Animals: Hibernation, Torpor and cryobiology*. Proc. of Life in the Cold. 13<sup>th</sup> Int. Hibernation Symp. B.G. Lovegrove and A.E. McKechnie (eds.).

**Brigham, R.M.**, A.E. McKechnie, L.I. Doucette and F. Geiser. 2012. Heterothermy in caprimulgid birds: a review of inter- and intraspecific variation in free-ranging populations. Page 175-187 In: Ruf T, Bieber C, Arnold W, Millesi E (eds). *Living in a seasonal world: thermoregulatory and metabolic adaptations*. Springer, Heidelberg.

Geiser, F. and **R.M. Brigham**. 2012. The other functions of torpor. Page 109-121 In: Ruf T, Bieber C, Arnold W, Millesi E (eds). *Living in a seasonal world: thermoregulatory and metabolic adaptations*. Springer, Heidelberg.

Josef Buttigieg

Associate Professor

[josef.buttigieg@uregina.ca](mailto:josef.buttigieg@uregina.ca), (306) 337-2569

#### Education and Professional Development

- 08/2008-2011 – Postdoctoral Fellow – University Health Network
- 2008 – PhD – McMaster University
- 2003 – BSc Major Neuroscience, Minor: Geology

#### Employment History

- 07/2016 – Present – Associate Professor, Biology Department, University of Regina
- 11/2011 – 06/2016 – Assistant Professor, Biology Department, University of Regina
- 2006 – 2010 – Term Lecturer, McMaster University

#### Teaching History

- BIOL 111 – Human Anatomy and Physiology – 2012 – Present
- BIOL 265 – Animal Physiology (co-taught) – 2012 - 2015
- BIOL 378 – Animal Physiology (co-taught) – 2017 – Present
- BIOL 396 – Independent Research Project Neurobiology – 2012 - Present
- BIOL 407 – Neurophysiology – 2013 – Present
- PSL374 – Physiology/Homeostasis – University of Toronto – 2010
- BIO 3UO3 – Comparative Physiology – McMaster University – 2008-2010
- BIO 3XL3 – Comparative Anatomy – McMaster University – 2006-2009
- 4GO6 – Human Gross Anatomy (Teaching Assistant) – McMaster University – 2007-2010
- 3PO3 – Cellular Physiology – (Teaching Assistant/Lecturer) McMaster University – 2003 - 2008

#### Student Supervision

Name	Position	Dates of supervision
<b>Maria Alejandra Castillo</b>	MSc	2017 - Present
<b>Katherine Markowitch</b>	BSc (NSERC USRA)	2016
<b>Benedict Blake</b>	BSc (NSERC USRA)	2016
<b>Anastasye Kisheev</b>	MSc	2015 - Present
<b>Shaneen Pelle</b>	MSc	2015 - Present
<b>Marianne Jacobsen</b>	Postdoctoral Fellow	2015 – Present
<b>Kristin Lett</b>	Hons Thesis	2015-2016
<b>Chance McDougall</b>	BSc	2015-2016

<b>Maria Alejandra Castillo</b>	Hons Thesis	2015-2016
<b>Balsam Arwini</b>	BSc (NSERC USRA) Undergraduate	2015
<b>Kyoo Yoon Choi (Jake)</b>	MD (Dean's scholar)	2015
<b>Wyatt Drew</b>	BSc (NSERC USRA) Undergraduate	2015
<b>David Teece</b>	BSc (Hons)	2014-2016
<b>Daniel Meyer</b>	BSc	2014-2015
<b>Steven West</b>	BSc	2014-2015
<b>Max Karnitsky</b>	BSc (NSERC USRA)	2014-2015
<b>Shaneen Pelle</b>	Hons Thesis	2014-2015
<b>Deiter Meena</b>	MD (Dean's Scholar)	2014
<b>Kristin Gray</b>	BSc (NSERC USRA)	2014
<b>Adam Lanigan</b>	MSc	2013-2017
<b>Daniel Stefanovic</b>	MSc (committee member)	2013-2015
<b>Olivia Phillipon</b>	BSc	2013-2014
<b>Shelby Fink</b>	Hons Thesis	2013-2014
<b>Deborah Sakano</b>	BSc (visiting student)	2013
<b>Katherine Ludlow</b>	MSc	2012-2015
<b>Anastasye Kisheev</b>	BSc	2012-2014
<b>Jared Wolfe</b>	BSc (NSERC USRA)	2012-2013
<b>Megan Deck</b>	BSc	2012-2013
<b>Cali Scheidt</b>	BSc	2012-2013
<b>Adam Lanigan</b>	Hons thesis	2012-2013
<b>Mathew Endsin</b>	MSc (committee member)	2011-2013

#### University Service

Principal investigator (2012-present): University of Regina

My own research program has 2 main foci. First is the investigation as to how various factors (cellular and environmental) influence the differentiation and proliferation of neural stem cells. My second area of interest is the examination of the mechanism by which peripheral chemosensors are able to detect changes in O<sub>2</sub> availability and how this information is relayed to the central nervous system (CNS) to elicit an appropriate physiological response.

Principal investigator (2012-present): University of Regina and First Nations University of Canada

I have put together a group of researchers from both the UofR and FNUniv to develop a language translation program to aid in the delivery of medical information to First Nations communities. The goal of this is to improve the dialogue between caregivers and First Nations patients.

- Research Cluster Leader for the Integrated Human Health Research cluster (UofR) **years: 2015-2017**
- Executive of Council member **years: 2013-2017**
- President's committee on animal care **years: 2012-2017**
- Scholarship committee member (CIHR, NSERC, USRA) **years: 2013-2015**

**Other administrative notes:**

I played an integral role in fostering closer research collaboration between the UofR and the Regina Qu'Appelle Health Region. This has led to a formal memorandum of understanding between the RQHR and the UofR in 2016. In addition this has also led to the development of a health research cluster of which I am a co-advisor to the Vice President Research.

I took lead on redeveloping the UofR animal research facility. This facility was originally closed in 2003. Working with administrators and faculty I successfully worked to the reopening of the facility, meeting the approval of the Canadian Council on Animal Care (CCAC) and formally receiving a certificate of compliance from CCAC in May of 2016.

Scholarly Research

Published Publications (underlines are trainees)

- 1) Jacobsen M, Lett K, Arwini B, Karnitski M, Wyatt D, Barden J, Buttigieg J. (2017). BK channel activation is neuroprotective during acute spinal cord injury. (in press: European J. Neuroscience).
- 2) Castilla Bolanos MA, Buttigieg J, Briceno Triana JC (2016) Development and characterization of a novel porous small intestine submucosa-hydroxyapatite scaffold for bone regeneration (in press: journal Materials Science and Engineering C).
- 3) Daku1 TM, Rabbi1 F, Buttigieg J, Coulson IM, Horne D, Martens G, Ashton NW, Suh DY. (2015). PpASCL, the *Physcomitrella patens* Anther-Specific Chalcone Synthase-Like Enzyme Implicated in Sporopollenin Biosynthesis, Is Needed for Integrity of the Moss Spore Wall and Spore Viability. PLOS One (in press)
- 4) Kopriva D, Karnitski M, Kisheev A, Meena D, Pelle S, Lavoie A, Buttigieg J. (2015). The nature of iron deposits differs between symptomatic and asymptomatic carotid atherosclerotic plaques. PLOS One (In press)
- 5) Kopriva D, Lavoie A, Kisheev A, Buttigieg J. (2014). Synchrotron mapping of carotid artery plaque- a pilot study. J Vasc Surg. 60(5); 1402-1407
- 6) Ludlow K, Buttigieg J. (2013). Not so liberating after all: Multiple Sclerosis disease and treatments. Journal Health Science. 4: 105-108
- 7) Wu Y, Satkunendrarajah K, Teng Y, Chow DS, Buttigieg J, Fehlings MG. (2013) Delayed post-injury administration of riluzole is neuroprotective in preclinical rodent model of spinal cord injury. J Neurotrauma. 30(6):441-52.
- 8) Salman S, Buttigieg J, Nurse CA (2013) ontogeny of O<sub>2</sub> and CO<sub>2</sub>/H<sup>+</sup> chemosensitivity in adrenal chromaffin cells: role of innervation. J Exp. Biol.
- 9) Salman S, Buttigieg J, Zhang M, Nurse CA (2012). Chronic exposure of neonatal rat adrenomedullary chromaffin cells to opioids in vitro blunts both hypoxia and hypercapnia chemosensitivity. J Physiol. 15:515-29
- 10) Salman S, Brown S, Buttigieg J (2012). Regulation of O<sub>2</sub> chemosensitivity in developing adrenal chromaffin cells. *Fish Phys.* 4(3):212-24
- 11) Salewski R, Buttigieg J, Mitchel R, Van der Kooy D, Nagy A, Fehlings M (2012). The generation of definitive neural stem cells from *piggyBac* transposon induced pluripotent stem cells can be enhanced by induction of the NOTCH signalling pathway. *Stem Cell Dev.* 22(3):383-96
- 12) Buttigieg J, Pan J, Yeger H, Cutz E (2012). NOX2 (gp91 phox) is a predominant O<sub>2</sub> sensor in a human airway chemoreceptor cell line: biochemical, molecular and electrophysiological evidence. *Am J lung cell mol phys.* 202(7):L598-607
- 13) Wu Y, Satkunendrarajah K, Teng Y, Chow D, Buttigieg J, Fehlings M (2012). Delayed postinjury

administration of riluzole is neuroprotective in a preclinical rodent model of cervical spinal cord injury. *J Neurotrauma*. 30(6):441-52

- 14) Buttigieg J, Nurse CA (2012). Methodologies for studying peripheral O<sub>2</sub>-chemosensing: past, present and future. *Respir Physiol Neurobiol*; 181(2):194-201.
- 15) (co-first author) Ye H, Buttigieg J, Wan Y, Wang J, Figley S, Fehlings MG (2012). Expression and functional role of BK channels in chronically injured spinal cord white matter. *Neurobiol Dis*; 47(2):225-36
- 16) Livermore S, Piskuric N, Buttigieg J, Zhang M, Nurse C (2011). Low glucose sensitivity and polymodal chemosensing in neonatal rat adrenomedullary chromaffin cells. *Am J Phys Cell*; 301(5):C1104-15.
- 17) Buttigieg J, Eftekharpour E, Karimi-Abdolrezaee S, Fehlings MG (2011). Molecular and electrophysiological evidence for the expression of BK channels in Oligodendroglial Precursor Cells. *Eur J Neurosci*; 34(4):538-547.
- 18) Brown ST, Buttigieg J, Nurse C.A (2010). Divergent roles of reactive oxygen species in the responses of perinatal adrenal chromaffin cells to hypoxic challenges. *Resp Physiol & Neurobiol*; 174(3):252-8.
- 19) Nurse CA, Buttigieg J, Brown ST, Holloway A, (2009). Regulation of oxygen sensitivity in adrenal chromaffin cells. *Ann N Y Acad Sci*; 1177:132-9.
- 20) Buttigieg J, Brown ST, Nurse CA (2009). Chronic nicotine blunts hypoxic sensitivity in perinatal rat adrenal chromaffin cells via upregulation of KATP channels: Role of H7 nicotinic AChR and hypoxia inducible factor -2H. *J Neurosci*; 29(22):7137-47.
- 21) Buttigieg J, Brown ST, Zhang M, Lowe M, Holloway AC, Nurse CA (2008). Chronic nicotine in utero selectively suppresses hypoxic sensitivity in neonatal rat adrenal chromaffin cells. *Fed Am Sci Ex Biol J*; 22(5):1317-26.
- 22) Buttigieg J, Brown ST, Lowe M, Zhang M, Nurse CA (2008). Functional mitochondria are required for O<sub>2</sub> but not CO<sub>2</sub> sensing in immortalized adrenomedullary chromaffin cells. *Am J Cell Physiol*; 294(4):C945-56.
- 23) (co-first author) Thompson RJ, Buttigieg J, Zhang M, Nurse CA (2007). A rotenone-sensitive site and H<sub>2</sub>O<sub>2</sub> are key components of hypoxia-sensing in neonatal rat adrenomedullary chromaffin cells. *Neurosci*; 45(1):130-41.
- 24) Zhang M, Buttigieg J, Nurse CA (2007). Neurotransmitter mechanisms mediating low-glucose signalling in co-cultures and fresh tissue slices of rat carotid body. *J Physiol*; 578(Pt 3):735-50

### **Book Chapters**

Nurse CA, Buttigieg J, Thompson RJ, Zhang M, Cutz E (2006). Oxygen sensing in neuroepithelial and adrenal chromaffin cells. *Novartis Found Symp*; 114-8, 131-40.

Buttigieg J, Zhang M, Thompson RJ, Nurse CA (2006). Potential role of mitochondria in hypoxia sensing by adrenomedullary chromaffin cells. *Adv Exp Med Biol*; 580:79-85.





## Andrew Cameron

Assistant Professor, and Co-director of the Institute for Microbial Systems and Society

[andrew.cameron@uregina.ca](mailto:andrew.cameron@uregina.ca), (306) 337-2568

### Education and Professional Development

PhD 04/2007 Department of Microbiology & Immunology, University of British Columbia, Canada

BSc 05/2000 Department of Biology, Vancouver Island University, BC, Canada

### Employment History

Assistant Professor 03/2012 – current Department of Biology, University of Regina

Postdoctoral fellow 08/2008 – 02/2012 Department of Microbiology, Trinity College Dublin, Ireland

Postdoctoral fellow 07/2007 – 06/2008 Department of Zoology, University of British Columbia

### Teaching History

Teaching at the University of Regina:

Biol 220 Introductory Microbiology: 2013, 2014, 2015 (30% of course)

Biol 222 Microbiology for Health Professionals: 2012, 2013, 2014 (twice), 2015, 2016

Biol 305 Genetics: 2017

Biol 405 Molecular Genetics: 2015, 2017

Biol 410 Microbial Genetics and Infection: 2016

Biol 803 Scientific Research Skills: 2013, 2014, 2015, 2016 (co-teach with other Biology faculty)

Biol 835 Directed Research: 2014, 2017

### Student Supervision

Name	Position	Dates of supervision
Nicole Lerminiaux	BSc Honours, NSERC USRA	2015-ongoing
Danae Suchan	BSc Honours, NSERC USRA	2015-ongoing
Nabeel Iqbal	BSc Honours	2016-ongoing
Iлона Monkman	BSc	2017-ongoing
Joel Steve	BSc	2016-ongoing
Kirstin Palmier	BSc	2016-ongoing
Emilie Wellman	BSc	2016
Laura Stewart	BSc	2015
Steven West	BSc	2014-2015
Rhiannon Cameron	BSc	2014
Valentyna Akulova	BSc	2013-2015
Ruhul Amin	MSc	2017-ongoing
Joshua Yoneda	MSc	2016-ongoing
Stephanie Kary	MSc	2013-2015
Stephen Olshefsky	PhD	2015-ongoing
Ebthal Alshabib	PhD	2013-2016
Keith Mackenzie	Postdoctoral fellow	2017-ongoing
Ebthal Alshabib	Postdoctoral fellow	2017-ongoing
Stephen Fitzgerald	Postdoctoral fellow	2013-2015

### Committees

- 2013-ongoing BSc Honours committee member (4 students)
- 2013-ongoing MSc committee member (6 students)
- 2013-ongoing PhD committee member (6 students)
- 2013-ongoing Scholarships and Awards Committee [Chair], Faculty of Graduate Studies and Research
  - Review >500 applicants/year
  - Administer review process, certify all committee reviews (~50 scholarships/year)
  - Review and update policies, Adjudicate on internal faculty funding conflicts
  - Develop new scholarships and Terms of Reference with Dean and Scholarship coordinator
- 2014-ongoing Curriculum committee, Department of Biology
- 2014-ongoing Council Committee for Faculty of Graduate Studies and Research
- 2014-recurring PhD defence chair, Faculty of Graduate Studies and Research (2 defences to date)
- 2014-recurring MSc defence chair, Faculty of Graduate Studies and Research (5 defences to date)
- 2013-ongoing Biology monthly departmental social, co-coordinator
- 2012-ongoing Biology and Nursing departments coordination committee
- 2014-2015 Local Organizing Committee for Canadian Society of Microbiologists 2015 conference
- 2013-2015 Executive of University Council member, Biology representative
- 2013-2014 CIHR Scholarship review committee
- 2014 Coordinator of Department of Biology seminar series
- 2014 Coordinator and host Genome Prairie meeting at UofR
- 2012 NSERC PGS UofR Internal Selection Committee
- 2012 Coordinator of Microbiology Journal Club, UofR

### Outreach

- 2013-ongoing Science Rendezvous, UofR, Host for high school quiz competition, DNA extraction demonstrator
- 2012-ongoing Summer Science Camp, UofR, Demonstrator
- 2016 Interview on CBC radio Blue Sky about antibiotic resistance
- 2016 Host Syrian refugee children in lab to learn about science and school opportunities
- 2016 Host and develop 2 week science project for Grade 10 science student Seamus Lim-Haley from La Ronge SK.
- 2016 Featured as cover story in inaugural issue of UofR *Discourse* research magazine
- 2016 Featured in Regina Leader Post story about antibiotic resistance
- 2016 Interview on CKRM about bioremediation of oil spills
- 2016 Featured in UofR Earth Day research advertisement (print and web)
- 2015 Featured in SHRF *Research for Health* magazine article about antibiotic resistance
- 2015 Two interviews with UofR External Relations for features on UofR website
- 2014 Interview for Regina Leader Post newspaper regarding Ebola threat
- 2014 Interview for INK student magazine regarding science and research, UofR
- 2013 TV interview with Global News regarding flu transmission and infection
- 2010 Demonstrator, Ireland Science Fair, Dublin

2007 Volunteer ecology instructor, University of Belize, Central America

### Reviewer for Grants and Tenure

2015-ongoing Saskatchewan Health Research Foundation Establishment grant review panel

2015 External reviewer of tenure application for Harvey Mudd College, California, USA

### Journal peer reviewer

Recurrent reviewer: *Molecular Microbiology*, *Journal of Bacteriology*, *Microbiology*, *PLoS Pathogens*, *Nucleic Acids Research*, *PLoS One*, *Scientific Reports*

Reviewer: *mBio*, *Archives in Microbiology*, *Genome Biology*, *BMC Genomics*, *BMC Microbiology*, *Journal of Leukocyte Biology*

## Scholarly Research

### Publications since 2006

- 23 Alexander DC, Vasireddy R, Vasireddy S, Philly JV, Brown–Elliott BA, Perry BJ, Griffith DE, Benwill JL, Cameron ADS, and Wallace Jr. RJ. (2017) The emergence of *mmpT5* variants during bedaquiline treatment of *Mycobacterium intracellulare* lung disease. *Journal of Clinical Microbiology* In press doi:10.1128/JCM.02087-16
- 22 Colgan A, Cameron ADS, and Kröger C. (2017) If it transcribes, we can sequence it: mining the complexities of host-pathogen-environment interactions using RNA-seq. *Current Opinion in Microbiology* In press
- 21 Perry BJ, Fitzgerald S, Kröger C, Cameron ADS. (2017) Whole genome sequence and annotation of *Salmonella enterica* subspecies *enterica* serovar Enteritidis phage type 8 strain EN1660. *Genome Announcements* In press (to be published January 26, 2017)
- 20 Kröger C, Kary SC, Schauer K, and Cameron ADS. (2017) Genetic regulation of virulence and antibiotic resistance in *Acinetobacter baumannii*. *Genes* 8(1), 12; doi:10.3390/genes8010012
- 19 Alexander DC, Fitzgerald S, DiPaulo R, Kitzul R, Levett P, and Cameron ADS. (2016) Laboratory-acquired infection with *Salmonella* Typhimurium exposed by whole genome sequencing. *Journal of Clinical Microbiology* 54(1):190–193
- 18 MacKenzie KD, Wang YJ, Shivak DJ, Wong CS, Hoffman LJJ, Lam S, Kröger C, Cameron ADS, Townsend HGG, Koster W, and White AP. (2015) Bistable Gene Expression in *Salmonella* Connects Virulence to Persistence. *Infection and Immunity* 83(6): 2312-2326
- 17 Fitzgerald S, Dillon SC, Chao TC, Wiencko HL, Hokamp K, Cameron ADS, and Dorman CJ. (2015) Re-engineering cellular physiology by rewiring high-level global regulatory genes. *Scientific Reports* 5:17653
- 16 Srikumar S, Kröger C, Hébrard M, Colgan A, Beckett M, Luque-Sastre L, Wang L, Sivasankaran SK, Breen K, Zhou D, Cameron ADS, Hokamp K, and Hinton JCD. (2015) The intra-macrophage transcriptome of *Salmonella* Typhimurium identifies macrophage-regulated promoters and a genus-specific sRNA required for virulence. *PLoS Pathogens* 11(11): e1005262
- 15 Robinson LJ, Cameron ADS, and Stavrinides J. (2015) Spontaneous and on point: Do spontaneous mutations used for laboratory experiments cause pleiotropic effects that might confound bacterial infection and evolution assays? *FEMS Microbiology Letters* 362(21): fnv177
- 14 Tambalo DD, Perry BJ, Fitzgerald S, Cameron ADS, and Yost CK. (2015) Draft genome sequence and annotation of phyllosphere-persisting *Salmonella enterica* subsp. *enterica* serovar Livingstone strain CKY-S4, isolated from an urban lake in Regina, Canada. *Genome Announcements* 3(4):

e00884-15

- 13 Quinn HJ, Cameron ADS, and Dorman CJ. (2014) Bacterial regulon evolution: distinct responses and roles for the identical OmpR proteins of *Salmonella* Typhimurium and *Escherichia coli* in the acid stress response. *PLoS Genetics* 10(3):e1004215
- 12 Cameron ADS, Kröger C, Quinn HJ, Scally IK, Daly AJ, Kary SC, and Dorman CJ. (2013) Transmission of an oxygen availability signal at the *Salmonella enterica* serovar Typhimurium *fis* promoter. *PLoS One* 8(12):e84382
- 11 Cameron ADS and Dorman CJ. (2012) A fundamental regulatory mechanism operating through OmpR and DNA topology controls expression of *Salmonella* pathogenicity islands SPI-1 and SPI-2. *PLoS Genetics* 8(3):e1002615
- 10 Kröger C, Dillon SC, Cameron ADS, Papenfort K, Sivasankaran SK, Hokamp K, Chao Y, Sittka A, Hébrard M, Händler K, Colgan A, Leekitcharoenphon P, Langridge GC, Lohan AJ, Loftus B, Lucchini S, Ussery DW, Dorman CJ, Thomson NR, Vogel J and Hinton JCD. (2012) The transcriptional landscape and small RNAs of *Salmonella enterica* serovar Typhimurium. *Proceedings of the National Academy of Science* 109: E1277-E1286
- 9 Rolfe MD, Rice CJ, Lucchini S, Pin C, Thompson A, Cameron ADS, Alston M, Stringer MF, Betts RP, Baranyi J, Peck MW, and Hinton JCD. (2012) Lag phase is a distinct growth phase that prepares bacteria for exponential growth and involves transient metal accumulation. *Journal of Bacteriology* 194: 686-701
- 8 Cameron ADS, Stoebel DM, and Dorman CJ. (2011) Divergent regulation of DNA supercoiling by environmental factors and Fis in *Escherichia coli* and *Salmonella enterica* constrains the expression of horizontally-transferred genes. *Molecular Microbiology* 80: 85-101
- 7 Corcoran CP, Cameron ADS, and Dorman CJ. (2010) H-NS silences *gfp*, the Green Fluorescent Protein gene: *gfp*<sup>TCD</sup> is a genetically remastered *gfp* gene with reduced susceptibility to H-NS-mediated transcription silencing and with enhanced translation. *Journal of Bacteriology* 192: 4790–4793
- 6 Dillon SC, Cameron ADS, Hokamp K, Lucchini S, Hinton JCD, and Dorman CJ. (2010) Genome-wide analysis of the H-NS and Sfh regulatory networks in *Salmonella* Typhimurium identifies a plasmid-encoded transcription silencing mechanism. *Molecular Microbiology* 76: 1250-1265
- 5 Sinha S, Cameron ADS, and Redfield RJ. (2009) Sxy induces a CRP-S regulon in *Escherichia coli*. *Journal of Bacteriology* 191: 5180-5195
- 4 Cameron ADS, Volar M, Bannister L, Redfield RJ. (2008) RNA secondary structure regulates the translation of *sxy* and competence development in *Haemophilus influenzae*. *Nucleic Acids Research* 36: 10-20
- 3 Cameron ADS and Redfield RJ. (2008) CRP binding and transcription activation at CRP-S sites. *Journal of Molecular Biology* 37: 313-323
- 2 Redfield RJ, Findlay WA, Bosse J, Kroll JS, Cameron ADS, and Nash JHE. (2006) Evolution of competence and DNA uptake specificity in the Pasteurellaceae. *BMC Evolutionary Biology* 6: 82-96
- 1 Cameron ADS and Redfield RJ. (2006) Non-canonical CRP sites control competence regulons in *Escherichia coli* and other gamma-proteobacteria. *Nucleic Acids Research* 34: 6001-6014

**Invited speaker**

- 2017 University of British Columbia, Vancouver BC. Dmitry Apel lectureship and scholarship presentation. Title TBD

- 2017 Vancouver Island University, Nanaimo BC. Department of Biology seminar. “Tracking infectious disease in Canadian and African communities.”
- 2017 Robert Bateman Gallery, Victoria BC. University of Regina Alumni Reception. “What do we do when antibiotics fail?”
- 2016 Michigan State University, East Lansing, USA. Department of Microbiology & Molecular Genetics seminar. “The unexpected layers of cross-feeding and competition in a defined bacterial ecosystem.”
- 2016 Vancouver Island University, Nanaimo BC. Department of Biology seminar. “DNA sequencing provides insights into pathogenicity, antibiotic resistance, and disease.”
- 2016 University of Saskatchewan. Saskatoon Next Generation Sequencing Symposium. “Whole genome sequencing for epidemiology and antibiotic resistance gene discovery.”
- 2015 Saskatchewan Health Research Foundation Santé, Saskatoon. Annual celebration of research. “Using genomics and molecular epidemiology to combat the rise of antibiotic resistance.”
- 2015 University of Saskatchewan. Department of Microbiology and Immunology seminar. “Bacterial transcriptome analysis: Unexpected features of chromosome architecture and ecosystem dynamics.”
- 2015 Trinity College Dublin, Ireland. Department of Microbiology seminar. “Phylogenetic analysis of the H-NS superfamily of proteins in Enterobacteriaceae.”
- 2015 University of Liverpool, United Kingdom. Institute of Integrative Biology seminar. “Bacterial transcriptome analysis for the study of *Salmonella* in designed ecosystems.”
- 2014 École Polytechnique Fédérale de Lausanne, Switzerland. Global Health Institute seminar. “Nucleoid-associated proteins in bacteria: shaping gene expression, structure, and evolution.”
- 2014 University of Liverpool, United Kingdom. Institute of Integrative Biology seminar. “How are transcription and sigma factors distributed around the chromosome?”
- 2012 Department of Genetics, University of Seville, Spain. Genetics seminar series. “Control of bacterial gene expression by DNA supercoiling.”
- 2011 University College of Dublin, Ireland. School of Biomolecular & Biomedical Science seminar. “Regulation of *Salmonella* pathogenicity by DNA topology.”
- 2010 CNB-CSIC, Madrid, Spain. Microbial genetics seminar series. “Species-specific DNA supercoiling may constrain horizontal gene transfer.”
- 2010 Trinity College Dublin, Ireland. Department of Microbiology seminar. “DNA topology controls gene expression in response to environmental change.”
- 2008 University of Birmingham, UK. Molecular Microbiology seminar. “Regulating DNA uptake: How CRP & Sxy activate competence genes.”
- 2008 Trinity College Dublin, Ireland. Department of Microbiology seminar. “The regulation of DNA uptake.”
- 2007 Stanford University, USA. Department of Microbiology and Immunology seminar. “The regulation of competence by CRP and Sxy.”
- 2007 Penn State University, USA. Department of Biology seminar series. “700 million years of eating DNA: A conserved competence regulon in Gamma-proteobacteria.”
- 2006 CNB-CSIC, Madrid, Spain. Microbial genetics seminar series. “The CRP-dependent competence regulon in Gamma-proteobacteria.”

## Heather Dietz

Lab Instructor III

[heather.dietz@uregina.ca](mailto:heather.dietz@uregina.ca), (306) 585 4286,

### Education and Professional Development

- |   |      |
|---|------|
| <i>Master of Science, Science Education</i>   | 2012 |
| Montana State University, Bozeman, MT   |      |
| Thesis title: <i>The effect of explicit writing instruction, scaffolded writing tasks and peer review on scientific writing and content mastery in a sophomore microbiology class</i> |      |
| Thesis supervisor: Dr. John Graves  |      |
| <i>Registered Technologist Certificate, Subject: Virology</i>   | 1991 |
| Royal University Hospital, Saskatoon, SK  |      |
| <i>Bachelor of Science, Microbiology</i>  | 1990 |
| University of Saskatchewan, Saskatoon, SK   |      |
- UR conference on Indigenizing Education, Sept. 3-4, 2015, Regina, SK
  - Canadian Society of Microbiologists annual conference, June 15-18, 2015, Regina, SK
  - Society for Teaching and Learning in Higher Education annual conference, June 15-18, 2011, Saskatoon, SK
  - American Society for Microbiology's annual Conference on Undergraduate Education (ASMCUE), May 30-June 1, 2008, Boston/Beverly, MA

### Employment History

Lab Instructor III (Biology)	2006 - present
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### Teaching History

Biology labs taught and coordinated for the following classes:

- BIOL 100 – Coordinator: Introductory Biology I
- BIOL 101\* – Coordinator: Introductory Biology II
- BIOL 140 – Coordinator: Human Biology for non-majors
- BIOL 150\* – Coordinator: Biological Principles for non-majors
- BIOL 220 – Lab Instructor: Introductory Microbiology
- BIOL 302\* – Lab Instructor: Food Microbiology
- BIOL 310\* – Lab Instructor: Microbial Diversity and Cell Function
- BIOL 403 – Lab Instructor: Microbial Ecology
- BIOL 410 – Lab Instructor: Bacterial Genetics

\* denotes labs taught in 2016

### Student Supervision

Typically TAs teach the first-year labs, and assist me in teaching upper-year labs. Supervision of an average of 23-BIOL100 TAs or 16-BIOL101 TAs, 8-BIOL140 TAs or 1-BIOL150 TA, 6-BIOL220 TAs or 2-BIOL302 TAs and 1-BIOL310 TA annually for the years I taught or coordinated a given lab.

### University Service

#### *University-level:*

- UR Biosafety Advisory Committee (inaugural chair 2011; member 2011-present)
- Created an autoclave waste disposal flowchart for HSE (2014)
- Acted as Chief Returning Officer for the Graduate Students' Association election (2014)
- UR Occupational Health and Safety Committee (URFA academic representative, 2012-2013)
- UR Biosafety Committee (member, 2011)
- URFA Grievance Committee (member, 2006-2007)
- URFA Status of Women Committee (co-chair, 2006)
- URFA Executive Committee (member, 2007-2009 and 2013-2015)
- Advisory Committee to URFA Negotiating Committee (member, 2009)
- URWISE (steering committee, 2007-2008; member, 2009-present)

#### *Faculty of Science level:*

- Faculty of Science Lab Instructor Performance Review Committee (member 2010, 2011, 2014, 2015; chair 2012, 2016)
- Faculty of Science Autoclave Working Group (member, 2014-2015)
- One of two point persons for LB414 complex and LB428/432 renovations (2011)
- Informal and formal mentoring and training other instructors (Biol, Luther Biol, Chem, Enev) in turnitin.com use and peer review (2010-present)
- Faculty of Science administrator for turnitin.com (2010)

#### *Department-level:*

- Allocated Teaching Assistants for fall semesters (2006-2009) and winter semesters (2013-present)
- Biology Department Safety Committee (member, 2006-2012)
- Biology Department Equipment Committee (member, 2011-present)
- Biology Department Cell Biology Lab Instructor Search Committee (chair 2009; chair 2012)
- Biology Department "Microbiology" Technician Search Committees (member, 2009, 2012, 2015- 2016)
- Mentored new lab instructors in Biology (2009, 2015) and new faculty member in Biology (2010, at the request of the Department Head)

#### *Outreach / Public Service Activities*

- Regina Regional Science Fair Judge (annual)

- Organized and ran a day-long forensic mystery exercise for a Scout camp in Lumsden, SK (2015)
- Helped a local pharmacist with a QA procedure (2015)
- Created, organized and ran handwashing experiments as “The Germ Lady” for K-2 students at Garneau School, Edmonton, AB (2015)
- Led a microbiology student lab tour and answered questions for the Canadian Institute of Public Health Inspectors certification board inspection (2014)
- Proctored NAIT exams for Anatomy/Physiology correspondence courses (2012-2013)
- Provided preserved specimens for a Cub Scout group (2011)
- Informal science fair project help for middle- high-school students (2007-2012 and 2014-2015)
- Ad hoc reviewer for submissions to ASM Microbelibrary (2009, 2010)
- Co-presented two sessions for the Science Option in Summer Sports School camp (2010)

#### Teaching Development and Outreach

##### *Professional society memberships*

- American Society for Microbiology
- Canadian Society of Microbiologists
- National Science Teachers’ Association
- Society for Teaching and Learning in Higher Education

##### *Lab experiment/module design*

- Developed, tested and implemented a new “experiment in a box” protist inquiry exercise for BIOL101 (2015-2016)
- Developed, tested and implemented a new “pet microbe” term project for BIOL220 (2012-2013)
- Converted several lab exercises to guided-inquiry for BIOL220 and BIOL302 (2010)
- Created several mini-projects, and all associated evaluative materials, BIOL220 students could choose to perform and orally present to their classmates (2010).

##### *Lab Manuals*

- Wrote lab manuals for the new BIOL310 lab and a new iteration of BIOL302 (2016)
- Wrote and revised a new 6-lab lab manual for BIOL101 (2014-2016)
- Wrote a new online lab manual for BIOL220 (2013)
- Wrote a new guided-inquiry / co-operative learning lab manual for BIOL100 (2009)
- Wrote lab manuals for two new microbiology labs: BIOL302 and BIOL403 (2006)

##### *Other undergraduate teaching development*

- “Indigenized” selected aspects of BIOL101 BIOL302 and BIOL302 labs (2015-2016) using monies from a UR Indigenization grant (Co-recipient, Dr. Mel Hart)
- Created a series of six “flipped-classroom” videos in addition to entrance/exit paper system for BIOL101 (2015-2016)
- Mentored two ENEV students in testing a new cleaning product for FM, and trained two other ENEV students in bacterial culturing (2014)



- Collaborated with Lauri Lintott on an online lab report writing guide for biology undergraduate students (2012-2013)
- Tested and implemented the “flipped classroom” approach in BIOL220 and BIOL310 (2013-2016)
- Aided a Biology Undergraduate Honour’s student with testing protocols (2011)
- Developed, implemented and assessed effective methods to teach scientific writing (2010-2012)
- Developed, with the help of David Gray, a Biology TA Training program (2008-2009)
- Converted BIOL100 labs to guided-inquiry from cookbook labs (2008)
- Collaborated with Laura Ambrose to develop and “exploration” lab about Saskatchewan Biodiversity for use in both BIOL150 and BIOL100 (2007)
- Part of a multidisciplinary team that created online modules to replace face-to-face labs for ENEV322 (2006) using monies from a UR Technology Enhanced Learning grant (Co-recipient, Dr. Dena McMartin).
- Provided information, expertise, biological, consumable and digital materials for then-SIAST nursing microbiology labs (2006-2011 and for the first run of ENEV322 labs (2006-2008)

#### Scholarly Research / Poster Presentations

**Heather Dietz**, Fidgi Gendron and Mel Hart. *Reconnecting with Mother Earth: Indigenizing Biology Labs and Classrooms*. Indigenous Research Day, Regina SK, Oct. 27, 2016.

Timothy G. Strozen, **Heather Stanley**, Yuqi Gu, Jessica Boyd, Michael Bagdasarian, Maria Sandkvist and S. Peter Howard. (2011). Involvement of the GspAB Complex in Assembly of the Type II Secretion System Secretin of *Aeromonas* and *Vibrio* Species. *Journal of Bacteriology*. **193(9)**: 2322-2331. doi: 10.1128/JB.01413-10

## Nola Erhardt

Lab Instructor III

[Nola.Erhardt@uregina.ca](mailto:Nola.Erhardt@uregina.ca), (306) 337 2530

### Education and Professional Development

Emergency First Aid and CPR, 2014

Facilitating International Student Success (educational seminars sponsored by UR Centre for Teaching and Learning, UR International, and Luther College), 3 of 4 sessions, 2013

Using Teaching Assistants Effectively (seminar sponsored by the UR Centre for Teaching and Learning), 2012

Discovering Knowledge...Sharing a Path: Aboriginal Awareness Training (workshop offered through UR Human Resources), 2012

Building a Respectful University (seminar offered through UR Human Resources), 2012

Positive Space Network (educational seminars offered by UR Pride Centre for Sexuality and Gender Diversity), 4 sessions, 2011-2013

B.C. Provincial Instructor Diploma, Vancouver Community College, 2010

University of Regina Faculty Association audio conference: Cultures in Conflict: Dealing with Diversity in the Workplace, 2009

Project Management (2-day workshop), Simon Fraser University, 2007

Ph.D, University of Victoria, 2003 (Molecular Biology)

B.Sc (Honours), University of Victoria, 1995 (Biology)

### Employment History

Lab Instructor III, July 2014 – current

Received Tenure and Promotion, July 2014

Lab Instructor II, July 2009 – July 2014

Communications Manager, Institute of Nutrition, Metabolism and Diabetes (Canadian Institutes of Health Research), 2004–2007

#### Teaching History

Lab Instructor for the following courses:

Biology 100: Biology 1 From Cells to Organisms, 2010 – current

Biology 288: Cell Biology, 2011 – current

Lab TA for the following courses:

Biology 100: Biology 1 From Cells to Organisms, 2009

Biology 288: Cell Biology, 2009

Lecturer:

Biology 11, Adult Upgrading Program, Vancouver Community College, 2009

#### Student Supervision

Supervision of 18-20 graduate and undergraduate teaching assistants per year, for Biology 100 and Biology 288 labs.

#### University Service

- Liaison with First Nations University for delivery of Biology 100 lab, 2010 – current
- Member of the Biology Department Curriculum Committee, 2014 – current
- Member of the Lab Instructor Review Committee, 2015 – current
- Assigned TAs for Fall Term for Department of Biology, 2011– current
- Annual Judge at the Regional Science Fair, 2009 – current
- Emergency Warden, 2013 – current
- Member of the URFA Executive Committee, 2015
- Member of the Hiring Committee for a Biology Lab Instructor, 2014 – 2015
- Member of the Hiring Committee for a Term Biology Lab Instructor, 2014
- Wrote Initial Script and Participated in Science Lab Orientation Video for Incoming Students (directed by Jeremy Lague, Media Liaison, Dean's Office, 2013)
- Member of the Joint Employment Equity Committee, 2010 – 2014
- Member of the URFA Equity Committee, 2009 – 2012

#### Teaching Development and Outreach

##### New Lab Program Designed:

In 2010, I began major revisions to the existing set of labs for Cell Biology. This work entailed obtaining an insect cell line and learning to culture the cells as I designed a set of labs for a project-based experience based on cell culture and cell manipulation. In consultation with Dr. Richard Manzon, and with help from Dr. Tanya Dahms (Department of Chemistry and Biochemistry), as well as a vet technician from Saskatoon's SIAST campus and a dean of

science and math at Darton College, I designed a set of labs for delivery in winter 2011. Seventy percent of the lab content was new. In conjunction with this work, I assisted in the planning of the renovation of a research lab to make it appropriate for teaching labs. This consisted of meetings with designers, consultations to furnish the lab, arranging and purchasing necessary safety and other equipment, and being part of a team that hand-picked four laminar flow hoods gifted by the Provincial Government Labs for cleaning and movement into the new lab. In 2011, I further modified the labs, changing some assignments, based on the experience from 2010, and student feedback.

In 2013, I researched and replaced the insect cell line with a rat cell line, and changed the cell project based on the response of the cells to hormonal manipulation. The Lab Program at this point was 100% different than it was when I arrived at U of R. The lab manual was re-written to reflect the new changes.

#### New Labs Designed:

In 2015, I began work on a new orientation lab for Biology 100, which was completed and trialed in spring of 2016. The new lab is a forensics style lab, and students must gather evidence based on bacterial, algal and protistan, and plant materials to develop a hypothesis. This replaces a lab on use of a microscope.

#### Labs Modified:

For the Biology 100 Lab, each year since 2010 I have made minor revisions to strengthen the labs and enhance clarity in the lab manual. I have moved the labs from a very open style of inquiry-based labs to a more guided style. This has included more time and direction in the use of a compound microscope, greater explanation and practice learning basic scientific principles such as the nature of a hypothesis, the use and of controls and replicates, and correct scientific data presentation. The manual was revised to reflect these changes, and as well, the format was altered so that the beginning of each lab is easily recognized by a standard format that includes a list of learning objectives. In addition, a TA Guide and Marking Key was prepared in 2010, and has been revised as needed for each following term. A set of practice exam questions was designed to help students study; revision and posting of these questions is ongoing.

For the Biology 288 Lab, each year since 2013 I have made minor revisions to vary data collection based on results from the previous term. In other words, each year, the students do original research. Some assignments have also changed, based on reception and feedback. The lab manual has been revised as necessary.

#### Teaching Workshops:

Designed a four-hour training workshop for Biology 100 TAs in the spring of 2010, and delivered the workshop to between 10-18 TAs each year. The workshop is continually revised depending on feedback, and takes place every year.

Kerri Finlay  
Assistant Professor  
[kerri.finlay@uregina.ca](mailto:kerri.finlay@uregina.ca), (306) 585 4236

### Education and Professional Development

2000 – 2004 Ph.D. Zoology, University of Guelph, Guelph, ON. Advisor Dr. John Roff.

Thesis title: “Nauplii and copepodites: An evaluation of trophodynamic roles in a north temperate bay – and implications beyond”

1995 - 1999 Hon. B.Sc. with distinction, Specialist Program in Ecology, University of Toronto, Toronto, ON, Convocation June 1999.

### Employment History

July 2016 – present Assistant Professor, Department of Biology, University of Regina

July 2009-June 2016 Lecturer, Department of Biology, University of Regina

Sept 2006- July 2009 Postdoctoral Fellow, University of Regina.

Feb 2005 – Aug 2006 Postdoctoral Fellow, University of Quebec at Montreal.

### Teaching History

- 2016: BIOL110 (fall), 166 students in Regina, 155 students in Saskatoon, 8 students in Swift Current
- 2015: BIOL101 (winter, co-taught with Dr. J. Stavrinos), 200 students  
BIOL402 (winter, co-taught with Dr. J. Stavrinos), 41 students  
BIOL110 (fall), 186 students in Regina, videoconferenced to an additional 149 students in Saskatoon, and 8 students in Swift Current  
BIOL265 (fall, co-taught with Dr. J. Buttigieg), 67 students
- 2014: BIOL101 (winter, co-taught with Dr. J. Stavrinos), 190 students  
BIOL402 (winter, co-taught with Dr. J. Stavrinos), 30 students  
BIOL110 (fall), 177 students in Regina, videoconferenced to an additional 148 students in Saskatoon  
BIOL265 (fall, co-taught with Dr. J. Buttigieg), 60 students  
BIOL275 (fall), 33 students
- 2013: BIOL101 (winter, co-taught with Dr. J. Stavrinos), 226 students  
BIOL275 (winter), 33 students

BIOL490BP (winter, co-taught with Dr. J. Stavrinides), 37 students  
 BIOL110 (fall), 168 students in Regina, videoconferenced to an additional  
 143 students in Saskatoon  
 BIOL265 (fall, co-taught with Dr. J. Buttigieg), 65 students  
 BIOL275 (fall), 27 students  
 2012: BIOL101 (winter), 212 students  
 BIOL275 (winter), 53 students  
 BIOL110 (fall), 177 students in Regina, videoconferenced to an additional  
 141 students in Saskatoon  
 BIOL265 (fall, co-taught with Dr. J. Buttigieg), 76 students  
 2011: BIOL101 (winter), 208 students  
 BIOL275 (winter), 16 students  
 BIOL110 (fall), 189 students  
 BIOL265 (fall), 71 students  
 2010: BIOL101 (winter), 236 students  
 BIOL275 (winter), 38 students  
 BIOL100 (fall), 306 students  
 BIOL265 (fall), 72 students  
 2009: BIOL100 (fall, co-taught with Dr. H Weger), 321 students  
 BIOL265 (fall), 63 students  
 Sessional Instructor, 2007: BIOL335 (fall), 4 students

### Student Supervision

Name	Position	Dates of supervision
<b>Corey McCowan</b>	UG, Research Assistant	June 2016-present
<b>Tiffany Blampied</b>	UG, Research Assistant	May 2016-present
<b>Samantha Campbell</b>	UG, Research Assistant	May-Aug 2016
<b>Jessica Bos</b>	UG, Honour's student	Sept 2016-present
<b>Judith Bjorndhal</b>	UG, Honour's student	Sept 2016-present
<b>Kristen Gray</b>	UG, Honour's student	Jan-Dec 2015
<b>April Sefton</b>	UG, Research Assistant	Sept 2014-May 2015
<b>Kristen Murphy</b>	UG, Research Assistant	May 2014-Sept 2014
<b>Katherine Miller</b>	UG, Honour's student	Sept 2011-Apr 2012

### University Service

#### *University Service*

Supplemental Instruction Coordinator, 2014-2015  
 Regina Regional Science Fair Judge (2007-present)  
 Science Rendezvous volunteer (2011 – 2014)

University of Regina Edible Campus Group member (June 2013-present)

*Broadcast Interviews*

Jan 2016 Prairie lakes reduce greenhouse gas emissions, Environment Video, Al Jazeera Canada

Feb 2015 Carbon sinks on the Canadian Prairies, Science, Radio Canada

*Text Interviews*

Feb 2015 Carbon storage in Prairie Lakes, Canadian Press

Feb 2015 Carbon storage in Prairie lakes, CTV News online

Apr 2015 A carbon sink on the prairies, Canadian Geographic, Can Geo Daily

Apr 2015 CO<sub>2</sub> research goes against the norm, The Carillon

*Professional Service*

Peer Review for:

Aquatic Ecology, Biogeochemistry, Biogeosciences, Canadian Journal of Fisheries and Aquatic Sciences, Ecosystems, Environmental Science and Pollution Research, Global Biogeochemical Cycles, International Journal of Ecology and Development, Journal of Biogeochemical Cycles, Journal of Geophysical Research, Journal of Great Lakes Research, Journal of Oceanography, Journal of Plankton Research, Lake and Reservoir Management, Limnology and Oceanography, Marine Ecology Progress Series, Nature Climate Change.

*Professional Memberships*

American Society of Limnology and Oceanography (ASLO), Society of Canadian Limnologists (SCL)

Scholarly Research

*Awards and Grants*

July 2016 – Mar 2017 “Water quality analyses in Prairie lakes” (\$40,000). Grant from the Faculty of Science, University of Regina.

July 2016 – Mar 2017 “Loch Leven and Kenosee Lake Water Quality Research Project” (\$30,000). Contract awarded from the Saskatchewan Ministry of Parks, Culture, and Sport.

Jan 2015 – Jan 2017 “Evaluating the Effectiveness of Online vs. Face-to-Face Supplemental Instruction in Introductory Biology Courses” (\$2895). University of Regina’s Centre for Teaching and Learning

- June 2014-Mar 2015 “Loch Leven Water Quality Research Project, Cypress Hills Provincial Park” (\$14,000). Contract awarded from the Saskatchewan Ministry of Parks, Culture, and Sport.
- Sept 2011 – Aug 2016 Distance Learning Grant (\$10,000) from the University of Regina’s Distance and Distributed Learning Committee. 2011-2016.
- Feb 2006 – Aug 2006. GRIL postdoctoral fellowship, held at the University of Quebec at Montreal
- Oct 2004-Nov 2004 BIODAQUA International Student Exchange to conduct research (Project: ‘Deep Sea Biodiversity in the Adriatic and Ionian Seas’) at the Polytechnic University of Marche, Ancona, Italy.

*Peer-reviewed Publications*

19. Bogard MJ, Finlay K, Waiser MJ, Tumber VP, Donald DB, Wiik E, Simpson G, del Giorgio PA, and PR Leavitt. Effects of nitrogen fertilization and ecosystem pH on planktonic metabolism and atmospheric CO<sub>2</sub> exchange in hardwater lakes. Submitted to PLOS One, July 2016.
18. Danovaro RL, Carugati L, Calafat A, Canals M, Finlay K, Heussner S, Langone L, Miserocchi S. Long-term changes in deep-sea zooplankton in the Mediterranean Sea: an analysis based on trap moorings. Submitted to PeerJ, June 2016.
17. Finlay K, Vogt RJ. 2016. An ecosystem management framework to maintain water quality in a macrophyte dominated, productive, shallow reservoir. *Hydrobiologia*. 776(1): 111-123.
16. Quinones-Rivera, ZJ, Finlay, K, Vogt, RJ, Leavitt, PR, Wissel, B. 2015 Hydrologic, metabolic and atmospheric CO<sub>2</sub> exchange in a large continental reservoir during spring and summer. *Journal of Great Lakes Research*. doi:10.1016/j.jglr.2015.05.005
15. Finlay, K, Vogt, RJ, Bogard, MJ, Wissel, B, Tutolo, BM, Simpson, GL, and Leavitt, PR. 2015. Decrease in CO<sub>2</sub> efflux from northern hardwater lakes with increasing atmospheric warming. *Nature*. DOI 10.1038/nature14172
14. Donald, DB, Bogard, MJ, Finlay, K, Bunting, L, and Leavitt, PR 2013. Phytoplankton-specific response to enrichment of phosphorus-rich surface waters with ammonium, nitrate, and urea. *PLOS One*. 8 (1) e53277.
13. Bogard, MJ, Donald, DB, Finlay, K, Leavitt, PR 2012. Distribution and regulation of urea in lakes of central North America. *Freshwater Biology*. 57(6): 1277-1292.
12. Donald, DB, Bogard, MJ, Finlay, K, Leavitt, PR 2011. Comparative effects of urea, ammonium, and nitrate on phytoplankton abundance, community composition, and toxicity in hypereutrophic freshwaters. *Limnology and Oceanography*. 56(6): 2161-2175.



11. Finlay, K, Patoine, A, Donald, DB, Bogard, MJ, and Leavitt, PR. 2010. Experimental evidence that pollution with urea can degrade water quality in phosphorus-rich lakes of the northern Great Plains. *Limnology and Oceanography* 55:1213-1230.
10. Finlay, K, Leavitt, PR, Patoine, A, and Wissel, B. 2010. Magnitudes and controls of organic and inorganic carbon flux through a chain of hard-water lakes on the northern Great Plains. *Limnology and Oceanography* 55: 1551-1564.
9. Finlay, K, Leavitt, PR, Wissel, B, and Prairie, YT. 2009. Regulation of spatial and temporal variability of carbon flux in six hard-water lakes of the northern Great Plains. *Limnology and Oceanography* 54: 2553-2564.
8. Tranvik, LJ, Downing, JA, Finlay, K. and 25 others. 2009 Lakes and Impoundments as regulators of carbon cycling and climate. *Limnology and Oceanography* 54 (6, part 2) 2298-2314.
7. Dröscher, I, Patoine, A, Finlay, K, and Leavitt, PR. 2009. Climate control of the spring clear-water phase through the transfer of energy and mass to lakes. *Limnology and Oceanography* 54: 2469-2480.
6. Finlay, K, Beisner, BE, Patoine, A, and Pinel-Alloul, B. 2007. Regional ecosystem variability drives the relative importance of bottom-up and top-down factors for zooplankton size spectra. *Canadian Journal of Fisheries and Aquatic Sciences* 64: 516-529.
5. Barnett, AJ, Finlay, K. and Beisner, BE. 2007 Functional diversity of crustacean zooplankton communities: towards a trait-based classification. *Freshwater Biology* 52(5):796-813.
4. Finlay, K, Beisner, BE, and Barnett, AJD. 2007 The use of the Laser Optical Plankton Counter to measure zooplankton size, density, and biomass in small freshwater lakes. *Limnology and Oceanography: Methods* 5: 41-49.
3. Finlay, K, and Roff, JC. 2006 Ontogenetic growth rate responses of temperate marine copepods to chlorophyll concentration and light. *Marine Ecology Progress Series*. 313: 145-156.
2. Finlay, K, and Roff, JC. 2004. Radiotracer determination of the diet of calanoid copepod nauplii and copepodites in a temperate estuary. *ICES Journal of Marine Science*. 61(4): 552-562.
1. Finlay, K, Cyr, H, and Shuter, BJ. 2001 Spatial and temporal variability in water temperatures in the littoral zone of a multi-basin lake. *Canadian Journal of Fisheries and Aquatic Sciences*. 58: 609-619.

*Government Reports*

Finlay K. 2015. Loch Leven Water Quality Research Project (Cypress Hills Interprovincial Park). Saskatchewan Ministry of Parks Culture and Sport.

*Conference Proceedings*

Finlay, K, Wissel, B, Leavitt, PR. 2009. Spatial and temporal synchrony of pCO<sub>2</sub> in six hardwater lakes of central Canada. *Verh. Internat. Verein. Limnol.* 30: 1061-1066.

Dröscher, I, Finlay, K, Patoine, A and Leavitt, PR. 2008. Daphnia control of the spring clear-water phase in six polymictic lakes of varying productivity and size. *Verh. Internat. Verein. Limnol.* 29: 186-190 .

PROFESSIONAL SERVICE

Peer Review for:

Aquatic Ecology, Biogeochemistry, Biogeosciences, Canadian Journal of Fisheries and Aquatic Sciences, Ecosystems, Environmental Science and Pollution Research, Global Biogeochemical Cycles, International Journal of Ecology and Development, Journal of Biogeochemical Cycles, Journal of Geophysical Research, Journal of Great Lakes Research, Journal of Oceanography, Journal of Plankton Research, Lake and Reservoir Management, Limnology and Oceanography, Marine Ecology Progress Series, Nature Climate Change.

PROFESSIONAL MEMBERSHIPS

American Society of Limnology and Oceanography (ASLO), Society of Canadian Limnologists (SCL)

## **Daniel Gagnon**

Full Professor

[daniel.gagnon@uregina.ca](mailto:daniel.gagnon@uregina.ca), (306) 216-1238

### Education and Professional Development

Honours B.Sc. in Biology, *cum laude*, 1976. University of Ottawa

M.Sc. in Biology, 1980. Université de Montréal (Supervisor: Dr. André Bouchard)

Ph.D. in Botany, 1985. University of British Columbia (Supervisor: Dr. Gary E. Bradfield)

### Employment History

Université du Québec à Montréal (UQAM), Professor, Department of Biological Sciences (June 1982 – December 2011; tenured 1986; Full Professor 1991)

Biodôme de Montréal, Director of Research (half-time July 1992 to June 1995; concurrently half-time at UQAM)

University of Regina, Dean, Faculty of Science (January 2012 – June 2016)

University of Regina, Professor, Department of Biology (July 2016 – )

### Teaching History

#### **UQAM undergraduate courses**

BIA 1700: Organisms & Environment (BIA courses taught using «problem based learning»)  
BIO 1700 Biodiversity Conservation  
BIO 3100: General Ecology  
BIA 3510-11: Ecology (taught using «problem based learning»)  
BIO 4401: Communities & Ecosystems Ecology  
BIO 4500: Forest Ecology  
BIO 6810: Plant Ecology  
BIO 6900: Soil Ecology  
BIO 6752: Undergraduate independent research projects (23 students supervised, 1982-2011)

#### **UQAM graduate courses**

BIO 8190: Plant Ecology  
BIO 8071: M.Sc. in Biology Seminar  
ENV 7220: Biodiversity and conservation

ENV 7610: M.Sc. Thesis proposal  
 ENV 9100-9200: Interdisciplinary seminars in Environmental Sciences  
 ENV 9301: Ph.D. Thesis proposal  
 ENV 9402: Doctoral comprehensive exam  
 ENV 9560: Current topics in Environmental Science

#### **University of Regina undergraduate courses**

BIOL 365: Vascular Plants (will be teaching starting 2017-2018)  
 BIOL 367: Plant Taxonomy (will be teaching starting 2017-2018)  
 BIOL 399AC: Terrestrial Ecosystems (new course starting in fall semester 2017)

#### **University of Regina graduate course**

BIOL 835AJ: Selected Topics in Ecology: Management of invasive plants (winter sem. 2014)

#### Student Supervision.

<b>Name</b>	<b>Degree</b>	<b>Dates of supervision</b>
<b>Fabienne Côté</b>	M.Sc. Biology (UQAM)	Thesis completed 2006
<b>Melinda Thompson</b>	M.Sc. Biology (UQAM)	Thesis completed 2006
<b>Elizabeth Turcotte</b>	M.Sc. Biology (UQAM)	Thesis completed 2008
<b>François Fabianek</b>	M.Sc. Biology (UQAM)	Thesis completed 2008
<b>Geneviève Boisjoli</b>	M.Sc. Biology (UQAM)	Thesis completed 2010
<b>Julien Fortier</b>	Ph.D. Environ. Sci. (UQAM)	Thesis completed 2010
<b>Matthew Wild</b>	Ph.D. Biology (UQAM)	Thesis completed 2010
<b>Caroline Tanguay</b>	M.Sc. Biology (UQAM)	Thesis completed 2011
<b>Kathleen Boothroyd-Roberts</b>	M.Sc. Environ. Sci. (UQAM)	Thesis completed 2011
<b>Azade Simavi</b>	M.Sc. Environ. Sci. (UQAM)	Thesis completed 2012
<b>Anaël Jean Bastide</b>	M.Sc. Environ. Sci. (UQAM)	Thesis completed 2013
<b>Jessica Marshal</b>	M.Sc. Environ. Sci. (UQAM)	Thesis completed 2013
<b>Denis Pageault</b>	M.Sc. Environ. Sci. (UQAM)	Thesis completed 2013
<b>Caroline Hamelin</b>	M.Sc. Biology, U. of Regina	Jan. 2014 - June 2016

## University Service

### **University of Regina (institutional)**

Dean's Council (Jan. 2012 – June 2016); Executive of Council (Jan. 2012 – June 2016); University Leadership Team (Jan. 2012 – June 2016); Senate (Jan. 2012 – June 2016); Search Advisory Committee for the new Dean of Engineering & Applied Science (Sept. 2012 – March 2013).

### **Faculty of Science, University of Regina**

Dean of the Faculty (Jan. 2012 – June 2016); Financial administration (annual budget over \$15,000,000); Personnel administration (80 faculty, 16 lab instructors, 30 support personnel); Faculty Tri-Council funding accounts for approx. 50% of University total; U. of Regina – School Divisions Transitions Management Committee; Organizing annual Science Rendezvous event (one Saturday in May); Hosting of the annual Regina Regional Science Fair (brought it to campus in 2013); Organizing the 2017 Canada-Wide Science Fair (we won the bid for 2017 fair).

### **Université du Québec à Montréal (institutional)**

Executive Committee and Academic Board of the Institute of Environ. Sciences; Institutional appeals committee for refusal of admission to graduate studies.

### **Faculty of Science (UQAM)**

Institutional ranking committee for NSERC scholarship applications; Ranking committee for scholarship applications; committee for a Major in Environment for the B.Sc.; committee analysing all programs in Environ. (report April 2011); developing a B.Sc. in Environment.

### **Department of Biological Sciences (UQAM)**

Executive Committee (2 separate terms); Faculty of Science Study Programmes committee; Representative to the institutional committee for promotion to Full Professor; President of departmental meetings; Teaching assistantship attribution committee.

### **Graduate Study Programmes (UQAM)**

Director of M.Sc. and Ph.D. programmes (Environmental Science & Biology, total of 9 yrs).

## External Community Service

### **Nature Conservancy of Canada**

Québec Regional Board of Directors (2005-2009); Qué. Conservation Committee (2008-2011); Saskatchewan Regional Board of Directors (2012-); Sask. Science Advisory Committee (2012-).

**Eastern Townships Forest Research Trust**, founding trustee, (2007-). I am one of the three founding trustees of this private trust with Dr. Benoit Truax (former Ph.D. student) and Marcel Leboeuf. The Trust promotes the conservation of forests (and all their species), their restoration, as well as developing the sustainable use of its resources, through research and education

(training of university students and scholarships; public information) (<http://www.frfce.qc.ca/>). The Trust has charitable status with Revenue Canada (charitable domains: Education, Environment). The Trust receives approximately \$200,000/year in funding, mostly from federal and provincial (Québec) governments, with a small percentage of donations.

**National Capital Commission (Ottawa)**, President and member of the External Expert Committee, for the « Gatineau Park Ecosystem Conservation Plan » (2005-2010).

**Conseil de mise en œuvre des recommandations de la Commission (Coulombe) d'étude sur la gestion de la forêt publique québécoise.** Member of advisory board of 16 persons appointed by the Minister of Natural Resources of Québec, in order to help him address Coulombe Commission recommendations on the management of public forests (2006-2007).

**International Minerals Innovation Institute (Saskatchewan)** (<http://imii.ca/>)  
Member of the Education and Training advisory panel (2012-2015)

#### Scholarly Research

#### (HQP of D. Gagnon are underlined)

- Tardif, J.C., Conciatori, F., Nantel, P. and Gagnon, D. 2006. Radial growth and climate responses of white oak (*Quercus alba*) and northern red oak (*Quercus rubra*) at the northern distribution limit of white oak in Quebec, Canada. *Journal of Biogeography* 33: 1657-1669.
- Wild, M., Gagnon, D. and Bouchard, A. 2006. Why are ferns regularly over-represented on state and provincial rare plant lists? *Diversity and Distributions* 12: 749-755.
- Humbert, L., Gagnon, D., Kneeshaw, D. and Messier, C. 2007. A shade tolerance index for common understory species of northeastern North America. *Ecol. Indicators* 7: 195-207.
- Weekley, C.W., Gagnon, D., Menges, E.S., Quintana-Ascencio, P.F. and Saha, S. 2007. Variation in soil moisture in relation to rainfall, vegetation, gaps, and time-since-fire in Florida scrub. *Écoscience* 14: 377-386.
- Ste-Marie, C., Paré, D. and Gagnon, D. 2007. The contrasting effects of aspen and jack pine on soil nutritional properties depend on parent material. *Ecosystems* 10: 1299-1310.
- Chacon, G., Gagnon, D. and Paré, D. 2009. Comparison of soil properties of native forests, *Pinus patula* plantations and adjacent pastures in the Andean highlands of southern Ecuador: land use history or recent vegetation effects? *Soil Use & Management* 25: 427-433.
- Fortier, J., Gagnon, D., Truax, B. and Lambert, F. 2010. Biomass and volume yield after 6 years in multiclonal hybrid poplar riparian buffer strips. *Biomass and Bioenergy* 34: 1028-1040.
- Fortier, J., Gagnon, D., Truax, B. and Lambert, F. 2010. Nutrient accumulation and carbon sequestration in 6 year-old hybrid poplars in multiclonal agricultural riparian buffer strips. *Agriculture, Ecosystems and Environment* 137: 276-287.
- Fortier, J., Gagnon, D., Truax, B., and Lambert, F. 2011. Understory plant diversity and biomass in hybrid poplar riparian buffer strips in pastures. *New Forests* 42: 241-265.

- Fabianek, F., Gagnon, D., and Delorme, M. 2011. Bat distribution and activity in Montreal Island green spaces: responses to multi-scale habitat effects in a densely urbanized area. *Écoscience* 18: 9-17.
- De Grandpré, L., Boucher, L., Bergeron, Y., and Gagnon, D. 2011. Effects of small canopy gaps on boreal mixedwood understory vegetation dynamics. *Community Ecology* 12: 67-77.
- Truax, B., Gagnon, D., Fortier, J. and Lambert, F. 2012. Yield in 8 year-old hybrid poplar plantations on abandoned farmland along climatic and soil fertility gradients. *Forest Ecology and Management* 267: 228-239.
- Fortier, J., Truax, B., Gagnon, D. and Lambert, F. 2012. Hybrid poplar yields in Québec: Implications for a sustainable forest zoning management system. *Forestry Chronicle* 88: 391-407.
- Fortier, J., Truax, B., Lambert, F., Gagnon, D. and Chevrier, N. 2012. Clone-specific response in leaf nitrate reductase activity among unrelated hybrid poplars in relation to soil nitrate availability. *International Journal of Forestry Research*, vol. 2012, Article ID 103878, 10 p. (<http://www.hindawi.com/journals/ijfr/2012/103878/>).
- Boothroyd-Roberts, K., Gagnon, D. and Truax, B. 2013. Can hybrid poplar plantations accelerate the restoration of forest understory attributes on abandoned fields? *Forest Ecology and Management* 287: 77-89.
- Fortier, J., Truax, B., Gagnon, D. and Lambert, F. 2013. Mature hybrid poplar riparian buffers along farm streams produce high yields in response to soil fertility assessed using three methods. *Sustainability* 5: 1893-1916 (doi:10.3390/su5051893) (<http://www.mdpi.com/2071-1050/5/5/1893/pdf>).
- Boothroyd-Roberts, K., Gagnon, D. and Truax, B. 2013. Hybrid poplar plantations are suitable habitat for reintroduced forest herbs with conservation status. *SpringerPlus* 2: 507, 13 p. (doi:10.1186/2193-1801-2-507) (<http://www.springerplus.com/content/2/1/507>).
- Fortier, J., Truax, B., Gagnon, D. and Lambert, F. 2013. Root biomass and soil carbon distribution in hybrid poplar riparian buffers, herbaceous riparian buffers and natural riparian woodlots on farmland. *SpringerPlus* 2: 539, 19 p. (doi:10.1186/2193-1801-2-539) (<http://www.springerplus.com/content/2/1/539>).
- Truax, B., Gagnon, D., Fortier, J. and Lambert, F. 2014. Biomass and volume yield in mature hybrid poplar plantations on temperate abandoned farmland. *Forests* 5: 3107-3130 (doi: 10.3390/f5123107) (<http://www.mdpi.com/1999-4907/5/12/3107/pdf>).
- Fortier, J., Truax, B., Gagnon, D. and Lambert, F. 2015. Biomass carbon, nitrogen and phosphorus stocks in hybrid poplar buffers, herbaceous buffers and natural woodlots in the riparian zone on agricultural land. *Journal of Environmental Management* 154: 333-345 (<http://dx.doi.org/10.1016/j.jenvman.2015.02.039>).
- Hamelin, C., Gagnon, D. and Truax, B. 2015. Aboveground biomass of glossy buckthorn is similar in open and understory environments but architectural strategy differs. *Forests* 6: 1083-1093 (doi:10.3390/f6041083) (<http://www.mdpi.com/1999-4907/6/4/1083/pdf>).
- Fortier, J., Truax, B., Gagnon, D. and Lambert, F. 2015. Plastic allometry in coarse root biomass of mature hybrid poplar plantations. *BioEnergy Research* 8: 1691–1704 (<http://link.springer.com/article/10.1007/s12155-015-9621-2>).
- Chacon, G., Gagnon, D. and Paré, D. 2015. Soil agricultural potential in four common Andean land use types in the Highlands of Southern Ecuador as revealed by a corn bioassay. *Agricultural Sciences* 6: 1129-1140 (<http://dx.doi.org/10.4236/as.2015.610108>).

- Truax, B., Gagnon, D., Lambert, F. and Fortier, J. 2015. Multiple-use zoning model for private forest owners in agricultural landscapes: a case study. *Forests* 6: 3614-3664 (doi:[10.3390/f6103614](https://doi.org/10.3390/f6103614)) (<http://www.mdpi.com/1999-4907/6/10/3614/pdf>).
- Asselin, H. and Gagnon, D. 2015. Trends in ecological research: reflecting on 21 years of *Écoscience*. *Écoscience* 22: 1-5 (<http://dx.doi.org/10.1080/11956860.2015.1120511>).
- Fortier, J., Truax, B., Gagnon, D. and Lambert, F. 2016. Potential for hybrid poplar riparian buffers to provide ecosystem services in three watersheds with contrasting agricultural land use. *Forests* 7 (2): 37 (doi:[10.3390/f7020037](https://doi.org/10.3390/f7020037)) (<http://www.mdpi.com/1999-4907/7/2/37/pdf>).
- Hamelin, C., Truax, B. and Gagnon, D. 2016. Invasive glossy buckthorn impedes growth of red oak and sugar maple under-planted in a mature hybrid poplar plantation. *New Forests* 47 (6): 897-911 (doi: [10.1007/s11056-016-9551-7](https://doi.org/10.1007/s11056-016-9551-7)) (<http://link.springer.com/article/10.1007/s11056-016-9551-7/fulltext.html>)
- Chacon, G., Gagnon, D. and Paré, D. 2016. Quinoa biomass production capacity and soil nutrient deficiencies in pastures, tree plantations and native forests in the Andean Highlands of Southern Ecuador. *La Granja: Revista de Ciencias de la Vida* 24 (2):16-28. (doi:[10.17163/lgr.n24.2016.02](https://doi.org/10.17163/lgr.n24.2016.02))



Fidji Gendron

Associate Professor of Biology

[fgendron@fnuniv.ca](mailto:fgendron@fnuniv.ca), (306) 790-5950 ext 3335

### Education and Professional Development

Degree	Area of Study	Institution	Date
Ph.D.	Biology	Université du Québec à Montréal	2002
B.Sc.	Biology	Université de Sherbrooke	1995

### Employment History

Employer	Position Title	Period
First Nations University of Canada	Associate Professor	4/2013-present
Luther College	Sessional Lecturer	9/2002-present
First Nations University of Canada	Assistant Professor	6/2006-4/2013

### Teaching History

Course	Title	Years Taught
BIOL 100	Biology I – From Cells to Organisms	2006-2016
BIOL 101, face-to-face	Biology II – Organisms in their Environment	2006-2016
BIOL 101, online	Biology II – Organisms in their Environment	2011-2016
BIOL 140 in English	Human Biology	2006-2007
BIOL 140 in French	Biologie humaine	2006-2016

BIOL 150	Biological Principles	2004, 06, 07
BIOL 365	Vascular Plants	2008
BIOL 396	Independent Research in Biology	2016
BIOC 200	Bioactive Plants and Culture	2013-2015

### Student Supervision

Name	Position	Dates of supervision
Alkholy, Sarah O.	Ph.D. from Wayne State University, Detroit, USA	Co-supervision, 2010-2015
Alqahtani, Samiah N.	Master's from Wayne State University, Detroit, USA	Co-supervision, 2010-2015
Campbell, Trisha	Undergraduate Researcher	5/2015-present
Liu, Chuanyuan	Undergraduate Researcher	5/2016-8/2016
Hancherow, Anna	Undergraduate Researcher	05/2013-08/2014
Norton, Ashley	Undergraduate Researcher	05/2014-12/2014
Cyr, Lisa	Undergraduate Researcher	05/2010-04/2013
Bouch-van Dusen, Rosella	Undergraduate Researcher	05/2010-04/2011
Biden, Michelle	Undergraduate Researcher	05/2009-08/2010
Cyr, Stacy	Undergraduate Researcher	05/2010-08/2010

### University Service

#### **First Nations University of Canada Service**

Science Unit Coordinator, Academic Performance Review Committee (Chair), FNUniv APT Education Leave Committee (Member), Curriculum Review Committee (Member), Acting Department Head, eLearning Committee (Member), Science Faculty Search Committee (Member), Coordinator of the Health and Science Camp, Academic Strategic Planning Committee (Member), Academic Seminars Committee Coordinator, Webmaster for the Science Unit, Grant Review Committee (Member)

#### **Faculty of Science Service**

Student Appeals Committee (Member), Science Admissions and Studies Committee (Member)

#### **Other U of R Service**

Council Committee on Undergraduate Awards (Member), First Nations University of Canada representative at La Cité universitaire francophone, Executive of Council (Elected Member)

### External Service (Last 10 Years)

#### Professional Service

Journal Referee (ACME: An International E-Journal for Critical Geographies, African Journal of Biotechnology, Applied Soil Ecology, Community Ecology, Ethnobiology Letters, Forest Ecology and Management Journal, Health Promotion International, International Journal of Health, Wellness and Society Journal, Journal of Medicinal Plant Research, Journal of Pharmacognosy and Phytotherapy)

#### Outreach/Community Service

Judge at the Regina Regional Science Fair and the File Hills Qu'Appelle Tribal Council Science Fair, organizer of biology activities with an Elder in collaboration with Treaty 4 Education Alliance and Nature Conservancy of Canada, Saskatchewan Region, organizer of the Science Showcase Series for school students at the First Nations University of Canada, gardening with Saskatchewan native plants workshop co-presenter, participant during the Wings Over Wascana Nature Festival, participant during the National High Altitude Balloon Experiment with students from Carry the Kettle First Nation.

### Scholarly Research

**Gendron, F.** Aboriginal Youth's Perceptions of Traditional and Commercial Tobacco in Canada. Accepted in Health Promotion International.

Alkholy, S.O., **Gendron, F.**, McKenna, B., Dahms, T., Ferreira, M.P. Assessing the Impact of Western Science and Indigenous Science Educators in an Online STEM Course. Accepted. Ubiquitous Learning, An International Journal.

**Gendron, F.**, Hancherow, A., and Norton, A. 2016. Exploring and revitalizing Indigenous food networks in Saskatchewan, Canada, as a way to improve food security. Health Promotion International.

doi: 10.1093/heapro/daw013

<http://heapro.oxfordjournals.org/content/early/2016/03/21/heapro.daw013.full.pdf+html>

Alkholy, S.O., **Gendron, F.**, Dahms, T., and Ferreira, M.P. 2015. Assessing student perceptions of indigenous science co-educators, interest in STEM, and identity as a scientist: a pilot study. *Ubiquitous Learning, An International Journal*. 7(3-4): 41-51  
(<http://digitalcommons.wayne.edu/nfsfrp/14/>)

**Gendron, F.**, Alqahtani, S.N., Alkholy, S.O., Haque, D., and Ferreira, M.P. 2015. Native/Aboriginal students use natural health products for health maintenance more than other university students. *International Journal of Complementary and Alternative Medicine*. 1(3): 1-9  
(<http://medcraveonline.com/IJCAM/IJCAM-01-00016.pdf>)

Ferreira, M.P., Palmer, J., McKenna, B., and **Gendron, F.** 2015. A traditional elder's anti-aging cornucopia of North American plants. Foods and dietary supplements in the prevention and treatment of disease in older adults. *Edited by R.R. Watson, Academic Press, Elsevier, Oxford, UK*. pp. 3-11.

Nilson, S., **Gendron, F.**, Bellegarde, J., McKenna, B., Louie, D., Manson, G., and Alphonse, H. 2014. Preliminary scientific investigation of the effectiveness of the medicinal plants *Plantago major* and *Achillea millefolium* against the bacteria *Pseudomonas aeruginosa* and *Staphylococcus aureus* in partnership with Indigenous Elders. *Global Journal of Research on Medicinal Plants and Indigenous Medicine*. 3(11):402-415.  
([http://gjrm.com/Upload/November2014/Suzanne%20N%20et%20al.,%20\(2014\)%20GJRM%203\(11\)%20402-415.pdf](http://gjrm.com/Upload/November2014/Suzanne%20N%20et%20al.,%20(2014)%20GJRM%203(11)%20402-415.pdf))

Ferreira, M.P., McKenna, B., and **Gendron, F.** 2014. Traditional elders in post-secondary STEM education. *The International Journal of Health, Wellness, and Society*. 3(4).  
(<http://ijw.cgpublisher.com/product/pub.198/prod.154/m.2?>)

**Gendron, F.**, Karana, R., Cyr, L.D., and Ferreira, M.P. 2014. Immunomodulatory Ethnobotanicals of the Great Lakes. *In Polyphenols in human health and disease. Edited by R. Watson, V.R. Preedy, and S. Zibadi. Academic Press, Elsevier, Oxford, UK*. pp. 453-461.

Yuzicapi, L., **Gendron, F.**, Bouch-van Dusen, R. 2013. Dakota and Lakota traditional food and tea: teachings from Elder Lorraine Yuzicapi. *Pimatisiwin*, 11(1):65-97.  
(<http://www.pimatisiwin.com/online/wp-content/uploads/2013/07/06Gendron.pdf>)

Alkholy, S.O., Alqahtani, S.N., Cochrane, A., Ferreira, M.P., **Gendron, F.** 2013. Aboriginal and non-Aboriginal students learn about natural health products from different information sources. *Pimatisiwin*, 11(1):99-112. (<http://www.pimatisiwin.com/online/wp-content/uploads/2013/07/07AlkholyAlqahtani.pdf>)

**Gendron, F.**, Bourassa, C., Cyr, L.D., McKenna, B., and McKim, L. 2013. The Medicine Room: a teaching tool for Elders and educational opportunity for youth. *First Nations Perspectives*, 5(1): 83-97. ([http://www.mfnerc.org/wp-content/uploads/2013/04/Section5\\_The-Medicine-Room-A-Teaching-Tool-for-Elders-and-Educational-Opportunity-for-Youth.pdf](http://www.mfnerc.org/wp-content/uploads/2013/04/Section5_The-Medicine-Room-A-Teaching-Tool-for-Elders-and-Educational-Opportunity-for-Youth.pdf))

Ferreira, M.P., **Gendron, F.**, and Kindscher, K. 2013. Bioactive prairie plants and aging adults: role in health and disease. *In* Bioactive food as dietary interventions for the aging population. *Edited by* R.R. Watson and V.R. Preedy. Elsevier Academic Press, San Diego. pp. 263-275 (<http://www.elsevier.com/books/bioactive-food-as-dietary-interventions-for-the-aging-population/watson/978-0-12-397155-5#>)

Ferreira, M.P., **Gendron, F.**, McClure, K.C. and Kindscher, K. 2012. North American bioactive plants for human health and performance. *Global J Res. Med. Plants & Indigen. Med.* 1(11): 568-582. ([http://www.gjrmi.com/Upload/November2012/Ferreira%20M%20Pontes%20et%20al.,%20GJRM%201\(11\)%20568-582.pdf](http://www.gjrmi.com/Upload/November2012/Ferreira%20M%20Pontes%20et%20al.,%20GJRM%201(11)%20568-582.pdf))

Ferreira, M.P., **Gendron, F.** 2011. Community-based participatory research with traditional and indigenous communities of the Americas: Historical context and future directions. *International Journal of Critical Pedagogy*. 3(3), p.153-168. (<http://libjournal.uncg.edu/ojs/index.php/ijcp/article/viewFile/254/119>)

**Gendron, F.** and Wilson, S.D. 2007. Responses to fertility and disturbance in a low-diversity grassland. *Plant Ecology*, 191:199-207.

**Gendron, F.**, Messier, C., Lo, L., and Comeau, P.G. 2006. The angular distribution of diffuse photosynthetically active radiation under different sky conditions in the open and within forest stands. *Ann. For. Sci.* 63: 43-53.

## Dr. Britt Dianne Hall

Associate Professor

[britt.hall@uregina.ca](mailto:britt.hall@uregina.ca), (306) 337 2355

### Education and Professional Development

Ph. D., Environmental Biology and Ecology, Department of Biological Sciences, University of Alberta, 2003. Supervisor: Dr. Vincent St. Louis.

M. Sc., University of Manitoba, Department of Entomology, 1996. Supervisors:

Drs. David Rosenberg and Drew Bodaly.

B. Sc., University of Manitoba, Departments of Chemistry and Microbiology, 1992. Four year Major Degree in Biochemistry.

### Employment History

Associate Professor (tenured)

Department of Biology, University of Regina, Regina, Saskatchewan (July 1, 2011 - Present).

Assistant Professor

Department of Biology, University of Regina, Regina, Saskatchewan (July 1, 2006 – June 30, 2011).

Research Associate

Department of Biology, University of Regina, Regina, Saskatchewan (August 1, 2005 - June 30, 2006).

### Teaching History

- Global Biogeochemistry (BIOL 456). Winter term 2006 – 2015, 2017;
- Ecosystems since Glaciation (BIOL 356). Fall term 2016
- Environmental Biology (BIOL 276). Fall term 2013 – 2015;
- Environmental Microbiology (BIOL 457). Winter term 2010 – 2015 (Team taught);
- Biogeochemistry for Graduate Students (BIOL 880AJ). Winter 2007 and 2013;
- Scientific Research Skills for Biological Science Graduate Students (BIOL 803). Fall term 2007, 2010, 2012, 2013 (Team taught in 2007, 2010, coordinator in 2012 - Present);
- Introductory Biology I (BIOL 100). Fall term 2006 and 2007. (Team taught).

### Student Supervision

Name	Position	Dates of supervision
Steve Wilkie	MSc student	2011-2016
Patrick Williamson	MSc student	2014-2015
Cameron Hoggarth	MSc student	2010-2013
Holly Kopecky	MSc student	2009-2010
Kim Robertson	MSc student	2008-2009
Lara Bates	MSc student	2007-2010
Jared Wolfe	Honours student	2013-2014
Kyleen Pangracs	Honours student	2012-2013
Stacy Boczulak	Honours student	2010-2011
Laruen Baron	Honours student	2007-2008

I have also directly supervised over 20 students as research assistants.

### University Service

- Dean of Science's Ad Hoc Committee on Print Optimization (2015);
- Science representation, URFA Executive Committee (Spring 2010 – 2011, 2015, 2016);
- Chair, Biology Curriculum committee (2014 – Present);
- Member, Faculty of Science Admissions and Studies committee (2012 – Present);
- Chair, Faculty of Science Safety committee (2014 – 2015);
- Member, Faculty of Science Safety committee (2009 – 2015);
- Department of Biology Equipment committee (Winter 2009 – Present);
- Library representative for the Department of Biology (July 2006 – Present);
- Member, University of Regina Women in Science and Engineering (URWISE) (2009 – 2015);
- Chair, search committee for Laboratory Instructor position (2015);
- Member, Biology Curriculum committee (2012 – 2014);
- Faculty Review Committee Member (2013 – 2014);
- Honours student coordinator for the Department of Biology (Fall 2010 – 2011);
- NSERC PGS Review Committee Member (Fall 2009, 2010);
- Chair, URWISE (2009 – 2011);
- Biology Instructor Hiring Committee member (Spring 2009);
- NSERC Undergraduate Summer Research Awards (USRA) selection committee member (Winter 2008);
- Department of Biology seminar series coordinator (Winter 2007, Winter 2010);
- Executive member URWISE (2007 – 2009).

### Scholarly Research

#### Refereed Publications (supervised students in italics)

**In press** Boczulak, S.A., M. Vanderwel, and B.D. Hall. Survey of mercury in Boreal Chorus (*Pseudacris maculata*) and Wood (*Rana sylvatica*) frog tadpoles from wetland ponds in the Prairie Pothole Region of Canada. Facets

- 2017** *Paranjape, A.R. and B.D. Hall.* Recent advances in the study of mercury methylation in aquatic systems. *Facets*. DOI: 10.1139/facets-2016-0027
- 2016** Graydon, J.A., C.P.J. Mitchell, C.J. Oswald, V.L. St Louis, P.A. Arp, B.A. Branfireun, J. Chételat, A. Cole, A.P. Dastoor, D. Durnford, C.A. Emmerton, S. Ghorpade, C. Girard, B.D. Hall, A. Heyes, J.L. Kirk, L.D. Mowat, M. Nasr, M. Richardson, A. Steffan, M.R. Turetsky, 2016. Mercury fate and methylation in terrestrial upland and wetland environments, in: Steffan, A. and Morrison, H., editors, Canadian Mercury Science Assessment Report. Environment and Climate Change Canada, Gatineau, QC, pp. 228-283.
- 2016** Lehnherr, I., M. Amyot, M.-L. Avramescu, J. Chételat, W.F. Donahue, C.S. Eckley, C. Girard, J.A. Graydon, **B.D. Hall**, S. Hamelin, R. Harris, A. Heyes, C.A. Kelly, D. Lean, N. O' Driscoll, C.J. Oswald, A. Poulain, J.W.M. Rudd, V.L. St Louis, 2016. Mercury fate and methylation in freshwater aquatic ecosystems, in: Steffan, A. and Morrison, H., editors, Canadian Mercury Science Assessment Report. Environment and Climate Change Canada, Gatineau, QC, pp. 284-322.
- 2016** Fleck, J.A., M. Marvin-DiPasquale, C. Eagles-Smith, J. Ackerman, M. Lutz, M. Tate, C.N. Alpers, **B.D. Hall**, D. Krabbenhoft and C. Eckley. Mercury and methylmercury in aquatic sediment across western North America. *Sci. Tot. Environ.* 568 :727-738.
- 2015** Painter, K.J., C.J. Westbrook, **B.D. Hall**, N.J. O'Driscoll, and T.D. Jardine. Effects of in-channel beaver impoundments on mercury bioaccumulation in Rocky Mountain stream food webs. *Ecosphere*. **6(10)**: art 194. DOI: 10.1890/ES15-00167.1
- 2015** *Hoggarth, C.G., B.D. Hall*, and C. Mitchell. Mercury methylation in high and low-sulphate impacted wetland ponds within the Prairie Pothole Region of North America. *Environmental Pollution*. **205**:269-277. DOI: 10.1016/j.envpol.2015.05.046
- 2014** **Hall, B.D.**, J.L. Doucette, *L.M. Bates*, A. Bugajski, S. Niyogi, and C.M. Somers. Differential trends in mercury accumulation in Double Crested Cormorant populations of Canadian Prairie. *Ecotoxicology*. **23**:419-428. DOI: 10.1007/s10646-014-1207-9
- 2014** Clayden, M.G., K.A. Kidd, J. Chételat, **B.D. Hall**, and E. Garcia. Environmental, geographic and trophic influences on methylmercury concentrations in macroinvertebrates from lakes and wetlands across Canada. *Ecotoxicology*. **23**:273-284. DOI 10.1007/s10646-013-1171-9
- 2014** **Hall, B.D.** Guest Editorial: Science communication. *Schol Res Comm.* 5:1.
- 2012** *Bates, L.M. and B.D. Hall.* Investigating the concentrations of methylmercury in invertebrates from Saskatchewan prairie pothole wetlands. *Environ. Pollut.* **160**:153-160.
- 2011** K.R. Rolfhus, **B.D. Hall**, B. Monson, M.P. Paterson, J. Jeremiason, and L. Chasar. Assessment of mercury bioaccumulation within the lower food web of lakes in the western Great Lakes Region. *Ecotoxicology*. **20**:1520-1529.
- 2011** Bittrich, D.R., **B.D. Hall**, A.P. Rutter, J.J. Schauer. Photodecomposition of methylmercury in atmospheric waters. *Aerosol Air Qua. Res.* **11**:290-298.



- 2009** Hall, B.D., L.A. Baron, and C.M. Somers. 2009. Mercury concentrations in surface water and harvested waterfowl from the prairie pothole region of Saskatchewan. *Environ. Sci. Technol.* **43**(23):8759-8766.
- 2009** Hall, B.D., K.P. Cherewyk, M.J. Paterson, and R.A. Bodaly. 2009. Changes in methyl mercury concentrations in zooplankton from four experimental reservoirs with differing amounts of carbon in the flooded catchments. *Can. J. Fish. Aquat. Sci.* **66**:1910-1919.
- 2009** Marvin-DiPasquale, M.C, M.A. Lutz, M.E. Brigham, D.P. Krabbenhoft, G.R. Aiken, W.H. Orem, and B.D. Hall. 2009. Mercury cycling in stream ecosystems: 2. Benthic methylmercury production and bed sediment-porewater partitioning. *Environ. Sci. Technol.* **43**(8): 2726–2732. *Note: This publication was chosen by the editors to be featured in Environ. Sci. Technol. Online News.*
- 2008** Graydon, J.A., V.L. St. Louis, H. Hintlemann, S.E. Lindberg, K.A. Sandilands, J.W.M. Rudd, C.A. Kelly, B.D. Hall, and L.D. Mowat. 2008. Long-term wet and dry deposition of total and methyl mercury in the remote boreal ecoregion of Canada. *Environ. Sci. Technol.* **42**(22):8345-8351.
- 2008** Hall, B.D., G.R. Aiken, D.P. Krabbenhoft, M.C. Marvin-DiPasquale, and C.M. Swarzenski. 2008. Wetlands as Principal Zones of Methylmercury Production in Southern Louisiana and the Gulf of Mexico Region. *Environ. Pollution.* **154**:124-134.
- 2006** Hall, B.D., M.L. Olson, A.P. Rutter, R.R. Frontiera, D.P. Krabbenhoft, D.S. Gross, M. Yuen, T.M. Rudolph, J.J. Schauer. 2006. Atmospheric mercury speciation in Yellowstone National Park. *Sci. Total Environ.* **367**:354-366.

#### Non-referred Publications

- 2013** Orihel, D., B.D. Hall, C.A. Kelly, and J.W.M. Rudd. 2013. Greg Rickford, Canada's new science minister, has poor track record. *The Toronto Star.* 17 July 2013.
- 2010** Hall, B.D. 2010. Mercury concentrations in surface water and harvested waterfowl from the prairie pothole region of Saskatchewan. *Western Canadian Game Warden Magazine.* **2**(1):10-11.
- 2009** Hall, B.D. 2009. Study of mercury content in Saskatchewan waterfowl. *The Outdoor Edge Magazine.* **19**(6):39.
- 2009** Hall, B.D. 2009. Methylmercury cycling in boreal forest uplands: Implications of reservoir creation. VDM Publishing House Ltd. Beau Bassin, Mauritius
- 2008** Marvin-DiPasquale, M.C.; M.A. Lutz, D.P. Krabbenhoft, G.R. Aiken, W.H. Orem, B.D. Hall, J.F. DeWild, and M.E. Brigham. 2008. Total mercury, methylmercury, methylmercury production potential, and ancillary streambed-sediment and pore-water data for selected streams in Oregon, Wisconsin, and Florida, 2003–04. U.S. Geological Survey Data Series 375. 25p. On-line: <http://pubs.er.usgs.gov/usgspubs/ds/ds375>

#### Invited Conference Presentations

- 2015** Hall, B.D. and S. Campbell. Are there microplastics downstream of Regina's wastewater treatment plant? Saskatchewan Ministry of Environment Fish and Wildlife Branch Meeting, Regina Saskatchewan, 1-2 December 2015.

- 2006** **Hall, B.D.**, M.L. Olson, A.P. Rutter, R.R. Frontiera, D.P. Krabbenhoft, D.S. Gross, M. Yuen, T.M. Rudolph, and J.J. Schauer. Atmospheric mercury speciation in Yellowstone National Park. 8th International Conference on Mercury as a Global Pollutant. Madison, Wisconsin. 6-11 August 2006.

#### Conference Presentations

- 2015** **Hall, B.D.**, *K. J. Pangracs*, J. Kirk, and D. Muir. Do potential rates of methylmercury production differ in prairie wetland sediments near coal fired power plants? American Geophysical Union Joint Assembly. Montreal, Quebec. 3-7 May 2015.
- 2011** **Hall B.D.**, *L.M. Bates*, J. Doucette, A. Bugajski, S. Niyogi, and C.M. Somers. Mercury concentrations in Double Crested Cormorants in prairie populations. 10th International Conference on Mercury as a Global Pollutant. Halifax, Nova Scotia. 24-29 July 2011.
- 2010** **Hall, B.D.** 2010. Impacts of land use and hydrology on methylmercury concentrations in water in prairie wetlands. American Geophysical Union Fall Meeting. San Francisco, California. 13-17 December 2010.
- 2010** **Hall, B.D.** Does land use dictate methylmercury concentrations in Saskatchewan wetlands? Society of Canadian Limnologists Annual Meeting. Winnipeg, Manitoba. 7-9 January 2010.
- 2007** **Hall, B.D.** Are prairie wetlands important sources of neurotoxic methylmercury? Society of Wetland Scientists Annual Meeting. Sacramento, California. 10-15 June 2007.
- 2006** **Hall, B.D.** Ecological processes controlling methylmercury production in prairie wetlands. 8th International Conference on Mercury as a Global Pollutant. Madison, Wisconsin. 6-11 August 2006.
- 2006** **Hall, B.D.**, G.R. Aiken, D.P. Krabbenhoft, M. Marvin-DiPasquale, and C. Swarenski. Wetlands as principal zones of methylmercury production in southern Louisiana and the Gulf of Mexico region. 8th International Conference on Mercury as a Global Pollutant. Madison, Wisconsin. 6-11 August 2006.
- 2006** **Hall, B.D.** Ecological processes controlling methylmercury production in prairie wetlands. Society of Canadian Limnologists Annual Meeting. Calgary, Alberta. 5-7 January 2006.

#### Invited Seminars

- 2013** **Hall, B. D.** The Experimental Lakes Area: A lightning rod of discontent in the science community. The Canadian Association of University Teachers Annual Council. Ottawa, Ontario. 25 April 2013.
- 2012** **Hall, B.D.** The need for science in the public realm. Rotary Club of Regina, 10 October, 2012.
- 2010** **Hall, B.D.** Are prairie wetlands important sources of neurotoxic methylmercury? Toxicology Centre, University of Saskatchewan. 26 March 2010.
- 2010** **Hall, B.D.** The study of ecological processes: Examples using the mercury biogeochemical cycle. Brandon University. 8 March 2010.

- 2009** **Hall, B.D.** Mercury cycling in Saskatchewan. Department of Geology, University of Regina. 1 December 2009.
- 2009** **Hall, B.D.** Are prairie wetlands important sources of neurotoxic methylmercury? Department of Biology, University of Regina. 13 November 2009.
- 2008** **Hall, B.D.** From Louisiana to the Saskatchewan prairie: Ecological factors controlling methylmercury production. Department of Biology, University of Saskatchewan. 14 February 2008.
- 2007** **Hall, B.D.** Are prairie wetlands important sources of neurotoxic methylmercury? Department of Biological Sciences, University of Quebec at Montréal. 6 December 2007.
- 2007** **Hall, B.D.** From Louisiana to the Saskatchewan prairie: Ecological factors controlling methylmercury production. Department of Chemistry and Biochemistry, University of Regina. 29 March 2007.

#### Contributed Conference Presentations

- 2016** *Campbell, S.H.* and **B.D. Hall**. Prevalence of microplastics in water and gastrointestinal tracts of fish from Wascana Creek. Society of Environmental Toxicology and Chemistry Prairie Northern Regional Chapter annual meeting. Winnipeg, Manitoba. 17 June 2016.
- 2016** Paterson, M.P., L. Hrenchuk, P. Blanchfield, H. Hintelmann, **B.D. Hall**. The effect of changes in mercury deposition on accumulation by zooplankton and fish: an update on the METAALICUS project Society of Environmental Toxicology and Chemistry Prairie Northern Regional Chapter annual meeting. Winnipeg, Manitoba. 17 June 2016.
- 2016** *Campbell, S.H.* and **B.D. Hall**. Prevalence of microplastics in water and gastrointestinal tracts of fish from Wascana Creek. Prairie Universities Biological Symposium. Lethbridge, Alberta. 18-20 February 2016.
- 2015** Marvin-DiPasquale, M., J.L. Agee, E. Kakouros, L.H. Kieu, M. Arias, D.P. Krabbenhoft, and **B.D. Hall**. Spatial variations in benthic methylmercury production rates among ecosystems and habitats across western North America. Society of Toxicology and Chemistry Annual Meeting. Salt Lake City, Utah. 1-5 November 2015.
- 2015** *Williamson, P.R.*, R.C. Harris, and **B.D. Hall**. Does Mercury Cycling and Bioaccumulation Differ Between Prairies and Boreal Lakes? American Geophysical Union Joint Assembly. Montreal, Quebec. 3-7 May 2015
- 2015** *Williamson, P.R.*, **B.D. Hall**, and R.C. Harris. Can we use the Dynamic Mercury Cycling Model to explore mechanistic processes in mercury cycling in prairie lakes? Prairie Universities Biological Symposium. Winnipeg, Manitoba. 20-22 February 2015.
- 2014** *Wolfe, J.D.*, **B.D. Hall**, and R.M. Brigham. Mercury concentrations in red-winged blackbirds (*Agelaius phoeniceus*) prairie pothole region wetlands. Society of Toxicology and Chemistry Annual Meeting. Vancouver, British Columbia. 9-13 November 2014.
- 2014** *Wolfe, J.D.*, **B.D. Hall**, and R.M. Brigham. Mercury concentrations in red-winged blackbirds (*Agelaius phoeniceus*) and dragonfly larvae (suborder: Anisoptera) from wetlands in the

- Saskatchewan prairie pothole region. Prairie Universities Biological Symposium. Regina, Saskatchewan. 20-22 February 2014.
- 2014** Painter, K., C. Westbrook, **B.D. Hall**, N. O'Driscoll, and T. Jardine. In-channel beaver impoundments increase availability of methylmercury to stream food webs. 67th Canadian Conference for Fisheries Research in conjunction with the Society of Canadian Limnologists. Yellowknife, Northwest Territories. 3 - 5 January 2014.
- 2013** *Wilkie, S.C., B.D. Hall, R.H.M. Espie, and N. Basu.* Total mercury concentrations in trapped river otter (*Lontra canadensis*) from northern Saskatchewan. 11th International Conference on Mercury as a Global Pollutant. Edinburgh, Scotland. 29 July-2 August 2013.
- 2013** *Hoggarth, C.G.J., B.D. Hall, and C.P.J. Mitchell.* Sediment as a source of MeHg in prairie wetlands. 11th International Conference on Mercury as a Global Pollutant. Edinburgh, Scotland. 29 July-2 August 2013.
- 2013** Bielefeld, K., C. Westbrook, **B.D. Hall**, N. O'Driscoll, T. Jardine. In-channel beaver impoundments increase food-web available mercury downstream. Society of Environmental Toxicology and Chemistry Prairie Northern Chapter. Lethbridge, Alberta. 7-8 June, 2013.
- 2013** *Hoggarth, C.G.J. and B.D. Hall.* Methylmercury production in prairie wetland sediment. Prairie Universities Biological Symposium. Winnipeg, Manitoba. 21-22 February 2013.
- 2013** *Pangracs, K.J. and B.D. Hall.* Quantifying net methylmercury production in prairie wetland sediments surrounding coal-fired electrical-generating plants. Prairie Universities Biological Symposium. Winnipeg, Manitoba. 21-22 February 2013.
- 2011** *Hoggarth, C.G.J. and B.D. Hall.* Mercury concentrations in prairie wetlands. American Geophysical Union Fall Meeting. San Francisco, California. 5-9 December 2011.
- 2011** *Hoggarth, C.G.J. and B.D. Hall.* Total mercury concentrations in prairie wetland sediments. 10th International Conference on Mercury as a Global Pollutant. Halifax, Nova Scotia. 24-29 July 2011.
- 2011** *Boczulak, S.A. and B.D. Hall.* The effect of agricultural land-use on mercury concentrations in tadpoles from Saskatchewan wetlands. 10th International Conference on Mercury as a Global Pollutant. Halifax, Nova Scotia. 24-29 July 2011.
- 2011** Rolfhus, K.R., **B.D. Hall**, B. Monson, M.J. Paterson, J. Jeremiason, and B. Knights. Assessment of mercury bioaccumulation within the lower food web of lakes in the western Great Lakes Region. 10th International Conference on Mercury as a Global Pollutant. Halifax, Nova Scotia. 24-29 July 2011.
- 2011** *Hoggarth, C.G.J. and B.D. Hall.* Sediment organic content and total mercury concentrations in prairie wetlands. Prairie Universities Biological Symposium. Saskatoon, Saskatchewan. 24-26 February 2011. Awarded best student paper for field research.
- 2009** *Bates, L.M. and B.D. Hall.* Investigating the bioaccumulation of methylmercury in Saskatchewan wetland food webs. Entomological Societies of Canada and Manitoba. Winnipeg, Manitoba. 18-21 October 2009.

- 2009** *Bates, L.M.* and **B.D. Hall**. Investigating the bioaccumulation of methylmercury in Saskatchewan wetland food webs. Entomological Society of America - North Central Branch. St. Louis, Missouri. 15-18 March 2009.
- 2008** *Bates, L.M.* and **B.D. Hall**. Utilizing invertebrates to investigate the bioaccumulation of methylmercury in Saskatchewan prairie pothole food webs. Prairie Universities Biological Symposium. Winnipeg, Manitoba. 21-23 February 2008.
- 2008** *Robertson, K.* and **B.D. Hall**. Methylmercury production rates in prairie pothole region wetlands. Prairie Universities Biological Symposium. Winnipeg, Manitoba. 21-23 February 2008.
- 2008** *Baron, L.A.* and **B.D. Hall**. Methylmercury concentrations in waterfowl harvested from Southern Saskatchewan. Prairie Universities Biological Symposium. Winnipeg, Manitoba. 21-23 February 2008.
- 2006** Kolb, C., **B.D. Hall**, and J.J. Schauer. The urban excess of atmospheric mercury. 8th International Conference on Mercury as a Global Pollutant. Madison, Wisconsin. 6-11 August 2006.
- 2006** Lutz, M.A., M. Marvin-DiPasquale, M.E. Brigham, **B.D. Hall**, P.K. Smith, L.L. Rozumalski, A.H. Bell, M.K. Segreto, and D.P. Krabbenhoft. Assessing mercury methylation rates in heterogeneous streambed sediments. 8th International Conference on Mercury as a Global Pollutant. Madison, Wisconsin. 6-11 August 2006.
- 2006** Rutter, A.P., C.J. Kolb, **B.D. Hall**, H. Manolopoulos, and J.J. Schauer. The Urban Excess of Atmospheric Mercury Species in Milwaukee, WI. 8<sup>th</sup> International Conference on Mercury as a Global Pollutant. Madison, Wisconsin. 6-11 August 2006.
- 2006** Marvin-DiPasquale, M., **B.D. Hall**, J.R. Flanders, N. Ladizinski, J.L. Agee, L.H. Kieu, L. Windham-Myer. Ecosystem investigations of benthic methylmercury production: A tin-reduction approach for assessing the inorganic mercury pool available for methylation. 8th International Conference on Mercury as a Global Pollutant. Madison, Wisconsin. 6-11 August 2006.

**Dr. Mel Hart**  
 Laboratory Instructor  
[mel.hart@uregina.ca](mailto:mel.hart@uregina.ca), (306) 585-4284

Education and Professional Development

<b>PhD (Biology)</b> – Simon Fraser University, Burnaby, BC	2012
<b>MSc (Biology)</b> – Simon Fraser University, Burnaby, BC	2006
<b>BSc (major: biology, with distinction)</b> -- University of Victoria, Victoria, BC	2003
<b>BA (majors: English, and Greek and Roman Studies, with distinction)</b> University of Victoria, Victoria, BC	2003

Employment History

<b>Laboratory Instructor</b> University of Regina – Regina, SK	Jul. 2015 – present
<b>Teaching Laboratory and Collections Technician</b> Simon Fraser University – Burnaby, BC	Jan. 2014-Jun. 2015
<b>Biology Instructor</b> Alexander College – Vancouver & Burnaby, BC	Sept. 2012 – Dec. 2013
<b>Veterinary Assistant</b> Mundy Animal Hospital	Sept. 2013 – Dec. 2013
<b>Teaching Marker: Animal Physiology 307W</b> Simon Fraser University – Burnaby, BC	Jan. - Apr. 2012, Sept. - Dec. 2013
<b>Teaching Assistant: Vertebrate Biology 316</b> Simon Fraser University – Burnaby, BC	May - Aug. 2013
<b>Laboratory Instructor: Invertebrate Biology 306</b> Simon Fraser University – Burnaby, BC	Jan. – Apr. 2013
<b>DNA Technician: Bird blood samples</b> Simon Fraser University – Burnaby, BC	Jan. 2012 – Apr. 2013
<b>Animal Care Worker</b> Simon Fraser University – Burnaby, BC	2011-2013
<b>Teaching Assistant: Introduction to Biology 100</b> Simon Fraser University – Burnaby, BC	May - Aug. 2012
<b>Teaching Marker: Experimental Techniques 329</b> Simon Fraser University – Burnaby, BC	May – Aug. & Sept. - Dec. 2011
<b>Ruff Colony Manager</b> Simon Fraser University – Burnaby, BC	May – Aug. 2011
<b>Laboratory Instructor: Invertebrate Biology 306</b> Simon Fraser University – Burnaby, BC	Jan. - Apr. 2011
<b>Animal Caregiver</b>	2007-Janary 2011

Xotics International Sales – Port Moody, BC  
**Teaching Assistant: Invertebrate Biology 306** Jan. - Apr. 2005, 2006 & 2011  
 Simon Fraser University – Burnaby, BC  
**Research Assistant** Summers of 2004-2010  
 Simon Fraser University – Burnaby, BC  
**Teaching Assistant: Neurophysiology 472** Sept. - Dec. 2007  
 Simon Fraser University – Burnaby, BC  
**Teaching Assistant: Ecology 204** Sept. - Dec., 2003 & 2007  
 Simon Fraser University – Burnaby, BC

### Teaching History

**Lab Instructor: BIO 275 (Ecology)** Fall 2016  
**Lab Instructor: BIO 140 (Human Biology)** Fall 2016, Winter 2015, Fall 2015  
**Lab Instructor: BIO 378, formerly 276 (Animal Physiology)** Fall 2015  
**Lecture and Lab Instructor: BIO 204 (Introductory Ecology)** Spring 2013  
**Lecture and Lab Instructor: BIOL 102 (Introduction to Biology II)** Winter 2013  
**Lecture and Lab Instructor: BIO 100 (Introductory Biology)** every term 2012-2013  
**Lecture and Lab Instructor: BIO 101 (Introduction to Biology I)** Fall 2012 & 2013  
**Laboratory Instructor: Invertebrate Biology 306** Jan. – Apr. 2011 & 2013  
**Teaching Marker: Animal Physiology 307W** Jan. - Apr. 2012, Sept. - Dec. 2013  
**Teaching Assistant: Vertebrate Biology 316** May - Aug. 2013  
**Teaching Assistant: Introduction to Biology 100** May - Aug. 2012  
**Teaching Marker: Experimental Techniques 329** May – Aug. & Sept. - Dec. 2011  
**Teaching Assistant: Invertebrate Biology 306** Jan. - Apr. 2005, 2006 & 2011

### Student Supervision

Name	Position	Dates of supervision
Kolitha Halangoda	Independent Semester of Research	Summer 2012

### University Service

**URFA council of representatives member** 2016-present  
 University of Regina  
**Chemistry 10 month Lab Instructor search committee member** Summer 2016  
 University of Regina  
**Chemistry 8 month Lab Instructor search committee member** Summer 2016  
 University of Regina  
**Science Rendezvous** Spring 2016  
 University of Regina  
**Sunflower Preschool plants and worms lab activity host** Spring 2016  
 University of Regina

<b>Girl Guide insect and protist lab activity host</b> University of Regina	Spring 2016
<b>Regina Regional Science Fair Judge</b> University of Regina	Spring 2016
<b>Cook – IAS 4<sup>th</sup> annual pipe ceremony and feast</b> University of Regina	Spring 2016
<b>Museum quality preparation of mammals instructor</b> Simon Fraser University	Fall 2015
<b>Education Table Designer and host</b> BC Reptile Expo	Spring 2015
<b>Harry Potter visits SFU exhibit curator</b> Simon Fraser University	Fall 2014
<b>Science AL!VE lab host</b> Simon Fraser University	2014 & 2015
<b>Science Spooktacular</b> Simon Fraser University	2009, 2010, 2013, 2014
<b>Science Rendezvous</b> Simon Fraser University	2013, 2014
<b>Independent Research Project Supervisor</b> Simon Fraser University	Summer 2012
<b>Graduate student representative</b> Entomological Society of BC	2008-2010
<b>Organizing committee member</b> Joint Meeting of the Entomological Society of BC & Canada	2010
<b>Session mediator</b> Entomological Society of BC's AGM	2009
<b>TSSU steward for the biological sciences</b> Simon Fraser University	2007-2008
<b>Event planner and volunteer</b> Simon Fraser University biology Christmas party	2005-2008
<b>Science representative</b> SFU Open House	2006, 2008, 2012
<b>Mentor for new graduate students</b> Biology: Simon Fraser University	2005, 2008, 2009

### Scholarly Research

Jackson M, Belton P, McMahon S, **Hart M**, McCann S, Azevedo D & Hurteau L (2016) The First Record of *Aedes (Hulecoeteomyia) japonicus* (Diptera: Culicidae) and Its Establishment in Western Canada. *Journal of Medical Entomology*. 53(1): 241-244.

Chubaty A, **Hart M** & Roitberg B (2014) To tree or not to tree: The role of energy limitation on host tree acceptance in a bark beetle. *Evolutionary Ecology Research*. 16: 337-349.



**Hart M** (2012) Making waves: the use of sound by a mosquito and three moth species. PhD thesis. Simon Fraser University.

**Hart M**, Belton P & Kuhn R (2011) The Risler Manuscript. *European Mosquito Bulletin*. 29:103-113.

**Hart M**, Belton P & Gries G (2010) The effect of fibril erection in male *Aedes togoi*: an open and shut case. *Canadian Acoustics* 38 (3): 36-37.

Schlamp KK; Brown K; Gries R; **Hart M**; Gries G; & Judd GGR (2006) Diel periodicity of sexual communication in *Anarsia lineatella* (Lepidoptera : Gelechiidae). *Canadian Entomologist*. 138:384-389.

**Hart M** (2006) The role of sonic signals in the sexual communication of peach twig borers, *Anarsia lineatella*, Zeller (Lepidoptera, Gelechiidae). MSc thesis. Simon Fraser University.



## Peter R. Leavitt

Professor, Canada Research Chair in Environmental Change and Society

[peter.leavitt@uregina.ca](mailto:peter.leavitt@uregina.ca), (306) 585 4253,

### Education and Professional Development

Ph.D. 1989, Aquatic Biology, University of Notre Dame, Notre Dame, Indiana, USA.  
M.Sc. 1985, Limnology, Queen's University, Kingston, Ontario, Canada.  
B.Sc. 1981, Biology, Honours, 1st class, Queen's University, Kingston, Ontario, Canada.

### Employment History

Director. Canadian Institute of Ecology and Evolution (2012-present).  
Canada Research Chair in Environmental Change and Society (Tier I). University of Regina, Regina, Saskatchewan. (2003-2010; renewed 2010-2017).  
Director. Institute for Environmental Change and Society (IECS) (formerly Environmental Quality Analysis Laboratory, EQAL), University of Regina, Regina, Saskatchewan. (2000-present).  
Professor. Department of Biology, University of Regina, Regina, Saskatchewan. (2001-present).  
Fulbright Visiting Research Chair, University of California-Santa Barbara, Santa Barbara, California (2015).  
Center Fellow. National Center for Ecological Analysis and Synthesis, University of California-Santa Barbara, Santa Barbara, California (2007).

### Teaching History

Lecturer: Biology 276 – Environmental Biology (Regina) (2002-06, 2008-10, 2012, 2016)  
Biology 335 - Limnology (Regina) (1994-98, 2001-06, 2008-14, 2016)  
Biology 490BP - Undergraduate Research Project (Regina) (2012)  
Co-lecturer: Biology 803 – Scientific Research Skills (Regina) (2008, 2010, 2012-14)

### Student Supervision

#### *Research Associates*

Deirdre Bateson (2015- )

Tyler Boa (2014-2015)

Amy Morrison-Hennessy (2015)

Zoraida Quiñones-Rivera (2006- )  
Martin Callahan (2005-07)  
Dunling Wang (2005-06)

Vincent Ignatiuk (2008-14)  
Samantha Dietrich (2003-05)

*Post-Doctoral Researchers*

Nicole Hayes (2015- )  
Lynda Bunting (2004-15)  
Kerri Finlay (2006-09)  
Blake Matthews (2006)

Emma Wiik (2015- )  
Richard Vogt (2010-14)  
Alain Patoine (2003-08)

*PhD students*

Vanessa Swarbrick (2010- )  
Lushani Nanayakkara (2011- )

Heather Haig (2012- )  
Iris Droscher (2006-08)

*MSc students*

Jared Wolfe (2014- )  
Derek Donald (2007-11)  
Samantha Pham (Dietrich) (2004-08)  
Kurt Samways (2006-08)

Matthew Bogard (2008-11)  
Melanie Ness (2003-07)  
Curtis Brock (2003-06)

*BSc students*

Derek Johnson (2016- )	Grayson Wihlsdal (2016- )	
Terry Mattern (2015-2016)	Justin Odynski (2015- )	Ethan Cobb (2016- )
Brady O'Connor (2014-16)	Kristen Grey (2015-2016)	Justine Kerr (2015)
Tiera McLeod (2014)	Michelle Lang (2014-15)	Gregory Owens (2014-15)
Erin Hillis (Hons 2012-13)	Jared Wolfe (2013)	Eric Armit (2013)
Leanne Trembley (2013)	Kyleen Pangracs (2012-13)	Chase Morell (2012-13)
Julia Hart (2012)	Katherine Miller (2012-13)	Morgan Ollinger (2011-12)
Jacob Ziegler (Hons 2011-12)	Jenna Toraruk (Hagen) (2008-11)	
Ryan Schnell (2011)	Taylor Mason (2011)	Liam Donnelly (2011)
Garricks Elechi (2008-10)	Ashley Walchuk (2010)	Braden Schmidt (2010)
Cameron Hoggarth (2009)	Anthony Freywald (2008-09)	Jason Unruh (2009)
Vincent Ignatiuk (2006-08)	Shelley Wellman (2008)	Paul Humenchuk (2008)
Derek Donald (Hons. 2006-07)	Kelsie Dale (2006-07)	Jennifer Rumancik (2007)
Christian Rufolfo Lott (2007)	Adam Mitichuk (2006)	Rachel Magnus (2005-06)
Martin Callahan (2006)		

University Service

**Professional Activities:**

*Leadership*

- Director, Canadian Institute of Ecology and Evolution (CIEE) (2012-present).
- Founding Director, Institute of Environmental Change and Society (2011-present).
- Founding Director, Environmental Quality Analysis Laboratory (2000-present).
- Board of Directors, Association for the Sciences of Limnology and Oceanography (ASLO) (formerly American Society of Limnology and Oceanography) (2012-2015).

- Past-President (2006), President (2003-2005), and Vice-President (1999-2002), Society of Canadian Limnologists (SCL).

#### *Outreach*

- Scientific consultant to Leader of Official Opposition (2007), Premier of Manitoba (2010-11), Secretary to Manitoba Cabinet (2010-11), Environment Canada (2010), Chinese Environmental Protection Agency (2008), MB Clean Environment Commission (2008-10), Manitoba Water Stewardship (2008- ), File Hills Qu'Appelle Tribal Council (2012), Sakimay First Nations Chief's Council (2012), Utah State Dept Environmental Quality (2011-12), Buffalo Pound Water Treatment Plant (2010), Last Mountain Lake Stewardship Association (2009), Mayor of Regina (2008), City of Regina (2008, 2012), Wascana Centre Authority (most years), Royal Saskatchewan Museum (2006), and Stantec Consulting (2011)
- Media Liaison, Society of Canadian Limnologists (2001, 2002).
- 121 media interviews since 2005, including CBC *The National*, CBC *As it Happens*, *National Post*, *Globe and Mail*, Canadian Press, *National Geographic*, *Canadian Geographic*, *Maclean's*, Radio Canada International, Radio Netherlands International, Reuters, Al Jazeera, *Science* and regional news outlets. Career total: 248 unique media interviews.
- Expert testimony to Canadian Federal Court in matter of potash mining and aquatic resource use (2012).

#### *Scientific Service*

- Conference Co-Chair, American Society of Limnology and Oceanography (2006).
- National Organizing Committee, 2007 Congress of International Association of Theoretical and Applied Limnology (SIL).
- National Organizing Committee and Working Group Chair, 2008 Chapman Conference on Lakes and Reservoirs as Sentinels, Integrators, and Regulators of Climate Change, (ASLO, AGU).
- Editorial Board: *Ecology*, *Ecosphere* and *Ecological Monographs* (2002-2014); *Inland Waters* (2010-present); University of California Press, *Freshwater Ecology Series* (2007-2014), *Limnology and Oceanography: Letters* (2016-present).
- Guest Editor, *Proceedings of the National Academy of Science* (2011).
- US National Science Foundation (NSF) Committee of Visitors, Division of Environmental Biology (DEB) review (2015).
- US National Science Foundation (NSF) Grant Selection Panel, *Dynamics of Coupled Natural and Human Systems* (2009 and 2010).
- Committee Member, American Society of Limnology and Oceanography: Redfield Lifetime Award Committee (2007-2010; Chair 2010-2012); Nominating Committee (2008-2010); Awards Committee (2010-2012; Chair 2012-2015); Hutchinson Committee (Chair 2012-2015).
- Society of Canadian Limnologists Visioning Committee (2012-2013).
- Invited Panellist, *The Future of Limnology in Canada*, Society of Canadian Limnologists.
- Canada Research Chair, College of Reviewers (2002-present).

- Reviewer: *Advances in Limnology, Ambio, Applied and Environmental Microbiology, Aquatic Microbial Ecology, Aquatic Sciences, Archiv für Limnologie, Arctic Antarctic and Alpine Research, Biogeochemistry, Biogeosciences, Canadian Journal of Fisheries and Aquatic Sciences, Canadian Journal of Microbiology, Catena, Ecohydrology and Hydrobiology, Ecology, Ecology Letters, Ecological Applications, Ecological Monographs, Ecosystems, Environmental Management, Environmental Science and Technology, Estuaries, Estuaries and Coasts, Estuarine, Coastal and Shelf Science, Freshwater Biology, Fundamental and Applied Limnology, Geological Survey of Canada Bulletin, Geophysical Research Letters, Global Biogeochemical Cycles, Global Change Biology, Hydrobiologia, Inland Waters, Journal of Environmental Monitoring and Assessment, Journal of Global Planetary Change, Journal of Global Planetary Change, Journal of Great Lakes Research, Journal of Hydrology, Journal of Limnology, Journal of the North American Benthological Society, Journal of Paleolimnology, Lake and Reservoir Management, Lakes & Reservoirs: Research and Management, Limnology and Oceanography, Marine Ecology Progress Series, Mem, Ist. Ital. Idrobiol., Nature, Nature Communications, Oceanologia, Organic Geochemistry, Palaeogeography Palaeoclimatology Palaeoecology, Proceedings of the National Academy of Science, Quaternary Science Reviews, NPG Scientific Reports, Theoretical and Applied Climatology, Transactions of the American Fisheries Society, Trends in Ecology and Evolution, Water Air and Soil Pollution, Wetlands, Alberta Challenge Grants in Biodiversity, American Chemical Society, Canada Research Chairs, Canada Council for the Arts, Exxon Valdez Trustee Council, Fond de recherche sur la nature et les technologies (QC), Fonds sur Forderung (Austria), Geological Survey of Canada, Israel Science Foundation, Maryland Seagrant Program, MITACS, National Geographic Society, UK Natural Environmental Research Council (NERC), Natural Science and Engineering Research Council of Canada (NSERC), Netherlands Organization for Scientific Research, US Geological Survey.*

### **University Service:**

#### *Inter-University*

- NSERC grant pre-submission reviewer (2013 McGill, UQAM, Trent), (2011 UNB-SJ), (2009 Moncton), (2004 Regina).
- Canada Research Chair pre-submission reviewer (2010 UQAM), (2009 UNB-SJ).
- National Science Foundation (NSF) pre-submission reviewer (2010 MSU).
- Reviewer Tenure packages: McGill (2015), UQAM (2014), Maine (2012), Michigan State (2011), Western Ontario (2006).
- Professor review (Mississippi) (2011).
- Reviewer Kilham Fellowship (2011).

#### *University*

- Executive of Council (2009-13, 2014-2017).
- Council Task Force on Executive Format and Operations (2010).
- Council Committee on Research (2011-13).
- Committee to Review Strategic Research Plan (2012).

- Internal reviewer for pre-submission grants to NSERC (2009-13), Canada Foundation for Innovation (2009, 2012), Canada Research Chair (2011, 2012) grant programs.
- Chair, Search Committee, Assistant Director of Canadian Institute of Ecology and Evolution (2012).
- Presentation on behalf of University to NATVAC (2012), Canadian Senate Committee on Energy, the Environment and Natural Resources (2011), President Chengdu University, China (2011), Industry Canada (2011), U. Regina Senate (2009), NSERC Indirect Costs Committee (2009), Communities of Tomorrow (2006), Government of Saskatchewan Cabinet (2006, 2001).
- Local Steering Committee, Pacific Institute of Mathematics Sciences (2009-10).
- Public Debater: *Unscripted: A Harvest of Cultural Ideas* (Regina Public Library Series) (2009).
- Nominator, Regina Alumni Award for of Excellence in Teaching (M. Brigham, 2006).

#### *Faculty of Science*

- Director (founding), Institute of Environmental Change and Society (IECS), formerly Environmental Quality Analysis Laboratory (EQAL) (2000- ).
- Faculty Review Committee (2011, 2012).
- Faculty Search Committees (2) for IECS staff scientists (2012).
- Canada Research Chair Search Committee (2006)

#### *Department of Biology*

- Supervisory committees:
  - PhD - Mohamed Anas (2013-), Joe Poissant (2010- ), Suzanne Lapp (2009-12), Heather Boyd (Calgary)(2010-12).
  - MSc - Mohamed Anas (2010-13), Elizabeth Stark (2010-13), Lara Bates (2010-11), Ryan Cooper (2008-10).
- Acting Head (2011).
- Research Seminar Co-ordinator (2010).
- Faculty Search Committee; Plant Ecology (2014), Nursing Microbiology (2011), Microbiology (2009).
- Biology Space Committee (2004-06).

#### *Indices of Academic Achievement*

- ISI H-index = 40 (42 in ResearchGate, 49 in Google Scholar); In 2006, University of Regina Biology Department was ranked in the top 1% of global “Plant and Animal Science” Departments by Thomson Reuters ISI.
- World’s most highly published limnologist in *Limnology and Oceanography* since 1995 (31 papers; source ASLO Board of Directors). *Limnology and Oceanography* is the top-ranked journal in freshwater and marine sciences (source Thomson Reuters ISI).
- Drought risk assessments used by 20 Federal, Provincial and local organizations to evaluate their vulnerability to future droughts, including MB Hydro Corp, SK Crop Insurance Corp, and MB Crop Insurance Corp, and Agriculture and Agri-Food Canada (formerly, Prairie Farm Rehabilitation Administration).

- Water quality research used as the basis for the *Save Lake Winnipeg Act*, passed into law unanimously by Manitoba Legislature in June 2011. Legislative transcript available on request.
- Certificate of Excellence in Reviewing, *Journal of Paleolimnology* (2015)

Scholarly Research

PRL HQP in *italics*

- Steinman, A.D., G.A. Lamberti, P.R. Leavitt, and D.G. Uzarski. 2017. Biomass and pigments of benthic algae. In F.R. Hauer and G.A. Lamberti (eds.), *Methods in Stream Ecology*. 3rd edition. Academic Press.
- Bunting, L., P.R. Leavitt, G.L. Simpson, B. Wissel, K.R. Laird, B.F. Cumming, A. St. Amand, and D.R. Engstrom. 2016. Increased variability and sudden ecosystem state change in Lake Winnipeg, Canada, caused by 20<sup>th</sup> century agriculture. *Limnol. Oceanogr.* 61: 2090–2107. doi: 10.1002/lno.10355.
- Murray, D.L., D. Morris, C. Lavoie, P.R. Leavitt, H. MacIsaac, M. Masson, M-A Villard. 2016. Bias in research grant evaluation has dire consequences for small universities. *PLoS One* 11(6): e0155876. doi:10.1371/journal.pone.0155876.
- Sayer, C.D., T.A. Davidson, R. Rawcliffe, P.G. Langdon, P.R. Leavitt, G. Cockerton, N.L. Rose and T. Croft. 2016. Consequences of fish kills for long-term trophic structure in shallow lakes: Implications for theory and restoration. *Ecosystems* 19: 1289–1309. doi: 10.1007/s10021-016-0005-z.
- Vuillemin, A., D. Ariztegui, P.R. Leavitt, L. Bunting, and the PASADO Science Team. 2016. Recording of climate and diagenesis through sedimentary DNA and fossil pigments at Laguna Potrok Aike, Argentina. *Biogeosciences* 13: 2475-2492. doi: 10.5194/bg-13-2475-2016.
- Stevenson, M.A., S. McGowan, N.J. Anderson, R.H. Foy, P.R. Leavitt, Y.R. McElearney, D.R. Engstrom and S. Pla-Rabés. 2016. Impacts of forest plantation management on primary production in upland lakes from north-west Ireland. *Global Change Biol.* 22: 1490-1504. doi: 10.1111/gcb.13194.
- Glibert, P.M., F.P. Wilkerson, R.C. Dugdale, J.A. Raven, C. Dupont, P.R. Leavitt, A.E. Parker, J.M. Burkholder, and T.M. Kana. 2016. Pluses and minuses of ammonium and nitrate uptake and assimilation by phytoplankton and implications for productivity and community composition, with emphasis on nitrogen-enriched conditions. *Limnol. Oceanogr.* 61: 165-197. doi:10.1002/lno.10203.
- Maheaux, H., P.R. Leavitt, and L.J. Jackson. 2016. Asynchronous onset of eutrophication among shallow prairie lakes of the northern Great Plains, Alberta, Canada. *Global Change Biol.* 22: 271–283. doi: 10.1111/gcb.13076.
- Einarsson, Á., U. Hauptfleisch, P.R. Leavitt, and A.R. Ives. 2016. Identifying consumer-resource population cycles using paleoecological data. *Ecology* 97: 361–371. doi 10.1890/15-0596.1.
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- pigments in a narrow river-valley reservoir, Lake Diefenbaker, Canada. *J. Great Lakes Res.* 41(Suppl. 2): 56-66. doi:10.1016/j.jglr.2015.08.002.
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- Quiñones-Rivera, Z.J., K. Finlay, R.J. Vogt, P.R. Leavitt, and B. Wissel. 2015. Hydrologic, metabolic and chemical regulation of water-column metabolism and atmospheric CO<sub>2</sub> exchange in a large continental reservoir during spring and summer. *J. Great Lakes Res.*, 41 (Suppl. 2): 144-154. doi:10.1016/j.jglr.2015.05.005.
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- Vogt, R.J., S. Sharma, and P.R. Leavitt. 2015. Decadal regulation of phytoplankton abundance and water clarity in a large continental reservoir by climatic, hydrologic and trophic processes. *J. Great Lakes Res.*, 41 (Suppl. 2): 81-90. doi:10.1016/j.jglr.2014.11.007.
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- Patoine, A., and P.R. Leavitt. 2006. Century-long synchrony of algal fossil pigments in a chain of Canadian prairie lakes. *Ecology* 87: 1710-1721.
- Engstrom, D.R., S.P. Schottler, P.R. Leavitt, and K.E. Havens. 2006. A re-evaluation of the cultural eutrophication of Lake Okeechobee using multiproxy sediment records. *Ecol. Applic.* 16: 1194-1206.
- Steinman, A.D., G.A. Lamberti, and P.R. Leavitt. 2006. Biomass and pigments of benthic algae. p. 357-379 *In* F.R. Hauer and G.A. Lamberti (eds.) *Methods in Stream Ecology*. 2<sup>nd</sup> edition. Academic Press.

**Major Technical Papers:** (*PRL trainees*)

- Leavitt, P.R., L. Bunting, B. Wissel, A. St. Amand, and D.R. Engstrom. 2014. Eutrophication of the south basin of Lake Manitoba, Canada. Final report to Manitoba Conservation and

Water Stewardship, and Environment Canada Lake Winnipeg Basin Stewardship Program, April 2014. 46 pp.

*Bunting, L., P.R. Leavitt, B. Wissel, M.D. Graham, K.R. Laird, A. St. Amand, B.J. Hann, and D.R. Engstrom.* Eutrophication of the north basin of Lake Winnipeg, Canada. Final report to Manitoba Conservation and Water Stewardship, and Environment Canada Lake Winnipeg Basin Stewardship Program, April 2012. 46 pp.

Moser, K., D. Woodward, Leavitt, P.R., and W.A. Wurtsbaugh. Historical changes in aquatic invertebrates and plants of the Great Salt Lake of Utah, USA, based on analyses of sedimentary remains. Final report to Utah State Department of Environmental Quality, March 2012. 26 pp.

Leavitt, P.R., L. *Bunting*, K. Moser, and C. Woodward. Effects of wastewater influx and hydrological modification on algal production in the Great Lake Lake of Utah, USA. Final report to Utah State Department of Environmental Quality, February 2012. 31 pp.

*Bunting, L., P.R. Leavitt, B. Wissel, K.R. Laird, B.F. Cumming, A. St. Amand, and D.R. Engstrom.* Sudden ecosystem state change in Lake Winnipeg, Canada, caused by eutrophication arising from crop and livestock production during the 20<sup>th</sup> century. Final report to Manitoba Water Stewardship, March 2011. 72 pp.

## Lauri Lintott

Lab Instructor III

[lintottl@uregina.ca](mailto:lintottl@uregina.ca), (306) 585-4441,

### Education and Professional Development

#### MASTER OF SCIENCE IN MOLECULAR BIOLOGY

University of Calgary, 1993

Thesis: Transcriptional regulation of metallothionein. Chair, Dr. R. N. Johnston.

#### BACHELOR OF SCIENCE IN BIOLOGY, HONOURS

University of Regina, 1989

Thesis: Molecular genetics of plasmid pKZ1: Incompatibility with plasmid pSLT of *Salmonella typhimurium* LT2. Chair, Dr. Rod Kelln.

### Employment History

Laboratory Instructor III. July 2007 – current. University of Regina.

Laboratory Instructor II. July 2004 – June 2007. University of Regina.

### Teaching History

Laboratories instructor for:

Biol288 Cell Biology: Fall 2006, 2007, 2008, and 2009.

Biol205 Introductory Genetics: Winter 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2016.

Biol288 Plant Physiology: Winter 2013, 2015, and Fall 2016.

Biol305 Genetics: Fall 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2015, and 2016.

Biol405 Molecular Genetics: Winter 2006 and 2007.

Laboratories instructor for:

Biol150 Biological Principles (non-majors course)

### Student Supervision

Supervise two to three TAs each semester.

### University Service

#### *Committees*

Hiring Committee Member: Biology Lab Instructor Search in 2009 and in 2014. Physics Lab Instructor Search in 2009 and in 2012. Geology Lab Instructor Search in 2010.

University of Regina Women in Sciences and Engineering (URWISE): Steering Committee Chair and Cofounder, 2007-2008; Chair 2008-2009; Vice-chair 2009 to 2010; Membership coordinator 2009 to present.

University of Regina Faculty Association. Communications Committee Chair, 2011-2014. Redesign of the association's website.

University of Regina Joint Equity Committee. URFA representative. 2011-2012.

University of Regina Faculty Association. Status of Women Committee Co-chair and Secretary, 2007-2009. Secretary 2009 to 2011.

University of Regina Faculty Association. Executive Counsel, Status of Women Committee Representative, 2007-2008.

Lab Instructor Review Committee. 2009-2010

Fire Warden for Laboratory Building fourth floor.

### *Biology Webmaster 2010 – present*

- In 2010, overhauled the biology website to bring it up to current best practices and make it a better resource for students and faculty. I was involved in the redesign and did much of the coding and reformatting of content.
- In 2012, worked with the External Relations to move the biology website to the university's new content management system.
- I continue to do all website updates, create and add new content as required. Minor updates are done on a weekly basis. Major updates (new pages or overhauling current pages) are done every month or two.

## Teaching Development and Outreach

### *Original lab programs and lab manuals*

#### Biology 205, Introductory Genetics

- New lab program, 2016, focuses on the relationship between DNA sequence variation and phenotypic variation. In one project, students do a mini DNA fingerprint and in another they determine their genetic makeup for their PTC tasting gene. Students learn molecular genetic techniques (e.g. PCR, agarose gel electrophoresis, restriction enzymes), phenotypic analysis (e.g. PTC tasting), population genetic analysis (e.g. class allele frequencies), and bioinformatics (e.g. using databases and sequence analysis tools). Learning goals include finding and interpret database records in OMIM, Gene, GenBank; relating allele sequences to phenotypes; annotating and aligning sequences; differentiating genes, alleles and haplotypes; identifying ancestral and derived traits; and recognizing types of mutations.

#### Biology 305 Genetics

- Identification of phenylthiocarbamide (PTC) haplotypes in a Biology 205 population. 2011. In this eight-week project, students use PCR to amplify the PTC locus from individuals that are heterozygous at two or more PTC gene nucleotide positions, i.e. the individuals differ at 2 or more SNP position. PTC products are cloned and sequenced to determine the actual alleles

carried by each individual. Student's then determined the haplotype frequencies in the 205 population sample and compare those frequencies to haplotype frequencies observed in other population samples. Students developed molecular biology understanding; practical molecular biology skills (PCR, restriction enzyme digestion, sizing and quantifying DNA on agarose gels, TA cloning, bacterial transformation); bioinformatics skills (primer design, DNA sequence analysis, DNA and amino acid sequence alignment). Students present their results in a primary journal article.

- Application and comparison of two subcloning approaches. 2005, updated 2014. In this eight-week project lab students use two approaches to subclone a gene from a low to a high-copy number vector. Students evaluate the potentials of the two techniques by comparing the time, cost and the recombinants produced. During the analysis, many unexpected recombinants are identified and these lead to some interesting discussions on the mechanics of recombination and plasmid replication. Students present their results in a primary journal article.

### *Original labs*

#### Biology 205

- Genotypic variation and phenylthiocarbamide (PTC) tasting. 2016.
- Identifying VNTR alleles at the SLC6A3 locus. 2016.
- Molecular identification of polymorphisms in the human phenylthiocarbamide (PTC) bitter taster gene. 2013.
- Population simulation. 2010. Adapted from the Dolan DNA Learning Center web site, Cold Spring Laboratories
- Classical genetics problem solving. 2007.
- Investigating inheritance in *Drosophila melanogaster*. 2006.
- Analysis of heterozygosity at the PV92 loci in humans. 2006. Adapted from Biotechnology Explorer™: PV92 Explorer Kit, BioRad™, and from the Dolan DNA Learning Center web site, Cold Spring Laboratories

#### Biology 288

- Exploring protein structure and function using bioinformatics tools (by investigating the probably structural/functional changes in phenylalanine hydroxylase that cause the disease PKU). 2007.
- Identification of unknown fish species using SDS-PAGE of muscle protein. 2006. Adapted from Biotechnology Explorer™: Protein Fingerprinting.

#### Biology 266

- Nitrate reductase activity in barley seedlings. 2014. Analysis of nitrate reductase activity changes in response to light, and over time in response to addition of nitrate.
- Comparing O<sub>2</sub> exchange rates in intact cells and isolated chloroplasts. 2016. Adapted from two previous cookbook labs, this was revamped as a guided inquiry in which students determine the effects of light, and photosynthesis inhibitors on O<sub>2</sub> evolution and consumption by isolated chloroplasts and intact alga cells. Learning objectives include: using and interpreting output from a Clark-type O<sub>2</sub> electrode; measuring chlorophyll content and estimating O<sub>2</sub> exchange rates in standard units; and explaining differences in treatment effects on O<sub>2</sub> exchange rates in algae and isolated chloroplasts.



*Lab modifications & updates*

- Web-based laboratory manual for the Biology 305 lab. 2011. Available at <http://bio305lab.wikidot.com/start> .
- Biology 205. 2006. New lab manual. Updated on a yearly basis.
- Lab websites. Developed in 2006 and updated regularly until UR Courses was available.
- Flipped classroom techniques are now used in all labs I teach.

*Other resources*

- Lab report help site for biology students. Initially developed, in consultation with other faculty members, in 2012. New material is added yearly. Available at [urbiolabreports.wikidot.com](http://urbiolabreports.wikidot.com).
- Excel tutorial videos. 2016. Three video tutorials demonstrate how to efficiently use Excel to enter formulas, make scatter graphs and add error bars. Videos for both PC and Mac version of Excel. Available at [urbiolabreports.wikidot.com/excel-help](http://urbiolabreports.wikidot.com/excel-help).

*Outreach*

- Teach microscopy to high school students from Western Christine High.
- Frog dissection lab with elementary school students.
- Judge yearly at the Regional Science Fair.
- Volunteer at Science Rendezvous (usually running a chess tournament).
- Advise high school teachers in genetics and cell biology.

## Richard G. Manzon

Professor

[richard.manzon@uregina.ca](mailto:richard.manzon@uregina.ca), (306) 337 241

### Education and Professional Development

Discipline: Zoology  
 University: University of Toronto  
 Thesis Title: Thyroid hormones and goitrogen-induced metamorphosis in the Sea Lamprey (*Petromyzon marinus*).  
 Degree Conferred: Ph.D. (November, 2000)

Discipline: Ecology and Evolutionary Biology  
 University: University of Toronto  
 Degree Conferred: Honours B.Sc. with Distinction (May, 1994)

### Employment History

- **Professor:** Department of Biology, University of Regina, Regina, SK (06/2016-present)
- **Associate Professor (Tenured):** Department of Biology, University of Regina, Regina, SK (07/2007-06/2016)
- **Assistant Professor:** Department of Biology, University of Regina, Regina, SK (07/2002-06/2007)

### Teaching History

- Introductory Biology – Biology 100
- Cell Biology – Biology 288
- General and Comparative Endocrinology – Biology 390
- Animal Developmental Biology – Biology 395
- Animal Developmental Biology Laboratory – Biology 395-009
- Vertebrate Metamorphosis – Biology 490AB.
- Developmental Endocrinology – Biology 455
- Scientific Research for Graduate Students – Biology 803
- Advanced Developmental Biology – Biology 820AA
- Advanced Topics in Animal Physiology – Biology 820

<b>Name</b>	<b>Position</b>	<b>Dates of supervision</b>
<b>Kendra Geitzen</b>	M.Sc. Candidate	2017-present
<b>Tiffany Blampied</b>	B.Sc. Honours	2016-present
<b>Lindy Whitehouse</b>	Ph.D. Candidate	2014-present
<b>Megan Zak</b>	M.Sc. Candidate	2015- Present
<b>Andrea Murillo</b>	M.Sc. Candidate	2014-2016
<b>Liam McDougall</b>	B.Sc.	2016 – Present
<b>Chance McDougall</b>	B.Sc. Honours	2015 – 2016
<b>Karl Vantome</b>	NSERC USRA	2015
<b>Chelsey Fonger</b>	B.Sc.	2014-2015
<b>Megan Zak</b>	B.Sc. Honours	2014- 2015
<b>Katie Sessions</b>	M.Sc.	2012-2015
<b>Daniel Stefanovic</b>	M.Sc.	2011-2014
<b>Chance McDougall</b>	NSERC USRA	2014
<b>Megan Zak</b>	B.Sc. Honours and NSERC USRA	2013-2014
<b>Matthew Agee</b>	B.Sc. Research	2012-2013
<b>April Sefton</b>	B.Sc. Honours	2011-2012
<b>Matt Endsinn</b>	M.Sc.	2010- 2012
<b>Rebecca Eberts</b>	B.Sc. Honours	2011-2012
<b>Adam Vantome</b>	NSERC USRA	2011
<b>Amy Tetlock</b>	B.Sc. Honours Biochemistry	2010-2012
<b>Tara Hicks</b>	B.Sc. Honours Biochemistry	2009-2010
<b>Caristin McDougall</b>	NSERC URSA	2009
<b>Odette Simmie</b>	B.Sc. Honours Biochemistry	2009
<b>Salina Stilborn</b>	M.Sc.	2006 – 2011 (Mat leave)
<b>Tianna Gross</b>	M.Sc.	2006 – 2008
<b>Steven Kruzeniski</b>	NSERC URSA	2008
<b>Megan Stobbs</b>	NSERC URSA	2008
<b>Graham Brown</b>	B.Sc. Honours	2005 – 2006
<b>Lori A. Manzon</b>	PDF (Part-time)	2005 – 2006
<b>Jennifer D. Schauenberg</b>	B.Sc. Honours; NSERC URSA	2004 – 2006

University Service

- **External Committees:**
  - Great Lakes Fishery Commission – Sea Lamprey Research Board 2010-present
- **University of Regina Committees**
  - President’s Advisory Committee on Radiation Safety (Chair) 2008 – present
  - President’s Advisory Committee on Radiation Safety 2004 – 2008
  - Presidents Advisory Committee on Animal Care 2003 – 2009
  - Presidents Advisory Committee on Animal Care
    - Subcommittee on standard operating procedures 2004 – 2006
  - Executive Council, 2003 – 2005, 2006 – 2008, 2010-2012
  - Vice President’s Task Force on Animal Care 2003 – 2004
  - Chemical Safety Emergency Response Committee 2005-2006
- **Faculty of Science Committees**
  - Faculty of Science Lab Instructor Review Committee, 2013 - 2015
  - RIC Safety Committee – Emergency Warden 2<sup>nd</sup> Floor RIC, 2010 – Present
  - Faculty of Science Student Appeals Committee (Chair), 2005 - 2014
  - Faculty of Science Faculty Review Committee, 2008 – 2010
  - Faculty of Science Student Appeals Committee, 2003 – 2004
  - Manager of the Aquatics Facility, 2005 – Present
- **Department of Biology Committees**
  - Curriculum Committee (Co-Chair), 2003 – 2014
  - Departmental Space Committee (Chair), 2004 – Present
  - Animal Physiologist Hiring Committee (Chair), 2011
  - Animal Biologist Hiring Committee (Chair), 2011
  - Departmental Seminar Coordinator, 2004, 2009, 2014
  - Animal Physiologist Hiring Committee, 2005
  - Ecologist Faculty Hiring Committee, 2004
  - Cell Biology and Genetics Lab. Instructor Hiring Committee (Chair), 2004

- Endsien, M.J., Michalec, O., Manzon, L.A., Lovejoy, D.A., **Manzon, R.G.** (2017). CRH peptide evolution occurred in three phases: Evidence from characterizing sea lamprey CRH system members. *General and Comparative Endocrinology*. 240: 162-173
- Eberts, R.L., Wissel, B., Simpson, G.L., Crawford, S.S., Stott, W., Hanner, R.H., **Manzon, R.G.**, Wilson, J.Y., Boreham, D., Somers, C.M. (In Press) Isotopic structure of Lake Whitefish in Lake Huron: evidence for regional and local populations based on resource use. *North American Journal of Fishers Management*.
- Lee, A.H., Eme, J., Mueller, C.A., **Manzon, R.G.**, Somers, C.M., Boreham, D.R., Wilson, J.Y. (2016). The effects of increased constant incubation temperature and cumulative acute heat shock exposures on morphology and survival of Lake Whitefish (*Coregonus clupeaformis*) embryos. *Journal of Thermal Biology*. 57:11-20
- Graham, C.F., Eberts, R.L., Morgan, T., Boreham, D.R., Lance, S., **Manzon, R.G.**, Martino, J.A., Rogers, S.M., Wilson, Y.W., Somers, C.M. (2016) Fine-scale ecological and genetic population structure of two Whitefish (*Coregoninae*) species in the vicinity of industrial thermal emissions. *PLOS ONE*; PONE-D-15-46470
- Eberts, R.L., Wissel, B., **Manzon, R.G.**, Wilson, J.Y., Boreham, D., Somers, C.M. (2016) Consistent differential resource use by sympatric Lake (*Coregonus clupeaformis*) and Round Whitefish (*Prosopium cylindraceum*) in Lake Huron: a multi-time scale isotopic niche analysis. *Canadian Journal of Fish and Aquatic Sciences*. 73: 1072-1080.
- Thome, C., Mitz, C, Somers, C.M., **Manzon, R.G.**, Boreham, D.R., Wilson, J.Y. (2015) Incubation of Lake Whitefish (*Coregonus clupeaformis*) embryos in cooling water discharge and the impacts of fluctuating thermal regimes on development. *Canadian Journal of Fish and Aquatic Sciences*. 73: 1-9.
- Stefanovic, D.I., Manzon, L.A., McDougall, C.S., Boreham, D., Somers, C.M, Wilson, J.Y., **Manzon R.G.** (2016). Thermal stress and the heat shock response in embryonic and young of the year juvenile Lake Whitefish. *Comparative Biochemistry and Physiology* 193:1-10
- Graham, C.F., Glenn, T.C. McArthur, A., Boreham, D.R., Kieran, T., Lance, S., **Manzon, R.G.**, Martino, J.A., Pierson, T., Rogers, S.M., Wilson, J.Y., Somers, C.M. (2015). Impacts of Degraded DNA on Restriction Enzyme Associated DNA Sequencing (RADSeq). *Molecular Ecology Resources* 15:1304-1315
- Sreetharan, S., Thome, C., Mitz, C., Eme, J., Mueller, C.A., Hulley, E.N., **Manzon, R.G.**, Somers, C.M., Boreham, D.R., Wilson, J.Y. (2015) Embryonic development of Lake Whitefish (*Coregonus clupeaformis*): a staging series, analysis of growth and impacts of fixation. *Journal of Fish Biology* 87:539-558
- Mueller, C.A., Eme, J., **Manzon, R.G.**, Somers, C.M., Boreham, D.R., Wilson, J.Y. (2015) Embryonic critical windows: changes in incubation temperature alter survival, hatchling phenotype and cost of development in Lake Whitefish (*Coregonus clupeaformis*). *Journal of Comparative Physiology B* 185:315-331.
- Eme, J., Mueller, C.A., **Manzon, R.G.**, Somers, C.M., Boreham, D.R., Wilson, J.Y. (2015) Critical windows in embryonic development: Shifting incubation temperatures alter heart

- rate and oxygen consumption of Lake Whitefish (*Coregonus clupeaformis*) embryos and hatchlings. *Comparative Biochemistry and Physiology A*. 179:71-81
- Manzon, L.A., Youson, J.H., Holzer, G., Staiano, L., Laudet, V., Manzon, R. G.\* (2014) Thyroid hormone and retinoid X receptor function and expression during Sea Lamprey (*Petromyzon marinus*) metamorphosis. *General and Comparative Endocrinology* 204:211-222.
- Mitz, C., Thome, C., Cybulskia, M., Laframboise, L., Somers, C., **Manzon, R.G.**, Wilson, J.Y., Boreham, D.R. (2014) A self-contained, controlled hatchery system for rearing Lake Whitefish embryos for experimental aquaculture. *North American Journal of Aquaculture*. 76:179-184.
- Manzon, R.G.**, Holmes, J.A., Youson, J.H. (2015) Metamorphosis. In: *Lampreys: Biology, Conservation and Control*. Ed. M.F. Docker. Fish and Fisheries Series. Springer. Invited Chapter.
- Stilborn, S. S M., Manzon, L.A., Schauenberg, J.D., **Manzon, R.G.** (2013) Thyroid hormone deiodinase type 2 expression in Sea Lamprey (*Petromyzon marinus*) is regulated during metamorphosis and in response to a thyroid challenge. *General and Comparative Endocrinology*. 183:63-68.
- Tetlock, A., Yost, C.K., Stavrinides, J., **Manzon, R.G.** (2012) Changes in the gut microbiome of the Sea Lamprey during metamorphosis. *Applied and Environmental Microbiology* 78:7638-7644.
- Youson, J.H. and **Manzon, R.G.** (2012) Lamprey Metamorphosis. In: *Metamorphosis in Fishes*. Eds. S. Dufour and K. Rousseau. Science Publishers, Enfield, New Hampshire. Invited Chapter.
- Gross, T.N. and **Manzon, R.G.** (2011) Sea Lamprey (*Petromyzon marinus*) contain four developmentally regulated serum thyroid hormone distributor proteins. *General and Comparative Endocrinology* 170:640-649
- Manzon R.G. (2011) Regulatory principles underlying life history transitions in fish. In: *Mechanisms of life history transitions*. Eds. T. Flatt and A. Heyland. Oxford University Press, New York. Invited Chapter.
- Manzon, R.G.**, Neuls, T.M. and Manzon, L.A. (2007) Molecular cloning, tissue distribution, and developmental expression of lamprey transthyretins. *General and Comparative Endocrinology*. 151:55-65.

## Christopher M. Somers

Associate Professor, Canada Research Chair Tier II

[chris.somers@uregina.ca](mailto:chris.somers@uregina.ca), (306) 585 4850,

### Education and Professional Development

- 2004-2006: NSERC PDF, University of Regina, Conservation & Animal Behavior
- 2004: Ph.D., Biology, McMaster University, Genetic Toxicology
- 2000: M.Sc., Biology, Brock University, Ecology
- 1998: B.Sc., Biology, York University, Ecology & Evolution

### Employment History

- 2011- present: Associate Professor (tenured), University of Regina, Department of Biology
- 2008-present (2 terms): Canada Research Chair (Tier II), Genes & Environment
- 2006-2011: Assistant Professor (tenure track), University of Regina, Department of Biology

### Teaching History

- Biology 205 - Introductory Genetics
- Biology 275 – Introductory Ecology
- Biology 490 BH – Conservation Biology
- Biology 316 – Conservation Biology
- Biology 396 – Independent Study
- Biology 835 – Advanced Topics in Ecology
- Biology 845 AB – Advanced Topics in Molecular Genetics
- Biology 803 (team taught) – Research Skills for Graduate Students

### Student Supervision

Name	Position	Dates of supervision
John Mee	PDF	2013
Leanne Heisler	PhD	2013-present
Carly Graham	PhD	2013-present
Anthony Fernando	PhD (withdrew)	2015-2016
Jennifer Doucette	PhD	2007-2012
Tera Edkins	MSc	2015-present
Kelsey Marchand	MSc	2015-present
Jessica Butt	MSc	2014-present

Thomas Morgan	MSc	2014-present
Danae Frier	MSc	2013-2015
Rebecca Eberts	MSc	2013-2015
Melissa Mushanski	MSc	2013-2015
Leanne Heisler	MSc	2011-2013
Leak Kovatch	MSc	2011-2014
Ashley Fortney	MSc	2011-2013
Laura Gardiner	MSc	2010-2012
Marc Beal	MSc	2010-2012
Aleksandra Bugajski	MSc	2009-2011
Holly Hennin	MSc	2008-2010
Jessica Martino	MSc	2008-2010
Allison Gallon	BSc	2016-present
Una Goncin	BSc	2016-present
Shelby Stecyk	BSc	2011-2012
Gena Shepherd	BSc	2010-2011
Ashley Fortney	BSc	2009-2010
Allison White	BSc	2009-2010
Patrick Barks	BSc	2008-2009
Carolyn Gaudet	BSc	2007-2008
Jessica Bos	NSERC USRA	2016
Alyssa Stulberg	NSERC USRA	2015
Caitlin Hunter	NSERC USRA	2011
Gena Shepherd	NSERC USRA	2010
Patrick Barks	NSERC USRA	2009
Ashley Fortney	NSERC USRA x 3	2008-2010

University Service

2014-present: CRC Representative, Council Committee on Research  
 2013-present: Biology Graduate Program Coordinator  
 2012-present: Faculty of Science Scholarship Committee, member  
 2014-2016: Faculty of Science Faculty Review Committee, member  
 2015-2016: CCR Sub-committee on Research Impact, member  
 2015-2016: University of Regina Research Strategic Plan, committee member  
 2015: VPR Search Committee, member  
 2014: Plant Ecologist Search Committee, Chair  
 2008-2011: President's Committee on Animal Care, member  
 2007-2010: Executive of Council, member

2015-present: Academic Editor, *PlosOne*  
 2007-present: Associate Editor, *Waterbirds*  
 2010-2015: Editorial Board Member, *Mutation Research Reviews*.



2010-2015: Editorial Board Member, *Environmental and Molecular Mutagenesis*  
 2009-2012: Editor, *Blue Jay*

Scholarly Research

Peer-Reviewed Publications (underlined = Somers HQP):

1. Lee, A.H., Eme, J., Mueller, C.A., Manzon, R.G., **Somers, C.M.**, Boreham, D.R., Wilson, J.Y. (*in press*). The effects of cumulative acute heat shock exposures on morphology and survival of Lake Whitefish (*Coregonus clupeaformis*) embryos. *Journal of Thermal Biology*, January 2016.
2. Thome, C., Mitz, C., **Somers, C.M.**, Manzon, R.G., Boreham, D.R. Wilson, J.Y. (*in press*) Incubation of Lake Whitefish (*Coregonus clupeaformis*) embryos in cooling water discharge and the impacts of fluctuating thermal regimes on development. Revisions submitted to *Canadian Journal of Fisheries and Aquatic Sciences*, December, 2015.
3. Eberts, R.L., Wissel, B., Boreham, D., Manzon, R.G., Wilson, J.Y., and **Somers, C.M.** (2016). Consistent differential resource use by sympatric Lake (*Coregonus clupeaformis*) and Round Whitefish (*Prosopium cylindraceum*) in Lake Huron: a multi-time scale isotopic niche analysis. *Canadian Journal of Fisheries and Aquatic Sciences*, 73:1072-1080.
4. Reudink, MW, Kyle, CJ, McKellar, AE, **Somers, CM**, Reudink, RLF, Kyser, TK, Franks, SE, Nocera, JJ. (2016). Linking isotopes and panmixia: high within-colony variation in feather  $\delta^{2}\text{H}$ ,  $\delta^{13}\text{C}$ , and  $\delta^{15}\text{N}$  across the range of the American White Pelican. *PlosONE*, <http://dx.doi.org/10.1371/journal.pone.0150810>.
5. Frier, S.D., **Somers, C.M.**, Sheffield, C. (2016). Comparing the performance of native and managed pollinators of Haskap (*Lonicera caerulea*: Caprifoliaceae), an emerging fruit crop. *Agriculture, Ecosystems and Environment*, 219:42-48.
6. Stefanovic, D.I., Manzon, L.A., McDougall, C.S., Boreham, D.R., **Somers, C.M.**, Wilson, J.Y., Manzon, R.G. (2016). Thermal Stress and the Heat Shock Response in Embryonic and Young of the Year Juvenile Lake Whitefish. *Comparative Biochemistry and Physiology Part A*, 193:1-10.
7. Graham, C.F., Eberts, R.L., Morgan, T. D., Boreham, D.R., Lance, S., Manzon, R.G., Martino, J.A., Rogers, S.M., Wilson, J.Y., **Somers, C.M.** (2016). Fine-Scale Ecological and Genetic Population Structure of Two Whitefish (Coregoninae) Species in the Vicinity of Industrial Thermal Emissions. *PlosONE*, <http://dx.doi.org/10.1371/journal.pone.0146656>.
8. Heisler, L.M., **Somers, C.M.**, Poulin, R.G. (2016). Owl pellets: a more effective alternative to conventional trapping for broad-scale studies of small mammal communities. *Methods in Ecology & Evolution*, 7:96-103.
9. Sreetharan, S., Thome, C., Mitz, C., Eme, J., Mueller, C. A., Hulley, E. N., Manzon, R. G., **Somers, C. M.**, Boreham, D. R. and Wilson, J. Y. (2015). Embryonic development of lake whitefish *Coregonus clupeaformis*: a staging series, analysis of growth and effects of fixation. *Journal of Fish Biology*, 87: 539–558.
10. Marchand, K.A., Stulberg, A., **Somers, C.M.**, and Poulin, R.G. (2015). *Chrysemys picta bellii* (Western Painted Turtle) - Record carapace length. *Herpetological Review*, 46: 617.
11. Beal, M.A., Rowan-Carroll, A., Campbell, C., Williams, A., **Somers, C.M.**, Marchetti, F.,

- Yauk, C.L. (2015). Single-molecule PCR analysis of an unstable microsatellite for detecting mutations in sperm of mice exposed to chemical mutagens. *Mutation Research*, 775:26-32.
12. Mueller, C.A., Eme, J., Boreham, D., Manzon, R.G., **Somers, C.M.**, and Wilson, J.Y. (2015). Critical Windows in embryonic development: Changes in incubation temperature alter hatchling phenotype, survival and cost of development in Lake whitefish (*Coregonus clupeaformis*) embryos. *Journal of Comparative Physiology B*, 185:315-331.
  13. Graham, C.F., Glenn, T.C. McArthur, A., Boreham, D.R., Kieran, T., Lance, S., Manzon, R.G., Martino, J.A., Pierson, T., Rogers, S.M., Wilson, J.Y., **Somers, C.M.** (2015). Impacts of Degraded DNA on Restriction Enzyme Associated DNA Sequencing (RADSeq). *Molecular Ecology Resources*, 15:1304-1315.
  14. **Somers, C.M.**, Heisler, L.M., Doucette, J.L., Kjoss, V.A., Brigham, R.M. (2015). Lake Use by Three Avian Piscivores and Humans: Implications for Angler Perception and Conservation. *The Open Ornithology Journal*, 8:10-21.
  15. Gardiner, L.E., **Somers, C.M.**, Parker, D.L., Martino, J.A., Poulin, R.G. (2015). Microhabitat Selection by Prairie Rattlesnakes (*Crotalus viridis*) at the Northern Extreme of their Geographic Range. *Journal of Herpetology*, 49:131-137.
  16. Hall, B.D., Doucette, J.L., Bates, L.M., Bugajski, A., Niyogi, S., **Somers, C.M.** (2014). Differential trends in mercury concentrations in Double-Crested Cormorant populations of the Canadian Prairies. *Ecotoxicology*, 23:419-428.
  17. Gaudet, C.A., **Somers, C.M.** (2014). American White Pelicans and Recreational Boaters on Lakes of the North American Great Plains: Habitat Use Overlap. *The Open Ornithology Journal*, 7:1-10.
  18. Mitz, C., Thome, C., Cybulskia, M.E., Laframboise, L., **Somers, C.M.**, Manzon, R.G, Wilson, J.Y., Boreham, D.R. (2014). A self-contained, controlled hatchery system for rearing Lake Whitefish embryos for experimental aquaculture. *North American Journal of Aquaculture*, 76:179-184.
  19. Heisler, L.M., **Somers, C.M.**, Poulin, R.G. (2014). Rodent populations on the northern Great Plains respond to weather variation at a landscape scale. *Journal of Mammalogy*, 95:82-90.
  20. Heisler, L.M., **Somers, C.M.**, Wellicome, T.I., Poulin, R.G. (2013). Landscape-Scale Features Affecting Small Mammal Communities on the Northern Great Plains of North America. *Journal of Mammalogy*, 94:1059-1067.
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- J.G., Trasler, J., Waters, M.D., Wilson, T.E., Witt, K.L., Bishop, J.B. (2013). Harnessing Genomics to Identify Environmental Determinants of Heritable Disease. *Mutation Research Reviews*, 752:6-9.
25. O'Bryhim, J., Lance, S.L., **Somers, C.M.**, Yau, M., Boreham, D.R., Jones, K.L., Taylor, E.B. (2013). Development and characterization of twenty-two novel microsatellite markers for the mountain whitefish, *Prosopium williamsoni* and cross-amplification in the round whitefish, *P. cylindraceum*, using paired-end Illumina shotgun sequencing. *Conservation Genetics Resources*, 5:89-91.
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  27. Quinn, J.S., Lozer, M., **Somers, C.M.** (2012). Tethered Raptor Displaces Roosting Cormorants. *Waterbirds*, 35(sp1):77-81.
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  29. Beal, M.A., Glenn, T.C., Lance, S.L, **Somers, C.M.** (2012). Characterization of unstable microsatellites in mice: no evidence for germline mutation induction following gamma-radiation exposure. *Environmental and Molecular Mutagenesis*, 53:599-607.
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  32. White, A.J., Poulin, R.G., Wissel, B., Doucette, J.L., **Somers, C.M.** (2012). Agricultural land use alters trophic status and population density of deer mice (*Peromyscus maniculatus*) on the North American Great Plains. *Canadian Journal of Zoology*, 90:868-874.
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  37. Oomen, R., Reudink, M., Nocera, J. **Somers, C.M.**, Green, M., Kyle C. (2011) Mitochondrial evidence for panmixia despite perceived barriers to gene flow in a widely distributed waterbird. *Journal of Heredity*, 102:584-592.
  38. **Somers, C.M.**, Doucette, J.L., Weseloh, D.V., Kjoss, V.A., Brigham, R.M. (2011)

- Interactions between double-crested cormorants and other ground nesting birds. *Waterbirds*, 34:168-176.
39. Reudink, M.R., Kyle, C.J., Nocera, J.J., Oomen, R.A., Green, M.C., **Somers, C.M.** (2011) Range-wide panmixia despite apparent behavioural and ecological barriers to gene flow in a widely-distributed waterbird. *Biological Journal of the Linnean Society*, 102:583-592.
  40. **Somers, C.M.**, Neudorf, K., Jones, K.L., Lance, S.L. (2011) Novel microsatellite loci for the compost earthworm *Eisenia fetida*: a genetic comparison of three North American Vermiculture Stocks. *Pedobiologia*, 54:111-117.
  41. **Somers, C.M.** (2011) Ambient air pollution exposure and damage to male gametes: human studies and in situ 'sentinel' animal experiments. *Systems Biology in Reproductive Medicine*, 57:63-71.
  42. Kwiatkowski, M.A., **Somers, C.M.**, Poulin, R.G., Rudolph, D.C., Martino, J.A., Tuberville, T.D., Hagen, C., Lance, S.L. (2010) Development and characterization of 16 microsatellite markers for the Louisiana pine snake, *Pituophis ruthveni*, and two congeners of conservation concern. *Conservation Genetics Resources*, 2:163-166.
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  44. Barks, P.M., Doucette, J.L., **Somers, C.M.** (2010). Lack of angling-sized yellow perch in a Canadian boreal lake: potential influences of growth rate, diet, and predation by double-crested cormorants. *Transactions of the American Fisheries Society*, 139:1029-1040.
  45. Hall, B.D., Baron, L.A., **Somers, C.M.** (2009). Mercury concentrations in surface water and harvested waterfowl from the prairie pothole region of Saskatchewan. *Environmental Science and Technology*, 43: 8759-8766.
  46. **Somers, C.M.**, Cooper, D.N. (2009) Air pollution and mutations in the germline: are humans at risk? *Human Genetics*, 125:119-130.
  47. Crawford, N.G., Peters, M.B., Hagen, C., Glenn, T.C., Davis, S.K., and **Somers, C.M.** (2009) Polymorphic microsatellite loci from Sprague's pipit (*Anthus spragueii*), a grassland endemic passerine bird. *Molecular Ecology Resources* 9: 315-317.
  48. Doucette, J.L., Kjoss, V.A. and **Somers, C.M.** (2008) Size and Composition of Foraging Flights in Two Species of Piscivorous Colonial Birds: Limited Evidence for Intra- or Interspecific Information Transfer. *The Open Ornithology Journal*, 1:48-56.
  49. Hickman, C.R., Peters, M.B., Crawford, N.G., Glenn, T.C., **Somers, C.M.** (2008) Development and characterization of microsatellite loci in the American white pelican (*Pelecanus erythrorhynchos*). *Molecular Ecology Resources* 8: 1439-1441.
  50. **Somers, C.M.**, Valdes, E.V., Kjoss, V.A., Vaillancourt, A.L., Quinn, J.S. (2008). The influence of a diet of small-bodied fish on germline mutations at repetitive DNA loci in mice. *Environmental and Molecular Mutagenesis*, 49:238-248.
  51. Yauk, C.L., Polyzos, A., Rowan-Carroll, A, **Somers, C.M.**, Godschalk, R.W., Van Schooten, F.-J., Berndt, M.L., Progribny, I.P., Koturbash, I., Williams, A., Douglas, G.R., Kovalchuk, O. (2008). Germline Mutations, DNA Damage and Epigenetic Modifications in Mice Exposed to Particulate Air Pollution in an Industrial Location. *Proceedings of the National Academy of Sciences USA*, 105:605-610.
  52. **Somers, C.M.**, Lozer, M. N., and Quinn, J.S. (2007). Interactions between double-crested

- cormorants and herring gulls at a shared nesting site. *Waterbirds*, 30:241-250.
53. **Somers, C.M.**, Kjoss, V.A, and Brigham, R.M. (2007) American White Pelicans force copulations with nestlings. *The Wilson Journal of Ornithology*, 119:280-284.
  54. **Somers, C.M.** (2006). Expanded simple tandem repeat (ESTR) mutation induction in the male germline: lessons learned from lab mice. *Mutation Research*, 598:35-49.
  55. Schmaltz, G., **Somers, C.M.**, Sharma, P., and Quinn, J.S. (2006). Non-destructive sampling of maternal DNA from the external shell of bird eggs. *Conservation Genetics*, 7:543-549.
  56. Boreham, D.R., Dolling, J.A., **Somers, C.M.**, Quinn, J.S., and Mitchel, R.E.J. (2006). The adaptive response and protection against heritable mutations and fetal malformation. *Dose Response*, 4:317-326.
  57. **Somers, C.M.**, Valdes, E.V., and Quinn J.S. (2006). An approach to feeding high percentage fish diets to mice for human and wildlife toxicology studies. *Ecotoxicology and Environmental Safety*, 63:481-487.

#### Book Chapters:

58. Beal, M.A., **Somers, C.M.** (2013). Environment and lifestyle effects on fertility. In: Paternal Influences on Human Reproductive Success, D.Carrell Eds. Cambridge University Press, Cambridge, UK. ISBN 978-1-107-02448-9
59. **Somers, C.M.** (2010). Birds and Vineyards. In: Birds of Niagara, J. Black and K. Roy Eds. ISBN 978-0-9811489-0-8
60. **Somers, C.M.** (2007). Use of sentinel animals exposed *in situ* to study potential health effects from urban and industrial air pollution. In: Progress in Air Pollution Research, S.P. Balduino. Ed. Nova Science Publishers, Hauppauge NY, USA. ISBN 1-60021-804-0

#### Other Refereed Contributions:

61. Marchand, K.A., **Somers, C.M.**, Poulin, R.G. (2015). Sightings of non-native red-eared sliders in Wascana Marsh, Regina, Saskatchewan. *Blue Jay*, 73:186-187.
62. Gardiner, L.E., Martino, J.A., Poulin, R.G., **Somers, C.M.** (2011) Eastern yellow-bellied racer populations on the Canadian Prairies. *Blue Jay*, 69:70-74.
63. **Somers, C.M.**, V.A. Kjoss, F.A. Leighton, and D. Fransden. (2010). American White Pelicans and Double-crested Cormorants in Saskatchewan: population trends over five decades. *Blue Jay* 68:75-86.

#### Published Abstracts:

- Beal, M.A., Shepherd, G.L., **Somers, C.M.** (2010) Searching for new markers of instability in germline of mice: are simple tandem repeats (STR) the needle in the haystack?  
*Environmental and Molecular Mutagenesis*, 51:729
- Shepherd, G.L., **Somers, C.M.** (2010) Adapting the buccal micronucleus cytome assay for use in wild birds. *Environmental and Molecular Mutagenesis*, 51:728

Langlois, N.L., Mantha, R., **Somers, C.M.**, Quinn, J.S., Mitchel, R.E.J., and Boreham, D.R. (2006) Examining the role of p53 in radiation-induced mutations at ESTR loci. *Environmental and Molecular Mutagenesis*, 47:433.

Other Publications:

**Somers, C.M.**, Morris, M. (2016) Saskatchewan Fishes: A Folding Pocket Guide to All Known Native and Introduced Species. Waterford Press, [www.waterfordpress.com](http://www.waterfordpress.com).

**Somers C.M.**, Kjoss, V.A. (2011) American white pelicans feeding on large fish in Lanigan Creek, Saskatchewan. *Blue Jay* 69:132-134.

**Somers, C.M.** (2006) Cormorant and Pelican Research in Saskatchewan. *The Outdoor Edge Magazine*, Fall Issue, pg 45.

## John Stavrinides

Associate Professor

[john.stavrinides@uregina.ca](mailto:john.stavrinides@uregina.ca), (306) 337 8478

### Education and Professional Development

- Postdoctoral Research Associate (2007-2009), Ecology and Evolution, University of Arizona
- Ph.D. (2001-2006), Department of Cell and Systems Biology, University of Toronto
- Honours B.Sc. (1997-2001), University of Toronto

### Employment History

- Associate Professor (July 2014 - Present), Department of Biology, University of Regina
- Assistant Professor (July 2009 - June 2014), Department of Biology, University of Regina

### Teaching History

- Undergraduate classes:
  - BIOL490BG/BIOL406 – Genomics (developed; 2010-present)
  - BIOL101 – Intro Biology (developed 12 lectures; 2013-present)
  - BIOL490BR/BIOL402 – Evolution (co-developed; 2013-present)
  - BIOL457 – Environmental Microbiology (developed 12 lectures; 2015-present)
  - BIOL490BM – Research in Microbiology I (developed; 2012-present)
  - BIOL490BO – Research in Microbiology II (developed, 2012-present)
  - BIOL220 – Intro Microbiology (developed; 201010, 201030, 201130)
- Graduate classes:
  - BIOL835AK – Pathogenesis (directed reading course, created)
  - BIOL835AL – Applied Microbiology (directed reading course, created)
  - BIOL830AG – Molecular Genetics (directed reading course, created)
  - BIOL880AK – Genomics (cross listing of BIOL490BG/BIOL406)
  - BIOL803 – Scientific Research Skills (contributed lectures/grading)

### Student Supervision

Name	Position	Dates of supervision
Ashley Williams	Grad	2016
Craig Soutar	Grad	2016
Shelby Rosvold	Honours	2016
Emily Haidl	Project	2016

Daniel McDougall	Project	2016
Naveen Sorout	MITACS	2016
Shelby Hubick	Project	2016
Jennifer Verrett	NSERC USRA	2016
Nathanael Bergbusch	UofR Research Award	2016
Shelby Hubick	Honours	2015
Una Goncin	Project	2015
Joel Steve	Project	2015
David Teece	Project	2015
Alexander Cameron	Project	2015
Marty Sriver	NSERC USRA	2015
Alexander Cameron	Project	2015
Shelby Hubick	Project	2015
Lucas Robinson	Grad	2014
Alexander McKeen	NSERC USRA	2014
Brady O'Connor	Project	2014
Courtney Mish	Project	2014
Craig Soutar	NSERC USRA	2014
Patrick Jacobson	NSERC USRA	2014
Victoria Verlysdonk	NSERC USRA	2014
Dan McDougall	Honours Thesis	2013
Patrick Jacobson	Project	2013
Karolina Grzyb	Project	2013
Kristen Gray	Project	2013
Lucas Robinson	NSERC USRA	2013
Alyssa Walterson	Grad	2012
Craig Soutar	Project	2012
Dan McDougall	Project	2012
Matt Getzlaf	Honours Thesis	2012
Nick Henderson	Project	2012
Stefani Kary	Honours Thesis	2012
Alyssa Walterson	Project (RxD)	2012
Amanda Dancsok	NSERC USRA	2012
Brendon Macknak	NSERC USRA	2012
Craig Soutar	Project (RxD)	2012
Derek Wright	Project	2012
Justin Eckert	Project	2012
Lucas Robinson	NSERC USRA	2012
Stefani Kary	Project	2012
Derek Smith	Grad	2011
Morgan Kirzinger	Grad	2011
Alyssa Walterson	Honours Thesis	2011
Amanda Dancsok	Honours Thesis	2011
Amy Tetlock	Project	2011
April Sefton	NSERC USRA	2011
Brittany Smith	Project	2011
Cheghaf Madariti	Project	2011
Danae Bradshaw	Project	2011
Jeffrey Blyth	Project	2011
Kollin Schmalenberg	Project	2011



Kyle Mason	Project	2011
Lucas Robinson	Project	2011
Maggi Pettit	Project	2011
Marc Beaton	Honours Thesis	2011
Mesel Teklemariam	Honours Thesis	2011
Stephanie Jay	Project	2011
Taylor Duda	NSERC USRA	2011
Julian Hovind	Project	2011
Enisa Zanacic	Grad	2010
Geeta Nadarasah	Grad	2010
Amy Tetlock	Honours Thesis	2010
Cheghaf Madariti	Honours Thesis	2010
Derek Smith	Honours Thesis	2010
Maggi Pettit	Honours Thesis	2010
Tyler Erickson	Project	2010
Wendy Huang	Project	2010
Karissa Brabant	Project	2010
Mesel Teklemariam	NSERC USRA	2010
Morgan Kirzinger	Honours Thesis	2010
Taylor Duda	Project	2010
Enisa Zanacic	Project	2009
Irene Chair	Technician	2009
Lanna Sigfusson	Project	2009

### University Service

#### **Administrative Service**

##### University-level

- Biosafety Advisory Committee Chair (2013-present)
- FGSR Executive of Council (2012-2014)
- Biosafety Advisory Committee Vice-Chair (2012)
- Biosafety Advisory Committee Member (2011)
- Executive of Council (2010-2012)

##### Faculty-level

- Health and Safety Committee (2015-present)
- Job Search Committee, Nuclear Physicist (2015)
- Job Search Committee, Biochemist (2013)
- Health and Safety Subcommittee (2013)
- Job Search Committee, Quantitative Biologist (2012)
- Job Search Committee, Proteomicist (2012)
- Job Search Committee, Microbiologist (2011)
- Nursing Program Advisory Subcommittee (2010)

### Departmental-level

- Seminar Coordinator (2016)
- BUGS Student Society Faculty Representative (2011-present)
- Biology Web Page Development (2010)
- Seminar Coordinator (2010)
- Space Allocation Subcommittee (2010)

### Public Outreach and Service

- 2016, Bacterial Isolation Activity – AP Biology, Central Collegiate (Moose Jaw)
- 2016, Regional Science Fair Judge
- 2015, Interview on Norwalk Outbreak, UofR
- 2014, Bioinformatics Seminar, UofR – Mar 6
- 2014, Influenza Information Session for UofR Residence Students – Nov 5
- 2014, CBC Radio Interview, Bluesky, Handwashing – Nov 19
- 2013, Science Fair Winner's Showcase – Career Seminar, Oct 19
- 2013, Influenza Information Session for UofR Residence Students, Oct 23
- 2013, UR Connected Student Orientation Seminars, Oct 26
- 2012, UofR International Student Orientation Seminar
- 2012, EYES - DNA Isolation Activity - March 29
- 2012, Career Interview - Highschool student – Kyle, Herbert SK
- 2012, Student Recruitment Office – Classroom Photoshoot
- 2012, Science Student Orientation - What are labs
- 2012, UR Connected Student Orientation Seminars– 2 days – Oct 19, 20
- 2012, Influenza Information Session for Residence Students
- 2012, Research Student Recruitment Drive Organizer– Faculty Club
- 2011, Regional Science Fair Judge
- 2011, Science Rendezvous – DNA Isolation Activity– 3x1 hour sessions
- 2011, Science Open House – Student and Parent Tours
- 2011, Summer Camp Activity – 2 day – Bacterial Isolation and Microscopy
- 2011, Highschool Student Orientation, Grade 12 – Tour of RIC
- 2011, Highschool Student Orientation, Grade 8 – DNA Isolation
- 2011, Alumni – DNA Isolation
- 2011, Research Student Recruitment Drive Organizer– Faculty Club
- 2011, Research Student Recruitment Drive – First Year Seminar
- 2011, Agribition – DNA isolation activity
- 2010, Prairie Valley School Division – Job Fair Talk – What professors do
- 2010, Regional Science Fair Judge
- 2010, Summer Camp Activity – Bacterial Isolation
- 2010, H1N1 Pandemic Seminar, Seniors Education Center
- 2009, H1N1 Pandemic Seminar, University of Regina

### Publications

1. Zanicic, E., Stavrinides, J. and McMartin, D.W. (2016) Field-analysis of potable water quality and ozone efficiency in ozone-assisted biological filtration systems for surface water treatment. *Water Research*. DOI: 10.1016/j.watres.2016.08.043.
2. Smith, D.D.N., Nickzad, A., Deziel, E. and Stavrinides J. (2016) A novel glycolipid biosurfactant confers grazing resistance to *Pantoea ananatis* BRT175 against the social amoeba, *Dictyostelium discoideum*. *mSphere*. 1(1): e00075-15.
3. Robinson, L.J., Cameron ADS, and Stavrinides J. (2015) Spontaneous and on point: do spontaneous mutations used for laboratory experiments cause pleiotropic effects that might confound bacterial infection and evolution assays? *FEMS Microbiology Letters*. 362: fnv177.
4. Walterson, A.M. and Stavrinides, J. (2015) *Pantoea*: a highly versatile and diverse genus within the *Enterobacteriaceae*. *FEMS Microbiology Reviews*. DOI: 10.1093/femsre/fuv027
5. Kirzinger, M.W.B., Butz CJ and Stavrinides, J. (2015) Inheritance of *Pantoea* type III secretion systems through both vertical and horizontal transfer. *MGG* DOI: 10.1007/s00438-015-1062-2.
6. Walterson, A.M., Smith, D.D.N., and Stavrinides J. (2014) Identification of a *Pantoea* biosynthetic cluster that directs the synthesis of an antimicrobial natural product. *PLoS One*. 9(5):ee96208.
7. Nadarasah, G. and Stavrinides J. (2014) Quantitative evaluation of the host colonizing capabilities of the enteric bacterium, *Pantoea*, using plant and insect hosts. *Microbiology*. 160(Pt\_3):602-615.
8. Smith, D.D.N., Kirzinger, M.W.B., and Stavrinides J. (2013) Draft genome sequence of *Pantoea ananatis* BRT175, an antibiotic-producing epiphytic isolate. *Genome Announce*. 1(6):e00902-13.
9. Smith, D.D.N., Kirzinger, M.W.B., and Stavrinides J. (2013) Draft genome sequence of the antibiotic-producing cystic fibrosis isolate, *Pantoea agglomerans* Tx10. *Genome Announce*. 1(5):e00904-13.
10. Tetlock, A., Yost, CK, Stavrinides J<sup>†</sup>, and Manzon RG<sup>†</sup>. (2012) Changes in the gut microbiome of the sea lamprey during metamorphosis. *Applied and Environmental Microbiology*. 78 (21): 7638-7644.
11. Stavrinides, J., Kirzinger, M.W.B, Beasley, FC, and Guttman, DS. (2012) E622: a miniature, virulence-associated mobile element. *Journal of Bacteriology*. 194 (2): 509-517.
12. Kirzinger, M.W.B, and Stavrinides J. (2012) Host specificity determinants as a genetic continuum. *Trends in Microbiology*. 20 (2):88-93.
13. <sup>†</sup>Kirzinger, M.W.B, <sup>†</sup>Nadarasah, G, and Stavrinides J. (2011) Insights into cross-kingdom plant pathogens. *Genes*. 2 (4):980-997.
14. Nadarasah, G., and Stavrinides J. (2011). Insects as alternative hosts for phytopathogenic bacteria. *FEMS Microbiology Reviews*. 35 (3): 555-575.
15. Stavrinides, J., No, A., and Ochman H. (2010) A single genetic locus in the phytopathogen *Pantoea stewartii* enables gut colonization and pathogenicity in an insect host. *Environmental Microbiology*. 12 (1): 147-155.
16. Stavrinides, J, McCloskey J.K., and Ochman H. (2009) Pea aphid as both host and vector for the phytopathogenic bacterium *Pseudomonas syringae*. *AEM* 75 (7): 2230-2235.
17. <sup>†</sup>Singh, S., <sup>†</sup>Stavrinides, J., Christendat, D. and Guttman, D. S. (2008) The phylogenomic characterization of the shikimate dehydrogenases reveals broadscale functional diversification, and identifies a new functional subclass. *MBE* 25 (10): 2221-2232.
18. Stavrinides J., McCann, H., and Guttman, D.S. (2008) Host-pathogen interplay and the evolution of type III effectors. *Cellular Microbiology* 10 (2): 285-292.

### **Invited Book Chapters**

1. Guttman, DS and Stavriniades J. (2010) Population genomics of bacteria. In *Bacterial Population Genetics in Infectious Disease*. Robinson, DA, Falush, D., and Feil, EJ (eds): Wiley and Sons.
2. Stavriniades, J. (2009) Origin and evolution of phytopathogenic bacteria. In *Plant Pathogenic Bacteria: Genomics and Molecular Biology*. Jackson, R.W. (ed): Caister Academic Press.
3. Stavriniades, J and Ochman, H. (2009) Phylogenetic methods and inferences in microbial evolution. In *Encyclopedia of Microbiology*. Schaechter, M. (ed): Elsevier.

### **Workshops (designed and delivered)**

- Bioinformatics Workshop, Prairie University Biology Symposium, February 20-22, 2014.

### **Conference and Symposium Presentations**

1. Smith, DDN, and Stavriniades, J. (2016) Comparative genomics of grazing-resistant and grazing-susceptible *Pantoea ananatis* and *Pantoea stewartii* isolates. CSM 66th Annual Conference, Toronto, Ontario, Canada, June 12-15.
2. Smith, DDN, Van Hamme, J. and Stavriniades, J. (2015) Using comparative genomics to identify genetic factors responsible for grazing resistance in the enterobacterial opportunist, *Pantoea ananatis*. CSM 65th Annual Conference, Regina, SK, Canada, June 15-18.
3. Robinson, L.J. and Stavriniades, J. (2015) Therapeutic potential of an antimicrobial recovered from cystic fibrosis isolate *Pantoea agglomerans* Tx10, and evaluation of its role in polymicrobial infections. CSM 65th Annual Conference, Regina, SK, Canada, June 15-18.
4. Zanicic, E., Stavriniades, J. and McMartin, D. (2014) Analysis and Optimization of Ozone-Assisted Biological Filtration Systems Used in Surface Water Treatment. Western Canada Water Conference. Regina, SK., Sept 23-26.
5. Walteson, AM. and Stavriniades J. (2014) Identification and characterization of a novel *Pantoea* antibiotic produced by *Pantoea ananatis* BRT175. IUMS, Montreal, Quebec, Canada, July 27-August 1.
6. Smith, DDN, and Stavriniades, J. (2014) Identification of animal-specific virulence factors mediating interactions between the pathogen *Pantoea* and the social amoeba, *Dictyostelium discoideum*. IUMS, Montreal, Quebec, Canada, July 27-August 1.
7. Robinson, L.J. and Stavriniades, J. (2014) Identification and characterization of a novel anti-staphylococcal antimicrobial from the cystic fibrosis isolate, *Pantoea agglomerans* Tx10. IUMS, Montreal, Quebec, Canada, July 27-August 1.
8. Jacobson, P., and Stavriniades, J. (2014) Classification of hemolysin activity on sheep's blood agar at 30 °C and 37 °C for clinical and environmental strains of *Pantoea*. Prairie University Biology Symposium (PUBS) Regina, Saskatchewan, Canada, February 20-22.
9. McDougall, DL, and Stavriniades J. (2014) High-throughput phage lawn (HTPL) assay: a rapid screening alternative for phage host range determination. Prairie University Biology Symposium (PUBS) Regina, Saskatchewan, Canada, February 20-22.
10. Walteson, AM, and Stavriniades J. (2014). Identification of a novel *Pantoea* antibiotic produced by *Pantoea ananatis* BRT175. Prairie University Biology Symposium (PUBS), Regina, Saskatchewan, Canada, February 20-22.

11. Smith, DDN, and Stavrinides, J. (2014) Animal-specific virulence factors mediate interactions of the enteric pathogen *Pantoea* with the amoeba, *Dictyostelium discoideum*. Prairie University Biology Symposium (PUBS) Regina, Saskatchewan, Canada, February 20-22.
12. Robinson, LJ, and Stavrinides, J. (2014) *Pantoea agglomerans* Tx10: Antibiotic discovery from a Cystic Fibrosis Isolate. Prairie University Biology Symposium (PUBS) Regina, Saskatchewan, Canada, February 20-22.
13. McDougall, D.L., and Stavrinides J. (2013) Description of a potentially novel bacteriophage infecting the genus *Pantoea*. Prairie University Biology Symposium (PUBS) Saskatoon, Saskatchewan, Canada, February 22-25.
14. Smith, DDN, and Stavrinides, J. (2013) Identification of virulence factors in the bacterial pathogen *Pantoea* using amoebae as a host. Prairie University Biology Symposium (PUBS) Saskatoon, Saskatchewan, Canada, February 22-25.
15. Henderson, N., and Stavrinides J. (2013) Effect of antibiotic production on host-microbe interactions. Prairie University Biology Symposium (PUBS) Saskatoon, SK, Canada, Feb 22-25.
16. Walterson, AM., and Stavrinides, J. (2013) *Pantoea ananatis* BRT175 produces a novel phenazine antibiotic. Prairie University Biology Symposium (PUBS) Saskatoon, Saskatchewan, Canada, February 22-25.
17. Kary, S., and Stavrinides J. (2013) Evaluation of *Pantoea* plasmid diversity and the construction of a cloning vector. Prairie University Biology Symposium (PUBS) Saskatoon, Saskatchewan, Canada, February 22-25.
18. Smith DDN, and Stavrinides, J. (2013) Identification of virulence factors in the bacterial pathogen *Pantoea* using amoebae as a host. Graduate Students Association Research Conference, Regina, Saskatchewan, Canada, March 16.
19. Walterson, AM., and Stavrinides, J. (2013) *Pantoea ananatis* BRT175 produces a novel phenazine antibiotic. Graduate Students Association Research Conference, Regina, Saskatchewan, Canada, March 16.
20. Kirzinger, M. W. B., and Stavrinides, J. (2012) Evolution of plant and animal type III secretion systems in *Pantoea* sp.. Canadian Society for Microbiologists (CSM) Annual Conference, Vancouver, BC, Canada, June 20-23.
21. Smith, DDN., and Stavrinides, J. (2012) Gladiatorial battles on the microscopic scale: using the amoeba as a model host for a cross-kingdom enteric pathogen. Canadian Society for Microbiologists (CSM) Annual Conference, Vancouver, BC, Canada, June 20-23.
22. Walterson, A, and Stavrinides, J. (2012) Characterization of a unique antibiotic produced by *Pantoea agglomerans* Strain BRT175. Graduate Students Association Research Conference, Regina, Saskatchewan, Canada, March 16-17.
23. Dancsok, A, and Stavrinides, J. (2012) Comparative virulence assays of environmental and clinical isolates of *Pantoea* sp. on *Caenorhabditis elegans* nematodes. Graduate Students Association Research Conference, Regina, Saskatchewan, Canada, March 16-17
24. Kirzinger MWB, and Stavrinides, J. (2012) Identification, distribution and evolution of three type III secretion systems in the multi-host pathogen, *Pantoea*. Graduate Students Association Research Conference, Regina, Saskatchewan, Canada, March 16-17.
25. Smith DDN, and Stavrinides, J. (2012) Characterization of the Novel Plasmid pPMA4326D and pPMA4326E from *Pseudomonas syringae* pv. maculicola ES4326. Graduate Students Association Research Conference, Regina, Saskatchewan, Canada, March 16-17.

26. Pettit, M., and Stavrinides J. (2011) Survivorship capabilities of environmental and clinical *Pantoea* isolates. Graduate Students Association Research Conference, Regina, SK, CA, Ap 1-2.
27. Dahms, T. E. S., Stavrinides, J. and Madariti, C. (2011) Ucp-1 from *Pantoea stewartii* affects bacterial ultrastructure and flocculation, Biophysical Society, Baltimore, MD. March 5-9.
28. Madariti, C., Stavrinides, J. and Dahms, T. E. S. (2011) Ucp-1 from *Pantoea stewartii* affects bacterial ultrastructure and flocculation. Graduate Students Association Research Conference, Regina, Saskatchewan, Canada, April 1-2.
29. Pettit, M., and Stavrinides J. (2011) Survivorship capabilities of environmental and clinical *Pantoea* isolates. Prairie University Biology Symposium (PUBS) Saskatoon, Saskatchewan, Canada, February 24-26.
30. Kirzinger, M. W. B., and Stavrinides, J. (2011) Three of a Kind: Distribution of Plant and Animal Type III Secretion Systems in *Pantoea* sp. Canadian Society of Microbiologists (CSM) Annual Conference, St. Johns Newfoundland Canada, June 20-23.
31. Kirzinger, M. W. B., and Stavrinides, J. (2011) Raiders of the Lost Hrc: The Search for the Elusive *Pantoea agglomerans* Type III Secretion System. Prairie University Biology Symposium (PUBS) Saskatoon, Saskatchewan, Canada, February 24-26.
32. Kirzinger, M. W. B., and Stavrinides, J. (2011) Raiders of the Lost Hrc: The Search for the Elusive *Pantoea* sp Type III Secretion System. Graduate Students Association Research Conference, Regina, Saskatchewan, Canada, April 1-2.
33. Nadarasah, G. and Stavrinides, J. (2011) Environmental and clinical isolates of *Pantoea* are indistinguishable. Canadian Society of Microbiologists Annual Conference. Newfoundland, Canada, June 20-23.
34. Nadarasah, G. and Stavrinides, J. (2011) Characterization of clinical and environmental isolates of *Pantoea*. University of Regina Annual Student Research Conference. SK, Canada, April 1-2.
35. Nadarasah, G. and Stavrinides, J. (2011) Comparing clinical and environmental isolates of *Pantoea*. Prairie University Biology Symposium. Saskatchewan, Canada, Feb 24-26.

### Invited Seminars

1. Northern Ontario School of Medicine. "Lifestyles of opportunistically infectious: exploration of the genetic determinants enabling environmental persistence in *Pantoea*." 2016.
2. Keynote Speaker: Life in Numbers 2: Genomics and Evolution of Microbial Pathogens. "Genomic insights into the host-associating capabilities of *Pantoea* spp.". ZHAW Zürcher Hochschule für Angewandte Wissenschaften. Wädenswil, Switzerland. 2015.
3. Canadian Society of Microbiology Annual Conference. "Synthesis and evaluation of phosphorus-based compounds as new antimicrobial architectures". Regina, SK. 2015
4. University of Regina, Department of Biology. "Is *Pantoea* safe for biocontrol?". 2013.
5. University of Saskatchewan, "Lifestyles of the surreptitiously infectious: A look into the pathogenic potential of the enteric bacterium, *Pantoea*", 2013.
6. University of Regina, Department of Chemistry and Biochemistry. "The bacterium *Pantoea* – A wolf in sheep's clothing?", 2013.
7. University of Calgary, "A glimpse into the biology of a multi-host bacterial pathogen", 2012.
8. University of Regina, Department of Computer Science, "Lifestyles of the promiscuous and infectious: a look into the multihost pathogen, *Pantoea*", 2012.

9. Canadian Phytopathological Society, University of Saskatchewan " Deciphering the biology of *Pantoea*: a true cross-kingdom plant-pathogen?", 2011.
10. University of Regina, Department of Mathematics, "Lifestyles of the promiscuous and infectious: a look into the multihost pathogen, *Pantoea*", 2011.
11. University of Regina, Department of Chemistry and Biochemistry, "Using a multidisciplinary approach to uncover the alternative hosts of a bacterial pathogen", 2010.
12. University of Regina, "Prevention through knowledge: understanding influenza and the H1N1 pandemic", 2009.
13. University of Regina, "Lifestyles of the virulent and infectious: exposing the alternative hosts of a bacterial pathogen", 2008.
14. McMaster University, "Lifestyles of the virulent and infectious: identification of genetic determinants governing host specificity in the pathogen *Pseudomonas syringae*", 2008.
15. York University, "Evolutionary genomics of host-pathogen interplay", 2008.

## Mark Vanderwel

Assistant Professor

[mark.vanderwel@uregina.ca](mailto:mark.vanderwel@uregina.ca), (306) 337-2544,

### Education and Professional Development

Ph.D. (2009). Forestry, University of Toronto.  
 M.Sc.F. (2005). Forestry, University of Toronto.  
 B.Sc. (2001). Ecology, University of Guelph.

### Employment History

Assistant Professor (2014-present). Department of Biology, University of Regina.  
 Postdoctoral associate (2013-2014). Department of Biology, University of Florida.  
 Postdoctoral researcher (2010-2012). Microsoft Research Cambridge.  
 Postdoctoral associate (2009). University of Toronto.

### Teaching History

BIOL275 – Ecology (2016-present).  
 BIOL376 – Population and Community Ecology (2016-present).  
 BIOL490BW – Modelling Biological Data (2015-present).  
 BIOL835AM – Modelling Biological Data (2015-present).  
 ZOO6927 – Likelihood and Bayesian Modelling for Ecologists (2013).

### Student Supervision

Name	Position	Dates of supervision
<b>Danäe Rozendaal</b>	Postdoctoral fellow	2015-2016
<b>Tanvir Ahmed Shovon</b>	Ph.D.	2016-present
<b>Rebecca Spriggs</b>	Ph.D.	2011-2015
<b>Joey Talbot</b>	Ph.D. intern	2012
<b>Nikée Groot</b>	Ph.D. intern	2011
<b>Katie Thebeau</b>	Ph.D. intern	2011
<b>Eva Lopez</b>	M.Sc.	2016-present
<b>Ryan Lin</b>	B.Sc.	2016-present
<b>Alana Wagner</b>	B.Sc.	2016-present



<b>Alan Chang</b>	B.Sc.	2016
<b>Alice Kong</b>	B.Sc.	2016
<b>Bryttni Nameth</b>	B.Sc.	2015
<b>Matt Schultz</b>	B.Sc.	2015

#### University Service

##### University committees:

Science Strategic Planning Committee, 2016-present  
 Executive of Council, 2015-present  
 Bioinformatics Resources Committee, 2014-present  
 CGS-M Adjudication Committee, 2015  
 Partnership Grant Adjudication Committee, 2015

##### Peer reviewer:

*Annals of Forest Science, Biological Conservation, Canadian Journal of Forest Research, Carbon Management, Ecography, Ecological Modelling, Ecology, European Journal of Forest Research, Forest Ecology and Management, Forests, Forests and Global Change (book chapter), Functional Ecology, GCB Bioenergy, Global Change Biology, Journal of Ecology, Journal of Vegetation Science, Methods in Ecology and Evolution, National Science Foundation, Nature Climate Change, New Phytologist, Oecologia, PLoS ONE, Southern Journal of Applied Forestry.*

##### Media interviews:

ScienceNow (2016), Regina Leader-Post (2016), U of R Feature Stories (2016), Moncton Times & Transcript (2015).

#### Scholarly Research

- Jucker, T., Caspersen, J., Chave, J., **Vanderwel, M.C.**, and 30 others. 2016. Allometric equations for integrating remote sensing imagery into forest monitoring programs. *Global Change Biology*. DOI: 10.1111/gcb.13388
- Rifai, S.W., Urquiza Munoz, J.D., Negron-Juarez, R.I., Tello, R., **Vanderwel, M.C.**, Lichstein, J.W., Chambers, J.Q., Bohlman, S.A. 2016. Landscape-scale consequences of differential tree mortality from catastrophic wind disturbance in the Amazon. *Ecological Applications* 26: 2225-2237.
- **Vanderwel, M.C.**, Zeng, H., Caspersen, J.C., Kunstler, G., Lichstein, J.W. 2016. Demographic controls of aboveground forest biomass across North America. *Ecology Letters* 19: 414-423.
- Kunstler, G., Coomes, D.A., Falster, D., Hui, F., Kooyman, R.M., Laughlin, D.C., Poorter L., **Vanderwel, M.C.**, Vieilledent, G., and 28 others. 2016. Plant functional traits have globally consistent effects on competition. *Nature* 529: 204-207.

- **Vanderwel, M.C.**, Slot, M., Lichstein, J.W., Reich, P.B., Kattge, J., Atkin, O.K., Bloomfield, K.J., Tjoelker, M.G., Kitajima, K. 2015. Global convergence in leaf respiration from estimates of thermal acclimation across time and space. *New Phytologist* 207: 1026-1037.
- Atkin, O.K., Bloomfield, K.J., Reich, P.B., Tjoelker M.G., **Vanderwel, M.C.**, and 58 others. 2015. Global variability in leaf respiration in relation to climate, plant functional types and leaf traits. *New Phytologist* 206: 614-636.
- Spriggs, R.A., **Vanderwel, M.C.**, Jones, T.A., Caspersen, J.P., Coomes, D.A. 2015. A simple area-based model for predicting airborne LiDAR first returns from stem diameter distributions: an example study in an uneven-aged, mixed temperate forest. *Canadian Journal of Forest Research* 45: 1338-1350.
- Reyer, C.P.O., Brouwers, N., Rammig, A., Brook, B.W., Epila, J., Grant, R.F., Holmgren, M., Langerwisch, F., Leuzinger, S., Lucht, W., Medlyn, B., Pfeifer, M., Steinkamp, J., **Vanderwel, M.C.**, Verbeek, H., Vilella, D.M. 2015. Forest resilience and tipping points: approaches and challenges. *Journal of Ecology* 103: 1-15.
- **Vanderwel, M.C.**, Purves, D.W. 2014. How do disturbances and environmental heterogeneity affect the rate at which forest distributions respond to climate change? *Ecography* 37: 10-20.
- Coomes, D., Flores, O., Holdaway, R., Jucker T., Lines, E.R., **Vanderwel, M.C.** 2014. Wood productivity response to climate change will depend critically on forest composition and structure. *Global Change Biology* 20: 3632-3645.
- Smith, M.J., Palmer, P.I., Purves, D.W., **Vanderwel, M.C.**, Lyutsarev, V., Calderhead, B., Joppa, L.N., Bishop, C.M., Emmott, S. 2014. Changing how Earth System Modelling is done to provide more useful information for decision making, science and society. *Bulletin of the American Meteorological Society* 95: 1453-1464.
- Purves, D.W., **Vanderwel, M.C.** 2014. Traits states and rates: understanding coexistence in forests. In: Coomes, D.A., Burslem, D.F.R.P., Simonson, W.D. (Eds.) *Forests and Global Change*. Cambridge University Press. Pp. 161-194. [peer-reviewed book chapter]
- Talbot, J., Lewis, S.L., Lopez-Gonzalez, G., Brienens, R.J.W., Monteagudo, A., Baker, T.R., Feldpausch, T.R., Malhi, Y., **Vanderwel, M.C.**, and 15 others. 2014. Methods to estimate above-ground wood productivity from long-term forest inventory plots. *Forest Ecology and Management* 320: 30-38.
- **Vanderwel, M.C.**, Coomes, D.A., Purves, D.W. 2013. Quantifying variation in forest disturbance, and its effects on aboveground biomass dynamics, across the eastern United States. *Global Change Biology* 19: 1504-1517.
- **Vanderwel, M.C.**, Lyutsarev, V.S., Purves, D.W. 2013. Climate-related variation in mortality and recruitment determine regional forest-type distributions. *Global Ecology and Biogeography* 22: 1192-1203.
- **Vanderwel, M.C.**, Cropper, W.P., Lichstein, J.W., Putz, F.E. 2013. Predicting broad-scale carbon loss and recovery in managed tropical forests. *Carbon Management* 4: 575-577.
- Smith, M.J., Purves, D.W., **Vanderwel, M.C.**, Lyutsarev, V.S., Emmott, S. 2013. The climate dependence of the terrestrial carbon cycle, including parameter and structural uncertainties. *Biogeosciences* 10: 583-606.

- **Vanderwel, M.C.**, Malcolm, J.R., Caspersen, J.P. 2012. Using a field-parameterized model of home range establishment to predict abundance in spatially heterogeneous habitats. *PLoS ONE* 7(7): e40599.
- Caspersen, J.P., **Vanderwel, M.C.**, Cole, W.G., Purves, D.W. 2011. How stand productivity results from size- and competition-dependent growth and mortality. *PLoS ONE* 6: e28660.
- **Vanderwel, M.C.**, Caspersen, J.P., Malcolm, J.R., Papaik, M.J., Messier, C. 2011. Structural changes and potential vertebrate responses following simulated partial harvesting of boreal mixedwood stands. *Forest Ecology and Management* 261: 1362-1371.
- **Vanderwel, M.C.**, Thorpe, H.C., Caspersen, J.P. 2010. Contributions of harvest slash to maintaining downed woody debris in selection-managed forests. *Canadian Journal of Forest Research* 40: 1680-1685.
- **Vanderwel, M.C.**, Malcolm, J.R., Caspersen, J.P., Newman, M.A. 2010. Fine-scale habitat associations of red-backed voles in boreal mixedwood stands. *Journal of Wildlife Management* 74: 1492-1501.
- Thorpe, H.C., **Vanderwel, M.C.**, Fuller, M.M., Thomas, S.C., Caspersen, J.P. 2010. Modelling stand development after partial harvests: an empirically based, spatially explicit analysis for lowland black spruce. *Ecological Modelling* 221: 256-267.
- **Vanderwel, M.C.**, Malcolm, J.R., Smith, S.M. 2009. Long-term snag and downed woody debris dynamics under periodic surface fire, fire suppression, and shelterwood management. *Canadian Journal of Forest Research* 39: 1709-1721.
- **Vanderwel, M.C.**, Mills, S.C., Malcolm, J.R. 2009. Effects of partial harvesting on vertebrate species associated with late-successional forests in Ontario's boreal region. *Forestry Chronicle* 85: 91-104.
- **Vanderwel, M.C.**, Thorpe, H.C., Shuter, J.L., Caspersen, J.P., Thomas, S.C. 2008. Contrasting downed woody debris dynamics in managed and unmanaged northern hardwood stands. *Canadian Journal of Forest Research* 38: 2850-2861.
- Holloway, G.L., Caspersen, J.P., **Vanderwel, M.C.**, Naylor, B.J. 2007. Cavity tree occurrence in hardwood forests of central Ontario. *Forest Ecology and Management* 239: 191-199.
- **Vanderwel, M.C.**, Malcolm, J.R., Mills, S.C. 2007. A meta-analysis of bird responses to uniform partial harvesting across North America. *Conservation Biology* 21: 1230-1240.
- **Vanderwel, M.C.**, Caspersen, J.P., Woods, M.E. 2006. Snag dynamics in partially-harvested and unmanaged northern hardwood forests. *Canadian Journal of Forest Research* 36: 2769-2779.
- **Vanderwel, M.C.**, Malcolm, J.R., Smith, S.M. 2006. An integrated model for snag and downed woody debris decay class transitions. *Forest Ecology and Management* 234: 48-59.
- **Vanderwel, M.C.**, Malcolm, J.R., Smith, S.M., Islam, N. 2006. Insect community composition and trophic guild structure in decaying logs from eastern Canadian pine-dominated forests. *Forest Ecology and Management* 225: 190-199.

## Mary Vetter

Professor, Luther College at the University of Regina

[mary.vetter@uregina.ca](mailto:mary.vetter@uregina.ca), (306) 585 5036

### Education and Professional Development

1975—1981 Ph.D. Botany, Duke University, Durham, NC. Advisor Dr. Dwight Billings.

Thesis title: “The physiological ecology of *Sedum lanceolatum* in the Colorado Front Range.”

1981—1983 MA Environmental Planning, University of Waterloo, Waterloo, ON. Advisor Dr. Roger Suffling. Thesis title: “Evaluation of Botanical Methods for Dating Debris Flow Deposits and Estimating Debris Flow Hazard in the Canadian Rocky Mountains”.

1969—1973 B.A. Summa Cum Laude, Biology and Psychology, Augustana College, Sioux Falls, SD.

### Employment History

September 1983—April 1984 Sessional Lecturer, Department of Biology and Department of Geography, University of Regina

July 1984—present Assistant, Associate, Professor, Luther College, University of Regina

### Teaching History

2016: (fall) BIOL 150 (42 students); BIOL 367 (11 students); BIOL 356 (18 students; co-taught with Dr. Britt Hall)

(winter) BIOL 365 (16 students); IDS 101 (8 students; coordinator; co-taught with Dr. Brenda Anderson, Dr. Viktoriya Galushko, Dr. Franzvolker Greifenhagen, Dr. Roger Petry)

2015: (fall) BIOL 150 (34 students); BIOL 367 (12 students); IDS 290AB (5 students)

(winter) IDS 101 (14 students; coordinator; co-taught with Dr. Brenda Anderson, Dr. Viktoriya Galushko, Dr. Franzvolker Greifenhagen, Dr. Roger Petry)

2014: (fall) BIOL 150 (34 students); BIOL 367 (7 students); IDS 290AB (8 students)

(winter) IDS 101 (13 students; coordinator; co-taught with Dr. Brenda Anderson, Dr. Viktoriya Galushko, Dr. Franzvolker Greifenhagen, Dr. Roger Petry)

2013: (fall) BIOL 150 (29 students); BIOL 367 (11 students); Acting Assistant Dean, Luther College  
(winter) Administrative Leave

2012: (fall) Administrative Leave

(winter) BIOL 476 (10 students); IDS 101 (co-instructor)

- 2011: Academic Dean Luther College  
 (spring/summer) BIOL 880AC (Advanced Plant Anatomy) (3 students)  
 (winter) IDS 101 (co-instructor)
- 2010: Academic Dean Luther College  
 (winter) BIOL 365 (16 students); IDS 101 (co-instructor)
- 2009: Academic Dean, Luther College  
 (winter) BIOL 476 (10 students); IDS 101 (co-instructor)
- 2008: Academic Dean, Luther College  
 (winter) BIOL 365 (12 students)
- 2007: Academic Dean, Luther College  
 (winter) BIOL 476/BIOL 835AI (14 students)

#### Student Supervision

Name	Position	Dates of supervision
<b>Candace Elchuk</b>	Honours	1997—1998
<b>Jon Sweetman</b>	Honours	1999—2000
<b>Ian Seiferling</b>	Honours	2003—2004
<b>Melissa Ranalli</b>	Honours (co-supervisor)	2005—2006
<b>Christina Whittmire</b>	MSc	2005—2006
<b>Margaret Put</b>	MSc	2006-2013 (on parental and compassionate leave 2008-2012)
<b>Catherine Hart</b>	MSc	2004-2009
<b>James Dickenson</b>	MSc	2014—present

#### University Service

Luther College at the University of Regina

- Acting Director, Voluntary Sector Studies Network (2015—present)
- Long-Range Planning committees (2007-2015)
- 100<sup>th</sup> anniversary committee (2008-2013)
- Acting Assistant Dean (July-December 2013), associated duties
- Academic Dean (July 2005-2012), associated duties
- Assistant Dean (September 2002 – June 2005), associated duties
- Retreat Committee (2013-present)
- Student Diversity and Services Working Group, Luther Strategic Plan (2013-present)
- Luther College Emergency Management Committee and Coordinator (2009-2014)
- Philosophy Search Committee (2004-2005)
- Acting Associate Academic Dean (January – July, 1998)
- Core Committee, Long-Range Planning, (November, 2000 – June, 2001)
- Classroom Technology Chair (September, 2000 – June 2005)

- Awards Officer (July 1990 – June 1993; July 1999 - 2001)
- Faculty Peer Review Committee (July 1998 – June 2001)
- Math Search Committee (1996)
- Geography Search Committee (1997-1998)
- Writing Across the Curriculum Chair (2002 – 2005)
- Extending Academic Expertise into the Community, Chair (2002 – 2005)
- Board of Regents Observer: Finance & Audit (Jan 2003 – Dec 2003)
- President’s Research Fund Review Committee (alternate) (2002 – 2004)
- Strategic Planning oversight, committees, and implementation teams (2010 – June 2015)
- VSSN Steering Group (2014 - present)
- VSSN Acting Director (July 2015 - present)
- Wellness, Retreat, and Christmas Party Committees (various times)

#### University of Regina

- Canadian Plains Research Centre Publications Board (1991 – 2012)
- Department of Biology, Graduate Studies and Honours Coordinator (2004 – 2005)
- Academic Program and Development Committee, Faculty of Arts (2005-2012)
- Deans’ Council (2005-2012)
- Centre for Kinesiology and Health Studies, two Faculty Search Committees (2006-2008)
- Executive of Council (1997—2002, September 2015 – present)
- Laboratory Instructor Search Committee, Department of Biology (March-May 2004)
- Herbarium Committee, Department of Biology (2002 – present)
- Faculty of Graduate Studies (1986 – present)
- Faculty of Graduate Studies and Research Liaison Committee (2003-2005)
- Faculty of Graduate Studies and Research, Chair Thesis Defenses as per request (1996-present)
- Faculty of Science (1984 – present)
- Faculty of Science Scholarship Committee (1984 – 2001; 2002; 2012-present)
- Faculty of Science Curriculum Committee (2003-2005)

#### Scholarly Research

Argus, G.; Harms, V.; Leighton, A.; Vetter, M. 2016. Conifers and Catkin-Bearing Trees and Shrubs of Saskatchewan. *Flora of Saskatchewan: Fascicle 5*. Nature Saskatchewan, Regina, SK. 272 pp.

Sauchyn, D.J.; Thompson, D.J.; Vetter, M.A. 2016. The resilience of western rangeland: Exposure to 9,000 years of climate variability. Plenary talk. Proceedings of the 10<sup>th</sup> International Rangeland Congress, 16-22 July 2016, Saskatoon, SK.

Gajewski, K.; Bunbury, J.; Vetter, M.; Kroeker, N.; Khan, A.H. 2014. Paleoenvironmental studies in southwestern Yukon. *Arctic* 67 (Supplement 1): 58-70.

Vetter, M.A. 2006. *Vegetation History at the Prairie-Forest Ecotone from High-Resolution Pollen Records*. Invited plenary session paper, Climate Change and Water Management Conference. April 2-4, 2006; Edmonton, AB.

## Harold G. Weger

Associate Professor

[harold.weger@uregina.ca](mailto:harold.weger@uregina.ca), (306) 585 4479

### Education and Professional Development

NSERC Post-Doctoral Fellowship (UBC, Forestry)	1990-91
Ph.D. Queen's University	1989
B.Sc. University of Toronto	1985

### Employment History

Associate Professor	Department of Biology University of Regina July 1997 - present
Department Head	July 2010 - June 2011 July 2014 - present

### Teaching History

Course (Percent Taught)	Title	Semester
BIOL 101	Biology II: Organisms in Their Environment	Winter 2017
BIOL 266	Plant Physiology	Fall 2016
BIOL 100 (67%)	Biology I: Cells to Organisms	Fall 2016
BIOL 803 (10%)	Scientific Research Skills	Fall 2016
BIOL 101 (67%)	Biology II: Organisms in Their Environment	Winter 2016
BIOL 100	Biology I: Cells to Organisms	Fall 2015
BIOL 366	Advanced Plant Physiology	Fall 2015
BIOL 366 lab instr.		
BIOL 803 (10%)	Scientific Research Skills	Fall 2015
BIOL 266	Plant Physiology	Winter 2015
BIOL 100	Biology I: Cells to Organisms	Fall 2014
BIOL 366	Advanced Plant Physiology	Fall 2014
BIOL 366 lab instr.		

BIOL 803 (10%)	Scientific Research Skills	Fall 2014
BIOL 396	Independent Research in Biology	Winter 2014
BIOL 266	Plant Physiology	Winter 2014
BIOL 803 (10%)	Scientific Research Skills	Fall 2013
BIOL 366	Advanced Plant Physiology	Fall 2013
BIOL 366 lab instr. (50%)		
BIOL 100	Introductory Biology I	Fall 2013
BIOL 266	Plant Physiology	Winter 2013
BIOL 803 (15%)	Scientific Research Skills	Fall 2012
BIOL 396	Independent Research in Biology	Fall 2012
BIOL 366	Advanced Plant Physiology	Fall 2012
BIOL 366 lab instr. (50%)		
BIOL 100	Introductory Biology I	Fall 2012
BIOL 490 BM (50%)	Independent Research project	Winter 2012
BIOL 266	Plant Physiology	Winter 2012
BIOL 366	Advanced Plant Physiology	Fall 2011
BIOL 366 lab instr. (50%)		
BIOL 100	Introductory Biology I	Fall 2011
BIOL 266	Plant Physiology	Winter 2011
BIOL 803 (25%)	Scientific Research Skills	Fall 2010
BIOL 366	Advanced Plant Physiology	Fall 2010
BIOL 366 lab instr. (50%)		
BIOL 266	Plant Physiology	Winter 2010
BIOL 100 (50%)	Introductory Biology I	Fall 2009
BIOL 366	Advanced Plant Physiology	Fall 2009
BIOL 366 lab instr. (50%)		
BIOL 266	Plant Physiology	Winter 2009
BIOL 803 (20%)	Scientific Research Skills	Fall 2008
BIOL 100 (50%)	Introductory Biology I	Fall 2008
BIOL 366	Advanced Plant Physiology	Winter 2008
BIOL 366 lab instr. (50%)		
BIOL 490AD	Analytical Methods for Metal Quant.	Winter 2008
BIOL 366	Advanced Plant Physiology	Winter 2008
BIOL 366 lab instr. (50%)		
BIOL 100 (50%)	Introductory Biology I	Fall 2007



BIOL 266	Plant Physiology	Fall 2007
BIOL 803 (16%)	Scientific Research Skills	Fall 2007
BIOL 266	Plant Physiology	Winter 2007
BIOL 366	Advanced Plant Physiology	Fall 2006
BIOL 366 lab instr. (50%)		
BIOL 100 (50%)	Introductory Biology I	Fall 2006

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#### Student Supervision

Name	Position	Dates of supervision
<b>Samantha Bancescu</b>	Research course (BIOL 396)	January – April 2014
<b>April Sefton (50%)</b>	NSERC USRA (with J. Stavrinides)	January – April 2013
<b>Derek Wright</b>	Research course (BIOL 490BM) (with J. Stavrinides)	September – December 2012
<b>Mathew Sonier</b>	Research Assistant, Technician	May 2009 – May 2011
<b>Daniel Contreras</b>	Technician	February 2009 – October 2009
<b>Yifan Wang</b>	Research Assistant	June 2008 – August 2008
<b>Nikki Wirtz</b>	Chemistry Co-op Student (double work term)	May 2008 – December 2008
<b>Crystal Walker</b>	Research Assistant	July 2008 – August 2008
<b>Jennifer Culig</b>	Research Assistant	May 2007 – August 2007
<b>Ryan Healey</b>	Research Assistant	May 2007 – August 2007
<b>Jackie Lam</b>	Chemistry Co-op Student (double work term)	January 2007 – August 2007
<b>Crystal Walker</b>	Research Assistant	May 2006 – August 2006
<b>Michael Fink</b>	Research Assistant	May 2006 – August 2006

Have also served on the supervisory committees of several graduate students in Biology, Chemistry & Biochemistry, and in the Faculty of Engineering. Also served on the committees of Honours students in the Biology Dept.

#### University Service

Biology Dept Co-op Coordinator (2007- present); founder of the Biology Co-op Program  
 Biology Dept Undergraduate Advisor (1993 – present)  
 Biology Dept Timetabling Committee (2014 – present)  
 Biology Dept Graduate Coordinator (2006 – 2012)  
 Biology Dept Awards Committee (1997 – present)  
 Biology Dept Curriculum Committee (2004 – 2012)  
 Biology Dept Plant Growth Facilities Committee (1992 – present)

Biology Dept Seminar Coordinator – numerous times  
Head of Biology (2010 – 2011, 2014 – present)  
Faculty of Science Admissions & Studies Committee (2004 – 2012)  
Faculty of Science Lab Instructor Review Committee (2005 – 2007)  
Faculty of Science Review Committee (2010)  
Faculty of Science Budget and Space Committee (2010)  
Faculty of Graduate Studies & Research Faculty Council (2006 – 2012, 2016 – present)  
Faculty of Graduate Studies & Research PhD Committee (2006 – 2012 [Chair], 2015 – present)  
Faculty of Graduate Studies & Research Ad Hoc Committee on Non-traditional thesis formats (2009)  
Faculty of Graduate Studies & Research Ad Hoc Committee on Mathematics English Language Entry Requirements (2010)  
Faculty of Graduate Studies & Research – various awards adjudication committees (PGS, USRA, CIHR, IODE)  
Council Committee on Student Appeals (2006 – 2012)  
Executive of Council (2007-11, 2013-2017)  
Executive of Council Task Force on Processes (2010)  
President’s Committee on Animal Care (2010-2011, 2014 – present)  
Director of Animal Facilities, including the ARE Facility (2010-2011, 2014 – present)  
Software Systems Engineering Search Committee, Fac of Engineering & App Sci (2013)  
Open Textbook Working Group (2014 – 2015)  
Autoclave Working Group (2014 – 2015)  
External Review Committee, Faculty of Kinesiology & Health Studies (2007)  
Identification of organisms for the general public – several times per year

### ***Other Service***

External Review Committee, Thompson Rivers University, Dept of Biological Sciences (2014)  
Board of Trustees, Oaks Scholarship Fund, Canadian Society of Plant Biologists (1997 - present, Chair 2003 - present)  
Treasurer, Canadian Society of Plant Biologists (2002- 2015)  
Membership Coordinator, Canadian Society of Plant Biologists (2015 – present)  
Centre for Teaching & Learning – “How to Mark” seminar for graduate students (2X per year, 2013 – present)  
Centre for Teaching & Learning – “Responsibilities of TAs Roundtable” (1-2X per year, 2013 – present)  
CFI-LOF College of Reviewers (2005-2013)  
Admissions Committee, University of Saskatchewan College of Medicine (2015 – present)  
Judge, Regina Region Science Fair - yearly

- Xin, X., G. Huang; X. Liu, C. An, Y. Yao, H.G. Weger, P. Zhang, X. Chen. Molecular toxicity of triclosan and carbamazepine to green alga *Chlorococcum* sp.: A single cell view using synchrotron fourier transform infrared spectromicroscopy. Submitted to Environ Pollut.
- Sonier, M.B., D.A. Contreras, R.G. Treble, H.G. Weger (2012) Two distinct pathways for iron acquisition by iron-limited cyanobacterial cells: evidence from experiments using siderophores and synthetic chelators. *Botany* 90: 181-190.
- Sonier, M.B., H.G. Weger (2010) Plasma membrane ferric reductase activity of iron-limited algal cells is inhibited by ferric chelators. *Biometals* 23:1029-1042.
- Wirtz, N.L., R.G. Treble, H.G. Weger (2010) Siderophore-independent iron uptake by iron-limited cells of the cyanobacterium *Anabaena flos-aquae*. *Journal of Phycology* 46:947-957.
- Weger, H.G., J. Lam, N.L. Wirtz, C.N. Walker, R.G. Treble. (2009) High stability ferric chelates result in decreased iron uptake by the green alga *Chlorella kessleri* owing to decreased ferric reductase activity and chelation of ferrous iron. *Botany* 87:922-931.
- Weger, H.G., C.N. Walker, M.B. Fink (2007) Ferric and cupric reductase activities by iron-limited cells of the green alga *Chlorella kessleri*: quantification via oxygen electrode. *Physiologia Plantarum* 131: 322-331.
- Weger, H.G., C.J. Matz, R.S. Magnus, C.N. Walker, M.B. Fink, R.G. Treble (2006) Differences between two green algae in biological availability of iron bound to strong chelators. *Canadian Journal of Botany* 84:400-411.

## Christopher K. Yost

Professor, Canada Research Chair (Tier II)

[chris.yost@uregina.ca](mailto:chris.yost@uregina.ca), (306) 585 5223,

### Education and Professional Development

1998 PhD. Microbial Genetics. Department of Biology, University of Calgary  
 1992 BSc. Microbiology (CO-OP distinction). Department of Microbiology & Biochemistry,  
 University of Victoria

### Employment History

07/2014-Present: Professor, Dept. Biology, University of Regina  
 09/2007-08/2017: Canada Research Chair Tier II  
 07/2008-06/2014: Associate Professor, Dept. Biology, University of Regina  
 08/2003-06/2008: Assistant Professor, Dept. Biology, University of Regina

### Teaching History

Biol220 Introductory Microbiology (2006, 2007, 2012-2016): Enrolment range 60-100 students  
 Biol223 Microbes and Society (2011-2016): Enrolment range 34-94 students  
 Biol302 Food Microbiology (2006-2008, 2011-2016): Enrolment range 18-32 students  
 Biol396 Independent Research (2015): Individual research projects for single semester  
 Biol488/499 Honours Research (2006-2016): Supervision of 1 to 2 honours students per year  
 Biol410 Bacterial Genetics (2006, 2007, 2008): Enrolment range 6-10 students  
 Biol803: Scientific Research Skills (2007): Team Taught Enrolment range 6-12  
 Biol850 Directed Readings (2006, 2008, 2009)

\*2010 I was on sabbatical

### Student Supervision

Name	Position	Dates of supervision
Zainab Ahmedseidi	MSc student	2016-
Jennifer Russell	MSc student	2016-
Mir Akter	PhD student	2016-

Claire Freeman	MSc student	2015-
Adeyinka Ajayi	PhD student	2015-
Kara Neudorf	PhD graduate	2011-2015
Benjamin Perry	MSc graduate	2013-2015
Shirin Afroj	MSc graduate	2011-2014
Bijaya Aryal	MSc graduate	2010-2012
Teddie Rahube	PhD graduate	2008-2013
Ryan McDonald	PhD graduate	2006-2013
Elizabeth Vanderlinde	PhD graduate	2006-2012
Christi Tsui	MSc graduate	2006-2008
Dallas Foreman	MSc graduate	2006-2008
Marty Sriver	BSc Honours student	2016-
Brady O'Connor	BSc Honours graduate	2015-2016
Carmen Beaton	BSc Honours graduate	2015-2016
Jaydon Tsui	BSc Honours graduate	2012-2013
Jeremy Counsel	BSc Honours graduate	2011-2012
Lindsay Chapman	BSc Honours graduate	2010-2011
Danielle Frost	BSc Honours graduate	2009-2010
Samantha Magnus	BSc Honours graduate	2008-2009
Jenna Gritzfeld	BSc Honours graduate	2006-2007

#### University Service

2006-2016: Biology Honours Coordinator  
 2014-2015: Chair of the Council Committee on Academic Mission  
 2006-2014: Biology Time Table Coordinator  
 2005-2008; 2013-2016: Member of Executive of Council  
 2006-2008: Faculty of Graduate Studies and Research Scholarship Committee  
 2006-2014: Hiring Committee for 5 faculty hires  
 2008-2015: Chair of PhD Defences for FGSR

#### Professional Service:

2016-ongoing: Co-Editor-in-Chief for the Canadian Journal of Microbiology  
 2016-2019: Chair NSERC Discovery Grant Committee 1501

2016-2019: Member of the NSERC Committee on Discovery Research (Formerly known as COGS)  
 2014-2017: Executive Committee Member of Canadian Society of Microbiologists (President 2015/16)  
 2011-2014: Member of the NSERC Discovery Grants 1501 Committee and Co-Chair (Microbiology/Immunology) for 2013 and 2014  
 2008-2010: Member of the NSERC Promos Science Grants selection committee and Chair in 2010  
 2009, 2015, 2016: External Examiner for PhD defences at U of Manitoba (2009), U of Waterloo (2009), U of Saskatchewan (2015) and U of Alberta (2016)  
 2006-ongoing: Ad-hoc reviewer for Journal of Bacteriology, Microbiology, Applied and Environmental Microbiology, Molecular Plant Microbe Interactions, Frontiers in Microbiology, Water Research, Journal of Applied Microbiology, Food Microbiology, Journal of Microbiological Methods, PLoS One.

#### Scholarly Research

43. Perry BJ, Akter MS, **Yost CK** (2016) The use of transposon insertion sequencing to interrogate the core functional genome of the legume symbiont *Rhizobium leguminosarum*. *Front. Microbiol.* 7: 1873
42. Wheatley RM, Ramachandran VK, Geddes BA, Perry BJ, **Yost CK**, Poole PS. (2016). Role of O2 in the growth of *Rhizobium leguminosarum* bv. vice 3841 on glucose and succinate. *J. Bacteriol.* 199: pii:e00572-16
41. Oresnik IJ, Mascarenhas L, **Yost CK**. (2016). Does it take a community to raise a plant? A summary of the Canadian Crop Microbiome Workshop. *Can. J. Microbiol.* 62: 980-982
40. Tambalo DD, Boa T, Aryal B, **Yost CK**. (2016). Temporal variation in the prevalence and species richness of *Campylobacter* spp. in a prairie watershed impacted by urban and agricultural mixed inputs. *Can. J Microbiol.* 62: 402-410
39. O'Connor B, Perry BJ, **Yost CK**. (2015). Draft genome sequence of *Rheineimera* sp. KL1 isolated from a freshwater lake in southern Saskatchewan, Canada. *Genome Announcements.* 3(5): e01177-15.
38. Bhat S, Booth S, Vantomme E, Afroj S, **Yost CK**, Dahms, T. (2015). Oxidative stress and metabolic perturbations in *Escherichia coli* exposed to sublethal levels of 2,4-dichlorophenoxyacetic acid. *Chemosphere.* 135: 453-461.
37. Stea EC, Truelstrup Hansen L, Jamieson RC, **Yost CK**. (2015) Fecal contamination in the surface waters of a rural- and an urban-source watershed. *J Environ. Qual.* 44: 1556-1567.
36. Halmillawewa AP, Restrepo-Cordoba M, Perry BJ, **Yost C.K.**, Hynes MF. (2015). Characterization of the temperate phage vB\_RleM\_PPF1 and its site specific integration into the *Rhizobium leguminosarum* phage F1 genome. *Mol. Genet. Genomics.* [e pub ahead of print]
35. Tambalo, DD, Perry, BJ, Fitzgerald, S, Cameron, ADS, **Yost, C.K.** (2015). Draft Genome Sequence and Annotation of Phyllosphere-Persisting *Salmonella enterica* Serovar Livingstone Strain CKY-S4, isolated from an Urban Lake in Regina, Canada. *Genome Announcements.* 3(4): e00884-15.
34. Stea EC, Purdue LM, Jamieson RC, **Yost CK**, Truelstrup Hansen L. (2015). Comparison of the prevalences and diversities of *Listeria* species and *Listeria monocytogenes* in an urban and a rural agricultural watershed. *Appl. Environ. Microbiol.* 81: 3812-3822.
33. Halmillawewa A, Restrepo-Córdoba M, **Yost CK**, Hynes MF. (2015). Genomic and phenotypic characterization of *Rhizobium gallicum* phage vB\_RglS\_P106B. *Microbiol.* 161: 611-620.

32. Neudorf, K.D., Vanderlinde, E.M., Tambalo, D.D., **Yost, C.K.** (2015). A previously uncharacterized tetratricopeptide repeat containing protein is involved in cell envelope function in *Rhizobium leguminosarum*. *Microbiol.* 161: 148-157
31. Perry, B.J., **Yost, C.K.** (2014). Construction of a mariner-based transposon vector for use in insertion sequence mutagenesis in selected members of the Rhizobiaceae. *BMC Microbiol.* 14:298
30. Rahube, T.O., Viana, L.S., Koraimann, G., **Yost, C.K.** (2014). Characterization and comparative analysis of antibiotic resistance plasmids isolated from a wastewater treatment plant. *Front. Microbiol.* 5: 558
29. Piorkowski, G.S., Jamieson, R.C., Bezanson, G.S., Hansen, L.T., **Yost, C.** (2014). Reach specificity in sediment *E. coli* population turnover and interaction with waterborne populations. *Sci Tot Environ* 496: 402-413
28. Ridley, C.M., Jamieson, R.C., Hansen, L.T., **Yost, C.K.**, Bezanson, G.S. (2014). Baseline and storm event monitoring of *Bacteroidales* marker concentrations and enteric pathogen presence in a rural Canadian watershed. *Water Res.* 60: 278-288.
27. Piorkowski, G.S., Jamieson, R.C., Bezanson, G.S., Hansen, L.T., **Yost, C. K.**(2014). Effect of hillslope position and manure application rates on the persistence of fecal source tracking indicators in an agricultural soil. *J Environ Qual.* 43: 450-458
26. Tambalo, D.D., Vanderlinde, E.M., Robinson, S., Halmillawewa, A., Hynes, M.F., **Yost, C.K.** (2014). Legume seed exudates and *Physcomitrella patens* extracts influence swarming behavior in *Rhizobium leguminosarum*. *Can. J. Microbiol.* 60: 15-24
25. Piorkowski, G.S., Jamieson, R.C., Bezanson, G.S., Hansen, L.T., **Yost, C.K.** (2013). Characterizing spatial structure of sediment *E. coli* populations to inform sampling design. *Environ. Monit. Assess.* [Epub ahead of print]
24. Vanderlinde E.M., Hynes, M.F., **Yost, C.K.** (2014). Homoserine catabolism by *Rhizobium leguminosarum* bv. *viciae* 3841 requires a plasmid-borne gene cluster that also affects competitiveness for nodulation. *Environ. Microbiol.* 16: 205-217
23. Piorkowski, G., Jamieson, R., Bezanson, G., Hansen, L.T., **Yost, C.** (2013). Evaluation of statistical models for predicting *Escherichia coli* particle attachment in fluvial systems. *Water Res.* 47: 6701-6711.
22. Nelson K.Y., McMartin, D.W., **Yost, C.K.**, Runtz, K.J., Ono, T. (2013). Point-of-use water disinfection using UV light-emitting diodes to reduce bacterial contamination. *Environ. Sci. Pollut. Res. Int.* 20: 5441-5448
21. Boa, T., Rahube, T.O., Fremaux, B., Levett, P.N., **Yost, C.K.** (2013). Prevalence of methicillin resistant staphylococci species isolated from computer keyboards located in secondary and postsecondary schools. *J. Environ. Health* 75: 50-58.
20. Tambalo, D.D., Boa, T., Liljebjelke K., **Yost, C.K.** (2012) Evaluation of two quantitative PCR assays using *Bacteroidales* and mitochondrial DNA markers for tracking dog fecal contamination in waterbodies. *J. Microbiol. Methods* 91: 459-467.
19. Tetlock A, **Yost, C.K.**, Stavrinides J, Manzon, R.G. (2012). Changes in the gut microbiome of the sea lamprey during metamorphosis. *Appl. Environ. Microbiol.* 78: 7638-7644.
18. Vanderlinde E.M., **Yost, C.K.** (2012). Genetic analysis reveals links between lipid A structure and expression of the outer membrane protein gene, *ropB*, in *Rhizobium leguminosarum*. *FEMS Microbiol Lett.* 335: 130-139.

17. Rahube, T.O., **Yost, C.K.** (2012). Characterization of a mobile and multiple resistance plasmid isolated from swine manure and its detection in soil after manure application. *J. Appl. Microbiol.* 112: 1123-1133.
16. Marti, R., Fremaux, B., Edge, T.A., Topp, E., **Yost, C.K.** (2012). Les méthodes de typages des sources microbiennes au Canada. *TSM: Techniques Science Méthodes* 3: 65-79
15. Tambalo, D.D., Fremaux, B., Boa, T., **Yost, C.K.** (2012). Persistence of host-associated *Bacteroidales* gene markers and their quantitative detection in an urban and agricultural mixed prairie watershed. *Water Res.* 46: 2891-2904.
14. Vanderlinde, E.M., **Yost, C.K.** (2012). Mutation of the sensor kinase *chvG* in *Rhizobium leguminosarum* negatively impacts cellular metabolism, outer membrane stability and symbiosis. *J. Bacteriol.* 194: 768-777.
13. Dong, J., Signo, K.S.L., Vanderlinde, E.M., **Yost, C.K.**, Dahms, T.E.S. (2011). Atomic force microscopy of a *ctpA* mutant in *Rhizobium leguminosarum* reveals surface defects linking CtpA function to biofilm formation. *Microbiol* 157: 3049-3058.
12. Vanderlinde, E.M., Magnus, S.A., Tambalo, D.D., Koval, S.F., **Yost, C.K.** (2011). Mutation of a broadly conserved operon from *Rhizobium leguminosarum* biovar *viciae* (RL3499-RL3502) causes defects to cell morphology and envelope integrity. *J. Bacteriol.* 193: 2684-2694.
11. Rahube, T.O., **Yost, C. K.** (2010). Antibiotic resistance plasmids in wastewater treatment plants and their possible dissemination into the environment. *African J. Biotech.* 9: 9183-9190.
10. Fremaux, B., Boa, T., **Yost, C.K.** (2010). Quantitative real-time PCR assays for sensitive detection of Canada goose-specific fecal pollution in water sources. *Appl. Environ. Microbiol.* 76: 4886-4889.
9. Tambalo, D.D., **Yost, C.K.**, Hynes, M.F. (2010). Characterization of swarming motility in *Rhizobium leguminosarum* bv. *viciae*. *FEMS Microbiol Lett.* 307: 165-174.
8. Foreman D.L., Vanderlinde E.M., Bay D.C., **Yost C.K.** (2010). Characterization of a gene family of outer membrane proteins (*ropB*) in *Rhizobium leguminosarum* biovar *viciae* VF39SM and the role of the sensor kinase *ChvG* in their regulation. *J. Bacteriol.* 192: 975-983.
7. Vanderlinde, E.M., Harrison, J.J., Muszynski, A., Carlson, R.W., Turner, R., **Yost, C.K.** (2010). Identification of a novel ABC transporter required for desiccation tolerance, and biofilm formation in *Rhizobium leguminosarum* biovar *viciae* 3841. *FEMS Microbiol Ecol.* 71: 327-340.
6. Fremaux, B., Gritzfeld, J., Boa, T., **Yost, C.K.** (2009). Evaluation of host-specific *Bacteroidales* 16S rRNA gene markers as a complementary tool for detecting fecal pollution in a prairie watershed. *Water Res* 43: 4838-4849.
5. Vanderlinde, E.M., Muszynski, A., Harrison, J.J., Koval, S.F., Foreman, D.L., Ceri, H., Kannenberg, E.L., Carlson, R.W., **Yost, C.K.** (2009). A *Rhizobium leguminosarum* biovar *viciae* 3841 mutant, deficient in 27-hydroxyoctacosanoate-modified lipopolysaccharide is impaired in desiccation tolerance, biofilm formation and motility. *Microbiol.* 155: 3055-3069.
4. Fremaux, B., Boa, T.B., Chaykowski, A.C., Kasichayanula, S.K., Gritzfeld, J.G., Braul, L.B., **Yost, C.** (2009). Assessment of the microbial quality of irrigation water in a prairie watershed. *J. Appl. Microbiol.* 106: 442-454
3. Gilbert, K., Vanderlinde, E., **Yost, C.K.** (2007). Mutagenesis of the carboxy terminal protease CtpA decreases desiccation tolerance in *Rhizobium leguminosarum*. *Fems Microbiol. Lett.* 272: 65-74



**2.** Miller, L. D., **Yost, C. K.**, Hynes, M. F., and Alexandre, G. (2007). The major chemotaxis gene cluster of *Rhizobium leguminosarum* bv. *viciae* is essential for competitive nodulation. *Mol. Microbiol.* 63: 348-362

**1.** **Yost, C. K.**, Rath, A. M., Noel, T. C., and Hynes, M. F. (2006). Characterization of genes involved in erythritol catabolism in *Rhizobium leguminosarum* bv. *viciae*. *Microbiol.* 152: 2061-2074.