

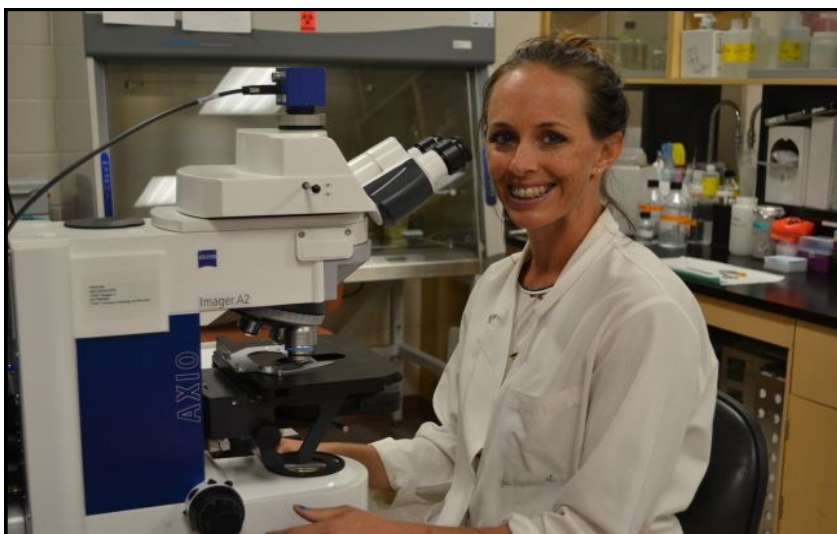
\$75,000 Research Grant Awarded by Nunavut Research Institute and Irving Shipbuilding



Congratulations to **Dr. Pierre-Yves Daoust** for being awarded a research grant of \$75,000 by the Nunavut Research Institute (NRI) in partnership with Irving Shipbuilding Inc. for his research proposal, “Ringed Seal Health Surveillance – Tracking trends in a changing world”. This was a highly competitive process. NRI and Irving Shipbuilding will make a public announcement of the successful projects at the Oceans Innovation Conference on October 4th at the Gala dinner.

Well done Pierre-Yves!

\$2.5 Million Granted for Research Conducted at AVC



Congratulations to **Dr. Mark Fast** for his recent research funding success. As part of the +\$200 million Ocean Frontier Institute collaboration between Dalhousie and Memorial Universities and UPEI, AVC has been granted over \$2.5 million for the research being conducted here. This funding will support staff and students research in Dr. Fast’s laboratory, and maintain AVC-UPEI as a national and world leader in aquatic animal health.

Well done Dr. Fast!

Photo: Post Doc **Laura Braden** working in the laboratory under Dr. Mark Fast ‘s supervision.

PhD Thesis Defense



Congratulations to **Ori Elad** who successfully defended his PhD thesis [Nutritional regulation of genes associated with avian B cell receptors involved in innate and adaptive immunity] on August 17, 2016. Ori was supervised by **Dr. Juan Carlos Rodriguez-Lecompte**. **Dr. Chelsea Martin** chaired the Examination Committee.

Congratulations Ori!

Innovation PEI Award Granted



Congratulations to **Alyson Brown**, winner of the Graduate and Post-Doctoral Fellowship Fund awarded by Innovation PEI.

Alyson was the only MSc student at UPEI to receive this grant for her project: The importance of acute phase and intracellular responses in vaccine-induced protection against bacterial infections in Arctic charr (*Salvelinus alpinus*). The grant is for \$20,000 per year and is renewable for 1 additional year.

Well done Alyson!

Dr. Rodriguez- Lecompte, Keynote Speaker at Workshop in Mexico



As part of his academic collaborative effort that has strengthened the links between North American and South American researchers, **Dr. Rodriguez-Lecompte** was a keynote speaker at the workshop and web laboratory seminar series, "Consolidating the immune system" in Torreon, Mexico, July 25-28. He delivered a talk entitled, 'La enfermedad de NewCastle: Un fenotipo viral con diferentes patologias. The talk focused on his work on nutritional immuno-intervention and NewCastle disease virus mucosal immunity.

Welcome to Path/Micro Dr. Kim Foote



Dr. Kim Foote started a combined clinical pathology Master of Veterinary Science and residency program in August under the co-supervision of **Dr. Cornelia Gilroy** and **Dr. Shelley Burton**. Kim came to Prince Edward Island (PEI) from Newfoundland in 1993 to do a Master of Science (MSc) program in the Biomedical Science department at the University of Prince Edward Island (UPEI) studying the behavioural and physiological effects of 915 megahertz microwave radiation as an alternative heat source for weaner pigs. She enrolled in the Doctor of Veterinary Medicine (DVM) program at UPEI in 1995 and defended her MSc thesis following graduation from the DVM program. She spent 2 years in a mixed animal practice in Hampton, New Brunswick, before returning to PEI in 2001 to work at the Charlottetown Veterinary Clinic as a small animal practitioner. Over the past 17 years in private practice, Kim has developed a passion for clinical pathology and is looking forward to expanding her knowledge in this area. Kim lives on a farm near Charlottetown with her partner, Chris, 3 cats and a small herd of beef cattle. In her spare time, she enjoys running, gardening and baking.

Welcome to Path/Micro Haili Wang



In July, the Department of Pathology and Microbiology welcomed research technologist **Haili Wang** to her new position in **Dr. Chelsea Martin**'s laboratory. Haili is originally from China, where she earned a BSc in Phytopathology and Entomology, an MSc in Natural Products and Biopesticides, and was an associate professor at the Guangzhou College of Agricultural Technology. More recently, Haili completed bioscience technology training at Holland College, and has gained a variety of research experience here in PEI at NRCC Institute of Nutrisciences and Health, Sekisui Diagnostics and Biovectra. Haili has held a research technologist position in Dr. Spencer Greenwood's laboratory in the Department of Biomedical Sciences since January of last year, and currently divides her time between the Martin and Greenwood laboratories. Haili is performing cancer research in Dr. Martin's laboratory, focusing on gene expression of mediators of inflammation and invasiveness in human and feline oral squamous cell carcinoma and is providing support for graduate student research in the laboratory. When not in the laboratory, Haili enjoys boating and spending time in the national parks.

AVC/UPEI Students Travel to Norway



As part of the Cross Atlantic Sea Lice (CASL) Initiative, a 3 year program funded by the Norwegian Research Council and directed by Drs. Sussie Dalvin and **Mark Fast**, seven AVC/UPEI students traveled to Norway for one week in June to partake in a course offered at the University of Bergen (UiB). It was titled: "Methods and use of genome modifications in research on host and parasites". While there, students attended lectures on DNA vaccines, the creation of transgenic animals, and GMOs in Atlantic salmon and sea lice. The course consisted of thirteen students (7 from AVC, 6 from UiB). Next summer, Dr. Mark Fast will host a course that both Norwegian students and AVC students will attend.

Photo: From left to right: Joao Barbosa (UiB), **Dylan Michaud** (AVC), **Carter Van Iderstine** (UPEI), **Jordan Poley** (AVC), **Carlos Lopez-Mendez** (AVC), **Kaitlin Fitzpatrick** (AVC DVM Class of 2016), **Danielle Burnett** (AVC), **Aly Brown** (AVC), Elisabeth Midtbo (UiB), Vegar Heen (UiB), Talha Qureshi (UiB), Victoria Royseth (UiB), Rune Male (UiB-Course Instructor), Sussie Dalvin (UiB-Course Instructor).

Well Well Well, So That's Where Our Bats Are

On September 14, 2016, **Jordi Segers**, National Bat White-nose Syndrome Scientific Program Coordinator with the Canadian Wildlife Health Cooperative (CWHC) at the AVC, was interviewed by CBC and appeared on CBC Island Morning with Matt Rainnie. The CBC article and Island Morning interview focused on the unique way that PEI bats hibernate, using dried up, hand dug wells instead of caves and mines.



CBC Island Morning had announced that Jordi was going to do a public presentation on bats at the Confederation Centre Library in Charlottetown on September 20. The presentation was well attended, with a full room of people asking engaging questions. The audience learned about the importance of bats, the differences between the many bat species around the world, and what they can do to help bats that are suffering from white-nose syndrome,

the fungal disease that is wiping out bats throughout North America. In short: report bat sightings and well locations to PEI fish and wildlife and put up a bat house to encourage surviving bats to roost on your property. They will eat insects like mosquitoes and can give birth to their pups in a safe environment.

The CBC article can be found here: <http://www.cbc.ca/news/canada/prince-edward-island/bats-wells-white-nose-syndrome-1.3761027>



Welcome to Drs. Jairo Jaime and Diana Vargas



Dr. Rodriguez-Lecompte has two visiting researchers in his laboratory: **Jairo Jaime**, DVM, MSc, PhD, and **Diana Vargas**, DVM, MSc, from the National University, Faculty of Veterinary Medicine, Bogota, Colombia. Dr. Jaime is a visiting professor on sabbatical leave and Dr. Vargas' wife is a research technician in his laboratory. During their stay with us, they will be taking part in the nutritional immunology research laboratory under Dr. Rodriguez-Lecompte's direction. They will be conducting and involved in research programs in virology, immunology, and molecular biology. They will be taking part in seminars, classes and directed studies in our department.

Thank you to 2016 Path/ Micro Summer Student Assistants



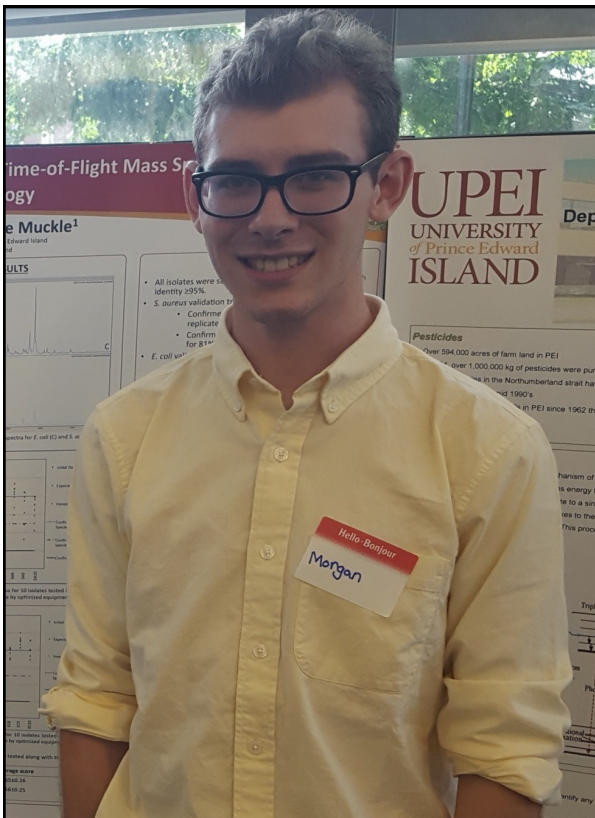
Véronique Savoie Dufour, AVC Class of 2018, was this year's summer student with the Canadian Wildlife Health Cooperative (CWHC) - Atlantic region. Véronique has a very strong interest in anatomic pathology, which is an important component of the CWHC's activities in the context of its wildlife health surveillance program. As is typical for this position, her work probably rivalled any other in its diversity. She had the opportunity to examine a very broad spectrum of animal species, encounter a wide variety of disease processes in these animals, and become familiar with the CWHC's database of wildlife diseases in Canada. She took part in a small research project on amphibian hematology under the direction of **Dr. María Forzán**; she at least became acquainted with **Dr. Scott McBurney's** surveillance program for Bat White-nose Syndrome; with CWHC technician **Darlene Weeks**, she had a chance to participate for a few days in the raccoon rabies control program in southern New Brunswick; and she helped with avian and marine mammal necropsy laboratories for undergraduate students at Dalhousie University in Halifax. Véronique was a very dedicated, hard-working and efficient summer student. We just hope that her experience with us was as beneficial as her help was to our group.

Thank you to 2016 Path/ Micro Summer Student Assistants



Carter Van Iderstine, a fourth year honour's student in biology at UPEI, has been working as a summer research student under the supervision of **Dr. Mark Fast**, since May of 2015. Carter graduated from Montague Regional High School on PEI with a life science specialization before going on to study at Dalhousie University. While at Dalhousie University, he did a research project in the Tissue Mechanics Laboratory at the Department of Biomedical Engineering. While there he learned a number of molecular biology techniques along with gaining experience in fish health. Last summer in Dr. Fast's laboratory, Carter focused mainly on the immune response of Atlantic salmon when infected with an intracellular pathogen. This summer, he worked mostly on his honour's research which focuses on how exposure to hydrogen peroxide affects the salmon louse *Lepeophtheirus salmonis*.

Other sea lice work he has done this summer included RT-qPCR analysis for a study examining gene expression post-exposure to emamectin benzoate or ivermectin. His work also included sampling for studies on various diseases affecting salmonids, including winter ulcer disease, furunculosis, and bacterial kidney disease. It also included vaccination of Atlantic salmon for a sea lice vaccine trial.



Morgan King, a UPEI BSc. (Honours) Biology 2018 student, worked in the Diagnostic Services (DS) Bacteriology Laboratory as a summer research student during May to the end of August, 2016. Morgan was working on the validation of the MALDI-TOF MS for use in veterinary diagnostic bacteriology under the supervision of Matthew Saab, Diagnostic Services, and **Dr. Anne Muckle**. Data generated from Morgan's research will be used for validation of the MALDI-TOF MS unit for ISO/IEC 17025 QA accreditation of Diagnostic Services. We wish to thank **Dr. Jeff Lewis**, **Béatrice Després**, Toki Iwamoto, and Alex MacNeill for their assistance with this project.

Morgan participated in the UPEI Summer for Undergraduate Research (SPUR) and gave a poster presentation of his research on Tuesday, August 16th at AVC. Morgan also helped out in the DS Bacteriology Laboratory as a laboratory assistant, and will continue to work as a casual laboratory assistant throughout the academic year. We enjoyed having such a promising young microbiologist doing diagnostic research with us. Morgan also has the distinction of being the youngest person to ever work in our laboratory.

Thank you to 2016 Path/ Micro Summer Student Assistants



Brett Nightingale, AVC class of 2018, was a student researcher in **Dr. Chelsea Martin's** laboratory this summer. Brett worked on a Zoetis-funded project titled, "Targeting Inflammation as a Treatment for Feline Oral Squamous Cell Carcinoma: Alternatives to Cyclooxygenase Inhibition". Brett is originally from Barbados, where he completed a BSc in Microbiology from the University of West Indies, followed by additional studies at UPEI. He brought to the project useful laboratory skills from his undergraduate training, a keen interest in pathology and oncology, and enthusiasm for research. Brett became proficient in cell culture techniques and was responsible for developing western blot protocols and tumour cell migration assays for the laboratory, which are critical for upcoming experiments looking at the effects of various inhibitors of prostaglandin E2 signalling. We wish Brett all the best as he continues in the DVM program.



Tyson Hay is a first year veterinary student from Cornwall, PEI. Before attending the Atlantic Veterinary College, he studied biology and chemistry at the University of Prince Edward Island. His passion for animal science, more specifically veterinary medicine, was established at a young age on his family's beef farm. Over the summer Tyson was given the privilege to work under **Dr. Fast** and this experience has led to the discovery of his interest for research. He spent this time analyzing Atlantic salmon response to an anti-louse vaccine, as the objective of this study was to determine the efficacy of a novel prototype vaccine against critical *L. salmonis* antigens. The vaccine efficacy was determined through comparison of lice numbers on vaccinated fish versus unvaccinated controls. In addition to the lice counts, responses to vaccination post infection were assessed through quantitative PCR assays. The information collected was then used to generate quantitative transcriptional data on immune relevant pathways. Tyson hopes to one day incorporate his interests of veterinary medicine and animal research into a rewarding career here on PEI.

2016 FALL SEMINAR SERIES

Departments of BioMedical Sciences & Pathology and Microbiology 2016 Fall Seminar Series

Tuesdays, 3:00 pm AVC, Lecture Theatre B

Date	Topic	Presenter
October 18	Tips to Prepare a Seminar	Dr. Luis Bate Biomedical Sciences
October 25	Acute phase and intracellular responses in vaccine-induced protection against bacterial infections in Arctic char (<i>Salvelinus alpinus</i>)	Alyson Brown Pathology and Microbiology
November 1	A next generation sequencing (NGS) approach for the simultaneous detection of plant viruses for the purpose of quarantine testing	Desmond Hammill Pathology and Microbiology
November 8	What's in your gut, leftovers or lunch? Determining if tick gut contents are blood meal remnants or a result of interrupted feeding	Kami Harris Pathology and Microbiology
November 15	Prostaglandin Receptor Expression in Feline Oral Squamous Cell Carcinoma	Nicole Kaiser Pathology and Microbiology
November 22	Sex-bias and mating-responsive gene expression of <i>Lepeophtheirus salmonis</i> .	Dylan Michaud Pathology and Microbiology
November 29	Defining the role of SOXC proteins in the Kidney Development	Sushant Gavhale Biomedical Sciences
Co-ordinators of the departmental seminar series are Drs. Collins Kamunde and Juan Carlos Rodriguez		

Recent Publications

Cameron M, Saab M, Heider L, McClure JT, Rodriguez-Lecompte JC, Sanchez J.
Antimicrobial Susceptibility Patterns of Environmental Streptococci Recovered from Bovine Milk Samples in

Nino-Fong R, Esparza Gonzalez BP, Aburto E, Desmarchelier M, Rodriguez-Lecompte JC, McDuffee LA.
Evaluation of Two Populations of Equine Stem Cells in Promotion of Bone Healing in a Nude Rat Fracture Model. JJ Vet Sci Res. 2016; 2;(1):033.

For comments or suggestions for our newsletter, please contact: Dr. Fred Kibenge (kibenge@upei.ca) or
Ingrid MacLeod (imacleod@upei.ca) (902) 566-0541.
Editor Dr. Alfonso López. Reviewer: Dr. Shelley Burton

Please don't print this newsletter unless you really need to!

