

The 2017 North Atlantic Right Whale Unusual Mortality Event



The southern Gulf of St. Lawrence is a busy place. It represents less than 1% of Canada's marine waters, yet accounts for 15% of the total catch value of Canadian fisheries. It is crossed by multiple lines of heavy international shipping traffic and now is increasingly becoming the summer home for the critically endangered North Atlantic right whale (NARW). The NARWs usually spend their summers in and around the Bay of Fundy. Since 2014 however, they have been appearing in the Gulf of St. Lawrence in increasing numbers with a record

high of 114 individuals sighted this summer. To put this into perspective, this is a quarter of their entire population which, to date, is estimated at 458 individuals (CI: 444-471, ref: Pace *et al.*, 2017). Given the intense human activity and high NARW numbers, it should come as no surprise that this summer also marked the highest number of right whale deaths to occur in a single year since whaling was banned. From June to September, at least 12 NARWs have died in the Gulf which, in combination with 3 NARW deaths in United States waters due to entanglement, is 3% of the estimated population. The last comparable mortality event was in the summer of 2015 when three NARW died also in the Gulf.

This situation is an unsustainable and likely catastrophic blow to this species which is teetering on the brink of extinction. The silver lining of this sad event has been that it brought many people together from across multiple groups including The Canadian Wildlife Health Cooperative (CWHC, Atlantic and Quebec regions), The Marine Animal Response Society of Nova Scotia (MARS), and the Canadian Department of Fisheries and Oceans (DFO) to perform necropsies on 7 of the dead NARWs. This collaboration led to the production of a 224 page report (released to the public on October 5th) that outlines the leading causes of death of the NARW. This report is available on many websites including those of the CWHC and MARS. In brief, the main findings in the 7 whales that were available for necropsy were 4 cases of extensive internal hemorrhage consistent with blunt force trauma, 2 cases of severe entanglement in snow crab fishing gear, and 1 undetermined cause of death due to postmortem decomposition. The blunt force trauma is presumed to have been due to shipping-whale interactions. Moving forward, DFO is set to conduct further in-depth investigations into how to mitigate the impact of human activities on NARWs in the Gulf to prevent further mortalities in the coming year. We highly encourage people to put pressure on their local members of government to ensure that these issues are addressed so that we can ensure the survival of this beautiful species in our waters.

Pace *et al.* 2017. State-space mark-recapture estimates reveal a recent decline in abundance of North Atlantic right whales. [Ecology and Evolution](https://doi.org/10.1002/ece3.3406). DOI: 10.1002/ece3.3406. Pg: 1-12.

Article written by: Dr. Laura Bourque. Photo: North Atlantic Right Whale carcass floating in the Gulf of St. Lawrence.

Photo credit: Marina Animal Response Society.

Promotion to Full Professor



Congratulations to **Dr. Juan Carlos Rodriguez** who has been recommended by the University Review Committee to the President to be promoted to the rank of Full Professor.

Congratulations Dr. Rodriguez!

Research Funding Success



Congratulations to **Dr. Chelsea Martin** for her recent success in being awarded \$15,000 in the 2017 AVC Internal Research Fund competition, Basic Science Pool. Her project is entitled “Anti-inflammatory and antioxidant properties of cranberry and blueberry extracts for treatment of human and feline oral squamous cell carcinoma” in which she collaborates with Dr. Collins Kamunde (Biomedical Sciences), **Dr. Juan Carlos Rodriguez**, and Dr. McCallum (Agriculture and Agri-food Canada.)

Congratulations Dr. Martin!



Congratulations to **Dr. Anne Muckle** for her recent success in being awarded \$8,000 in the 2017 AVC Internal Research Fund competition, Clinical Science Pool. This funding is for the project entitled “Development and validation of a multiplex PCR enteric pathogen panel for equines” in which she collaborates with Ms. Liz Dobbin (Diagnostic Services).

Congratulations Dr. Muckle!

Research Funding Success Continued



Congratulations to **Dr. Melanie Buote** for her recent success in being awarded \$7,100 in the 2017 AVC Research Fund competition, Basic Science Pool, for her project entitled “Microscopic investigation of *Limax maximus* infected with metastrongyloid larvae,” in which she collaborates with **Dr. Gary Conboy**. The objective of this research is to determine the larval anatomic localization and cellular inflammatory reactions to metastrongyloid larvae in the leopard slug, *Limax maximus*.

Congratulations Dr. Boute!

Board Certifications by the American College of Veterinary Pathologists



Congratulations to **Dr. Laura Bourque** who successfully passed the 2017 American College of Veterinary Pathologists Phase II Certifying Examination in Veterinary Anatomic Pathology and is now a Diplomate of the American College of Veterinary Pathologists, abbreviated as Diplomate, ACVP.

Congratulations Dr. Bourque!



Congratulations to **Dr. Enrique Aburto** (former faculty member of the department) who successfully passed the 2017 ACVP Phase II Certifying Examination in Veterinary Anatomic Pathology and is now a Diplomate of the American College of Veterinary Pathologists, abbreviated as Diplomate, ACVP. Dr. Aburto is now a faculty member at the Western College of Veterinary Medicine, University of Saskatchewan.

Congratulations to Dr. Aburto!

Welcome Our New Faculty Members



We welcome **Dr. Melanie Buote** who has joined the Department of Pathology and Microbiology as a tenure-track Assistant Professor of Anatomic Pathology. A native of North Rustico, PEI, she obtained her BSc with Honors in Marine Biology at Dalhousie University in 1997. In 2003 she received her DVM from the Atlantic Veterinary College (AVC). Following graduation, Dr. Buote pursued residency training in anatomic pathology at Texas A&M University and became board certified by the American College of Veterinary Pathologists in Anatomic Pathology in 2006. Dr. Buote then worked as an in-house diagnostic anatomic pathologist at Angell Animal Medical Center in Boston, Massachusetts, for two years. Dr. Buote later returned to the AVC as a part-time diagnostic anatomic pathologist in 2008. While working part-time, Dr. Buote pursued a PhD working on the microscopic and metabolomics investigation of a dinoflagellate blood parasite (Hematodinium) in snow crabs. After successful defense of her PhD in June 2016, Dr. Buote travelled to Australia and worked as a Senior Lecturer at the University of Adelaide (Roseworthy Campus) for just under one year. For her research, Dr. Buote is interested in host-parasite interactions and invertebrate pathology. She enjoys teaching parasitology and anatomic pathology in second-year courses as well as in fourth-year rotations.



We welcome **Dr. Noel Clancey** who is a 1999 graduate of the Atlantic Veterinary College (AVC). Following graduation, Noel practiced small animal medicine and surgery in his hometown of Dartmouth, Nova Scotia, for a short while before moving to Vancouver, British Columbia, where he worked in a busy surgery referral hospital for six years. Noel returned to the AVC to complete a combined residency in clinical pathology and Master of Veterinary Science Degree, becoming board certified in Clinical Pathology by the American College of Veterinary Pathologists in 2010. Noel remained at the AVC as a contract clinical pathologist until 2013. After this time he ventured to the United Kingdom where he co-managed Batt Laboratories, part of the Laboklin family. As of July 2017, Noel has returned to PEI to rejoin the Pathology and Microbiology Department in a tenure-track position.

Welcome Our New Staff Members



The Department of Pathology and Microbiology would like to welcome **Dr. Janet Saunders**, who was the successful candidate in the full time, MTS 7 Bacteriology Technologist position. The AVC has become a second home to Janet since she is a 2004 graduate of the DVM program and a 2012 MSc graduate. Janet has worked in the clinical field as well as in research and diagnostics within the AVC.



The Department of Pathology and Microbiology would like to welcome **Tessa McBurney** who has joined the department as the new Atlantic Bat Conservation Project Technician for the CWHC. Tessa is working alongside **Jordi Segers** and **Dr. Scott McBurney** to write Standard Operating Procedures and Best Management Practices for excluding bats from anthropogenic structures. Her work is in collaboration with the province and Nuisance Wildlife Control Operators. Tessa is a recent graduate from Trent University with a Bachelor of Science with Honors in Conservation Biology. For her honor's thesis, she assessed how mobile acoustic surveys as outlined by the North American Bat Monitoring Program (NABat) protocol might be adapted to improve monitoring of PEI bat populations. Tessa is very passionate about bats, and so is excited to be starting her career in wildlife conservation working to protect and conserve them.

Welcome Our New Graduate Students



The Department of Pathology and Microbiology would like to welcome **Ashley McKibbin**, an MSc graduate student in virology under the supervision of **Dr. Fred Kibenge**. Her research project is on a newly discovered salmonid coronavirus. Ashley is originally from Moncton, NB, and attended Mount Allison University, where she had completed her Bachelor of Science with Honors in Biology under the supervision of Dr. Vett Lloyd. Ashley's Honours research was focused on methods of detection of *Borrelia burgdorferi* (the Lyme disease causing bacteria) in human sera and of genital cultures samples.



The Department of Pathology and Microbiology would like to welcome **Ennoyaq Sudlovenick**, an MSc graduate student in wildlife anatomic pathology. Enno, which she prefers to be called, has completed a Bachelor of Science with Honors in Marine and Freshwater Biology at the University of Guelph. Enno will be working under the supervision of **Dr. Pierre-Yves Daoust** and Dr. Susan Kutz, University of Calgary. Her focus will be on Ringed Seal health in Iqaluit, Nunavut. Enno is originally from Iqaluit, Nunavut.

MSc and PhD Thesis Defenses



Congratulations to **Dr. Anil Kalupahana** who successfully defended his PhD thesis entitled “Characterization of orthoreoviruses isolated from American crow (*Corvus brachyrhynchos*) winter mortality events in eastern Canada” on July 12, 2017. Anil was co-supervised by **Dr. Fred Kibenge** and **Dr. Scott McBurney**. **Dr. Barb Horney** and **Dr. Paul Hanna** chaired the Supervisory Committee. **Dr. Juan Carlos Rodriguez** chaired the Examination Committee.

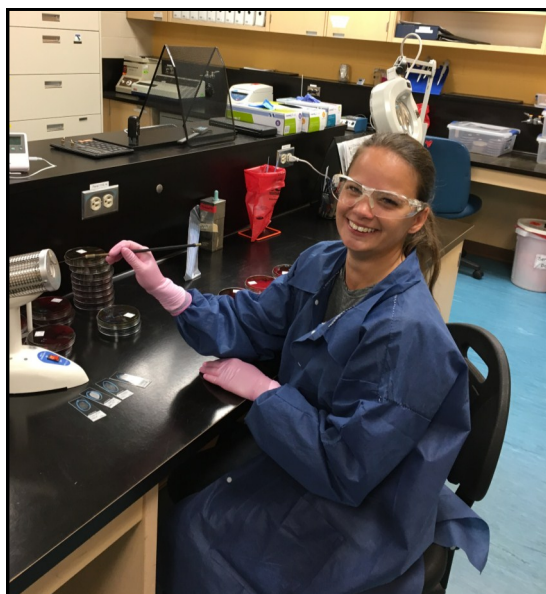
Anil has returned to his faculty position as Lecturer-Veterinary Virology at the Faculty of Veterinary Medicine and Animal Science, University of Peradeniya in Sri Lanka.



Congratulations to **Walaa Nasry** who successfully defended her MSc thesis entitled “Cyclooxygenase and CD147 expression in human and feline oral squamous cell carcinoma” on September 07, 2017. Walaa was co-supervised by **Dr. Chelsea Martin** and **Dr. Juan Carlos Rodriguez**. **Dr. Shelley Burton** chaired the Examination Committee.

Walaa has started a PhD program in Anatomic pathology co-supervised by Dr. Chelsea Martin and Dr. Collins Kamunde (Biomedical Sciences).

Pathology and Microbiology 2017 Summer Students



Ashley Powell, AVC Class of 2019, worked as a summer research student in the AVC Diagnostic Services Bacteriology Laboratory. Ashley was a recipient of an AVC Veterinary Summer Research Award, and she was supervised by **Dr. Anne Muckle**, **Dr. Pierre-Yves Daoust**, and Matthew Saab on her research project “Investigation of antimicrobial resistance in fecal *E. coli* in seals from Canadian Atlantic and Arctic waters”. She participated in the AVC Summer Research and Leadership Program and attended the Boehringer Ingelheim Veterinary Scholars Symposium from August 3-6th, in Washington, DC, USA, where she gave a poster presentation of her research. Ashley was awarded the 2nd prize at the AVC student poster presentations that took place on August 29th.

Ashley worked with Dr. Pierre-Yves Daoust and other members of the Atlantic right whale investigation team on five of six whale post-mortem examinations during June and July. In her spare time, Ashley kept busy assisting with wildlife and fish cases in the AVC post-mortem laboratory, maintaining the AVC display aquariums, helping with AVC Vet Camps and Summer Academy, and giving student tours. She has been a regular participant in histopathology and clinical pathology rounds, and the American Society for Veterinary Clinical Pathology on-line and mystery case rounds. Ashley will continue to work in the Bacteriology Laboratory as our weekend student laboratory-assistant and providing weekend coverage in Post Mortem during the 2017-2018 academic year.

Pathology and Microbiology 2017 Summer Students



Liam Shea, AVC Class of 2019, worked as a summer research student in the Department of Pathology and Microbiology and Canadian Wildlife Health Cooperative (CWHC), Atlantic region. Liam's project "Demographics of spring nuisance beavers (*Castor canadensis*) on PEI" was supported by the AVC Veterinary Summer Research Award and was supervised by **Dr. Pierre-Yves Daoust**. The project involved working closely with provincial biologists at PEI Fish and Wildlife to address welfare concerns surrounding spring trapping and gather information on the local beaver population. Liam presented his work at the Boehringer Ingelheim Veterinary Scholars Symposium in Washington, DC, USA, and at the AVC Summer Research and Leadership Program poster session. His high-quality research will be submitted for publication in a peer-reviewed scientific journal. In addition to his research experience, Liam gained practical skills in post-mortem

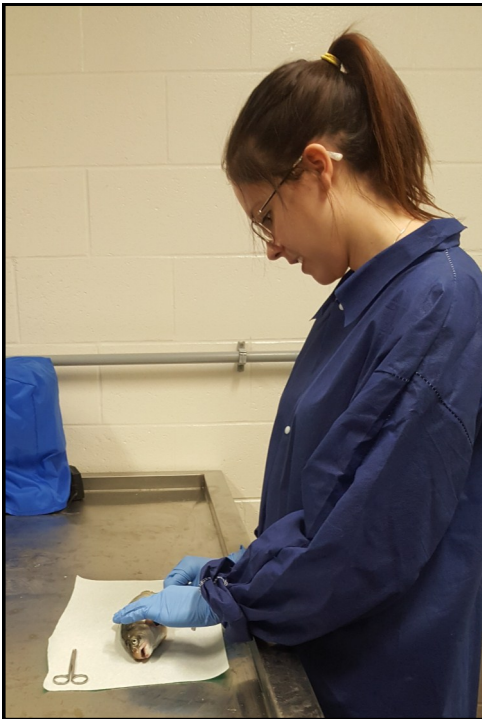
techniques by doing necropsies on one blue whale and three North Atlantic right whales. Liam says the most fulfilling aspect of his work was not academic, but instead came through getting to know the knowledgeable, hard-working members of the CWHC and Diagnostic Services post-mortem staff.



Briar Spinney, AVC Class of 2019, has been working with the Canadian Wildlife Health Cooperative in the AVC since early May under the supervision of **Dr. Pierre-Yves Daoust** and AVC's new wildlife pathologist **Dr. Laura Bourque**. This position allowed him to explore his interests in both wildlife health and pathology. In his first week, he assisted in a blue whale necropsy in Lunenburg, NS, and then participated in the North Atlantic right whale investigation throughout the summer. Although they were long days of demanding physical work, Briar would always jump at every opportunity to help with the dissection. He worked alongside classmate Liam Shea, assisting his project about island beavers. In the CWHC office, Briar collected data and consulted concerned bird lovers

about the trichomonas outbreak affecting songbirds this summer. He gained veterinary experience working with animals of all shapes and sizes. Tiny songbirds, northern gannets, bald eagles, a black bear, seals, bats, foxes, raccoons, all the way to North Atlantic Right whales can all be part of a wildlife veterinary pathologist's job. Briar noted that it is incredible how much there is to learn about each animal species. Briar is currently the President of the AVC Pathology Club, and he hopes that he will be able to share his learning experience in pathology with his classmates.

Pathology and Microbiology 2017 Summer Students



Emily Norton is entering her fourth year of a biology major and currently working on an honour's project under the supervision of **Dr. Mark Fast**. Before joining Dr. Fast's laboratory, Emily spent two summers in Dr. Pedro Quijon's coastal ecology laboratory studying the impact of juvenile green crabs on Basin Head ecosystems. After two seasons of fieldwork, she was curious to explore the molecular aspect of marine organisms. Throughout this summer, Emily's project focused on testing the efficiency of vaccine-induced protection for juvenile Arctic charr. Her particular area of interest is Bacterial Kidney Disease (BKD) that causes inflammation and renal failure in fish. The vaccines post-infection will be analyzed using quantitative PCR assays and the data will be used to determine the specific immune elements being up-regulated by the fish. Aside from her project, she gained knowledge and skills regarding fish health and sampling for studies relating to Atlantic salmon. Emily plans to continue her work throughout the school year and present her findings in the spring.



Carter Van der Horst, a recent graduate 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 before going on to study at Dalhousie University. While at Dalhousie, he did a research project in the Tissue Mechanics Laboratory at the Department of Biomedical Engineering. Last summer in Dr. Fast's laboratory, Carter worked primarily on his honour's research which focused on how exposure to hydrogen peroxide affects the salmon louse *Lepeophtheirus salmonis*. This summer, he continued with that research by examining how exposure to hydrogen peroxide at different temperatures affects sea lice survival and the expression of various genes. This fall, Carter started his MSc program in Pathology at Dalhousie University.



Tyson Hay, AVC Class of 2020, from Cornwall, PEI, worked this summer under the supervision of **Dr. Mark Fast**. He analyzed Atlantic salmon response to a novel prototype vaccine that was designed to protect fish from *Lepeophtheirus salmonis* infection. *L. salmonis*, commonly known as the salmon louse, is an important parasitic copepod that primarily infects and feeds on Atlantic salmon. Responses to vaccination were determined through comparisons of lice numbers on vaccinated fish versus unvaccinated controls, as well as by comparing the gene expression profiles of immune-relevant genes using qPCR.

Pathology and Microbiology 2017 Summer Students



Emma Moore is entering her third year of Bachelor of Science program (Major in Biology & Minor in Psychology). From May to August 2017, Emma was the recipient of an NSERC Undergraduate Student Research Award, during which she worked in **Dr. Fred Kibenge's** laboratory. She performed various experiments to determine the growth curve of a newly discovered salmonid coronavirus using different fish cell lines, and assisting in the general laboratory work. Among her other interests, Emma is on the UPEI Cross Country Team, she enjoys volunteering with Big Brothers Big Sisters and is a lifeguard and swimming lesson supervisor.



Erika Pugh, AVC Class of 2020, was the recipient of the AVC Veterinary Summer Research Award (VetSRA) in **Dr. Chelsea Martin's** laboratory this summer. Erika worked on a project titled, "Effect of Cranberry, Blueberry, and Blackberry Extracts on Feline Oral Squamous Cell Carcinoma Viability". Erika is from Upper Caverhill, New Brunswick, and majored in biology at the University of New Brunswick in Fredericton before entering the DVM program at AVC. Erika developed laboratory skills in her undergraduate program that were very useful to her summer project, and she was instrumental in optimizing tumor cell viability assays for the research group. Erika's poster presentation was very well received at the 2017 Meriel NIH National Veterinary Scholars Symposium held in Washington, DC. She also received a first place award for her work during the AVC Summer Research and Leadership Program Symposium.

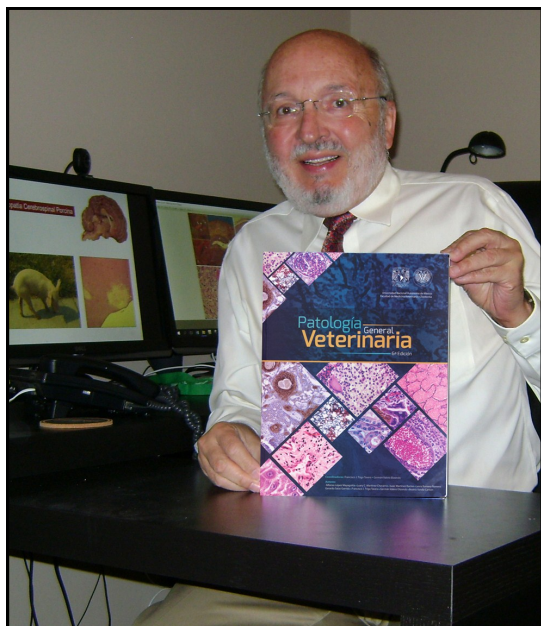
Appointment to Editorial Board of BMC Virology Journal



Congratulations to **Dr. Fred Kibenge** who has been appointed to the Editorial Board of BioMed Central Virology Journal. Virology Journal is an open access, peer reviewed journal that publishes articles on all aspects of virology, including research on the viruses of animals, plants and microbes. Dr. Kibenge is one of the Associate Editors within the Veterinary RNA viruses section.

Congratulations Dr. Kibenge!

Patología General Veterinaria [General Veterinary Pathology] 6th Edition



The 6th edition of "Patología General Veterinaria" (General Veterinary Pathology) was published in 2017 and Drs. Francisco Trigo and German Valero from the Universidad Nacional Autónoma de México are the editors of this textbook. With over 280 full-color figures and illustrations, "Patología General Veterinaria" is the standard textbook for DVM students in Mexico and some other Latin American countries. This book deals with the fundamentals of general pathology, including the history of veterinary pathology, cell injury, necrosis, inflammation, repair, and neoplasia with an emphasis on disease mechanisms. In this new edition, there is for the first time an entire chapter dedicated to environmental pathology.

Dr. Alfonso López, Professor Emeritus, authored the chapter on repair which illustrates the healing mechanisms that follow injury and necrosis in the tissues and organs of domestic animals.

On-line Veterinary Education in Chile and Argentina



Dr. Alfonso Lopez was recently invited to present a live and simultaneous seminar via the Internet to the School of Veterinary Medicine, Universidad Mayor in Santiago de Chile, and the Faculty of Veterinary Sciences, Universidad Nacional del Centro de la Provincia de Buenos Aires in Argentina. During a two-hour presentation, Dr. Lopez reviewed the pathologic basis of the most relevant diseases of the pleural cavity and mediastinum in domestic animals. This international collaboration among Canadian, Chilean, and Argentinian pathologists was organized by Dr. Carlos Flores-Olivares and Dr. Angel Bence from Chile and Argentina, respectively. Students and faculty in South America enjoyed the presentation and plans are currently underway to produce more on-line lectures and discussions with the participation of Spanish-speaking anatomic pathologists from Canada, Spain, Uruguay, Brazil, and the United States.

Good News for Canadian Bats and the Department of Pathology and Microbiology



Jordi Segers has been the Canadian National Bat White-nose Syndrome (WNS) Scientific Coordinator for the past three years. In August 2017, Environment and Climate Change Canada (ECCC) provided funding for the continuation of the Canadian National WNS Coordination Program for a five-year term (2017- 2022) with no requirement for annual renewals. This funding is shared between the Canadian Wildlife Health Cooperative's (CWHC's) National Office and Atlantic Region and represents a \$90,000 funding for the CWHC, Atlantic Region, housed within the Department of Pathology and Microbiology. The ongoing and stable funding in this new agreement speaks to the quality of the program's contributions and the confidence that it will continue to be a beneficial program regarding ECCC's mandate related to endangered species and the health of bats in Canada. Jordi deserves a great deal of credit for this success as well as the other collaborators, including Dr. Craig Stephen, CEO of CWHC; Patrick Zimmer, COO of CWHC; **Dr. Pierre-Yves Daoust**, CWHC Atlantic Region's Director; and **Dr. Scott McBurney**, a retired CWHC wildlife pathologist. Dr. McBurney actively managed the Canadian National WNS Coordination Program in the Department of Pathology and Microbiology since its inception.

This program renewal is not the only good news for bats in the Canadian Atlantic Region! Scott and Jordi submitted a new proposal to ECCC's Habitat Stewardship Program – Species at Risk Stream (HSP-SAR), and received full funding. The title of the new project is "Bats roosting in anthropogenic structures: Building a better understanding in Prince Edward Island and Newfoundland and Labrador through stewardship and outreach." The main goals are to protect and conserve two endangered bat species that roost in human-occupied buildings, the little brown myotis and Northern myotis. The collaborative project engages several government departments in the two provinces as well as the private sector's nuisance wildlife control operators that are concerned with the removal of bats from anthropogenic structures. This project received \$152,658 of HSP-SAR funding over two years and will identify best management practices and produce standard operating protocols related to handling those situations that involve bats roosting in human-occupied structures as well as study what happens to bats when they are excluded from these roosts. The expected result of the project is a better public understanding of bats roosting in buildings that will take human health into consideration while ensuring the endangered bat species in these important concentration areas receive the highest degree of protection.

2017 Chinook Project Update

In June, the Chinook Project team visited Nunavut to run mobile veterinary clinics free of charge in the town of Igloolik. Dr. Heather Gunn McQuillan (AVC, PEI) and Dr. Alison Pollard (SPCA, NS) were the attending veterinarians aided by Heather Crowley, a coordinator working with the Iqaluit Humane Society. The Iqaluit Humane Society was a major partner again this year, providing local liaising and arranging some transportation. Airfare to get to Igloolik is very expensive - if we had not been provided with discounts from First Air and Aeroplan points donated by IHS and Veterinarians without Borders, airfare alone would have cost over \$50,000.

On June 9th, the Government of Nunavut issued a [health advisory](#) to the community of Igloolik about a fox that tested positive for rabies – two dogs have also tested positive, and results on a third dog were pending as of June 15th.

Several other exciting developments occurred in 2017. A new relationship with Veterinarians without Borders (VwB) has been formed. In early 2017, VwB launched an initiative to support Canada's veterinary colleges in providing veterinary care to remote under-served communities in Canada's north. Donation of funds and Aeroplan points helped to send the team to Igloolik. The Chinook Project was asked to participate in this year's CVMA conference in Charlottetown. **Drs. Lisa Miller** and **Marti Hopson** gave a presentation in the animal welfare stream and then participated in a panel discussion. Veterinarians Without Borders - with support from PetSmart Charities, Aimia, and the Canadian Veterinary Medical Association - also hosted a panel and workshop with the participation of a variety of stakeholders, including the Chinook Project, from across Canada. Discussion centered around the provision of sustainable veterinary services in underserved, remote, Northern communities in Canada.



2017 Fall Seminar Series

Departments of BioMedical Sciences & Pathology and Microbiology 2017 Fall Seminar Series		
Wednesdays, 3:00 pm Lecture Theatre A		
Date	Topic	Presenter(s)
September 27	Information session for graduate students presenting this semester.	Dr. Sandra McConkey Biomedical Sciences and Dr. David Speare Pathology and Microbiology.
October 4	Furunculosis in Arctic charr (<i>Salvelinus alpinus</i>)	Alyson Brown Pathology and Microbiology
October 11	A smorgasbord of <i>Borrelia</i> : The genetic diversity of the Lyme-causing bacteria <i>Borrelia burgdorferi</i> in New Brunswick.	Kami Harris Pathology and Microbiology
October 18	Assessment of microscopic area of equine bronchoalveolar lavage fluid from horses with Respiratory Disease.	Kim Foote Pathology and Microbiology
October 25	Characterizing infection dynamics and host response in simultaneous infections of <i>Lepeophtheirus salmonis</i> and <i>Moritella viscosa</i> in Atlantic salmon (<i>Salmo salar</i>)	Laura Carvalho Pathology and Microbiology
November 1	Effects of low dose neonicotinoid pesticides on CNS function in the rat	Maria Soriani Biomedical Sciences
November 8	Characterization of chitin deacetylases by RNA interference of <i>Lepeophtheirus salmonis</i>	Dylan Michaud Pathology and Microbiology
November 15	Prostaglandin receptor expression in feline oral squamous cell carcinoma	Nicole Kaiser Pathology and Microbiology
November 22	Assessment of cognitive function and associated bio-markers in a novel progressive model of Parkinson's disease	Logan Bigelow Biomedical Sciences
November 29	A next generation sequencing (NGS) approach for the simultaneous detection of plant viruses for the purpose of quarantine testing	Desmond Hammill Pathology and Microbiology
Coordinators of the departmental seminar series are Drs. Sandra McConkey (Biomedical Sciences) and David Speare (Pathology and Microbiology)		

Recent Publications

Fogelson SB, Fast MD, Leary J, Camus AC. Pathologic features of mycobacteriosis in naturally infected Syngnathidae and novel transcriptome assembly in association with disease. *Journal of Fish Diseases* 2017; doi:10.1111/jfd.12634.

Waititu SM, Yin F, Patterson R, Yitbarek A, Rodriguez-Lecompte JC, Nyachoti CM. Dietary supplementation with a nucleotide-rich yeast extract modulates gut immune response and microflora in weaned pigs in response to a sanitary challenge. *The Animal Consortium* 2017;doi:10.1017/s1751731117001276.

Poley JD, Sutherland B JG, Fast MD, Koop BF, Jones S RM. Effects of the vertically transmitted microsporidian *Facilispora margolisi* and the parasiticide emamectin benzoate on salmon lice (*Lepeophtheirus salmonis*). *BMC Genomics* 2017; 18:630 DOI 10.1186/s12864-017-4040-8.

López-Crespo RA, López, A, Ramírez-Romero R, Martínez-Burnes J, Prado-Rebolledo OF, García-Márquez LJ. Pulmonary lesions caused by the lungworm (*Didelphostrongylus hayesi*) in the opossum (*Didelphis virginiana*) in Colima, Mexico. *Journal of Zoo and Wildlife Medicine* 2017; 48:404-412.

Margineda CA, Zielinski GO, Jurado S, Alejandra F, Mozgovoj M, Alcaraz AC, López A. *Mycoplasma bovis* pneumonia in feedlot cattle and dairy calves in Argentina. *Brazilian Journal of Veterinary Pathology* 2017;10: 79-86.

Villa-Arcila NA, Sanchez J, Ratto MH, Rodriguez-Lecompte JC, Duque-Madrid PC, Sanchez-Arias S, Ceballos-Marquez A. The association between subclinical mastitis around calving and reproductive performance in grazing dairy cows. *Animal Reproduction Science* 2017; 185:109-117.

Reyes J, Chaffer M, Rodriguez-Lecompte JC, Sánchez J, Sadoks RN, Robinson N, Cardona X, Ramirez N, Keefe GP. Short communication : Molecular epidemiology of *Streptococcus agalactiae* differs between countries. *American Dairy Science Association* 2017; 100:1-4 <https://doi.org/10.3168/jds.2017-133363>.

García LJ, González DA, Prado OF, Macedo JR, Ramírez R, Martínez J, Barrios HB, López A, Constantino F. Identification of non-tuberculous mycobacteria isolated from opossum lymph nodes (*Didelphis virginiana*) and characterization of lesions. *Austral Journal of Veterinary Sciences* 2017; 49:199-203.

For comments or suggestions for our newsletter, please contact: Dr. Fred Kibenge (kibenge@upei.ca) or

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Editor Dr. Alfonso Lopéz. Reviewer: Dr. Shelley Burton .

Think about the environment!

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

