



Pathology & Microbiology Newsletter
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Atlantic Veterinary College
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Merry Christmas!



The Chair's End of Year Message and Holiday Greeting

This is my third end of year message and second update on the state of the department. In a nutshell, the department performance indicators are strong as exemplified by the following accomplishments of our faculty, staff and students. Eight "AVC Originals" in the department (Dr. Rick Cawthorn, Dr. Arnost Cepica, Grant Curtis, Dr. Gerry Johnson, Dr. Fred Markham, Judy Sheppard, Geoff Paynter, and Dr. Carmencita Yason) were deservedly recognized for "25 years of service at AVC" at the ceremony that kicked off AVC's 25th Anniversary activities. Dr. Shelley Burton received the 2011 UPEI Hessian Merit Award for Excellence in Teaching, the second year in a row a faculty member in the department has been recognized with the highest UPEI teaching award. Dr. Shelley Burton also received the 2011 Vetoquinol Clinical Teaching Award (for the second time!). Dr. Soraya Sayi and Dr. Carolyn Legge became board certified by the American College of Veterinary Pathologists (ACVP) in Anatomic Pathology, an impressive accomplishment for our combined MVSc/Residency training program. Dr. Dave Speare was appointed Editor of the Journal of Aquatic Animal Health.

Several faculty members were successful in obtaining research funding this year: Dr. Arnost Cepica was funded by the Canadian Mink Breeders Association for 3 years, Dr. Fred Kibenge's NSERC Discovery Grant was renewed for another 5 years and Fraser Clark (PhD candidate) and Dr. Spencer Greenwood (Department of Biomedical Sciences) received funding from ACOA-BDF. Four groups received Sir James Dunn Animal Welfare Centre grants (Dr. Shelley Burton, Dr. Ralph Vanderstichel, Dr. Cora Gilroy and Dr. Dania Villarnovo; Dr. Marion Desmarchelier, Dr. Hans Gelens and Dr. Pierre-Yves Daoust; Dr. Wendy Duckett and Dr. Gary Conboy; Dr. Ralph Vanderstichel, Dr. J. Serpell, Dr. E. Garde and Dr. María Forzán). Dr. Jennifer Covello, post-doc in Dr. Mark Fast's lab was awarded a PEI Post-doctoral Fellowship under the Island Prosperity Fund. Dr. Maria Forzan and Dr. Natasha Hogan received an AVC Internal Research Grant. Graduate students Whitney Kelly-Clark (MSc candidate) and Dr. Heather Fenton (MVSc/Residency candidate) received funding from the Canadian Wildlife Federation Foundation Fund.

Dr. Cora Gilroy and Dr. Noel Clancey worked hard to revamp the Diagnostic Services website in time for this year's Atlantic Provinces Veterinary Conference.

Michael Ciaramella (Dr. Barb Horney & Dr. Andrea Battison, supervisors) successfully defended his MSc thesis. Dr. Carolyn Legge (Dr. Alfonso Lopez & Dr. Paul Hanna) successfully defended her MVSc project. Fraser Clark (Dr. Spencer Greenwood), Dr. Anil Kapulahana (Dr. Fred Kibenge & Dr. Scott McBurney) and Dr. Melanie Buote (Dr. Rick Cawthorn & Dr. Andrea Battison) passed their PhD Comprehensive Examinations. Graduate students Whitney Kelly-Clark, Michael Ciaramella, and Dr. Heather Fenton won awards at this year's AVC Graduate Studies and Research Days; Fraser Clark (PhD candidate) and Peter Gaudet (MSc candidate) were recognized for their presentations at the 44th Annual Meeting of the Society for Invertebrate Pathology.

The department welcomed three staff members (Kara McIsaac, Joseph Hall, Laura DeVries), one Post-doctoral Fellow (Dr. Bassim Mohamed), seven graduate students (Dr. Ana Gradil, Dr. Edelokun Borha, Dr. Dania Villarnovo, Dr. María Forzán, Sarah McConnachie, Heather Wotton, Dr. Carlos Lopez-Mendez), four visiting professors (Dr. Richard "Mick" Fulton, Dr. Maribel Quiroga, Dr. Elizabeth Steeves, Dr. Susantha Gomis) and four visiting students (Marion Tanguy, Dr. Haythm Ali, Alonso Reyes-Matute, Fernando Sánchez).

Dr. Dave Speare and Dr. Gary Conboy returned from their sabbatical leaves. Dr. Barb Horney went on a 6-month sabbatical leave. We bid fond farewell to Dr. Soraya Sayi who completed a term faculty position in April, Dr. Gerry

Johnson who retired in September, Geoff Paynter who is retiring in January 2012, Dr. Ahmed Siah, Dr. Helena Fridholm, Dr. Ashkan Zargar, Dr. Vikas Kulshrestha, Dr. Nakhyung Lee, Zoe Little, Carolyn Thorne, Vijaya Guruswamy and Curran Schoenmakers who moved to other positions and/or other institutions. Dr. Gerry Johnson's retirement party at ICES was a departmental social highlight which was well attended by Gerry's many friends from UPEI and around Charlottetown.

The department is in the process of recruiting a second immunologist to share the load with Dr. Fred Markham, who has single-handedly taught immunology in the DVM curriculum and to our graduate students to date, a teaching feat unrivaled in the department and probably the college. Filling this position will also significantly strengthen our basic research base and benefit all disciplines in the department. We anticipate continuing to support our basic research with future faculty hires.

The effective administrative support of Rita Saunders, Diane MacLean and Laura DeVries has kept the department running smoothly. Together with numerous other good works that often go unrecorded, all deserve our acknowledgment and appreciation for supporting and representing the work of the department of Pathology and Microbiology. I, for one, would not have predicted my participation last week in the Cohen Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River. This has been portrayed favourably in the news; the help and support from Dr. Don Reynolds, Dr. Jeff Wichtel and Anna MacDonald was incredibly vital and is greatly appreciated. Together, we have achieved so much to cheer about in 2011. Next year promises ever more innovation in our teaching, research and professional service functions.

Finally, on behalf of all in the Department of Pathology and Microbiology, I would like to congratulate Sarah Stewart-Clark (Post-doctoral Fellow) and Fraser Clark (PhD candidate) on the birth of their first child, Rory Kenneth Clark.

Have a wonderful Christmas holiday and best wishes for the New Year!

Fred Kibenge

Welcome Laura DeVries

After three months, Laura is settling into her new role as one of the administrative assistants in the Department of Pathology and Microbiology. In addition to general secretarial services, she will be assuming the responsibilities of assistant editor of the Path/Micro Newsletter and will be helping with the maintenance of the departmental web site.

After attending UPEI for one year in 2008, Laura then received her Medical Support Services Diploma from Holland College. She hopes to continue her university education in the fields of religious studies and psychology as she works during the mornings in Path/Micro and maintains casual employment as both an Admitting Clerk and Medical Transcriptionist at the Queen Elizabeth Hospital.



Invited Speaker in Ciudad Victoria, Mexico

Dr. Alfonso Lopez was invited by his Alma Mater, the Faculty of Veterinary Medicine of the University of Tamaulipas (UAT), to speak on trends in veterinary education in Canada and respiratory diseases of domestic animals. The event took place from October 24-28 and was attended by faculty, veterinary students and practicing veterinarians. Dr. Lopez also met with Dr. Julio Martinez-Burnes (AVC PhD 2001), who leads a research group (Cuerpo Academico) investigating animal health, to discuss collaborative projects between UAT and UPEI. These two institutions have a solid history of collaborative work in which several UAT faculty have received their MSc and PhD degrees at AVC-UPEI and over ten AVC faculty have gone to Mexico to give continuing education courses. At the end of the event, Dr. Patricia Luevano, representing veterinary alumni at UAT, Dr. Julio Martinez, representing the "Cuerpo Academico" and Dr. Jorge Zertuche, Dean of the Faculty of Veterinary Medicine presented Dr. Lopez with a plaque recognizing his long-life contributions to the enhancement of veterinary education at UAT and in Mexico.



Antimicrobial Stewardship in Canadian Agriculture and Veterinary Medicine Conference

Dr. C. Anne Muckle attended the Antimicrobial Stewardship in Canadian Agriculture and Veterinary Medicine Conference, held October 30th - November 2nd, 2011, in Toronto, Ontario. She gave an oral presentation during the group discussion session on the role of diagnostic laboratories in antimicrobial stewardship.

Dr. Heather Fenton Honoured with C.L. Davis Award



Dr. Heather Fenton recently received the Charles Louis Davis DVM Foundation Student Scholarship Award, which was presented in Nashville at the annual conference of the American College of Veterinary Pathologists (ACVP) on December 3-7th, 2011. Dr. Fenton, a 2nd year anatomic pathology resident/MVSc candidate, was nominated by the department anatomic and clinical pathologists. Dr. Fenton is from Alberta and is a 2008 DVM graduate of the Western College of Veterinary Medicine, University of Saskatchewan. She spent 2 years in mixed practice before coming to the AVC in August 2010 to begin her training. This nomination recognized Dr. Fenton's enthusiasm for anatomic pathology, her hard work and resourcefulness, her diagnostic skills and her remarkable initiative in addressing wildlife health questions.

Dr. Dania Villarnovo Receives Gift to Attend the ACVP/ASVCP Conference

Dr. Dania Villarnovo, a 1st year clinical pathology resident/MVSc candidate, recently received funding to attend the annual conference of the American College of Veterinary Pathologists (ACVP)/American Society for Veterinary Clinical Pathology (ASVCP). This conference was held in Nashville, Tennessee, from December 3-7, 2011. The majority of the funding was a gift from Dr. Lois Roth-Johnson of Massachusetts, who donated the honorarium she would have received for contributions to a recent textbook edited by Dr. Etienne Côté. Dr. Villarnovo also received funding from the Pathology & Microbiology Professional Development Fund to assist in travel to the conference. Dr. Roth-Johnson is a double boarded ACVP Diplomate who has visited the AVC and who has generously supported AVC clinical pathology trainee opportunities in the past.



Photo: Dr. Villarnovo receiving her funding from Dr. Côté

In November 2011, the second round of the series of workshops organized by the OIE (World Organization for Animal Health) in conjunction with one of its collaborating centres, the Canadian Cooperative Wildlife Health Centre (CCWHC), was held in Buenos Aires, Argentina. These workshops have been developed by the CCWHC for the training of professionals who inform and advise OIE Delegates about wildlife health. The workshop in Buenos Aires was directed at American members of the OIE, was developed by Dr. Ted Leighton (General Director of the CCWHC), and Dr. Jane Parmley (Public Health Agency of Canada and CCWHC member), and delivered by **Dr. Maria Forzan**, Wildlife Pathologist at the CCWHC Atlantic Region based here in the Dept. of Pathology and Microbiology. AVC's Dr. Javier Sanchez and Wildlife Conservation Society's Dr. Marcela Uhart co-delivered the workshop. Focal points from over 25 American countries participated in this interactive workshop, and found it relevant to their activities in wildlife surveillance.



Northern hunting practices

The North Atlantic Marine Mammal Commission (NAMMCO) is an international organization for cooperation on the conservation, management and study of marine mammals. Its members include Greenland, the Faroe Islands, Iceland, and Norway; Canada is not a member but has been able to participate as an observer in its meetings.

This past November, thanks to a generous contribution from the Department's Professional Development Fund, **Dr. Pierre-Yves Daoust**, wildlife pathologist, participated in a workshop on hunting methods for small cetaceans organized by NAMMCO and held in Copenhagen, Denmark. The meeting gathered hunters, biologists, and veterinarians. Small cetaceans are hunted mainly for subsistence in NAMMCO member countries: pilot whales on the Faroe Islands; harbour porpoises, belugas, narwhals, pilot whales, and killer whales in Greenland. Belugas and narwhals are also very important species targeted by Canadian Inuit hunters. Therefore, two hunters, Charlie Inuarak, from Pond Inlet, and Noah Kadlak, from Coral Harbour, as well as Glenn Williams, scientific wildlife adviser for Nunavut Tunngavik Inc., also participated in the workshop.

As with other comparable meetings organized by NAMMCO to discuss various aspects of the harvest of marine mammals (e.g., hunting methods for seals, problems of 'struck and lost' rates), discussions at this recent meeting represented a good blend of practical observations reported by hunters and science-based information provided by biologists and veterinarians. The overall goal of such meetings is to promote hunting methods that lead to rapid death of the animals as a means of improving animal welfare, while recognizing the numerous environmental challenges faced by the hunters. The international scope of these meetings and the respect that is accorded to the hunters attending them provide a unique learning opportunity for biologists and veterinarians alike.

Dr. Shannon Martinson trains Residents for ACVP Board Exam



An important goal for MVSc-Residents in Anatomic Pathology is to become a Diplomate of the American College of Veterinary Pathologists (ACVP). This long term preparation generally takes between 2-3 years of intensive study and hands-on practice in gross and microscopic pathology. The ACVP examination consists in four sections: General Pathology, Veterinary Pathology, Microscopic Pathology and Gross Pathology. Dr. Shannon Martinson conducts practical sections to train MVSc residents to recognise, describe, understand the pathogenesis and make morphological diagnosis on gross specimens. In this picture, she appears with Dr. Heather Fenton and Dr. Carlos Lopez reviewing gross specimens using digital images from the AVC archive.

Wildlife Student Mentioned in the CVJ

Ms. Tricia Fleming, a 3rd-year veterinary student at the AVC, was featured in the News section of the latest issue of the Canadian Veterinary Journal (CVJ), November 2011. Ms. Fleming, a native of Bedford, Nova Scotia, was one of only five students to receive a scholarship from the Morris Animal Foundation this past summer. The scholarship is intended to support students during summer jobs in veterinary research. Ms. Fleming worked with **Dr. Maria Forzan** and **Dr. Cora Gilroy** in the determination of hematological reference intervals for wild green frogs (*Rana clamitans*). Her work was also supported by the CCWHC, and by the invaluable help from members of the Diagnostic Services Unit, particularly Ms. Anne Dover.



World Veterinary Congress 2011 - Cape Town, South Africa



In October, **Dr. Scott McBurney** was one of four Canadian Cooperative Wildlife Health Centre professionals from across Canada invited to speak at the World Veterinary Congress 2011 in Cape Town, South Africa. The invitation to participate in the conference was extended by colleagues at the World Health Organization (OIE) Collaborating Centre for Training in Integrated Livestock and Wildlife Health Management, Department of Tropical Medicine, University of Pretoria, South Africa. **Dr. McBurney** delivered two presentations: "Surveillance for Bat White Nose Syndrome in Eastern Canada" and "Considerations Regarding Detection of Emerging Health Issues in Wild Avian Populations".

Recent Publications

AboElkhair M., Iwamoto T., Clark K.F., McKenna P., Siah A., Greenwood S.J., Berthe F.C.J., Casey J.W., Cepica A. Lack of detection of a putative retrovirus associated with haemic neoplasia in the soft shell clam *Mya arenaria*. *Journal of*

Hwang S., Jeon, B., Yun, J., and Ryu, S. (2011) Roles of RpoN in the resistance of *Campylobacter jejuni* under various stress conditions. BMC Microbiology 11:207

Kim M., Hwang S., Ryu S., Jeon B. (2011) Regulation of perR expression by iron and PerR in *Campylobacter jejuni*. Journal of Bacteriology, p. 6171-6178.

Liu H., Wang Y., Wu C., Schwarz S., Shen Z., Jeon B., Ding S., Zhang Q., Shen J. (2011) A novel phenicol exporter gene, *flexB*, found in enterococci of animal origin. Journal of Antimicrobial Chemotherapy Advance Access. November, doi: 10.1093/jac/dkr481

2012 Winter Seminar Series AVC Lecture Theater C Thursday, 10:30-11:30am		
Date	Topic	Presenter
January 12	Aleutian Disease in wild American mink (<i>Neovison vison</i>) on Prince Edward Island	Dr. Heather Fenton
January 19	Neuroplasticity and recovery of cognitive function following focal ischemia in the rat	Robert Deziel
January 26	Interactive effects of copper with hypoxia and thermal stress on energy metabolism in rainbow trout	Ravinder Sappal
February 2	Evaluating sub-lethal impacts of oil sands development on white sucker (<i>Catostomus commersonii</i>): trials and tribulations	Collin Arens
February 9	Heterologous production of bioactive terpenes	Jennifer Cuillerier
February 16	Androgen Receptor α : Understanding the expression and function of two androgen receptors in 3-Spined Stickleback	Brad Scott
February 23	Demonstrating differential selection of <i>Cryptosporidium</i> and <i>Giardia</i> by American oysters using new and optimized detection methods	Jessica Willis

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For comments and suggestions please contact us by e-mail:

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