

Pathology & Microbiology Newsletter Bi-monthly News Bulletin Atlantic Veterinary College University of Prince Edward Island Issue 34, July, 2015



Dr. Alfonso Lopez Conferred Rank of Professor Emeritus at UPEI

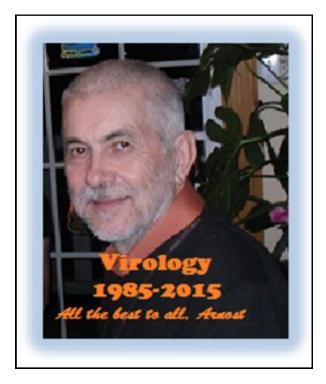
Dr. Alfonso Lopez was conferred the rank of Professor Emeritus at UPEI at the convocation ceremony on May 9th, 2015. During his 27 year career at the Atlantic Veterinary College (AVC), he taught anatomic pathology; this started with the first AVC graduating class of 1990. Teaching was indeed Dr. Lopez's passion and his dedication earned him many teaching awards, including the Carl J. Norden Pfizer Distinguished Teacher Award, the Hessian Award for Excellence in Teaching and the Janet Pottie-Murray Award for Educational Leadership. One of Dr. Lopez's contributions to his discipline that he is very proud of is his chapter on the respiratory system in the textbook, Pathologic Basis of Veterinary Disease. Now in press for its 6th edition, this textbook is used by veterinary students worldwide. He has also authored five other chapters in textbooks in Spanish for Latin American students. Since his arrival at the AVC, Dr. Lopez's interest in international veterinary medicine was apparent and in 1993, he was awarded the first Canadian International Development Agency (CIDA) project at UPEI. The goal of this project was to advance veterinary education in Mexico. Through CIDA funding, several Mexican faculty obtained graduate degrees at UPEI and AVC faculty had the opportunity to lecture abroad. Dr. Lopez has also received two trilateral Canada-United States-Mexico mobility projects funded by Human Resource Development Canada. These projects sponsored Canadian students to do external rotations in Mexico and the US, and paid DVM students from those host countries to do externships at UPEI, the University of Guelph and the University of Montreal. His devotion to international programs was recognized with the Award for Innovation in International Education by the Canadian Bureau for International Education. As an



enthusiastic diagnostic pathologist, he also enjoyed transforming diagnostic cases into valuable teaching material, all of which has been made freely available on-line to students and institutions overseas. After retirement, Dr. Lopez would like to remain teaching overseas, doing collaborative research and co-supervising graduate students, writing and working as a consultant. He will be enrolling soon in graphic design courses to improve his didactic materials and to assist AVC faculty with course illustrations. In Dr. Lopez's own nostalgic words, he would truly miss his day-to-day contact and friendship with colleagues, students and staff: Hasta la vista amigos!

Photo left to right: Dr. Alaa Abd-El-Aziz, President and Vice-Chancellor, Dr. Alfonso Lopez and Dr. Don McDougall, Chancellor.

Dr. Arnost Cepica Retires from UPEI



After 30 years of association with the Atlantic Veterinary College (AVC), Arnost is retiring as of July 1, 2015. His veterinary career started 1965 when he became a veterinary technician, followed by a DVM (1971; Brno, Czech Republic), and a PhD in virology/immunology (1981; University of Guelph). His employment history prior to coming to the AVC includes time as a research assistant/ graduate student in respiratory and enteric viruses of cattle (1971-78; Veterinary Research Institute, Medlanky, Brno, Czech Rep.); and Section Head at the Bureau of Biologics, Health and Welfare Canada (1981-85), in control of viral vaccines for human use. In 1985, Arnost was recruited among the first 5 faculty members hired by the AVC founding Dean, Dr. Reg Thomson. Arnost took a leave of absence from the AVC between 1992-95 to teach virology and immunology in the Faculty of Science of the University of Botswana.

Throughout his tenure at the AVC, Arnost taught the 2nd year DVM course of Virology, the 4th year rotation in Diagnostic Services, and a graduate course, Concepts in Viral Pathogenesis.

While at the AVC, he conducted funded research, and contributed through publications in the following areas: a) local intestinal cell mediated immunity against viruses; b) antibody induced conformational change of viral antigen; c) diagnosis of bovine viral diarrhea persistency (PCR, ear notch immunohistochemistry); d) feline coronavirus detection by reverse transcriptase PCR; e) etiology of haemic neoplasia of soft shell clam *Mya arenaria*; and f) conformational restraint of a virus by formaldehyde and glutaraldehyde-treatments. During the last 5 years, he worked on the control of Aleutian mink disease (AD). This work led to world-wide abandonment of the "individual detection/ removal control method", and development of the method of mass spectrometric determination of albumin/IgG ratio in blood serum and plasma as a tool for breeding of mink for AD resistance. The success of this control method of AD has been verified in field trials in PEI, and the program will continue to be delivered by the AVC Diagnostic Services Laboratory.

Arnost wishes to acknowledge the following persons with whom he had particularly significant research collaboration: Dr. Jaromir Mensik and Dr. Brian Derbyshire (graduate mentors); Dr. Biao Chen and Dr. Tokinori Iwamoto (technicians); Dr. Carmencita Yason, Dr. Ashkan Zargar, Dr. Basim Mohamed (postdoctoral fellows); Dr. Dorota Wadowska, Dr. Jian Jian Liu, Dr. Mohamed AboElKhair, and Dr. Haytham Ali (graduate students).

Arnost and his wife Dagmar have no immediate plans to leave PEI; they will remain for a foreseeable future at the same residence in Stratford.

Welcome Our New Faculty Members



Dr. Cornelia (Cora) Gilroy is welcomed as a tenure track Associate Professor in Clinical Pathology in the Department of Pathology and Microbiology. A native of Victoria, Prince Edward Island, Dr. Gilroy is a 1997 graduate of the Atlantic Veterinary College (AVC). Following a 1 year internship and 4 years in small animal practice, she returned to the AVC to train in clinical pathology. She is an American College of Veterinary Pathologists (ACVP) board certified clinical pathologist. After completing her training at AVC in July 2005. Dr. Gilrov worked first as a clinical pathologist with the Diagnostic Services Laboratory until January 2008. She then began as a contract Assistant Professor with the Department of Pathology and Microbiology with most of her time spent performing diagnostic work and teaching. Since 2006, she has worked to promote the AVC Diagnostic Services Laboratory to our clients as the coordinator and editor for Diagnostic Update, the semi-annual newsletter. Dr. Gilroy enjoys teaching in the classroom, at regional veterinary conferences and in her role as clinical pathology faculty advisor for the AVC student chapter of the ACVP. Dr. Gilrov is the recipient of the prestigious 2015 Zoetis Carl J. Norden Distinguished Teacher Award, which she will be awarded this fall. We wish Dr. Gilroy all the best as she begins her new position!

Dr. Anne Muckle started her tenure track position as an Associate Professor in Clinical Bacteriology on July 1, 2015. She is a 1979 graduate of the Ontario Veterinary College (OVC 1979) with an MSc (1981) and PhD (1983) from the OVC Department of Veterinary Microbiology and Immunology. Prior to coming to the AVC, she was the OIÉ Designated Expert on Salmonellosis in the Public Health Agency of Canada OIÉ Reference Laboratory for Salmonellosis, in Guelph, Ontario. Anne has been a Clinical Bacteriologist in the Atlantic Veterinary College (AVC) Diagnostic Services Laboratory (DS) since 2006 and was also Director of the DS during 2006 to 2009. She has been involved in an ACOA AIFfunded research initiative to achieve ISO/IEC quality assurance accreditation for the DS and the DS Veterinary Laboratory Quality Assurance Program (VLA-QAP) and technical innovations to the VLA-QAP since 2010. She teaches in the second year DVM course, Veterinary Microbiology and Mycology, and the fourth year DVM rotation, Clinics in Diagnostic Services. She particularly enjoys working in the DS Bacteriology Laboratory. We are pleased to be able to retain Dr. Anne Muckle as a faculty member in the Department of Pathology and Microbiology.



Welcome Our New Faculty Members

We welcome Dr. Shannon Martinson, as a tenure track Assistant Professor in Anatomic Pathology in the Department of Pathology and Microbiology. A native of Oromocto, NB, she obtained her BSc with Honors at the University of New Brunswick in 1999. Five years later in 2004, she received her DVM degree from the Atlantic Veterinary College (AVC) and was awarded the RG Thomson Academic Achievement Award. Following graduation, Dr. Martinson enrolled in a combined MVSc-Residency in Anatomic Pathology in the Department of Pathology and Microbiology at the AVC and became board certified in Anatomic Pathology by the American College of Veterinary Pathologists in 2008. Dr. Martinson worked as a contract pathologist at the AVC Diagnostic Services Laboratory until 2013 when she moved south to become the Senior Veterinary Pathologist at the New Hampshire Veterinary Diagnostic Laboratory/Department of Molecular, Cellular and Biomedical Sciences in Durham. In addition to her stellar track record as a pathologist working on domestic animals, Dr. Martinson has developed an interest in reptiles and has become a respected resource for reptilian pathology in Canada and the US. We are fortunate to have Dr. Shannon Martinson back as a faculty member of our department.



Dr. Fred Kibenge Reappointed for 3rd Term as Chair of Path / Micro



Dr. Fred Kibenge has been reappointed as Chair of the Department of Pathology and Microbiology for a third 3-year term which began June 1, 2015.

Dr. Kibenge is honoured to continue to represent the Department of Pathology and Microbiology. This is a department of award winning teachers and researchers, delivering high quality diagnostic service, with high quality graduate programs and proud to have received its second faculty *Professor Emeritus* this year.

Dr. Juan Carlos Rodriguez Participated in Latin America Trade Fair

Dr. Juan Carlos Rodriguez participated in the Latin America Trade Fair for Poultry and Swine Industry with a conference entitled, "Nutritional Tools for immunological enhancement in Pigs and Chickens" invited by Professor Carlos Mallmann Universidade Federal do Rio Grande do Sul. The title of the meeting was Animal Protein International Trade Fair of production and processing of Animal Protein, and it was held in Curitiba, Parana, Brazil, on April 28-30, 2015.

Photo: Professor Carlos Mallmann and Dr. Juan Carlos Rodriguez-Lecompte.



Dr. Juan Carlos Rodriguez Was Invited Speaker at Conference

Dr. Juan Carlos Rodriguez participated as invited speaker at the 14th Encuentro AMVEAV (Asociación de Médicos Veterinarios Especialistas en Avicultura de Veracruz) with a conference paper entitled, "Nutrición como una herramienta para el mejoramiento inmunológico de las aves". The conference was held at Boca del Rio, Veracruz, México, June 17-19, 2015.



Photo left to right: Drs. Alberto Tirado Madrid, Karina Hernández, Juan C. Rodriguez-Lecompte and Alejandro Martínez Meneses

Poultry Disease Rotation for Senior DVM Students

Dr. Juan Carlos Rodriguez taught a Poultry Disease Rotation to 4th Year DVM Students (Class of 2016) which included instruction on poultry management and a field trip to the Annapolis Valley in Wolfville, Nova Scotia on June 23-26, 2015. This rotation included the participation of Dr. Randall Bishop, DVM, ACPV, a poultry veterinarian in Nova Scotia. Students visited chicken breeder, broiler, pullet, layer hen and turkey farms, as well as hatchery, processing and feed mill plants.

Photo left to right:

Dr. Juan Carlos Rodriquez drawing blood from a wing vein and Laura Wilson holding a chicken.





Photo left to right: Nick Oakley, Bruno Ouimet, Rebecca Frank, Dr. Bishop, Christine Bosse, Eryn Dinisi, and Brad Caissie.

NSERC Discovery Grant Awarded

Congratulations to **Dr. Juan Carlos Rodriguez** for being awarded an NSERC Discovery Grant for 5 years (2015-2020) at \$24,000/year (total funding \$120,000). The research program is titled "Nutritional regulation of genes associated with avian B cell receptors involved in innate and adaptive immunity".

In his research, Dr. Rodriguez will be investigating the effect of folic acid in breeder hens diet on B cell and toll-like receptor methylation status cell development in the embryo. He is looking to correlate early host innate and adaptive immune system development and maturation to explain epigenetic regulation at the antigen receptors (BCR and TLR) and cytokine production as the cells mature. Dr. Rodriguez 's program will also integrate epigenetic characterization, B cell development, and immunity evaluation with oral nutrition intervention using folate-producing probiotics as epigenetic modifiers. Dr. Rodriguez is also training a PhD Graduate student, Ori Elad. Well done Dr. Rodriguez!

What Happens After Dark in the PEI National Park?

Due to the devastating impact of the disease, white-nose syndrome, that has decimated bat populations all over eastern North America, last year three bat species were federally listed as endangered. These included the little brown myotis and Northern myotis native to PEI. Now it is more important than ever to understand how bats are doing on PEI and to identify critical habitat for them. Therefore, the Canadian Wildlife Health Cooperative (CWHC), Atlantic Region, was asked to assist the PEI National Park with making an inventory of their bat species by monitoring the nightly activity of bats in buildings and four different habitat types this summer. Each week, acoustic bat detectors are deployed which passively record the echolocation calls of each bat that flies past them. The CWHC team working on this project includes **Jordi Segers** (Canadian National Bat White-nose Syndrome Coordinator**), Dr. Scott McBurney** (Wildlife Pathologist) and Lauren Grant, a Dalhousie University 4th year Biology Student experienced working with bats. **Dr. Hugh Broders**, a bat ecologist from Saint Mary's University, is also collaborating by sharing his extensive expertise with the CWHC team. The fieldwork began in early June and the preliminary data has indicated that despite the devastation of white-nose syndrome in PEI, a bat population is still present in the park. As the project

proceeds, we will learn more about the population in the park of these mysterious flying mammals that come out after dark to rid us of the insects that plague us.



Myotis bat flying in the early evening sun

(photo by Jordi Segers)

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Visualization of a bat's echolocation call

Graduate Student Accomplishments

Congratulations to **Dr. Fany Marron-Lopez** who successfully defended her MVSc thesis [Cilia Associated Respiratory (CAR) bacillus-like organisms in cats with pneumonia, a retrospective study] on May 15, 2015. Fany was co-supervised by **Dr. Shannon Martinson** and **Dr. Enrique Aburto**. **Dr. Chelsea Martin** chaired the Examination Committee. Congratulations Fany.

Congratulations to **Ori Elad** who successfully passed his PhD Comprehensive Examination. Ori is supervised by **Dr. Juan Carlos Rodriguez. Dr. Paul Hanna** chaired the PhD Comprehensive Examination Committee. Congratulations Ori.

Congratulations to the following graduate students for their awards at the 23rd Annual GS&R Days on May 15, 2015.

- 1. Jocelyn Perez Lazo, who received The Dr. Douglas W. Ehresmann Graduate Award (in virology).
- 2. **Jordan Poley**, who received The John and Carol MacLeod Award for Research Communication Excellence.
- 3. Ori Elad, who received Bronze prize in Paper Presentations (Session One).
- 4. Jordan Poley, who received Bronze prize in Paper Presentations (Session Two).

Congratulations to **Jordan Poley**, who is the recipient of the 2015 Department of Pathology and Microbiology Seminar Series Award for Best Seminar Presentation. The award consists of a plaque and a cheque.

New Arrival

Congratulations to **Amy and Mark Fast** on the birth of their fourth child, Magnus Amado, born May 21, 2015 weighing 6 lbs., 4 oz., 19 cm long. A brother for Jackson, Mathis and Maëlle!

2015 Summer Schedule for Pathology Rounds and Seminars

Date	Торіс	Room
Monday	3:30 PM Biopsy Rounds	Room 1196N *
Tuesday	8:30 AM ASVCP Mystery Cases & Journal Review	Room 1196N*
Wednesday	3:30 PM Biopsy Rounds	Room 1196N *
Thursday	4:00 PM Gross Pathology Rounds	Room 1034N **
Friday	3:30 PM Biopsy Rounds	Room 1196N*
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PI	ease note: lab coats or coveralls are required at Gross Path	nology Rounds.

Recent Publications

Forzán MJ, Jones KM, Vanderstichel RV, Wood J, Kibenge FSB, Kuiken T, Wirth W, Ariel E, Daoust PY. (2015) Clinical signs, pathology and dose-dependent survival of adult wood frogs, *Rana sylvatica*, inoculated orally with frog virus 3 (*Ranavirus sp., Iridoviridae*). Journal of General Virology 96,1138-1149.

Raab O, Béraud R, Tefft KM, Muckle CA. (2015) Successful treatment of *Corynebacterium urealyticum* encrusting cystitis with systemic and intravesicular antimicrobial therapy. Canadian Veterinary Journal 56, 471-475.

McElroy AE, Hice LA, Frisk MG, Purcell SL, Phillips NC, Fast MD. (2015) Spatial patterns in markers of contaminant exposure, glucose and glycogen metabolism, and immunological response in juvenile winter flounder (*Pseudoplueronectes americanus*). Comparative Biochemistry and Physiology, Part D 14, 53-65.

Jeon SJ, Fast MD. (2015) Age-0 striped bass, *Morone saxatilis* (Walbaum, 1792), response to immunostimulation. Journal of Applied Ichthyology 31,125-134.

Romany JS, McElroy AE, Fast MD. (2015) Measures of immune system status in young of the year winter flounder *Pseudopleuronectes americanus*. Journal of Fish Biology 86, 148-161.

Sappal R, MacDougald M, Fast M, Stevens D, Kibenge F, Siah A, Kamunde C. (2015) Alterations in mitochondrial electron transport system activity in response to warm acclimation, hypoxia-reoxygenation and copper in rainbow trout, *Oncorhynchus mykiss*. Aquatic Toxicology 165, 51-63.

Villeneuve A, Polley L, Jenkins E, Schurer J, Gilleard J, Kutz S, Conboy G, Benoit D, Seewald W, Gagne F. (2015) Parasite prevalence in fecal samples from shelter dogs and cats across the Canadian provinces. Parasites & Vectors 8, 281.

We welcome all comments, suggestions and submissions. Please contact:

Dr. Fred Kibenge (kibenge@upei.ca) or Ingrid MacLeod (imacleod@upei.ca).