



Path Micro News

A monthly news bulletin
Department of Pathology and Microbiology
Atlantic Veterinary College
University of Prince Edward Island



Issue 2, August 2009

A Message from the Chair



New Editor:

Kudos to **Dr. Alfonso López** who has volunteered to serve as the Editor for the **Path Micro News**. Alfonso brings to this job his wide knowledge and expertise with desktop publishing and veterinary bioinformatics, elements that will ensure that we in the Department of Pathology and Microbiology effectively make our successes and achievements known.

Dr. Fred Kibenge BVM, PhD, DACVM.

Visiting Professor for the Poultry Rotation



We welcome **Dr. Richard "Mick" Fulton**, who is an external locum for the VPM 462 Diseases of Poultry Rotation from August 17-28, 2009. Mick is Associate Professor, Avian Diseases, in the College of Veterinary Medicine, Michigan State University. He obtained his DVM from Purdue University in 1981, and PhD in Veterinary Pathology in 1991. He is a Diplomate of American College of Poultry Veterinarians. The VPM 462 Diseases of Poultry Rotation helps consolidate our students' poultry experience in the DVM curriculum and their preparation for the poultry section of the NAVLE. Recently, Dr. Fulton returned from a sabbatical where he assisted the United States Agency for International Development (USAID) in a project where he traveled the world helping developing countries prepare for, detect, respond to, and recover from H5N1 avian influenza.

Leadership Program

Undergraduate Research:

The AVC Summer Research and Leadership Program is in its second year at AVC. This year, a total of 9 students from all departments enrolled. Completion of the course included each student giving an oral presentation and a poster presentation detailing their summer research. Additionally the students met once a week through the summer for lectures about careers in research. This included learning about opportunities for research careers in government, industry, and academia; additionally lectures were provided to help improve presentation skills and scientific writing. Three DVM students worked with faculty in Path & Micro: **Emily Weidhaas** worked with **Dr. Jeff Lewis** on project titled "Validation of MALDI-TOF mass spectrometry in veterinary bacteriology"; **Jessica Boyd** worked with **Dr. Fred Kibenge** on project titled "Phenomic characterization of the new Chilean strains of ISAV"; **Jessica Cady** worked with **Dr. Anne Muckle** and Dr. Jeff Lewis on project titled "MALDI-TOF MS for the diagnosis of urinary tract infections". DVM students who take this program as a course receive 2 fourth year credits.

Graduate Thesis and Defense

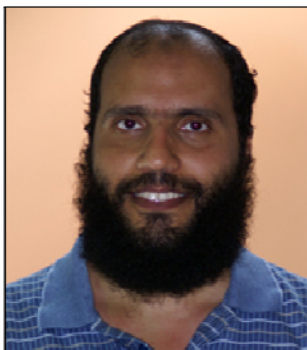


Dr. Soraya Sayi recently completed her MVSc degree and gave presentation on her results on the “Detection of *Bartonella* by PCR in Nodular Pyogranulomatous Dermatitis in Dogs” at the Scientific session of the Canadian Association of Veterinary Pathologists in Charlottetown, PEI on June 7, 2009. She also presented these results at the 8th Annual Meeting of the Canadian Animal Health Network (CAHLN) on June 9, 2009. Dr Sayi was supervised by **Dr. P Hanna** and **Dr. BO Ikede**.



Dr. Samuel Workenhe successfully defended his PhD thesis titled "Molecular Interaction of Infectious Salmon Anaemia Virus and the Atlantic Salmon Innate Immune System". He was supervised by **Dr. Fred Kibenge**.

Samuel will be starting a Post-doctoral Fellowship with **Dr. Karen Mossman**, Department of Pathology & Molecular Medicine, McMaster University, on September 1, 2009



Dr. Mohammed Abo El-Khair successfully defended his PhD thesis titled "Etiology of disseminated neoplasia in the soft shell clam, *Mya arenaria*". He was supervised by **Dr. Arnost Cepica** and **Dr. Frank Berthe**.

Mohammed will be on the faculty of the Veterinary College, Minufiya University in Sadat City, Egypt.

FACES YOU MAY NOT KNOW

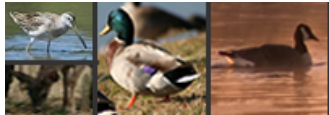


Dr. Bertrand Tankouo Sandjong came to the Department of Pathology and Microbiology, AVC, from University of Laval on August 2008. He has been working on the development of a new molecular tool for the simultaneous detection and surveillance of species of invasive tunicates. Dr. Tankouo Sandjong is working with **Dr. Siah Ahmed**, **Dr. Gerald Johnson** and **Dr. Fred Markham**



Dr. Xin Yi received her Ph.D. degree in cell biology from Beijing Institute of Basic Medical Sciences in 2007. Since 2009 she has been working in **Dr. Fred Kibenge's** lab on a project to elucidate the molecular mechanism governing IBDV(Infectious bursal disease virus) RNA replication by RdRp (RNA dependent RNA polymerase), IBDV VP1 protein. Before coming to AVC, Dr. Xin Yi was a NRC-INH postdoctoral fellow. Dr. Xin Yi first came to PEI in 2007.

The Canadian Cooperative Wildlife Health Centre (CCWHC)



Canadian Cooperative Wildlife Health Centre
Centre Canadien Coopératif de la Santé de la Faune

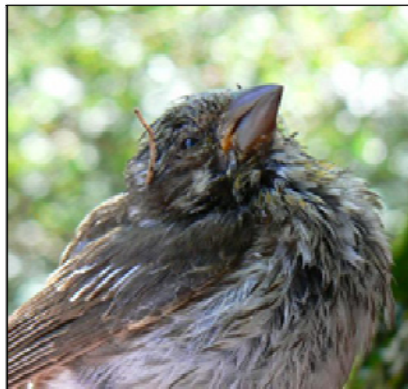


The Canadian Cooperative Wildlife Health Centre (CCWHC) is a cooperative effort at all 5 Canadian Veterinary Colleges. Their purpose is to apply the veterinary medical sciences to wildlife conservation and management in Canada through the acquisition of knowledge of wildlife health and disease, via continuous disease surveillance in free-ranging populations. CCWHC coordinates Canada's National Wildlife Health Surveillance Program and provides educational programs, information, and consultation to government agencies and the public.

The CCWHC, Atlantic Region, is housed within the Department of Pathology and Microbiology, with **Dr. Pierre-Yves Daoust** as its Regional Coordinator. Departmental members working in the CCWHC include pathologists **Dr. Scott McBurney** and **Dr. María Forzán**, and wildlife technologists **Darlene Weeks** and **Fiep DeBie**.

More information about the CCWHC is available on line: <http://atlantic.ccwhc.ca/>

Research Project on Trichomoniasis in Wild Finches



Dr. Scott McBurney and **Dr. María Forzán** are conducting research on a recently described cause of mortality in wild finches due to infection with the protozoan parasite *Trichomonas gallinae*. First identified in Maritime finches in 2007, the disease has occurred every summer/early fall since, affecting purple and American goldfinches. The main goals of the research are to identify locations where the mortalities are occurring, identify contributing factors and characterize the genomic identity of the protozoan. Collaboration from the general public and various Departments of Natural Resources, in the form of an online questionnaire and through submission of dead birds, will be key to accomplishing the first two objectives. Collaborating with CCWHC is **Dr. Spencer Greenwood**, who will perform the genotyping from live *Trichomonas gallinae* cultures. CCWHC is also

collaborating with **Drs. Lawson and Bell**, scientists in the U.K., where similar mortalities have been recorded since 2005.

VPM 450 Diagnostic Services Rotation

Dr. Pierre-Yves Daoust is the new course coordinator for VPM 450 Diagnostic Services Rotation. Pierre-Yves takes over on September 1, 2009. **Dr. Barb Horney** had coordinated this rotation since Fall of 2007. The VPM 450 rotation (combined diagnostic services rotation) is a core rotation (i.e., all 4th year DVM students have to take it) in diagnostic bacteriology, clinical pathology, pathology, parasitology and virology.

Special Seminars

Dr. Ean Foley, from the University of Alberta presented "Identification of novel regulators of TNF-dependent cell death" on August 13th, 2009. Dr. Foley's visit was supported by the Aquatic Virology Collaborating Centre.

Dr. Ian Bricknell, from the University of Maine, presented a seminar entitled "Do all sea lice come from fish farms" on August 13, 2009.

Scientific Presentations

Canadian Association of Veterinary Pathologists (CAVP)

The latest meeting of the CAVP took place at UPEI on June 7, 2009. Various members of the Pathology and Microbiology Department presented talks: **Dr. Caroline Legge**, 2nd-year resident, reviewed canine cardiomyopathies and presented the outline of her research on "Dilated cardiomyopathy in the Toy Manchester Terrier". **Dr. Maria Forzan**, wildlife pathologist, reviewed the most common diseases of frogs in her talk "Notes on the Pathology of Frogs". **Dr. Betsy O'Neil**, a clinical pathology resident, reviewed the topic of "Necrotizing Fasciitis." **Dr. Melanie Buote**, anatomic pathologist, reviewed the little known condition known as "Eosinophilic pseudotumors in dogs and cats" **Dr. Paul Hanna**, anatomic pathologist, spoke about Atypical Actinobacillosis in a Group of Feedlot Cattle" **Dr. Jan Lovy**, post-doctoral fellow, spoke about his research on "Morphological and immunohistochemical evidence suggesting the existence of Langerhans cells in fish" **Dr. Shannon Martinson**, anatomic pathologist, presented a case of "Suprasellar germ cell tumour in a dog." **Dr. Alfonso Lopez** compared the gross and histologic diagnosis of pneumonias in his talk "Interstitial Pneumonia in Cattle: Not an easy diagnosis"

Other presentations:

Sayai S, Hanna P, Ikede I, Lewis J, Melekhovets Y. Detection of Bartonella by PCR in Nodular Pyogranulomatous Dermatitis in Dogs. Presented at the 8th Annual Meeting of the Canadian Animal Health Network (CAHLN), June 7-10, 2009.

López A. Animal Health in Developing Countries: How laboratorians and universities can help. 8th Annual Meeting, Canadian Animal Health Laboratorian Network. Charlottetown, PEI. June 7-10, 2009. (Abstract p 44).

Dr. Alfonso López was the keynote speaker at the XXI meeting of the Spanish Society of Anatomic Veterinary Pathology that took place in Lugo, Spain during June 24-26. This meeting was hosted by the Faculty of Veterinary Medicine of the University of Santiago de Compostela and over 100 pathologists from Spain, Portugal and Italy were in attendance. Dr. López also gave a continuing education course on the general pathology of respiratory system. Handouts and presentations are available to Spanish speaking pathologist at <http://people.upei.ca/lopez/castellano/lugo/lugo.html>. During his trip to Europe he was also a guest lecturer at the Faculdade de Medicina Veterinária, Univerisdade Técnica de Lisboa, Portugal.

Recent Publications

AboElkhair M, Siah A, Clark KF, McKenna P, Pariseau J, Greenwood SJ, Berthe FC, Cepica A. Reverse transcriptase activity associated with haemic neoplasia in the soft-shell clam *Mya arenaria*. *Dis Aquat Organ*. 2009;9:84:57-63.

Glover CM, Miller LM, Dybdal NO, López A, Duckett WM, McFarlane D. Extrapituitary pars intermedia dysfunction: A retrospective study. *J Equine Vet Sci* 2009;29:146-153.

Speare DJ. Environmental diseases of intensively reared fish. *Fish Dis*. Chapter 20, 2009.

Theriault M, Van Leeuwen J, Morrison M, Cawthorn R. Risk factors for the development of shell diseases in impounded populations of the American Lobster, *Homarus americanus*. *J Shellfish Res* 2008;27: 1239-1245.

AboElkhair M, Siah A, Clark EF, McKenna P, Pariseau J., Greenwood SJ, Berthe FCJ, Cepica A. Reverse transcriptase activity associated with haemic neoplasia in the soft-shell clam *Mya arenaria*. *Dis Aqua Org* 2009;84:57-63.

Daoust P-Y, McBurney S, Godson DL, Van de Bildt MWG, Osterhaus ADME. Canine distemper virus-associated encephalitis in free-living lynx (*Lynx canadensis*) and bobcats (*Lynx Rufus*) of eastern Canada. *J Wildlife Dis* 2009;45:611-624.

Daoust P-Y, Dobbin GV, Ridlington ARCF, Dawson SD. Descriptive anatomy of the subcutaneous air diverticula in the Northern Gannet (*Morus bassanus*). *Seabird J*. 2008;21:64-75.

Racine T, Hurst T, Barry C. Shou Jingyun, Kibenge FSB, Duncan R. Aquareovirus effects syncytiogenesis by using a novel member of the FST protein family translated from a non-canonical translation start site. *J Virol* 2009; 2009:5951-5955.

Lovy J, Savidant GP, Speare DJ, Wright GM. Langerin/CD207 positive dendritic-like cells in the haemopoietic tissue of salmonids. *Fish Shelfish Immunol* 2009;27:365-368.



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For comments or suggestions for our newsletter, please contact Alfonso López
lopez@upei.ca