

## Chair's Holiday Message



As we get ready to welcome 2024, I want to thank our students, staff and faculty for another successful year in the Department of Pathology and Microbiology and for helping to create a great place to learn, teach and discover. I enjoyed the opportunity to serve as Acting Department Chair, and I appreciate all the kind support (and patience) I received from you!

May you and your loved ones have a safe, peaceful, and enjoyable holiday season. I look forward to starting a new semester with you in January!

Chelsea Martin



## Dr. Russell Fraser Granted Tenure



Congratulations to **Dr. Russell Fraser** who has been granted tenure by the University of Prince Edward Island effective July 1, 2024.

Congratulations Dr. Fraser!

## Co-Chair of ACVP Certifying Examination Board



**Dr. Shelley Burton** will soon complete the first year of a 3 year elected term as Co-Chair (representing clinical pathology) of the Certifying Examination Board (CEB) of the American College of Veterinary Pathologists (ACVP). The anatomic pathology Co-Chair is Dr. Ryan Jennings at The Ohio State University. Along with ACVP staff, Drs. Burton and Jennings work closely on all aspects of the ACVP Certifying Examination and lead a group of many hard working pathologist volunteers.

Photo: Drs. Shelley Burton and Ryan Jennings

## Pathology Training of Small Animal Residents

The residents in small animal medicine (Drs. Zoe Rutledge and Siobhan McGrath) and surgery (Dr. Ken Young) from the Department of Companion Animals enjoyed an intensive week of pathology training from December 4-8, 2023. The clinical pathology sessions were led by **Drs. Shelley Burton, Noel Clancey and Cora Gilroy**. Anatomic pathology training was provided by **Drs. Andrea Bourque, Melanie Buote, Russell Fraser, Chelsea Martin and Shannon Martinson**. This week partly or fully meets requirements for time spent with American College of Veterinary Pathologists (ACVP) boarded pathologists in residency programs accredited by the American College of Veterinary Internal Medicine (ACVIM) or the American College of Veterinary Surgery (ACVS).

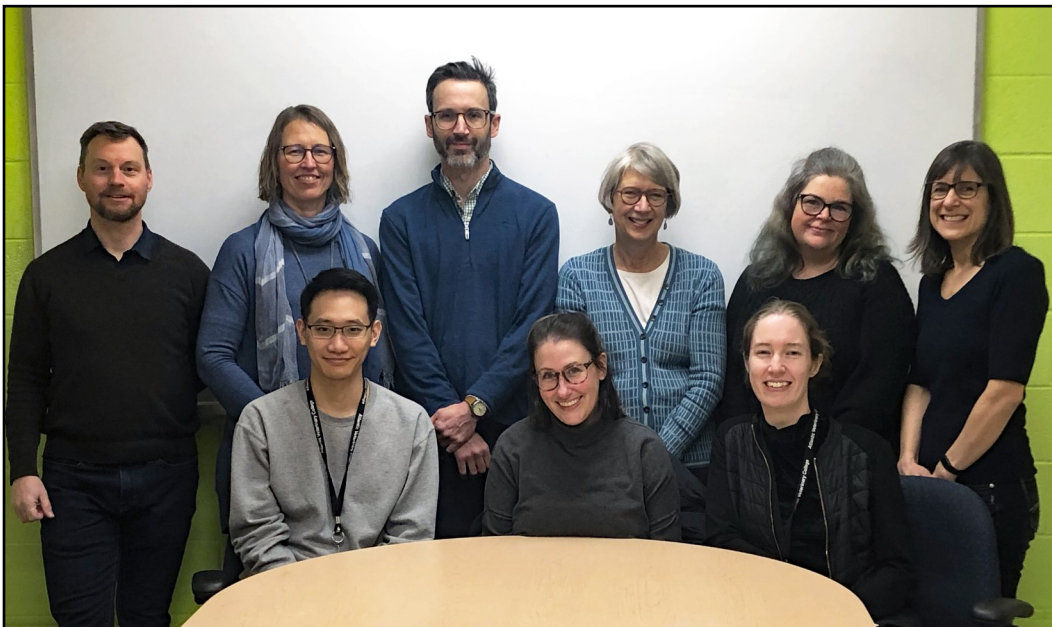


Photo left to right: Seated: Drs. Ken Young, Zoe Rutledge, Siobhan McGrath.  
Standing: Drs. Noel Clancey, Cora Gilroy, Russell Fraser, Shelley Burton, Melanie Buote, Shannon Martinson.



## Welcome to Post-doctoral Fellow



The Department of Pathology and Microbiology welcomes **Dr. Mouhamad Bodaghie**, a post-doctoral fellow under the supervision of **Dr. Mark Fast**. Dr. Bodaghie has worked as a researcher at the University of Alberta in Edmonton. While there, he worked under the supervision of Professor Witold Petdrycz on developing algorithms for machine learning in quantum and fuzzy space. The subjects of his master and doctoral theses have been focused on the challenges of bioinformatics and computational biology. He has also developed algorithms to solve them in his research and articles which can be the best solution for solving biological challenges. Dr. Bodaghie pursued his university studies up to his doctorate in computer science at the best universities in Iran. In his new position in Dr. Fast's laboratory, he will be using computer science methods to quickly and reliably detect the genetic changes in sea lice that have led to resistance to existing drugs.

Dr. Bodaghie lives in Ottawa with his wife and three teenage children. Because of his interest in art, he fills his free time by listening to music, watching movies and going to the theatre and the opera. Mouhamad enjoys sports such as; swimming, squash and cycling.

## Welcome to Graduate Student



The Department of Pathology and Microbiology welcomes **Laura Leaman**, who will be starting her Master of Science program in January 2024. She is excited to be supervised by **Dr. Nina Germitsch**, focusing on the study of *Crenosoma vulpis*. Laura graduated from UPEI in May 2023 with a Bachelor of Science, majoring in biology. Her goal is to attend the AVC to become a wildlife veterinarian, with the possibility of working with conservation programs. In her free time, she loves reading, drawing, spending time with friends, and exploring new places.

## Presentations



As a part of **Dr. Juan Carlos Rodriguez-Lecompte's** collaboration with Elanco, he was invited to give an intensive theoretical-practical course on comparative immunology in Puerto Varas, Chile, on November 14, 2023. The course was aimed at veterinarians and field technicians from salmon-producing companies. Dr. Rodriguez's course was titled, 'Applied fish immunology: What the body can tell you.' He covered important topics such as Fish Anatomy - Immune Structures and Organs, Ontogeny of the Fish Immune System, Cells and tissues of the immune system, Innate Immunity and Adaptive Immunity and Immune response to infectious agents (Bacteria, Virus, Parasites, Protozoan and fungi).



An exciting and fruitful day was lived in the second version of the "Salmon Immunology Seminar," organized by Pathovet Labs (Chile), which was held on November 15 at the Teatro del Lago de Frutillar (Los Lagos Region). A select group of international immunologists and immunopathologists shared several findings on salmonids. At the meeting, the presentation addressed the future of fish immunology, immunopathology, autoimmunity and melanosis, mucosal immunity and microbiota, and the role of vaccines and immunomodulation, among other contingent issues for the salmon industry in Chile and the world. Invited to the seminar, **Dr. Rodriguez-Lecompte** gave the talk,

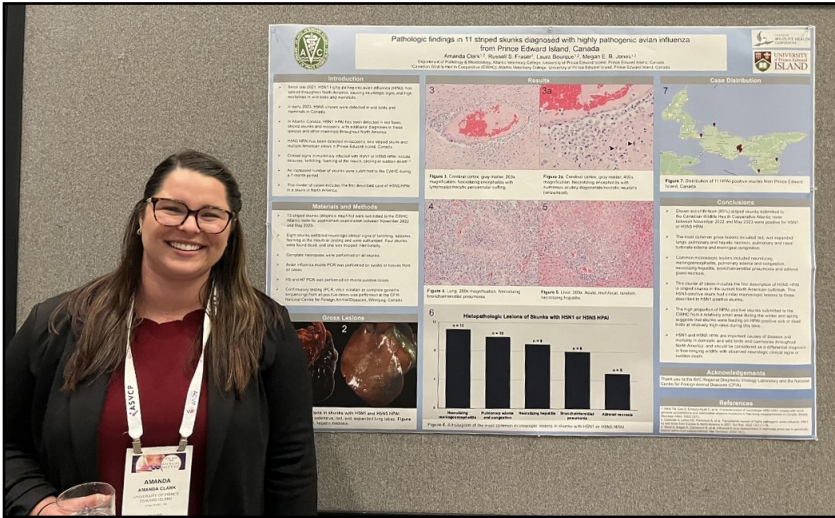
"The cellular immune response to a heterologous vaccine associated with multivalent antigens in Atlantic salmon." He presented and discussed the results of a trial conducted in Chile evaluating different vaccines and strategies to enhance the control of pathogens in salmon.



Picture: Drs. Marco Rozas-Serri (Pathovet, Chile), Uwe Fischer (Friedrich-Loeffler-Institut, Germany), **Juan Carlos Rodriguez-Lecompte (AVC)** and Espen Rimstad, (Norwegian University of Life Science, Norway).

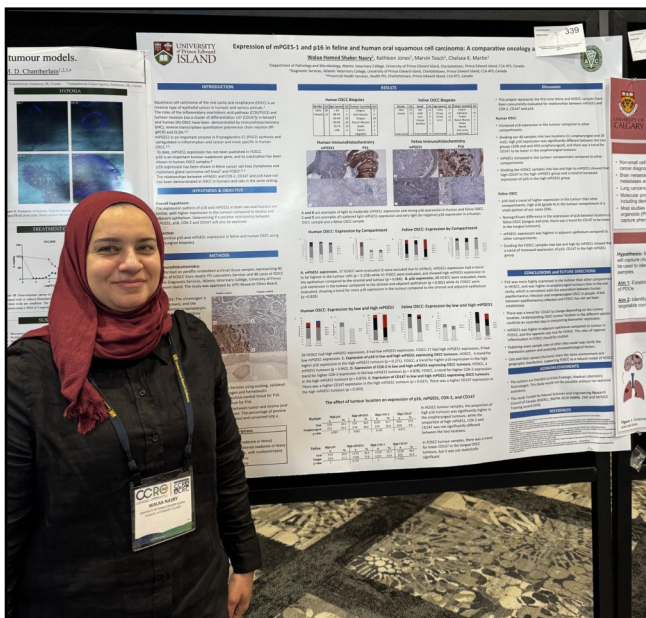
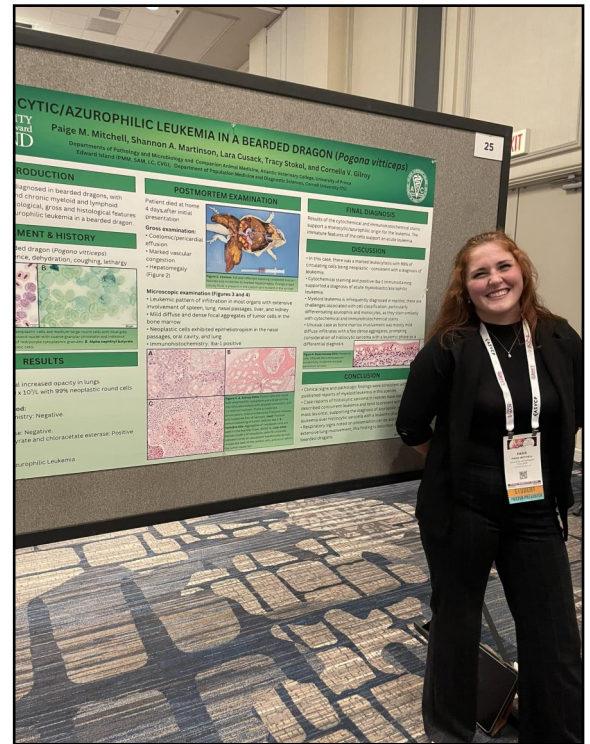


## Poster Presentations



**Dr. Amanda Clark**, a Master of Veterinary Science student and resident in wildlife anatomic pathology, presented a case series at the American College of Veterinary Pathologists/American Society for Veterinary Clinical Pathology (ACVP/ASVCP) annual meeting October 28-31, 2023, in Chicago, Illinois. Her poster was titled "Pathologic findings in 11 striped skunks diagnosed with highly pathogenic avian influenza from Prince Edward Island, Canada." She is supervised by Drs. Russell Fraser and Megan Jones.

Veterinary student **Paige Mitchell** from the AVC Class of 2025 presented a case report at the American College of Veterinary Pathologists/ American Society for Veterinary Clinical Pathology (ACVP/ASVCP) annual meeting October 28-31, 2023, in Chicago, Illinois. Her poster was titled, "Monocytic/ Azurophilic leukemia in a bearded dragon (*Pogona vitticeps*)". She was supervised by Drs. Shannon Martinson and Cora Gilroy. Paige received travel funding through the AVC Pathology Club.



**Dr. Walaa Nasry**, a PhD student under the supervision of Dr. Chelsea Martin, recently presented a research poster at the Canadian Cancer Research Conference, comparative oncology section, held November 12-14, 2023, in Halifax, Nova Scotia. The title of her abstract was "Expression of mPGES-1 and p16 in feline and human oral squamous cell carcinoma: A comparative oncology approach".

## Publications

Godoy M, Montes de Oca M, Pontigo Caro D, JP, **Kibenge M, Kibenge F**. Evolution and current status of Influenza A virus in Chile; A review. Pathogens 2023;12;1252. <https://doi.org/10.3390/pathogens12101252>

**Ayalew LE**, Popowich S, Chow-Lockerbie B, Gautam H, Subhasinghe I, Ashfaque Ahmed K, Tikoo SK, Ojkic D and Gomis S. Development of multivalent adjuvanted inactivated vaccine against variant arthrotropic avian reoviruses. Front Vet Sci 10:1209597. <https://www.frontiersin.org/articles/10.3389/fvets.2023.1209597/full>

Zhong L, **Carvalho LA**, Gao S, **Whyte SK, Purcell SL, Fast MD, Cai W**. Transcriptome analysis revealed immune responses in the kidney of Atlantic salmon (*Salmo salar*) co-infected with sea lice (*Lepeophtheirus salmonis*) and infectious salmon anemia virus. Fish and Shellfish Immunology 2023;143;109210. <https://doi.org/10.1016/j.fsi.2023.109210>

Zamparo S, Orioles M, **Brocca G**, Stilwell J, Galeotti M, Verin R (2023) Caudal peduncle mineralized lesion resembling calcinosis circumscripta in a wels catfish *Silurus glanis*. Diseases Aquatic Organisms 156:47-52. <https://doi.org/10.3354/dao03759>

Gautam H, **Ayalew L**, Shaik NA, Subhasinghe I, Popowich S, Chow-Lockerbie B, Dixon A, Ahmed KA, Tikoo S, Gomis S. 2023. Exploring the predictive power of jejunal microbiome composition in clinical and subclinical necrotic enteritis caused by *Clostridium perfringens*: Insights from a broiler chicken model. Journal of Translational Medicine (Accepted for publication. Manuscript#: JTRM-D-23-04859R1)



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Editor: Dr. Russell Fraser, Reviewer: Dr. Shelley Burton

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