

S.F. Snieszko Distinguished Service Award Winner



Dr. David Groman, fish pathologist in the Diagnostic Services department, has been honored with the prestigious S.F. Snieszko Distinguished Service Award. The highest award in the fish health section of the American Fisheries Society, the S.F. Snieszko Distinguished Service Award is presented to individuals to honour their outstanding accomplishments in the field of fish health. Dr. S.F. Snieszko was one of the most prominent figures in the establishment of the modern fish health sciences in the USA and internationally, and the first to be honoured with the award in 1979.

Photo: Dr. David Groman (right)

“Dr. Groman’s tireless efforts and commitment to advancing fish and aquatic animal health exemplify the very spirit of the S.F. Snieszko Distinguished Service Award,” said Dr. Dominique Griffon, dean of the AVC. “We are thrilled to celebrate his accomplishments and grateful for his enduring contributions.” Dr. Groman has been advancing the field of wild and aquaculture fish pathology for over 40 years, beginning his career at the Northeast Wildlife Disease Center at the University of Connecticut in 1976 and continuing onto the US National Fisheries Academy, the University of Idaho, and the University of Iceland. He has worked on fish health projects and diagnostic cases in Atlantic Canada and worldwide since he joined AVC in 1988. Since 1996, he has been section head of Aquatic Diagnostic Services at AVC. In this role, he has reviewed thousands of fish disease cases, including those from a large variety of wild finfish and shellfish.

Pathology & Microbiology Faculty Members Listed Among Top Two Percent of Scientists

Elsevier, in collaboration with Stanford university, has revealed it’s list of the worlds top scientists. The Standford/Elsevier Top two percent of the world’s most influential and top cited scientists list includes seventeen UPEI researchers of which four are in the Pathology & Microbiology department. **Drs. Fred Kibenge, Mark Fast, David Speare** and **Gary Conboy** were among those recognized for their career-long achievements and for making a positive impact on society through research and scholarly work. Congratulations to our colleagues for their achievements and commitment to research!

Grants



Dr. Cora Gilroy received the following grants;

The Chinook Project. Gilroy C, Hopson M, Landry S. Tier 1 Newfoundland Labrador Grant Funding, \$15,000.00. June 2024.

Qualitative and quantitative changes in observation by veterinary students before and after fine-arts observation training and effect of time in program and professional identity formation. Fernandez N, **Gilroy C**, Dickinson R. **Academy of Veterinary Educators Veterinary Educational Research Grants**, July 9, 2024, \$3,000.00.

Recommended for Promotion



Congratulations to **Dr. Cora Gilroy** who has been recommended by the University Review Committee to the UPEI President to be promoted to full Professor effective July 1, 2024.

Dr. Cora Gilroy completed a Post Graduate Diploma in Veterinary Medical Education from the Royal Veterinary College, London, United Kingdom in July 2024.



Congratulations to **Dr. Megan Jones** who has been recommended by the University Review Committee to the UPEI President to be promoted to Associate Professor effective July 1, 2024.

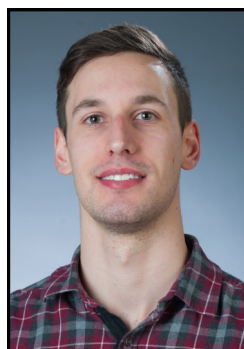


Congratulations to **Dr. Russel Fraser** who has been recommended by the University Review Committee to the UPEI President to be promoted to Associate Professor effective July 1, 2024.



Congratulations to **Dr. Melanie Buote** who has been recommended by the University Review Committee to the UPEI President to be promoted to Associate Professor effective July 1, 2024.

Thesis Defense



Congratulations to **Dylan Michaud** who successfully defended his PhD thesis Investigations of Development, Virulence, and Evolution of the Salmon Louce (*Lepeophtheirus salmonis*) on July 17, 2024. Dylan was supervised by **Dr. Mark Fast**; **Dr. Fred Kibenge** chaired the Supervisory Committee and **Dr. Chelsea Martin** chaired the Examination Committee.

Congratulations Dylan!

Pathology and Microbiology Welcomes New Post Doctorate Fellow



The Department of Pathology and Microbiology welcomes **Dr. Shawna Semple**, a post-doctoral fellow (PDF) under the supervision of **Dr. Mark Fast**. Shawna completed her B.Sc. and Ph.D. at the University of Waterloo under the supervision of Dr. Brian Dixon where she focused on sustainable antibacterial therapies in both freshwater and saltwater salmonid models (defended 2019). Shawna then went on to complete a Mitacs Accelerate PDF at Wilfrid Laurier University with Dr. Stephanie DeWitte-Orr where she developed, tested, and helped patent mammalian antiviral therapies pertinent to the COVID-19 pandemic (2019-2021). Shawna recently completed a NSERC PDF (2022-2024) at the University of Alberta in collaboration with Grieg Seafood Ltd. where she studied mouth rot infections in Atlantic salmon as well as exploring the impact of water temperature on antimicrobial defenses and vaccine efficacy. For her new position in Dr. Fast's laboratory, Shawna will be assessing how behavioural

thermoregulation can be used to improve vaccine efficiency and disease outcomes (BKD and ISA) in Atlantic salmon culture. In her free time, Shawna loves spin classes, going for long walks, reading, and taking dance classes with her wonderful (yet rhythmically challenged) fiancé.

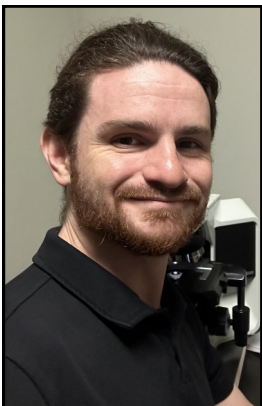
Pathology and Microbiology Welcomes New MSc Graduate Student



The Department of Pathology and Microbiology welcomes MSc grad student **Taylor Wheatley**. Under the supervision of **Dr. Mark Fast**, she will be studying behavioral thermoregulation in Atlantic salmon. Taylor completed her BSc in Marine biology at Memorial University earlier this year. In 2023, Taylor spent a semester working as a Marine Bioprocessing Research Assistant at the Marine Institute, funded by the NSERC Undergraduate Student Research Award. Her goal is to gain new laboratory skills and get as much experience as possible. Taylor is from Warren Grove, PE, and enjoys golfing, traveling, camping, and hiking with her dog, "Bella."

New ACVP Diplomates

The Pathology and Microbiology department is pleased to announce that two colleagues have passed the rigorous American College of Veterinary Pathologists (ACVP) Phase II Certifying Examination and are now ACVP Diplomates.



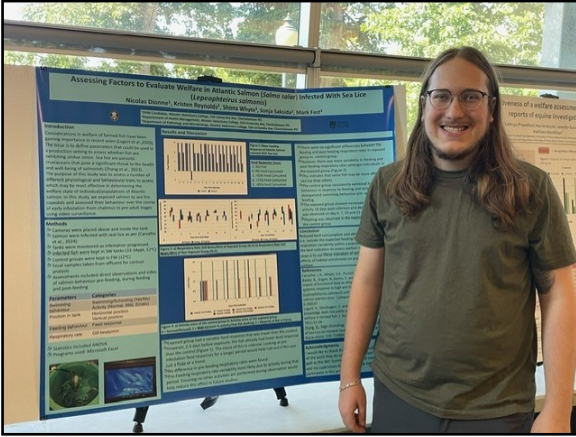
Dr. Brodie Reinhart, a past resident and graduate student, passed the clinical pathology examination and is now working at True North Veterinary Diagnostics in Vancouver. Dr. Reinhart was supervised by **Drs. Cornelia Gilroy** and **Dr. Noel Clancey** in his residency and graduate work.

Dr. Ginevra Brocca, a pathologist with the Atlantic Veterinary College Diagnostic Services, passed the anatomic pathology examination.

Congratulations to Drs. Reinhart and Brocca for this major accomplishment!

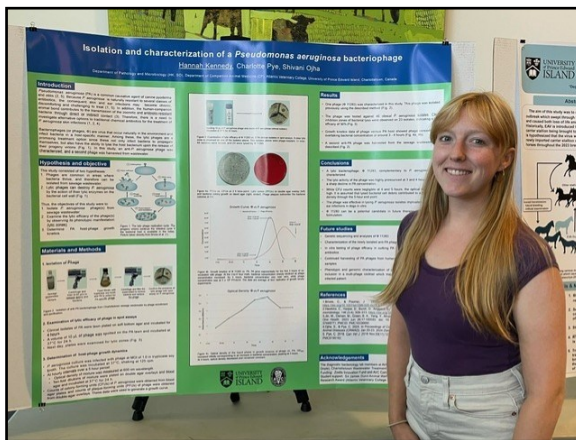


AVC Summer Research and Leadership Program Poster Presentation Winners



Nicolas Dionne was supervised by **Drs. Sonja Saksida and Mark Fast.**

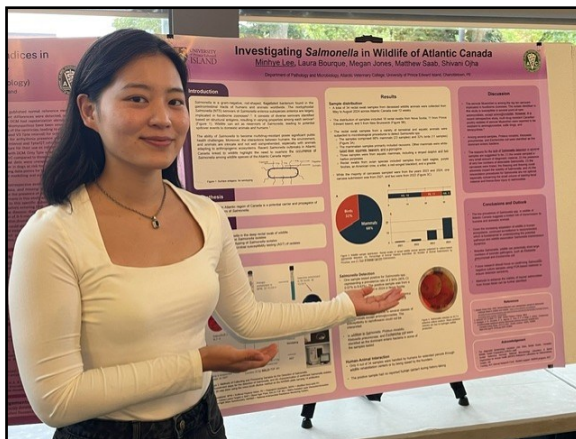
Nicolas' project was entitled "Assessing Factors to Evaluate Welfare in Atlantic Salmon (*Salmo salar*) Infested with Sea Lice (*Lepeophtheirus salmonis*)". His project involved observing Atlantic salmon behaviour to define parameters that could be used in a production setting to assess whether fish are exhibiting undue stress. The salmon were infected with sea lice and their behaviour was assessed using video surveillance over the course of early infestation from chalimus to pre-adult stages. We found that reduced feed consumption, abnormal erratic activity, and large respiration variability within a population appeared to be the best indicators to assess welfare in Atlantic salmon.



Hannah Kennedy was supervised by **Dr. Shivani Ojha.**

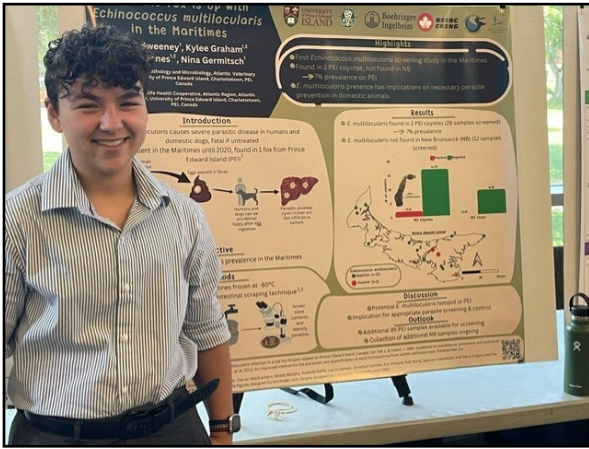
Hannah received 1st place for her poster. Hannah is a 3rd year DVM student and this summer she completed a project with Dr. Shivani Ojha titled "Isolation and characterization of a *Pseudomonas aeruginosa* bacteriophage." They tested a *Pseudomonas* bacteriophage (a virus that attacks bacteria) against clinical isolates of *P. aeruginosa* submitted to the Diagnostic Services laboratory in the VTH. The bacteriophage lysed (killed) 50% of the tested isolates. They also demonstrated that the phage inhibited bacterial growth 3-4 hours after introduction to the bacterial culture. Finally, they isolated a second *Pseudomonas* bacteriophage from Charlottetown wastewater.

By participating in veterinary research at AVC with SJDAWC funding, Hannah contributed to early drug development of alternative therapeutics for debilitating skin infection. She felt that her project was meaningful to the veterinary community at large and she had learned valuable bacteriology laboratory techniques not covered in the course



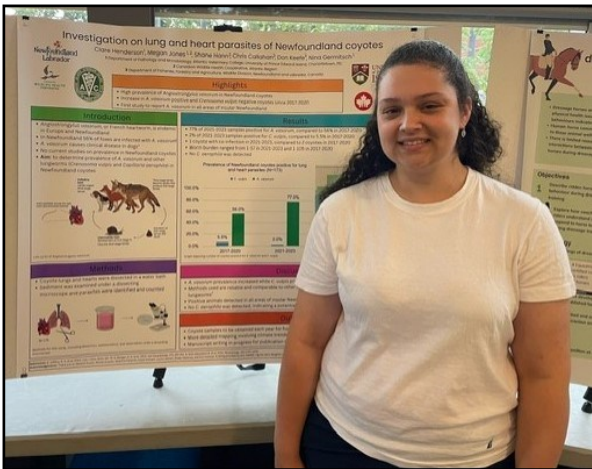
Minhye Lee was supervised by **Dr. Shivani Ojha and Megan Jones**

Minhye, is currently in her second year of the DVM program. The summer VetSRA project she worked on, titled "Investigation of *Salmonella* in Wildlife of Atlantic Canada," aimed to survey the status of *Salmonella* in the region and assess the potential of wildlife acting as viable carriers in the area. Deep rectal swabs were collected from wildlife carcasses submitted to the AVC Post-Mortem Services, and they underwent standard microbiological procedures to resuscitate and select for any *Salmonella* present. Out of 34 samples, one sample from a bald eagle submitted from Nova Scotia tested positive for *Salmonella*, and further serotyping revealed it to be serovar Muenchen, which is among the top ten serovars causing human illnesses. The serovar was pan-susceptible to antimicrobials, suggesting limited risk in the area and a low likelihood of transmission by wildlife. The project provided Minhye with hands-on experience in veterinary research, microbiology, and scientific writing, allowing her to explore various areas of veterinary medicine and helping her navigate her career path.



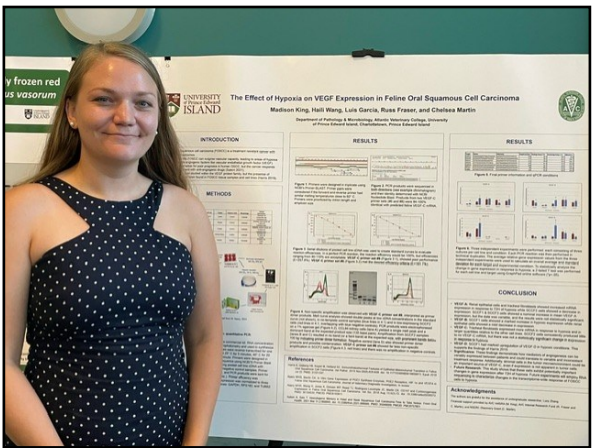
Brady Sweeney was supervised by **Dr. Nina Germitsch**.

Brady's poster was titled "What the fox is up with *Echinococcus multilocularis* in the Maritimes". I found an ~8% prevalence of *Echinococcus multilocularis* on PEI! I was also selected as a BI veterinary scholar so I had the opportunity to present my poster in Minnesota at the Veterinary Scholars Symposium. As a second year DVM student, it was a great opportunity to learn more about parasitology and veterinary research in general!



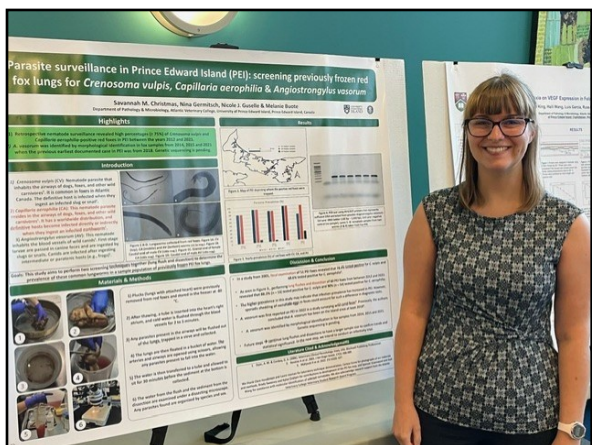
Clare Henderson was supervised by **Dr. Nina Germitsch**.

Clare continued her research from last summer on lung and heart parasites of Newfoundland coyotes. She dissected lungs and hearts of 174 coyotes and identified parasites under a dissecting microscope. Her research showed that 77% of Newfoundland coyotes are infected with *Angiostrongylus vasorum*, while 2% are infected with *Crenosoma vulpis*. Last summer's results showed that 56% of coyotes were infected with *A. vasorum*, and 5.5% were infected with *C. vulpis*. This shows that the prevalence of *A. vasorum* is seemingly increasing, while the prevalence of *C. vulpis* is seemingly decreasing. Clare is a third year DVM student who plans to pursue her interests in research and pathology after graduating.



Madison King was supervised by **Dr. Chelsea Martin**.

She is a second year vet student at AVC. Maddison studied the effect of hypoxia on VEGF expression in feline oral squamous cell carcinoma (FOSCC) with **Drs. Martin and Fraser**. She designed reverse transcription PCR primers to characterize VEGF-A VEGF-B, VEGF-C, and VEGF-D mRNA expression in FOSCC tumor cells and cancer associated fibroblasts. Her most interesting finding was that tracheal fibroblasts produced significantly more VEGF-C in both hypoxia and normoxia compared to other cell lines. At the end of October, she will be presenting her findings at the Canadian Emerging Veterinary Scholars Symposium in Calgary, Alberta.



Savannah Christmas was supervised by **Dr. Melanie Buote**.

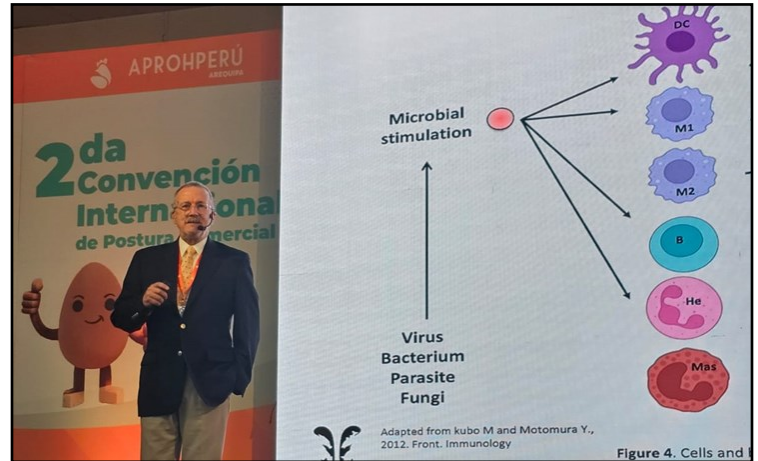
Her project was entitled Parasite surveillance in Prince Edward Island (PEI): screening previously frozen red fox lungs for *Crenosoma vulpis*, *Capillaria aerophila* & *Angiostrongylus vasorum*. This study aimed to perform two screening techniques together (lung flush and dissection) to retrospectively determine the prevalence of *Crenosoma vulpis*, *Capillaria aerophila* & *Angiostrongylus vasorum* in a sample population of previously frozen PEI fox lungs. Savannah found that of the 60 red fox lungs, 88.3% (n = 53) were positive for *C. vulpis*. Savannah is in her 3rd year of the DVM program at AVC.

Invited Key Note Speaker



Dr. Juan Carlos Rodríguez-Lecompte was an invited key note speaker at the VECAO (Association of Veterinarians Specialized in Poultry Sciences of the West) conference. The event took place in Mexico from August 14-16, 2024. In this critical forum, participants from Mexico discussed responsible production for a healthy economy, considering the current situation of avian influenza and infectious bronchitis and how to control them effectively. Dr. Rodríguez's presentation was about the Respiratory Tract of Birds: Tropism and Immune Response of Avian Influenza Viruses and Infectious Bronchitis.

As part of the Second National Congress of the Peruvian Association of Commercial Egg Producers held in Arequipa, Peru, September 18—20, 2024, **Dr. Rodríguez-Lecompte** presented a lecture on the immunosuppression of birds that predisposes animals to respiratory diseases during the production period and their economic impact. The event was an important forum where producers, poultry specialists, industry and government control entities met. Influenza Viruses and Infectious Bronchitis.



Invited Speaker



Dr. Megan Jones was invited by the New Brunswick Veterinary Medical Association to give a 90 minute presentation at their Annual General Meeting on Saturday, September 21, 2024. Her presentation was entitled Wildlife Health in the Maritimes; Surveillance and Important Diseases.

A Splash of Color



Thank you to **Dr. Shelley Burton** who brought in these lovely flowers from her beautiful garden. It was a very thoughtful gesture and helped to bring color and cheer into the department.

Dean of AVC Dr. Dominique Griffon's Update for the College

https://www.peicanada.com/island_farmer/griffon-reflects-on-first-eight-months-outlines-challenges-strategic-moves/article_d7da49d2-8b0f-11ef-b7a3-57ea5177286d.html

Conferences



BioAqua 2024 conference, May 26-30, 2024 in Varadero, Cuba. **Dr. Mark Fast's** oral presentation was "*Applying comparative genomic technologies to combat sea lice infection in salmon*". **Dr. Manuel Soto-Davila's** oral presentation was "*mRNA vaccine: a potential therapeutic strategy against ISA_v in Atlantic salmon (*Salmo salar*)*".

Dr. Manuel Soto-Davila attended the Aquaculture Canada Conference and Tradeshow, June 16-19, 2024, in Charlottetown, PE. The oral presentation title was "*mRNA vaccine to prevent infectious salmon anemia in Atlantic salmon*".



Dr. Manuel Soto-Davila attended the "*Introduction to R 2024 Workshop*" - Bioinformatics Canada, on June 11-12, 2024, in Toronto, Ontario.

Dr. Manuel Soto-Davila was the speaker for the first AVC Research Seminar Series - Fall 2024 (September 18th), sponsored by Purina Pro Plan Veterinary Diets. Dr. Soto-Davila's presentation was titled "*mRNA vaccines: a therapeutic strategy against Atlantic salmon diseases*".



Presentation at Budapest Congress



Dr. Shelley Burton was an invited speaker at the European Society for Veterinary Clinical Pathology / European College of Veterinary Clinical Pathology (ESVCP/ECVCP) Congress. It was held August 28-31, 2024 in Budapest, Hungary. Dr. Burton spoke on erythrocyte structure and function as well as providing a workshop on writing high quality multiple choice questions.

View of Buda from Pest across the Danube river.

Presentation in Dublin, Ireland



Dr. Cora Gilroy attended the International Symposium of the Veterinary Schools Council in Dublin, Ireland, held from July 3-5, 2024. She co-presented a workshop with Dr. Nicole Fernandez from the Western College of Veterinary Medicine entitled "What do you see? It depends on who you are: Observation and professional identity formation" (Fernandez N, Gilroy C, Dickinson R).

Publications

Kumar Mishra V, **Rodriguez-Lecompte JC**, Ahmed M. Nanoparticles mediated folic acid enrichment. Food Chemistry 2024: 456; 139964. <https://doi.org/10.1016/j.foodchem.2024.139964>

Quijano Cardé EM, Anenson KM, Yun S, Heckman TI, Jungers HT, Henderson EE, **Purcell SL, Fast MD, Soto, E.** Effects of Acipenserid herpesvirus 2 on the outcome of a *Streptococcus iniae* co-infection in white sturgeon (*Acipenser transmontanus*). Frontiers in Aquaculture 2024;3;1306518 <https://doi.org/10.3389/faqc.2024.1306518>

Kibenge FSB, Godoy MG. Aquaculture Virology Second Edition. 721 pages. Published July 17, 2024 By Academic Press; Paperback ISBN: 9780323911696. Book link: <https://www.sciencedirect.com/book/9780323911696/aquaculture-virology>

Subhasinghe I, Ahmed KA, **Ayalew LE**, Gautam H, Popowich S, Matsuyama-Kato A, Chow-Lockerbie B, Tikoo SK, Griebel P, Gomis S. Induction of trained immunity in broiler chickens following delivery of oligodeoxynucleotide containing CpG motifs to protect against *Escherichia coli* septicemia. Scientific Reports 2024;14:18882 <https://doi.org/10.1038/s41598-024-69781-x>

Kibenge F, Kibenge M, Montes de Oca M, Godoy M. Parvoviruses of Aquatic Animals Pathogens 2024;13; 625 <https://doi.org/10.3390/pathogens> 13080625.

Zamparo S, Orioles M, **Brocca G**, Marroni F, Castellano C, Radocic S, Mandrioli L, Galeotti M, Verin R. Novel insights on microbiome dynamics during a gill disease outbreak in farmed rainbow trout (*Oncorhynchus mykiss*) Scientific Reports 2024:14;17791 <https://doi.org/10.1038/s41598-024-68287-w>

Subhasinghe I, Matsuyama-Kato A, Ahmed KA, **Ayalew LE**, Gautam H, Popowich S, Chow-Lockerbie B, Tikoo SK, Griebel P, Gomis S. Oligodeoxynucleotides containing CpG motifs upregulate bactericidal activities of heterophils and enhance immunoprotection of neonatal broiler chickens against *Salmonella* Typhimurium septicemia. Poultry Science 2024:103;104078 <https://doi.org/10.1016/j.psj.2024.104078>

VanLeeuwen CA, VanLeeuwen JA, Taylor J, **Gilroy CV**. Investigating the Long-Term Impacts of "Place-Rich" Community-Based Learning Experiences on University Students. Journal of Higher Education Outreach and Engagement, Volume 28, Number 2, p.81, (2024)

Xue X, Eslamloo K, Caballero-Solares A, Katan T, Umasutham N, Taylor RG, **Fast MD**, Andreassen R, Rise ML. Characterization of the impact of dietary immunostimulant CpG on the expression mRNA biomarkers involved in the immune responses in Atlantic salmon (*Salmo salar*) Fish and Shellfish Immunology 2024: 153;109840 <https://doi.org/10.1016/j.fsi.2024.109840>

Reinhart B, Gilroy C, Clancey N, O'Neil E, Bourque A. Diagnosis of renal lymphoma by Wright-Giemsa-stained cytocentrifuged urine evaluation in a cat. *Can Vet J*. 2024;65(6):544-546.

Gautam H, Ahmed KA, Subhasinghe I, Popowich S, Matsuyama-Kato A, Chow-Lockerbie B, **Ayalew LE**, Tikoo S, Griebel P, Gomis S. Protection of Broiler Chickens Against Necrotic Enteritis by Intrapulmonary Delivery of a Live *Clostridium perfringens* Vaccine Exploiting the Gut-Lung-Axis Concept. Avian Diseases 2024;68:240-253. [https://bioone.org/journals/Avian Diseases](https://bioone.org/journals/Avian_Diseases) on Oct 2024

Pathology & Microbiology Past Department Chair Passes

Dr. Joseph Raymond "Ray" Dvm, Phd LONG — Truro

Published: October 04, 2024



Long, Dr. Joseph Raymond "Ray" DVM, PhD It is with sadness but with gratitude for a life well lived that we share the news of the passing of Ray Long, 90, at Cedarstone Enhanced Care on Sept. 30. Born on the family farm in Goshen, NB, to Irvine and Mary (O'Connor) Long, Ray moved with his parents to Sussex at the end of World War II. Following high school he worked for Canadian Tire in Yarmouth for two years to earn money for further education. He graduated from the Nova Scotia Agricultural College with a Diploma in Agriculture in 1957 and the Ontario Veterinary College with his DVM in 1962. For the next two years he practiced with Dr. Maurice Clark in Kensington, PEI. He received a MS in animal nutrition from Cornell University in 1966 before returning to OVC where he taught while completing a PhD in veterinary microbiology which he received from the University of Guelph in 1974. The following year he took a position with the Provincial Diagnostic Laboratory in Truro, becoming Provincial Veterinarian in 1981. When the Atlantic Veterinary College opened in Charlottetown in 1986, he joined the faculty and chaired the Department of Pathology and Microbiology from 1988 to 1994. In 1996 he retired to Truro where he enjoyed golf, woodworking, and travel including many winters with Jeanne in North Myrtle Beach. Ray is survived by Jeanne (nee Ogden), his wife of 61 years; daughter, Heather (Stephen Murphy); son, Graham (Marie); grandchildren, Katherine and Joseph; brother, Arthur (Susan) and sisters-in-law, Sophia and Marion. In addition to his parents, he was predeceased by his brothers, Bill, Murray and Bernard (in infancy). Ray was a man of deep and abiding faith and in earlier years was active in Immaculate Conception Parish as a member of parish council and with the St. Vincent de Paul. Ever the professor, it was Ray's concern for student well-being that led him to donate his body to Dalhousie Medical School. There will be no funeral at this time. If desired, donations may be made to the Dr. Ray Long Award fund at the Atlantic Veterinary College at the University of Prince Edward Island, 550 University Ave., Charlottetown, PE C1A 4P3 or online at www.upei.ca/donate.

For comments or suggestions for our newsletter,
please contact: Ingrid MacLeod (imacleod@upei.ca) (902) 566-0541.
Editor/ Reviewer Dr. Fred Kibenge and Dr. Shivani Ohja