

Funding Success



Dr Sonja Saksida, Department of Health Management, and **Dr. Mark Fast**, Department of Pathology and Microbiology, received a grant from the 2023 Sir James Dunn Animal Welfare Centre competition. Their project, “Environmental enrichment for stress reduction in land-based salmonid aquaculture”, was awarded \$99,900 over 3 years. **Dr. Mark Fast** also received a 2023 Atlantic Salmon Conservation Foundation grant. This project entitled, “Assessment of wild Atlantic salmon host variables associated with sea lice susceptibility in different environments with varying intensity of salmon aquaculture,” was awarded \$81,798 over 2 years.



Dr. Nina Germitsch, principle investigator, **Dr. Megan Jones**, co-investigator, and **Kylee Graham**, graduate student, received \$10,000 from the Companion Animal Trust Fund. Their project was entitled, “Seroepidemiology of *Sarcoptes scabiei* in dogs and foxes of Prince Edward Island”.



Dr. Russell Fraser is a co-applicant on a successful Canadian Institutes of Health Research grant investigating mpox virus susceptibility, transmission, host immune responses, and viral evolution in Canadian livestock. The grant is valued at \$498,000 over the course of two years.

Congratulations to these successful researchers!

On the Way to ACVP Certification



Congratulations to **Dr. Ginevra Brocca** (Aquatic Diagnostic Services – AVC) who passed Phase 1 of the Certifying Examination of the American College of Veterinary Pathologists (ACVP). The next step for Dr. Brocca will be to pass Phase 2 to become an ACVP Diplomate in Anatomic Pathology.

Dr. Kibenge Receives Extraordinary Service Award for Dedication



Dr. Fred Kibenge was awarded an Extraordinary Service Award for his dedication to the Editorial Board of Microbiology Spectrum and to the American Society for Microbiology (ASM) journal program. He was recognized by the journal staff and senior editorial team for his efforts in going above and beyond in his service to Spectrum. The journal has had a banner year and Dr. Kibenge is credited in contributing to the overall success of the journals program at the ASM. Microbiology Spectrum is a highly respected peer-reviewed research journal published by the American Society for Microbiology based in Washington, DC. Spectrum was established in 2021 and publishes research from all domains of basic, applied, and clinical microbial sciences. Spectrum publishes research studies that are of high technical quality and are useful to the community. Spectrum is a broad-based journal that is indispensable to those whose basic work has implications of near-term practical benefit.

Congratulations Dr. Kibenge!

Interim Associate Dean of Graduate Studies and Research



Dr. Chelsea Martin has agreed to serve as the Interim Associate Dean of Graduate Studies and Research. Dr. Larry Hammell is leaving the position and a search process to replace him is in progress.

Assisting UPEI Valedictorians



As the 2023 UPEI convocation approached, **Dr. Shelley Burton** volunteered to aid the 4 valedictorians in the preparation of their valedictory addresses. She has taken on this role yearly since 2004 and as past chair of the UPEI convocation committee, she helped write the guidance documents for these speeches. Dr. Burton initially meets with each valedictorian, then provides suggested edits on multiple draft speeches until they are finalized. She enjoys the interaction with these students who are often from outside of the Atlantic Veterinary College and frequently from other provinces or countries.

Recommended for Promotion



Congratulations to **Dr. Noel Clancey** who has been recommended by the University Review Committee to the UPEI Interim President to be promoted to the rank of Associate Professor.

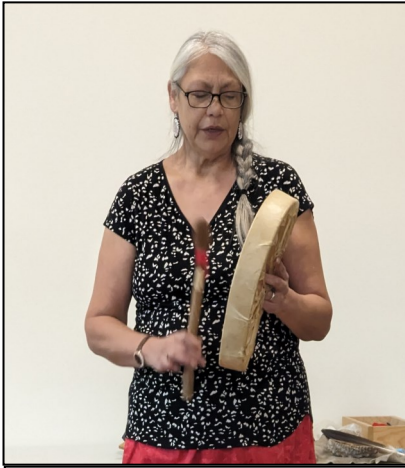
Canadian Wildlife Health Cooperative Workshop

Dr. Laura Bourque, wildlife pathologist with the Canadian Wildlife Health Cooperative (CWHC), developed and delivered an in-depth 3 day marine mammal necropsy workshop for 17 personnel from the Marine Animal Response Society (MARS). The workshop was in Halifax, Nova Scotia, from February 23-25, 2023. The purpose was to provide hands-on training for appropriate and safe field and laboratory sampling of marine mammal mortalities in the region. This training helps build necropsy capacity and extends the ability to monitor marine mammal health in the Maritime provinces.



Bat Acoustics Workshop for Canadian Maritime Indigenous Organizations

The Canadian Wildlife Health Cooperative (CWHC), Atlantic Region in the AVC, partnered with the Native Council of Prince Edward Island to host a bat acoustic monitoring workshop specifically designed for Indigenous groups from the Canadian Maritime provinces. STEAM PEI provided an excellent space to accommodate the workshop, located in the Epekwitk Assembly of Councils Building in Charlottetown, Prince Edward Island.



Elder Sarah Stewart-Jackson
performing a traditional song.

Photo by: Scott McBurney

The workshop was held March 22-23, 2023, and was attended by seven participants from four different Indigenous organizations across all three Maritime provinces. The workshop began with an impactful Indigenous opening ceremony led by Elders Sarah Stewart-Jackson and Stephenson Joe. **Enooyaq Sudlovenick**, a graduate of UPEI and a PhD student at the University of Manitoba, followed with a presentation on Indigenous perspectives in western science.

The remainder of the workshop focused on bat acoustic monitoring while maintaining the Indigenous focus and was led by **Jordi Segers** (CWHC National Office) and **Darrian Washinger** (CWHC Atlantic), with additional support provided by **Dr. Scott McBurney** (CWHC Atlantic, retired). The presenters provided information on the ecology and biology of Atlantic Canada's bat species, the North American Bat Monitoring Program's standardized protocol, and analyses of acoustic data.

Although the information was focused primarily on western science, there was specific intent to consider and adapt it in the context of traditional knowledge and the unique research goals of the organizations represented at the workshop. It was an excellent workshop of engaged people brought together by a passion for wildlife conservation and a love of bats.

Submitted by Darrian Washinger, CWHC Atlantic



Left to right: Darrian Washinger, Jordi Segers, Clara-Jane Wood, James Fraser, Sam Rogers, Michelle Knockwood, Elder Sarah Stewart-Jackson, Joady Marshall, and Jerry Lee Dennis. Not photographed: Devon Polchies.

Photo by: Scott McBurney

Conference and Workshop Presentations

April Presentations

The 46th Annual Eastern Fish Health Workshop was held in Atlantic Beach, North Carolina, from March 27-31. Students **Dylan Michaud** and **Muskan Zaidi** presented thesis works (referenced below), and **Dr. Mark Fast** who presented on the HOPLITE research group studies on complex gill disease (referenced below):

Dylan Michaud's presentation finished 2nd overall in the student presentation awards. **Dr. Shona Whyte** gave an invited lecture on fish welfare and the Canadian Council on Animal Care (CCAC) guidelines at American Fisheries Society-Fish Health Section forum for continuing education on March 31.

Michaud D, Weeks B, Trudel M, Fast MD. Assessing the evolution of virulence in the salmon louse (*Lepeophtheirus salmonis*) in the Bay of Fundy. 46th Annual Eastern Fish Health Workshop, March 27-31, 2023. Atlantic Beach, North Carolina, USA. (Oral presentation by Michaud)

Zaidi M, Goldberg S, Purcell SL, Whyte SK, Navaneethaiyer U, Fast MD. Impact of diet on wound healing in Atlantic salmon (*Salmo salar*). 46th Annual Eastern Fish Health Workshop, March 27-31, 2023. Atlantic Beach, North Carolina, USA. (Oral presentation by Zaidi)

Veltman C, Eslamloo K, Whyte SK, Purcell SL, Groman D, Fast MD. Identification of gene expression patterns in complex gill disease: Laboratory models examining Atlantic salmon (*Salmo salar*) farm management practices and environmental insults such as jellyfish, *Chaetoceros* and *Tenacibaculum*. 46th Annual Eastern Fish Health Workshop, March 27-31, 2023. Atlantic Beach, North Carolina, USA. (Oral presentation by Fast)

May Presentations

The HOPLITE research group held a scientific committee meeting for the Complex Gill Disease Initiative in Victoria, BC, in May, as part of the Aquaculture Canada Conference. It engaged local stakeholders within the salmon farming industry and updated on progress to date. Post-doctoral fellows **Drs. Khalil Eslamloo** and **Reza Ghanei-Motlagh**, gave presentations as did MSc student **Crystal Veltman**. Other presentations with the HOPLITE research group were given by collaborators from Center for Aquaculture Technologies Canada, the University of British Columbia and Memorial University (referenced below).

Allen M, Danzmann R, Rise ML, Gamperl AK, Garber A, Fast MD. Genomic architecture of sea lice resistance in Atlantic salmon at different thermal profiles. Aquaculture Association of Canada Meeting, May 7-10, 2023. Victoria, BC, Canada. (Oral presentation by Allen)

Eslamloo K, Kumar S, Caballero-Solares A, Hall JH, Purcell SL, Whyte SK, Lo J, Tibbetts SM, Wang Y, Fast MD, Rise ML. Aquaculture Association of Canada Meeting, May 7-10, 2023. Victoria, BC, Canada. (Poster presentation by Eslamloo)

Ghanei-Motlagh R and Fast MD. Isolation and characterization of *Bacillus* probiotics with anti-quorum sensing and anti-pathogenic activities: A promising strategy to disarm gram-negative bacterial fish pathogens. Aquaculture Association of Canada Meeting, May 7-10, 2023. Victoria, BC, Canada. (Oral presentation by Reza Ghanei-Motlagh)

Caballero-Solares A, **Purcell SL**, Frasca Jr S, Rise ML, **Fast MD**. Transcriptome response of rainbow trout gill epithelial cells to *Aurelia aurita* venom. Aquaculture Association of Canada Meeting, May 7-10, 2023. Victoria, BC, Canada. (Oral presentation by Caballero-Solares)

Jia B, Saksida S, Kennedy T, Wilson M, McKenzie P, Whittaker P, **Whyte SK**, Balder R, **Fast MD**. Risk factors of complex gill disease in farmed Atlantic salmon in British Columbia, Canada Aquaculture Association of Canada Meeting, May 7-10, 2023. Victoria, BC, Canada. (Oral presentation by Jia)

Veltman C, Eslamloo K, Whyte SK, Purcell SL, Groman D, Fast MD. Identification of gene expression patterns in complex gill disease: Laboratory models examining Atlantic salmon (*Salmo salar*) farm management practices (hydrogen peroxide and environmental insults such as jellyfish). Aquaculture Association of Canada Meeting, May 7-10, 2023. Victoria, BC, Canada. (Oral presentation by Veltman)

Publications

Decelles N, Martinson S. Mosher M, Rose S. Submandibular malignant schwannoma in a pet rat (*Rattus norvegicus domestica*) with facial paralysis, dysphagia, and aspiration pneumonia. Journal of Exotic Pet Medicine Elsevier Inc 2023:557-5063. <https://doi.org/10.1053/j.jepm.2023.01.001>.

Riveroll AL, Skyba-Lewin S, Lynn DK, Mubyeyi G, Abd-El-Aziz A, **Kibenge FSB, Kibenge MJT**, Cohen AM, Gonsalez BE, McDuffee L, Montelpare WJ. Selection and validation of reference genes for gene expression studies in an equine adipose-derived mesenchymal stem cell differentiation model by proteome analysis and reverse-transcriptase quantitative real-time PCR. Genes 2023;14:673. <https://doi.org/10.3390/genes14030673> www.mdpi.com/journal/genes

Perry LR, Butler AJ, John E, **Martinson S, Buote M, Foote K, Burton S**, Stoughton B. Lymphomatosis as a cause of abdominal pain and distension in two adult horses. Elsevier Inc. Journal of Equine Veterinary Science; 2022: 0737-0806 <https://doi.org/10.1016/j.jevs.2022.104193>.

Ojasanya RA, Gardner IA, **Groman DB**, Saksida S, Saab ME, Thakur KK 2022. Development and validation of main spectral profile for rapid identification of *Yersinia ruckeri* isolated from Atlantic salmon using matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. Frontiers in Veterinary Science 9:1031373. doi:10.3389/vets.2022:1031373

Ojasanya RA, Gardner IA, **Groman DB**, Saksida S, Saab ME, Thakur KK 2022. Antimicrobial susceptibility profiles of bacteria commonly isolated from farmed salmonids in Atlantic Canada (2000-2021). Veterinary Science 2022; 9(4):159.

Romero JF, Gardner IA, Hammell L, **Groman DB**, Whelan D, O'Brien N, Hawkins LJ, Burnley H, Thakur KK, 2022. Descriptive epidemiology of variants of infectious salmon anaemia virus in four Atlantic salmon farms in Newfoundland and Labrador, Canada. 2022. Journal of Fish Diseases 45,919–930. <https://doi.org/10.1111/jfd.13617>

Chérif N, Rym ElJ, Amdouni F, Zreilli S, Djabou H, Khemiri S, Tliba I, Bouhaouala-Zahar B, Maatoug K, Zaafran S, **Groman DB**. Phylogeography of betanodavirus genotypes circulating in Tunisian aquaculture sites, 2012–2019. 2021. Disease of Aquatic Organisms Vol.146:53-63

Crossman AH, Ignatz EH, Hall JR, Kumar S, **Fast MD**, **Eslamloo K**, Rise ML. Basel and Immune-responsive transcript expression of two Atlantic salmon *interferon regulatory factor 2 (irf2)* paralogues. Elsevier Ltd. Developmental and Comparative Immunology 2023;143: 104689. <https://doi.org/10.1016/j.dci.2023.104689>

Saksida SM, **Fast MD**, Garver KA, Johnson SC. Movement of infectious agents between wild and farmed fish. Climate change on diseases and disorders of finfish in cage culture. 3rd edition 2023: DOI: 10.1079/9781800621640.0009

Kibenge FSB. Continuous surveillance and viral discovery in animals and humans are a core component of a one-health approach to address recent viral reverse zoonoses. JAVMA Currents in One Health AVMA doi.org/10.2460/javma.23.03.0148.

Alkie NT, Cox S, Embury-Hyatt C, Stevens B, Pople N, Pybus MJ, Xu W, Hisanaga T, Suderman M, Koziuk J, Kruczkiewicz P, Nguyen HH, Fisher M, Lung O, Erdelyan CNG, Hochman O, Ojkic D, **Yason C**, Araya MB, **Bourque L**, Bollinger TK, Soos C, Giacinti J, Provencher J, Ogilvie S, **Clark A**, MacPhee R, Parsons GJ, Eaglesome H, Gilbert S, Saboraki K, Davis R, Jerao A, Ginn M, **Jones MEB**, Berhane Y. Characterization of neurotropic HPAI H5N1 viruses with novel genome constellations and mammalian adaptive mutations in free living mesocarnivores in Canada. Emerging Microbes & Infections 2023;12: 2186608 <https://doi.org/10.1080/22221751.2023.21186608>.

Kibenge FSB. A One Health approach to mitigate the impact of influenza A virus (IAV) reverse zoonosis is by vaccinating humans and susceptible farmed and pet animals. American Journal of Veterinary Research 2023; Apr 21:1-9. doi.org/10.22460/ajvr.23.03.0053.

Furrow E, Tate N, Minor K, **Martinson S**, Larrabee S, Anttila M, Sleeper M, Henthorn P. An ABCC9 Missense Variant Is associated with sudden cardiac death and dilated Cardiomyopathy in juvenile dogs. Genes 2023;14: 988. <https://doi.org/10.3390/genes14050988>.

McDermott KA, Greenwood SJ, **Conboy GA**, Franzen-Klein DM, Wünschmann. Massive hepatic trematodosis in 5 juvenile bald eagles. Journal of Veterinary Diagnostic Investigation. 2023:1-4; DOI:10.1177/10406387231176227 jvdi.sagepub.com. <https://journals.sagepub.com/doi/full/10.1177/10406387231176227>

For comments or suggestions for our newsletter, please contact:
Dr. Russell Fraser (rufraser@upei.ca) or
Ingrid MacLeod (imacleod@upei.ca) (902) 566-0541.
Editor: Dr. Russell Fraser, Reviewer: Dr. Shelley Burton

Please don't print this unless you really need to!

