

## Two AVC faculty members appointed to Inaugural Associate Editor Board

Drs. **Fred Kibenge** and Jason Stull have been appointed to the Inaugural Associate Editor Board for the American Veterinary Medicine Association's two peer-reviewed, scientific journals.

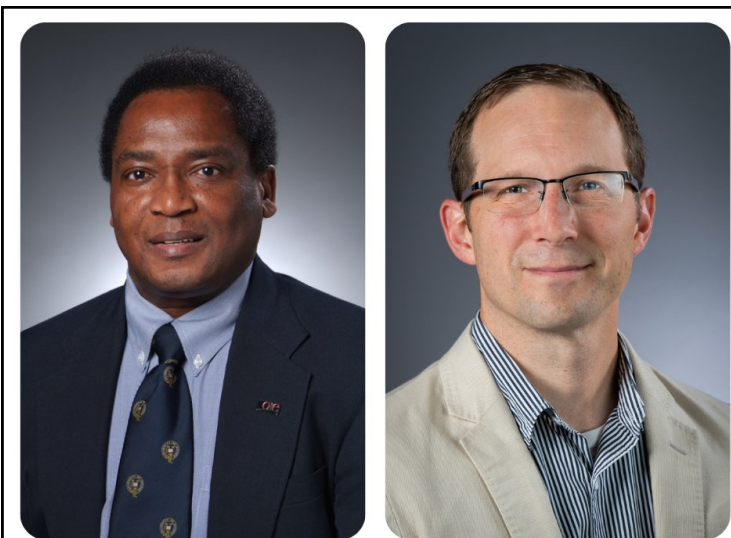
Charlottetown, PEI (January 20, 2022)—The Atlantic Veterinary College (AVC) at the University of Prince Edward Island is pleased to congratulate Drs. Fred Kibenge and Jason Stull on being appointed to the Inaugural Associate Editor Board (Associate Editor Board) for the Journal of the American Veterinary Medical Association (JAVMA) and the American Journal of Veterinary Research (AJVR).

**Dr. Kibenge** is a professor of virology at the AVC and served as chair of the Department of Pathology and Microbiology from 12 years (June 1, 2009 to May 31, 2021). Kibenge has been working with animal viruses for more than 35 years. His research is focused on understanding the mechanisms of virus virulence to contribute to knowledge on viral pathogenesis. He also focuses on ways to improve on methods of virus detection and control. Kibenge has over 180 peer-reviewed journal articles, dissertations, books, and reports.

Dr. Stull is an assistant professor in infectious disease epidemiology in the Department of Health Management at the AVC. He is also lead on the AVC's Infection Prevention and Control Team where he has been instrumental in the AVC's COVID-19 response. For 20 years, Stull has taught and researched veterinary infectious diseases, with the goal of protecting people and animals from infections. He has served on several veterinary college infection control committees and chaired a task force to develop private practice infection control guidelines.

Although the journals have had associate editors before, this is the first time they have had an Associate Editor Board. The Board will be responsible for reviewing submitted manuscripts, overseeing peer review, advising on journal policy and scope, attracting new authors and submissions, and promoting the journals to their peers. They would also assist the Editor-in-Chief as required. The JAVMA and AJVR are peer-reviewed, scientific journals that are published by the American Veterinary Medical Association. The JAVMA has been a leading voice in the veterinary profession for over 100 years and brings important clinical

content and policy information affecting the Veterinary profession to the nearly 100,000 AVMA members, while AJVR focuses on delivering veterinary research manuscripts to subscribers.



Article submitted by Rachel Cutcliff,  
External Engagement Officer, Atlantic Veterinary College,  
UPEI.

Photo: L-R Dr. Fred Kibenge and Dr.  
Jason Stull

## Dr. Gary Conboy selected as the 2021 recipient of the Atlantic Award of Excellence in Veterinary Medicine and Animal Care



The Atlantic Veterinary College (AVC) is pleased to announce that **Dr. Gary Conboy**, professor emeritus, has been selected as the 2021 recipient of the Atlantic Award of Excellence in Veterinary Medicine and Animal Care. The award was presented by Dr. John VanLeeuwen, interim dean, AVC, University of Prince Edward Island (UPEI), on Sunday, April 24, during the Atlantic Provinces Veterinary Conference in Halifax, Nova Scotia.

For the past 30 years, Dr. Conboy has been the cornerstone of the diagnostic parasitology service at the AVC's Diagnostic

Services. He is a recognized expert in the field of veterinary parasitology, consulting with veterinarians and researchers all over the world on parasite identification. "Dr. Conboy's expertise in morphologic identification of parasites has been one of the key foundational components of the AVC diagnostic parasitology services, and has been the foundation of his research program," explains Dr. Melanie Buote, assistant professor, Department of Pathology and Microbiology, AVC, UPEI, and lead nominator.

In the early 1990s, Conboy discovered his unique niche in parasitology while living on Prince Edward Island. His main research focus has been nematode lungworm parasites (metastrongyloids) of wild and domestic canids, a field where his expertise is unparalleled. In this unique maritime climate, he recognized the perfect mix of definitive hosts—canids including foxes and dogs—and gastropod intermediate hosts—slugs and snails—and how the climate allowed for transmission of this important parasite group. "From his research, we know that approximately 25 per cent of coughing dogs in Atlantic Canada are infected with fox lungworm," says Buote. "His research has refined and revealed unique aspects of the parasite's life cycle and transmission. Additionally, his focus on treatment modalities has led to better clinical resolution and quality of life for canine patients."

Conboy was also part of a research team that discovered the spread of French heartworm—a devastating disease infecting dogs—in Nova Scotia and Prince Edward Island. A widely published researcher, Conboy has authored over 60 peer-reviewed scientific publications and presented at numerous conferences. He also was coauthor of *Veterinary Clinical Parasitology* (7<sup>th</sup>, 8<sup>th</sup>, and 9<sup>th</sup> editions), which is an essential diagnostic guide for veterinary education, as well as a reference text for veterinary diagnostic laboratories and clinics around the world. In addition to this, he has been a mentor and supervisor for graduate students and served on graduate program committees and various boards.

"Dr. Conboy is an esteemed colleague, mentor, and friend of the Atlantic Veterinary College, and veterinarians all over the world," says VanLeeuwen. "He is an internationally renowned expert in his field, and even in retirement, he continues to be an asset to the local, national, and the international veterinary community. He is more than deserving of this prestigious award."

*The Atlantic Award of Excellence in Veterinary Medicine and Animal Care was established in 2005 and recognizes practicing or retired veterinarians from Atlantic Canada. Recipients must have demonstrated exceptional service and contribution to the veterinary profession; exemplified the highest values of compassion, leadership, and dedication to the profession; and helped to promote veterinary medicine in the community and to advance the profession. Each year, one person is recognized at an event during the Atlantic Provinces Veterinary Conference, and their portrait is hung on the wall at the Atlantic Veterinary College in perpetuity.*

Submitted by Rachel Cutcliffe  
External Engagement Officer, AVC, UPEI

## 2022 AVC Research Fund Competition Winners



**Dr. Lisanework Ayalew** (PI) and **Dr. Shivani Ojha** (CI): AVC Internal Research Fund, Basic Science pool, \$12,500 to project entitled: "Molecular analysis of the genetic footprint of the fresh chicken retail meat and the chicken fecal microbial mobile resistome".

**Dr. Lisanework Ayalew** (PI), Co-PIs are **Dr. Shivani Ojha** and Dr. Charlotte Pye: Companion Animal Trust Fund, \$10,000 to project entitled "The canine cutaneous microbial ecology and its role in the pathogenesis of pyoderma caused by drug resistant and/or susceptible *Staphylococcus* species".



## Pathology and Microbiology Welcomes Dr. Nina Germitsch



Pathology and Microbiology welcomes, **Dr. Nina Germitsch**, a board certified veterinary parasitologist from Switzerland. She obtained her veterinary degree from the Vetsuisse Faculty, University of Zurich, Switzerland in 2015. She started her path in parasitology with a Master thesis focusing on lungworms of Swiss foxes. During her Master studies she spent a 4 week internship with Professor **Dr. Gary Conboy** at AVC. After completion of her veterinary state examinations she proceeded with her first doctorate studying the epidemiology of lungworms in canids and adapting serological procedures for detection of the French heartworm *Angiostrongylus vasorum* in wildlife hosts. She obtained her doctorate in veterinary medicine (Dr. med. vet.) from the University of Zurich in 2017. She continued her career in parasitology by conducting PhD studies in molecular parasitology and a residency with the European Veterinary Parasitology College (EVPC) simultaneously. Her PhD work comprised studying the coagulation-pathogenesis of *Angiostrongylus vasorum* and focused on the host-parasite

interaction analysed by bottom-up proteomics. As a resident of the EVPC she contributed to the veterinary and human diagnostic unit of the Institute of Parasitology in Zurich and lectured courses in veterinary and wildlife parasitology. In 2021 she passed the EVPC board exams and successfully defended her PhD.

## Pathology and Microbiology Welcomes Back Dr. Kim Foote



Pathology and Microbiology welcomes back **Dr. Kimberley Foote**. As part of the staffing for **Dr. Cora Gilroy's** sabbatical leave, Dr. Kimberley Foote has been working in Diagnostic Services as a clinical pathologist from January– June, as a sessional instructor for the winter semester. Dr. Foote completed a Master of Veterinary Science/Residency in Veterinary Clinical Pathology at AVC in 2019 and recently became an ACVP Diplomate. She has held a previous contract position as a clinical pathologist at AVC in 2019 and during the past year worked as a diagnostic clinical pathologist at Langford Vets Diagnostic Laboratories near Bristol in the United Kingdom.

## Pathology and Microbiology Welcomes New MTS 5 Technician



The Pathology and Microbiology welcomes **Darrian Washinger**, new term Atlantic Bat Conservation Project Technician for the Canadian Wildlife Health Cooperative (CWHC). Darrian is supervised by **Drs. Megan Jones** and **Scott McBurney**. Originally from Pennsylvania, Darrian moved to Newfoundland to pursue an MSc studying bat ecology. After graduating she worked as a Wildlife Biologist for the provincial government of Newfoundland and Labrador. Now she is excited to be a part of CWHC's bat health program. In her free time, Darrian loves playing ultimate frisbee, exploring nature, and playing board games.

## Pathology and Microbiology Welcomes New MVSc Resident



The Pathology and Microbiology department welcomes **Maricruz Guevara** MVSc Resident in Anatomic Pathology/Aquatic Health on May 2, 2022. She is supervised by **Drs. Mark Fast** and **Shannon Martinson**.

Maricruz Guevara is the new domestic/fish anatomic pathology resident working in the Department of Pathology and Microbiology at the Atlantic Veterinary College. She attended veterinary school at the San Francisco de Asís Veterinary and Surgery School. She is originally from San José, Costa Rica. Maricruz has been working with domestic, wildlife and animals in Costa Rica, she did her PhD at the University of Bern in Switzerland, she loves to travel and know new cultures and people. She will be working with domestic

animals and with fish diagnosis. Maricruz is very excited to start this new challenge with her mentors and professors from vet school and looks forward to learning from them during her residency. In her free time, Maricruz enjoys walking with her dog, swimming, cycling and she loves to read.

## Pathology and Microbiology Welcomes New Summer Intern



**Dr. Megan Jones** with CWHC in Pathology and Microbiology is hosting **Leyla Jamba**; a summer conservation intern from the Canadian Wildlife Federation from April 25, 2022 to July 15, 2022.

**Leyla Jamba** is a Canadian Conservation Corps (CCC) member from Calgary, Alberta. Through the CCC, she has had the opportunity to move to PEI and join the Atlantic node of the Canadian Wildlife Health Cooperative (CWHC) as a Research Assistant. This summer, she will be working with **Tessa McBurney** and the CWHC under the supervisions of **Dr. Megan Jones**, on her MSc project to assess the presence of zoonotic pathogens in wild bat populations.

## Pathology and Microbiology Welcomes New Summer Students

Pathology and Microbiology welcomes the following students who will work as summer students with faculty in the Department this year:



**Kirsten Spray**, AVC Class of 2024, as the Summer Student Assistant in Wildlife Pathology with **Dr. Megan Jones** and the CWHC. Her work this summer will include participating in necropsies and helping with case submissions and CWHC database projects. Her veterinary interests include marine animal and wildlife medicine, radiology, and pathology.



**Olivia Galeuzzi** who is a third year veterinary student at the AVC. Similar to the research project Olivia completed last summer on PEI red foxes, she will be working on an endoparasite survey of two Atlantic Canadian bat species (Little Brown Myotis and the Northern Long-eared Myotis) under the supervision of **Dr. Megan Jones** and **Dr. Melanie Buote**. Additionally, she will be assisting master's student **Tessa McBurney** in her fieldwork with the capture, tagging, and sampling of live bats on the island.



**Kelly Levesque**, a third year UPEI biology student and aspiring veterinary student. Kelly will be working as a summer student under the guidance of **Dr. Lisane Ayalew**. Kelly aims to complete a research project utilizing the Oxford Nanopore MinION sequencing system and will present her results at the 2022 SRLP Poster Presentations. Kelly has an enthusiasm for laboratory work and a specific interest in genetics and pathology. Originally from Montreal, in her spare time Kelly enjoys yoga, hiking, swimming, and taking pictures of her cats.



**Alyssa McGee**, Summer Student Assistant in Aquatic Animal Health with **Dr. Mark Fast**. Alyssa is a Florida resident and an upcoming second year student at AVC. Between cramming for exams and complaining about the snow, her hobbies include running and reading. After completing veterinary school she hopes to pursue a residency in Anatomic Pathology with a focus in Forensic Pathology.

**Jamye Rouette**, AVC Class of 2024, who has been hired as the Summer Student Assistant in Avian Pathology for the summer 2022. She will be working with the Atlantic node of the Canadian Wildlife Health Cooperative (CWHC) database to help develop a pilot project that identifies and characterizes plastic pollution in the Atlantic Canadian wildlife. Jamye will also be assisting in coordinating Avian Influenza Testing. (No Photo)

## Pathology and Microbiology Welcomes New Graduate Students



**Tessa McBurney**, MSc student (summer 2022) and class of 2025 student in the DVM program has completed the first year of her DVM. This summer Tessa hopes to complete the second field season of her master's degree research investigating the prevalence of zoonotic pathogens in bats on Prince Edward Island under the supervision of **Dr. Megan Jones**. Specifically, she is targeting rabies virus in bat serum and saliva and *Histoplasma capsulatum* in bat guano in her project funded by the Canadian Wildlife Health Cooperative, Atlantic Region, NSERC, and Parks Canada. She is very excited to be spending another summer out in the field conducting wildlife research before starting her second year of veterinary school in August. Tessa's background is in conservation biology and prior to starting her Master of Science and veterinary school, she worked for several years

as the Atlantic Bat Conservation Project Technician with the Canadian Wildlife Health Cooperative here at the AVC. In her free time she loves volunteering with local wildlife monitoring, going for long walks outside in the woods, and spending time at home with her cat, Loki.



Pathology and Microbiology welcomes **Dr. Kylee Graham**, a recent DVM graduate of AVC class of 2022. Kylee is now a full-time MSc graduate student studying Sarcoptic mange in PEI red foxes. She will continue working under the supervision of **Dr. Megan Jones** and Dr. Javier Sanchez, as this project incorporates her top three favorite subjects from vet school: pathology, parasitology and epidemiology. Therefore, it is fitting that Kylee was awarded the 2022 Elanco Parasitology Award at her recent graduation. Kylee was also honored to receive a 2022 NSERC Canada Graduate Scholarships-Master's Award for this project. In her spare time, Kylee is deeply committed to bettering her community through mutual aid and advocacy work, taking her cat Olive for walks, and enjoys reading and writing poetry, for which she is a published author. Kylee is excited to finally be able to focus on her research full time, with the end goal being to complete a PhD in a few years.

## Other Faculty Awards and Accomplishments



**Dr. Nina Germitsch** is chair of the Resident Committee of the European Veterinary Parasitology College (EVPC).

**Dr. Nina Germitsch** is also a contributor to Veterinary eClinic (<https://eclinic.vet/>), an online learning platform for veterinary students providing clinical parasitology cases for the platform. The parasitology cases (Digital Parasites) will go live in August of 2022.

## One Health Essay Challenge Competition Winner



Congratulations to **Dr. Shivani Ojha**, second place winner in the One Health Challenge essay competition. The competition was conducted by Veterinary public health institute, University of Bern.

The essay titled 'When tick-talks...it relapses!' submitted by Shivani Ojha received second place in the competition. Shivani received a book on "Animals, Health, and Society - Health Promotion, Harm Reduction, and Health Equity in a One Health World".

([http://www.vphi.ch/continuing\\_education/one\\_health\\_challenge/index\\_eng.html](http://www.vphi.ch/continuing_education/one_health_challenge/index_eng.html)).

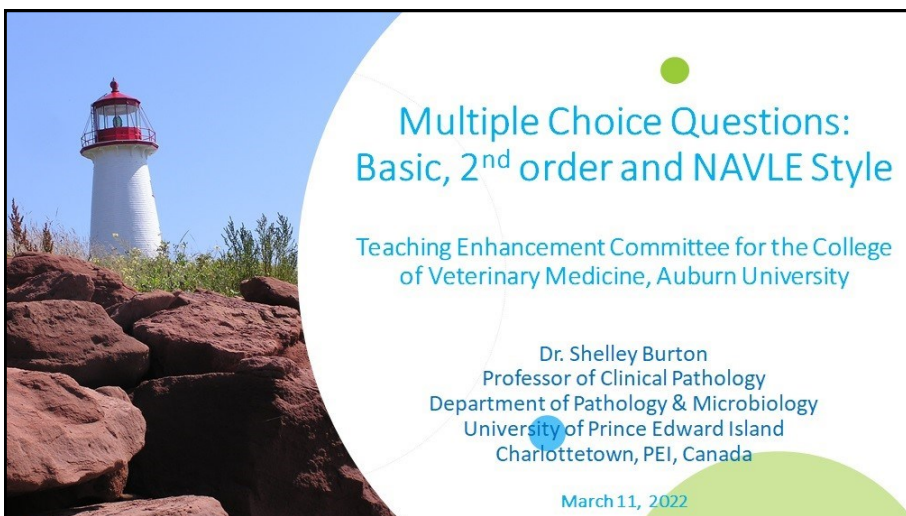
## Dr. Gary Conboy Donates Text Books to Pathology and Microbiology



Recently retired Professor Emeritus **Dr. Gary Conboy** has donated 7 copies of the latest edition of his diagnostic parasitology guide book "Veterinary Clinical Parasitology 9<sup>th</sup> Edition" (Zajac, Conboy, Little and Reichard, 2021) for use by students taking VPM 4500 Diagnostic Services. Previous editions of this book have been bestsellers and the 9<sup>th</sup> edition contains some of the best images he has taken over his career in parasitology spanning 4 decades. This edition is most likely the final one he will be involved in writing. A dedication included in each copy expresses how much he enjoyed sharing his passion for diagnostic parasitology in this rotation and his heartfelt gratitude to the students for being so worthy of the time and effort he expended teaching them over his long and deeply fulfilling career. Thinking himself a wit, he also included several "jokes" in the dedication proving that on this subject he is at least half right.

## Presentation on Multiple Choice Question Writing

**Dr. Shelley Burton** was the invited speaker on March 11th for an online presentation at the College of



Veterinary Medicine at Auburn University in Alabama. The topic was on writing quality multiple choice questions while avoiding common flaws. Dr. Burton based the presentation on her experience writing and reviewing questions for the National Board of Veterinary Medical Examiners, her past chairing of the clinical pathology section of the American College of Veterinary Pathologists (ACVP) Examination Committee and her current chairing of the ACVP Clinical Pathology Test Item Writers Group.

## CWHC Reports Winter Crow Mortality Event

CWHC had reported a winter crow mortality event in Victoria Park, Charlottetown. Over the Christmas holidays and extending into the new year, the Canadian Wildlife Health Cooperative (CWHC) and the wildlife service of the AVC teaching hospital began to receive reports of an unusually large mortality event of overwintering crows roosting in downtown Charlottetown. Members of the public reported that the bodies of hundreds of dead crows were scattered throughout Victoria park and there was concern of a possible poisoning incident or zoonotic disease. Numerous sick crows were brought to the VTH for treatment and rehabilitation, and a large number of dead crows were submitted to the CWHC for necropsy investigation into the cause of the event. Gross examination of a representative sample of the best-preserved carcasses revealed a spectrum of nutritional conditions (good to emaciated) and approximately 10% of the birds had small to large nodules consistent with poxvirus infection. The most consistent lesion observed was moderate to severe necrotizing enteritis and typhlitis with occasional foci of necrosis scattered throughout the liver and kidneys. The spleen was frequently involved and was typically large and diffusely necrotic. In several cases intestinal contents were notably bloody. Histology was performed on the best-preserved cases and confirmed acute to subacute necrosis throughout the intestinal tract and in parenchymal organs. Samples were submitted for bacterial culture and were negative for Salmonella and Clostridium sp. All crows were negative for avian influenza virus on PCR.

It is not unusual for crows to die over the course of the winter, sometimes in large numbers, and it is typically attributed to emaciation/starvation and/or diseases related to stress and immune suppression. In this case however, acute mortality of a large number of crows in an area of high-density roosting over the course of the winter, with lesions consistent with acute necrotizing enteritis and splenitis, is the typical presentation attributed to an outbreak of corvid orthoreovirus. Testing for corvid orthoreovirus is sometimes challenging as it is genetically distinct from species of reovirus that infect domestic poultry and so most reovirus PCRs available at diagnostic laboratories are not able to detect it. This was the case for several of the crows here which were negative for domestic reoviruses by PCR. Virus isolation was pursued and cell lysis characteristic of reoviruses was detected from three of the crows. Electron microscopy and next generation sequencing on one of the birds confirmed the reovirus to be consistent with corvid orthoreovirus. Confirmatory testing is pending for the remaining two birds. At this point, there is considerable evidence to support an outbreak of corvid orthoreovirus as the cause of the Victoria park mortality event. This virus has been identified as the cause of winter crow mortality events in both Canada and the US and it has been previously detected in PEI crows. It is a highly infectious virus being shed in oronasal and fecal secretions which allows it to spread rapidly through dense colonies of roosting crows.



## Emcees at AVC White Coat Ceremony and Awards Night



**Drs. Russell Fraser and Shannon Martinson** were the emcees for the presentation of the awards at the recent AVC White Coat Ceremony and Awards Night on May 9th at the Prince Edward Island Convention Centre.



## Publications

Soto E, **Fast MD, Purcell SL**, Coleman DD, Yazdi Z, Kenelty K, Yun S, Camus A. Expression of Immune markers of white sturgeon (*Acipenser transmontanus*) during *Veronaea botryose* infection at different temperatures. Comparative Biochemistry and Physiology-Part D: Genomics and Proteomics 2022;41:100950.

Cai W, Kumar S, Navaneethaiyer U, Caballero-Solares A, **Carvalho LA, Whyte SK, Purcell SL**, Gagne N, Hori TS, Allen M, Taylor RG, Balder R, Parrish CC, Rise ML, **Fast MD**. Transcriptome Analysis of Atlantic Salmon (*Salmo salar*) Skin in Response to Sea Lice and Infectious Salmon Anemia Virus Co-Infection Under Different Experimental Functional Diets. Frontiers in Immunology January 2022; Volume 12: Article 787033 [www.frontiersin.org](http://www.frontiersin.org).

**Ayalew LE**, Ahmed KA, Popowich S, Lockerbie B, Gupta A, Tikoo SK, Ojkic D and Gomis S. 2022. Virulence of emerging arthrotropic avian reoviruses correlates with their ability to activate and traffic interferon-gamma producing cytotoxic CD8 + T cells into gastrocnemius tendon. *Frontiers in Microbiology* (Accepted on 24/02/2022, Manuscript ID: 869164)

Eslamloo K, Kumar S, Xue Xi, Parrish KS, **Purcell SL, Fast MD**, Rise ML. Global gene expression responses of Atlantic salmon skin to *Moritella viscosa*. Scientific Reports 2022; 12:4622. <https://doi.org/10.1038/s41598-022-08341-7>.

**Bourque L**, Nielsen O, Jager M, Ojkic D, Provost C, Gagnon C.A., Lockerbie B, Snyman H, Stevens B, Needle D, Nakagun S, Cox S, Khodadad J, **Jones M.E.B.** "In Situ Hybridization and Virus Characterization of Skunk Adenovirus in North American Wildlife Reveals Multisystemic Infections in a Broad Range of Hosts". Journal of Wildlife Diseases 58(2), 2022, DOI: 10.7589/JWD-D-21-00099

Arsenault AC, Foley PM, **Clancey NP**. *Babesia vulpes* in a dog from Prince Edward Island, Canada, 2022. *Canadian Veterinary Journal*. Accepted, ahead of print.

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

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