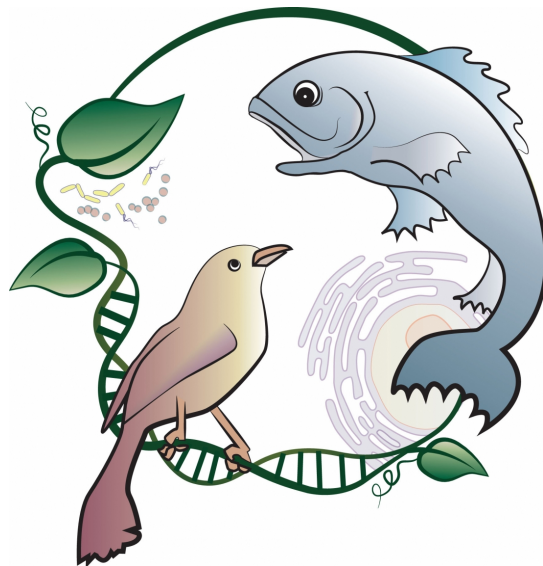
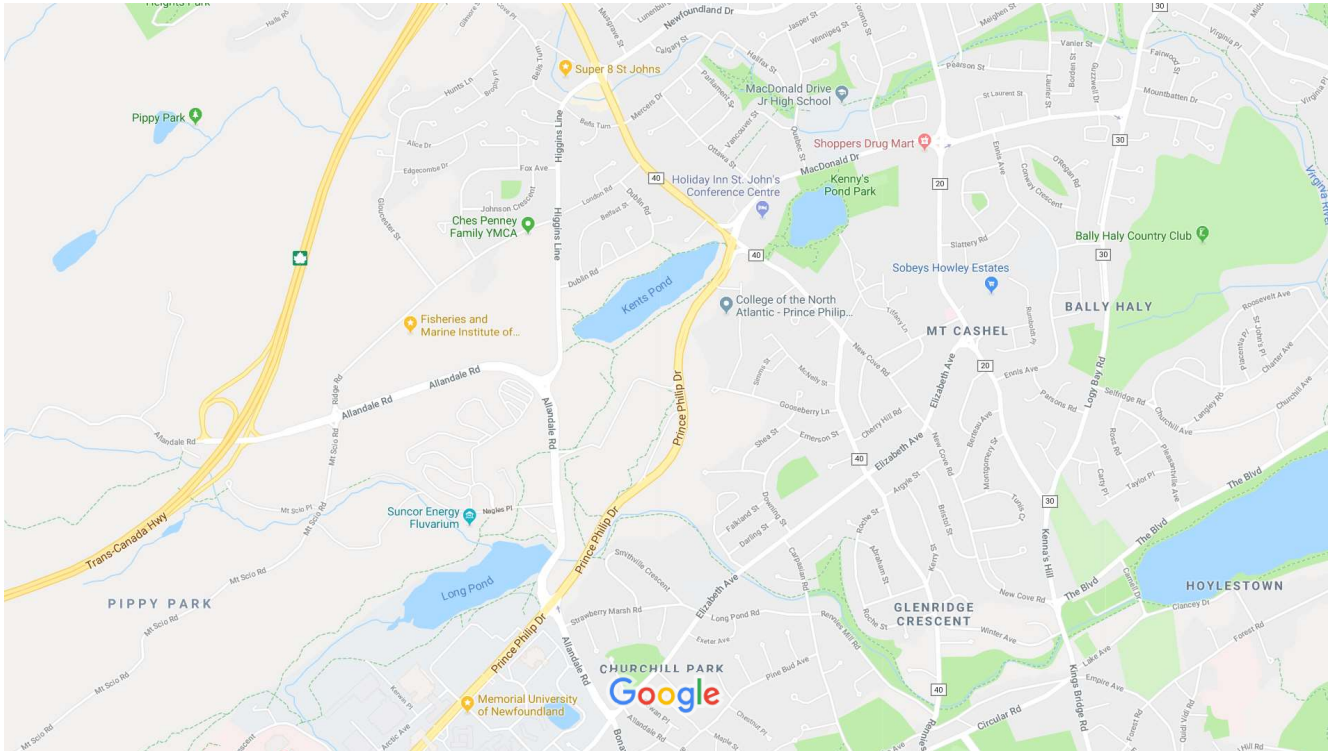


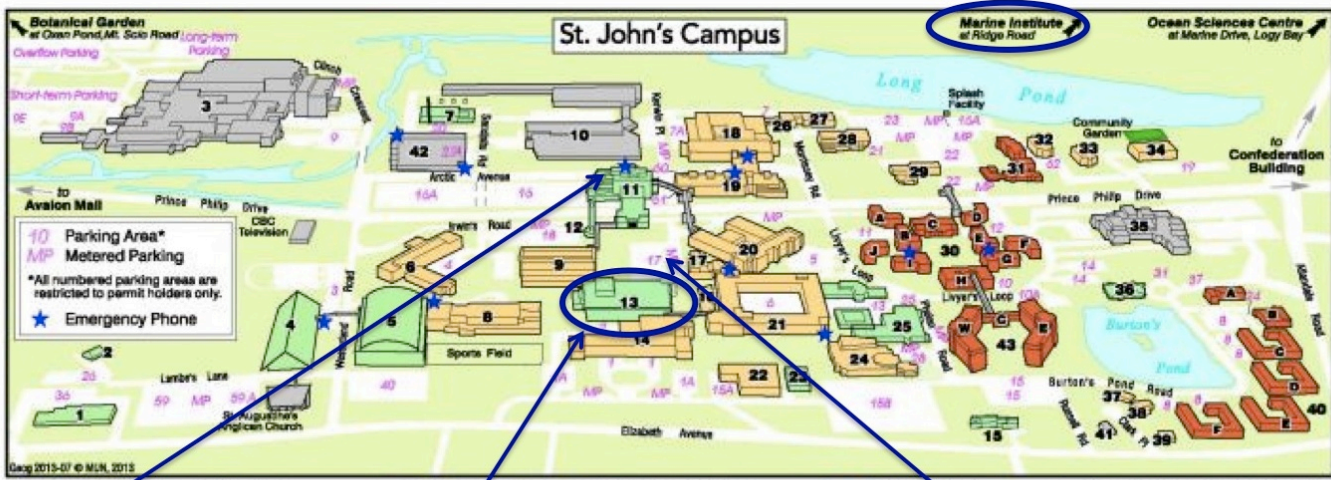


Science Atlantic
Aquaculture & Fisheries and Biology Conference
Memorial University, March 9-11, 2018





Map data ©2018 Google 200 m



BUS STOP

BRUNEAU CENTRE

PARKING

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THANKS TO THE LOCAL ORGANIZING COMMITTEE:

Jody Burke, Fiona Cuthbert, Laura Hillier, Ian Jones, Alvin Kenny, Dawn Marshall, Yolanda Wiersma, Rachel Wigle and student volunteers

AND THANKS TO THE TRAVEL BURSARY COMMITTEE:

Trevor Avery, Cyr Couturier, Russell Easy, Timothy Frasier, Heather Hunt, Lois Murray

Science Atlantic Representatives from Memorial University:

Cyr Couturier (Aquaculture & Fisheries – Marine Institute)
Suzanne Dufour (Biology)
Matt Rise (Aquaculture & Fisheries – Department of Ocean Sciences)

BIOLOGY CONFERENCE

Friday, March 9, 2018

Main campus, Bruneau Centre

- | | |
|----------------|---|
| 5:00 – 9:00 pm | Registration and poster set-up
<i>Bruneau Centre Atrium</i> |
| 6:00 – 9:00 pm | Welcome reception
<i>Bruneau Centre Atrium</i> |
| 7:00 – 8:00 pm | Aquaculture & Fisheries and Biology Committee Members Dinner
<i>Beatrice Watts Boardroom, IIC2014</i> |
| 8:00 – 9:00 pm | Aquaculture & Fisheries and Biology Committee Members Meeting
<i>Beatrice Watts Boardroom, IIC2014</i> |

Saturday, March 10, 2018

Main Campus, Bruneau Centre

- | | |
|------------------|---|
| 8:00 – 9:00 am | Registration and poster set-up
<i>Bruneau Centre Atrium</i> |
| 9:00 – 9:15 am | Welcome address – Dr. Mary Courage , Dean of Science and Ed Durnford , Head of School of Fisheries, Marine Institute
<i>Bruneau Theatre, IIC2001</i> |
| 9:15 – 10:15 am | Biology Keynote (<i>Bruneau Theatre</i>)
Dr. Amanda Bates , Department of Ocean Sciences, MUN
Thermal safety, environmental variability and biodiversity change |
| 10:15 – 11:00 am | MORNING BREAK AND POSTER VIEWING
<i>Bruneau Centre Atrium</i> |

Biology Session 1 (Bruneau Theatre, IIC2001)

- | | |
|------------------|--|
| 11:00 – 11:15 am | Victoria Gonzalez , Dalhousie University
Using simultaneous PET/MRI to evaluate an orthotopic ovarian cancer model |
|------------------|--|

11:15 – 11:30 am	Cooper Coats , Acadia University Anthracycline-induced cardiotoxicity (ACT) prevention using RAR γ -agonists in a zebrafish model
11:30 – 11:45 am	Tessa Bartlett , University of Prince Edward Island Exploring egg development in the invasive European Green Crab (<i>Carcinus maenas</i>) with a possibility for potential marketability
11:45 – 12:00 pm	Alexa Stack Mills , University of New Brunswick, Fredericton Does the salt marsh snail (<i>Melampus bidentatus</i>) show a preference for live or dead grass species in Maritime salt marshes?
12:00 – 12:15 pm	Hannah Mackellar , Mount Allison University Diet and fattening rates of Semipalmated Sandpipers (<i>Calidris pusilla</i>) and Semipalmated Plovers (<i>Charadrius semipalmatus</i>) staging in the Acadian Peninsula, New Brunswick
12:15 – 1:15 pm	LUNCH <i>Bruneau Centre Atrium</i>
1:15 – 2:15 pm	Aquaculture & Fisheries Keynote (<i>Bruneau Theatre</i>) Dr. Brett Favaro , Marine Institute, Memorial University Fixing the Fisheries Act: my journey along the science-policy interface

Biology Session 2 (Bruneau Theatre, IIC2001)

2:25 – 2:40 pm	Jacob Hubner , Dalhousie University Comparing avian communities across habitats in Thomas Raddall Provincial Park, Nova Scotia
2:40 – 2:55 pm	Claire West , Mount Allison University How does the social environment affect responses to thermal stress in Mangrove Rivulus (<i>Kryptolebias marmoratus</i>)?
2:55 – 3:10 pm	Allison Ford , Memorial University The ecology and effects of the bark beetle species, <i>Dryocoetes krivolutzkajae</i> , on rosieroot populations in Newfoundland, Canada
3:10 – 3:25 pm	Carmen Landry , St. Francis Xavier University Using qPCR to measure gene expression in the great pond snail, <i>Lymnaea stagnalis</i>
3:25 – 3:40 pm	David Oakley , Cape Breton University Evaluating the electrochemical removal of bacterial biofilms

3:40 – 5:00 pm AFTERNOON BREAK AND POSTER VIEWING
Bruneau Centre Atrium

Biology Session 3 (Bruneau Theatre, IIC2001)

5:00 – 5:15 pm **Madeline Clarke**, Saint Mary's University
The effect of spatial scale on heterogeneity and plant species richness in coastal barrens

5:15 – 5:30 pm **Ryan Smith**, University of New Brunswick, Fredericton
Detection, identification, and characterization of viroids in ornamental plants, with an in-depth look at *Coleus blumei* viroids

7:00 – 9:00 pm BANQUET (Dining Room, Marine Institute)

Sunday March 11, 2018
Marine Institute, 155 Ridge Road
(**Note that we switch to Daylight Saving Time today!)

Biology Session 4 (Hampton Hall)

9:00 – 9:15 am **Laura Davidson**, St. Francis Xavier University
H₁/H₂ histamine receptor blockade decreases substrate-dependent mitochondrial H₂O₂ emission in deep gastrocnemius muscle following a bout of prolonged exercise

9:15 – 9:30 am **Jenna Priest**, Acadia University
Relationships between parasite intensity and body condition in coyotes

9:30 – 9:45 am **Katrine Jade Petritchenko**, Memorial University
Reproductive strategies in thyasirid bivalves from Bonne Bay, Newfoundland

9:45 – 10:00 am **Marie Charles**, University of Prince Edward Island
Natural product discovery and development of a novel method to quantify bacteria from marine habitats in remote locations

10:00 – 10:30 am MORNING BREAK (Foyer, Marine Institute)

Biology Session 5 (Hampton Hall)

10:30 – 10:45 am	Brianna Kelly , Dalhousie University Using Magnetic Resonance Imaging to track immune cell migration in a 4T1 mouse model
10:45 – 11:00 am	Ceilidh McCoombs , Saint Mary's University Nestling vocalization development in the European Starling (<i>Sturnus vulgaris</i>)
11:00 – 11:15 am	Milagros Sanchez , Dalhousie University Investigating dive characteristics of resting and non-resting behaviour in grey seals (<i>Halichoerus grypus</i>)
11:15 – 11:30 am	Stacey Lee , Cape Breton University Circadian and sex-linked gene expression of melanocortin receptor 5 and androgen receptor in the electric organ of <i>Brachyhypopomus gauderio</i>
11:30 – 12:30 pm	LUNCH <i>Dining Room, Marine Institute</i>
12:30 – 1:30 pm	Awards Ceremony <i>Dining Room, Marine Institute</i>

POSTERS

- 1. Emma Blanche**, Acadia University
Viral spread of Black Queen Cell Virus in managed and wild bees in Canada
- 2. Joshua Bokma**, Crandall University
Comparison of two instruments to measure frailty
- 3. Ashton Bradley**, Saint Mary's University
Do nestlings increase their begging in response to enhanced sibling competition in European Starlings, *Sturnus vulgaris*?
- 4. Makenzie Branch**, Acadia University
Characterizing the oncogenic protein-protein interaction between the microphthalmia-associated transcription factor and CBP/p300
- 5. Brock Burgess**, Acadia University
Nest density of Orange-belted Bumble Bees
- 6. Victoria Cluney**, Saint Mary's University
The relationship between anal fin size and behavioural traits of male Japanese medaka, and their importance in reproductive success across varying social settings
- 7. Sage Dixon**, Mount Saint Vincent University
Interactive effects of temperature, carbon dioxide and nitrogen on canola growth and quality
- 8. Nicole Duff**, Mount Allison University
Analysis of yolk lipid quality and its effect on visual development, larval growth, and survival in Zebrafish (*Danio rerio*)
- 9. Sally Faulkner**, Mount Allison University
Macromolecular dynamics of *Thalassiosira weissflogii* under steady-state and non steady-state phosphorus stress
- 10. Erica Geldart**, Mount Allison University
Movement patterns of migrating Semipalmated Sandpipers (*Calidris pusilla*) and Semipalmated Plovers (*Charadrius semipalmatus*) in Eastern New Brunswick
- 11. Martin Gouthro**, Cape Breton University
Bean Beetle (*Callosobruchus maculatus*) mating behaviour in relation to water and nutrient enrichment of males
- 12. Emily Hurley**, Memorial University
TBPH in *Drosophila melanogaster* models of amyotrophic lateral sclerosis
- 13. Morgan King**, University of Prince Edward Island
Defining the role of SOX4/SOX11 during nephrogenesis *in vivo*
- 14. Olivier Lurette**, Université de Moncton
The impact of mitochondrial Src kinase in breast cancer

- 15. Morgan MacKinnon**, Saint Mary's University
Measuring the distribution of reproductive success and mating system structure across varying operational sex ratios in the Japanese medaka (*Oryzias latipes*)
- 16. Emma McDermott**, University of Prince Edward Island
Effects of PEI Berries blueberry purée on renal oxidative stress
- 17. Michon McDonald**, Dalhousie University
Role of XBAT31.1 in regulating iron uptake in *Arabidopsis thaliana*
- 18. Molly McIntyre**, St. Francis Xavier University
Extraction and preservation of DNA from microbes in soil
- 19. Brooke McPhail**, Cape Breton University
An examination of composition and species richness in trematode communities using *Stagnicola elodes*
- 20. Lauren Miller**, Acadia University
Investigating the effects of peroxisome proliferator-activated receptor gamma agonist pioglitazone in a lysolecithin model of focal demyelination in mice
- 21. Nii Obodai**, Saint Mary's University
Does reproductive performance improve with age in female European Starlings, *Sturnus vulgaris*?
- 22. Flavio Preti**, Saint Mary's University
Effects of a microsporidium pathogen, *Nosema adaliae*, on the general predator Chinese mantis, *Tenodera sinensis*
- 23. Liam Rappoldt**, Acadia University
Investigation of the molecular growth factors contributing to BBB restrictive permeability
- 24. Madison Stewart**, Dalhousie University
Connectivity of endangered Northern Bottlenose Whales (*Hyperoodon ampullatus*) between two populations along the Eastern Canadian Continental Shelf
- 25. Olga Trela**, Memorial University
Fatty acid and stable isotope composition in sea urchins, sea cucumbers, and sediments in a shelf-break canyon off British Columbia, Canada
- 26. Sindy Walsh**, University of New Brunswick, Saint John
Effects of ocean acidification on respiration and burrowing behaviour of infaunal marine invertebrates in the Bay of Fundy
- 27. Nicholas Zinck**, Mount Saint Vincent University
An examination of protein expression during embryonic chick eye development

AQUACULTURE AND FISHERIES CONFERENCE

Friday, March 9, 2018

Main campus, Bruneau Centre

- | | |
|----------------|---|
| 5:00 – 9:00 pm | Registration
<i>Bruneau Centre Atrium</i> |
| 6:00 – 9:00 pm | Welcome reception
<i>Bruneau Centre Atrium</i> |
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| 8:00 – 9:00 pm | Aquaculture & Fisheries and Biology Committee Members Meeting
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Saturday, March 10, 2018

Main Campus, Bruneau Centre

- | | |
|------------------|--|
| 8:00 – 9:00 am | Registration
<i>Bruneau Centre Atrium</i> |
| 9:00 – 9:15 am | Welcome address – Dr. Mary Courage , Dean of Science and Ed Durnford , Head of School of Fisheries, Marine Institute
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Dr. Amanda Bates , Department of Ocean Sciences, MUN
Thermal safety, environmental variability and biodiversity change |
| 10:15 – 11:00 am | MORNING BREAK AND POSTER VIEWING
<i>Bruneau Centre Atrium</i> |

Aquaculture & Fisheries Session 1 (Arts & Admin AA1043)

- | | |
|------------------|---|
| 11:00 – 11:15 am | Brittany Bard , University of New Brunswick, Saint John (G)
The effects of repeat acute thermal stress on the critical thermal maximum (CTmax) and physiology of juvenile shortnose (<i>Acipenser brevirostrum</i>) |
|------------------|---|

11:15 – 11:30 am	Kathleen Duncan , Saint Mary's University (UG) Temporal patterns of sex-specific size at maturity of porbeagle sharks (<i>Lamna nasus</i>)
11:30 – 11:45 am	Connor Mackie , Dalhousie University (UG) Exploring the presence of diazotrophs in the tissues of cultured oysters and the surrounding waters
11:45 – 12:00 pm	Isabelle Hurley , Dalhousie University (UG) Spatio-temporal mapping and analysis of the Atlantic Halibut (<i>Hippoglossus hippoglossus</i>) fisheries bycatch in Atlantic Canada
12:00 – 12:15 pm	Tomer Katan , Memorial University (G) Growth performance, tissue composition, gene expression and fatty acid biosynthesis in Atlantic salmon (<i>Salmo salar</i>) fed plant-based diets with different ratios of $\omega 6$ to $\omega 3$ fatty acids
12:15 – 1:15 pm	LUNCH <i>Bruneau Centre Atrium</i>
1:15 – 2:15 pm	Aquaculture & Fisheries Keynote (<i>Bruneau Theatre</i>) Dr. Brett Favaro , Marine Institute, Memorial University Fixing the Fisheries Act: my journey along the science-policy interface

Aquaculture & Fisheries Session 2 (Arts & Admin AA1043)

2:25 – 2:40 pm	Hillary Dort , Acadia University (UG) Identification of protein biomarkers in epidermal mucus of Striped Bass (<i>Morone saxatilis</i>) as a consequence of angling stress
2:40 – 2:55 pm	Quentin Kerr , Dalhousie University (UG) Temporal stability of genomic differentiation between spawning season components in Atlantic herring (<i>Clupea harengus</i>)
2:55 – 3:10 pm	Gemma Rayner , Memorial University (G) Effects of the invasive green crab (<i>Carcinus maenas</i>) on the American lobster (<i>Homarus americanus</i>) fishery in Newfoundland
3:10 – 3:25 pm	Jacquelyn Saturno , Memorial University (G) An experimental study of microplastic generation from fragmenting fishing gear

- 3:25 – 3:40 pm **Caitlin Bate**, Dalhousie University (UG)
The impact of temperature on the migration of juvenile female blue sharks (*Prionace glauca*) through Nova Scotian waters
- 3:40 – 4:00 pm AFTERNOON BREAK AND POSTER VIEWING
Bruneau Centre Atrium

Aquaculture & Fisheries Session 3 (Arts & Admin AA1043)

- 4:00 – 4:15 pm **Jordan Bujold**, Dalhousie University – Agriculture (UG)
Gonadal germ cell response to photoperiod manipulation in Arctic charr (*Salvelinus alpinus*)
- 4:15 – 4:30 pm **Alexandra Brown**, Acadia University (UG)
A phylogenetic classification of Nova Scotian longfin squid species (*Doryteuthis pealeii*)
- 4:30 – 4:45 pm **Ethan Armstrong**, Memorial University (G)
Investigating single-beam sonar as a tool to detect the benthic footprint of aquaculture in Newfoundland
- 4:45 – 5:00 pm **Patrick Gallagher**, University of New Brunswick, Fredericton (UG)
The effects of repeated hypoxia stress on PO₂ at loss of equilibrium and hematological parameters in brook charr, *Salvelinus fontinalis*
- 5:00 – 5:15 pm **Kalen Mawer**, University of New Brunswick, Saint John (UG)
Is there geographic variation in development rate of American lobster (*Homarus americanus*) embryos?
- 5:15 – 5:30 pm **Zhiyu Chen**, Memorial University (G)
Proof of concept: efficacy of cleaner fish (cunner, *Tautoglabrus adspersus*) for sea lice (*Lepeophtheirus salmonis*) mitigation and control
- 5:30 – 5:45 pm **Hoda Rajabi**, Memorial University (G)
Use of functional genomics to determine modulatory effects of diet on transcription of immune and metabolism relevant genes in Atlantic salmon (*Salmo salar*)
- 7:00 – 9:00 pm BANQUET (Dining Room, Marine Institute)

Sunday March 11, 2018
Marine Institute, 155 Ridge Road
(**Note that we switch to Daylight Saving Time today!)

Aquaculture & Fisheries Session 4 (W3005)

- 9:00 – 9:15 am **Lydia White**, University of New Brunswick, Saint John (UG)
Contribution of variability in embryo development rate and status at hatch to the protracted hatch period of individual female American lobsters *Homarus americanus*
- 9:15 – 9:30 am **Manuel Soto-Davila**, Memorial University (G)
Immune response of Atlantic cod (*Gadus morhua*) primary macrophages to *Aeromonas salmonicida* infection
- 9:30 – 9:45 am **Charlotte Bartlett**, University of New Brunswick, Fredericton (UG)
Optimizing zebrafish reproduction (*in vitro* and *in vivo*) through the use of LHRHa on females to accelerate ovulation
- 9:45 – 10:00 am **Emma Laskey**, Acadia University (UG)
Freshwater diet of alewife, *Alosa pseudoharengus*, during their spawning run
- 10:00 – 10:15 am **Robyn Knight**, Memorial University (G)
Benthic bacterial communities at hard-bottom aquaculture sites in Newfoundland
- 10:15 – 10:30 am MORNING BREAK (Foyer, Marine Institute)

Aquaculture & Fisheries Session 5 (Room W3005)

- 10:30 – 10:45 am **Robin Leeuwis**, Memorial University (G)
Metabolic physiology and environmental tolerances of sablefish (*Anoplopoma fimbria*)
- 10:45 – 11:00 am **Brandon Nilsen**, Acadia University (UG)
Fish movement patterns and habitat suitability in Kejimikujik National Park and National Historic Site
- 11:00 – 11:15 am **Emily Norton**, University of Prince Edward Island (UG)
Vaccine-induced protection against bacterial kidney disease in Arctic charr (*Salvelinus alpinus*)

- 11:15 – 11:30 am **Ashley Bungay**, Memorial University (G)
The performance of biocide and non-biocide coatings to prevent
biofouling by invasive and non-native species in Newfoundland
- 11:45 – 12:30 pm LUNCH
Dining Room, Marine Institute
- 12:30 – 1:30 pm **Awards Ceremony**
Dining Room, Marine Institute