

**RUSSELL HAROLD EASY B.Sc., M.Sc., Ph.D.**

<http://easylab.acadiau.ca/home.html>

**Canadian Citizen**

**CURRICULUM VITAE**

**EDUCATION**

- 2005 - 2010 Ph.D. Biology Department, Dalhousie University, Halifax, NS, Canada  
Thesis: *Changes in Atlantic Salmon (Salmo salar) Epidermal Mucus Protein Composition in Response to Sea Lice (Lepeophtheirus salmonis) Infection, Stress and Vaccination*
- 2003 - 2004 M.Sc. Biology Department, St. Mary's University, Halifax, NS, Canada  
Thesis: *Taxonomy of Selected Species of Myxobolus (myxozoa) From Freshwater Fishes in Canada; Applications of Light Microscopy and Molecular Methods*
- 1996 - 1999 B.Sc. (Int. Sciences), Carleton University, Ottawa, Ontario, Canada
- 1997 Registered Microbiologist, Canadian College of Microbiologists, Vancouver, BC, Canada
- 1986 - 1989 Biochemical Technology/Biochemist, Algonquin College, Ottawa, Ontario, Canada  
Thesis: *High Density and Low-Density Lipoproteins and Their Role in Human Pathology*
- 1980 - 1982 Pure Sciences Diplômé, CEGEP, Hull, Quebec, Canada

Theses

RH Easy. 2010. Thesis: Changes in Atlantic salmon (*Salmo salar*) epidermal mucus protein composition in response to sea lice (*Lepeophtheirus salmonis*) infection, stress and vaccination (Ph. D).

RH Easy. 2004. Thesis: Taxonomy of selected species of *Myxobolus* (Myxozoa) from freshwater fishes in Canada; Applications of light microscopy and molecular methods (MSc.).

RH Easy. 1989. High Density and Low-Density Lipoproteins: Role in Human Disease (Biochemical Technology Diploma).

Continuing Education

- a. Equity Training
- b. Scuba Diver - Advanced certificate
- c. Seafarers Medical Certificate
- d. Animal Care Certificate
- e. Cardiopulmonary Resuscitation Certificate
- f. Class G Drivers Licence
- g. St. John's Ambulance First Aid Certificate
- h. Sea kayaker/single person rescue certificate
- i. WHMIS Certificate

**PROFESSIONAL APPOINTMENTS**Acadia University

- 2021 – present: Associate Professor Tenured: Department of Biology
- 2019 - present: Associate Professor - Tenure Track: Department of Biology
- 2017 - 2019: Associate Professor - Contract Limited Term: Department of Biology
- 2014 - 2017: Assistant Professor - Contract Limited Term: Department of Biology
- 2015-2020
- Courses taught
- BIOL 3413/4413 - Research Topics
  - BIOL 4996 - Honours Thesis
  - BIOL 3633 - Topics in Cell Biology
  - BIOL 3613 - Principles of Genetics
  - BIOL 3623 - Molecular Genetics and Genomics
  - BIOL 2013 - Cell and Molecular Biology
  - BIOL 3013 - Natural History and Field Biology
- 2014
- Courses taught
- BIOL 1813 - Human Biology
  - BIOL 3113 - Vertebrate Diversity

Other Employment

- 2009 - 2012: Post-Doctoral Fellow/Research Associate: Department of Biology  
St. Mary's University
- Post-Doctoral Fellow: Department of Psychology/Neuroscience  
Dalhousie University
- 2002 - 2014: Guest Lecturer - Dalhousie University, Halifax, NS

- Courses taught BIOL 1505 - Integrated Science [Microbiology, Cell Biology, Molecular Biology, Genetics, Immunology, Animal physiology]
- 2012 - 2014:  
Courses taught Guest Lecturer - Mount St. Vincent University, Halifax, NS  
BIOL 372L - Molecular Biology
- 2004 - 2008:  
Courses taught Guest Lecturer - St. Marys University, Halifax, NS  
BIOL 4449.1 - Community Ecology Course - Joint Biology/Sociology  
China [Beijing, Xian, Hong Kong]  
BIOL 3414.2 - Environmental Microbiology  
BIOL 2398.1 - Introduction to Microbiology  
BIOL 4419.1 - Molecular Biology
- 2000 - 2008: Research Laboratory Manager - National Research Council, Institute for Marine Biosciences, Halifax, NS
- 1990 - 2000: Biologist - Health Canada, Canadian Science Centre for Human and Animal Health, Winnipeg, MB and Ottawa ON

Volunteer

- 2018 - present: Chair Biology, Science Atlantic
- 2017-2021: Board member – Science Atlantic
- 2016 - present: Consultant for Aqualitas/Finleaf technologies
- 2016 – 2021: Director: Blue Dream Project
- 2016 – present: SMILE participant

**STUDENT SUPERVISION – ACADIA UNIVERSITY****Graduate Students****Master's Students/Theses:**

**Emma-Jean Freeman** (Co-Supervisor with Dr Don Stewart). MSc candidate. 2022. An exploration of the parasitic relationship between freshwater mussel glochidia and fish hosts and the impacts on fish health and survival in an aquaculture setting.

**McKenzie Brown** (Supervisor). MSc candidate. 2021. Characterizing differential effects of stress on CBD Treatment using a Zebrafish Model.

**Sam Nunn** (Supervisor). MSc candidate. 2021. Exploring differential gene expression in the MHC of Striped Bass (*Morone saxatilis*) in response to mercury contamination.

**Taylor Swanburg** (Co-Supervisor with Dr Laura Ferguson). MSc candidate. 2021. Detecting the Spread of Invasive Mosquitoes and Disease Potential in Nova Scotia

**Veronique Plante** (Committee member). MSc candidate. 2020. Supervised by Dr Shawkat Ali and Dr Allison Walker. *In vitro* elimination of raspberry viruses from virus- infected raspberry plants using a combination of thermotherapy and cryotherapy as well dsRNA-induced gene silencing.

**Zhe Yang** (Co-Supervisor with Dr Trevor Avery & Dr Glenys Gibson). 2022. Environmental DNA: Identification of a striped bass diet using molecular tools.

**Victoria Ivey** (Committee member). MSc. Supervised by Dr Kirk Hillier. 2022. Molecular and behavioural plasticity in the pheromone response of the corn earworm moth *Helicoverpa zea*.

**Carter Feltham** (Co-Supervisor with Dr Stephen Mockford). MSc. 2020. Genetics of a new Blanding's turtle population in Nova Scotia.

**Elizabeth Tsitrin** (Committee member). MSc. 2019. Supervised by Dr Mike Stokesbury. Post-spawning migration and predicted encounter rates with in-stream tidal turbines of Atlantic herring (*Clupea harengus*) and Alewife (*Alosa pseudoharengus*) in Minas Basin

#### **Honours BSc Students/Theses:**

**Mia Lauzon.** (Co-Supervisor with Dr Laura Ferguson). 2022. The impacts of winter climate change on immune gene expression in blacklegged ticks, *Ixodes scapularis*

**Sydney Zakutney.** (Co-Supervisor with Dr Brian Wilson). 2022. Impact of Stress on Neurogenesis in Zebrafish

**Emma-Jean Freeman.** 2021. An exploration of the impacts of temperature stress on an agricultural insect pest, the oblique banded leafroller (*Choristoneura rosaceana*).

**Cedric Gravel.** 2021. The vascular and neuronal effects of astrocytic *hmgbl* in the cerebral cortex.

**Josh Klum.** (Co-Supervisor with Dr Trevor Avery). 2021. Differential antifreeze glycoprotein expression among tissue types in *Microgadus tomcod*

**Melanie Smith.** 2020. Exploring expression of *tp53* in Zebrafish, *Danio rerio*, in response to exogenous cannabinoids and stress.

**Jenna Nauss.** 2020. Exploring differential gene expression in striped bass (*Morone saxatilis*) in response to mercury exposure.

**Sydney Tonner** (Co-Supervisor with Dr Dave Shutler). 2020. Putative stress biomarkers in Leach's storm-petrel (*Oceanodroma leucorhoa*) during the breeding season.

**William Bauer** (Co-Supervisor with Dr Don Stewart). 2019. A tale of two mussels: molecular characterization of unionid mussels in Guanacaste province, Costa Rica.

**Aileen Feschuk** (Co-Supervisor with Dr Todd Smith): 2019. Exploring differential gene expression of antimicrobial peptides of the green frog, *Rana clamitans*.

**Kassandra Kelbratowski** (Co-Supervisor with Dr Kirk Hillier): 2019. Plasticity of pheromone chemistry and female olfactory sensitivity in the tobacco budworm moth *Heliothis virescens*.

**Allie Scovil**. 2019. Exploring differential gene expression during wound healing and regeneration in *Asterias rubens*.

**Jack Guthrie** (Co-Supervisor with Dr Brian Wilson): 2019. The effects of stress on the endocannabinoid receptor system in zebrafish (*Danio rerio*).

**Casi Sutherland** (Co-Supervisor with Dr Dave Shutler):2019. Identification of stress biomarkers in leach's storm petrels (*Oceanodroma leucorhoa*) on Bon Portage Island, Nova Scotia. Did not complete due to acceptance into veterinary school.

**Zachary Visser**. 2019. Differential Gene Regulation of promising anti-cancer compounds in zebrafish (*Danio rerio*). Chemistry major.

**Anna Murphy** (Co-Supervisor with Dr Mike Stokesbury): 2019. Identification and characterization of protease activity and protein biomarkers of stress in the epidermal mucus of the Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*).

**Alexandra Brown** 2018. Identification and characterization of northern squid species using quantitative real time PCR.

**Claire Bullock** (Co-Supervisor with Dr Todd Smith): 2018. Influence of epidermal mucus proteins from green frogs, infected by *Hepatozoon clamatae*, on attraction of the mosquito, *Culex territans*.

**Hillary Dort** (Co-Supervisor with Dr Trevor Avery): 2018. Proteomic changes in epidermal mucus profiles of striped bass (*Morone saxatilis*) as a consequence of catch-and-release.

**Cooper Coats** (Co-Supervisor with Dr Jason Berman): 2018. Exploring CRISPR-Cas9 as a tool for editing zebrafish genomes in the study of childhood diseases.

**Makenzie Branch** (Co-Supervisor with Dr David Langelaan). 2018. Optimization, purification and characterization of multiple transcription factors play a major role in up-regulation of melanocytes.

**Roshni Kollipara** (Co-Supervisor with Dr Jon Geske). 2018. Development of diagnostic tools for human and animal health.

**Emma Blanche** (Co-Supervisor with Dr Sophie Cardinal). 2018. Developing molecular and morphological tools to better understand our beneficial native pollinators.

**Leah MacLean**. 2017. Differential gene expression of transcription factor *FoxP3* in zebrafish (*Danio rerio*); Exploring environmental effects on autoimmunity.

**Gillian Johnstone** (Co-Supervisor with Dr Mark Mallory). 2017. Exploring stress biomarkers in an avian model.

**Alexia Hawkey-Noble** (Co-Supervisor with Dr Martin Kalmikoff). 2017. Microbiological flora of wild vs farmed Atlantic salmon (*Salmo salar*).

**Jessica Fahey** (Co-Supervisor with Dr Hong Shu). 2017. The expression of thermotolerant *Campylobacter* species recognized by a monoclonal antibody M1169.

### Research Topics Students:

#### 2022

**Blake Hewins-Higgins:** Proteomic analysis of sea star wasting disease.

**Roman Javorek:** Differential gene expression in key molecular signatures of sea stars experiencing sea star wasting disease.

**Rob Fioretti:** What's killing the silversides off Southwest Cove, Nova Scotia.

**Allison Murphy.** Exploring parasites of freshwater mussels in Nova Scotia.

**Roman Javorek:** Exploring Sea Star Wasting Disease; Parasite, bacteria or virus?

**Holly Turner.** The effects of temperature on an invasive species in Southwest Nova.

#### 2021

**Victoria Enserink.** Sea star wasting disease and sea star associated densovirus.

**Cedric Gravel.** Optimization of PCR conditions for glyceraldehyde-3-phosphate dehydrogenase using Striped Bass (*Morone saxatilis*) tissue.

**Meghan Johnston.** Temperature range and expression of stress biomarker HSP30 in Leach's Storm Petrels (*Oceanodroma leucorhoa*).

**Natalie Scheiring.** The amplification of sea star-associated densovirus in *asterias rubens* infected with sea star wasting disease.

## 2020

**Jordi Chaffer.** Optimizing primers and employing end-point PCR to detect presence of *FoxP3* in zebrafish (*Danio rerio*) following an increase in dietary sodium.

**Victoria Gallant.** Essential oils repellency to ticks sensory regions and gene expression for cytochrome P-450 monooxygenase, acetylcholinesterase, and glutathione-S-transferase.

**Emily MacNeil.** The use of molecular tools to begin the identification of an unknown parasitic cyst found on a guitarfish off the coast of California.

**Rebecca Mader.** Identification of a potential antifreeze glycoprotein gene in striped bass, *Morone saxatilis*, from the Bay of Fundy.

**Calista Richard.** PCR analysis of enzymes *Faah2a*, *Faah2b*, and *NAPEPLD* involved in the production of anandamide.

**Olivia Shive.** The use of SDS-page to identify and compare paralytic toxins in shellfish from the local market.

**Alex Surette.** Determining the effects of cannabiniol on the expression of MHC Class I and II in *Morone saxatilis*.

**Sydney Tonner.** Exploring the presence of sea star associated densovirus in various species of diseased and healthy sea star tissues.

## 2019

**William Bauer.** The effects of the Acadia genebank's cryopreservation procedure on methylation of disease-resistant genes in grapevine.

**Kristen Crewe.** Oral bacteria diversity of *Canis familiaris*, Dorset *Ovis aries* and humans.

**Jack Guthrie.** Investigating and attempting to sequence antifreeze proteins I-IV in striped bass, *Morone saxatilis*.

**Hillary Maillet.** Investigation of possible protein biomarkers of stress in *Oceanodroma leucorhoa* using a proteomic approach.

**Jenna Nauss.** Investigation of parasite X, found in host species *Rhinobactos productus*, using molecular techniques.

**Michaela Okamura.** Extracting, quantifying, and analyzing proteins extracted from frozen feces of *Alces*.

**Yoram Scholl.** Marketing Plan: Lobster Shell Soil.

**Allie Scovil.** Exploring behavioural tendencies and effects of stress on the common sea star, *Asterias rubens*: Genomic analyses through DNA barcoding and sequencing.

**Melanie Smith.** Unknown ectoparasites collected from the gills and fins of the genera *Fundulus* and *Gillichtrys*.

**Zachary Visser.** The exploration of immune-related genes and the interplay with a resident/transient gut microbiome within the tobacco hornworm (*Manduca sexta*).

## 2018

**Emma Blanche.** Exploring sex differences in expression of FoxP3 in response to a high-salt diet using a Zebrafish (*Danio rerio*) model.

**Hillary Dort.** Using DNA barcoding to identify unknown ectoparasites present on Striped Bass (*Morone saxatilis*)

**Varun Dhunna.** The use of molecular Techniques Including Polymerase Chain Reaction, Gel Electrophoresis and Amplicon Sequencing in the Identification of a Gyrodactylus spp.

**Cooper Coats.** Drink like a fish: effects of chronic alcohol exposure on associative learning in adult zebrafish (*Danio rerio*).

**Aileen Feschuk.** Investigating the proteins in mucus secreted by *Cortinarius spp.* In Nova Scotia.

**Denver Gilbert.** Identifying stress biomarkers in the Nova Scotia population of white-tailed deer (*Odocoileus virginianus*).

**Riley Lockhart.** Identifying the role of mushroom mucus: A genomic analysis of *Cortinarius spp.*

**Hillary Maillet.** Investigation of possible protein biomarkers of stress in *Oceanodroma leucorhoa* using a proteomic approach.

**Mark O'Reilly.** Isolation and sequencing of the partial coding sequence of an antifreeze glycoprotein (AFGP) gene in *Microgadus tomcod* and suggestions for novel identification of AFGP genes.

**Liam Rappoldt.** Studying the chemical ecology of stress communication in zebrafish (*Danio rerio*) by protein secretions in epidermal mucosa.



**Alexandra Candice Robart.** (Co-Supervisor with Dr Laura Ferguson). Investigation of the presence of *Wolbachia spp.* in several Lepidoptera and *Drosophila* species using molecular techniques: A research topics study.

**Rebecca Strachan.** Study on the effects of stress on protein content in the epidermal mucus of zebra fish (*Danio rerio*).

**Taylor Luck.** Media testing in an aquaponics system: hydroton expanded clay pellets in comparison to recycled glass growstones.

**Emily Anderson.** Determining partial DNA sequence of *Ligictaluridus monticellii* using DNA extraction, PCR and gel electrophoresis with primers from the *Ancyrocephalidae* family.

## 2017

**Chantalle Byron.** Identification of stress biomarkers in white-tailed deer in nova scotia and their relation to environmental factors.

**Makenzie Branch.** Isolation and identification of the robust and diverse microbial colonies found within a healthy aquaponics system.

**Alexandra Brown.** Proteomic Changes in Epidermal Mucus Profiles of *Morone saxatilis* in Response to Stress.

**Claire Bullock.** A preliminary exploration of the mucosal proteome of *Rana clamitans* with and without the presence of a low *Hepatazoon clamatae* infection.

**Cooper Coats.** The effects of alcohol on the structure and function of the blood brain barrier in adult zebrafish (*Danio rerio*).

**Todd Dow.** A discovery study of the effects of stress on protein content in the epidermal mucus of zebra fish (*Danio rerio*).

**Alexia Hawkey-Noble.** Phylogenetic insight on the channel catfish parasite *Ligictaluridus mirabilis*.

**Gillian Johnstone.** Phylogenetic determination of *Ligictaluridus pricei*.

**Roshni Kollipara.** Modifying fructose transporters in *Escherichia coli*.

**Jordan Kruisselbrink.** Phylogenetic determination of the fish parasite *Ligictaluridus bychowskyi*.

**Leah MacLean.** Molecular analysis of *Ligictaluridis* phylogeny with emphasis on *L. bychowskyi*.

**Rebecca Strachan.** Study on the effects of stress on the protein content of the epidermal mucus of zebra fish (*Danio Rerio*).

## WORKSHOPS

(Development and Implementation)

- a. Molecular Typing of Bacterial Pathogens [Health Canada – Ottawa, ON/Winnipeg, MB]
- b. Polymerase Chain Reaction/RFLP (Training seminars and workshops)
- c. Pulsed Field Gel Electrophoresis, Buenos Aires, Argentina, Winnipeg MB, Ottawa, ON
- d. Molecular Phylogenetics workshops/ Systematics

## GRANTS/RESEARCH FUNDING

### 2022-23

Funds: \$5,000

Project: An exploration of the parasitic relationship between freshwater mussel glochidia and fish hosts and the impacts on fish health and survival in an aquaculture setting.

Co-applicant: Dr Don Stewart

Source: Acadia Raddall Fund

Funds: \$4,835

Project: The impacts of winter climate change on immune gene expression in blacklegged ticks, *Ixodes scapularis*

Co-applicant: Dr Laura Ferguson

Source: Acadia Raddall Fund

Funds: \$4,835

Project: The impacts of winter climate change on immune gene expression in blacklegged ticks, *Ixodes scapularis*

Co-applicant: Dr Laura Ferguson

Source: Acadia Raddall Fund

Funds: \$10,000

Award: Visitorship Award

Source: Harrison McCain Foundation

Funds: \$5,000

Project: Investigating the potential for insect frass to increase Drought tolerance across crops

Source: Engage Grant – in collaboration with Dr Mat Vankoughnett

Source: Industrial Research Assistance Program

Funds: \$25,000

Project: Investigating the potential for insect frass to increase Drought tolerance across crops

Source: Engage Grant – in collaboration with Dr Mat Vankoughnett

Funds: \$4,000

Project: Exploring physiological changes in Chain pickerel (*Esox niger*) and Brook trout (*Salvelinus fontinalis*) in response to habitat shift

Source: Acadia University Research Award Fund 25.55

Funds: \$488,726

Project: Predicting the effects of climate change on the microbial and chemical control of agricultural pests such as obliquebanded leafroller in apple

Source: National Sciences and Engineering Council – Alliance Grant – in collaboration with Dr Shelley Adamo, Dalhousie University, Dr Suzie Blatt, Kentville NS Research Station, Dr Ray Spitteri, University of Saskatchewan.

Funds: \$47,500 X 1, \$37,000 X 4

National Sciences and Engineering Council – Discovery Grant (2019) - 5-year Grant – extended to 2027.

Funds: \$4,000

Project: Exploring thermal stress in chain pickerel in a Nova Scotia tributary

Source: Acadia University Research Fund 25.55 (URF)

Funds: \$47,500 X 1, \$37,000 X 4

Project: Identification of protein stress biomarkers in epidermal mucus of marine fishes

Source: National Sciences and Engineering Council - Discovery Grant

## **2019 - 2021**

Funds: \$47,000

Project: Purchase of a Chemi-Doc Imaging System

Co-applicants: Don Stewart, PhD (Professor: Acadia), Allison Walker, PhD (Associate Professor: Acadia), Trevor Avery, PhD (Professor: Acadia)

Source: National Sciences and Engineering Council (NSERC) Research and Tools, Instruments (RTI)

Funds: \$250,589

Project: Assessing mosquito range expansion and vector potential in Nova Scotia:

Co-applicants: Laura Ferguson, PhD (post-doc: Dalhousie), Todd Smith, PhD (Professor: Acadia), Kirk Hillier, PhD (Professor: Acadia).

Source: Public Health Agency of Canada, Infectious Disease and Climate Change Fund (IDCCF)

Funds: \$5,000

Project: Exploring alternative lobster bait/Molecular analyses  
Co-applicant: Roland Leblanc, Meteghan, NS  
Source: Springboard

Funds: \$9,000  
Co-applicants: Don Stewart, PhD (Professor: Acadia), Allison Walker, PhD (Associate Professor: Acadia).  
Source: Acadia Raddall Fund

Funds: \$55,000  
Project: THC and CBD ratios in cannabis grown in soil or aquaponic systems  
Co-applicant: Brian Wilson, PhD (Professor: Acadia)  
Source: MITACS

### **2017 - 2019**

Funds: \$40,000  
Project: Exploring wild yeasts in Nova Scotia: Part 2 - Proteomics  
Co-applicant: Allison Walker, PhD (Associate Professor: Acadia)  
Source: Nova Scotia Business Institute: Tier 1 and 2 funding

### **2018**

Funds: \$5,000  
Project: Development of an artificial lobster attractant  
Source: Springboard

Funds: \$5,000  
Project: Studies on White Tailed Deer (*Odocoileus virginianus*) in Nova Scotia  
Source: Department of Natural Resources (DNR)

Funds: \$5,000  
Project: Monitoring Striped Bass – stress effects of catch-and-release.  
Source: Acadia University Research Fund 25.55

### **2017**

Funds: \$40,000  
Projects: Development of an artificial lobster bait: Epidermal mucus protein analyses of baitfish.  
Source: Nova Scotia Business Institute Two successful grants with industrial partners.

Funds: \$45,000  
Project: Setup, maintenance and research of an aquaponics facility for plant development.  
Source: Innovacorp

Funds: \$15,000

Project: Development of an aquaponics facility at Acadia University  
Source: Industrial Research Assistance Program (2016/17) Three successful Science and Technology Assistance Grants.

Funds: \$9,000

Project: Identification of Stress Markers in White Tailed Deer (*Odocoileus virginianus*) in Nova Scotia.

Source: The Nova Scotia Habitat Conservation Fund

Funds: \$5,000

Project: Monitoring Striped Bass - stress effects of catch-and-release.

Source: Acadia University Research Fund 25.55

## **2016**

Funds: \$5,000

Project: Monitoring Striped Bass - stress effects of catch-and-release.

Source: Acadia University Research Fund 25.55

## **2010**

Funds: \$100,000 (Contributor)

Project: Exploring changes in gene expression in songbirds in response to maternal or paternal investment.

Source: Nova Scotia Health Research Foundation (NSHRF)

## **2008 – 2012**

Funds: (\$400,000)

Project: Gyrodactylosis in freshwater fishes/Author of molecular/proteomics component

Source: National Sciences and Engineering Council (NSERC)

Note: I also have experience in writing grants for non-profit organizations (>\$80,000). I wrote annual components of Canadian Heritage Grants that covered programming aspects of the Lunenburg Folk Harbour Society where I acted as artistic director for 7 years. These grants were essential to the organization and allowed continuation of the festival for over 30 years.

## **PEER REVIEWED PUBLICATIONS**

(Bold Indicates student)

Leis, E., Easy, R.H., Cone D. 2021. A variant of *Gyrodactylus mediotorus* King, Marcogliese, Forest, McLaughlin and Bentzen, 2013 (Monogenea) identified from weed shiner (*Notropis texanus*) in Wisconsin portions of the upper Mississippi River. Systematic Parasitology. . 98:247-253.

**William G. Bauer**, Donald T. Stewart, Rebeca Quesada Céspedes, Sidey Arias Valverde, and Russell H. Easy. 2021. DNA Barcoding of Invasive Chinese Pond Mussels in Guanacaste, Costa Rica Supports Hypothesis of Taiwanese Origin. *Neotropical Naturalist*. 5:1-8.

**Anna E. Murphy**, Michael J. W. Stokesbury, Russell H. Easy. 2020. Exploring Epidermal Mucus Protease Activity as an Indicator of Stress in Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*). *J Fish Biology*. <https://doi.org/10.1111/jfb.14489>

**Mengfei Cao**, Ling Tang, Juan Chen, Xiaoyu Zhang, Russell H. Easy, Ping You. 2020. The mitogenome of freshwater loach *Homatula laxiclathra* (Teleostei: Nemacheilidae) with phylogenetic analysis of Nemacheilidae. *Ecology and Evolution*. <https://doi.org/10.1002/ece3.6338>

Leis, E. Easy R., **Scovil A.**, Cone D.K., Cloutman D.G., McAllister C.T., Robison H.W. 2020. *Urocleidus sayanus* n. sp. (Monogeneoidea: Dactylogyridae) from gills of pirate perch (*Aphredoderus sayanus*), U.S.A. *Systematic Parasitology*. DOI: 10.1645/20-36

Yang, Z, Easy RH. 2019. Science Atlantic 2020 Aquaculture & Fisheries and Biology Conference. Undergraduate Research in Natural and Clinical Science and Technology Journal. DOI Link: <https://doi.org/10.26685/urncst.142>

White K, Easy RH, **Gillis Rebecca**. 2020. Science Atlantic 2020 Aquaculture & Fisheries and Biology Conference. Undergraduate Research in Natural and Clinical Science and Technology Journal. DOI Link: <https://doi.org/10.26685/urncst.196>

Leis, E., LeBlanc, R., Easy, R., **Dort, H.**, Cone D. 2020. Supplemental diagnosis of *Gyrodactylus nebulosus* Kritsky and Mizelle, 1968 (Monogenea) on 0+ age *Ameiurus nebulosus* (Siluriformes) considered for commercial grow-out in southwestern Nova Scotia, Canada. *Parasitology Research*. 119(3):1149-1153.

**Miyashita, A.**, Lee, M., **McMillan, L.E.**, Easy, R.H., Adamo, S., 2020. Terminal reproductive investment, physiological trade-offs and pleiotropic effects: Their effects produce complex immune/reproductive interactions in the cricket, *Gryllus texensis*. PLOS ONE. <https://doi.org/10.1371/journal.pone.0209957>

Leis, E., Easy, R.H., Cone D. 2018. Supplemental diagnosis of *Gyrodactylus fairportii* VanCleave, 1921 (Monogenea) from 1-month old black bullhead (*Ameiurus melas*) in riverside pools in Wisconsin. *Parasit Res*. 117(4): 1265-1269.

Leis, E., Easy, R.H., **MacLean L.**, Cone D. 2018. *Ligictaluridus michalorum* n. sp. (Monogenea: Ancyrocephalidae) from flathead catfish (*Pylodictis olivaris*) in the upper Mississippi River, including remarks on taxonomy influencing monogenean treatment regulation in the United States. *Parasit Res*. 117(3): 825-830.

Adamo, S., Easy, R.H., **Kovalko, I.**, **MacDonald, J.**, **McKeen, A.**, Swanburg, T.\*, **Turnbull, K.**, Reeve, C. 2017. Predator exposure-induced immunosuppression: trade-off, immune redistribution or immune reconfiguration? J Exp Biol. doi: 10.1242/jeb.153320

Adamo, S., **Kovalko, I.**, **Turnbull, K.**, Easy, R.H., Miles, C.I., 2016. The parasitic wasp *Cotesia congregata* uses multiple mechanisms to control host (*Manduca sexta*) behaviour. J Exp Biology. doi: 10.1242/jeb.145300

**Ye, F.**, Easy, R.H., Cone, D.K., You, P. 2016. Comparative analyses within *Gyrodactylus* (Platyhelminthes: Monogenea) mitochondrial genomes and conserved polymerase chain reaction primers for gyrodactylid mitochondrial DNA. J Fish Dis. DOI: 10.1111/jfd.12539

Leis, E., Easy, R.H., Cone D. 2016. A report of the potential pathogen *Pseudocapillaria* (*Pseudocapillaria*) *tomentosa* (Dujardin, 1843) (Nematoda) from red shiner (*Cyprinella lutrensis*) shipped from Missouri to Wisconsin. Comp Parasit. 83(2): 273-276.

Adamo, S.A., **Davies, G.**, Easy, R.H., **Kovalko, I.**, Turnbull, K.\*. 2016. Reinventing yourself: Reconfiguration of the immune system network during food limitation in the caterpillar *Manduca sexta*. J Exp Biology. 219: 706-718.

Adamo, S.A., **Kovalko, I.**, Easy, R.H., Stoltz, D., 2014  
A viral aphrodisiac: The effects of an iridovirus on its cricket host, *Gryllus texensis*.  
J Exp Biology. 1; 217(Pt11):1970-6.

Easy, R.H., Trippel, E.A., Burt, M.D., Cone, D.K. 2012. Identification of Transferrin in Atlantic Cod *Gadus morhua* Epidermal Mucus. J Fish Biol. 81(6): 2059-63.

Easy, R.H., Ross, N.W. 2010. Changes in Atlantic salmon (*Salmo salar*) epidermal mucus following short and long-term handling stress. J Fish Biol. 77(7): 1616-1631.

**Mullen, A.J.**, Cone, D.K., Easy, R.H., Burt, M.D. 2010. Taxonomy and host-specificity of *Gyrodactylus aideni* n. sp. and *G. pleuronecti* (Monogenea: Gyrodactylidae) from *Pseudopleuronectes americanus* (Walbaum) in Passamaquoddy Bay, New Brunswick, Canada. J Parasitol. 77(3): 233-239.

Easy, R.H., Cone, D.K. 2009. Taxonomy of *Myxobolus ridouti* N. sp. and *M. ridgwayi* n. sp. (Myxozoa) from *Pimephales notatus* and *Semotilus atromiculatus* (Cypriniformes) in Ontario. J Parasitol. 95(6): 1446-1450.

Easy, R.H., Ross, N.W. 2009. Changes in the Atlantic salmon (*Salmo salar*) epidermal mucus protein composition profiles following infection with sea lice (*Lepeophtheirus salmonis*). Comparative Biochemistry and Physiology. Part D. Genomics and Proteomics. 4(3):159-167.

Easy, R.H. 2008. Gyrodactylosis: a molecular approach. Proceedings NSERC Gyrodactylus workshop, Huntsman Marine Science Centre, St. Andrews, New Brunswick, Canada.

- Adamo, S.A., **Roberts, J.L.**, Easy, R.H., Ross, N.W. 2008. Competition between immune function and lipid transport for the protein apolipoprotein III leads to stress-induced immunosuppression in crickets. *J Exp Biol.* 211:531-538.
- You, P., Easy, R.H., Cone, D.K. 2008. *Gyrodactylus parvi* n. sp. (Monogenea) from the fins and body surface of *Pseudorasbora parva* (Cyprinidae) in central China. *Comp Parasit.* 75(1):28-32.
- You, P., Yaun, P., Yang, J., Easy, R.H., Dong, Z., Cone, D.K. 2006. Intense infections of *Gyrodactylus brachymystacis* (Monogenea) on *Oncorhynchus mykiss* (Salmoniformes) at a fish farm in the Qinling Mountain region of China. *J Fish Dis.* 29:313-316.
- Fast, M.D.**, Muise, D.M., Easy, R.H., Ross, N.W., Johnson, S.C. 2006. The effects of *Lepeophtheirus salmonis* infections on the stress response and immunological status of Atlantic salmon (*Salmo salar*). *Fish Shell Immun.* Sep; 21(3):228-41.
- Easy, R.H., Johnson, S.C., Cone, D.K. 2005. Morphological and molecular comparison of *Myxobolus procerus* and *M. intramusculari* n. sp. (Myxozoa) parasitizing muscle of trout-perch (*Percopsis omiscomaycus*). *Syst. Parasit.* 61:115-122.
- Cone, D.K., Easy, R.H., 2005. Supplemental diagnosis and molecular taxonomy of *Myxobolus diaphanus* (Myxozoa) parasitizing *Fundulus diaphanus* (Cyprinodontidae) in Nova Scotia, Canada. *Folia Parasit (Praha).* 52(3):217-22.
- 30** Cone, D.K., Yang, J., Sun, G., Easy, R.H. 2005. Taxonomy and molecular phylogeny of *Myxobolus bilobus* n. sp. (Myxozoa) parasitizing *Notemigonus crysoleucas* (Cyprinidae) in Algonquin Park, Ontario, Canada. *Dis Aqua Org.* 66 (3):227-32.
- F Akaishi**, Easy, R.H., S St-Jean, S Courtenay, CA de Oliveira Robeiro, DK Cone. 2004. Supplemental Diagnosis of *Kudoa funduli* (Myxozoa) Parasitizing *Fundulus heteroclitus* (Cyprinodontidae) from Coastal Northeastern North America. *J Parasit.* 90(3): 477- 80.
- Demczuk, W., Soule, G., Clark, C., Ackermann, H.W., Easy, R.H., Khakhria, R., Rodgers, F., Ahmed, R. 2003. Phage-based typing scheme for *Salmonella enterica* serovar Heidelberg, a causative agent of food poisonings in Canada. *J Clin Micro.* 41(9): 4279-84.
- Clark, C.G., Johnson, S.C., Easy, R.H., **Campbell, J.L.**, Rodgers, F.G. 2002. PCR for detection of cdt-III and the relative frequencies of cytolethal distending toxin variant-producing *Escherichia coli* isolates from humans and cattle. *J Clin Micro.* 40(7): 2671-4.
- Macdonald, C., Drew, J., Carlson, R., Dzogan, S., Tataryn, S., Macdonald, A., Ali, A., Amhed, R., Easy, R.H., Clark, C., Rodgers, F. 2000. Outbreak of *Escherichia coli* O157:H7 leading to the recall of retail ground beef--Winnipeg, Manitoba, May 1999. *Can Comm Dis Rep.* 26(13): 109-11.



There are also numerous (>10) research projects on which I am a contributor. However, due to intellectual property considerations, these studies have not yet been published (e.g. sea lice vaccine development).

### MANUSCRIPTS IN PREPARATION

(Bold Indicates student)

Easy RH, **H. Dort**, A. Brown and T. Avery. 2019. Identifying Epidermal Mucus Proteins in Striped Bass (*Morone saxatilis*) as a result of Angling Stress.

**Gillian F Johnstone**, Dave Shutler, Mark Mallory, **Hillary Maillet** and Russell H Easy. 2019. Exploring stress biomarkers in an avian model.

Wilson B, **Strachan R** and Easy RH. Exploration of alarm responses in zebrafish.

**Leah MacLean** and Russell H Easy. Exploring the genetic basis of autoimmune disease through the differential expression of foxp3 in zebrafish (*Danio rerio*) following an increase in dietary sodium.

RH Easy. Molecular Mechanisms of Stress: A Review.

**Coats, J.**, Easy, R. Wilson, B. and Miller, D.W. Effects of chronic ethanol exposure on spatial learning and blood-brain barrier function in zebrafish.

Leis, E., R. Easy and D. Cone. *Tetraonchus monenteron*, a parasite of northern pike (*Esox lucius*). To be submitted. Systematic Parasitology

### MANUSCRIPT REVIEWER

(Occasional)

Journals:

- a. Aquaculture International
- b. Ecology of Freshwater Fishes
- c. Fish Physiology and Biochemistry
- d. Journal of Fish Diseases

### CONFERENCE PRESENTATIONS

(Bold Indicates student; Asterisk indicates speaker)

Russell Easy\*. 2023. Alternative Methods for Exploring Stress in Fish. University of New Brunswick, Saint John. Invited speaker.

Russell Easy\*. 2023. Exploring Biomarkers of Stress in Fish: Challenges in Downtown Dwellings. American Fisheries Society, Grand Rapids, Michigan, USA. Invited speaker for Symposium.

Russell Easy\*. 2023. Exploring Biomarkers of Stress in Fish. Universidad Nacional Costa Rica. Invited talk.

**Mia Lauzon\***, Easy, R., Ferguson, L. 2023. Impacts of Pathogen Infection on the Winter Behaviour and Physiology of the Black-Legged Tick, *Ixodes scapularis*. Science Atlantic Annual Meeting. Saint John, New Brunswick. [Won best student oral presentation].

**Emma-Jean Freeman\***, Easy, R., Stewart, D., 2023. An Exploration of Methods to Measure Stress in Aquaculture Fish Caused by Parasitic Freshwater Mussel Glochidia. Science Atlantic Annual Meeting. Saint John, New Brunswick.

**Sam Nunn\***, Easy, R., 2023. Exploring Immune Gene Expression in Striped Bass (*Morone saxatilis*) in Response to Mercury Contamination. Science Atlantic Annual Meeting. Saint John, New Brunswick.

**Mckenzie Brown\***, Easy, R., 2022. Investigating the effects of stress and CBD treatment on zebrafish epidermal mucus protein composition. Atlantic International Chapter of the American Fisheries Society. Newry, Maine, USA.

**Sam Nunn\***, Easy, R., 2022. Exploring differential expression of MHC related genes in Striped Bass (*Morone saxatilis*) in response to mercury contamination. Atlantic Chapter of the American Fisheries Society. Newry, Maine, USA.

**H. Dort**, T. Avery, Easy RH\*. 2022. Identifying Epidermal Mucus Proteins in Striped Bass (*Morone saxatilis*) as a result of Angling Stress. Atlantic International Chapter of the American Fisheries Society. Spokane, Washington, USA.

**Freeman, E.G\***, Adamo, S., Blatt, S., Easy, R.H. Canadian Society of Zoology. Moncton, NB (Virtual). 2022. An Exploration of the Impacts of Temperature Stress on an Agricultural Insect Pest, the Oblique Banded Leafroller (*Choristoneura rosaceana*).

**Swanburg, T. L.<sup>1\*</sup>**, Easy, R. H.<sup>1</sup>, Hillier, N. K.<sup>1</sup>, Smith, T. G.<sup>1</sup>, Ferguson, L. V.<sup>1</sup> Canadian Society of Zoology. Moncton, NB (Virtual). 2022. Detecting the Spread of Invasive Mosquitoes and Disease Potential in Nova Scotia

Russell Easy\*. 2022. Stress: What is it good for? Lesson from fish. Universidad Nacional Costa Rica. Invited talk.

**Freeman, E.G\***, Adamo, S., Blatt, S., Easy, R.H. An Exploration of the Impacts of Temperature Stress on an Agricultural Insect Pest, the Oblique Banded Leafroller (*Choristoneura rosaceana*). 2022 . Science Atlantic. (Virtual)

**Cedric Gravel\***, Russell H Easy, Baptiste LaCoste. The Vascular and Neuronal Effects of Astrocytic HmGB1. Science Atlantic. (Virtual)

Russell Easy. 2021. The Parasitic Freshwater Mussel. Back to Costa Rica. Atlantic Canada Association of Parasitology, Pictou, NS.

Neuropeptide regulation of anti-diuresis: the role of CAPA in the female mosquito, *Aedes aegypti*. 2021. **Bauer, W. G.**<sup>1\*</sup>, Easy, R. H.<sup>1</sup>, Quesada, R. C.<sup>2</sup>, Arias, S.<sup>2</sup>, Stewart, D. T.<sup>1</sup> Sajadi, F.<sup>1\*</sup>, Paluzzi, JP.<sup>1</sup> (Accepted but not presented due to COVID)

DNA Barcoding Reveals one Invasive, and Additional Previously Undescribed Species of Unionids. 2021. **Bauer, W. G.**<sup>1\*</sup>, Easy, R. H.<sup>1</sup>, Quesada, R. C.<sup>2</sup>, Arias, S.<sup>2</sup>, Stewart, D. T.<sup>1</sup> (Accepted but not presented due to COVID)

**Zhe Yang\***, Russell Easy, Trevor Avery. 2020. Identification and quantification of Atlantic Salmon *Salmo salar*, Arctic char *Salvelinus alpinus*, Cod *Gadus morhua*, and Capelin *Mallotus villosus* in Striped Bass diets in Labrador, Canada. Society for Integrative Biology. Austin, Texas.

Russell H Easy\*. 2019. Exploring Parasite Diversity in Fish: A Molecular and Morphological Journey. Atlantic International Chapter of the American Fisheries Society, Cardigan, PEI.

**Aileen Feschuk\***, Todd Smith, Russell Easy. 2019. AMPing up the temperature in green frogs. Atlantic Canada Association of Parasitology, Pictou, NS.

**William Bauer\***, Don Stewart, Russell Easy. 2019. The mussel larval stage: how an underappreciated parasite is a conservation issue. Atlantic Canada Association of Parasitology, Pictou, NS.

**A Scovil\***, RH Easy. 2019. Exploring differential gene expression during wound healing and limb regeneration in the common sea star, *Asterias rubens*. Canadian Society of Zoology. Windsor, ON,

**A Scovil\***, RH Easy. 2019. Exploring differential gene expression during wound healing and limb regeneration in the common sea star, *Asterias rubens*. Association for Graduate Studies Conference, Acadia University.

**Z Visser\***, RH Easy. 2019. Gene Expression Profiles of Potential 6-4-Hydroxypiperidino naphthalen-2-ol-based Selective Estrogen Receptor Modulators in Banded Killifish *Fundulus diaphanous*. Association for Graduate Studies Conference, Acadia University.

**J Guthrie\***, B Wilson, RH Easy. 2019. The effects of handling stress on cannabinoid receptors in killifish, *Fundulus heteroclitus*. Association for Graduate Studies Conference, Acadia University.

**A Murphy\***, RH Easy, M Stokesbury, 2019. Identification and characterization of protease activity and potential protein biomarkers of stress in the epidermal mucus of the Atlantic sturgeon *Acipenser oxyrinchus*. Association for Graduate Studies Conference, Acadia University. [Won best poster award]

**C Feltham\***, S Mockford, RH Easy. 2019. A new population of Blanding's turtles *Emydoidea blandii* in Kespukwitk. Association for Graduate Studies, Acadia University.

**H Dort\***, T Avery, RH Easy. 2018. Proteomic changes in epidermal mucus profiles of striped Bass (*Morone saxatilis*) as a Consequence of Angling Stress. Atlantic International Chapter of the American Fisheries Society. Vergennes, Vermont, USA.

**H Dort\***, RH Easy. 2018. Solving for Parasite X: Morphological and Molecular Identification of Unknown Parasites in the Shovelnose Guitarfish *Rhinobatos productus*. Atlantic Canada Association of Parasitology, Pictou, NS.

**E Blanche\***, RH Easy. 2018. Viral spread of Black Queen Cell Virus in managed and wild bees in Canada. Science Atlantic. Atlantic Canada Association of Parasitology, Pictou, NS.

**H Dort\***, T Avery, RH Easy. 2018. Identification of Protein Biomarkers in Epidermal Mucus of Striped Bass (*Morone saxatilis*) as a Consequence of Angling Stress. Canadian Society of Zoology. St. Johns, NFLD.

**A Brown\***, RH Easy. 2018. A phylogenetic classification of Nova Scotian longfin squid species *Doryteuthis pealeii*. Science Atlantic. St. Johns, NFLD.

**E Blanche\***, RH Easy. 2018. Viral spread of Black Queen Cell Virus in managed and wild bees in Canada. Science Atlantic. St. Johns, NFLD.

**C Coats\***, RH Easy. 2018. Anthracycline-induced cardiotoxicity ACT prevention using RARg-agonists in a zebrafish model. Science Atlantic. St. Johns, NFLD.

**M Branch\***, RH Easy. 2018. Characterizing the oncogenic protein-protein interaction between the microphthalmia associated transcription factor and CBP/p300. Science Atlantic. St. Johns, NFLD.

**H Dort\***, T Avery, RH Easy. 2018. Identification of Protein Biomarkers in Epidermal Mucus of Striped Bass (*Morone saxatilis*) as a Consequence of Angling Stress. Science Atlantic. St. Johns, NFLD.

**A Brown\***, RH Easy. 2017. Molecular identification of endoparasites of Northern squid *Doryteuthis pealeii*. Atlantic Canada Association of Parasitology, Pictou, NS.

**H Dort\***, RH Easy. 2017. Using DNA barcoding to identify an unknown parasite of striped bass *Morone saxatilis*. Atlantic Canada Association of Parasitology, Pictou, NS.

**C Bullock\***, L Ferguson, RH Easy, T Smith. 2017. The role of the skin microbiome in the attraction of mosquitoes *Culex territans* to green frogs *Rana clamitans* infected with *Hepatozoon* blood parasites. Atlantic Canada Association of Parasitology, Pictou, NS.

**L MacLean**, RH Easy\*. 2017 Exploring the genetic basis of autoimmune disease through the differential expression of *foxP3* in zebrafish (*Danio rerio*) following an increase in dietary sodium. Canadian Society for Ecology and Evolution. Victoria, BC.

**G Johnstone\***, M Mallory, RH Easy. 2017. Exploring stress biomarkers in an avian model. Canadian Society for Ecology and Evolution. Victoria, BC.

RH Easy\*. 2015 The Power of Proteomics in Exploring the Mechanics of Parasitism; Parasiteomics (sic). Atlantic Canada Association of Parasitology ACAP, Pictou, NS.

RH Easy\*, DK Cone, SA Adamo. 2013 Parasitism and the Trade-Off Between Resistance and Tolerance Mechanisms. Atlantic Canada Association of Parasitology ACAP, Pictou, NS.

RH Easy\*, DK Cone, SA Adamo. 2013 Stress, The Parasites Friend; Stress Effects on Immune Function Are Tied into Molecular Networks. *American Society for Parasitologists*, Richmond, Virginia.

RH Easy\*, SA Adamo. 2012 Interactions Between the Immune Response and Stress Response in Insects Cricket, *Gryllus texensis*: Conflict and Collaboration. *Canadian Society of Zoology*, Sackville, NB.

RH Easy\*, SA Adamo. 2012 Pitting the Stress Response Against the Immune Response: Changes in Gene Expression in the Texas Field Cricket *Gryllus texensis*. *Society for Integrative and Comparative Biology*, Charleston, South Carolina.

RH Easy\*, SA Adamo. 2011 Potential for Neuro-Immune Communication in the Cricket *Gryllus Texensis*: Evidence for an Octopamine Receptor in Hemocytes. *International Congress on Invertebrate Pathology and Microbial Control*, Halifax, NS

RH Easy\*, SA Adamo. 2011 Of Wasps and Worms: Exploring Parasitic Manipulation of the Host. *Atlantic Canada Association of Parasitology ACAP*, Pictou, NS.

RH Easy\*, DK Cone. 2011 The Proteomic Interface of Stress, Parasites, and Hosts: Lessons from Salmon and Cod. *American Society for Parasitologists*, Anchorage, Alaska.

RH Easy\*, SA Adamo. 2010 It's All in the Expression – The Cricket's Tale *Psychology and Neuroscience Conference*, Dalhousie University, Halifax, NS.

RH Easy\*, SA Adamo. 2010 Biogenic amine receptor gene expression in the immune system and nervous system of the Texas field cricket *Gryllus texensis*. *Society for Comparative and Integrative Biology*, Salt Lake City, Utah.

RH Easy\*. 2010 Changes in Cod and Salmon Epidermal Mucus Proteins in Response to Stress. *Atlantic Canada Association of Parasitology*, Pictou, NS.

RH Easy\*, DK Cone. 2010 Changes in Cod and Salmon Epidermal Mucus Proteins in Response to Stress. *American Society for Parasitologists*, Colorado City, Colorado.

RH Easy\*, SA Adamo. 2009 The Cricket's Tale – How to survive at the bottom of the food chain. *Psychology and Neuroscience Conference*, Dalhousie University, Halifax, NS.

RH Easy\*. 2009 *Gyrodactylus* and Cod: A Proteomic Puzzle. *Atlantic Canada Association of Parasitology*, ACAP, Pictou, NS.

RH Easy\*, SA Adamo. 2008 From DNA to proteins – The Cricket's Tale – Part One. *Psychology and Neuroscience Conference*, Dalhousie University, Halifax, NS

RH Easy\*. 2008 Sea Lice Infection and the Stress Response. *Atlantic Canada Association of Parasitology* ACAP, Pictou, NS.

RH Easy\*. 2008 Sea Lice Infection and the Stress Response. *ACCESS*, Sydney, NS.

RH Easy\*, NW Ross. 2008 Proteomic Analysis of The Epidermal Mucus of Atlantic Salmon *Salmo salar*: Biological Indicators of Stress. *APICS*, St. John, NB.

RH Easy\*, NW Ross. 2008 Proteomic Analysis of The Epidermal Mucus of Atlantic Salmon *Salmo Salar*: Biological Indicators of Stress. *Aquaculture Association of Nova Scotia*, Halifax, NS.

RH Easy\*, NW Ross. 2008 Proteomic Analysis of The Epidermal Mucus of Atlantic Salmon *Salmo Salar*: Biological Indicators of Stress. *International Congress on the Biology of Fish*, St. John's, NFLD.

RH Easy\*. 2007 Changes in the proteome of Atlantic salmon mucus following infection by sea lice *Lepeophtheirus salmonis*. *Atlantic Canada Association of Parasitology*, Pictou, NS.

RH Easy\*, EE EgboSimba, NW Ross. 2007 Identification of a protease in hemolymph of spawning mussels *Mytilus edulis*. *Aquaculture Association of Nova Scotia*, Halifax, NS.

RH Easy\*, NW Ross. 2007 Proteomics Of Atlantic Salmon Mucus – Response To Stressors, Vaccination and *Aeromonas salmonicida* Infection. *Genome Health Initiative, Annual General Meeting*, Gatineau, Que.

RH Easy\*, NW Ross. 2006 A Case for Fish Mucus: Its Role in Innate Immunity *Aquaculture Association of Canada*, Halifax, NS.

RH Easy\*. 2006 Myxozoans: A view from the inside. *National Research Council: Institute for Marine Biosciences*. Halifax, NS.

RH Easy\*. 2006 Examination of a presumed single species of *Myxobolus neurophilus* in two freshwater fish: molecular and morphological analysis. *Atlantic Canada Association of Parasitology*, St. Andrews, NB.

RH Easy\*, DK Cone. 2005 Morphological and molecular comparison of *Myxobolus procerus* and *M. intramusculari* n. sp. Myxozoa parasitizing muscle of trout-perch *Percopsis omiscomaycus*. *Atlantic Canada Association of Parasitology*, Moncton, NB.

RH Easy\*, DK Cone. 2004 Examination of a presumed single species of *Myxobolus neurophilus* in two freshwater fish: molecular and morphological analysis. *Canadian Society of Zoology*, Wolfville, NS.

RH Easy\*, DK Cone. 2004 Morphological and molecular comparison of *Myxobolus procerus* and *M. intramusculari* n. sp. Myxozoa parasitizing muscle of trout-perch *Percopsis omiscomaycus*. *European Association of Fish Pathologists*, Valleta, Malta.

RH Easy\*, DK Cone. 2004 Identification Of A Single Genotype In Spores From Morphologically Distinct Cysts Of *Myxobolus procerus* In Trout-Perch *Percopsis omiscomaycus*. *American Society for Parasitologists*, Halifax, NS.

RH Easy\*. 2004 Molecular Typing of Parasites. *Atlantic Canada Association of Parasitology*, Fredericton, NB.

### INVITED SEMINARS

Russell Easy\*. 2023. Exploring Alternatives Methods for Determining Stress in Fish. University of New Brunswick, Saint John. Invited speaker.

Russell Easy\*. 2023. Exploring Biomarkers of Stress in Fish: Challenges in Downtown Dwellings. American Fisheries Society, Grand Rapids, Michigan, USA. Invited speaker for Symposium.

Russell Easy\*. 2023. Exploring Biomarkers of Stress in Fish. Universidad Nacional Costa Rica. Invited talk.

Russell Easy. 2022. Stress: What is it good for? Lesson from fish. Universidad Nacional Costa Rica. Invited talk.

Russell H Easy. 2019. Exploring Parasite Diversity in Fish: A Molecular and Morphological Journey. Atlantic International Chapter of the American Fisheries Society, Cardigan, PEI.

RH Easy. 2017 Identification of Stress Markers in White Tailed Deer (*Odocoileus virginianus*) in Nova Scotia. Annual General Meeting – Hunters and Anglers of Nova Scotia. Truro, NS.

RH Easy. 2016 Exploring Health and Disease - Let's Talk Science. Association of Science Teachers of Nova Scotia. Halifax, NS.

RH Easy. 2014 A World of Microbes - Exploring Bacteria, Viruses and Parasites and How We Can't Live Without Them. Association of Science Teachers of Nova Scotia. Halifax, NS. 2016

RH Easy. 2013 A World of Microbes - Exploring Bacteria, Viruses and Parasites and How We Can't Live Without Them. Association of Science Teachers of Nova Scotia. Halifax, NS. 2015

RH Easy. 2011 A Molecular Odyssey: From Bacteria to Fish to Crickets  
*Institute for Veterinary Pathology, Keldur, Reykjavik, Iceland*

RH Easy. 2011 The Proteomic Interface of Stress, Parasites, and Hosts: Lessons from Cod.  
*National Science and Engineering Research Council. Sea Lice/Loma workshop, St. Andrews, NB*

RH Easy. 2011 A World of Microbes - Exploring Bacteria, Viruses and Parasites and How We Can't Live Without Them. *Association of Science Teachers of Nova Scotia*. Halifax, NS.

RH Easy. 2009 A World of Microbes - Exploring bacteria, viruses and parasites and how we can't live without them. *Association of Science Teachers of Nova Scotia*. Halifax, NS.

RH Easy. 2008 A World of Microbes - Exploring bacteria, viruses and parasites and how we can't live without them. *Association of Science Teachers of Nova Scotia*.

RH Easy. 2008 Proteomics and Cod: Protein Signatures as an Indicator of Fish Stress.  
*National Science and Engineering Research Council - Gyrodactylus workshop, St. Andrews, NB*.

RH Easy. 2004 *Aeromonas salmonicida* and Atlantic Salmon *Salmo salar*. *Genome Health Initiative, Annual General Meeting, Winnipeg, MB*.

RH Easy. 2004 Pulsed Field Gel Electrophoresis of Fish Pathogens. *Genome Health Initiative, Annual General Meeting, Halifax, NS*.

## **PROFESSIONAL MEMBERSHIPS**

- a. Canadian Society of Ecology and Evolution (CSEE)
- b. Society for Integrative and Comparative Biology (SICB)
- c. American Society for Parasitologists (ASP)
- d. Canadian Society for Zoology (CSZ)
- e. Pan American Marine Biotechnology Association (PAMBA)

## **SERVICE – UNIVERSITY AND COMMUNITY**



- a. Appointed: NSERC Scholarships and Fellowships Selection Committee for Cellular and Molecular Biology for a three-year term (2022-present)
- b. President Atlantic International Chapter of the American Fisheries Society (2022-present)
- c. Honours Coordinator Acadia University (2018-present)
- d. Acadia Faculty Representative Science Atlantic (2017-present)
- e. Presidential Appointee Acadia Sabbatical leave committee (2020-22)
- f. Member Acadia Rhodes Awards Committee (2019-present)
- g. Board member Science Atlantic (2018-2021)
- h. Chair Science Atlantic, Biology (2018-2022)
- i. Vice President Atlantic International Chapter of the American Fisheries Society (2017-2022)
- j. Co-coordinator Bon Portage Field Course – Acadia University (2017-2020)
- k. Director Blue Dream Project (2017-2022)

Other activities:

- l. Lectures and presentations for Scientists in Schools (Manitoba, Ontario, Nova Scotia, Nunavut - > 100 presentations and science fair judging
- m. Yearly presenter for Association of Science Teachers of Nova Scotia
- n. Canada Wide Science Fair: (Captain and co-captain)
- o. BioBlitz – Education Coordinator – St. Mary’s University
- p. Outreach Committee – St. Mary’s University
- q. Artistic Director for Lunenburg Folk Harbour Society, Lunenburg, NS
- r. Director at large Lunenburg Folk Harbour Society, Lunenburg, NS
- s. Volunteer of the Year - Town of Lunenburg
- t. East Coast Music Awards (ECMA) Nominee for Event of the Year
- u. Musician/performer mentor East Coast Music Association
- v. Volunteer member of Chester Playhouse, Chester, NS. Volunteer of the Year (2008)
- w. Member of School Advisory Council Southwest Regional School Board, Chester Basin, NS [Secretary]
- x. Volunteer as scientific staff with the Bedford Institute of Oceanography for Hudson Research Cruise, Halifax, NS
- y. Instruction and demonstration of scientific techniques to the public in open-house forums including Sci –Trek (CSCHAH), Winnipeg, MB
- z. Instruction and demonstration of rehabilitation activities with the Rehabilitation Institute of Canada, Ottawa, ON (1986-1989)

## **MEDIA INTERVIEWS**

(While at Acadia)

February 2019: Science Atlantic Interview. <https://scienceatlantic.ca/member-story-entry-one-Dr-russell-easy/>

February 2019: Interview with Rural Delivery – Yeast project

December 2018: CTV Atlantic Live TV interview discussing Saltbox: Acadia partnership to discuss cultivation and proteomic characterization of wild yeasts.

December 2018: Chronicle Herald Interview for yeast project. See <https://www.thechronicleherald.ca/news/local/acadia-profs-south-shore-brewer-collaborate-to-cultivate-nova-scotia-wild-yeast-268196/>

October 2018: Radio interview with News 95.7 discussing yeast project. See <https://www.halifaxtoday.ca/local-news/craft-brewery-experimenting-with-local-yeast-strains-1082880>

November 2016: Interview Information Morning (with Don Connolly) discussing stress research on white-tailed deer in Nova Scotia. See <https://www.cbc.ca/news/canada/nova-scotia/deer-liver-research-acadia-university-nova-scotia-1.3839758>