

Ottawa-Carleton Institute of Biology  
22<sup>nd</sup> Annual Symposium  
April 28-29, 2025

---



Adapting to Change and Challenges

## Symposium Program



## Welcome to the OCIB 2025

The Ottawa-Carleton Institute of Biology is an institutional collaboration between the Biology Departments at the University of Ottawa and Carleton University. OCIB members have significant expertise in physiology, botany, biochemistry, neuroscience, molecular biology, genetics, bioinformatics, evolution, and toxicology – just to name a few. The OCIB facilitates interdisciplinary research, and collaboration between the two universities and external partners.

## Table of Contents

|                           |    |
|---------------------------|----|
| Schedule at a Glance..... | 3  |
| Keynote Speakers.....     | 4  |
| PubTalk.....              | 5  |
| Panel.....                | 6  |
| Locations.....            | 7  |
| Presentation Program..... | 8  |
| Poster Program.....       | 14 |
| Sponsor Information.....  | 18 |

## Thank you to our Sponsors !



No photos or videos allowed of any scientific presentation, including posters, without explicit permission from the presenter.



## Monday April 28<sup>th</sup>, 2025

|                  |   |           |
|------------------|---|-----------|
| 11:00 - 12:45 pm | Registration  | CRX Lobby |
| 12:45 - 1:00 pm  | Opening Remarks   | CRX C104  |
| 1:00 - 2:00 pm   | Keynote : Dr. Matthew Pamerter - "What can extremophiles teach us about life in a warming and hypoxic world?" | CRX C104  |
| 2:00 - 2:30 pm   | 3 Minute Thesis Presentations   | CRX C104  |
| 2:30 - 2:45 pm   | Coffee Break  | CRX Lobby |
| 2:45 - 3:45 pm   | Poster Session: Even Numbers  | CRX Lobby |
| 3:45 - 4:00 pm   | Coffee Break  | CRX Lobby |
| 4:00 - 5:00 pm   | Poster Session: Odd Numbers   | CRX Lobby |
| 5:00 - 5:20 pm   | Closing Remarks   | CRX C104  |

## Tuesday April 29<sup>th</sup>, 2025

|                  |   |  |
|------------------|---|--|
| 8:00 - 8:45 am   | Registration  | CRX Lobby                                    |
| 8:45 - 9:00 am   | Opening Remarks   | CRX C104                                     |
| 9:00 - 10:00 am  | Keynote : Dr. Katie Gilmour - "Hot and bothered: How fish facing challenges cope with a warming world"                        | CRX C104                                     |
| 10:00 - 10:15 am | Break   | CRX Lobby                                    |
| 10:15 - 11:30 am | Session 1: Plant Sciences<br>Session 2: Cellular and Molecular<br>Session 3: Bioinformatics<br>Session 4: Animal Physiology 1 | CRX C104<br>CRX C307<br>CRX C308<br>CRX C309 |
| 11:30 - 1:30 pm  | Coffee Break and Snacks   | CRX Lobby                                    |
| 1:30 - 2:30 pm   | Professional Pathways Panel: Navigating Research in Academia, Industry and Government   | CRX C104                                     |
| 2:30 - 3:45 pm   | Session 5: Animal Physiology 2<br>Session 6: Conservation/ Ecology<br>Session 7: Genetics<br>Session 8: Animal Behaviour      | CRX C104<br>CRX C307<br>CRX C308<br>CRX C309 |
| 3:45 - 4:00 pm   | Coffee Break  | CRX Lobby                                    |
| 4:00 - 4:45 pm   | Undergraduate Session<br>Session 9: EVO DEVO<br>Session 10: Biochemistry  | CRX C104<br>CRX C307<br>CRX C308             |
| 4:45 - 5:00 pm   | Closing Remarks   | CRX C104                                     |
| 6:00 PM          | PubTalk : Dr. Dalal Hanna - Ditching Despair Through Stewardship of Land and Water  | NOX Eatery & Public House                    |

# Keynote Speakers

## Dr. Matthew Pamerter

Monday April 28<sup>th</sup> 2025

Associate Professor University of Ottawa

**What can extremophiles teach us about life in a warming and hypoxic world?**

Dr. Matthew Pamerter joined the Biology Department at the University of Ottawa as the Tier II Canada Research Chair in Comparative Neurophysiology in 2015. He has a diverse background in comparative physiology and has conducted studies in 25+ species, including reptiles, birds, mammals, fish (and sharks!), and invertebrates. Originally trained as a neuroscientist, Dr. Pamerter's research program now explores exciting questions across a broad swathe of physiology and is focused on naturally evolved adaptations to environmental hypoxia in some of the most hypoxia-tolerant animals from around the globe. As a National Geographic Explorer, Dr. Pamerter seeks out thrilling field work opportunities for his team and recent projects in the Pamerter lab have incorporated international collaborations on the ground (or in the ocean!) in Africa, Australia, and New Zealand. Beyond the lab, Matt is mostly busy herding his 3 young children but loves to swim, run long distances, read (fiction only), or just play some videogames if he can find some spare time. He is very excited to share his teams' recent work exploring metabolic adaptations to hypoxia in some very cool animal models!



## Dr. Katie Gilmour

Tuesday April 29<sup>th</sup> 2025

Professor University of Ottawa and Vice-Dean, Governance and International Relations

**Hot and bothered: How fish facing challenges cope with a warming world**

Dr. Katie Gilmour is a professor in the Department of Biology at the University of Ottawa. Her current research explores two themes. First, she aims to understand the mechanisms through which fish maintain gas exchange, and ion and acid-base balance in diverse environments and in response to environmental challenges. Second, she uses the formation of dominance hierarchies in fish and the resultant social stress as a means of studying chronic stress. Questions of interest include how the stress axis functions during chronic stress, and the physiological consequences of chronic stress on metabolism, growth and tolerance of environmental challenges such as elevated temperature. Gilmour also enjoys the teaching side of academic life, sharing her enthusiasm for comparative physiology in general and fish in particular through undergraduate lecture and lab courses, as well as the supervision of both undergraduate and graduate research students. Gilmour serves as a Monitoring Editor for the Journal of Experimental Biology and is the Vice-Dean, Governance and International Affairs for the Faculty of Science at the University of Ottawa.





# Professional Pathways Panel: Navigating Research in Academia, Industry and Government

Tuesday April 29th 2025  
1:30pm

**Dr. Emily Standen (Moderator)**  
Associate Professor University of Ottawa



Dr. Standen uses comparative biomechanics to understand the flexibility of animal systems to changes in their environment. Her most recent work is focussed on understand how a single neurological control system can result in multiple locomotory gaits across aquatic and terrestrial habitats. She works on whole animals from centipedes to salamanders and collaborates broadly with bio-roboticists and simulation engineers to help pull apart the complexity of locomotor control across animals and machines.



**Dr. Jennifer Provencher**  
Adjunct Research Professor Carleton University, Government Research Scientist  
Dr. Provencher is a government scientist, currently with Environment and Climate Change Canada. She studies wildlife health, which can include parasites, pathogens, contaminants and plastic pollution, from coast to coast to coast and in lakes and lands in between in Canada, but with a focus on northern Canada mostly. Her work informs both domestic and international regulations and targets on how pollution and pathogens affect animals and their environments, from both a conservation and clean environment perspective

**Dr. Matt Hoekstra**  
Research Manager at Food Cycle Science

Dr. Hoekstra is the Research Manager at Food Cycle Science, a company who's goal is to divert food waste from landfills with help through pre-treatment from their machines. His role is to manage all the scientific research within the company. This includes in-house and third-party research pertaining to the addition of biologics to our equipment to improve its range of function, along with downstream application and adding value to the by-product and communication of the findings to stakeholders."



**Dr. Kyle Biggar**  
Associate Professor Carleton University

Dr. Kyle Biggar researches functional proteomics, emphasizing how post-translational modifications regulate protein interactions and cellular signaling in disease contexts. He is also the Chief Scientific Officer and co-founder of NuvoBio, an Ottawa-based biotechnology company developing innovative peptide therapeutics using its AI-driven platform. His work bridges academic discovery with entrepreneurial translation, advancing new treatments for infectious diseases and cancer.



# PubTalk

## Dr. Dalal Hanna

Tuesday April 29<sup>th</sup> 2025 6:00pm

Assistant Professor Carleton University

### Ditching Despair Through Stewardship of Land and Water

Dr. Dalal Hanna is a professor of conservation science at Carleton University, where she leads the Watershed Stewardship Research Collaborative. As a freshwater ecologist, science communicator, and National Geographic Explorer, Dalal works to generate the information and momentum required for society to shift toward more sustainable and equitable living. Her focus is on how freshwaters can best be stewarded to ensure their continued contributions to people's well-being. She is also the co-founder and director of Riparia, a Canadian Charity that works to create better connections between young women, science and water by bringing youth on free, multi-day, freshwater science expeditions.



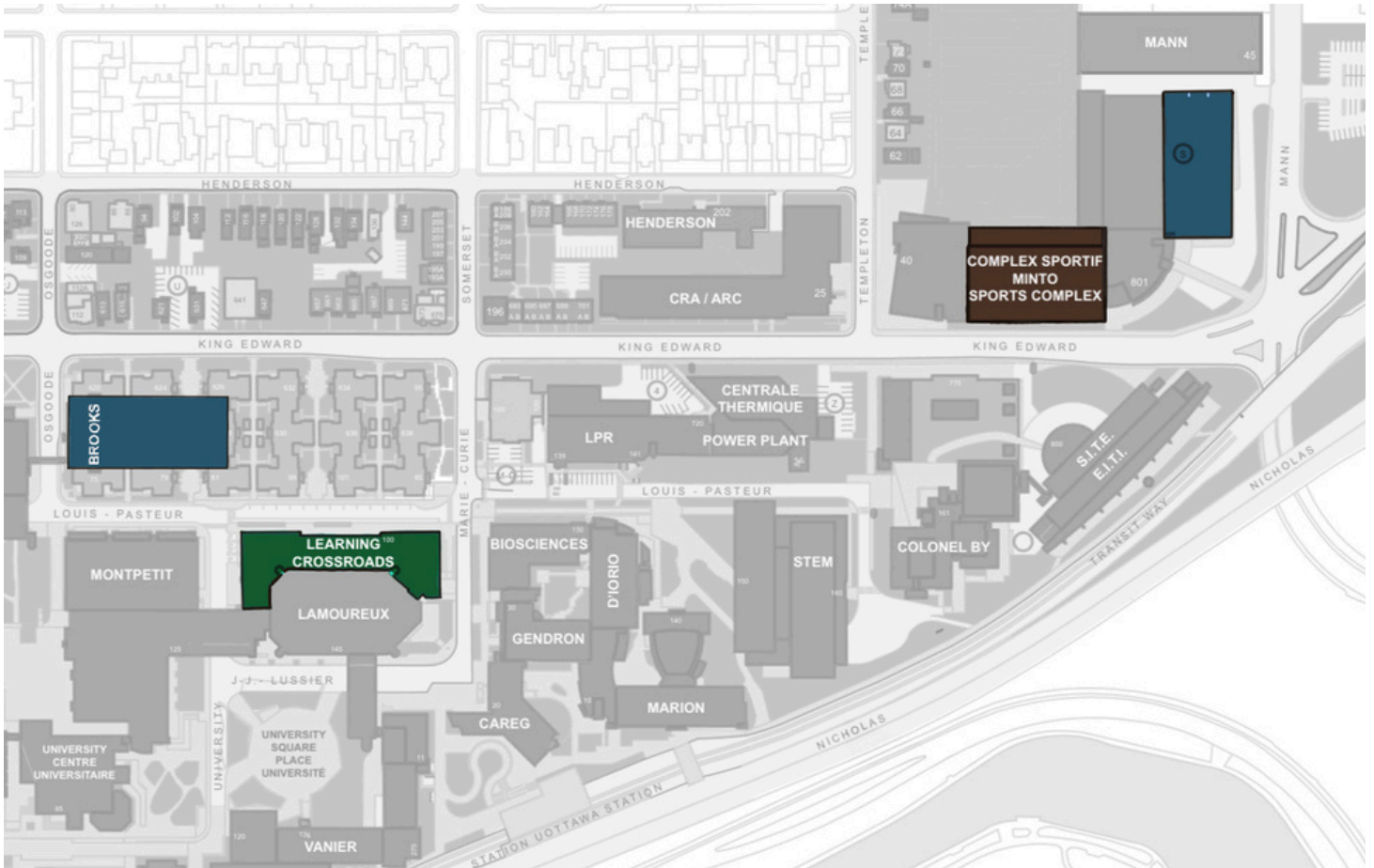
**The PubTalk will be held at NOX Eatery & Public House Inc.**

801 King Edward Ave (MINTO) 2nd Level





<https://noxeatery.com>



# Locations



uOttawa

-  April 28th 2025 – 11:00am - 5:00 pm at Learning Crossroads CRX (100 Louis-Pasteur) Lobby and room C140
-  April 29th 2025 – 8:00am - 5:00 pm at Learning Crossroads CRX (100 Louis-Pasteur) Lobby and rooms C140, C307, C308, C309
-  April 29th, 2025 – 6:00pm – 8:00 pm at NOX Eatery & Public House in Mino Sports Complex /801 King Edward Ave 2nd Level
-  Paid Visitor Parking



# Presentation Program

## 3 Minute Thesis | CRX C140

Monday April 28<sup>th</sup> 2025 @ 2:00 - 2:30 pm

Session Chair : Grace Gardner

|                |  |
|----------------|--|
| Emam Khan      | Involvement of dl3 neurons in spinal motor learning  |
| Hussein Omran  | The Evolutionary Dynamics of GBM and Intra-tumor Heterogeneity as a Potential Predictor of Tumoral Fitness               |
| Jeremy Atho    | Phylogenetic evolution of the actinodin (and) and augurin (ecrg4) genes  |
| Amer Abdelgany | Evaluation of the Impact of Environmental Antimicrobial Residues on the Gut Microbiome and Resistome Using a Mouse Model |

## Undergraduate Talk Session | CRX C140

Tuesday April 29<sup>th</sup> 2025 @ 4:00 - 4:30 PM

Session Chair : Marshall Ritchie

|         |                 |  |
|---------|-----------------|--|
| 4:00 PM | Brooke Maclsaac | How Long Are Shorebirds Retaining Ingested Microplastics?  |
| 4:10 PM | Sally Adil      | Acute oxygen-dependent epigenetic regulation in rainbow trout liver: Is H3K4me3 linked to induced metabolic genes?     |
| 4:20 PM | Shelby Atkinson | Using Microsatellite Markers to Investigate Genetic Diversity in Kaladar's Disjunct <i>Opuntia fragilis</i> Population |



## Session 1 Plant Science | CRX C140

Tuesday April 29<sup>th</sup> 2025 @ 10:15 - 11:30 pm

Session Chair : Ana Hernandez Martinez de la Riva

|          |                                   |   |
|----------|-----------------------------------|---|
| 10:15 AM | Matthew Coffey                    | Quantifying Flowering Bias in Community Science Data  |
| 10:30 AM | Alicia Halhed                     | Soybean Cell Wall Development is Microbiome-Responsive  |
| 10:45 AM | Simon Lackey                      | The importance of germplasm collections: a case study in soybean protein and amino acid content |
| 11:00 AM | Kevin MacColl                     | The first steps towards population genomic research in arbuscular mycorrhizal fungi             |
| 11:15 AM | Ana Hernandez Martinez de la Riva | Comparison of drone and ground surveys for the detection of a rare plant in a fragile ecosystem |

## Session 2 Cellular and Molecular Biology | CRX C307

Tuesday April 29<sup>th</sup> 2025 @ 10:15 - 11:30 pm

Session Chair : Laura Phillips

|          |                    |  |
|----------|--------------------|--|
| 10:15 AM | Ikram Khan         | Investigating Protein Interactions of a Novel Cell Stress Response   |
| 10:30 AM | Olivia MacMillan   | Developmental genetic endocrinology underlying caste determination and differentiation in ants   |
| 10:45 AM | Navid Bahramifarid | Histone Epigenetic and Hormonal Modulation of Temperature and Nutrition During Fire Ant Development  |
| 11:00 AM | Remy Carter        | Regulation of stress granules and P-bodies during hibernation  |
| 11:15 AM | Mohamed Ramadan    | Mitochondrial ATP-dependent K <sup>+</sup> channels downregulate ionotropic glutamate receptors during hypoxia in retinal horizontal cells of goldfish |

### Session 3 Bioinformatics | CRX C308

Tuesday April 29<sup>th</sup> 2025 @ 10:15 - 11:30 pm

Session Chair : Paige Chan

|          |                      |   |
|----------|----------------------|---|
| 10:15 AM | Matthieu Vilain      | dna-parser: a Python library written in Rust for fast encoding of DNA and RNA sequences                                       |
| 10:30 AM | Vaibhav Kulkarni     | Elucidating Global Patterns of Viral Biodiversity across the Latitudinal Gradient   |
| 10:45 AM | Mustafa Al-gafari    | Human-Candida interactome prediction discovers novel protein virulence markers in Candida sp.                                 |
| 11:00 AM | Julia Hooker         | WGCNA and multiWGCNA identifies environmentally-influenced gene modules from soybean grown across eastern and western Canada  |
| 11:15 AM | Calvin Bradbury-Jost | Platelet GPIIb $\alpha$ harbouring PT-VWD mutations binds the VWF-C4 domain and competes with $\alpha$ IIb $\beta$ 3 integrin |

### Session 4 Animal Physiology 1 | CRX C309

Tuesday April 29<sup>th</sup> 2025 @ 10:15 - 11:30 pm

Session Chair : Ella de Nicola

|          |                       |  |
|----------|-----------------------|--|
| 10:15 AM | Anthea Mavridis       | A role for purinergic signaling in the transmission of the hypoxic response in the gills of the adult zebrafish ( <i>Danio rerio</i> ) |
| 10:30 AM | Sophie Kasdorf        | A human's trash is an insect's treasure; sustainable feed products for farmed crickets to further a circular bioeconomy                |
| 10:45 AM | Liam Eaton            | Enhanced scavenging of reactive oxygen species as a neuroprotective mechanism in cortex of hypoxia-tolerant naked mole-rat             |
| 11:00 AM | Louise Claudia Walker | Investigating the role of serotonin receptors in the hypoxic response in the gills of <i>Danio rerio</i>                               |
| 11:15 AM | Ella De Nicola        | Is thermal plasticity in <i>Aedes aegypti</i> sensitive to photoperiod?  |

## Session 5 Animal Physiology | CRX C140

Tuesday April 29<sup>th</sup> 2025 @ 2:30 - 3:45 pm

Session Chair : Raegan Davis

|         |                   |   |
|---------|-------------------|---|
| 2:30 PM | Émile Vadboncoeur | Temperature-diet interactions impact the ability of farmed crickets <i>Acheta domesticus</i> to turn feed into body mass                            |
| 2:45 PM | Lahari Basu       | Cisplatin disrupts long-term blood glucose control in high-fat diet-fed male mice, but not females  |
| 3:00 PM | Sophia Fraser     | Keep an ion it! Prevention of cold-induced ionoregulatory collapse in the freeze-tolerant Asian longhorn beetle ( <i>Anoplophora glabripennis</i> ) |
| 3:15 PM | Liam Johnston     | Molecular consequences of mild and severe short-term hypoxia exposure in rainbow trout ( <i>Oncorhynchus mykiss</i> )                               |
| 3:30 PM | Raegan Davis      | Dam it, I'm stranded: evaluating fish stranding downstream of a hydropeaking facility.  |

## Session 6 Conservation/ Ecology | CRX C307

Tuesday April 29<sup>th</sup> 2025 @ 2:30 - 3:45 pm

Session Chair : Stasha Lysyk

|         |                  |   |
|---------|------------------|---|
| 2:30 PM | Sara Steel       | Evaluating the ecological trade-offs of formal versus informal campsite management  |
| 2:45 PM | Emily Wong       | Measuring the chemical contaminant burdens of Arctic nesting geese in Arviat Nunavut – a community-based monitoring project.              |
| 3:00 PM | Millicent Gaston | Using passive monitoring to determine the outcomes of temporary road closures on bird and mammal diversity at an urban-wildland interface |
| 3:30 PM | Felix Chan       | Examining the long-term effects of upstream timber harvesting on freshwater biodiversity in Quebec  |
| 3:15 PM | Stasha Lysyk     | Evaluating the Efficacy of Treated Windows to Reduce Bird-Window Collisions in Ottawa   |

## Session 7 Genetics | CRX C308

Tuesday April 29<sup>th</sup> 2025 @ 2:30 - 3:45 pm

Session Chair : F. Alice Cang

|         |                 |  |
|---------|-----------------|--|
| 2:30 PM | Ken Mugambi     | Chromosome-level Genome Sequencing and 3D-genome Analysis of <i>Gigaspora margarita</i>            |
| 2:45 PM | Andrea Bresolin | EDNA biomonitoring: how does metabarcoding compare to sampling stream macroinvertebrates?          |
| 3:00 PM | Mohamad Elian   | Omicsflow, a robust and reproducible bioinformatic platform  |
| 3:15 PM | Catrina Lane    | Diversity and evolution of transposable elements in arbuscular mycorrhizal fungi                   |
| 3:30 PM | F. Alice Cang   | Conservation genomics to inform seed provenance for translocation of spotted wintergreen in Canada |

## Session 8 Animal Behaviour | CRX C309

Tuesday April 29<sup>th</sup> 2025 @ 2:30 - 3:45 pm

Session Chair : Rebecca Dean

|         |                          |  |
|---------|--------------------------|--|
| 2:30 PM | Kara Scott               | Movement of Brook trout in a small river in Southern Quebec with implications for the conservation of imperiled molluscs     |
| 2:45 PM | Kennis Ross              | Legwork and Brainwork: Neural Control of Amphibious Locomotion   |
| 3:00 PM | Isaac Finkelstein        | Interspecific male aggression in <i>Mnais</i> and its consequences for character displacement and male-limited polymorphisms |
| 3:15 PM | Juan Camilo Ríos-Orjuela | Foraging behavior predicts the evolution of humeral shape in hummingbirds  |

## Session 9 EVO DEVO | CRX C307

Tuesday April 29<sup>th</sup> 2025 @ 4:00 - 5:00 pm

Session Chair : Caroline Grela

|         |               |  |
|---------|---------------|--|
| 4:15 PM | Lydia Wong    | Nesting resource limitation: Determinants of upper-elevation range limits in cavity-nesting bees?  |
| 4:30 PM | Jayna Bergman | Pronounced genetic structure associated with differences in a reproductive trait and climatic barriers in Canadian populations of western toads ( <i>Anaxyrus boreas</i> ) |
| 4:45 PM | Marc Avramov  | Mosquito-borne arboviruses in eastern Ontario: Vectors, ecology, and seasonality (2017–2021)   |

## Session 10 Animal Behaviour | CRX C308

Tuesday April 29<sup>th</sup> 2025 @ 4:00 - 4:45 pm

Session Chair : Mahmoud El-Saadi

|         |                   |   |
|---------|-------------------|---|
| 4:00 PM | Kassandra Fugard  | Proteomic mapping of the stress responsive MYB41 regulatory network in Arabidopsis                  |
| 4:15 PM | Thomas Kazmirchuk | Using AI to generate peptide theranostics for rare bleeding disorders                               |
| 4:30 PM | Angela Ching      | $\beta$ -cell specific AhR expression is critical to high-fat diet induced hyperinsulinemia in mice |



# Poster Program

## Poster Presenters | CRX Lobby

Monday April 28<sup>th</sup> 2025

Event Number Posters 2:45 - 3:45 pm

Odd Number Posters 4:00 -5:00 pm

|    |                    |  |
|----|--------------------|--|
| 1  | Emam Khan          | Involvement of dl3 neurons in spinal motor learning  |
| 2  | Dinusha Rajapaksha | Pharmacological manipulation of vasotocin and oxytocin receptors reduces reproduction performances in female zebrafish ( <i>Danio rerio</i> )    |
| 3  | Rebecca Dean       | Networking in the cold: connecting renal transcriptional plasticity to chill injury prevention through gene network analysis.                    |
| 4  | Tighe Bloskie      | Hypoxia-responsive lysine demethylase expression in two tissues of anoxic red-eared slider turtles   |
| 5  | Paola Figueroa     | Role of the Novel Hormone Secretoneurin in Zebrafish Ovarian Function  |
| 6  | Donna St-Amant     | Does FKBP5 contribute to chronic cortisol elevation in subordinate rainbow trout?  |
| 7  | Mahmoud El-Saadi   | Mitigation of chilling injuries in <i>Drosophila melanogaster</i> through antioxidant supplementation  |
| 8  | Hossam Ehab        | Degrees of survival: Testing the fitness effects of incubation temperature in at-risk turtles  |
| 9  | Johanna Enright    | Determining the Efficacy of Novel Peptides on Increasing Bacterial Susceptibility to Ampicillin through Inhibition of the TEM-1 beta - lactamase |
| 10 | Saif Rehman        | Small RNA and Freeze Survival: The Cryoprotective Functions of MicroRNA in the Frozen Muscle Tissue of The Grey Tree Frog                        |
| 11 | Hussein Omran      | The Evolutionary Dynamics of GBM and Intra-tumor Heterogeneity as a Potential Predictor of Tumoral Fitness                                       |
| 12 | Jeremy Atho        | Phylogenetic evolution of the actinodin (and) and augurin ( <i>ecrg4</i> ) genes   |
| 13 | Franck Ouedraogo   | Functional Diversity of Microbes in Metal Detoxification within High Arctic Lake Sediments   |
| 14 | Reyna Tao          | Development of Adverse Outcome Pathways to Describe Declines in Male Fertility   |
| 15 | Jiashu Wang        | AI-designed peptides in detection of HPV 18 L1 protein   |
| 16 | Sarah A. Breedon   | MicroRNA expression in the heart of estivated <i>Scaphiopus couchii</i>  |
| 17 | Noor Shubair       | Sequence Analysis of Stx2i-Producing <i>Escherichia coli</i> Strains Isolated from Lamb  |

|    |                        |   |
|----|------------------------|---|
| 18 | Bianca Tassi           | Evaluating Population Genetic Clustering Methods Under Different Migration and Sampling Scenarios   |
| 19 | Danielle Bowman        | Understanding the Genetic Underpinnings of Climate Change Acclimation and Temperature Stress Resilience in an Antarctic Green Algal Extremophile      |
| 20 | Madeleine Wredenhagen  | Understanding the effects of ciliopathy gene LRRC56 mutation on model species <i>Danio rerio</i>  |
| 21 | Thalia Molloy Charette | The Role of the Hippo-Yorkie Pathway in Caste Development in Ants.  |
| 22 | Allison Szenasi        | Comparative analysis of physiology and stress response in closely related Arctic and Antarctic green algae  |
| 23 | Paulina Hanzelova      | The role of fin-specific structural fibers in guiding the development of fin cartilages in the zebrafish and the small-spotted catshark               |
| 24 | Imane Rhzali           | Anoxic Adaptations: Histone acetylation and deacetylation in the wood frog brain  |
| 25 | Asalia Ibrahim         | The Ionophore Resistance Genes <i>narA</i> and <i>narB</i> are Geographically Widespread and Linked to Resistance for Medically important Antibiotics |
| 26 | Emily Marion           | Characterizing the role of candidate maize genes in tar spot resistance   |
| 27 | Robert Ferguson        | Soil bacterial community selection by conspecific AMF strains   |
| 28 | Siddharthan Lakshmanan | Investigating differential host sensitivity to the <i>Fusarium graminearum</i> virulence factor gramillin in barley                                   |
| 29 | Marielle Zouein        | Regulation and virulence function of <i>Fusarium graminearum</i> secondary metabolites during <i>Arabidopsis</i> seedling infection                   |
| 30 | Sambina Bevilacqua     | Titanium dioxide and human large intestinal epithelial cells: the effect of particle size and dispersion method on cell proliferation and viability   |
| 31 | Melissa Labelle        | The Effect of Seed Size on Expression of Maternal Effects   |
| 32 | Katherine Wiebe        | Quantifiable measures of eye-tracking and their correlation with the VOMS score in concussed subjects   |
| 33 | Amélie Boutin          | Avian Influenza H5N1 in Ontario: Landscape Drivers of Wildlife-to-Poultry Transmission  |
| 34 | Shahriar Nasiri        | dl3 neurons form sensorimotor circuits across the cervical and lumbar spinal cord for motor control   |
| 35 | Benjamin Harrison      | Impact Of Sert Knockout on Surfacing Behaviour and Visual Function in <i>Danio Rerio</i>  |
| 36 | Douglas Strick         | Effects Of Ground Vibration Exposure During Incubation on the Behaviour of Hatchling Snapping Turtles ( <i>Chelhydra serpentina</i> ).                |

|    |                  |  |
|----|------------------|--|
| 37 | Deanna Turchyn   | No Rest for the Rodent: Energy Management Strategies in the Naked Mole-Rat ( <i>Heterocephalus glaber</i> )  |
| 38 | Agape Williams   | The Kinematics of Multimodal Locomotion in Salamanders   |
| 39 | Sophia Perrakis  | Investigating the longevity and healthspan of ants under different social conditions   |
| 40 | Jennie Mills     | They'll Grow Out of It: Investigating the effects of moulting on microplastic retention in arthropods  |
| 41 | Hannah Ross      | Effects of daily temperature fluctuations on growth and nutrient assimilation in a farmed cricket  |
| 42 | Willa MacDonald  | Identification of Monoaminergic and Cholinergic Pathways in Cutaneous Sensory Cells of Developing Zebrafish  |
| 43 | Michael Qi       | Immune Activation Reinforces Hypoxia-Induced Metabolic Suppression in Naked Mole-Rats  |
| 44 | Neha Erukulla    | Differential Tissue-Specific HIF-1 $\alpha$ Expression in Naked Mole-Rats and Mice Exposed to Hypoxia and LPS  |
| 45 | Taya Kostyleva   | Detection of Secondary Sodium Pump Variant Expression in <i>Drosophila melanogaster</i> Anterior Malpighian Tubule Tissue Through Long-Read IsoSeq mRNA Sequencing |
| 46 | Kristen Huang    | Implicating the serotonergic system in feeding and growth in zebrafish ( <i>Danio rerio</i> ).   |
| 47 | Khaled Mkarem    | Ca <sup>2+</sup> Mitochondrial Buffering and Impact on Mitochondrial Respiration in Goldfish Brain   |
| 48 | Said Abubakar    | Directed Evolution in Action: Mutagenesis Strategy for Enhanced Plastic-Eating Enzymes   |
| 49 | Angtai Shi       | New Tricks for an Old Kit: Engineering the Metabolism of the Yeast <i>Torulasporea delbrueckii</i>   |
| 50 | Yusuf Moussa     | Milking the Potential of Yeast: Engineering Yeast to Combat the Dairy Waste Problem  |
| 51 | Hannah Doyle     | Can Yeast Survive a Toxic Diet of Plastic Compounds?   |
| 52 | Fiona Hutchinson | Long Noncoding RNA Diversity in AMF Heterokaryons and Homokaryons  |
| 53 | Nusrat Tazkia    | Phylogenetic Conservation of lacA Gene Across Different Species in the Enterobacteriaceae Family In Vivo   |
| 54 | Gueridi Fella    | Comparaison des effets des délétions and1 (1214pdb et 669pdb) sur le développement des nageoires du poisson zèbre.   |
| 55 | Julia Singer     | The Influence of Ecdysone Signalling on Caste Development in <i>Camponotus floridanus</i>  |

|    |                                |  |
|----|--------------------------------|--|
| 56 | Kami Fabien                    | Histone modifiers at the crossroads between environmental variation and hormones during fire ant development                               |
| 57 | Farha Gomaa                    | Investigating the Activation of XBP1 by Splicing Inhibitors: A Study Using Reporter Cell Lines and Chemical Inhibitors.                    |
| 58 | Malvina Isaak                  | Investigating the spatiotemporal and functional role of Sex-lethal in ants   |
| 59 | Darius Aliahmad                | Investigation of TRIM9 as a novel mGluR5 interacting protein   |
| 60 | Ella McBoyle                   | An optimized protocol for the Agrobacterium-mediated transformation of <i>Chlamydomonas priscui</i>  |
| 61 | Dean Whitehead                 | Analysis of hyphal biovolume across strains of <i>Rhizophagus irregularis</i> grown with <i>Sorghum x drummondii</i>                       |
| 62 | Joshua Cadieux                 | Collision Course: How Well Can We Predict Building Collision Risk for Birds?   |
| 63 | Ashley Smith                   | Examining the impact of wildfire on amphibian microhabitat composition around breeding ponds in Waterton Lakes National Park               |
| 64 | Ayai Offor                     | Evaluating the Impact of Academic Integrity Modules on Student Perceptions and Misconduct at the University of Ottawa                      |
| 65 | Natasha Sandhu                 | The Exploration of Methanotrophic Bacteria: Using Phospholipid Fatty Acid Biomarkers from Canadian Oil Sands Facilities                    |
| 66 | Deniz Pourazar                 | Identification Of Correlated Soybean Genes with Lipid Composition in Different Environments Through Differential Gene Expression Analysis  |
| 67 | Celine Larose                  | Using Specific Primers in PCR to Discern White Footed Mice ( <i>Peromyscus leucopus</i> ) From Deer Mice ( <i>Peromyscus maniculatus</i> ) |
| 68 | Veronica Langdon               | Biomechanical Analysis of Force Production and Skating Efficiency in Female Varsity Hockey Players   |
| 69 | Aurora Tracy                   | Depressive Symptom Heterogeneity and Inflammation: The Moderating Role of Early-Life Trauma  |
| 70 | Lina Dulgher                   | Assessing myelin integrity and axonal conduction through compound action potentials.   |
| 71 | Christina Tziata               | Investigating the effects of silencing spinal dl3 interneurons on mouse locomotor behaviour  |
| 72 | Rekha Govindasamy Ravichandran | Neural Stem Cell-Mediated Therapy for Glioblastoma   |
| 73 | Kira Tromp                     | Investigating the Influences of Green Spaces on Outdoor Learning Implementation Across Canada  |

|    |  |   |
|----|--|---|
| 74 | Carole Pengdwende<br>Larissa Ouedraogo | Effects of potassium M-current modulators on swimming behaviour of larval zebrafish                         |
| 75 | Tessa Wynn                             | Native Grassland Restoration in Southern Ontario: Assessing Vegetation Composition and Changes Post-Seeding |
| 76 | Kiersten DeViller                      | Caught in the Act: Assessing Lure Type Effects on Japanese Beetle ( <i>Popillia japonica</i> ) Trap Capture |

## Sponsorship Information

**University of Ottawa**  
Faculty of Science and  
Department of Biology  
A setting where  
science thrives.



uOttawa

Département de biologie  
Department of Biology



uOttawa

Faculté des sciences  
Faculty of Science

### Carleton University

Faculty of Science and Department of Biology

A thriving community of researchers engaged in cutting-edge, world-class scientific inquiry.



**Carleton  
University**

Department  
of Biology



**Carleton  
University**

Faculty of Science

### Canadian Science Publishing

<https://cdnsiencepub.com/>

Canada's largest independent, not-for-profit leader in mobilizing science-based knowledge



Canadian  
**Science**  
Publishing

### Fisher Scientific

<https://fishersci.ca/>

The scientific marketplace for unrivaled choice and convenience





# Sponsorship Information

## SoftMouse

<https://softmouse.net>

Rodent Colony Management Database & Software



**SoftMouse.NET**<sup>©</sup>  
Animal Data Platform

## BGSA (uOttawa)

<https://www.uottawabgsa.ca/>

University of Ottawa Biology Graduate Students' Association



## BGSA (Carleton)

[https://instagram.com/bgsa\\_carleton](https://instagram.com/bgsa_carleton)

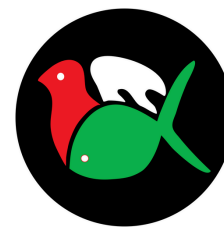
Carleton University's Biology Graduate Students' Association



## Canadian Society of Zoologists

<https://www.csz-scz.ca/>

Dedicated to the enhancement of education and research in zoology at the provincial, federal, and international level.



## Society for Experimental Biology

<https://www.sebiology.org/>

Represent and bring together an international community of experimental biologists to support them in their scientific work, new ideas and experimental techniques



## Prize and Gift Card Donors

