

Lauren Zink

Curriculum Vitae

EDUCATION

Post-Doctoral Fellow, University of British Columbia, January 2024-present
Wood Lab, PI: Chris M. Wood

PhD Biosystems and Biodiversity, University of Lethbridge, 2023
Pyle Laboratory for Aquatic Health, PI: Gregory G. Pyle
Dissertation: Effects of polyethylene microplastics and cadmium on freshwater animals:
A modelling framework

BSc Animal Biology (*honours*), Thompson Rivers University, 2017
Gosselin Laboratory, PI: Louis Gosselin
Thesis: Effects of light wavelengths experienced during juvenile life on eye development
and morphometrics in the crayfish *Procambarus patzcuranesis*

SCHOLARSHIPS AND FELLOWSHIPS

- 2025 Chris Lee Award for Metals Research (Global), \$5000
- 2025 Company of Biologists Travelling Fellowship, £3000
- 2024 Natural Sciences and Engineering Research Council of Canada (NSERC) Post Doctoral Fellowship, \$131667
- 2024 University of British Columbia Post-Doctoral Fellows Office Travel Award, \$750
- 2021 NSERC Post-Graduate Doctoral Scholarship, \$63000
- 2020 Nexen Fellowship in Water Research (Doctoral), \$30000
- 2020 University of Lethbridge School of Graduate Studies PhD Tuition Scholarship, \$20000
- 2020 NSERC Canada Graduate Scholarship – Masters, \$17500
- 2019 Nexen Fellowship in Water Research (Masters), \$5000
- 2019 Alberta Society of Professional Biologists Graduate Scholarship \$1750
- 2019 University of Lethbridge School of Graduate Studies MSc Tuition Scholarship, \$8000

PUBLICATIONS

Underlined authors represent trainees

Refereed Journal Articles, published

- 2026 Dubiel, J., Terrazas-Salgado, L., Oliveira de Farias, N., **Zink, L.**, Morales Urrutia, R., Collins, C.H., Eagon, L., Pizarro, L., Vogiatzaskis, M., Langevin, C., Doering, J.A., de Aragão Umbuzeiro, G., and Wiseman, S. Developmental toxicity of the anthraquinone dye alizarin to zebrafish: effects on development and behaviour. Accepted by Environmental Toxicology and Pharmacology (Manuscript ID: ETAP-D-26-00346).

- 2026 **Zink, L.**, Xu, E.G., Brander, S.M., Bain, A., Almroth, B.C., Bertram, M.G. Novel entities. Invited Primer for Current Biology. Accepted for Special Issue in Geobiology to be released in 2026.
- 2026 Bertram, M.G., Ågerstrand, M., Balshine, S., Brand, J.A., Brooks, B.W., Dang ZC., Ford, A.T., Hollert, H., LeFauve, M.K., Manera, J.L., Martin, J.M., Michelangeli, M., Moiron, M., Moore, E.R., Puglis, H.J., Sih, A., Steevens, J.A., Thoré E.S.J., Wong, B.B.M., **Zink, L.**, Brodin T. Are behavioural ecotoxicity endpoints relevant at the population level? Evidence-based insights for environmental protection. Environmental Science & Technology. DOI: 10.1021/acs.est.5c07777.
- 2025 **Zink, L.**, Val, A.L., Wood, C.M. Perspectives on the impact of microplastics (MPs) on fish of the Amazon that exhibit air-breathing and aquatic surface respiration. Invited article to a Special Issue in Annals of the Brazilian Academy of Sciences. DOI: 10.1590/0001-3765202520250254
- 2025 **Zink, L.**, and Wood, C.M. Development of a gradual hypoxia chamber for assessing copper toxicity on air-breathing behavior in *Lymnaea stagnalis*. Toxicology Mechanisms and Methods. DOI: 10.1080/15376516.2024.2449417
- 2024 **Zink, L.**, Morris, C., and Wood, C.M. Pulse exposure to microplastics depolarizes the goldfish gill: Interactive effects of DOC and differential degradation. Environmental Pollution. DOI: 10.1016/j.envpol.2024.125434
- 2024 **Zink, L.**, Mertens, E., Zhou, X., Johnston, S.E., Bogard, M., Wiseman, S., and G.G. Pyle. Reframing microplastics as a ligand for metals reveals that water quality characteristics govern the association of cadmium to polyethylene. Science of the Total Environment. DOI: 10.1016/j.scitotenv.2024.174659
- 2024 Zhou, X., Logozzo, L., Johnston, S.E., **Zink, L.**, Bogard, M.J. Composition and bioreactivity of dissolved organic matter leachates from end members in a mountain to prairie transitional river valley. JGR-Biogeosciences. DOI: 10.1029/2023JG007831
- 2024 **Zink, L.**, and Wood, C.M. The effects of microplastics on ion transport processes in the gills of freshwater fish and invertebrates: A prospective review. Invited Review to the Special Issue: Novel Mechanisms of Epithelial Ion Transport and Its Regulation. Comparative Biochemistry and Physiology, Part A. DOI: 10.1016/j.cbpa.2024.111669
- 2024 Simonis, C., **Zink, L.**, Johnston, S.E., Bogard, M.J., and G.G. Pyle. Effects of water quality on palladium-induced olfactory toxicity and bioaccumulation in rainbow trout (*Onchorynchus mykiss*). Integrated Environmental Assessment and Management. DOI: 10.1002/ieam.4900
- 2023 Eriksson, A.N.M., Dubiel, J., **Zink, L.**, Zhe, L., Doering, J.A., Wiseman, S. Embryonic exposure to benzotriazole UV stabilizer 327 (UV-327) alters behaviour of rainbow trout alevin. Environmental Toxicology and Chemistry. DOI: 10.1002/etc.5807

- 2023 **Zink, L., Meslo, M., Wiseman, S., and G.G. Pyle.** *Daphnia magna* alter their digestive physiology differently when exposed to equally turbid waters caused by either suspended sediment or suspended microplastics. *Environmental Toxicology*. DOI: 10.1002/TOX.24096
- 2023 Raza, Y., Mertens, E., **Zink, L.**, Lu, Z., Doering, J.A., and S. Wiseman. Embryonic exposure to the benzotriazole UV stabilizer, UV-P, decreases fertility of adult zebrafish (*Danio rerio*). *Environmental Toxicology and Chemistry*. DOI: 10.1002/etc.5790
- 2023 Razmara, P., **Zink, L.**, Doering, J., Miller, J., Wiseman, S., and G.G. Pyle. The combined effect of copper nanoparticles and microplastics on rainbow trout (*Onchorynchus mykiss*) hepatocytes. *Bulletin of Environmental Contamination and Toxicology*. DOI: 10.1007/s00128-023-03811-8
- 2023 **Zink, L.**, Simonis, C., Wiseman, S., and Pyle, G.G. *In vitro* characterization of cadmium transport across the gastro-intestinal membrane of the fathead minnow (*Pimephales promelas*) in the presence and absence of microplastics. *Environmental Toxicology and Pharmacology for the Special Issue: Microplastics and their Environmental Effects*. DOI: 10.1016/j.etap.2023.104195
- 2023 Chmilar, S., **Zink, L.**, Laird, R. Interactive effects of immediate and ancestral salt stress on fitness in duckweed. *International Journal of Plant Sciences*. DOI: 10.1086/726083
- 2023 Nava, V., Aherne, J., Alfonso, M.B., Antão-Geraldes A.M., Attermeyer, K., Bao R., Bartrons, M., Berger, S.A., Biernaczyk, M., Bissen, R., Brookes, J., Brown D., Cañedo-Argüelles, M., Canle, M., Capelli, C., Carballeira, R., Cereijo, J.L., Chandra, S., Chawchai, S., Chen, G., Christensen, S.T., Christoffersen, K.S., Eyto, E., Delgado, J., Dornan, T.N., Doubek, J.P., Dusaucy, J., Erina, O., Ersoy, Z., Feuchtmayr, H., Frezzotti, M.L., Galafassi, S.L., Gateuille, D., Gonçalves, V., Grossart, H., Hamilton, D.P., Harris, T., Kangur, K., Kankılıç, G.B., Kessler, R., Kiel, C., Krynak, E.M., Leiva-Presa, A., Lepori, F., Matias, M.G., Matsuzaki, S.S., McElarney, Y., Messyasz, B., Mitchell, M., Mlambo, M., Motitsoe, S.N., Nandini, S., Owens, C., Özkundakci, D., Pinnow, S., Pociecha, A., Raposeiro, P., Rõõm, E., Rotta, F., Sartirana, D., Salmaso, N., Sarma, S.S.S., Scordo, F., Sibomana, C., Siewert, D., Stepanowska, K., Tavşanoğlu, U.N., Tereshina, M., Thompson, J., Tolotti, M., Valois, A., Verburg, P., Wesolek, B., Weyhenmeyer, G.A., Wu, N., Zawisza, E., **Zink, L.**, Leoni, B. Plastic debris in lakes worldwide. *Nature*. DOI: 10.1038/s41586-023-06168-4
- 2023 **Zink, L.**, Wiseman, S., and Pyle, G.G. Single and combined effects of cadmium, microplastics, and their mixture on whole-body serotonin and feeding behaviour following chronic exposure and subsequent recovery in the freshwater leech, *Nephelopsis obscura*. *Aquatic Toxicology*. DOI: 10.1016/j.aquatox.2023.106538

- 2023 **Zink, L., Shearer, A.,** Wiseman, S. and G.G. Pyle. Effects of exposure to cadmium, microplastics, and their mixture on survival, growth, feeding, and life history of *Daphnia magna*. Environmental Toxicology and Chemistry. DOI: 10.1002/etc.5628
- 2023 **Zink, L.,** and Pyle, G.G. A proposed reporting framework for microplastic-metal mixtures research, with emphasis on environmental considerations known to influence metals. Ecotoxicology. DOI: 10.1007/s10646-023-02634-x
- 2022 Pyle, G.G., Plomp, R.D., **Zink, L.,** and Klemish, J.L. Invertebrate metal accumulation and toxicity from sediments affected by the Mount Polley mine disaster. Environmental Science and Pollution Research. DOI:10.1007/s11356-022-20677-1
- 2019 **Zink, L.,** and Pyle, G.G. Contrary to marine environments, common microplastics in freshwater systems do not emit dimethyl sulphide, and important infochemical. Bulletin of Environmental Contamination and Toxicology. DOI: 10.1007/s00128-019-02726-7

Refereed Journal Articles, under review

Terrazas-Salgado, L., Dubiel, J., **Zink, L.,** Zhe, L., and Wiseman, S. Whole transcriptome responses of zebrafish (*Danio rerio*) exposed to a mixture of benzotriazole ultraviolet stabilizers: insights into embryotoxicity and behavior. Under Review at Environmental Pollution (Manuscript ID: ENVPOL-D-26-03611).

Lavery, B., Wood, C.M., and **Zink, L.** The combined effects of copper exposure and hypoxia on zebrafish behaviour. Under Review at Bulletin of Environmental Contamination and Toxicology (Manuscript ID: BECT-D-26-00245).

Meslo, M., Wood, C.M., and **Zink, L.** Culturing conditions of the great pond snail (*Lymnaea stagnalis*) alters their growth, physiology, and behavioural response to hypoxia. Under Review at Canadian Journal of Zoology (Manuscript ID: cjz-2025-0169). Decision of “Revise” given February 6.

Zink, L., Klemish, J.L., Plomp, R.D., Pyle, G.G. Acute time-course depuration and retention of microplastics in the freshwater mussel. Under Review at Archives of Environmental Contamination and Toxicology (Manuscript ID: AECT-D-25-00652).

Non-Refereed Publications and Technical Reports

- 2019 Klemish, J.L., S.J. Bogart, **L. Zink,** and G.G. Pyle. Quesnel Lake database construction and assessment. Report No. EQS2019-03. Environmental Quality Series, British Columbia Ministry of Environment and Climate Change Strategy, Victoria, BC. 88 p.
- 2019 **Zink, L** and Pyle, GG. Convenience Has Its Consequences: Risks of Repurposing Sulphur Waste into Polymers. Society of Environmental Toxicology and Chemistry Globe.

2019 **Zink, L.** The Prairie Northern Chapter of SETAC's 10th Annual Meeting. Society of Environmental Toxicology and Chemistry Globe.

GRANT AND FUNDING PROPOSALS UNDER REVIEW

2025 Environment and Climate Change Canada, Elk Valley Environmental Damages Fund, "A collateral consequence: Understanding how changes in major ion composition in the Elk River as a result of selenium removal and mining activities affect tuhu[†] (bull trout)". Role: Coordinator. Total Requested Funds: \$450000 CAD

2025 The Trebek Initiative (National Geographic), "Brownification and Salinization of Freshwaters Altering Fish Populations". Role: Primary Applicant. Total Requested Funds: \$91500 CAD

SUCCESSFUL RESEARCH GRANT AND FUNDING PROPOSALS

2026 Alberta Conservation Association – Research Grants Program, "Fish in the Face of Fire and Farming: How prairie run-off shapes trout populations". Role: co-/primary applicant, Total Granted Funds: \$13050 CAD

2025 University of British Columbia Wall Research Award, "Smell Steers the Salmon: Bringing Pacific Salmon Home in BC Using Cutting-Edge Olfactory Analysis". Role: Coordinator. Total Granted Funds: \$200000 CAD

2025 Microbial Cell Systems for Sustainable Living (MCELLS) Research Excellence Cluster Award. Role: Primary Applicant. Total Granted Funds: \$1000 CAD

2025 University of British Columbia Biology Undergraduate Diversity in Research Program, undergraduate student funding for micro-experience programs. Role: Primary Applicant. Total Granted Funds: \$1000 CAD

2025 Amazon: The Aquatic Biota in the Face of Climate Change, Fundação de Amparo a Pesquisa do Estado do Amazonas. Role: Research Scientist, Team Lead for 5-projects over 5 years; this is an international collaboration led by Adalberto L. Val (Brazil). Total Granted Funds: \$3.4 million CAD

2022 Natural Sciences and Engineering Research Council (NSERC) – Department of Fisheries and Oceans Supplement. Role: Primary Applicant, awarded one of ten in Canada. Total Granted Funds: \$10000 CAD

2020 Alberta Conservation Association – Grant in Biodiversity. "Combined effects of microplastics and cadmium on the freshwater leech". Role: Primary Applicant. Total Granted Funds: \$4780 CAD

DISSEMINATION OF RESEARCH AND TEACHING

Invited Lectures (outside of Academia)

- 2023 **Zink, L.** Breaking down the “buzz words” – what does a changing environment mean when it comes to water pollution? Invited presentation to the Lethbridge Breakfast Club hosted by the CFO of Charlton & Hill Home Services, Lethbridge, Alberta. March 9.
- 2023 **Zink, L.** Water worries: Considerations in a changing environment. Invited presentation to the City of Lethbridge hosted by the Natural Leaders Project, Lethbridge, Alberta. January 26.
- 2020 **Zink, L.** Microplastics and Metals – A Myriad of Mixtures Toxicity. Invited presentation to Water Talks hosted by Water Institute for Sustainable Environments, virtual. November 18.

Platform Presentations Given

- 2025 **Zink, L.,** Ruhr, I., Tilley, M., Bogard, M.J., Wiseman, S., and C.M. Wood. Natural dissolved organic carbon alters olfaction in brown trout (*Salmo trutta*): Correlating behaviour, physiology, and cellular responses. Canadian Ecotoxicity Workshop, Victoria, BC, Canada. October 6. Invited.
- 2025 **Zink, L.,** Franklin, N., Wood, C.M. The influence of isolated water chemistry manipulations on the toxicity of copper to zebrafish using the Biotic Ligand Model framework. Canadian Ecotoxicity Workshop, Victoria, BC, Canada. October 7. Invited.
- 2025 **Zink, L.,** Tilley, M., Ruhr, I., Bogard, M.J., Wiseman, S., and C.M. Wood. Immediate loss and subsequent recovery of olfaction in brown trout (*Salmo trutta*) exposed to natural dissolved organic carbon. Annual Meeting of the Society of Experimental Biology, Antwerp, Belgium. July 10.
- 2024 **Zink, L.,** Meslo, M., and C.M. Wood. Establishing a new species for environmental toxicity tests, the systematic standardization of snails. Post-Doctoral Research Day at the University of British Columbia. Vancouver, BC. (Earned second place presentation award) December 9.
- 2024 **Zink, L.,** and C.M. Wood. Towards a “Behavioural Best Practice”: engineering and experimental considerations in developing behavioural assays, an example using hypoxic response in the pond snail. Society of Environmental Toxicology and Chemistry – North America. Fort Worth, TX. October 24.

- 2024 **Zink, L.**, and C.M. Wood. Alterations in transepithelial potential following exposure of fish to differentially degraded microplastics suggests even brief pulse exposures to plastics has ionoregulatory consequences. Society of Canadian Zoologists. Moncton, NB. May 7.
- 2023 **Zink, L.**, Mertens, E., Zhou, X., Johnston, SE., Bogard, M., Wiseman, S. and GG Pyle. A predictive model created to understand how specific water quality characteristics govern the association of cadmium to microplastics in freshwater systems. Canadian Ecotoxicity Workshop. Ottawa, ON. October 4.
- 2022 **Zink, L.**, and G.G. Pyle. Knowing the parts to understand the whole: Tackling microplastic and metal mixtures toxicity. Biology Graduate Symposium, University of Lethbridge, Lethbridge, AB. January 28.
- 2021 **Zink, L.**, and G.G. Pyle. Water quality influences the binding of metal to microplastic. Meeting of the Minds Interdisciplinary Conference, University of Lethbridge, Lethbridge, AB. March 25.
- 2021 **Zink, L.** A step back and a step up for peer-led tutorials: Empowering student leaders to embed transferrable skills while putting complex material into perspective. International Society for the Scholarship of Teaching and Learning, virtual. October 26-29.
- 2021 **Zink, L.**, and G.G. Pyle. Impacts of water quality on the interaction of cadmium and microplastics in simulated freshwater environments. Canadian Conference for Fisheries Research and Society of Canadian Limnologists, virtual. February 15-19.
- 2020 **Zink, L.**, Klemish, J.L., and G.G. Pyle. Laundry-effluent toxicity of copper-treated textiles to freshwater invertebrates. Society of Environmental Toxicology and Chemistry – Prairie Northern Chapter, virtual. (Earned second place platform award). June 15-19.
- 2019 **Zink, L.**, and G.G. Pyle. Variations in cadmium adsorption to weathered and virgin polyethylene microplastics. Presented at the Society of Environmental Toxicology and Chemistry (SETAC) Prairie Northern Chapter (PNC), University of Lethbridge, Lethbridge, AB. June 10-11.

Poster Presentations Given

- 2023 **Zink, L.** Incorporating non-traditional information sources in classroom discussion. Undergraduate Biology Educators of Alberta. Lethbridge, AB. May 18.
- 2022 **Zink, L.**, and G.G. Pyle. Cadmium and microplastics alter leech feeding behaviour via different mechanisms, resulting in additive effects. Society of Environmental Toxicology and Chemistry – North America, Pittsburgh, PA. (Earned third place Ph.D. Best Poster Award). November 14.

- 2020 **Zink, L.**, and G.G. Pyle. Combined effects of microplastics and metals on aquatic invertebrates. Biology Graduate Symposium, University of Lethbridge, Lethbridge, AB. January 29.
- 2019 **Zink, L.** Red pen potential: Promoting an influential teaching environment through effective feedback. SPARK Teaching Symposium, University of Lethbridge, Lethbridge, AB. April 25.
- 2019 **Zink, L.** and G.G. Pyle. The effects of chronic exposure to cadmium and microplastics on serotonin levels and feeding behaviour in the leech, *Nepheleopsis obscura*. Meeting of the Minds Interdisciplinary Conference, University of Lethbridge, Lethbridge, AB. March 22.

Media Coverage

- 2025 Why the world can't seem to agree on global plastic production and recycling. Live radio interview with CBC Edmonton. April 24.
- 2023 Microplastics are found globally in freshwater systems, raising concern. Live radio interview with CBC Edmonton. July 24.
- 2023 International research collaborations to better understand microplastics in lakes globally. Live radio interview with CBC Calgary – The Homestretch. July 20.
- 2022 Pride flag ascends at U of L. University advancement media coverage by the Lethbridge Herald. June 21.
- 2021 These aquatic invaders post a big risk in Alberta. Video interview with CBC news. November 4.

Invited Lectures (within academia)

- 2026 **Zink, L.** A movement towards behaviour in toxicology: Considerations from an animal welfare perspective. University of British Columbia Pre-Veterinary Annual Conference. Vancouver, BC. March 20.
- 2025 **Zink, L.**, Smithson, J., Tilley, M., Fischer, K., Ruhr, I., Bogard, M.J., Wiseman, S., and C.M. Wood. Effects of natural dissolved organic carbon on trout olfaction. University of British Columbia Comparative Physiology Seminar Series. Vancouver, BC. October 31.
- 2024 **Zink, L.** Methods matter – how clear communication of methods increases research applicability. Invited lecture to the Urban Planning and Policy graduate students at the University of Illinois Chicago, virtual. April 16.

- 2024 **Zink, L.** Methods matter – how clear communication of methods increases research applicability. Invited lecture to the Urban Planning and Policy graduate students at the University of Illinois Chicago, virtual. April 16.
- 2024 **Zink, L.** Foundations of investigating mixtures toxicity. Invited guest lecture for Toxicology. University of Lethbridge, Lethbridge, AB. March 26.
- 2024 **Zink, L.** Risk assessment across ecosystems. Invited guest lecture for Special Topics in Biology. University of Lethbridge, Lethbridge, AB. March 5.
- 2023 **Zink, L.** The fundamentals of environmental risk assessment. Invited guest lecture for Toxicology. University of Lethbridge, Lethbridge, AB. October 26.
- 2023 **Zink, L.** Student life in Lethbridge. Invited talk for the Peer Education Program. University of Lethbridge, AB. January 16.
- 2022 **Zink, L.** Giving a topic pitch presentation: tips, tricks, and considerations for environmental topics. University of Lethbridge, AB. September 22.
- 2020 **Zink, L.** Microplastics: A complex pollutant? Invited guest lecture for Current Topics in Environmental Science. University of Lethbridge, Lethbridge, AB. March 6.
- 2019 **Zink, L.** Microplastic toxicity. Invited guest lecture for Toxicology. University of Lethbridge, Lethbridge, AB. October 16.

Other Presentations

- 2021 **Zink, L.** Packed with plastics. Images of Research Competition, virtual. March 11-19.
- 2019 **Zink, L.** and G.G. Pyle. More than microplastics. Three-Minute Thesis (3MT) Research Competition. University of Lethbridge, Lethbridge, AB. (Earned second place). March 25.

TEACHING EXPERIENCE

*Courses marked with an asterisk are courses for which I have created the structure and content.

Red Crow Community College, Alberta, Canada

Courses Taught (as Instructor of Record)

Aquatic and Wetland Ecology (Fall 2024) *

Terrestrial Ecology (Fall 2024) *

Introduction to Environmental Science (Fall 2022, Winter 2023, Winter 2024, Winter 2025, Winter 2026)*

Introduction to Geography (Fall 2023, Fall 2024, Winter 2025, Fall 2025) *

Introductory Environmental Chemistry (Winter 2025)*

Environmental Reclamation and Remediation (Winter 2025)*
Soil Genesis and Classification (Fall 2025)*
Introduction to Irrigation (Winter 2026)*
Soil Microbiology (Winter 2026)*

University of Lethbridge, Alberta, Canada

Graduate Courses Taught (as Seminar Instructor)

Research and Skill Development: Using R Software (Fall 2023, Fall 2024, Fall 2025) *
Data Management and Statistical Techniques I (Fall 2025)*
Data Management and Statistical Techniques II (Winter 2025, Winter 2026)*
Predictive Analytics I (Winter 2024, Winter 2025, Winter 2026) *
Regression Analyses (Winter 2024, Winter 2025, Winter 2026) *

Undergraduate Courses Taught (as Instructor of Record)

Behavioural Ecology (Fall 2022) *
Animal Physiology Seminar (Fall 2020, Fall 2021) *

Undergraduate Courses Taught (as Teaching Assistant)

Developmental Biology (Spring 2023)
Vertebrate Zoology (Spring 2023)
Research Internship Concentration (Spring 2020, Spring 2021) *
Animal Physiology Laboratory (Fall 2019, Fall 2020, Fall 2021, Fall 2023)
Cellular Basis of Life Laboratory (Spring 2019)

Thompson Rivers University, British Columbia, Canada

Courses Taught (as Teaching Assistant)

Principles of Biology Laboratory (Fall 2016)

STUDENT SUPERVISION

2025 – present Maya Seethram. “Assessing the feasibility of using mycelium-based foods in aquaculture systems”, University of British Columbia. Final year undergraduate directed studies project. Primary supervisor.

2024 – 2026 Brendan Lavery. “Antipredator behaviour in zebrafish under simultaneous copper exposure and hypoxia”, University of British Columbia. Final year undergraduate directed studies project. Primary supervisor.

Poster Presentation at Canadian Ecotoxicity Workshop, October 2025.
“Interactive effects between copper and hypoxia on zebrafish behaviour” (earned First Place Student Poster Award)

- 2024 – 2026 Jaden Griffiths. “Ionoregulatory and hypoxic responses of the pond snail (*Lymnaea stagnalis*) exposed to Frank Lake Wetland effluent”, University of Lethbridge. Undergraduate thesis. Co-supervised with Dr. Steve Wiseman.
- Poster Presentation at Canadian Ecotoxicity Workshop, October 2025. “Ionoregulatory and hypoxic responses of the pond snail (*Lymnaea stagnalis*) exposed to Frank Lake Wetland effluent”
- 2024 – 2026 Mikaila Meslo, “Alterations in hypoxic response of pond snails under changes in food quality and temperature regimes”, University of British Columbia. Undergraduate volunteer project. University of British Columbia. Primary supervisor.
- 2023 Emily Mertens, “Correlating the amount of cadmium sorbed to microplastics and the subsequent toxicity to freshwater algae”, University of Lethbridge. Co-supervised with Dr. Steve Wiseman.
- 2022-2023 Julia Stroud, “Combined toxicity of maternally transferred PAHs and waterborne selenium to the fathead minnow”, University of Lethbridge. Co-supervised with Dr. Steve Wiseman.
- 2020-2021 Anna Shearer, “The multigenerational effects of cadmium and microplastic mixtures to *Daphnia magna*”, funded through NSERC, University of Lethbridge. Primary supervisor.
- 2020-2021 Mikaila Meslo, “Physiological responses of *Daphnia magna* to various microplastics”, funded through University of British Columbia Co-operative Education and BioTalent, University of Lethbridge. Primary supervisor.
- 2020 Alyssa Hoveling, “Seasonal toxicity considerations of the effects of microplastics to *Hyalella azteca*”, University of Lethbridge. Primary supervisor.
- 2020 Karen Shamash, “Influence of sediment characteristics to the uptake of microplastics by *Hyalella azteca*”, University of Lethbridge. Primary supervisor.

PROFESSIONAL AFFILIATIONS AND SERVICE

- 2025 – present Editorial Advisory Board member for Contaminants, Environment, and Society (a Canadian Science Publishing journal)
Project lead for a column dedicated to community outreach activities
- 2024 – present Society of Experimental Biology
- 2024 – present Canadian Society of Zoologists
2024 Judge – Battle Award for best poster presentation
- 2020 – present Society of Environmental Toxicology and Chemistry

2025 – present	Endowment Fund Board of Trustees Member
2025	Session Chair – “Innovative Toxicity Endpoints: Behavior and Beyond
2024	Session Chair – “Behavioral Endpoints and Methods as a Line of Evidence in Regulatory Toxicity Testing”
2023 – present	Aquatic Toxicity Testing Interest Group, Steering Committee member
2022 – 2023	North American Student Support Committee member
2021 – 2022	World Council, ex-officio member
2021 – 2022	North American Board member
2021 – 2022	Chair, North American Student Advisory Committee
2019 – 2021	Board Member, Prairie Northern Chapter
2019 – present	International Society for the Scholarship of Teaching and Learning
2019 – 2021	Society of Canadian Limnologists

SHORT COURSES AND PROFESSIONAL DEVELOPMENT

- 2025 Research as a High Impact Practice in STEM Education. Centre for the Integration of Research, Teaching and Learning. Virtual.
- 2024 McCall MacBain Postdoctoral Scholars Leadership Certification.
Selected as one of 40 postdoctoral fellows to participate from over 200 applicants
- 2023 R Workshop: analyzing environmental data with numerous non-detects, Canadian Ecotoxicity Workshop, Ottawa, ON.
- 2023 Conceptual Site Modelling. GeoEnviroPro, virtual.
- 2023 Integrating Western Science and Traditional Knowledge in Restoration Works. GeoEnviroPro, virtual.
- 2023 Introduction to Assessment and Management of Chemicals. Stockholm University, virtual.
- 2023 Anti-Racism Response Training. Canadian Association for Graduate Studies, virtual.
- 2022 Peer Reviewer Training. Young Environmental Scientists Meeting, virtual.
- 2021 Indigenous Relations Workshop. Canadian Conference for Fisheries Research and Society of Canadian Limnologists, virtual.
- 2020 Speak Science Simply Series. Concordia University of Edmonton, AB.
 - Persuasive science storytelling techniques
 - Science interview toolkit
 - Navigating scientific controversy
 - Communicating data and statistics to the public
 - Communicating science for policy

- 2019 Instructional Skills Workshop. University of Lethbridge, AB.
- 2019 Utilizing R. Society of Environmental Toxicology and Chemistry, Prairie Northern Chapter, Lethbridge, AB.
- 2019 Thesis Writing Bootcamp. University of Lethbridge, AB.
- 2019 Graduate Teaching Assistant Professional Development Program. University of Lethbridge, AB.

UNIVERSITY SERVICE

University of British Columbia

- Adjudicator for the Postdoctoral Fellow Research Symposium, December 2025
- Adjudicator for the Multidisciplinary Undergraduate Research Conference, March 2025
- Interdisciplinary Research Cluster Activity & Participation
- Microbial Cell Systems for Sustainable Living (MCELLS) 2024 - present

University of Lethbridge

- Coach for 3-Minute Thesis competitors, 2020 - 2023
- Presidential Search Committee, 2022 – 2023
- Board of Governors, 2019 - 2023
- Strategic Planning Committee, 2019 - 2023
- Graduate Council (and Executive), 2019 - 2023
- General Faculties Council, 2019 – 2023
- School of Liberal Education Advisory Council, 2019 – 2023
- Academic Quality Assurance Committee, 2020 – 2023
- Academic Standards Committee, 2019 – 2023
- Curriculum Coordinating Committee, 2019 – 2023
- University of Lethbridge Alumni Association, 2019 – 2023
- President, Graduate Students' Association, University of Lethbridge, 2019 - 2023
- Teaching Centre Advisory Council, 2019 – 2021

COMMUNITY ACTIVITY AND OUTREACH

- 2022 – 2024 Aquatic Sciences Mentor, Natural Leaders Program, Helen Schuler Nature Center, Lethbridge, AB
- 2019 - 2023 Visiting Scientist and Program Leader, Destination Exploration Youth Outreach Program, University of Lethbridge, Lethbridge, AB
- 2023 Judge, Nicholas Sheran Elementary School Science Fair, Lethbridge, AB.
- 2020 – 2022 Judge, Lethbridge Science Fair, Lethbridge, AB.

- 2019 Organizer and Volunteer, Annual Biology Graduate Symposium, University of Lethbridge, Lethbridge, AB
- 2019 Organizer, Society of Environmental Toxicology and Chemistry Prairie Northern Chapter (SETAC PNC), University of Lethbridge, Lethbridge, AB
- 2019 Judge and Session Chair, Luke Stebbins Undergraduate Research Symposium, University of Lethbridge, AB

OTHER RELATED EXPERIENCE

2020 – 2024 Animal Care Research Technician, University of Lethbridge, Lethbridge, AB

Peer-Reviewed Articles for:

- 2025-present NanoImpact
- 2025-present Zoological Research
- 2024-present Collected Essays on Learning and Teaching
- 2024-present Journal of Experimental Biology
- 2023-present Journal of Environmental Chemical Engineering
- 2023-present Limnology and Oceanography Letters
- 2023-present Water Research
- 2023-present Environmental Toxicology and Chemistry
- 2022-present The Canadian Journal for the Scholarship of Teaching and Learning
- 2022-present Environmental Pollution
- 2021-present Environmental Science and Pollution Research
- 2020-present Environmental Science and Technology

Technical Document Reviews

- Ongoing ASTM E1850-2004(2019) - Standard Guide for Selection of Resident Species as Test Organisms for Aquatic and Sediment Toxicity Tests
- Ongoing ASTM E1688-10(2019) - Standard Guide for Determination of the Bioaccumulation of Sediment- Associated Contaminants by Benthic Invertebrates