

Shahinur S. Islam

Curriculum Vitae

CONTACT

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PROFESSIONAL EXPERIENCES

Postdoc 2024- University of California Davis (UC Davis)
Supervisor: Dr. Andrea Schreier (Department of Animal Science)

Postdoc 2022-23 University of Windsor, Canada
Supervisors: Drs. Daniel Heath (U. Windsor) and Ken Jeffries (U. Manitoba)

EDUCATION

Ph.D 2021 **Marine Biology**, Memorial University of Newfoundland (MUN), Canada
Dissertation Supervisor: Dr. Ian Fleming

M.S. 2015 **Erasmus Joint MSc in Marine Environment and Resources**
Uni. of Bordeaux (France); Uni. of the Basque Country (Spain); Uni. of Liege (Belgium); Concordia Uni., Montreal, Canada (Visiting Research Fellow)
Dissertation Supervisor: Dr. Dylan Fraser

M.S. 2012 **Fish Genetics & Biotechnology**, Khulna University, Bangladesh (**Distinction**)

B.S. 2010 **Fisheries Science (Hons)**, Khulna University, Bangladesh (**Distinction**)

PEER-REVIEWED PUBLICATIONS

In Preparation

20. **S. S. Islam**, K. M. Jeffries, J. W. Heath and D. D. Heath. Gene transcriptional profiling to assess Chinook salmon osmoregulatory resilience to environmental change. (**In Preparation**)
19. **S. S. Islam**, A. D. Schreier, C. E. Burdi, S. A. Stinson, G. P. Schumer, K. Karpenko, C. Dean, M. B. Espe, B. M. Schreier, M. R. Baerwald, and D. A. Gille. Advancing eDNA monitoring for aquatic species: Detecting a rare fish species at a critical early-life stage using multiple

sampling methods in a dynamic estuary. (**In Preparation-soon to be submitted to *Environmental DNA***)

In Review

18. X. Dang, Y. Chen, **S. S. Islam**, D. D. Heath, and B. Dixon, 2025. QuantStudio™ 12K Flex OpenArray™ Chip as a Tool for High-Throughput Immunogene Expression Analysis in Chinook Salmon *Oncorhynchus Tshawytscha*. (**Submitted-*Canadian Journal of Fisheries & Aquatic Sciences***)
17. N. Tugui, **S. S. Islam**, and D. D. Heath, 2025. Gene transcriptional profiling of osmoregulatory stress response in Salmonids: Development and assessment of 28 Taqman qPCR assays. (**Submitted-*Aquaculture Reports***) (**Pre-print: <https://dx.doi.org/10.2139/ssrn.5270854>**)
16. A. Howarth, **S. S. Islam**, B. Firth, D. D. Heath, and S. J. Cooke, 2025. Transcriptomic responses to thermal and angling stress in wild, small stream brook trout. (**Submitted-*Conservation Physiology***)
15. **S. S. Islam**, D. D. Heath, B. Dixon, P. Karpowicz, Kelvin Vuu, J. Lablanc, N. J. Bernier, and K. M. Jeffries, 2025. Development of multi-species qPCR assays for a nanofluidic transcriptional profiling chip to assess responses of salmonids to changing environments. (**Submitted-*Canadian Journal of Fisheries & Aquatic Sciences***) (**Pre-print: <https://www.biorxiv.org/content/10.1101/2024.09.25.615083v1>**)

Published

14. C. Best, T. C. Durhak, A. J. Chapelsky, M. Aminot, **S. S. Islam**, D. D. Heath, N. J. Mochnacz and K. M. Jeffries, 2025. Transcriptional profiling provides insights on sublethal thermal stress thresholds in juvenile bull trout. *Canadian Journal of Fisheries & Aquatic Sciences*, **82: 1-17**
13. G. Banousse, C.A.D. Semeniuk, D. Garant, J.D. Jeffrey, **S. S. Islam**, N.J. Bernier, K.M. Jeffries and C. Audet, 2025. Genetic and environmental basis of transcriptional thermal plasticity of Brook Charr fry. *Canadian Journal of Fisheries & Aquatic Sciences*, **82:1-15**
12. E. H. Ignatz, X. Xue, J. R. Hall, **S. S. Islam**, M. L. Rise and I. A. Fleming, 2024. Defense-relevant gene expression differences in hatchling Atlantic salmon among wild Newfoundland and farmed European and North American populations and their hybrids. *Molecular Ecology*, **33:e17535**
11. I. C. San Roman, I. R. Bradbury, S. E. Crowley, S. J. Duffy, **S. S. Islam**, and I. A. Fleming 2023. Experimental comparisons of changes in relative survival and fitness-related traits of wild, farm and hybrid Atlantic Salmon *Salmo salar* in nature. *Aquaculture Environment Interactions*, **15: 323-337**

10. S. E. Crowley, I. R. Bradbury, A. M. Messmer, S. J. Duffy, C. C. Parrish, **S. S. Islam**, and I. A. Fleming, 2023. Differences in energy acquisition and storage of farm, wild and hybrid Atlantic salmon (*Salmo salar*) competing in the wild. *Canadian Journal of Fisheries & Aquatic Sciences*, **80**: 43-56
9. **S. S. Islam**, B. F. Wringe, C. M. Conway, I. R. Bradbury and I. A. Fleming 2022. Fitness consequences of hybridization between wild Newfoundland and farmed European and North American Atlantic salmon. *Aquaculture Environment Interactions*, **14**: 243-262
8. B. M. Perriman, P. Bentzen, B. F. Wringe, S. Duffy, **S. S. Islam**, I. A. Fleming, M. F. Solberg and I. R. Bradbury, 2022. Morphological consequences of hybridization between farm and wild Atlantic salmon, under both wild and experimental conditions. *Aquaculture Environment Interactions*, **14**: 85-96
7. **S. S. Islam**, X. Xue, A. Caballero-Solares, I. R. Bradbury, M. L. Rise and I. A. Fleming 2022. Distinct early-life stage gene expression effects of hybridization among European and North American farmed and wild Atlantic salmon populations. *Molecular Ecology*, **31 (9)**: 2712-2729
6. S. E. Crowley, I. R. Bradbury, A. M. Messmer, S. J. Duffy, **S. S. Islam**, and I. A. Fleming, 2022. Common-garden comparison of relative survival and fitness-related traits of wild, farmed, and hybrid Atlantic salmon (*Salmo salar*) parr in nature. *Aquaculture Environment Interactions*, **14**: 35-52
5. **S. S. Islam**, B. F. Wringe, K. Boe, I. R. Bradbury and I. A. Fleming 2021. Early-life fitness trait variation among divergent European and North American farmed and wild Atlantic salmon populations. *Aquaculture Environment Interactions*, **13**: 323-337
4. **S. S. Islam**, B. F. Wringe, I. R. Bradbury and I. A. Fleming 2020. Behavioural variation among divergent European and North American farmed and wild Atlantic salmon (*Salmo salar*) populations. *Applied Animal Behaviour Science*, **230**: 105029
3. S.M.B. Rahaman, S.K. Biswas, M.S. Rahaman, A.K. Ghosh, L. Sarder, S.M.S. Siraj and **S. S. Islam**, 2014. Seasonal nutrient distribution in the Rupsha-Passur tidal river system of the Sundarbans Mangrove Forest, Bangladesh. *Ecological Processes*, **3 (18)**: 1-11.
2. **S. S. Islam**, M. S. Shah and M. L. Rahi, 2014. Assessment of genetic variability of Prawn (*Macrobrachium rosenbergii*) post larvae (PL) from the broods stocked under different sex ratios. *Int. Journal of Aquaculture*, **4(9)**: 55-63.
1. **S. S. Islam**, M. S. Shah and M. L. Rahi, 2011. Study of Fecundity and Induced Breeding of *Mystus vittatus*. *Bangladesh Journal of Zoology*, **39(2)**: 205-212.

AWARDS & SCHOLARSHIPS

Major Awards and Scholarships

2025-2026	Delta Science Postdoctoral Fellowship by California Sea Grant	\$156,570
2022-2023	MITACS Accelerate Postdoctoral Internship, Canada	\$60,000
2013-2015	Erasmus Mundus Master Scholarship by European Union	€48,000

Other Awards and Scholarships

2022	Genetics Society of America (GSA) Presidential Membership award	-
2021	TAUMUN award for outstanding contribution in teaching, MUN	\$300
2019	Summer Ins. Stat. Genetics, Dept of Biostatistics, U. Washington, USA	\$1,200
2011	NSICT Research Fellowship, Ministry of Science, Bangladesh	\$1,000

RESEARCH INTERESTS

- Ecology, Evolution & Conservation Biology
- Integrative Genetics & Genomics

TEACHING EXPERIENCE

2024 (Fall)	Teaching (Instructor)*	Graduate Seminar in Ecology (UC Davis)
2021	Teaching Assistant	Aquaculture Principles & Practices (MUN)
2020-2021	Teaching Assistant	Principles of Biology (MUN)
2020-2021	Teaching Assistant	Principles of Biology (Lab) (MUN)
2019-2020	Teaching Assistant	Aquatic Ecology (High School Program) (MUN)
2018	Teaching Assistant	Model Based Statistics in Biology (MUN)

*Instructor of Record: Dr. Andrea Schreier

PRESENTATIONS***Invited/Guest Speaker***

2024	Department of Animal Science (Fall Seminar Series), UC Davis, CA, USA
2024	Fish Conservation and Culture Laboratory, UC Davis, CA, USA
2024	Cramer Fish Sciences, Sacramento, CA, USA
2016	Department of Ocean Sciences, MUN, NL, Canada

Oral Presentation

2025	UC Davis 10 th Annual Postdoctoral Research Symposium, Davis, CA, USA (Co-organizer)
2024	Bay-Delta Science Conference (Longfin Smelt Symposium), Sacramento, CA, USA
2024	UC Davis 9 th Annual Postdoctoral Research Symposium, Davis, CA, USA
2024	Gene, Genetics & Genomics Sym*, Society of Canadian Aquatic Science (SCAS), NB, Canada
2023	Gene, Genetic & Genomics Symposium, SCAS, Montral, Canada

- 2022 Ecological Society of America & Canadian Society for Ecology and Evolution, MTL, Canada
- 2021 Ocean Frontier Institute Module J Symposium (Virtual), St John's, NL, Canada
- 2020 Sustainable Aquaculture & Fisheries Symposium (SAFS-OFI), St John's, NL, Canada
- 2019 Canadian Society for Ecology and Evolution, Fredericton, NB, Canada
- 2019 Aldrich Conference, Memorial U. St John's, NL, Canada
- 2019 Biology Graduate Student Symposium, MUN, NL, Canada
- 2018 Ocean Frontier Institute, MUN, St John's, NL, Canada
- 2018 Canadian Society for Ecology and Evolution, U of Guelph, ON, Canada
- 2018 Canadian Society of Zoology, MUN, St John's, NL, Canada (also Co-organizer)
- 2017 Biology Graduate Student Symposium, MUN, NL, Canada
- 2016 Aquaculture Canada & Cold Harvest 2016, St John's, NL, Canada
- 2016 Canadian Conference for Fisheries Research, St John's, NL, Canada (Co-organizer)
- 2013 5th Fisheries Conference and Research Fair, Dhaka, Bangladesh
- 2012 International Science Seminar, Asiatic Society of Bangladesh, Bangladesh

*Presenter: Dr. Daniel Heath

Poster Presentation

- 2024 American Genetic Association President's Symposium, Tahoe, California
- 2011 18th National Fisheries Conference, Jahangirnagar University, Bangladesh

TRAINING/ WORKSHOP/ INTERNSHIP

- 2025 Delta Science Early Career Leadership Workshop (by California Sea Grant), Sacramento, USA
- 2024 Postdoctoral Scholars Association Writing Retreat Workshop (co-organized), UC Davis, USA
- 2023 NCBI workshop: Exploring the relationship between Eukaryotic genomes by Genome Viewer
- 2023 RNA-seq analysis workshop, The Computational Biology Core, U. Connecticut, USA
- 2019 Summer Institute of Statistical Genetics, Dept of Biostatistics, University of Washington, USA
- 2014 Internship at Cellular & Molecular Biology Dept, University of Basque Country, Spain
- 2012 Training on Fisheries Biotechnology, Khulna University & Washington State University, USA

MEDIA/MAGAZINE

- 2019 Sustainable Aquaculture: Identifying The Impacts Of Escaped Hatchery Fish. Prescience, Vol. 8 (2019), p.17.
- 2018 Weighing The Risks. *Sustainable Aquaculture*. MUN Gazette, MemorialU, March 2, 2018.

MENTORING

Trained/Mentored Graduate Research Students

- 2023-2024 Andrew Howarth (PhD- Carleton University)
- 2022-2023 Nicholas Tugui (MSc- U. Windsor)

- 2017-2018 Samantha Crowley (MSc- MUN); Sindy Dove (MSc-MUN)
Trained/Mentored Research Assistants
- 2022 Patricia Voyer (U. Windsor)
- 2016-2018 Devin Saunders (2017-2018) (MUN); Arielle Przybysz (2016) (MUN)
Trained/Mentored Undergraduate Research Students
- 2015-2018 Gerissa Fowler (2015/16); Arielle Przybysz (2016); Kristen Lo (2016/17); Devin Saunders (2016/17); Jillian Conway (2018) (MUN)
Co-Trained/Mentored Undergraduate Research Students
- 2019-2020 Taylor Hughes (2019); Keeley Blanchard (2019) (MUN)

COMMITTEE MEMBERSHIP

- 2024-2025 Secretary, UC Davis Postdoctoral Scholars Association (PSA)
- 2022-2023 Secretary, American Fisheries Society-Ontario Chapter (AFS-ON Chapter)
- 2021-2022 Mentorship, American Society of Naturalists & EEB Mentor Match
- 2021-2022 Diversity, Equity, and Inclusion (DEI) Committee, Canadian Society of Zoology (CSZ)
- 2017-2018 Communication Coordinator MUN Ocean Sciences Graduate Student Association
- 2018-2020 Interpreter/trainer, Educational Program, Ocean Science Centre, MUN

COMMUNITY OUTREACH

- 2025 Selection Committee/Judge, 2025 Postdoctoral Excellence Awards, UC Davis, USA
- 2024-2025 Judge, UC Davis Postdoctoral Research Symposium, UC Davis, USA
- 2024-2025 Volunteered, Picnic Day, Department of Animal Science, UC Davis, CA, USA
- 2023 Judge, Integrative Biology Graduate Symposium, University of Windsor, Canada
- 2017-2018 Interpreter, Science Rendezvous, Faculty of Science, MUN

REVIEWER (PEER-REVIEWED JOURNALS)

- Proceedings of the Royal Society B (1), BMC Genomic Data (1), Aquaculture (1), Aquaculture International (2), PeerJ (1), Environmental Biology of Fishes (1)

PROFESSIONAL ORGANIZATIONS

- Society for the Study of Evolution
- Genetics Society of America
- Ecological Society of America
- American Genetic Association
- American Fisheries Society

REFERENCES

- Dr. Daniel Heath, Professor Emeritus, Department of Integrative Biology & Great Lakes Institute for Environmental Research, University of Windsor, Canada. Phone: 519-253-3000 (3762); Email: dheath@uwindsor.ca
- Dr. Ken Jeffries, Associate Professor, Department of Biological Sciences, University of Manitoba, Canada. Phone: 204-474-6429; Email: Ken.Jeffries@umanitoba.ca
- Dr. Ian Fleming, Professor, Ocean Science Centre, Department of Ocean Sciences, Memorial University of Newfoundland, NL, Canada. Phone: 709-864-3586; E-mail: ifleming@mun.ca