

TIMOTHY J BOWDEN

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EDUCATION

B.Sc (Hons) Biological Sciences, University of Lancaster, Lancaster, UK. 1988

M.Phil., Biotechnology, Napier University, Edinburgh, UK. 1993

M.Sc., Information Systems, Robert Gordon University, Aberdeen, UK. 2006

Ph.D., Microbiology, University of Aberdeen, Aberdeen, UK. 1998

EMPLOYMENT HISTORY AND APPOINTMENTS

2018- Associate Professor, University of Maine.

2011-2018 Assistant Professor, University of Maine.

2007-2011 Consultant Project Manager, Waverley Science, UK.

2006-2007 Marie Curie More Experienced Research Fellow, University of Valencia, Spain

2000-2004 Senior Scientist, Fisheries Research Services, UK

1996-2000 Research Fellow, University of Aberdeen, UK

1995-1996 Scientific Officer, Fisheries Research Services, UK

1992-1994 Research Assistant, Stirling University, UK.

1989-1992 Research Assistant, Napier University, UK

1988-1989 Research Technician, University of Manchester, UK

TEACHING EXPERIENCE

AVS/SMS 211 – Introduction to Aquaculture, lead instructor 2011-, recent enrolment 58

SMS 401 – Critical Issues in Aquaculture, instructor since 2011-, recent enrolment 10

AVS 401/402 – Capstone class, contributing instructor 2011-, lead instructor since 2018-19, last enrolment 32

SMS 400 – Capstone class, contributing instructor since 2011, currently advising 4

AVS 411/511 – Advanced Aquaculture, new course, Spring 2021, enrollment 27

I have graduated 1x PhD and 4x MS students since 2011. Currently on the committee for 3x MS students, 6+ capstone/honors/senior project students per year

Interim Animal & Veterinary Science Undergraduate Program Coordinator

Animal Science Graduate Program Coordinator

Aquaculture and Aquatic Resource Graduate Program Coordinator

PUBLICATIONS

1. **Bowden TJ**, Kraev I & Lange S. 2020. Extracellular vesicles and post-translational protein deimination signatures in haemolymph of the American lobster (*Homarus americanus*). *Fish & Shellfish Immunology*. Vol. 106, pp79-102. doi: 10.1016/j.fsi.2020.06.053
2. Bricknell IR, Birkel SD, Brawley SH, Van Kirk T, Hamlin HJ, Capistrant-Fossa K, Huguenard K, Van Walsum GP, Liu ZL, Zhu LH, Grebe G, Taccardi E, Miller M, Preziosi BM, Duffy K, Byron CJ, Quigley CTC, **Bowden TJ**, Brady D, Beal BF, Sappati PK, Johnson TR & Moeykens S. (2020). Resilience of cold water aquaculture: a review of likely scenarios as climate changes in the Gulf of Maine. *Reviews in Aquaculture*. Vol. 13, No. 1 pp460-503. doi: 10.1111/raq/12483

3. **Bowden TJ**, Kraev I & Lange S. 2020. Extracellular Vesicles and Post-Translational Protein Deimination Signatures in Mollusca—The Blue Mussel (*Mytilus edulis*), Soft Shell Clam (*Mya arenaria*), Eastern Oyster (*Crassostrea virginica*) and Atlantic Jackknife Clam (*Ensis leei*). *Biology* Vol. 9, No. 12, pp. 416, doi: 10.3390/biology9120416
4. **Bowden TJ**, Kraev I & Lange S. 2020. Post-translational protein deimination signatures and extracellular vesicles (EVs) in the Atlantic horseshoe crab (*Limulus polyphemus*). *Developmental and Comparative Immunology*. Vol. 110. doi: 10.1016/j.dci.2020.103714
5. Magnadóttir B, Bragason, B, Bricknell IR, **Bowden TJ**, Nicholas AP, Hristova M, Guðmundsdóttir S, Dodds AW & Lange S. 2019. Peptidylarginine deiminase and deiminated proteins are detected throughout early halibut ontogeny – Complement components C3 and C4 are post-translationally deiminated in halibut (*Hippoglossus hippoglossus* L.). *Developmental and Comparative Immunology*. Mar;92:1-19. doi: <https://doi.org/10.1016/j.dci.2018.10.016> .
6. Dickey G, Preziosi BM, Clark CT & **Bowden TJ**. 2018. The impact of ocean acidification on the byssal threads of the blue mussel (*Mytilus edulis*). *Plos ONE*, 13(10). DOI: 10.1371/journal.pone.0205908
7. Dickey G, Messerman NA & **Bowden TJ**. 2017. Prevalence of the protozoan parasite *Haplosporidium nelsoni* in the eastern oyster, *Crassostrea virginica*, within the Damariscotta River Estuary, in Maine, USA, in 2014 and 2016 as measured by PCR. *Bulletin of the European Association of Fish Pathologists*, 37(6): 235-243
8. **Bowden TJ**. 2017. The humoral immune systems of the American lobster (*Homarus americanus*) and the European lobster (*Homarus gammarus*). *Fisheries Research*, 186 (part 1): 367-371. DOI: 10.1016/j.fishres.2016.07.023
9. Messerman NA & **Bowden TJ**. 2016. Survey of potential reservoir species for the oyster parasite MSX (*Haplosporidium nelsoni*) in and around oyster farms in the Damariscotta River Estuary, Maine, USA. *Journal of Shellfish Research*, 35(4): 851-856. DOI: 10.2983/035.035.0413

AWARDS

University of Maine Center for Undergraduate Research Faculty Fellow 2014-
Bangor Savings Bank and Lyndon Paul LoRusso Memorial Travel Award 2016

PROFESSIONAL ACTIVITIES

Executive Editor - Aquaculture Reports

Scientific committee – 2nd International Symposium for Fish and Shellfish Immunology 2019

Scientific review committee – 19th International Conference on Diseases of Fish and Shellfish 2019

PROFESSIONAL ASSOCIATIONS

American Fisheries Society

European Association of Fish Pathologists

GRANTS

1. Northeast Regional Aquaculture Center, Comparing the performance of diploid and triploid eastern oysters in the Northeast, \$200,000, Sep 2020- Aug 2022. (co-PI)

2. Maine Food & Agriculture Institute, You are what you eat, impact of diet on flavor of scallops, \$5,000, May 2021 – Sep 2022 (PI)

3. Aquaculture Research Institute RRF – Immune ontogeny in yellowtail, \$4,200, Jan 2021- Dec 2021 (PI)