

MARYNA P LESOWAY

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PROFESSIONAL EXPERIENCE :

- Postdoctoral Scholar** 2020-present
Scripps Institute of Oceanography, University of California, San Diego
Advisor: Deirdre Lyons
- Postdoctoral Research Associate** 2018–2020
FRQNT Postdoctoral Fellow 2016–2018
Department of Cell and Developmental Biology, University of Illinois at Urbana-Champaign
Advisor: Jonathan Henry

EDUCATION :

- Doctor of Philosophy, Biology, Neotropical Environment Option** 2015
McGill University, Montreal, QC, Canada
Smithsonian Tropical Research Institute (STRI), Panama, Republic of Panama
Advisors: Ehab Abouheif (McGill), Rachel Collin (STRI)
- Certificat en Sciences de l'environnement** 2009
Université du Québec à Trois-Rivières, Trois-Rivières, QC, Canada
- Master of Science, Biology** 2004
University of Victoria, Victoria, BC, Canada
Advisor: Louise R. Page
- Bachelor of Science, Zoology** 2001
University of Calgary, Calgary, AB, Canada

GRANTS :

- National Science Foundation, Division of Integrative Organismal Systems.** 2018-2020
Principal Investigator: Jonathan Henry. IOS #1827533, \$300,000.00 USD.
Enabling Discovery through GENomic tools (EDGE):
Generating Tools to Study Spiralian Development.
Role: Co-wrote grant, named post-doctoral researcher.
- Society for Developmental Biology.** Emerging Models Grant. \$5000 USD. 2017
Crepidula atrasolea : A new model for sex change in a sequential hermaphrodite.
Role: Principal Investigator.

PRESENTATION AWARDS :

- 1st Place, Postdoctoral Podium Talk Competition, \$200 USD. August 2019
Sex change in marine snails: leveraging ecotoxicology to identify developmental mechanisms. Pan-American Society for Evolutionary Developmental Biology.
3rd Biennial Meeting, Miami, FL.

RESEARCH AWARDS :

Whitman Center Early Career Investigator Award, approx. \$20,000 USD. <i>Understanding sex change in marine snails: leveraging ecotoxicology to identify developmental mechanisms. Marine Biological Laboratory, Woods Hole, MA, USA.</i>	Summer 2018
Whitman Center Early Career Investigator Award, \$25,706 USD. <i>Sex change and reproductive development in sequentially hermaphroditic marine snails. Marine Biological Laboratory, Woods Hole, MA, USA.</i>	Summer 2017
Bourse de recherche postdoctorale, \$70,000 CAD. <i>Changements de sexe: mécanismes moléculaires et influences environnementales chez Crepidula, un hermaphrodite séquentiel. Sex change: molecular mechanisms and environmental influences in Crepidula, a sequential hermaphrodite. Fonds de recherche du Québec - Nature et technologies (FRQNT).</i>	2016–2018
EDEN Research Exchange Award, \$3000 USD. <i>Evo-Devo-Eco Network (EDEN), NSF Research Coordination Network. MAPK activation in two closely related species of gastropod molluscs. Hosted by Dr. Jonathan Henry, University of Illinois at Urbana-Champaign.</i>	May 2011
Bourse de doctorat en recherche, \$60,000 CAD. <i>Direct development with nutritive embryos in the calyptraeid gastropods: Mechanisms and evolutionary transitions. Fonds de recherche du Québec - Nature et technologies (FRQNT).</i>	2009–2012

OTHER AWARDS :

Travel Award, \$330 USD. <i>Pan-American Society for Evolutionary Developmental Biology.</i>	August 2019
Travel Fellowship, ¥115,000 JPY. <i>RIKEN Center for Developmental Biology, Kobe, Japan.</i>	October 2017
Travel Award, \$260 USD. <i>Pan-American Society for Evolutionary Developmental Biology.</i>	August 2017
Excellence Award, \$928 CAD. <i>Quebec Centre for Biodiversity Sciences.</i>	April 2015
Student Travel Award, \$250 CAD. <i>Canadian Society of Zoologists.</i>	April 2015
Excellence Award, \$245 CAD-DECLINED. <i>Quebec Centre for Biodiversity Sciences.</i>	May 2014
GREAT Travel Award, \$270 CAD. <i>Department of Biology, McGill University.</i>	May 2014
International Research Travel Award. \$2147 CAD. <i>Department of Biology, McGill University.</i>	Sept 2013
International Research Travel Award, \$1700 CAD. <i>Department of Biology, McGill University.</i>	April 2013
Research Travel Award, \$1300 CAD. <i>Department of Biology, McGill University.</i>	April 2012
GREAT/GTC Travel Award, \$500 CAD. <i>Department of Biology, McGill University.</i>	January 2012
Excellence Award, \$1319 CAD. <i>Quebec Centre for Biodiversity Sciences.</i>	January 2012
Fellows' Travel Award, \$600 USD. <i>Smithsonian Tropical Research Institute.</i>	Sept 2011

Student Financial Support, \$1400 USD. <i>Friday Harbor Laboratories, University of Washington.</i>	June 2010
Excellence Award, \$2500 CAD. <i>Quebec Centre for Biodiversity Sciences.</i>	June 2010
Charlotte Mangum Student Support, \$130 USD. <i>Society for Integrative and Comparative Biology.</i>	January 2010
GREAT/GTC Travel Award, \$1000 CAD. <i>Department of Biology, McGill University.</i>	January 2010
Provost's Graduate Fellowship, \$5,000 CAD. <i>McGill University.</i>	Sept 2009
Principal's Graduate Fellowship, \$5,000 CAD. <i>McGill University.</i>	Sept 2009
STRI-NEO-McGill Fellowship, \$5,000 CAD. <i>McGill University.</i>	Sept 2009
Graduate Research and Teaching Fellowship, \$8,200 CAD. <i>University of Victoria.</i>	2001–2004

PUBLICATIONS :

PEER-REVIEWED PUBLICATIONS :

- Lesoway MP**, and Henry JQ. 2021. *Retinoids promote penis development in sequentially hermaphroditic snails*. *Developmental Biology*. 478: 122–132. doi: 10.1016/j.ydbio.2021.06.013
- Collin R, Shishido C, Cornejo A, **Lesoway MP**. 2021. *Ancestral form and function of larval feeding structures are retained during development of non-planktotrophic gastropods*. *International Journal of Developmental Biology*. 65: 413–425. doi: 10.1387/ijdb.200154rc
- Henry JQ, **Lesoway MP**, and Perry KJ. 2020. *An automated aquatic rack system for rearing marine invertebrates*. *BMC Biology*. 18: 46. doi: 10.1186/s12915-020-00772-w
- Armisen D, and 54 co-authors [including **Lesoway MP**]. 2018. *The genome of the water strider Gerris buenoi reveals expansions of gene repertoires associated with adaptations to life on the water*. *BMC Genomics*. 19: 832. doi:10.1186/s12864-018-5163-2
- Henry JQ, **Lesoway MP**, Perry KJ, Osborne CC, Shankland M, and Lyons DC. 2017. *Beyond the Sea: Crepidula atrasolea as a spiralian model system*. *International Journal of Developmental Biology*. 61: 479–493. doi: 10.1387/ijdb.170110jh
- Lesoway MP**, Collin R, and Abouheif E. 2017. *Early activation of MAPK and apoptosis in nutritive embryos of calyptraeid gastropods*. *Journal of Experimental Zoology B: Molecular and Developmental Evolution*. 328:449–461. doi: 10.1002/jez.b.22745
- Lesoway MP**, Abouheif E, and Collin R. 2016. *Comparative transcriptomics of alternative developmental phenotypes in a marine gastropod*. *Journal of Experimental Zoology B: Molecular and Developmental Evolution*. 326:151–167. doi: 10.1002/jez.b.22674
- Lesoway MP**. 2016. *The Future of Evo-Devo: The Inaugural Meeting of the Pan American Society for Evolutionary Developmental Biology*. *Evolution & Development*. 18:71–77. doi: 10.1111/ede.12181
- Lesoway MP**, Abouheif E, and Collin R. 2014. *The development of viable and nutritive embryos in the direct developing gastropod Crepidula navicella*. *International Journal of Developmental Biology*. 58: 601–611. doi: 10.1387/ijdb.140136rc
- McDonald KA, Collin R and **Lesoway MP**. 2014. *Poecilogony in the caenogastropod Calyptraea lichen*. *Invertebrate Biology*. 133: 213–220. doi: 10.1111/ivb.12057
- Abouheif E, Favé MJ, Ibarrarán-Viniegra AS, **Lesoway MP**, Rafiqi AM, and Rajakumar R. 2014. *Eco-evo-devo: The time has come*. In: *Ecological Genomics: Ecology and the Evolution of Genes and Genomes*. C. Landry and N. Aubin-Horth (eds.). Springer. doi: 10.1007/978-94-007-7347-9_6

- Lyons DC, Perry KJ, **Lesoway MP**, Henry JQ. 2012. *Cleavage pattern and fate map of the mesentoblast, 4d, in the gastropod Crepidula: a hallmark of spiral development*. *EvoDevo*. 3:21. 19 September 2012. doi:10.1186/2041-9139-3-21
- Lesoway MP** and Page LR. 2008. *Growth and differentiation during delayed metamorphosis of feeding gastropod larvae: signatures of ancestry and innovation*. *Marine Biology*. 153: 723–734. doi:10.1007/s00227-007-0849-z

INVITED REVIEWS :

- Lesoway MP** and Henry JQ. 2019. *Sex Determination and Sex Change in Slipper Snails*. In: *Evo-Devo: Non-model Species in Cell and Developmental Biology*. Eds: W Tworzydło and S Bilinski. Results and Problems in Cell Differentiation. Springer. doi: 10.1007/978-3-030-23459-1
- Lesoway MP** and Henry JQ. 2019. *Twisted shells, spiral cells, and asymmetries: Evo-Devo lessons learned from gastropods*. In: *Evolutionary Developmental Biology: A Reference Guide*. Eds: GB Müller and L Nuño de la Rosa. Springer. doi:10.1007/978-3-319-33038-9_179-1

NON-PEER REVIEWED PUBLICATIONS :

- Lesoway MP**. 2021. In the Spotlight -- Postdoc. *Journal of Experimental Zoology B: Molecular and Developmental Evolution*. 336: 5– 6. doi: 10.1002/jez.b.22991

SELECTED PRESENTATIONS:

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| Talk. <i>Virtual Evolution 2021</i> . Online. | June 2021 |
| Invited Talk. <i>Spiralian White Paper Meeting</i> .
Whitney Laboratory for Marine Biosciences, St. Augustine, FL, USA. | Nov 2019 |
| Invited Talk. <i>Symposium: Utility of Molluscan Genomics. World Congress of Malacology</i> .
Pacific Grove, CA, USA. | August 2019 |
| Selected Talk. <i>3rd Biennial Meeting, Pan-American Society for Evolutionary Biology</i> .
Miami, FL, USA. | August 2019 |
| Poster. <i>Society for Developmental Biology 78th Annual Meeting</i> . Boston, MA, USA. | July 2019 |
| Invited Talk. <i>REU Student Program</i> . Marine Biological Laboratory, Woods Hole, MA. | July 2019 |
| Talk. <i>Annual Meeting of the Canadian Society of Zoologists</i> . Windsor, ON, Canada. | May 2019 |
| Poster. <i>National Science Foundation, 1st Annual EDGE (Enabling Discovery through GENomic Tools) Awardee Meeting</i> . Alexandria, VA, USA. | April 2019 |
| Invited Outreach Talk. <i>Coastal Interpretive Training, MA State Park Interpretive Staff</i> .
Waquoit Bay National Estuarine Research Reserve. Waquoit, MA, USA. | June 2018 |
| Selected Talk. <i>29th CDB Meeting: Mavericks, New Models in Developmental Biology</i> .
RIKEN Center for Developmental Biology (CDB). Kobe, Japan. | October 2017 |
| Selected Talk. <i>2nd Biennial Meeting, Pan-American Society for Evolutionary Developmental Biology</i> .
Calgary, AB, Canada. | August 2017 |
| Talk. <i>Quebec Centre for Biodiversity Science Symposium</i> . Montreal, QC, Canada. | October 2015 |
| Talk. <i>Annual Meeting of the Canadian Society of Zoologists</i> . Calgary, AB, Canada. | May 2015 |
| Talk. <i>BESS (Biodiversity, Ecosystem Services, and Sustainability) / NEO (Neotropical Environment Option) Symposium 2015</i> .
McGill University, Montreal, Canada. | May 2015 |

INSTITUTIONAL SERVICE :

- PASEDB Media Officer. Pan-American Society for Evolutionary Developmental Biology. 2019–present
- Responsible for implementation of social media marketing of the society.
- Informal Mentor. Choose Development, Society for Developmental Biology. 2019–2020
- Providing guidance, support, and mentorship to undergraduate research students with the goal of increasing representation of minority groups in developmental biology.
- Committee Member. CDB Careers Committee. University of Illinois, Urbana, IL 2018–2020
- Assist with identifying, inviting, and hosting speakers, ideally graduates of the department, representing diverse post-doctoral career paths.

SERVICE AS A REVIEWER :

JOURNALS : BMC Evolutionary Biology; EvoDevo; G3: Genes, Genomes, Genetics; Journal of Experimental Zoology B: Molecular and Developmental Evolution; Journal of Molluscan Studies; Journal of Sea Research; Marine Biology; PloSONE; Regional Studies in Marine Science

GRANTING AGENCIES : National Science Foundation Division of Ocean Sciences

COURSES AND WORKSHOPS ATTENDED :

- Summer School in Evolutionary Developmental Biology: From Gene Networks to Organismal Systems. Istituto Veneto di Scienze, Lettere ed Arti. Venice, Italy. Sept 2013
- Tomlinson Project in University-Level Science Education (T-PULSE) Graduate Teaching Workshop. McGill University. Montreal, QC, Canada. January 2013
- Next Generation Sequencing Workshop. Smithsonian Institution. Washington, DC, USA. October 2011
- Comparative Invertebrate Embryology. Friday Harbor Laboratories, University of Washington. Friday Harbor, WA, USA. Summer 2010

TEACHING EXPERIENCE :

UNDERGRADUATE-LEVEL TEACHING ASSISTANT :

- Laboratory Instructor. Biology 112: Cell and Molecular Biology. McGill University. Montreal, Canada. 2013, 2014
- Laboratory Instructor. Biology 111: Principles: Organismal Biology. McGill University. Montreal, Canada. 2013
- Teaching Assistant. Biology 304: Evolution. McGill University. Montreal, Canada. 2012
- Laboratory Instructor. Biology 321: Survey of the Invertebrates. University of Victoria, Victoria, British Columbia. 2001–2003
- Laboratory Instructor. Biology 322: Invertebrate Adaptations. University of Victoria, Victoria, British Columbia. 2002, 2003

COURSE COORDINATION :

Laboratory Coordinator. Biology 322: Invertebrate Adaptations. 2003
University of Victoria, Victoria, British Columbia.

FIELD COURSE INSTRUCTION :

Research Facilitator. Embryology: Concepts and Techniques in Modern 2019, 2011
Developmental Biology. Marine Biological Laboratory. Woods Hole, MA, USA.
Instructor. Curso de Introducción a las Ciencias Biológicas. Laboratorios Marinos Galeta. Nov 2011
Smithsonian Tropical Research Institute. Galeta, Panama.

CLASSROOM INSTRUCTION :

Replacement Teacher, Mathematics. Secondary 1-3 (Grades 7-9). 2008
Three Rivers Academy. Central Quebec School Board. Trois-Rivières, QC.
Substitute Teacher, Various. Secondary 1-5 (Grades 7-11). 2008
Three Rivers Academy. Central Quebec School Board. Trois-Rivières, QC.
English Language Monitor. Secondary 1-5 (Grades 7-11) 2008–2009
Odyssey Program, Heritage Canada. École Sécondaire Val-Mauricie,
Commission Scolaire de l'Énergie. Shawinigan-Sud, QC.
English Language Instructor. Adult and Secondary Private Instruction. 2008–2009
D'un monde à l'autre. Trois-Rivières, QC.
Language Specialist (ALT). Kindergarten, Primary, Secondary, Adult. 2005–2007
Japan Exchange and Teaching (JET) Programme,
Kamikawa Town Board of Education. Kamikawa, Hokkaido, Japan.

LANGUAGES :

Fluent in English and French. Working knowledge of Spanish. Basic Japanese.