

Catriona Munro

Postdoctoral researcher · Huynh lab, Collège de France & Clytia team, LBDV

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Education

PhD Ecology and Evolutionary Biology, Brown University 2019

MRes Ocean Science, University of Southampton 2013

BSc Biology, University College London 2011

Professional Experience

2018–present Postdoctoral Researcher
Huynh lab, Collège de France

2017–2018 Ivy Exchange Scholar, Yale University

Peer-Reviewed Publications

2023 **Munro C**, Cadis H, Pagnotta S, Houliston E, Huynh J.-R (2023). Conserved meiotic mechanisms in the cnidarian *Clytia hemisphaerica* revealed by *Spo11* knockout. *Science Advances*. 9:eadd2873. doi: 10.1126/sciadv.add2873

2023 Church, SH, **Munro C**, Dunn, CW, Extavour, CG (2023) The evolution of ovary-biased gene expression in Hawaiian *Drosophila*. *PLoS Genetics*. 19:1-24. doi: 10.1371/journal.pgen.1010607

2022 Houliston E, Leclère L, **Munro C**, Copley R & Momose T (2022). Past, present and future of *Clytia hemisphaerica* as a laboratory jellyfish. Eds: Goldstein B & Srivastava M. *Current Topics in Developmental Biology*. 147:121-151. doi: 10.1016/bs.ctdb.2021.12.014

2022 **Munro C**, Zapata F, Howison M, Siebert S, Dunn CW (2022). Evolution of gene expression across species and specialized zooids in Siphonophora. *Molecular Biology and Evolution*. 39:msac027. doi: 10.1093/molbev/msac027

2020 Jessup C, **Munro C**, Houliston E (2020). Managing the Oocyte Meiotic Arrest — Lessons from Frogs and Jellyfish. *Cells*. 9:1150 doi: 10.3390/cells9051150

2019 **Munro C**, Vue Z, Behringer RR, Dunn CW (2019). Morphology and development of the Portuguese man of war, *Physalia physalis*. *Scientific Reports*. 9:15522 doi: 10.1038/s41598-019-51842-1

2018 **Munro C**, Siebert S, Zapata F, Howison M, Damian-Serrano A, Church SH, Goetz FE, Pugh PR, Haddock SHD, Dunn CW (2018) Improved phylogenetic resolution within Siphonophora (Cnidaria) with implications for trait evolution. *Molecular Phylogenetics and Evolution*. 127:823-833 doi: 10.1016/j.ympev.2018.06.030

2018 Brown A, Thatje S, Oliphant A, **Munro C**, Smith KE (2018). Temperature adaptation in larval development of lithodine crabs from deep-water lineages. *Journal of Sea Research*. 142:167-173

2018 Brown A, Thatje S, Oliphant A, **Munro C**, Smith KE (2018). Temperature effects on larval development in the lithodid crab *Lithodes maja*. *Journal of Sea Research*. 139:73-84

2018 Dunn CW, Zapata F, **Munro C**, Siebert S, Hejnal A (2018). Pairwise comparisons are problematic when analyzing functional genomic data across species. Proceedings of the National Academy of Sciences. doi:10.1073/pnas.1707515115.

2016 Dunn CW, **Munro C** (2016) Comparative genomics and the diversity of life. Zoologica Scripta. 45:5-13. doi:10.1111/zsc.12211

2015 **Munro C**, Morris JP, Brown A, Hauton C, Thatje S (2015). The role of ontogeny in physiological tolerance: decreasing hydrostatic pressure tolerance with development in the northern stone crab *Lithodes maja*. Proceedings of the Royal Society of London B. 282(1809): 20150577 doi: 10.1098/rspb.2015.0577

2012 Shank TM, Baker ET, Embley RW, Hammond S, Holden JF, White S, Walker SL, Calderon M, Herrera S, Lin TJ, **Munro C**, Heyl T, Stewart L, Malik M, Lobecker M, Potter J (2012) GALREX 2011: Exploration of the Deep-Water Galapagos Region. Oceanography 25 Suppl.: 50-51.

Fellowships and Awards

2019 Marie Skłodowska-Curie Individual Fellowship (#841433) €196,707.84

2017 NSF Doctoral Dissertation Improvement Grant (#1701272) \$21,028

2017 & 2016 EMBRC-France funding

2016 MBL Embryology Post-Course research

2014 RI-EPSCoR Graduate Student Fellowship (full tuition and stipend)

2012 Society for Underwater Technology, Educational Support Fund (full tuition)

Invited Talks

2023 “Siphonophore genomics, larval development and evolution”. SICB Symposium: Genomics of marine larval evolution and development. January 4, 2023

2022 “Meiotic mechanisms in the jellyfish *Clytia hemisphaerica*”. Stowers Institute for Medical Research. Wednesday Lecture Series. September 14, 2022

Conference Activity

ORAL PRESENTATIONS

2022 **Munro C**. Meiosis in the jellyfish *Clytia hemisphaerica*. Evolution and Diversity of Meiosis Meeting. Les Treilles, France (4-9 April)

2021 **Munro C**, E Houliston, J-R Huynh. Meiotic DSBs are required for correct synapsis of homologous chromosomes in the jellyfish *Clytia hemisphaerica*. MAYosis webinar series. <http://meiosis.cornell.edu/mayosis2021/>

2018 **Munro C**, S Siebert, F Zapata, CW Dunn. Siphonophore Differential Gene Expression Patterns Analyzed within a Phylogenetic Context. SICB Meeting, San Francisco CA (3-7 January)

2012 **Munro C**, GW Luther III, RA Lutz, C Vetriani, TS Moore, S Herrera, TM Shank. Temporal and spatial patterns of in situ community structure using time-lapse camera systems at a vent field on the East Pacific Rise, 13th International Deep-Sea Biology Symposium, Wellington New Zealand (3-7 December)

POSTER PRESENTATIONS

2022 **Munro C**, Cadis H, Pagnotta S, Houliston E, Huynh J.-R. Conserved meiotic mechanisms in the cnidarian *Clytia hemisphaerica* revealed by Spo11 knockout. Jacques Monod Origin of Metazoans. Roscoff, France (20-24 June).

2021 **Munro C**, E Houliston, J-R Huynh. Meiotic DSBs are required for correct synapsis of homologous chromosomes in the jellyfish *Clytia hemisphaerica*. The Students and Postdocs Meiosis Workshop, V3.0, Online.

2019 **Munro C**, E Houliston, J-R Huynh. The jellyfish *Clytia hemisphaerica*: a new model for meiosis research. EMBO Workshop on Meiosis, La Rochelle, France (25-29 August)

2016 **Munro C**, S Siebert, M Howison, F Zapata, CW Dunn. Gene expression patterns in siphonophore zooids, Hydroidfest, Bodega CA (23-25 September)

2016 **Munro C**, S Siebert, M Howison, F Zapata, CW Dunn. Exploring the evolution of functional specialization in siphonophores using RNAseq, SICB Meeting, Portland OR (3-7 January)

Teaching Experience

Marie Curie ITN Workshop, Instructor

Computational Biology short course (PhD level). Marie Curie ITN “EvoCELL”. 3-14 June 2019. Course materials: <https://github.com/cmunro/evocell>

Brown University, Teaching Assistant

Invertebrate Zoology. Fall semester, 2014; Fall semester, 2013.

Mentoring

15 May – present Julie Uveira, Research assistant (Ingenieure Assistant)

1 Feb 2021 – 31 Jan 2022 Hugo Cadis, Research assistant (Ingenieure Assistant)

1 Feb - 17 June 2021 Lisa Rouressol, Sorbonne Université Master 2 internship

16 March - 15 May 2020 Bastien Salmon, Sorbonne Université Master 1 internship

Fall 2015 Nicola Malakooti, undergraduate senior thesis

Sorbonne Université, Development of Marine Organisms (Master’s level). Short project supervisor: 13-19 December 2019; 11-15 March 2019.

Research Experience

2012 Research Assistant, Shank Lab, Woods Hole Oceanographic Institution

Scientific Expeditions

2015 R/V Western Flyer, ROV Doc Ricketts, Gulf of California, Mexico. Chief scientist: Steven Haddock (March 8-16)

2014 R/V Western Flyer, ROV Doc Ricketts, Monterey Bay, U.S.A. Chief scientist: Steven Haddock (September 16-22)

2014 R/V Endeavor, North East Atlantic, U.S.A. Chief scientist: Brad Seibel (August 13-18)

2014 R/V Western Flyer, ROV Doc Ricketts, Monterey Bay, U.S.A. Chief scientist: Steven Haddock (May 17-23)

2013 R/V Western Flyer, ROV Doc Ricketts, Monterey Bay, U.S.A. Chief scientist: Steven Haddock (November 19-24)

2012 R/V Falkor, ROV Global Explorer MK3, Deep-Sea Coral Shakedown cruise, Gulf of Mexico U.S.A. Chief scientist: Peter Etnoyer (August 26 - September 6)

2011 M/V Holiday Chouest, ROV UHD 34, HC3 Leg 1 and 2. Gulf of Mexico, U.S.A. Chief scientists: Charles Fisher and Erik Cordes (October 2-26)

Professional Service

PEER REVIEW

Publons review records: <https://publons.com/researcher/AAP-8755-2020/>

Genome Biology and Evolution (1) iScience (2) Journal of Experimental Zoology (3)

TO COMMUNITY

Declics, Career and Science discussions with high school students in Nice. Lycée Albert Calmette. 1 Dec 2022.

Fête de la Science, Villeneuve Loubet. Oct 2021, Institut de la Mer de Villefranche. Oct 2019.

Guest lectures & zoom lab demonstrations on meiosis and fertilization, University of São Paulo (Instructor: Federico Brown). Oct 2020.

Fact checking, Portuguese man of war biology, BBC Blue Planet II. 2017.

Hennessy Elementary School, Brown Junior Researchers Program (after school science class). Feb 2016 – Feb 2018.

Other Professional Experience

MBL Embryology Course, Woods Hole MA, Jun 7- Jul 18 2015.