

Yi-Jyun Luo

Biodiversity Research Center, Academia Sinica
email: yjluo@gate.sinica.edu.tw

EDUCATION AND TRAINING

2021–2022 Postdoc, Zoology, University of Oxford, UK
 2017–2020 Postdoc, Organismic and Evolutionary Biology, Harvard University, USA
 2012–2017 PhD, Okinawa Institute of Science and Technology Graduate University (OIST), Japan
 2005–2008 MS, Marine Biotechnology, National Dong Hwa University, Taiwan
 2001–2005 BS, Marine Resources, National Sun Yat-Sen University, Taiwan

PROFESSIONAL APPOINTMENTS

2022–present Joint Assistant Professor, Department of Life Science, National Taiwan Normal University
 2022–present Assistant Research Fellow, Biodiversity Research Center, Academia Sinica
 2021–2022 Royal Society Newton International Fellow, Department of Zoology, University of Oxford
 2020–2021 Research Fellow, Department of Integrative Biology, University of Texas at Austin
 2017–2020 Human Frontier Science Program Long-Term Fellow, Department of Organismic and Evolutionary Biology, Harvard University
 2015–2017 Japan Society for the Promotion of Science Research Fellow, Marine Genomics Unit, OIST
 2012–2015 Graduate Research Assistant, Marine Genomics Unit, OIST
 2009–2012 Research Assistant, Institute of Cellular and Organismic Biology, Academia Sinica
 2005–2008 Graduate Research Assistant, National Museum of Marine Biology and Aquarium

FELLOWSHIPS

2020 Royal Society Newton International Fellowship
 2017 Human Frontier Science Program Long-Term Fellowship
 2015 Japan Society for the Promotion of Science Research Fellowship for Young Scientists

PUBLICATIONS

- Hulett RE[†], Kimura JO[†], Bolaños DM[†], **Luo YJ**[†], Ricci L, Srivastava M* (2022) Acoel single-cell atlas reveals expression dynamics and heterogeneity of a pluripotent stem cell population. *bioRxiv* (†contributed equally)
- Gehrke AR, Neverett E, **Luo YJ**, Brandt A, Ricci L, Hulett RE, Gompers A, Ruby JG, Rokhsar DS, Reddien PW, Srivastava M* (2019) Acoel genome reveals the regulatory landscape of whole-body regeneration. *Science* 363, eaau6173.
- Luo YJ**^{*}, Kanda M, Koyanagi R, Hisata K, Akiyama T, Sakamoto H, Sakamoto T, Satoh N^{*} (2018) Nemertean and phoronid genomes reveal lophotrochozoan evolution and the origin of bilaterian heads. *Nature Ecology & Evolution* 2, 141–151.
- Zhao R, Takeuchi T^{*}, **Luo YJ**, Ishikawa A, Kobayashi T, Koyanagi R, Villar-Briones A, Yamada L, Sawada H, Iwanaga S, Nagai K, Satoh N, Endo K (2018) Dual gene repertoires for larval and adult shells reveal molecules essential for molluscan shell formation. *Molecular Biology and Evolution* 35, 2751–2761.
- Gerdol M^{*}, **Luo YJ**, Satoh N, Pallavicini A (2018) Genetic and molecular basis of the immune system in the brachiopod *Lingula anatina*. *Developmental & Comparative Immunology* 82, 7–30.
- Shimizu K^{*}, **Luo YJ**, Satoh N, Endo K (2017) Possible co-option of *engrailed* during brachiopod and mollusc shell development. *Biology Letters* 13, 20170254.

7. Mochizuki T, **Luo YJ**, Tsai HF, Hagiwara A, Masai I* (2017) Cell division and cadherin-mediated adhesion regulate lens epithelial cell movement in zebrafish. *Development* 144, 708–719.
8. **Luo YJ***, Takeuchi T, Koyanagi R, Yamada L, Kanda M, Khalturina M, Fujie M, Yamasaki S, Endo K, Satoh N* (2015) The *Lingula* genome provides insights into brachiopod evolution and the origin of phosphate biomineralization. *Nature Communications* 6, 8301.
9. **Luo YJ***, Satoh N, Endo K (2015) Mitochondrial gene order variation in the brachiopod *Lingula anatina* and its implications for mitochondrial evolution in lophotrochozoans. *Marine Genomics* 24, 31–40.
10. Zhang QJ[†], **Luo YJ**[†], Wu HR, Chen YT, Yu JK* (2013) Expression of germline markers in three species of amphioxus supports a preformation mechanism of germ cell development in cephalochordates. *EvoDevo* 4, 17. (†contributed equally)
11. **Luo YJ**, Su YH* (2012) Opposing Nodal and BMP signals regulate left–right asymmetry in the sea urchin larva. *PLoS Biology* 10, e1001402.
12. Lu TM, **Luo YJ**, Yu JK* (2012) BMP and Delta/Notch signaling control the development of amphioxus epidermal sensory neurons: insights into the evolution of the peripheral sensory system. *Development* 139, 2020–2030.
13. Wu HR, Chen YT, Su YH, **Luo YJ**, Holland LZ, Yu JK* (2011) Asymmetric localization of germline markers Vasa and Nanos during early development in the amphioxus *Branchiostoma floridae*. *Developmental Biology* 353, 147–159.
14. Chen JH, **Luo YJ**, Su YH* (2011) The dynamic gene expression patterns of transcription factors constituting the sea urchin aboral ectoderm gene regulatory network. *Developmental Dynamics* 240, 250–260.
15. **Luo YJ**, Wang LH, Chen WNU, Peng SE, Tzen JTC, Hsiao YY, Huang HJ, Fang LS, Chen CS* (2009) Ratiometric imaging of gastrodermal lipid bodies in coral–dinoflagellate endosymbiosis. *Coral Reefs* 28, 289–301.
16. Peng SE, **Luo YJ**, Huang HJ, Lee IT, Hou LH, Chen WNU, Fang LS, Chen CS* (2008) Isolation of tissue layers in hermatypic corals by *N*-acetylcysteine: morphological and proteomic examinations. *Coral Reefs* 27, 133–142.

SELECTED PRESENTATIONS

1. **Luo YJ** (2022) Genomic and cellular approaches in dissecting the evolution of body plan and cell types. *Marine Open Course: Evolutionary Developmental Biology II*, Hiroshima, Japan. (Invited)
2. **Luo YJ** (2021) Single-cell profiling of animal cell states and the evolution of bilaterian cell types. *Constrained & Directional Evolution Online Meeting*. The 13th CDE international seminar. (Invited, online)
3. **Luo YJ**, Ricci L, Hulett RE, Srivastava M (2020) Single-cell profiling of acoel stem cell dynamics during development and regeneration. *Society of Integrative and Comparative Biology Annual Meeting*, poster session P1-18, Austin, USA.
4. **Luo YJ**, Ricci L, Hulett RE, He M, Knecht A, Srivastava M (2019) Acoel cell type atlas and stem cell regulation by single-cell transcriptomics. *Society for Developmental Biology 78th Annual Meeting*, poster session III: Single Cell Analysis P612, Boston, USA.

5. **Luo YJ**, Ricci L, Hulett RE, Srivastava M (2019) Single-cell transcriptomics of the acoel *Hofstenia* reveals the evolution of bilaterian cell types and stem cell regulation. ***The 19th Human Frontier Science Program Awardees Meeting***, poster session P80, Tsukuba, Japan.
6. **Luo YJ**, Ricci L, Hulett RE, Srivastava M (2019) Single-cell transcriptomics of the acoel *Hofstenia* reveals the evolution of bilaterian cell types and stem cell regulation. ***Developmental Biology Gordon Research Conference***, session Cell Identity and Robustness in the Era of Single-Cell 'Omics, South Hadley, USA.
7. **Luo YJ**, Ricci L, Hulett RE, Srivastava M (2019) Single-cell transcriptomics of the acoel *Hofstenia* reveals the evolution of bilaterian cell types and stem cell regulation. ***EMBL Symposium: The Identity and Evolution of Cell Types***, poster session P83, Heidelberg, Germany.
8. **Luo YJ**, Ricci L, Hulett RE, Gehrke AR, Ramirez A, Srivastava M (2018) Cell type atlas and regulation of the acoel *Hofstenia miamia* by single-cell transcriptomics. ***Single Cell Genomics 2018***, poster session P78, Cambridge, USA.
9. **Luo YJ**, Ricci L, Hulett RE, Gehrke AR, Ramirez A, Srivastava M (2018) Exploring the molecular control of stem cell fate during whole-body regeneration in the acoel *Hofstenia miamia*. ***The 18th Human Frontier Science Program Awardees Meeting***, poster session 2-11, Toronto, Canada.
10. **Luo YJ**, Satoh N (2017) Dorsal–ventral patterning in brachiopods and the evolution of BMP gradients in neural induction. ***The 2nd Biennial Meeting of Pan-American Society for Evolutionary Developmental Biology***, poster session P75, Calgary, Canada.
11. **Luo YJ** (2017) Genomic and transcriptomic approaches provide insights into lophotrochozoan evolution and the origin of bilaterian body plan. ***The 10th Meeting of the Rising Generation of Evo-Devo Biologists***, plenary talk on the theme: Think Post-Genomic Evo-Devo, Mishima, Japan. (Invited)
12. **Luo YJ**, Kanda M, Koyanagi R, Hisata K, Satoh N (2016) Nemertean and phoronid genomes reveal lophotrochozoan evolution and bilaterian head origin. ***The 6th Meeting of the European Society for Evolutionary Developmental Biology***, contributed session C17: Evolutionary developmental genomics, Uppsala, Sweden.
13. **Luo YJ**, Takeuchi T, Koyanagi R, Yamada L, Kanda M, Khalturina M, Fujie M, Yamasaki S, Endo K, Satoh N (2015) The brachiopod genome of *Lingula anatina* provides insight into the evolution of lophotrochozoans and calcium-phosphate-based biomineralization. ***Inaugural Meeting of Pan-American Society for Evolutionary Developmental Biology***, concurrent session 2, Berkeley, USA.
14. **Luo YJ**, Takeuchi T, Koyanagi R, Yamada L, Kanda M, Khalturina M, Fujie M, Yamasaki S, Endo K, Satoh N (2015) The brachiopod genome of *Lingula anatina* provides insight into the evolution of lophotrochozoans and calcium-phosphate-based biomineralization. ***CSHL Conference on The Biology of Genomes***, poster session II 213, Cold Spring Harbor, USA.
15. **Luo YJ**, Takeuchi T, Koyanagi R, Tanaka M, Khalturina M, Fujie M, Yamasaki S, Yamada L, Sawada H, Endo K, Satoh N (2014) The *Lingula* genome and the evolution of lophotrochozoans and biomineralization. ***The 85th Annual Meeting of the Zoological Society of Japan***, concurrent session 1L1115, Sendai, Japan.
16. **Luo YJ**, Endo K, Tanaka M, Fujie M, Koyanagi R, Satoh N (2013) Towards genome decoding of all the animal phyla: A brachiopod, *Lingula anatina*. ***The 84th Annual Meeting of the Zoological Society of Japan***, concurrent session 2N1045, Okayama, Japan.

17. **Luo YJ**, Su YH (2013) Opposing Nodal and BMP signals regulate left–right asymmetry in the sea urchin larva. ***CDB Symposium: The Making of a Vertebrate***, poster session P48, Kobe, Japan.
18. **Luo YJ**, Su YH (2011) BMP signaling and the left–right asymmetry in the sea urchin larva. ***Developmental Biology of the Sea Urchin Meeting XX***, concurrent session 7, Woods Hole, USA.

RESEARCH GRANTS

2023–2027	Academia Sinica Career Development Award (\$570,000)
2021–2022	Royal Society Newton International Fellowship (£111,210)
2017–2020	Human Frontier Science Program Long-Term Fellowship (\$163,480)
2015–2017	Grant-in-Aid for Japan Society for the Promotion of Science Fellows (¥9,500,000)

HONORS AND AWARDS

2018	Alumnus of the 68th Lindau Nobel Laureate Meeting (Physiology or Medicine)
2016	Helmsley Scholarship, The Leona M. and Harry B. Helmsley Charitable Trust
2015	Outstanding Young Scientist 1st Place TOMY Award, The 22nd East Asia Joint Symposium
2014	Lola Ellis Robertson Scholarship, Marine Biological Laboratory
2014	The John and Elisabeth Buck Endowed Scholarship, Marine Biological Laboratory
2011	Outstanding Poster Award, The 12th Taiwanese Society of Developmental Biology Retreat
2007	Honorary Member, The Phi Tau Phi Scholastic Honor Society
2007	Graduation with Distinction, National Dong Hwa University
2005–2006	Presidential Award for Academic Excellence, National Dong Hwa University

ADVANCED RESEARCH TRAINING

2017	CSHL Scientific Writing Retreat, Lloyd Harbor, USA
2016	CSHL Course: Programming for Biology, Cold Spring Harbor, USA
2014	MBL Embryology: Concepts & Techniques in Modern Developmental Biology, Woods Hole, USA
2013	EMBO Practical Course: Marine Animal Models in Evolution & Development, Kristineberg, Sweden
2012	OIST Winter Course: Evolution of Complex Systems, Okinawa, Japan
2012	EMBO Global Exchange Lecture Course: Logic of Regulatory Circuits, Taipei, Taiwan

PROFESSIONAL AFFILIATIONS

2022	Taiwanese Society of Developmental Biology
2019	Society for Integrative and Comparative Biology
2019	Society for Developmental Biology
2016	European Society for Evolutionary Developmental Biology
2015	Pan-American Society for Evolutionary Developmental Biology
2013	Zoological Society of Japan

PROFESSIONAL SERVICES

Journal Reviewer for:

Nature Ecology & Evolution, Communications Biology, Proceedings of the Royal Society B, GigaScience, Frontiers in Marine Science, Scientific Reports, BMC Genomics, EvoDevo, PLoS One, Gene, Marine Genomics, Biological Journal of the Linnean Society, Development Growth and Differentiation, Biological Bulletin

Grant Reviewer for:

United States-Israel Binational Science Foundation