



Yuanning Li

Curriculum Vitae

Institute of Marine Science and Technology, Shandong University
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CURRENT POSITIONS

2022-NOW **Shandong University**, Professor of Institute of Marine Science and Technology

AWARDS

2022-2024 **The National Science Fund Program for Distinguished Young Scholars (Overseas)**

2022-2027 **Distinguished young and middle-aged scholars of Shandong University**

PAST POSITIONS

2019-2021 Postdoc scholar, **Vanderbilt University**. Advisor: Dr. Antonis Rokas

2018-2019 Postdoc scholar, **Yale University**. Advisor: Dr. Casey Dunn

2017-2018 Postdoc scholar, **Auburn University**. Advisor: Dr. Ken Halanych

EDUACTION

2012-2017 Ph.D. **Auburn University** (Molecular Systematics). Advisor: Dr. Ken Halanych

2011-2012 M.S. **Ocean University of China** (Aquatic biology). Advisor: Dr. Qi Li

2007-2011 B.S. **Shanghai Ocean University**. (Biological Science)

RESEARCH INTERESTS

- Animal comparative genomics, systematics, and life history evolution
- Inferring large-scale species phylogeny with genome-scale data
- Genomic and symbioses adaptation to deep-sea chemosynthetic (hydrothermal vents, cold seeps or whale bones) habitats, especially in tubeworms
- Genome evolution in yeast subphylum

RESEARCH CRUISE

2013 **BoWls** - Two weeks long NSF funded deployment of bone/wood landers for capture of *Osedax* and *Xylophaga* in the Pacific Northwest.

2014 **BoWls** - Two weeks long NSF funded deployment of bone/wood landers for capture of *Osedax* and *Xylophaga* in the Pacific Northwest.

WORKSHOP

2014 **AU Bioinformatic Bootcamp**.

2014 **FAB Fall Taxonomy Workshop Polychaetes**.

PROFESSIONAL AFFILIATIONS

- Society for Molecular Biology and Evolution, Society of Systematic Biologists, Deep-sea Biology Society, The Society for Integrative and Comparative Biology.

PUBLICATIONS

First-Author

1. **Yuanning Li**, Liu H, Steenwyk JL, LaBella AL, Harrison MC, Groenewald M, Zhou X, Shen XX, Zhao T, Hittinger CT, Rokas A.(2022). **Contrasting modes of macro and microsynteny evolution in a eukaryotic subphylum.** *Current Biology.* 29:50960-9822(22)01670-0.
2. **Yuanning Li**, Altamia MA, Shipway JR, Brugler MR, Bernardino AF, de Brito TL, Lin Z, da Silva Oliveira FA, Sumida P, Smith CR, Trindade-Silva A. (2022). **Contrasting Modes of Mitochondrial Genome Evolution in Sister Taxa of Wood-Eating Marine Bivalves (Teredinidae and Xylophagidae).** *Genome biology and evolution.* Jun;14(6):evac089.
3. **Yuanning Li**, X. Shen, B. Evans, A. Rokas, C.W. Dunn. (2021). **Rooting the animal tree of life.** *Molecular Biology and Evolution.* Msab170.
4. **Yuanning Li**, J. L. Steenwyk, Y. Chang, Y. Wang, T. Y. James, J. E. Stajich, J. W. Spatafora, M. Groenewald, C. W. Dunn, C. T. Hittinger, X.-X. Shen, A Rokas (2021). **A genome-scale phylogeny of the kingdom Fungi.** *Current Biology.* 31, 1653-1665.
5. **Yuanning Li**, KT. David, X. Shen, JL. Steenwyk, KM. Halanych, A. Rokas. (2020). **Feature Frequency Profile-based phylogenies are inaccurate.** *Proceedings of the National Academy of Sciences of the United States of America.* 117: 31580-31581.
6. L. Kong*, **Yuanning Li***, K.M. Kocot, Y. Yang, Q. Li, K.M. Halanych. (2020). **Mitogenomics reveals phylogenetic relationships of Arcoida molluscs and multiple independent expansions in mitogenome size.** *Molecular Phylogenetics and Evolution.* 150, 106857. (* Co-first Author)
7. **Yuanning Li**, M.G. Tassia, D.S. Waits, V.E. Bogantes, K.T. David, K.M. Halanych. (2019). **Genomic adaptations to chemosymbiosis in the deep-sea seep-dwelling tubeworm *Lamellibrachia luymesii*.** *BMC Biology.* 17(1):19.
8. **Yuanning Li**, K.M. Kocot, M.G. Tassia, J.T. Cannon, M. Bernt, K.M. Halanych. (2019). **Mitogenomics reveals a novel genetic code in Hemichordata.** *Genome Biology and evolution.* 11(1), 29-40.
9. **Yuanning Li**, M.R. Liles, K.M.Halanch. (2018). **Endosymbiont genomes yield clues of tubeworm success.** *The ISME journal.* 12(11), p.2785.
10. **Yuanning Li**, K.M. Kocot, N.V. Whelan, S.R. Santos, D.S. Waits, K.M. Halanych. (2017). **Phylogenomics of tubeworms (Siboglinidae, Annelida) and comparative performance of different reconstruction methods.** *Zoologica Scripta.* 46: 200-213.
11. **Yuanning Li**, K.M. Kocot, S.R. Santos, D.J. Thornhill, K.M. Halanych. (2015). **Mitogenomics reveals phylogeny and dramatic size variations of control regions in the deep-sea family Siboglinidae (Annelida).** *Molecular Phylogenetics and Evolution.* 85, 221-229.
12. **Yuanning Li**, P. Ma, P. Liu, Q. Li. (2012). **The genetic diversity and phylogenetic analysis of ITS1 in mitochondrial DNA of four populations of *Portunus Trituberculatus*.** *Oceanologia Et Limnologia Sinica.* 43(4).

Contributing-Author

13. Novitsky V, J. Steingrimsson, M. Howison, C. Dunn, F.S. Gillani, A. Manne, **Li Y**, M. Spence, Z. Parillo, J. Fulton, T. Marak.(2021). **Longitudinal typing of molecular HIV clusters in a statewide epidemic.** *AIDS.*(London, England). 1;35(11):1711-1722.
14. Steenwyk, J. L., M. E. Mead, P. A. Castro, C. Valero, A. Damasio, R. A. C. Santos, A. L. LaBella, **Yuanning Li**, S. L. Knowles, H. A. Raja, N. H. Oberlies, X. Zhou, O. A. Cornely, F. Fuchs, P. Koehler, G. H. Goldman, A. Rokas.(2021). **Genomic and phenotypic analysis of COVID-19-associated pulmonary aspergillosis isolates of *Aspergillus fumigatus*.** *Microbiol. Spectr.* 3;9(1), e0001021.
15. Steenwyk, J. L., T. J. Buida III, A. L. LaBella, **Yuanning Li**, X.-X. Shen, A. Rokas (2021). **PhyKIT: a broadly applicable UNIX shell toolkit for processing and analyzing phylogenomic data.** *Bioinformatics.* 9;37(16):2325-31.
16. X. Shen, JL. Steenwyk, AL. LaBella, DA. Opulente, X. Zhou, J. Kominek, **Yuanning Li**, M. Groenewald, CT. Hittinger, A. Antonis. (2020). **Genome-scale phylogeny and contrasting modes of genome evolution in the fungal phylum Ascomycota.** *Science Advances.* 6(45), eab0079.
17. JL. Steenwyk, TJ. Buida, **Yuanning Li**, X. Shen, A. Antonis. (2020). **ClipKIT: a multiple sequence alignment-trimming algorithm for accurate phylogenomic inference.** *Plos Biology.* 18(12), e3001007.
18. Novitsky, V., Steingrimsson, J.A., Howison, M., Gillani, F.S., **Yuanning Li**, Manne, A., Fulton, J., Spence, M., Parillo, Z., Marak, T. and Chan, P.A. (2020). **Empirical comparison of analytical approaches for identifying molecular HIV-1 clusters.** *Scientific reports.* 10(1), pp.1-11.
19. Kantor, R., Fulton, J.P., Steingrimsson, J., Novitsky, V., Howison, M., Gillani, F., **Yuanning Li**, Manne, A., Parillo, Z., Spence, M. and Marak, T. (2020). **Challenges in evaluating the use of viral sequence data to identify HIV transmission networks for public health.** *Statistical Communications in Infectious Diseases,* 12(s1).

20. X. Shen, **Yuanning Li**, C. Hittinger., X. Chen, A. Antonis. (2020). **An investigation of irreproducibility in maximum likelihood phylogenetic inference.** *Nature Communication.*11(1), 1-14.
21. Y. Zhou, **Yuanning Li**, C. Shen, K.M. Halanych C. Wang. (2020). **The mitochondrial genome of the bone-eating worm *Osedax rubiplumus* (Annelida, Siboglinidae).** *Mitochondrial DNA.* 50(1), 1-9.
22. V. Novitsky, J. Steingrimsson, Ma. Howison, F. Gillani, **Yuanning Li**, A. Manne, J. Fulton, M. Spence, Z. Parillo, T. Marak, P. A. Chan, T. Bertrand, U. Bandy, N. Alexander-Scott, C. W. Dunn, J. Hogan, R. Kantor (2021). **Empirical Comparison of Analytical Approaches for Identifying Molecular HIV-1 Clusters.** *Scientific Reports.* 10(1), 1-11.
23. Y. Zhou, Y. Wang, **Yuanning Li**, C. Shen, Z. Liu, C. Wang. (2020). **First report of *Osedax* in the Indian Ocean indicative of trans-oceanic dispersal through the Southern Ocean.** *Marine Biodiversity.* 50(1), 1-9.
24. N. Li, L. Bao, T. Zhou, Z. Yuan, S. Liu, R. Dunham, **Yuanning Li**, Wang K, Xu X, et al. (2018). **Genome sequence of walking catfish (*Clarias batrachus*) provides insights into terrestrial adaptation.** *BMC genomics.*19(1):952.
25. J.R. Voight., B.A. Marshall, J. Judge, K.M. Halanych, **Yuanning Li**, A.F. Bernardino, F. Grewe and J. Maddox. (2019). **Life in wood: preliminary phylogeny of deep-sea wood-boring bivalves (*Xylophagidae*), with descriptions of three new genera and one new species.** *Journal of Molluscan Studies,* 85(2), pp.232-243.
26. P.G. Galaska, **Yuanning Li**, K.M. Kocot, A.R. Mahon, K.M. Halanych. (2018). **Conservation of brittle stars (*Ophiuroidea*, *Echinodermata*) mitochondrial genome arrangements.** *Molecular Phylogenetics and Evolution.* 130, pp. 115-120.
27. A.F. Bernardino, **Yuanning Li**, C.R. Smith, K.M. Halanych. (2017). **Multiple introns in a deep-sea Annelid mitochondrial genome.** *Scientific Reports* 7:4295.
28. D.S. Waits, S.R. Santos, D.J. Thornhill, **Yuanning Li**, K.M. Halanych. (2016). **Evolution of Sulfur Binding in Hemoglobin in *Siboglinidae* (Annelida) with Special Reference to Bone Eating Worms, *Osedax*.** *Journal of Molecular Evolution.* 82: 219-229.
29. X. Su, G. Wang, J. Feng, J. **Yuanning Li**. (2011). **Genetic diversity of 15 *Macrobrachium nipponense* populations in Poyang Lake based on microsatellite analysis.** *Chinese Journal of Ecology.* 2011,30(9):2007-2013.

INVITED TALKS

1. **Yuanning Li**. (speaker), C.W. Dunn, A. Rokas. **Rooting the animal tree of life.** The biology of genomes. The 2nd AsiaEvo Conference (virtual). August 2021.
2. **Yuanning Li**. (speaker), C.W. Dunn, A. Rokas. **Rooting the animal tree of life.** The biology of genomes. Cold Spring Harbor Laboratory (virtual). May 2021.
3. **Yuanning Li**. (speaker), K.M. Halanych. **Comparative genomics of seep-dwelling tubeworm (*Siboglinidae*: *Annelida*) endosymbionts.** The Society for Integrative Comparative Biology (SICB). San Francisco, CA, USA. January 2018.
4. **Yuanning Li**. (speaker), K.M. Halanych. **Comparative genomics reveal symbiont-host evolution of deep-sea tubeworms.** 6th International Symposium on Chemosynthesis-Based Ecosystems. Woods Hole, Mass. USA. Augustus 2017.
5. **Yuanning Li**. (speaker), A.F. Bernardino, K.M. Halanych. **Recruitment patterns of deep-sea wood-boring bivalves (*Xylophagidae*, *Mollusca*) inferred from SNP data.** The Society for Integrative Comparative Biology (SICB). New Orleans, LA, USA. January 2017.
6. **Yuanning Li**. (speaker), K.M. Halanych. **Using genomic tools to understand symbiont-host evolution of deep-sea tubeworms.** 12th International Polychaete Conference (IPC12). Cardiff, UK. August 2016.
7. **Yuanning Li**. (speaker), K.M. Halanych. **Recruitment of deep-sea wood-boring (*Xylophagidae*, *Mollusca*) inferred from RAD sequence Data.** Evolution 2016. Austin, TX, USA. May 2016.
8. **Yuanning Li**. (speaker), N.V. Whelan, K.M. Kocot, S.R. Santos, K.M. Halanych. **Phylogenomics of tubeworms (*Annelida*: *Siboglinidae*) facilitates comparative performance of supermatrix versus species tree phylogenetic approaches.** The Society for Integrative Comparative Biology (SICB). Portland, OR, USA. January 2016.
9. **Yuanning Li**. (speaker), K.M. Kocot, S.R. Santos, K.M. Halanych. **Phylogenomics and species-tree analyses reveal deep-sea family *Siboglinidae* (*Annelida*) relationships.** The Society for Integrative Comparative Biology (SICB). West Palm Beach, FL, USA. January 2015.
10. **Yuanning Li**. (speaker), K.M. Kocot, S.R. Santos, K.M. Halanych. **Mitogenomics and Phylogenomics of the family *Siboglinidae* (*Annelida*).** Southeastern Ecology and Evolution Conference (SEEC). March 2014.

NATIONAL AND INTERNATIONAL ACADEMIC ACTIVITIES

Editorial Board Member

Review Editor in *Frontiers in Genetics*.

Manuscript Reviewer

I review many manuscripts and has served as a reviewer for many top-flight journals, including: *Systematic Biology*, *BMC Evolutionary Biology*, *Deep-sea Research Part I*, *Frontiers in Genetics*, *Molecular Biology and Evolution*, *Molecular Ecology Resources*, *MicrobiologyOpen*, *Molecular Phylogenetics and Evolution*, *PLOS One*, *Zoologica Scripta*.