

Yafei Mao, Ph.D.

Associate Professor
Evo-Geno-Disease Lab (<https://yafmao.org/>)

Shanghai, 200030
CHINA

+86-(021)-62932151
yafmao@sjtu.edu.cn

EDUCATION

2019 Ph.D. Okinawa Institute of Science and Technology Graduate University

Evolutionary Genomics (Advisors: [Dr. Noriyuki Satoh](#) and [Dr. Evan Economo](#))

2014 B.Sc. Nanjing University (with honor)

Life Sciences

Other Training:

May 2018 - Oct 2018 Princeton University

Visiting Student (Advisor: [Dr. Ricardo Mallarino](#))

Oct 2013 - Mar 2014 Hong Kong University of Science and Technology

Visiting Student (Advisor: [Dr. Mingjie Zhang](#))

APPOINTMENTS

Shanghai Jiao Tong University

May 2022 - present Associate Professor

University of Washington

Jun 2019 - May 2022 Postdoctoral Fellow (Advisor: [Dr. Evan Eichler](#))

Okinawa Institute of Science and Technology Graduate University

Apr 2019 - Jun 2019 Junior Researcher

(Advisors: [Dr. Noriyuki Satoh](#) and [Dr. Evan Economo](#))

PUBLICATIONS

Journal Articles

22. Mao, Y., Li, Y., Yang, Z., Xu, N., Zhang, S., Wang, X., ... & **Mao, Y.*** (2023). Comparative transcriptome in rhesus macaques and crab-eating macaques. [*bioRxiv*](#), 2023-08.
21. Yang, C., Zhou, Y., Song, Y., ... **Mao, Y.** ... & Zhang, G.* (2023). The complete and fully-phased diploid genome of a male Han Chinese. [*Cell Research*](#), 1-17.
20. He, Y.* & **Mao, Y.*** (2023). Exploring the primate genome: Unraveling the mysteries of evolution and human disease. [*The Innovation*](#), 4(4).
19. Logsdon, G.A., Rozanski, A.N., Ryabov, F., ... **Mao, Y.** ... & Eichler, E. E.* (2023). "The variation and evolution of complete human centromeres." [*bioRxiv*](#), 2023.2005.2030.542849.
18. Okhovat, M.*, VanCampen, J., Lima, A.C., ... **Mao, Y.** ... Ahituv, N.* & Carbone, L.* (2023). "TAD Evolutionary and functional characterization reveals diversity in mammalian TAD boundary properties and function." [*bioRxiv*](#), 2023.2003.2007.531534.
17. **Mao, Y.**, Harvey, W.T., Porubsky, D., Munson, K.M., Hoekzema, K., Lewis, A.P., Audano, P.A., Rozanski, A., Yang, X. & Zhang, S. (2023). "Structurally divergent and recurrently mutated regions of primate genomes." [*bioRxiv*](#), 2023.2003.2007.531415.
16. Yang X., Wang X., Zou Y.,... & **Mao, Y.***. (2023). Characterization of large-scale genomic differences in the first complete human genome. [*Genome Biology*](#) 24, 157.
15. Wang, T.*, Kim, C. N., Bakken, T. E., Gillentine, M. A., Henning, B., **Mao, Y.**, ... & Eichler, E. E.* (2022). Integrated gene analyses of de novo variants from 46,612 trios with autism and developmental disorders. [*Proceedings of the National Academy of Sciences*](#), 119(46), e2203491119.
14. **Mao, Y.***, Zhang, G.* A complete, telomere-to-telomere human genome sequence presents new opportunities for evolutionary genomics. [*Nature Methods*](#) 19, 635–638 (2022).
13. Ebler, J., Ebert, P., Clarke, W. E., Rausch, T., Audano, P. A., Houwaart, T., ... **Mao, Y.** ... & Marschall, T.* (2022). Pangenome-based genome inference allows efficient and accurate genotyping across a wide spectrum of variant classes. [*Nature Genetics*](#), 54(4), 518-525.
12. **Mao, Y.**, Catacchio, C.R., Hillier, L.W., Porubsky, D., Li, R., Sulovari, A., ... & Eichler, E.E.* (2021). A high-quality bonobo genome refines the analysis of hominid evolution. [*Nature*](#), 594(7861), 77-81.
11. Logsdon, G.A., Vollger, M.R., Hsieh, P., **Mao, Y.**, Liskovych, M.A., Koren, S., ... & Eichler, E.E.* (2021). The structure, function and evolution of a complete human chromosome 8. [*Nature*](#), 593(7857), 101-107.
10. Hsieh, P.* , Dang, V., Vollger, M.R., **Mao, Y.**, Huang, T.H., Dishuck, P.C., ... & Eichler, E.E.* (2021). Evidence for opposing selective forces operating on human-specific duplicated TCAF genes in Neanderthals and humans. [*Nature Communications*](#), 12(1), 1-14.
9. **Mao, Y.***, Hou, S., Shi, J., & Economo, E.P. (2020). TREEasy: an automated workflow to infer gene trees, species trees, and phylogenetic networks from multilocus data. [*Molecular Ecology Resources*](#), 2020;20:832–840.
8. **Mao, Y.*** (2020). Genomic insights into hybridization of reef corals. [*Coral Reefs*](#), 39(1), 61-67.
7. Warren, W.C.*, Harris, R.A., Haukness, M., ... **Mao, Y.** ... , Rogers, J.* & Eichler, E.E.* (2020). Sequence diversity analyses of an improved rhesus macaque genome enhance its biomedical utility. [*Science*](#), 370(6523).

6. Cantsilieris, S., Sunkin, S.M., Johnson, M.E., Anaclerio, F., Huddleston, J., Baker, C., ... **Mao, Y.**, ... & Eichler, E.E.* (2020). An evolutionary driver of interspersed segmental duplications in primates. *Genome Biology*, 21(1), 1-35.
5. Maggiolini, F.A.M., Sanders, A.D., Shew, C.J., Sulovari, A., **Mao, Y.**, Puig, M., ... & Antonacci, F.* (2020). Single-cell strand sequencing of a macaque genome reveals multiple nested inversions and breakpoint reuse during primate evolution. *Genome Research*, 30(11), 1680-1693.
4. **Mao, Y.***, & Satoh, N. (2019). A likely ancient genome duplication in the speciose reef-building coral genus, *Acropora*. *iScience*, 13, 20-32.
3. **Mao, Y.*** (2019). GenoDup Pipeline: a tool to detect genome duplication using the dS-based method. *PeerJ*, 7, e6303.
2. **Mao, Y.***, Economo, E.P.*, & Satoh, N.* (2018). The roles of introgression and climate change in the rise to dominance of *Acropora* corals. *Current Biology*, 28(21), 3373-3382.
1. Zhang, Y., Shao, Z., Yang, L., Sun, X., **Mao, Y.**, Chen, J.* & Wang, B.* (2013). Non-random arrangement of synonymous codons in archaea coding sequences. *Genomics*, 101(6), 362-367.

NOTE: *Corresponding author

PRESENTATIONS

2023	Southwest University, School of Life Sciences (Invited speaker)	Chongqing, China
2023	Chengdu Institute of Biology, Chinese Academy of Sciences	Chengdu, China
2023	Southern University of Science and Technology, School of Life Sciences (Invited speaker)	Shenzhen, China
2023	Nanjing University, School of Life Sciences (Invited speaker)	Nanjing, China
2023	Neuroscience Research Institute, Peking University (Invited speaker)	Virtual Meeting
2022	Institute of Neuroscience, Chinese Academy of Sciences Center for Excellence in Brain Science and Intelligence Technology, Chinese Academy of Sciences (Invited speaker)	Shanghai, China
2022	Fudan University, Department of Anthropology and Human Genetics (Invited speaker)	Shanghai, China
2022	Structural Variants and DNA Repeats	Virtual Meeting
2022	Zhejiang University, School of Medicine (Invited speaker)	Hangzhou, China
2022	CAS, Kunming Institute of Zoology (Invited speaker)	Kunming, China
2021	Biodiversity Genomics 2021 (Invited speaker)	Virtual Meeting
2021	Structural Variants and DNA Repeats	Virtual Meeting
2021	Bold Predictions for Human Genomics by 2030	Virtual Meeting
2020	T2T/HPRC Symposium	Virtual Meeting
2019	The Use of Big Data in Quantitative Genetics	Lucca, Italy
2018	The 1st AsiaEvo Conference, (Invited speaker)	Shenzhen, China

2017 Agricultural Genomics 2017

Wuhan, China

2017 Speciation (Selected for Oral Presentation)

Lucca, Italy

GRANTS AND FELLOWSHIPS

2022 Shanghai Pujiang Program (A-type)

2022 Shanghai Jiao Tong University 2030 Program (C-type)

2022 Opening research fund from Shanghai Key Laboratory of Stomatology, Shanghai Ninth People's Hospital

2017 Japan Society for the Promotion of Science (JSPS) Fellow, DC1

AWARDS AND HONORS

2022 CUHK Vice-Chancellor Assistant Professorship (withdraw)

2014 Outstanding Graduates of Nanjing University

2013 Gold Medal of iGEM (team leader)

2010, 2011, 2012 Cyrus Tang Scholarship

2012 National Scholarship

2011, 2013 National Motivational Scholarships

2011 Outstanding Students of Nanjing University

MENTORSHIP

Shanghai Jiao Tong University

Xiangyu Yang

Dan Meng

Xuankai Wang

Shilong Zhang

Lianting Fu

Nanjing University

Shuke Xiao

Kun Lv

Yuanyuan Wang

Jianchen Yang

ACADEMIC SERVICE

Society Memberships

Society for Molecular Biology & Evolution

Human Pangenome Reference Consortium

Chinese Society of Biotechnology

Subject/Associate Editor/Review Editor

2022-present *BMC Biology*

2022-present *Frontiers in Bioinformatics*

2021-present *eLife (Early-Career Reviewers Pool)*

Peer Reviewer

Genome Research, BMC Biology, eLife, GigaScience, Scientific Reports, Frontier in Plant Science, Frontiers in Marine Science, Frontier in Bioinformatics

REFERENCES

Evan P. Economo

Professor
Biodiversity and Biocomplexity Unit
Okinawa Institute of Science and
Technology Graduate University
+1 (617) 386-6669 (US)
+81 (098) 982-3328 (JP)
economo@oist.jp

Douglas E. Soltis

Distinguished Professor
Florida Museum of Natural History
Department of Biology
University of Florida
(352) 273-1963
dsoltis@ufl.edu

Evan E. Eichler

Principal Investigator
Professor of Genome Sciences
Department of Genome Sciences,
University of Washington
(206) 543-9526
eee@gs.washington.edu