

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

24. Logsdon, G.A., Rozanski, A.N., Ryabov, F., ... **Mao, Y.** ... & Eichler, E. E.* (2023). The variation and evolution of complete human centromeres. [bioRxiv](#), 2023-05.
23. **Mao, Y.**, Harvey, W. T., Porubsky, D., Munson, K. M., Hoekzema, K., Lewis, A. P., ... & Eichler, E. E.* (2024). Structurally divergent and recurrently mutated regions of primate genomes. [Cell](#).
22. Mao, Y., Li, Y., Yang, Z., Xu, N., Zhang, S., Wang, X., ... & **Mao, Y.*** (2024). Comparative transcriptome analysis between rhesus macaques (*Macaca mulatta*) and crab-eating macaques (*M. fascicularis*). [Zoological Research](#), 45(2): 299-310.
21. 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.
20. He, Y.* & **Mao, Y.*** (2023). Exploring the primate genome: Unraveling the mysteries of evolution and human disease. [The Innovation](#), 4(4).
19. Okhovat, M.*, VanCampen, J., Nevenon, K. A., ... **Mao, Y.** ... & Carbone, L.* (2023). TAD Evolutionary and functional characterization reveals diversity in mammalian TAD boundary properties and function. [Nature Communications](#), 14(1), 8111.
18. Yang, X., **Mao, Y.**, Wang, X., ... , Li, Z.*, Takahashi, E.* & Li, W.* (2023). Population genetics of marmosets in Asian primate research centers and loci associated with epileptic risk revealed by whole-genome sequencing. [Zoological Research](#), 44(5), 837–847.
17. Li, Z.*, Liu, X., Wang, C., ... **Mao, Y.** ..., & Chen, Y.* (2023). The pig pangenome provides insights into the roles of coding structural variations in genetic diversity and adaptation. [Genome Research](#), 33(10), 1833-1847.
16. 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.
15. **Mao, Y.***, Zhang, G.* (2022) A complete, telomere-to-telomere human genome sequence presents new opportunities for evolutionary genomics. [Nature Methods](#) 19, 635–638.
14. 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.

Before SJTU

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*](#), 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	The 3rd AsiaEvo Conference (Oral talk)	Singapore
2023	International Symposium on Human Cultural and Genetic Diversity in Southeast Asia and Southwest China (Invited speaker)	Kunming, China
2023	GSC2023 (Invited speaker)	Wuhan, China
2023	The Innovation Webinar No.66 (Invited speaker)	Virtual Meeting
2023	School of Life Sciences, Southwest University (Invited speaker)	Chongqing, China
2023	Chengdu Institute of Biology, Chinese Academy of Sciences	Chengdu, China
2023	School of Life Sciences, Southern University of Science and Technology (Invited speaker)	Shenzhen, China
2023	School of Life Sciences, Nanjing University (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	Department of Anthropology and Human Genetics, Fudan University (Invited speaker)	Shanghai, China
2022	Structural Variants and DNA Repeats	Virtual Meeting
2022	School of Medicine, Zhejiang University(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

2024 General Program of National Natural Science Foundation of China
 2024 National Natural Science Fund for Excellent Young Scientists Fund Program(Overseas)
 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

2023 Shanghai Young Talent Program
 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
Genetics Society of China

Subject/Associate Editor/Review Editor

2022-present *BMC Biology*
2021-present *eLife (Early-Career Reviewers Pool)*

Peer Reviewer

BMC Biology, Cell Genomics, Cell Reports, eLife, Genome Research, Nature Communications, PLoS Genetics, Science Bulletin and others

Grant Review

Research Grants Council (RGC) of Hong Kong, Funding Scheme: GRF / ECS

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

Evan E. Eichler

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

Douglas E. Soltis

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