

Dang Liu

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EDUCATION

PhD in Biology (Molecular Anthropology) 10/2018 - 10/2021

International Max Planck Research School "The Leipzig School of Human Origins", Leipzig University and Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
Thesis: Human population genetic history of Mainland Southeast Asia
Advisor: Prof. Dr. Mark Stoneking

MSc in Biology (Evolutionary Genomics) 09/2015 - 07/2017

Genome and Systems Biology Degree Program, National Taiwan University and Academia Sinica, Taipei, Taiwan
Thesis: Comparative genomics of *Caenorhabditis* species
Advisor: Dr. Isheng Jason Tsai

BSc in Biology 09/2011 - 06/2015

Department of Life Sciences, National Cheng Kung University, Tainan, Taiwan

RESEARCH EXPERIENCE

Postdoc 06/2022 - present

Topic: Demographic and adaptive history of Polynesians
Advisors: Prof. Dr. Lluís Quintana-Murci & Dr. Etienne Patin
Human Evolutionary Genetics Unit, Pasteur Institute, Paris, France

Postdoc 11/2021 - 05/2022

Topic: Interaction between culture and genetic diversity in the Asia-Pacific
Advisor: Prof. Dr. Mark Stoneking
Department of Evolutionary Genetics, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany

Substitutive Military Service 09/2017 - 08/2018

Topic: Core collection of tomato populations through NGS technology
Director: Dr. Ien-Chie Wen
Plant Germplasm Division, Taiwan Agricultural Research Institute, Taichung, Taiwan

PUBLICATIONS

*Equal contribution / #correspondence

- 1 Teiti, I.*, Aubry, M.*, Fernandes-Pellerin, S., Patin, E., Madec, Y., Boucheron, P., Vanhomwegen, J., Torterat, J., Lastère, S., Olivier, S., Jaquaniello, A., Roux, M., Mendiboure, V., Harmant, C., Bisiaux, A., Rijo De León, G., **Liu, D.**, Bossin, H., Mathieu-Daudé, F., Gatti, C., Suhas, E., Chung, K., Condat, B., Ayotte, P., Conte, E., Jolly, N., Manuguerra, J. C., Sakuntabhai, A., Fontanet, F.#, Quintana-Murci, L.#, & Cao-Lormeau, V. M.# (2023). Unravelling the determinants of human health in French Polynesia: the MATAEA project. **Frontiers in Epidemiology**, 3, 1201038. doi: 10.3389/fepid.2023.1201038

- 2 **Liu, D.***, Ko, A. M. S.*, & Stoneking, M.# (2023). The genomic diversity of Taiwanese Austronesian groups: implications for the "Into and Out of Taiwan" models. **PNAS Nexus**, 2(5). doi:10.1093/pnasnexus/pgad122
- 3 Stoneking, M.#, Arias, L.*, **Liu, D.***, Oliveira, S.*, Pugach, I.*, & Rodriguez, J. J. R. B.* (2023). Genomic perspectives on human dispersals during the Holocene. **PNAS**, 120(4), e2209475119. doi:10.1073/pnas.2209475119
- 4 **Liu, D.**, Peter, B. M., Schiefenhovel, W., Kayser, M.#, & Stoneking, M.# (2022). Assessing Human Genome-wide Variation in the Massim Region of Papua New Guinea and Implications for the Kula Trading Tradition. **Mol Biol Evol**, 39(8). doi:10.1093/molbev/msac165
- 5 Kutanan, W.*#, **Liu, D.***, Kampuansai, J., Srikummool, M., Srithawong, S., Shoocongdej, R., Sangkhano, S., Ruangchai, S., Pittayaporn, P., Arias, L., & Stoneking, M.# (2021). Reconstructing the Human Genetic History of Mainland Southeast Asia: Insights from Genome-Wide Data from Thailand and Laos. **Mol Biol Evol**, 38(8), 3459-3477. doi:10.1093/molbev/msab124
- 6 **Liu, D.**, Duong, N. T., Ton, N. D., Van Phong, N., Pakendorf, B., Van Hai, N.#, & Stoneking, M.# (2020). Extensive Ethnolinguistic Diversity in Vietnam Reflects Multiple Sources of Genetic Diversity. **Mol Biol Evol**, 37(9), 2503-2519. doi:10.1093/molbev/msaa099
- 7 Srithawong, S., Muisuk, K., Srikummool, M., Kampuansai, J., Pittayaporn, P., Ruangchai, S., **Liu, D.**, Kutanan, W.# (2021). Close genetic relationship between central Thai and Mon people in Thailand revealed by autosomal microsatellites. **International Journal of Legal Medicine**, 135(2), 445-448. doi:10.1007/s00414-020-02290-4
- 8 Kanzaki, N.*, Tsai, I. J.*, Tanaka, R.*, Hunt, V. L.*, **Liu, D.**, Tsuyama, K., Maeda, Y., Namai, S., Kumagai, R., Tracey, A., Holroyd, N., Doyle, R. S., Woodruff, C. G., Murase, K., Kitazume, H., Chai, C., Akagi, A., Panda, O., Ke, H. M., Schroeder, C. F., Wang, J., Berriman, M., Sternberg, P. W., Sugimoto, A.#, & Kikuchi, T.# (2018). Biology and genome of a newly discovered sibling species of *Caenorhabditis elegans*. **Nat Commun**, 9(1), 3216. doi:10.1038/s41467-018-05712-5
- 9 Ke, H. M., **Liu, D.**, Ogura, Y., Hayashi, T., Urbanczyk, H., & Tsai, I. J.# (2018). Tracing Genomic Divergence of *Vibrio* Bacteria in the *Harveyi* Clade. **Journal of Bacteriology**, 200(15). doi:10.1128/JB.00001-18
- 10 **Liu, D.**, Hunt, M., & Tsai, I. J.# (2018). Inferring synteny between genome assemblies: a systematic evaluation. **BMC Bioinformatics**, 19. doi: 10.1186/s12859-018-2026-4
- 11 Chung, C. L.#, Lee, T. J., Akiba, M., Lee, H. H., Kuo, T. H., **Liu, D.**, Ke, H. M., Yokoi, T., Roa, B. M., Lu, J. M., Chang, Y. Y., Ann, P. J., Tsai, J. N., Chen, C. Y., Tzean, S. S., Ota, Y., Hattori, T., Sahashi, N., Liou, R. F., Kikuchi, T.#, & Tsai, I. J.# (2017). Comparative and population genomic landscape of *Phellinus noxius*: A hypervariable fungus causing root rot in trees. **Mol Ecol**, 26(22), 6301-6316. doi:10.1111/mec.14359

JOURNAL PEER-REVIEWS

BMC Biology, BMC Genomics, Cell Genomics, Frontiers in Ecology and Evolution, Molecular Biology and Evolution, Genome Biology and Evolution, Scientific Reports, European Journal of Human Genetics, Nature Communications

PRESENTATIONS AND CONFERENCES

Oral presentations

- 04/2025 **Human Evolution - From Fossils to Ancient and Modern Genomes (Welcome Genome Campus)**, Hinxton, UK. Title: Genomic insights into the evolutionary history and metabolic risk of Polynesians
- 10/2024 **LabEx Milieu Intérieur Annual Meeting**, Pairs, France. Title: Genetic determinants of phenotypic variation in Eastern Polynesians
- 09/2022 **EMBO I EMBL Symposium - Reconstructing the human past: using ancient and modern genomics**, Heidelberg, Germany. Title: The genomic diversity of Taiwanese Austronesian groups: implications for the 'Into and Out of Taiwan' models

- 11/2021 **Human Evolution - From Fossils to Ancient and Modern Genomes (Welcome Genome Campus)**, virtual Conference. Title: Assessing human genome-wide variation in the Massim region of Papua New Guinea and implications for the Kula trading tradition
- 11/2016 **International Symposium on Evolutionary Genomics and Bioinformatics**, Kaohsiung, Taiwan. Title: The genome sequence of *Caenorhabditis sp. 34*: a true sister species of *C. elegans* advancing model species biology
- Poster presentations
- 09/2024 **EMBO I EMBL Symposium - Reconstructing the human past: using ancient and modern genomics**, Heidelberg, Germany. Title: Reconstructing the genomic history of Eastern Polynesians: insights into phenotypic variation in the Pacific
- 11/2023 **Annual Meeting of the American Society of Human Genetics**, Washington, DC, USA. Title: Dissecting the genetic and evolutionary sources of phenotypic variation in East Polynesians
- 05/2021 **Cold Spring Harbor Laboratory meeting - Biology of Genomes**, virtual conference. Title: Assessing human genome-wide variation in the Massim region of Papua New Guinea and implications for the Kula trading tradition
- 03/2021 **EMBO Virtual Course on Population Genomics**. Title: Reconstructing the human genetic history of mainland Southeast Asia: insights from genome-wide data from Thailand and Laos
- 10/2019 **Human Evolution - From Fossils to Ancient and Modern Genomes (Welcome Genome Campus)**, Hinxton, UK. Title: Extensive ethnolinguistic diversity in Vietnam reflects multiple sources of genetic diversity

TEACHING AND SUPERVISORY EXPERIENCE

Instructor for "Workshop on basic management/analysis of genome-wide data for Biological Anthropology", Naresuan University, Phitsanulok, Thailand	11/2023
Co-supervisor of PhD student Wipada Worravatin on the population history study of Thai groups using genome-wide data, Khon Kaen University, Khon Kaen, Thailand	01/2024 - present
Co-supervisor of PhD student Zi Yin on the population history study of Thai groups using genome-wide data, Fudan University, Shanghai, China	01/2023 - present
Co-supervisor of visiting PhD student Beatriz Amorim on the population history study of southern African groups using genome-wide data, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany	02/2022 - 05/2022
Co-supervisor of PhD student Jae Rodriguez on the population history study of Filipino groups using genome-wide data, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany	10/2021 - 05/2022
Seminar mentor at the Molecular Anthropology course, University Leipzig, Leipzig, Germany	05/2021
Seminar mentor at the Molecular Anthropology course, University Leipzig, Leipzig, Germany	05/2020

OUTREACH ACTIVITIES

Invited seminar "Population Genomics of Austronesian Peoples Sheds Light on the Human Settlement of the Pacific", Ludwig Maximilian University, Munich, Germany	06/2024
Invited seminar "Evolutionary Rethinking: doing a PhD and postdoc in Germany and France", by Investigator Biosciences Honor Society Taiwan, online	03/2024
Visiting and scientific communication with Vietnamese collaborators and local communities, Vietnam Academy of Science and Technology, Hanoi, Vietnam	12/2023
Visiting and scientific communication with Thai collaborators and local communities, Naresuan University, Phitsanulok, Thailand	11/2023

Curriculum Vitae

Apr 2025

Invited seminar "Population genomic insights into the Austronesian expansion - from Taiwan to Polynesia", Naresuan University, Phitsanulok, Thailand

11/2023

Graphic design for result communication for our paper on Taiwanese Austronesian genomic diversity

05/2023

- Facebook (in Mandarin)
- Twitter (in English)
- EurekAlert! press (in English)
- Max Planck Institute for Evolutionary Anthropology press (in English)

Accepted art design for Molecular Biology and Evolution journal cover for our paper on Thai population genomics

08/2021

Graphic design for result communication for our paper on Vietnamese genomic diversity

04/2020

- Facebook (in Mandarin)
- EurekAlert! press (in English)
- Max Planck Institute for Evolutionary Anthropology press (in English)

ACQUIRED RESEARCH AND CAREER FUNDINGS

Pasteur-Roux-Cantarini Postdoctoral Fellowships

10/2023 - 09/2025

- role: postdoctoral researcher
- amount: 81,000 Euro

Government Scholarship to Study Abroad from Taiwan Ministry of Education

06/2020 - 05/2022

- role: doctoral student/researcher
- amount: 16,000 US Dollar

AWARDS

Poster Prize for EMBO | EMBL Symposium - Reconstructing the human past: using ancient and modern genomics, Heidelberg, Germany

09/2024

Semi-Finalist for the Trainee Awards for Excellence in Human Genetics Research for the Annual Meeting of the American Society of Human Genetics, Washington, DC, USA

11/2023

Reviewers' Choice Award (top 10% poster abstracts) for the Annual Meeting of the American Society of Human Genetics, Washington, DC, USA

11/2023

Semi-Finalist Award for Best Student Oral Presentation on International Symposium on Evolutionary Genomics and Bioinformatics, Kaohsiung, Taiwan

11/2016

The Award of Outstanding Student for the Academic Achievement, Department of Life Sciences, National Cheng Kung University, Tainan, Taiwan

semester
2011-2012

The Award of Outstanding Student for the Academic Achievement, Department of Life Sciences, National Cheng Kung University, Tainan, Taiwan

semester
2012-2013

SKILLS

- Proficiency in programming language including R, Python and Bash scripting
- Familiar with Linux environment
- Familiar with high-performance computing (HPC) cluster such as SLURM
- Familiar with Github versioning
- Familiar with Adobe Illustrator
- Experience in NGS data analysis such as assembly, annotation, comparative genomics and population genomics
- Molecular and genetics techniques such as DNA/RNA extraction, cloning and cell culture

LANGUAGE ABILITIES

- Mandarin (native speaker)
- English (fluent)
- German (basic)
- French (basic)

EXTRACURRICULAR ACTIVITIES

Internal PhD representative at Dept. of Evolutionary Genetics, MPI-EVA	05/2019 - 05/2020
Player on National Taiwan University Football Team	09/2015 - 06/2017
• Assistant coach in 2015/2016 season of University Football Association	
Player on National Cheng Kung University Football Team	09/2011 - 06/2015
• Captain in 2013/2014 season of University Football Association	
Poetry Exhibition in National Cheng Kung University	06/2015
Poetry Exhibition in National Cheng Kung University	06/2013

REFERENCES

Postdoc advisor

Luis Quintana-Murci, Ph.D.

Director of the Human Evolutionary Genetics Unit, Institut Pasteur and Professor at the Collège de France,
Chair of Human Genomics and Evolution

Unit Human Evolutionary Genetics, 28 Rue du Docteur Roux, 75015 Paris, France

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Postdoc co-advisor

Etienne Patin, Ph.D.

Research Director, CNRS, UMR2000, Evolutionary genomics, modeling and health

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PhD advisor

Mark Stoneking, Ph.D.

Visiting Professor, CNRS Laboratory for Biometry and Evolutionary Biology

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Retired Group Leader of Department of Evolutionary Genetics, Max Planck Institute for Evolutionary
Anthropology, and Honorary Professor of Biological Anthropology, University of Leipzig

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MSc advisor

Isheng Jason Tsai, Ph.D.

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