

# Dang Liu

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## EDUCATION

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- 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

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## RESEARCH EXPERIENCE

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- Postdoc** 10/2025 - present  
Topic: Human genetic and cultural evolution / WGS processing pipeline development  
Advisors: Prof. Dr. Sandra Oliveira  
Human Evolutionary Genetics Unit, Pasteur Institute, Paris, France
- Postdoc** 06/2022 - 09/2025  
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

\*Equal contribution / #correspondence

- 1 Olin, A., Pou, C., Jaquaniello, A., Crook, J., Tan, Z., Roux, M., Dubois, D., Charbit, B., **Liu, D.**, Donnadieu, F., Garcia, L., Lambert, C., Bloch, E., Clave, E., Araujo, I. L., Toubert, A., Rotival, M., Simon-Lorière, E., White, M., Bordin, P., Duffy, D., Quintana-Murci, L.#, & Patin, E.# (2026). Demographic and genetic factors shape the epitope specificity of the human antibody repertoire against viruses. *Nature Immunology*, 27(3), 600-612. doi:10.1038/s41590-026-02432-7
- 2 Yin, Z., Gupta, Y. M., Prakhun, N., Kampuansai, J., Inta, A., Srikumool, M., Rodcharoen, P., Suwannapoom, C., Lorphengsy, S., Woravatin, W., Rodriguez, J. J. R. B., Khaokhiew, C., Stoneking, M., Kutanan, W.#, **Liu, D.#**, & Wang, K.# (2026). Exploring the genomic population structure and history of Austroasiatic speakers in Mainland Southeast Asia. *Communications Biology*, 9, 300. doi:10.1038/s42003-025-09471-0
- 3 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/feid.2023.1201038
- 4 **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
- 5 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
- 6 **Liu, D.**, Peter, B. M., Schiefenhover, 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. *Molecular Biology and Evolution*, 39(8). doi:10.1093/molbev/msac165
- 7 Kutanan, W.\*#, **Liu, D.\***, Kampuansai, J., Srikumool, 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. *Molecular Biology and Evolution*, 38(8), 3459-3477. doi:10.1093/molbev/msab124
- 8 **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. *Molecular Biology and Evolution*, 37(9), 2503-2519. doi:10.1093/molbev/msaa099
- 9 Srithawong, S., Muisuk, K., Srikumool, 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
- 10 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*. *Nature Communications*, 9(1), 3216. doi:10.1038/s41467-018-05712-5
- 11 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
- 12 **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
- 13 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. *Molecular Ecology*, 26(22), 6301-6316. doi:10.1111/mec.14359

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

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## CONFERENCE PRESENTATIONS

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### 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

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## INVITED SEMINARS

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- Invited seminar "Genomic insights into Polynesian history", University Paris 1 Panthéon-Sorbonne, Paris, France 03/2026
- 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
- Invited seminar "Dissecting the genetic and evolutionary sources of phenotypic variation in Eastern Polynesians", Vietnam Academy of Science and Technology, Hanoi, Vietnam 12/2023
- Invited seminar "Population genomic insights into the Austronesian expansion - from Taiwan to Polynesia", Naresuan University, Phitsanulok, Thailand 11/2023

## TEACHING AND SUPERVISORY EXPERIENCE

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Lecturer for practicals in the block course of “Human Evolutionary Genetics”, University of Zurich, Zurich, Switzerland	02/2026 - 03/2026
Lecturer for practical on “basic population genetic exercises” for Interdisciplinary Primer on Language Evolution Research, University of Zurich, Zurich, Switzerland	11/2025
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 - 06/2024
Lecturer for “Workshop on basic management/analysis of genome-wide data for Biological Anthropology”, Naresuan University, Phitsanulok, Thailand	11/2023
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	05/2020, 05/2021

## OUTREACH ACTIVITIES

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Serving as the ZALAN見識南島 TV show guest for interviews and a speech on “Taiwanese Austronesian genomic diversity and the implications for into and out-of-Taiwan dispersals” ( <a href="#">YouTube link</a> )	12/2025
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
Accepted art design for Molecular Biology and Evolution journal cover for our paper on Thai population genomics	08/2021

## ACQUIRED RESEARCH AND CAREER FUNDINGS

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Pasteur-Roux-Cantarini Postdoctoral Fellowships - role: postdoctoral researcher - amount: 81,000 Euro	10/2023 - 09/2025
Government Scholarship to Study Abroad from Taiwan Ministry of Education - role: doctoral student/researcher - amount: 16,000 US Dollar	06/2020 - 05/2022

## AWARDS

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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

## Curriculum Vitae

Apr 2026

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

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- 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

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

## EXTRACURRICULAR ACTIVITIES

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Player on University of Zurich Futsal Team for the Swiss Universities Championships	11/2025
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

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Postdoc advisor

**Sandra Oliveira**, Ph.D.

Assistant Professor, Department of Evolutionary Biology and Environmental Studies, University of Zurich

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[sandra.dasilvaoliveira@uzh.ch](mailto:sandra.dasilvaoliveira@uzh.ch)

Postdoc advisor

**Luis Quintana-Murci**, Ph.D.

Director, Human Evolutionary Genetics Unit, Institut Pasteur /

Professor, 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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[lluis.quintana-murci@pasteur.fr](mailto:lluis.quintana-murci@pasteur.fr)

Postdoc advisor

**Etienne Patin**, Ph.D.

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

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

Tel: +33-1-44-38-94-41

[epatin@pasteur.fr](mailto:epatin@pasteur.fr)

PhD advisor

**Mark Stoneking**, Ph.D.

Visiting Professor, CNRS Laboratory for Biometry and Evolutionary Biology /

Retired Group Leader, 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.

Research Fellow, Biodiversity Research Center, Academia Sinica

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