

CURRICULUM VITAE

Yuting (Yuti) Gao, PhD Candidate

Department of Anthropology, University of Colorado Boulder

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EDUCATION

Ph.D. Biological Anthropology, University of Colorado Boulder, USA	2021-present
Advisor: Steven R. Leigh	
B.S., Anthropology, Sun Yat-sen University, China	2020
Study Abroad, University of California, Los Angeles, USA	2019

PUBLICATIONS

Gao, Yuting, and Steven R. Leigh. 2025. "Advancing Scientific Collection-Based Research with the Global Registry of Scientific Collections (GRSciColl)." *American Journal of Biological Anthropology* 188 (4): e70184. <https://doi.org/10.1002/ajpa.70184>.

GRANTS AND FELLOWSHIPS

External:

Leakey Foundation Research Grant, \$11,564	2026
Smithsonian Institution Fellowship, \$45,000, alternate	2025

Internal:

Dissertation Completion Fellowship, \$14,408	2025
Research Grants, \$12,650 Total	

By Funding Agency:

- Graduate School, \$4150	2025, 2024
- Museum of Natural History, \$3000	2025, 2023
- Graduate and Professional Student Government, \$500	2025
- Center to Advance Research and Teaching in the Social Sciences, co-PI, \$5000	2023
Frances Leon Quintana Scholarship, \$1000	2023

RESEARCH SKILLS

Wet Lab:

DNA extraction (modern + ancient); NGS library preparation; PCR; shotgun metagenomic sequencing

Computational:

Programming: R/Python; Linux/Bash; Nextflow; HPC (Slurm)

Metagenomics & aDNA: quality control, taxonomic profiling, functional annotation; ancient DNA authentication

Pathogen genomics: competitive mapping, SNV calling, coverage/breadth metrics, allele-frequency reporting

Population genetics: PCA, Fst, Tajima's D, selection statistics

RESEARCH EXPERIENCE

<u>Graduate Researcher</u>	2021-Present
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- Generated a comparative dataset of 130 shotgun metagenomes (average ~30M – 80M reads) across 20+ primate species to study effects of host and ecological factors on primate oral microbiomes; built a reproducible ancient metagenomics pipeline with documented SOPs, custom R scripts for downstream statistical analyses.
- Secured \$24,214 in competitive funding for dissertation research.

<u>Collaborative Researcher</u>	2023-present
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- Conducted paleogenomic analyses of pathogen (*Mycobacterium tuberculosis* complex, *Streptococcus pneumoniae*, periodontal disease-associated taxa) recovered from 19th century population oral microbiomes; built a pathogen-genomics workflow in nf-core/eager, including competitive mapping, coverage/breadth metrics, and genotyping with allele-frequency reporting.

<u>Population genetics related projects</u>	2019, 2023
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- Evidence of selection in *FADS1* among high-altitude Tibetans - course research project, UCLA (Fall 2019). Analyzed variation in the *FADS1* gene using 688 Tibetan genomes and 206 Han Chinese and 208 Japanese samples. BED→VCF→FASTA via PGDSpider and computed nucleotide diversity and neutrality tests (Tajima's D; Fu & Li's F*) in DnaSP; summarized results in a written report and presentation.
- Southern East Asia lipid metabolism adaptation - collaborative project, Contributed to data preprocessing/QC and organization of analysis outputs; qpGraph modeling and GRoSS scans were led by a collaborator; co-interpreted results and drafted summary text.

TRAINING

<u>Selected coursework</u>	2021-2023
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Population Genetics (theory and real data analyses in R)

Genomics (de novo assembly of a flax genome)

Biostatistics (GLMs applied to primate amylase expression; presented at SMBE)

Data science for ecology: machine learning

2022-2025

<u>Ancient DNA, metagenomic lab training</u>
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- Katerina Guschanski Lab (Uppsala University, Sweden, 2022)
- University of Illinois Urbana-Champaign (Ripan Malhi Lab, USA, 2023)
- Anne Stone Lab (Arizona State University, USA, 2025)

MENTORSHIP

<u>Undergraduate Research Mentor, Studio Lab</u>	2025
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- Selected as a mentor for university-wide undergraduate research; mentored three undergraduates from molecular biology, neuroscience, and evolutionary biology in bioinformatics and genomics research through weekly one-on-one meetings. Advised students on their presentations for the end-of-year research symposium.

Graduate Student Mentor through Graduate School

2022, 2023

- Guided incoming domestic and international graduate students through academic and social “hidden curriculum” of graduate school.

CONFERENCE PRESENTATIONS

American Association of Biological Anthropologists

Gao, Y., Leigh, S.R. 2025, Microbes, Molars, and Meals: Interspecific Comparisons of Oral Microbiomes in African and Eurasian monkeys Cercopithecoidea, *94th annual meeting of American Association of Biological Anthropologists*, March 2025, Baltimore, MD, US

Gao, Y., SR. Leigh 2024, Diet Shapes the Oral Microbiome Diversity in Old World Monkeys, *3rd annual meeting of Rocky Mountain Biological Anthropologist Association*, Denver, CO, US

SR. Leigh, JM. Thomas, **Gao, Y.,** 2023, Calibrating Primate Body Mass Growth Spurts, *92nd annual meeting of American Association of Biological Anthropologists*, Reno, NV, US

Gao, Y., Z.Xia 2022, Genetic Insights into Local Adaptation of Lipid Metabolism in Fishing-based Populations in Southern East Asia, *91st annual meeting of American Association of Biological Anthropologists*, Denver, CO, US

Society for Molecular Biology & Evolution

Gao, Y., 2023 Beyond Genetics: The Influence of Diet on Primate Salivary Amylase Expression, *Society for Molecular Biology & Evolution 2023*, Ferrara, Italy

PROFESSIONAL REFERENCES

Steven R. Leigh (Advisor, primate microbiome, growth and sexual dimorphism)
Department of Anthropology, University of Colorado Boulder
steven.leigh@colorado.edu

Fernando Villanea (Committee, population genetics, archaic admixture)
Department of Anthropology, University of Colorado Boulder
Fernando.Villanea@colorado.edu

Katherine Amato (Committee, primate gut microbiome)
Department of Anthropology, Northwestern University
katherine.amato@northwestern.edu

Anne Stone (Collaborator, ancient DNA, pathogen genomics)
School of Human Evolution and Social Change, Arizona State University
acstone@asu.edu