

# Xinjun Zhang

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**EDUCATION**      **PhD, Evolutionary Anthropology**, University of California, Davis, USA      Dec 2017

- *Major areas*: Genetic Anthropology and Primatology
- *Dissertation*: Zoonotic Malaria in Southeast Asian Macaques
- *Advisor*: David Glenn Smith

**BS, Biology**, Beijing Normal University, China      Jul 2012

- *Thesis*: Geo-Spatial Features and Ecological Corridor Design for the Habitat of Asian Elephant in Southwest China

## ACADEMIC POSITIONS

**Postdoctoral Scholar**, University of California, Los Angeles, USA      Feb 2019 - Present

- Department of Ecology and Evolutionary Biology
- *Advisor*: Kirk Lohmueller

**Postdoctoral Scholar**, University of California, Merced, USA      Feb 2018 - Jan 2019

- School of Natural Sciences (Molecular and Cell Biology)
- *Advisor*: Emilia Huerta-Sanchez

## RESEARCH INTEREST

Population Genetics, Genetic Anthropology, Archaic Introgression, High Altitude Adaptation, Zoonotic Malaria, Admixture and Natural Selection, Statistical Modeling and Simulations, East Asia

## PUBLICATIONS *Published articles*

1. **Zhang X**, Kim B, Lohmueller K, Huerta-Sanchez E. The impact of recessive deleterious variants on signals of adaptive introgression in human populations. *Genetics*. vol. 215 no. 3 799-812. 2020
2. Berg J, Harpak A, Sinnott-Armstrong N, Joergensen AM, Mostafavi H, Field Y, Boyle EA, **Zhang X**, Racimo F, Pritchard JK, Coop G. Reduced signal for polygenic adaptation of height in UK Biobank. *eLife* 8:e39725. 2019
3. **Zhang X**, Kanthaswamy S, Trask JS, Ng J, Oldt RF, Mankowski JL, Adams RJ, Smith DG. Genetic characterization of a captive colony of pigtailed Macaques (*Macaca nemestrina*). *Journal of the American Association for Laboratory Animal Science*. 56:390-395. 2017
4. **Zhang X**, Meng Y, Houghton P, Kanthaswamy S, Oldt R, Ng J, Satkoski Trask J, Huang R, Singh B, Du H, Smith DG. Ancestry, *Plasmodium cynomolgi* prevalence and rhesus macaque admixture in cynomolgus macaques (*Macaca fascicularis*) bred for export in Chinese breeding farms. *Journal of Medical Primatology*. 46:31-41. 2017

5. **Zhang X**, Kadir KA, Quintanilla-Zarian LF, Villano J, Houghton P, Du H, Singh B and Smith DG. Distribution and prevalence of malaria parasites among long-tailed macaques (*Macaca fascicularis*) in regional populations across Southeast Asia. *Malaria Journal* 15:450. 2016

*Non-peer reviewed articles*

1. Berg J, **Zhang X**, Coop G. Polygenic Adaptation has Impacted the Evolution of Multiple Anthropometric Traits. bioRxiv 167551. 2017  
*\*note: this article has been left unpublished because of complications with additional dataset after the initial preprint submission. The Berg et al. (2019) on eLife listed above examines these issues in depth. For more, see the author's note in this preprint.*

*Preprints (Under review or close to submission)*

1. **Zhang X**, Witt-Dillon K, Ko A, Xu S, Nielsen R, Huerta-Sanchez E. The History of Denisovan Intgression in East Asia Revealed through the Evolution of the *EPAS1* gene in Tibetan Population.
2. Zhang P\*, **Zhang X\***, Gao X, Huerta-Sanchez E, Zwyns N. Modeling the Population History of Tibetan Plateau: Toward an integration of Archaeology and Genetics.  
*\*These authors contributed equally*

*Manuscript in prep*

1. **Zhang X**, Kim B, Durvasula A, Lohmueller K. *MaLAdapt* - A Machine Learning-based Approach for Detecting Genome-wide Adaptive Intgression

**TALKS AND POSTERS**

1. **Invited Webinar Talk**, *Upon the encounter between archaic and modern humans: why deleterious mutations matter*, Chinese Genomics Meet-up Online, 2020
2. **Poster Presentation**, *A limited impact of recessive deleterious variants on signals of adaptive introgression in human populations*, TAGC Allied Genetics Conference, 2020
3. **Invited Seminar Talk**, *Tools to detect Archaic Adaptive Introgression*, BGI Research Institute, Shenzhen, China, 2019
4. **Podium Talk**, *Denisovan Introgression and the Evolutionary History of EPAS1 in Tibetan population*, International Symposium of Paleoanthropology in Commemoration of the 90th anniversary of the Discovery of the First Skull of Peking Man, Beijing, China, 2019
5. **Invited Seminar Talk**, *Genetic legacies from archaic humans - a tale of Tibetans, Denisovans, and EPAS1 gene*, School of Archaeology, Oxford University, UK, 2019
6. **Podium Talk**, *MaLAdapt - a machine learning-based approach to detect genome-wide adaptive introgression*, Society of Molecular Biology and Evolution, Manchester, UK, 2019
7. **Podium Talk**, *Genetic legacies from archaic humans*, Los Angeles Postdoctoral Research Symposium, Los Angeles, CA, 2019
8. **Podium Talk**, *Archaic introgression largely affected high altitude adaptation and the evolutionary history of EPAS1 in Tibetans*, American Association of Physical Anthropologists, Cleveland, OH, 2019
9. **Poster Presentation**, *High altitude adaptation and archaic introgression of EPAS1 in Tibetan populations*, American Society of Human Genetics, San Diego, CA, 2018
10. **Poster Presentation**, *Ancestry, admixture, and the distribution of zoonotic malaria parasites in Southeast Asian long-tailed macaque populations*, International Primatological Society, Chicago, IL, 2016

11. **Oral Presentation**, *Fighting malaria using macaque models*, Grad Slam Thesis Competition (finalist), University of California Davis, 2016
12. **Poster Presentation**, *Identifying candidate genes contributing to the susceptibility of zoonotic malaria in macaques*, Interdisciplinary Graduate and Professional Symposium, University of California Davis, 2014

**TEACHING  
EXPERIENCE**

**Instructor**, University of California Los Angeles 2020

- Taught the *Population Genetics* modules for the Basics of Genomics (BIG-Bio) - a free online learning resource for students learning genomics at and outside of UCLA campus
- Recorded teaching videos that are publicly available.
- Contributed to the *Zoom teaching during COVID-19* tutorials.

**Instructor**, University of California Davis 2016-2017

Course: *Human Evolutionary Biology* (1 quarter)

- Designed course materials and exams.
- Lectured lower level undergraduate class of 300 students. Managed 5 TAs and 15 lab sections.

Course: *Human Biological Variation* (2 quarters and 2 summer sessions)

- Designed the entire teaching package, including course materials and exams.
- Lectured upper level undergraduate class of 70 students in quarters and 30 students in summer.

**Teaching Assistant**, University of California Davis 2012-2017

Course: *Human Evolutionary Biology* (8 quarter)

- Lower level undergraduate course on the fundamentals of biological anthropology

Course: *Human Biological Variation* (1 quarters)

- Upper level undergraduate course for the phenotypic, genetic, and behavioral variation in human populations.

Course: *Behavioral and Evolutionary Biology of the Human Life Cycle* (1 quarters)

- Lower level undergraduate course on human life history and strategies

**Guest Lecturer**, University of California Davis 2014-2015

Course: *Anthropological Genetics* (2 lectures)

- Upper level undergraduate course on human population genetics

Course: *Introduction to Primatology* (1 lecture)

- Lower level undergraduate course on primate taxonomy, ecology, natural history and evolution

**OTHER  
EXPERIENCE**

**Exchange Student**, Ludwig Maximilian University of Munich, Germany 2010-2011

- Department of Biology
- Internship at the Bioanthropology Laboratory (*PI*: Gisela Grupe)

**Archaeology Field Intern**, Hall in Tirol, Austria 2011

- Archaeological Excavation at Tirol Psychiatric Hospital

**Research Assistant**, Cell Biology Institute, Beijing Normal University 2010  
 • Laboratory of Molecular Biology and Biochemistry (*PI*: Xiaobo Qiu)

**FUNDING AND AWARDS**

**Outstanding Mentorship Award**, UCLA Bruins-in-Genomics Research Program 2020  
**Symposium Organizing Fund**, the 89th AAPA Annual Meeting, \$2,000 2020  
**Best Talk Award**, Los Angeles Postdoctoral Research Symposium 2020  
**Full Scholarship**, Summer Institute of Statistical Genetics at University of Washington 2017  
**Business Development Fellowship**, Graduate School of Management at UC Davis 2015  
**Graduate Studies Travel Award**, University of California Davis, \$2,000 2016  
**Crook Travel Award**, University of California Davis, \$500 2016  
**Graduate Student Fellowship**, University of California Davis, \$8,000 2016  
**Non-resident Graduate Student Fellowship**, University of California Davis, \$30,000 2014  
**Graduate Student Summer Fellowship**, University of California Davis, \$4,000 2014  
**Graduate Student Summer Fellowship**, University of California Davis, \$4,000 2013

**ACADEMIC SERVICE**

**Reviewer for journal articles** 2019 - Present  
 • Cell, Genome Biology and Evolution, Communications Biology, Molecular Genetics and Genomics, ACS Omega

**Reviewer for conferences** 2020 - Present  
 • AAPA 2021, SACNAS 2020

**Symposium Co-Chair and Organizer**, the 90th AAPA annual meeting 2021  
 • *Ethics and Best Practices for Studying Contemporary Human Populations*

**Symposium Chair and Organizer**, the 89th AAPA annual meeting 2020  
 • *Thriving at Miles High - Studying High Altitude Adaptation around the Globe*

**Webinar Organizer**, AAPA monthly webinar series 2020  
 • *The Ups, Downs, Ins and Outs of Computational Genomics in Anthropology*

**Scientific Program Committee Member**, AAPA 2020 - Present  
**Co-Organizer** *Back to Basics* seminar series, Department of Anthropology, UC Davis 2017  
**Faculty Search Committee Member**, Department of Anthropology, UC Davis 2015-2017  
**Website Committee Member**, Department of Anthropology, UC Davis 2015-2017  
**K-12 Outreach Events Volunteer**, Department of Anthropology, UC Davis 2012-2016  
**Volunteer** *Expand your Horizons* Science Fair for Grade 4-6 girls, Sacramento 2016  
**Student Judge**, Postdoctoral Research Symposium, UC Davis 2016

**STUDENTS  
MENTORED**

**Nina Sachdev** 2020 (summer)  
• Undergraduate student in Computer Science at Wellesley College  
• Served as direct mentor for the Bruins-In-Genomics Summer Program, mentored student with project development, SLiM simulations, python scripting, and abstract writing

**Mayra Bañuelos** 2019 - Present  
• Graduate student in Computational Biology at Brown University  
• Served as mentor in a population genetics project (student first author)

**Armaan Singh** 2019 - Present  
• Undergraduate student in Computer Science at UCLA  
• Served as mentor in a machine learning project (student second author)

**Caroline Solís** 2019 (Summer)  
• Undergraduate student in Biology at California State University at San Francisco  
• Trained student in python scripting and abstract writing

**Leslie Quintanilla** 2014-2016  
• Undergraduate student in Biology at UC Davis  
• Served as mentor in a malaria project (student second author)  
• Trained student in wet-lab research, literature reading, and scientific writing

**PROFESSIONAL  
AFFILIATIONS**

American Association of Physical/Biological Anthropologists 2019 - present  
American Association of Anthropological Geneticists 2019 - present  
Genetics Society of America 2019 - present  
Society of Molecular Biology and Evolution 2019 - present  
Society for Advancement of Chicanos/Hispanics and Native Americans in Science 2020 - present  
UCLA EEB SciComm and Outreach Club 2019 - present  
American Society of Human Genetics 2018 - present  
Bay Area Population Genomics Group 2017 - present  
International Primatological Society 2015-2017  
American Society of Primatologists 2014-2017

**CERTIFICATES**

**Machine Learning** Stanford University, Coursera Verified Certificate (License 82Q7B5RR254Z)  
**Business Development Fellowship Certificate** Graduate School of Management, UC Davis  
**R Programming** Johns Hopkins University, Coursera Verified Certificate (License: HTUU4CCWWQ)

**RELATED  
SKILLS**

Computer Language: Python, R, MATLAB, L<sup>A</sup>T<sub>E</sub>X  
Human Language: English (fluent), Chinese (fluent), German (oral), Spanish (written)