

# MARIANA ESCOBAR-RODRIGUEZ

PhD student - Microbial Paleogenomics Unit

Pasteur Institute, France

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

## Education

2023 - Present

**PhD student in Microbial Paleogenomics**

Pasteur Institute & Paris Cité University, France

2021 - 2023

**MSc in Evolutionary Biology**

Erasmus Mundus Master Programme in Evolutionary Biology: University of Groningen, The Netherlands & University of Montpellier, France

2017 - 2021

**BSc in Genomic Sciences**

Graduated with Honours

Center for Genomic Sciences

National Autonomous University of Mexico

## Research Experience

October 2023 - Present

**Doctoral researcher at the Microbial Paleogenomics Unit, Pasteur Institute**

Supervisor: Dr. Nicolás Rascovan

Department of Genomes & Genetics, Pasteur Institute

- *Investigating the microbial dimension of the European colonization of the southern cone of the Americas*

February 2023 - July 2023

**MSc Research Intern at the Microbial Paleogenomics Unit, Pasteur Institute**

Supervisor: Dr. Nicolás Rascovan

Department of Genomes & Genetics, Pasteur Institute

- *Prevalence and diversity of Antibiotic Resistance Genes over the last millennia*

September 2022 - February 2023

**MSc Research Intern at the Viral Ecology and Evolution Lab, University of Groningen**

Supervisor: Dr. Sebastian Lequime

Microbial Ecology Group, University of Groningen

- *Evolution of endogenous viral elements in Formicidae*

April 2022 - July 2022

**MSc Research Intern at the Phylogenetics and Molecular Evolution Lab, ISEM**

Supervisor: Dr. Frédéric Delsuc

Institute of Evolutionary Science of Montpellier, University of Montpellier

- *Molecular evolution and expression of the salivary mucin genes MUC5B and MUC7 in mammals*

September 2020 - September 2021

**Undergraduate Senior Thesis at the Veeramah Lab, Stony Brook University**

Supervisor: Dr. Krishna R. Veeramah

Department of Ecology and Evolution, Stony Brook University

- *Evaluation of genotype imputation of ancient DNA: a simulation study*

September 2019 - October 2020

**Research Intern at the Paleogenomic Consortium, INMEGEN**

Supervisor: Dr. Federico Sánchez-Quinto

Department of Computational Genomics, National Institute of Genomic Medicine (INMEGEN)

- *Genomic analysis of ancient Mediterranean remains*

December 2019 - February 2020

**Research Intern at the Laboratory of Adaptive Genomics, University of Potsdam**

Supervisor: Dr. Michael Hofreiter

Department of Mathematics and Natural Sciences, University of Potsdam

- *Genomic analysis of historical samples of *Canis lupus baileyi* (Mexican wolf)*

September 2018 - October 2020

**Research Intern at the Laboratory of Systems and Synthetic Biology, UNAM**

Supervisor: Dr. Diego Cortez-Quezada

Center for Genomic Sciences, UNAM

- *Temperature-dependent sex determination in *Lepidochelys olivacea* (sea turtle)*

## Publications

Martínez-Pacheco M; Díaz-Barba K; Pérez-Molina R; Marmolejo-Valencia A; Collazo-Saldaña P; **Escobar-Rodríguez M**; Sánchez-Pérez M; Meneses-Acosta A; Martínez-Rizo A; Sánchez-Pacheco A; Furlan-Magaril M; Merchant-Larios H; Cortez D. *Gene expression dynamics during temperature-dependent sex determination in a sea turtle* (2024) Developmental Biology DOI:10.1016/j.ydbio.2024.06.018

**Escobar-Rodríguez M**; Veeramah K. *Evaluation of ancient DNA imputation: a simulation study* (2024) Human Population Genetics and Genomics DOI:10.47248/hpgg2404010002

Taron, U; Salado I; **Escobar-Rodríguez, M**; Westbury M; Butschkau S; Paijmans J; von Holdt B; Hofreiter M & Leonard, J. *A sliver of the past: the decimation of the genetic diversity of the Mexican wolf*. (2021) Molecular Ecology DOI:10.1111/mec.16037

## Grants

**AMR axis - 2023 - Pasteur Institute** Investigating the prevalence and diversity of Antibiotic Resistance Genes in human commensal microbes over the last millennia. €6,000

## Teaching Experience

2024 - 2025

### **Paleogenomics lecturer**

EvoBio Crash Course Programme

Online

2019

### **Teaching assistant of Phyloinformatics course**

Undergraduate Program on Genomic Sciences

Center for Genomic Sciences, UNAM

## Other relevant experience

- Media Team management of the SPAAM (Standards, Precautions, and Advances in Ancient Metagenomics) community

## Honors and Awards

2023 - 2026

### **Pasteur-Paris University international doctoral programme fellowship**

Awarded by the Pasteur Institute & Paris Cité University

2021 - 2023

### **Erasmus Mundus Joint Master Degree (EMJMD) scholarship**

Awarded by the Erasmus+ Programme of the European Union

2021

### **Bachelor of Science with Honours**

Awarded by the National Autonomous University of Mexico

2019 - 2020

### **Research Methods Training Scholarship**

Awarded by the National Autonomous University of Mexico

## Skills

- Familiar with Python, R and Bash.
- Server and cluster management for bioinformatic purposes
- Fluent Spanish and English

## Interests

My current interests are human and animal diversity, population genetics, ancient DNA, and the application of genomic and computational tools to examine patterns of genetic variation from different time points in history.