

# Afra Salazar

PhD Student — Department of Fundamental Microbiology

University of Lausanne, Switzerland

Contact information

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## EDUCATION

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- 2021 - **Doctoral School of the Faculty of Biology and Medicine**  
PhD in Life Sciences | University of Lausanne
- 2019 - 2021 **Erasmus Mundus Master Programme in Evolutionary Biology (MEME)**  
Master in Sciences | University of Groningen & University of Montpellier
- 2015 - 2019 **Undergraduate Program of Genomic Sciences**  
Bachelor in Sciences | National Autonomous University of Mexico (UNAM)

## RESEARCH EXPERIENCE

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- 2021 **Student visitor at the Centre for History and Philosophy of Science**  
Six-month master project | University of Leeds, United Kingdom  
Supervised by Dr. Ellen Clarke  
*Philosophical analysis on the evolutionary individuality of bacterial plasmids*
- 2020 **Research intern at the Groningen Institute for Evolutionary Life Sciences**  
Six-month master project | University of Groningen, The Netherlands  
Supervised by Dr. Marjon de Vos & Dr. Sander van Doorn  
*Built a mathematical model to study the long term evolution of plasmid host ranges*
- 2020 **Research intern at MIVEGEC**  
Three-month master project | University of Montpellier, France  
Supervised by Dr. Samuel Alizon  
*Built an epidemiological model to study the evolutionary conditions governing symptom onset rates of infectious diseases*
- 2019 **Research intern at the Department of Fundamental Microbiology**  
Six-month internship | University of Lausanne, Switzerland  
Supervised by Dr. Sara Mitri  
*Built a mathematical model to design antibiotic treatments based on microbiota composition to reduce resistance*
- 2018 **Research intern at the Department of Fundamental Microbiology**  
Summer internship | University of Lausanne, Switzerland  
Supervised by Dr. Sara Mitri  
*Built a mathematical model mapping out the effects of different antibiotic treatment strategies on the microbiota of individual patients*
- 2016 - 2018 **Research Intern at the Laboratory of Systems and Synthetic Biology**  
22-month internship | Center of Genomic Sciences, Mexico  
Supervised by Dr. Rafael Peña Miller  
*Built a computational models to study plasmid population dynamics in bacterial populations*

## TEACHING EXPERIENCE

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2018      **Teaching assistant of Introduction to Linear Algebra**  
Undergraduate program of Genomic Sciences | UNAM  
*Provided one-on-one assistant instruction for 24 students*

## HONORS AND AWARDS

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2019      **Erasmus Mundus Joint Master Degree (EMJMD) Scholarship**  
By the European Commission  
*Selected as one of six high-ranked students of the MEME Cohort 2019-2021*  
*Awarded with EUR 49000*

2018      **The School of Biology Summer Undergraduate Research Programme**  
By the Faculty of Biology and Medicine, University of Lausanne  
*Selected out of nearly 250 international students of medicine and biology*  
*Awarded with CHF 3200, plus travel expenses*

2018      **Research Methods Training Scholarship**  
By SEP-UNAM-FUNAM  
*Selected to carry out an undergraduate internship at the University of Lausanne*  
*Awarded with MXN 85000*

## CONFERENCES

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2021      **On Plasmid Evolutionary Individuality**  
Centre for History and Philosophy of Science | University of Leeds  
*Invited talk*

## TECHNOLOGY

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**Programming Languages:**  
Julia, R, Python

**Other:**  
LaTeX, Wolfram Mathematica, M. Office

## LANGUAGES

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Spanish (native) & English (C1)