

JUAN CAMILO ARBOLEDA RIVERA

juan.arboleda2@udea.edu.co

Institute of Biology, University of Antioquia (Colombia) \diamond [CvLAC](#)

EDUCATION

MSc. Biology

February 2018 - February 2021

Universidad de Antioquia

Overall GPA: 4.8/5

Institute of Biology

Thesis title: Analysis of network motifs in gene regulatory networks involved in band pattern generation in a stage of embryonic development. (*in press*)

Thesis advisors: Gloria Machado Rodríguez and Boris Anghelo Rodríguez Rey

Relevant Courses

Dynamical systems

Systems biology

Mechanisms of regulation of gene expression

Academic writing in English

BSc. Biology

February 2011 - August 2017

Universidad de Antioquia

Overall GPA: 4.06/5

Thesis title: Effect of temperature on infection and dissemination potential of chikungunya virus in populations of *Aedes aegypti* from the municipality of Bello, Antioquia, Colombia.

Thesis advisor: Sair Orieta Arboleda Sánchez

Relevant Courses

Bioinformatics

Molecular Genetics Seminar

Immunology

Microtechnics

Cytogenetics

Morphometry

Entomology

Philosophy and History of Biology

TECHNICAL STRENGTHS

Computer Languages

Python 3, Wolfram Mathematica, Bash, C++.

Software & Tools

R, ImageJ, GIMP, GNU/Linux, Microsoft Office, LibreOffice, Artemis, Jalview, BLAST, L^AT_EX, GROMACS, Qiime2, Git, GitHub.

ACADEMIC ACHIEVEMENTS

Ranked in the ECAES 100th percentile nationwide.

Stood first in Masters entrance exam winning the “Estudiante Instructor” fellowship.

PARTICIPATION IN ACADEMIC EVENTS

Participation in the “V Congreso Colombiano de Biología Computacional y Bioinformática” as speaker, Universidad del Tolima, Ibagué. November 2019

Participation and poster presentation in the course “A Systems Approach to Biology” of the Centro Latinoamericano de Formación Interdisciplinaria (CELFI) in the Ciudad Autónoma de Buenos Aires, Argentina. June 2018

Participation in the workshop “Biophysical simulations and experiments” of the Chemical Sciences postgraduate program, Universidad de Antioquia. May 2018

Participation in the Third Symposium of Exact and Natural Sciences, Universidad de Antioquia. June 2017

WORK AND RESEARCH EXPERIENCE

Assistant Professor

February 2018 - Present

- Courses taught: Genetics, Molecular Genetics Fundamentals Laboratory, General Biology Laboratory.

Genetics laboratory assistant

2016

- Maintenance of *Drosophila melanogaster* colonies.

Laboratory of Biology and Control of Infectious Diseases (BCEI)

2014 - 2016

Research assistant

- Support in the research project “Definition of spatio-temporal distribution patterns of natural populations of *Aedes aegypti* in Colombian cities with high and medium endemicity for dengue fever”. Support consisted in:
 - Maintenance of *Aedes aegypti* colonies.
 - RNA extractions.
 - Participation in seminars.
 - Infecting mosquitoes experimentally with dengue virus and chikungunya virus.
 - Carrying out plaque assays.
 - Maintenance of cell cultures.
 - Life table analysis.
 - Survival analysis.
- Support in the research project “Functional and molecular characterization of ionic channels in *Aedes aegypti* populations sensitive and resistant to insecticides” developed in the BCEI laboratory. Support consisted on:
 - Maintenance of *Aedes aegypti* colonies.
 - RNA extractions.
 - cDNA synthesis.
 - Conducting PCRs.
 - Enzymatic assays for quantification of beta-esterase activity.
 - Protein quantification by BCA method.
 - Literature reviews about resistance mechanisms associated with sodium channel mutations in insects.

During this time I won experience giving presentations in seminars, reading and analyzing academic papers in a critical way, working as a team, in laboratory research and in molecular biology techniques as ELISA and in bioinformatics techniques as molecular dynamics simulations in GROMACS.

Participated in Science, Technology and Innovation fair “Explora la UdeA” perfomed by Parque Explora and Universidad de Antioquia.

September 2015

- Participation consisted on guiding a group of twelve school students through the University, telling my own research experience and encouraging them to study sciences.

EXTRA-CURRICULAR

Lectured occasionally in the Colombian Association of Evolutionary Biology (COLEVOL) in Medellín, Colombia on subjects as Virology, Prions, Transposons and Systems Biology.

LANGUAGES

English	Fluent. TOEFL iBT: 105
Spanish	Mother tongue.
French	Fluent. Language school of the University of Antioquia.
German	Basic knowledge. Language school of the University of Antioquia.
Norwegian	Basic knowledge. Online course “Introduction to Norwegian” in www.futurelearn.com .