



Juan Camilo Barbosa-Caro

Biologist
PhD candidate
Institute for Molecular Physiology
Heinrich Heine University

<https://jucbca.github.io/>

Hoffeldstraße 6.
Düsseldorf, Germany

+4915753691907

jucbca@gmail.com

<https://www.linkedin.com/in/juan-camilo-barbosa-caro/>

Results-driven researcher and leader with strong background in plant physiology, computational tools, and science communication.

Passionate about food production sustainability through effective knowledge transfer and interdisciplinary collaboration.

Core competencies

- Data-driven and result oriented thinking
- Project management
- Team work capacity
- Creative & multidisciplinary problem solving
- Scientific communication skills

Language proficiency



Computational skills



- FAIR-focused data management
- scalable pipeline construction and automation
- signal processing
- imaging data analysis

Publications

Research

3D designs



Dr. Michael Wudick

wudick@hhu.de
Heinrich Heine Universität
Düsseldorf - Germany

Prof. Jose Feijo

jfeijo@umd.edu
University of Maryland
College Park - USA

Professional experience

Research Scientist - Physiology of plant stress-response signaling

Heinrich Heine Universität, Düsseldorf - Germany
Since September 2021

Group coordinator - virtual learning material generation for Taiz & Zeiger 7th ed. Plant Physiology text book.

Remote, Maryland - USA
January 2022 - June 2022

Teaching assistant - Lab coordination and guidance of university students.

University of Maryland, College Park - USA
August 2018 - August 2021

Science trainer - Colombian science olympic team

Antonio Nariño University, Bogotá - Colombia
January 2016 - September 2018

Education

Ph.D. in Plant Biology

Heinrich Heine University, Düsseldorf - Germany
since September 2021

MSc. in Plant Biology

University of Maryland, College Park, USA
August 2018 - August 2021

Bsc. in biology

Colombia National University, Bogota - Colombia
September 2017

References

Laboratory skills

Plant in vitro culture	- protoplasting and regeneration of plant tissue - maintenance of cell suspension cultures
Animal cell in vitro culture	- maintenance of cultured mammalian cells
Fungus cultivation	- mycelium maintenance in solid and liquid media - scalable inoculus production - development of novel spawn mix - growth conditions automation - green house automation
Molecular biology	- DNA extraction for genotyping, sequencing, and cloning - genotyping using known molecular markers - molecular cloning - RNA in vitro synthesis
Electrophysiology	- patch-clamp in mammalian and protoplasted plant cells - patch clamp in living brain slices - plant cell impalement - current clamp - Two-Electrode Voltage Clamp in <i>Xenopus laevis</i> oocytes - Multi-Electrode Array recording of surface potential plant tissues

Workshops & Courses

Statistics and Modelling for Biology <i>Prof. Phillip Johnson</i> <i>University of Maryland, USA</i> <i>2020</i>	Probability theory, statistical inference, and hypothesis testing with likelihood , Bayesian methods and other statistical test. Hands on course usign the software R.
Programming for Biology <i>Prof. Steve Mount, Prof. Najib El-Sayed</i> <i>University of Maryland, USA</i> <i>2020</i>	Manipulation and analysis of large data files in a unix environment using awk, python and R
Biology of lichens and fungi <i>National University of Colombia</i> <i>2014</i>	University course on general biology of fungi and lichens, with emphasis on industrial usage and a practical training on <i>P. ostreatus</i> culture.
Identification of Basidiomycota fungi <i>VII Latinamerican mycology congress</i> <i>November 2014</i>	Macro- and microscopic technics for identification of basidiomycetes families.
Bioprospection of colombian macromycetes <i>National University of Colombia</i> <i>April 2018</i>	Identification and characterization of fungi, aiming to determine possible use in pharmacological, cosmetic, or food industries.