



# Juan Camilo Barbosa-Caro

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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



# Laboratory skills

<b>Plant in vitro culture</b>	- protoplasting and regeneration of plant tissue - maintenance of cell suspension cultures
<b>Animal cell in vitro culture</b>	- maintenance of cultured mammalian cells
<b>Fungus cultivation</b>	- mycelium maintenance in solid and liquid media - scalable inoculus production - development of novel spawn mix - growth conditions automation - green house automation
<b>Molecular biology</b>	- DNA extraction for genotyping, sequencing, and cloning - genotyping using known molecular markers - molecular cloning - RNA in vitro synthesis
<b>Electrophysiology</b>	- 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

<b>Statistics and Modelling for Biology</b> <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.
<b>Programming for Biology</b> <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
<b>Biology of lichens and fungi</b> <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.
<b>Identification of Basidiomycota fungi</b> <i>VII Latinamerican mycology congress</i> <i>November 2014</i>	Macro- and microscopic technics for identification of basidiomycetes families.
<b>Bioprospection of colombian macromycetes</b> <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.