



NAME: David Johnston-Monje

INTITUTION / FUNCTION: Principal Investigator, Max Planck Tandem Group in Plant Microbial Ecology, Universidad del Valle, Cali, Valle del Cauca, Colombia

E-mail: damojomo@gmail.com

More information: www.symbiotico.co

[linkedin.com/in/david-johnston-monje](https://www.linkedin.com/in/david-johnston-monje)

<https://orcid.org/0000-0002-5077-4894>

Short Professional Biography:

David Johnston-Monje was born as a Canadian in Bogota, Colombia, and grew up in Peru and Jamaica before moving to Ottawa, Canada at the age of ten. By age 15 he decided to study plant biology, doing an undergrad in chemical ecology of medicinal plants with John Arnason at the University of Ottawa, a M.Sc. in wood genetics at the University of British Columbia with the late Carl Douglas and a PhD with Manish Raizada at the University of Guelph in microbial ecology of maize. He has also been a visiting scientist at Biodiversity International, the International Potato Research Institute in Peru, at EMBRAPA Agrobiologia in Brazil and most recently at the International Center for Tropical Agriculture in Colombia. His post-doctoral research with George Lazarovits at the company A&L Biologicals focused on discovering what causes an emerging disease called tomato vine decline. Having discovered the most abundant parts of the maize microbiome are transmitted through seed he was recruited to help start the endophyte focused company Indigo Agriculture in Boston, where he lead efforts to bioprospect for beneficial microbes, analyze plant microbiomes, develop inoculant formulations for seeds, and assay plant-microbe interactions in field trials. Most of Indigo Agriculture's patents are based on his research, which laid the foundation for it to become the most well-funded agricultural startup company ever. David currently works as Principle Investigator and Max Planck Tandem Group Leader at Universidad del Valle in Cali, Colombia, cooperating with Paul Schulze-Lefert at the MP Institute for Plant Breeding Research in Cologne, Germany.

Studies:

BSc. in Biology/Biotechnology at the University of Ottawa (Canada)

MSc. in wood genetics at the University of British Columbia (Canada)

PhD. in Plant Agriculture and Microbial Ecology at the University of Guelph (Canada)

Research interests

My ongoing interests include microbial ecology, chemical ecology, crop science, plant physiology and genetics, plant microbiome research, functional genomics, biodiversity conservation and plant agriculture.

Relevant Publications:

1. D Johnston-Monje, JP Gutiérrez, LA Becerra Lopez-Lavalle (2021) Seed-Transmitted Bacteria and Fungi Dominate Juvenile Plant Microbiomes. *Frontiers in Microbiology* 12 (2945).

2. D Johnston-Monje, DK Castillo-Avila, MN Raizada, LA Becerra Lopez-Lavalle (2019) Paying the Rent: How Endophytic Microorganisms Help Plant Hosts Obtain Nutrients. *Comprehensive Biotechnology* 4, 770–788
3. D Johnston-Monje, S Loewen, G Lazarovits. (2017) Mycobiomes of tomato plants with vine decline. *Canadian Journal of Plant Pathology* 39 (2), 184-200
4. D Johnston-Monje, DS Lundberg, G Lazarovits, VM Reis, MN Raizada. (2017) Bacterial populations in juvenile maize rhizospheres originate from both seed and soil. *Plant and Soil* 405 (1), 337-355
5. D Johnston-Monje, MN Raizada (2011). Conservation and diversity of seed associated endophytes [in Zea across boundaries of evolution, ethnography and ecology. Plos one 6 \(6\), e20396](#)