MICHELLE LYNN D'SOUZA

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Florenceville-Bristol, NB

EDUCATION

Doctor of Philosophy
Integrative Biology | University of Guelph

Bachelor of Science
Honours Biochemistry | University of Waterloo

MY PHILOSOPHY

Do rigorous science & tell compelling stories that benefit society & nature.

MOST PROUD OF

Community-Engaged Biodiversity Research

A decade-plus of expertise leading and collaborating on international research endeavors with a strong focus on equity and community engagement.

Science Communication & Knowledge Mobilization

Driven by a deep belief in science literacy and the transformative potential of storytelling, cultivated a robust digital portfolio that effectively communicates and enhances the accessibility of scientific research.

Commitment to Diversity & Inclusion

Championed diversity and inclusion in the workplace through project engagement, mentorship, and voluntary contributions to empower and support women and LGBTQ+ communities within STEM fields.

EXPERIENCE

McCain Foods Ltd., Farms of the Future, Florenceville-Bristol, NB

Research and Innovation, Manager / July 2023 – present

Establish research priorities, lead innovation, and forge strategic partnerships to drive research and innovation outcomes that enhance sustainability and industry competitiveness. Support the development of sustainable corporate frameworks that benefit society and nature.

Research consultant / Sept 2022 – Jun 2023

Designing a scalable soil biodiversity assessment program to support McCain's Regenerative Agricultural Framework and drive sustainability goal attainment.

COP15 delegate supporting DNA-based tools to inform biodiversity targets

Project Manager & Postdoctoral Fellow / Aug 2020 – Aug 2022

Led industry-academia collaborative research on soil biodiversity at McCain Foods' Farm of the Future. Utilized next-generation sequencing to identify regenerative farming practices fostering productive biological communities.

Distinguished panelist for Genome BC's Annual Genomics Forum in the session titled 'Agri-Smart: Feeding the World in a Changing Climate'

Mitacs Elevate Fellowship, McCain Foods/University of Guelph, Aug. 2020

Centre for Biodiversity Genomics, University of Guelph, Guelph, ON

Visiting Researcher / Sept 2022 – present

Supporting research collaborations with McCain Foods Ltd.

Postdoctoral Fellow / May 2018 – Aug 2022

Strengthened international research collaborations through strategic partnerships with networks in Costa Rica, Ghana, Honduras, South Africa, USA, and UK. Facilitated institutional support for diverse biodiversity research projects. Led monthly institutional newsletter to foster communication among researchers and staff. Coordinated research training for international trainees and undergraduate students.

Diversity Prize for Best Postdoctoral Presentation, International Barcode of Life Consortium Conference, Jun. 2019

Food from Thought Conference Bursary, University of Guelph, Jan. 2019

Research coordinator, Kruger Malaise Trap Program / May 2018 – Jul 2020

Directed a year-long biodiversity monitoring project in Kruger National Park, South Africa by engaging park rangers through open dialogue & creative reporting. Demonstrated the power of passionate engagement, igniting interest among rangers in biodiversity monitoring that was instrumental in the program's success, as noted by the general manager of research at Kruger.

Featured – 'We are at risk of erasing the books of life': Biologists work to chronicle life on earth by CBC The National. Jun. 2019

Featured – The Great Insect Dying: The tropics in trouble and some hope by Jeremy Hance. MongaBay. Jun. 2019

International Barcode of Life Consortium, Guelph, ON

Science Research Communications / Jan 2019 – Dec 2021

Transitioned from research to knowledge mobilization, driving digital communication and marketing efforts. Engaged diverse stakeholders through dialogue and dynamic media, expanding the Consortium's reach 16-fold. Spearheaded scientific branding and content creation for the Consortium website, supporting the successful launch of the $180-million BIOSCAN project.

Operation Wallacea, Honduras

Invertebrate Senior Scientist / Jun. 2013 – Aug. 2016

Drove the seamless fusion of science and activism, contributing to influential presentations engaging politicians and environmental ministers. Provided vital support in funding applications for carbon credits under the Natural Forest Standard. Conducted and managed invertebrate trapping program to assess diversity and abundance in remote sites of Cusuco National Park, Honduras. Collaborated with senior scientists to communicate and publish research findings.

Michigan State University, East Lansing, MI

Genome Expression Research Assistant / May 2010 – Apr. 2011

Performed hepatic gene expression evaluations in response to environmentally prevalent chemicals in mice. Demonstrated expertise in various aspects of rodent handling, including dosing via oral gavage, blood collection, and tissue harvesting. Proficient in aseptic techniques for tissue culture. Skilled in toxicogenomic studies utilizing Quantitative Real-Time PCR and whole-genome oligonucleotide Agilent microarrays. Proficient in histopathological evaluations of hepatic and intestinal sections and conducted lipidomic studies using Gas Chromatography-Mass Spectrometry.

Agriculture and Agri-Food Canada, Harrow, ON

Genome Expression Research Assistant / Sept. – Dec. 2009

Contributed to research on Food Grade soybean cultivars and breeding lines, focusing on studying genes associated with low cadmium uptake. Developed molecular markers using Quantitative Real-Time PCR to investigate soybean gene expression. Provided training to lab technicians on essential procedures including RNA extraction and cDNA synthesis.

Delivered a seminar at the prestigious Harrow Research Center, titled "Identifying the gene(s) controlling cadmium accumulation in soybean: A student's semester achievements."

LEARN MORE:

PROFESSIONAL DEVELOPMENT

PUBLIC ENGAGEMENT

SCIENTIFIC AND OTHER WRITING

SCIENTIFIC PRESENTATIONS

VIDEO PRODUCTION