

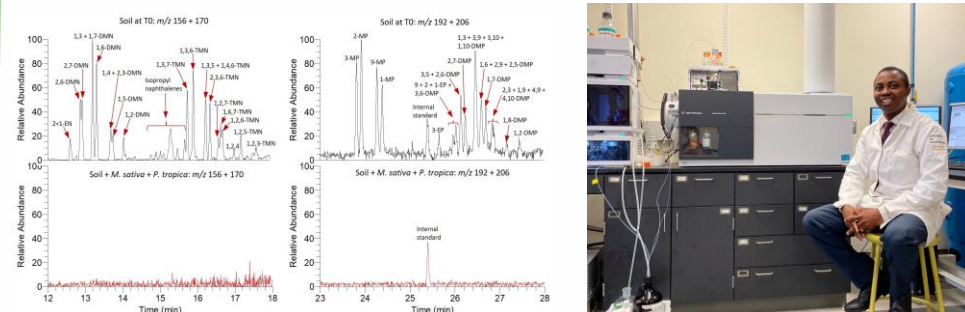
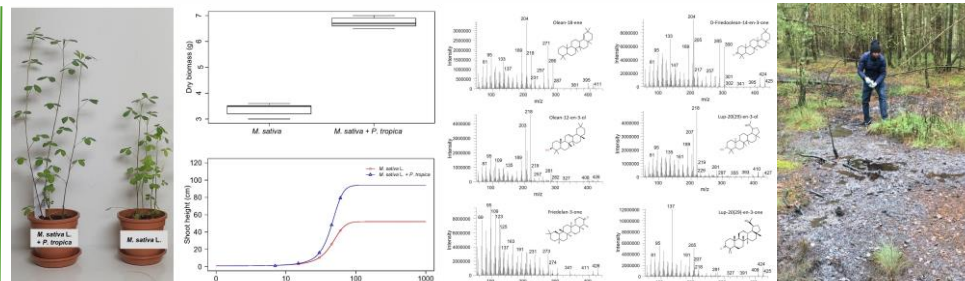
Metabolomics and Environmental Toxicology

➤ Metabolomics and Exposomics

- Mass spectrometry-based metabolomics for disease diagnosis
- GC-MS and LC-MS bioassay method development for animal and plant metabolomics and exposomics studies
- Roles of secondary metabolites in plant disease progression
- Characterizing human exposure to environmental contaminants using targeted and untargeted exposomics

➤ Environmental Toxicology and (Bio)remediation

- Chemical fate and transport in the environment
- Bioaccumulation and toxicity of organochlorine pesticides and polychlorinated biphenyls in whales and dolphins
- Metabolism of exogenous chemicals such as food additives, hydrocarbons, halogenated organics, PFAS and microplastics
- Novel cost-effective and ecofriendly bioremediation methods for organic and inorganic pollutants



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Recognitions

- USCIS EB-1A Extraordinary Ability PR for Extraordinary Professors
- 2020 Hot Article Award by the Royal Society of Chemistry
- Carlos Walter Campos Memorial Award for Best International Paper
- Merrill W. Haas Memorial Grant
- Bernold M. Hanson Memorial Environmental Grant

Selected Publications

- *Eze, et al. (2022). Bacteria-plant interactions synergistically enhance biodegradation of diesel fuel hydrocarbons. *Communications Earth & Environment*, **3**, 192. doi.org/10.1038/s43247-022-00526-2
- †McCartney, †Eze, et al. (2023). A metabolomics assay to diagnose citrus Huanglongbing (HLB) disease and to aid assessment of treatments to prevent or cure infection. *Phytopathology* (in press). doi.org/10.1094/PHYTO-04-23-0134-R