

Centering Microbes in the Emerging Role of Integrative Biology in Understanding Environmental Change

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The current environmental changes stressing the Earth's biological systems urgently require study from an integrated perspective to reveal unexpected, cross-scale interactions, particularly between microbes and macroscale phenomena. Such interactions are the basis of a mechanistic understanding of the important connections between deforestation and emerging infectious disease, feedback between ecosystem disturbance and the gut microbiome, and the cross-scale effects of environmental pollutants. These kinds of questions can be answered with existing techniques and data, but a concerted effort is necessary to better coordinate studies and data sets from different disciplines to fully leverage their potential.

Recent Publications

1. Ebony I Weems, Noé U de la Sancha, Laurel J Anderson, Carlos Zambrana-Torrel, Ronaldo P Ferraris, Centering Microbes in the Emerging Role of Integrative Biology in Understanding Environmental Change, *Integrative and Comparative Biology*, 2021;, icab047, <https://doi.org/10.1093/icb/icab047>

Biography

Dr. Ebony Weems is an Assistant Professor at Alabama Agricultural and Mechanical University in Huntsville, Alabama. Her research focuses on investigating the molecular mechanisms associated with metabolic diseases and addressing health disparities that are prevalent in minority communities. Recently, her research interest also includes the adverse impacts of climate change on health outcomes in minority communities.