

SPRING MEETING



INDIANA

PFAS NETWORK

PURDUE UNIVERSITY

MAY 1, 2026, 9AM -1PM

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Tess Leuthner, Assistant Professor,
O'Neill School of Public and
Environmental Affairs, Indiana University

Title: Wild worms in a toxic world: Using genetics to identify mechanisms of PFAS toxicity

Tess Leuthner is an Assistant Professor at Indiana University, where her lab studies how genetic differences shape responses to environmental toxicants. Using *C. elegans*, her group combines high-throughput phenotyping with genetic and genomic approaches to identify variants, genes, and pathways that influence susceptibility to chemical exposures, with a focus on “forever chemicals” per- and polyfluoroalkyl substances, also known as PFAS.

Tess received her Ph.D. from Duke University through the Integrated Toxicology and Environmental Health Program, where she worked under the mentorship of Dr. Joel Meyer. There, she first learned about the awesome power of the worm *C. elegans* as a model for toxicology. She studied how various environmental contaminants affect nuclear and mitochondrial DNA and subsequent effects on health. She stayed at Duke for her post-doctoral training with Dr. Ryan Baugh, where she developed an interest in applying statistical genetics to toxicology, harnessing existing natural variation in wild *C. elegans* strains to identify molecular mechanisms of toxicity. Her research aims to connect basic biology with environmental health by understanding how chemicals differ in their toxicity and why individuals differ in their responses to chemical exposures.