

# Artifact Risk in IBD Microbiome Studies

## IBD-Specific Confounders

- Diarrhea → diluted samples
- Inflammation → altered transit
- Disease activity → load variation



## Artifact Risk

- Load variation up to 10x
- Creates  $\pm 3.3$  log2FC artifacts
- Mimics taxon-specific changes



## Recommended Approach

1. Report effect sizes, not just p-values
2. Flag findings  $< 3.3$  log2FC as "needs validation"
3. Use spike-in controls when possible



## Robust, Reproducible Findings

Only large effects ( $> 3.3$  log2FC) or validated by spike-in