MISTIFY PROJECT. ECOLOGY OF SALMONELLA TYPHIMURIUM INFECTION: A MATHEMATICAL MODELING INSIGHT
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BIOLOGICAL CONTEXT:

- Salmonella infection is the most common vector of collective food poisoning in the developed world. Deciphering the mechanisms of infection is a key step towards epidemiological policies against Salmonella zoonoses.
- Infection mechanism:
  - Pathogenic Virulence factors
  - Host inflammation
  - Dysbiosis: Butyrate Producers depletion
  - Metabolic switch
  - Pathogen proliferation
  - Different luminal Nutritional landscape (O₂, tetrathionate...)

*Goal:* “whole pathobiome” model to decipher the mechanisms of infection, and characterize the infection mechanisms, together with competition with commensals.

PROJECT OVERVIEW:

- MATHEMATICAL MODEL TYPE: Modeling the ecology of *Salmonella* infection

PRELIMINARY RESULTS: