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Integrating *Francisella's* intracellular lifestyleS. Daefler¹¹Mount Sinai School of Medicine, New York, USA

Francisella is a formidable intracellular pathogen with a high infectious efficiency that is determined by its interaction with its respective host cell. We attempted to integrate experimental data starting at *Francisella's* entry into the host cell into comprehensive computational models in order to understand *Francisella's* pathogenesis and intracellular life style. Constraint-based analysis of *Francisella's* metabolic capabilities demonstrate preferential amino acid catabolism and dynamic carbohydrate utilization patterns with associated changes in energy homeostasis. With a two-compartment agent-based model that simulates inhalational tularemia with subsequent dissemination to the liver we attempted to provide a broader framework for infection with *Francisella*. Such models underline the importance of the initial *Francisella*-host interaction for the outcome of the infection.