

Publication

Intracellular Salmonella metabolism

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Growth of Salmonella inside infected host cells is a key aspect of their ability to cause local enteritis or systemic disease. This growth depends on exploitation of host nutrients through a large Salmonella metabolism network with hundreds of metabolites and enzymes. Studies in cell culture infection models are unraveling more and more of the underlying molecular and cellular mechanisms, but also show striking Salmonella metabolic plasticity depending on host cell line and experimental conditions. In vivo studies have revealed a qualitatively diverse, but quantitatively poor, host-Salmonella nutritional interface, which on one side makes Salmonella fitness largely resilient against metabolic perturbations, but on the other side severely limits Salmonella biomass generation and growth rates. This review discusses goals and techniques for studying Salmonella intracellular metabolism, summarizes main results and implications, and proposes key issues that could be addressed in future studies.

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