

The Faculty of Biotechnology and Food Engineering

Seminar

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**Host succinate is an activation signal for
Salmonella virulence during intracellular
infection**

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Abstract

Key to the success of intracellular pathogens is the ability to sense and respond to a changing host cell environment. Macrophages exposed to microbial products undergo metabolic changes that drive inflammatory responses. However, the role of macrophage metabolic reprogramming in bacterial adaptation to the intracellular environment has not been explored. Here, using metabolic profiling and dual RNA sequencing, we show that succinate accumulation in macrophages is sensed by intracellular *Salmonella Typhimurium* (*S. Tm*) to promote antimicrobial resistance and type III secretion. *S. Tm* lacking the succinate uptake transporter DcuB displays impaired survival in macrophages and in mice. Thus, *S. Tm* co-opts the metabolic reprogramming of infected macrophages as a signal that induces its own virulence and survival, providing an additional perspective on metabolic host-pathogen cross-talk.

Wednesday, 05 / 5 / 2021, 14:00-15:00

<https://technion.zoom.us/j/94469578250>