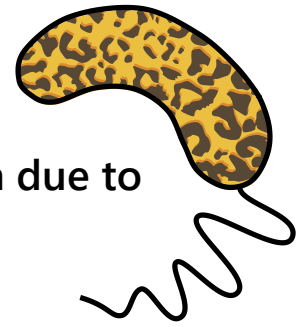


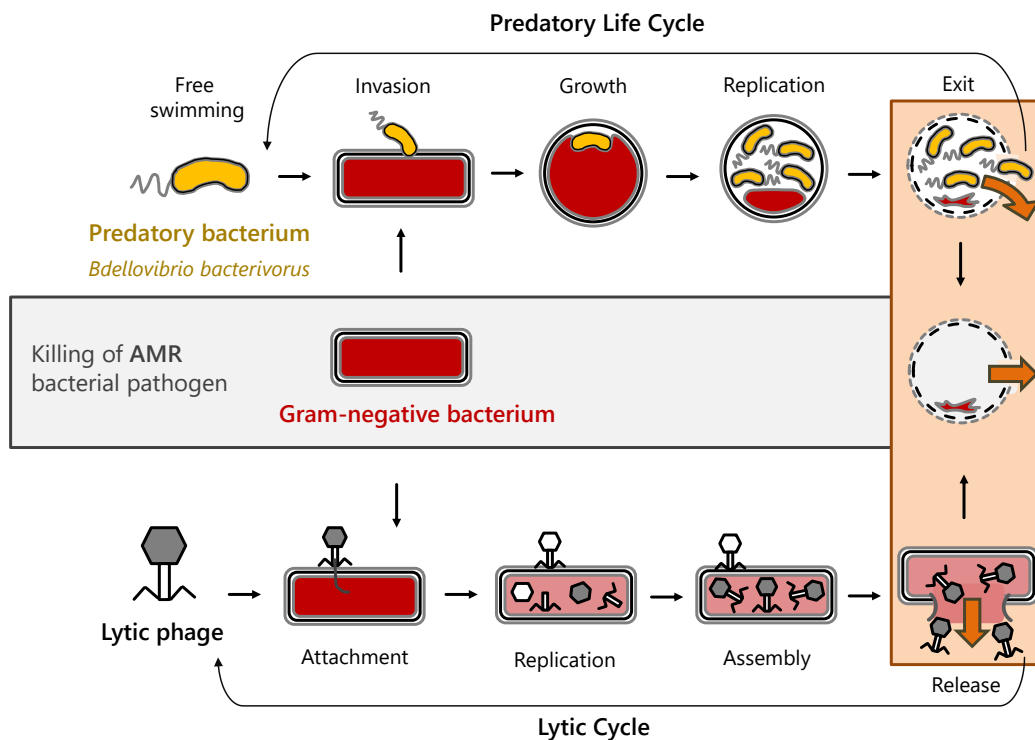
Debris of a feast: Analyzing leftovers after burst of pathogenic bacteria due to phages or predatory bacteria



Master Thesis Project

Motivation

Antibiotic resistance is one of the biggest threats to public health and alternatives to conventional antibiotics are urgently needed. An innovative way to kill pathogenic bacteria (red, Fig.1) is to use their natural enemies bacteriophages (grey) or a periplasmic predatory bacterium (*Bdellovibrio bacteriovorus*, yellow). While the detrimental destruction of pathogenic bacteria can be an advantage to stimulate the immune response of the infected eukaryote, too much immune stimulation may lead to toxic shock.



Project Aim

This Master thesis project aims to determine what and how much soluble metabolites are released when the pathogenic bacteria burst due to killing by phages or predatory bacteria.

Methods you will learn

Laboratory work with a predatory bacterium (*Bdellovibrio bacteriovorus*), different bacteriophages, *Escherichia coli* and pathogenic bacteria (depending on progress). Lab works includes microscopy. Specific determination and quantification of protein content, DNA content, as well as metabolomics in collaboration with FGZ.

Contact

Interested? So are we. Please get into contact via email with Dr. Simona Huwiler (simona.huwiler@uzh.ch) to discuss further details.

