

“Dramatic alterations of the endosomal pathway after *Salmonella*- invasion in epithelial cells”

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*Salmonella enterica* is an important cause of intestinal and systemic diseases. Following invasion of epithelial cells, *Salmonella* survives and replicates within a membrane-bound compartment known as the *Salmonella* containing vacuole (SCV). The biogenesis of the SCV involves sequential interactions with the endocytic pathway. However, *Salmonella* is believed to avoid fusion with lysosomes, a dogma that has been challenged by recent studies.

We reassessed the interactions between the SCV and lysosomes using a live cell imaging approach. Direct interactions between late endosomes/ lysosomes and the SCV were observed in the initial phase of invasion. Later we observed a decreased fusion activity between the SCV and lysosomes coinciding with a decrease in the number of late endosomes/lysosomes. This process, as well as the physical displacement of the SCV to a perinuclear position, was independent by the bacterial type III secretion system 2 (TTSS2). Based on these cellular kinetic studies we propose a model for the survival of salmonella in these cells.