Guest lecture

"Autophagy in a Salmonella intracellular persistent infection"

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10 AM in BMB seminar room

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Abstract:
Autophagy, a cellular process that detects dysfunction in self structures, also act to control proliferation of intracellular bacterial pathogens. In the specific case of Salmonella, some studies have reported recognition by autophagy of cytosolic bacteria or bacteria located inside damaged vacuoles. These studies have been mostly restricted to epithelial cells, in which the pathogen proliferates actively. Our studies, focused in the fibroblast persistent infection model, however show that the infection is differentially affected by autophagy in this particular model. We detected an early autophagy phase similar to that described in epithelial cells followed by a second “late” phase, in which only a few bacteria are selectively destroyed. Interestingly, those bacteria of the progeny remaining alive persist for long periods of time and do not elicit subsequent autophagy events. Thus, Salmonella can subvert autophagy to establish persistent infections inside host cells.

Hosts: Associate professor Birgitte H. Kallipolitis & Associate professor Jakob Møller-Jensen, Department of Biochemistry and Molecular Biology, SDU.