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## Autophagy in Antimicrobial Immunity

Guest Editor:

**Prof. Dr. Annemarie H. Meijer**

Gorlaeus Laboratory, Institute of  
Biology Leiden (IBL), Leiden  
University, Einsteinweg 55, 2333  
CC Leiden, The Netherlands

Deadline for manuscript  
submissions:

**closed (30 September 2020)**

### Message from the Guest Editor

Paradigm-shifting discoveries in the last fifteen years revealed that autophagy plays a major role in the immune system, adding to its well-known function in cellular homeostasis. Connections between autophagy defects and major disease phenotypes have spurred interest in the autophagy machinery as potential therapeutic target. In the area of infectious diseases, autophagy modulation is now being explored as a novel approach to treat antibiotic-resistant infections. Autophagy has multiple functions in host defence: it targets intracellular microbes towards lysosomal degradation, helps restricting microbes in subcellular compartments, facilitates antimicrobial peptide delivery to these compartments, controls inflammation, and processes peptides for antigen presentation. There is strong evidence for the host defence function of different autophagy-mediated processes, including xenophagy and LC3-associated phagocytosis, but in turn pathogens have evolved virulence mechanisms to evade autophagy or even exploit autophagic compartments as a replication niche.



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# Special Issue



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*Cells* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

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