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## Infection-like approach to identify immunogenic proteins of Salmonella enteritidis

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Salmonella enteritidis is a human food-borne pathogen and one of the most frequently detected serovars of Salmonella. Around 100000 cases of salmonellosis are reported in the European Union annually. After ingestion, the first step of infection is within the small intestine. The pathogen invades the host and leads to an inflammation within the intestinal epithelium from which the intruder may disseminate systemically. Bacteria are fast changing microorganisms with the ability to adapt their metabolism in response to environmental variations. Hence in this study, Salmonella enteritidis is examined under infection-like conditions to reveal the RNA, which is a snapshot of the bacterial environment. The aim of this study is to identify new immunogenic and virulence-associated proteins of Salmonella enteritidis. Therefore, the bacterial transcriptome is analyzed through RNA sequencing and cDNA library screenings. The infection-like approach is based on the invasion of Salmonella enteritidis in the human intestinal CaCo-2 cell line and the subsequent addition of gentamicin. Infection-like conditions may favor the number of immunorelevant proteins during immunoscreenings. That implies an advanced method to identify immunogenic proteins. Moreover, using RNA-seq, virulence-associated factors can be identified by gene expression profiles, thus furthering the understanding of the underlying pathogenicity of Salmonella, in general and of Salmonella enteritidis, in particular.

## Biography

Lena Danckert has completed her MSc at the University of Potsdam and pursuing PhD since in 2013. She is currently working in the Molecular Biology Department of the Fraunhofer Institute for Cell Therapy and Immunology at the branch Bioanalytics and Bioprocesses in Potsdam, Germany.

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