

Graduierten-Kolleg des SFB633 (IMMUCO):

Mucosal Immunology and Gastroenterology: from Bench to Bedside“ , „Animal Models in Mucosal Immunology“

In recent years, the intestinal pathogen *Campylobacter (C.) jejuni* has emerged as an abundant cause of bacterial diarrhea in industrialized as well as developing countries with approximately 2.5 million estimated cases per year in the United States and more than 60000 reported annual cases in Germany.

However, *in vivo* models for studying the underlying molecular mechanisms of immunopathology induced by *Campylobacter (C.) jejuni* are scarce. We will discuss the limitations for developing appropriate mouse models and possible strategies to overcome these pitfalls. Furthermore, we will elucidate the triangle interactions (“Menage à trios”) of *C. jejuni*, the commensal intestinal microbiota and the immune system of the host and further demonstrate resulting intestinal as well as extra-intestinal immunopathological sequelae derived from five different infection models recently established in our lab. Finally, we will speculate about potential clinical implications based upon the data derived from the animal model.

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