

SE-CD-003
Salmonella Pathogenesis
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Salmonella infection is a major public health problem with *Salmonella* spp. causing more than one billion new human infections each year that lead to more than three million deaths. The problem is greatly exacerbated by the emergence of multi-drug resistant strains. In fact, only a handful of drugs are useful in treating *Salmonella* infections clinically and the pipeline does not look promising. New drug targets are needed. This is especially true considering that this NIAID Category B pathogen could be used as a weapon of bioterrorism, given the ease with which it can be propagated and its environmental stability. In fact, *Salmonella* is one of only a handful of pathogens that has been successfully used as a weapon. We are performing global RNAi screens at the Duke University RNAi screening facility to identify all of the human macrophage genes that both *S. typhimurium* and *S. typhi* manipulate to facilitate their growth. We will rigorously characterize siRNAs identified from our ongoing screens that are of potential therapeutic interest. We will subsequently target the most promising ones to macrophages in mouse models of infection to assess if they can safely alter the course of infection.