



**Does “auto-immunization” by the intestinal microflora
alter susceptibility to systemic bacterial infection?**

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Abstract

The mammalian gastrointestinal tract is home to a large and diverse community of microorganisms that has a mutualistic relationship with its host. Recent investigations have highlighted the important role played by the gut microbiota in shaping the development of the host immune system, particularly within the mucosa. My laboratory has been studying one aspect of how the intestinal microflora can influence immune function, viz., as a result of sensitization of the systemic immune compartment by microbial antigens that leak through the gut epithelium in the context of inflammatory damage. Our experiments in mice suggest that such “auto-immunization” has a significant impact on the response to a subsequent systemic challenge with *Salmonella typhimurium*, an effect that appears to be T cell mediated. Moreover, studies from my laboratory as well as from other investigators suggest that similar processes may play a role in susceptibility to salmonellosis in humans.
