

Michael Otto, PhD Senior Investigator Laboratory of Bacteriology NIAID, NIH Probiotics for Staphylococcus aureus: A Translational Approach

Dr. Otto is one of the leading worldwide scientists in the field of Gram-positive bacterial pathogenesis. He focuses on the role of staphylococci and other Gram-positive bacteria in the interaction with the human host, addressing both beneficial and harmful aspects during colonization and infection by integrative use of molecular microbiology, immunology, and biochemistry approaches. He has made significant contributions for example to our understanding of virulence mechanisms of community-associated MRSA, the role of small peptide toxins in Staphylococcus aureus pathogenesis and host interaction, and the molecular underpinnings of staphylococcal biofilm formation. His laboratory currently focuses on mechanisms of gut, nose, and skin colonization by S. epidermidis and S. aureus and studies whether S. aureus decolonization can be achieved by probiotic microbiome-editing. Dr. Otto completed his diploma in biochemistry in 1994 and his PhD in microbiology in 1998 at the University of Tuebingen in Germany. He then took a position as principal investigator at the National Institute of Allergy and Infectious Diseases in Hamilton, Montana and moved his laboratory to the NIH main campus in Bethesda, Maryland, after receiving tenure in 2008. Dr. Otto has published more than 280 manuscripts, mostly in the field of staphylococcal pathogenesis, and given multiple presentations at US and international conferences. He serves on several editorial boards and is section editor for Grampositive pathogens at PLoS Pathogens.