

K07

Keynote Lecture

Systemic analysis of human-associated microbes in health and disease

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The human gut microbiota has become the subject of extensive research in recent years and our knowledge of the resident species and their potential functional capacity is rapidly growing. Our gut harbours a complex community of over 100 trillion microbial cells which influence human physiology, metabolism, nutrition and immune function while disruption to the gut microbiota has been linked with gastrointestinal conditions such as inflammatory bowel disease and obesity. Here, the many significant recent studies that have centred on further enhancing our understanding of the complexity of intestinal communities, as well as their genetic and metabolic potential, will be reviewed. These have provided important information with respect to what constitutes a 'healthy' and an 'unhealthy' gut microbiota while furthering our understanding of the role of gut microbes in intestinal diseases. Finally, consideration will be given to the manipulation of the gut microbiota as a potential therapeutic option to treat chronic gastrointestinal disease.