


## Episode #32 – Interview with Dr. A. Barbour: Oral Microbiome

**March 12, 2021**

Dr. Abdelahhad Barbour, PhD

Dr. Barbour began his research in molecular microbiology and microbial genomics through a High Impact Research Program at the University of Malaya, Kuala Lumpur, Malaysia. In South East Asia, he worked on a collaborative project with Professor Emeritus John Tagg of the University of Otago, New Zealand to identify and characterize novel peptide antibiotics produced by oral streptococci. His PhD work led to the discovery of the mechanism of action of salivaricin B produced by the oral probiotic strain *Streptococcus salivarius* K12. Collectively, Dr. Barbour spent 5 years in Malaysia to complete both MSc and PhD programs. At that time, he developed new probiotic streptococcal strains producing unique antimicrobial peptides to fight against sore throat in children. While he was still writing his PhD thesis in Malaysia, he received a post-doctoral offer from University of Toronto to work on the genetics and proteomics of metabolites produced by *Streptococcus mutans*. He spent two years at his first post-doctoral position in developing new approaches to characterize the functional genomics of streptococcal metabolites.

In 2019, Dr. Barbour joined Dr. Michael Glogauer's research team at University of Toronto to investigate the signaling and interactions between oral microbiota and the host. His research involves microbiome and biofilm analysis and their interactions with neutrophils. With Dr. Glogauer, Dr. Barbour is now developing new antimicrobial metabolites produced by oral commensals with antibiofilm and immunomodulatory activities. Currently, Dr. Barbour is also involved with Dr. Glogauer in developing a high throughput saliva test for SARS-CoV-2 detection. Dr. Barbour's research interests include antibiotic peptides and probiotics development, multispecies biofilm analysis, neutrophil responses to different microbial communities, and the use of high-throughput genomics to understand patterns of bacterial-host interactions.

**Additional Resources**

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https://www.cell.com/trends/microbiology/fulltext/S0966-842X(20)30058-5

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