

ADVANCES IN HUMAN MILK MICROBIOME RESEARCH DOWN UNDER

MARCH

30

ASIA-PACIFIC REGION

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Speaker: Dr. Lisa Stinson

Microbiologist Ecologist, University of Western
Australia

Over the past two decades, increasing research attention has been paid to the human milk microbiome. The community of micro-organisms in human milk likely contributes to infant microbiome seeding and immune training, as well as to mammary health. However, to date, investigation of this community has been largely limited to short-amplicon surveys, with poor taxonomic resolution. The purported composition of the milk microbiome is influenced by methodological factors such as method of DNA extraction, de-fatting, and sample collection and storage issues. Further, the human milk microbiota do not exist in isolation. They likely interact with non-microbial component of milk, such as antimicrobial proteins, milk fat globules, macro- and micro-nutrients, hormones, oligosaccharides, and immune cells. They also likely produce and respond to bacterial metabolites in human milk. The milk microbiome must therefore be considered in relation to these other factors in order to form an integrated and holistic view of this community. In this talk, methodological and theoretical advances in human milk microbiome research from the Perth Human Lactation Research Group will be presented.