



THE UNIVERSITY OF
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CIDM
centre for infectious diseases & microbiology
Public Health

How does the mobilome of Group B *Streptococcus* affect host-association and interspecies transmission?

Professor Ruth Zadoks

Professor Production Animal Health, Sydney School of Veterinary Science, Faculty of Science and Marie Bashir Institute for Infectious Diseases and Biosecurity, University of Sydney



Tuesday, 3 December 2019

3pm - 4pm

Level 2 Seminar Room,

Westmead Institute for Medical Research, Westmead

The scientific name of Group B *Streptococcus* (GBS) or *Streptococcus agalactiae* reflects its impact on dairy cattle, where GBS causes mastitis and diminishes milk production. In recent decades, GBS has emerged as a major pathogen of fishes, causing sepsis, meningitis and high levels of mortality. In humans, GBS is primarily known as a cause of serious disease in neonates but a food borne outbreak of GBS disease in adults occurred in Singapore in 2015. Subsequent work across Southeast Asia has shown that adult invasive GBS disease may be more common than neonatal disease in this region and is largely due to ST283. To fully understand GBS' capacity for niche adaptation and interspecies transmission, we need to consider its pangenome based on human and animal isolates. Comparative analysis of human and animal GBS has identified carbohydrate metabolism as driver of animal adaptation whilst genome reduction and pseudogenisation lead to host restriction. Current work focuses on understanding of the role of the mobilome in host adaptation, virulence and antimicrobial resistance and will help to inform development of future-proofed diagnostics and vaccines.

About Prof Ruth Zadoks

Prof Ruth Zadoks completed her DVM degree and MSc in Veterinary Epidemiology and Animal Health Economics at Utrecht University, the Netherlands, and worked in their ambulatory clinic and bovine herd health group before focusing on research, outreach and teaching. She specialised in molecular epidemiology of bacterial infectious diseases that can be shared between livestock, fishes and humans. She lived and worked in sub-Saharan Africa, North America and Europe, with additional projects in South America and Southeast Asia. While her initial focus was on biological understanding of pathogenesis and disease transmission, behavioural and societal drivers have become increasingly important elements of recent collaborations.

Event Details

This is a free event co-hosted by Centre for Infectious Diseases & Microbiology- Public Health and the Marie Bashir Institute for Infectious Diseases and Biosecurity, University of Sydney. Light refreshments will be provided.

Registration

To register click: <https://ruthzadoksseminar.eventbrite.com.au>