NUS National University of Singapore | Infectious Diseases Translational Research Programme
Yong Loo Lin School of Medicine

RESEARCH SEMINAR

DATE: 7 MAY 2026 **TIME: 12PM-1PM**
VENUE: MD4-02-03E,MICROBIOLOGY, SEMINAR ROOM, L2

METABOLIC STRATEGIES OF ENTEROBACTERIACEAE GUT COLONIZATION

IN THIS SEMINAR, THE ROLE OF NUTRIENT EXPLOITATION IN ENABLING MEMBERS OF THE ENTEROBACTERIACEAE, PARTICULARLY SALMONELLA TYPHIMURIUM AND ESCHERICHIA COLI, TO EXPAND IN THE GUT WILL BE DISCUSSED. THE PRESENTATION FOCUSES ON HOW NUTRIENT AVAILABILITY AND METABOLIC FLEXIBILITY SHAPE BACTERIAL COLONIZATION IN THE INTESTINAL ENVIRONMENT. HOST-DRIVEN CHEMICAL PROCESSES DURING INTESTINAL INFLAMMATION THAT GENERATE ALTERNATIVE NUTRIENTS, INCLUDING OXIDIZED MONOSACCHARIDES SUCH AS SUGAR ACIDS, WILL BE HIGHLIGHTED. FINALLY, ECOLOGICAL AND METABOLIC MECHANISMS THAT SUPPORT ENTEROBACTERIACEAE EXPANSION WILL BE OUTLINED, AND HOW THESE INSIGHTS MAY HELP IDENTIFY METABOLIC VULNERABILITIES TO CONTROL INTESTINAL PATHOGEN COLONIZATION WILL BE DISCUSSED.



Dr Christopher Schubert

Postdoctoral researcher,
ETH Zurich

I studied biology with a focus on microbiology and completed my PhD at Johannes Gutenberg University Mainz (Germany), investigating Escherichia coli physiology with an emphasis on carbon and nitrogen regulation. I am currently a postdoctoral researcher at ETH Zurich (Switzerland), where I study how nutrient availability shapes Salmonella Typhimurium colonization of the gut and influences pathogen–microbiota interactions, focusing on metabolic niches and nutrient competition among Enterobacteriaceae.