

# Integrative Perspectives on the Host Microbiome and Mental Well-Being

22 May 2026

## SYNOPSIS

The host microbiome and brain are increasingly recognised as deeply interconnected regulators of mental health. Propelled by an international collaboration between researchers at the University of Wisconsin–Madison and the multi-institutional GLOW (Gut Linked Outcomes in Wellbeing) initiative in Singapore, this symposium brings together researchers across disciplines to explore how microbial signals and mechanisms shape brain function, behaviour, and psychiatric risk. Through emerging evidence and integrative perspectives, we will examine how these dynamic biological systems interact across the lifespan and consider their implications for understanding, preventing, and treating mental illness.

The GLOW initiative is conducting one of Asia’s largest cohort studies to investigate how gut microbial communities interact with host genetics and lifestyle factors to shape mood, cognition, and mental health outcomes. Complementing this effort, researchers at University of Wisconsin–Madison, through the LUCIDA Project, will examine how the gut microbiome relates to depression across diverse populations and incorporate advanced genomic, behavioural, and digital phenotyping approaches. Together, these synergistic initiatives exemplify the integrative and cross-disciplinary spirit of the symposium – to deepen our understanding of microbiome-brain interactions and to inform innovative strategies for the prevention and treatment of mental illness.

## SPEAKERS



**Prof Patrick Tan**  
Executive Director  
PRECISE  
Dean and Provost’s Chair  
Cancer and Stem Cell Biology,  
Duke-NUS Medical School



**Prof Jo Handelsman**  
Director  
Wisconsin Institute for Discovery,  
University of Wisconsin-Madison  
Vilas Research Professor  
Howard Hughes Medical Institute Professor



**Prof John Chambers**  
Chief Scientific Officer  
PRECISE  
Professor  
Cardiovascular Epidemiology,  
Programme Director  
Population & Global Health Research Programme,  
Lee Kong Chian School of Medicine, NTU



**Prof John Denu**  
Professor  
Biomolecular Chemistry,  
School of Medicine and Public Health  
Director  
AI Precision Health Hub  
Co-director  
Wisconsin Nathan Shock Center,  
University of Wisconsin-Madison



**A/Prof Niranjan Nagarajan**  
Associate Director, AI and Compute  
Genome Institute of Singapore, A\*STAR  
Associate Professor  
Department of Biochemistry,  
Yong Loo Lin School of Medicine, NUS



**Prof Mark Craven**  
Professor  
Department of Biostatistics and Medical Informatics,  
Department of Computer Sciences,  
University of Wisconsin-Madison  
Director  
Computation and Informatics,  
Biology and Medicine (CIBM) Training Program  
Member  
Carbone Cancer Center  
Member  
Center for Genomic Science Innovation  
Former Director  
Center for Predictive Computational Phenotyping



**Asst Prof Sabrina Wong**  
Deputy Director  
Clinical Research Unit, NHG Polyclinics  
Clinical Director  
Primary Care and Family Medicine,  
Lee Kong Chian School of Medicine, NTU

## PROGRAMME

22 May 2026 Friday	<b>Lee Kong Chian School of Medicine,</b> Toh Kian Chui Annex Lecture Theatre, HQ Building, Level 1 11 Mandalay Road, Singapore 308232
0900 - 0915	<b>Opening Remarks</b> by Prof Patrick Tan
0915 - 0930	<b>Introduction to Gut Linked Outcomes in Wellbeing (GLOW)</b> by Prof John Chambers
0930 - 0955	<b>The Microbiome and Well-Being</b> by Prof Jo Handelsman
0955 - 1020	<b>Bridging the Awareness Gap: Digital Phenotyping’s role in Mental Health</b> by Asst Prof Sabrina Wong
1020 - 1100	<b>Break Time</b>
1100 - 1125	<b>Communication Between the Gut Microbiome and the Epigenome</b> by Prof John Denu
1125 - 1150	<b>Uncovering Hidden Genetic Diversity in Asian Gut Microbiomes through Hybrid Metagenomics</b> by A/Prof Niranjan Nagarajan
1150 - 1215	<b>Interpretable Machine Learning for Prediction and Discovery in the WisSing Project</b> by Prof Mark Craven
1215 - 1220	<b>Closing Remarks</b> by Prof John Chambers
1220 - 1400	<b>Lunch</b>



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## PARTNERS

