

## Confirmed scientific sessions at JITMM 2024

(as of 2 September 2024)

### **1. Advances in Melioidosis Research: Host-Pathogen Interactions, Vaccine Development, and Virulence Factor Characterization**

Organizer: Prof. Narisara Chantratita

Chairpersons: Prof. Paul J. Brett and Dr. Christina Yek

Speakers:

1. Complex Interplay between Host, Pathogen and Environment in Melioidosis

**Prof. Narisara Chantratita**

Faculty of Tropical Medicine, Mahidol University

2. Melioidosis Subunit Vaccines: Lessons Learned and Future Directions

**Prof. Paul J. Brett**

University of Nevada, Reno School of Medicine, USA

3. Characterisation of *Burkholderia thailandensis* E264 Virulence Factors in Cellular Infection Assays

**Dr. Mirko Himmel**

University of Hamburg, Germany

4. Screening of *Burkholderia pseudomallei* Isolates for Physiological Relevant Virulence Gene Variations

**Dr. Daria Dretvić**

University of Hamburg, Germany

### **2. Immunological tools for better diagnosis and vaccine development**

Organizer: Dr. Sadudee Chotirat

Chairpersons: Dr. Rhea Longley and Dr. Sadudee Chotirat

Speakers:

1. Serological-testing-and-treatment (seroTAT)

**Dr. Rhea Longley**

Walter and Eliza Hall Institute of Medical Research, Australia

2. Tonsil Organoid Model

**Dr. Lisa E. Wager**

University of California, Irvine, Irvine, CA, USA

3. Bispecific antibody (BsAb) technology

**Dr. Patchara Ngok-ngam**

Chulabhorn Research Institute

4. Single-cell analysis of the immune responses<sup>3</sup>

**Dr. Waradon Sungnak**

Faculty of Science, Mahidol University

### **3. Innovation for vector controls**

Organizer and Chairpersons: Assoc. Prof. Jiraporn Ruangsittichai and Asst. Prof. Thipruethai Phanitchat

Speakers:

1. Malaria Elimination in Maldives

**Dr. Bart Knols**

CULEX MALDIVES

2. Integrating Street view and drone images for detection of Aedes breeding sites

**Prof. Peter Haddawy**

Faculty of Information and Communication Technology, Mahidol University

3. Innovations in mosquito trap design for dengue vector surveillance and control

**Mr. Michael Weber**

Biogents AG, Regensburg, Germany; Mahidol University, Faculty of ICT, Bangkok, Thailand; VP Mosquito Control, Bangkok, Thailand

### **4. Innovative Strategies in Epidemic Preparedness for Emerging Infectious Diseases**

Organizer: Prof. Narisara Chantratita

Chairpersons: Prof. Narisara Chantratita and Assoc. Prof. Tan Le Van

Speakers:

1. Regional collaboration for improved epidemic preparedness and response

**Assoc. Prof. Tan Le Van**

Oxford University Clinical Research Unit, Ho Chi Minh City, Vietnam

2. Metagenomic sequencing in acute febrile illness in Cambodia: genomic characterization of endemic and emerging pathogens

**Dr. Christina Yek**

International Center of Excellence in Research Cambodia, NIH

3. Enabling single-cell multi-omic profiling for emerging infectious diseases in complex environments and field settings to support therapeutic development and evaluation

**Assoc. Prof. David McIlwain**

University of Nevada, Reno School of Medicine, USA

4. Serology in infectious disease investigations

**Asst. Prof. Tan Chee Wah**

Duke-NUS Medical School, National University of Singapore, Singapore

## **5. Sustainable food systems and gut health**

Organizer and Chairperson: Assoc. Prof. Pattaneeya Prangthip

Speakers:

1. Sustainable food security and system

**Prof. Emer. Kraisid Tontisirin**

Honorary Advisory Board, Nutrition Association of Thailand, Senior advisor of Mahidol University's Institute of Nutrition

2. Future food and gut health

**Assoc. Prof. Chalot Santivarangkna**

Institute of Nutrition, Mahidol University

3. Sustainable food in Southeast Asia and gut microbiome profiles

**Dr. Laleewan Tajasuwan**

Faculty of Tropical Medicine, Mahidol University

## **6. The role of the malaria vaccine R21/Matrix M in malaria control and elimination**

Organizer: Asst. Prof. Borimas Hanboonkunupakarn

Chairpersons: Asst. Prof. Borimas Hanboonkunupakarn and Prof. Lorenz von Seidlein

Speakers:

1. The conception and development of R21/MatrixM

**Dr. Adrian Hill**

Jenner Institute / Oxford University

2. Combining R21/MM with antimalarial drugs (VAC081)

**Asst. Prof. Borimas Hanboonkunupakarn**

MORU and Faculty of Tropical Medicine, Mahidol University

3. Mass vaccination and drug administration in Bangladesh (MVDA VAC090)

**Prof. Abul Faiz**

DevCare Foundation

4. The scale up and roll out of R21/Matrix M

**Dr. Harish Rao**

Serum Institute India (SIPL)

## **7. TropMed Tug-of-War #3**

Organizer: Asst. Prof. Wirongrong Chierakul

Chairperson: Asst. Prof. Wirongrong Chierakul and Assoc. Prof. Prof. Jittima Dhitavat

Moderators:

1. **Assoc. Prof. Athit Phetrak**

Faculty of Tropical Medicine, Mahidol University

2. **Asst. Prof. Supachai Topanurak**

Faculty of Tropical Medicine, Mahidol University

**3. Asst. Prof. Santi Maneewatcharangsri**  
Faculty of Tropical Medicine, Mahidol University

**4. Dr. Phimphan Pisutsan**  
Faculty of Tropical Medicine, Mahidol University

**8. Advancements in Extracellular Vesicle-Based Clinical Application for Human Diseases**

Organizer and Chairperson: Dr. Wittaya Panvongsa

Speakers:

1. Integrative Multi-Omics Profiling of Cancer-Derived Extracellular Vesicles

**Dr. Wittaya Suwakulsiri**

The University of Sydney, Sydney, Australia

2. Exploring Extracellular Vesicles: New Horizons in Drug Delivery and Immune Modulation for Malaria

**Asst. Prof. Ladawan Khowawisetsut**

Department of Parasitology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand

3. Translational Application of Extracellular Vesicles for Delivering Therapeutics in Neuropathic Lysosomal Storage Diseases

**Asst. Prof. Kanit Bhukhai**

Department of Physiology, Faculty of Science, Mahidol University, Bangkok, Thailand

**9. Strengthening the Early Warning and Outbreak Detection through event-based and syndromic surveillance and prediction models**

Organizer: Assoc. Prof. Saranath Lawpoolsri Niyom

Chairpersons: Assoc. Prof. Saranath Lawpoolsri Niyom and Prof. Peter Haddawy

Speakers:

1. National Event-based Surveillance: Practices and Challenges

**Dr. Pantila Taweewigyakarn**

Department of Disease Control, Ministry of Public Health, Thailand

2. Emerging Trends and Key Challenges in Arbovirus Sero-Surveillance in Endemic Regions

**Assoc. Prof. Kobporn Boonnak**

Department of Immunology, Faculty of Medicine Siriraj Hospital, Mahidol University

3. Climate Impacts on Leptospirosis and Dengue Transmission in Thailand: A Machine Learning and Mathematical Modelling Approach

**Assoc. Prof. Charin Modchang**

Department of Physics, Faculty of Science, Mahidol University

4. Influenza-like-illness monitoring in primary schools

**Asst. Prof. Supawat Chatchen**

Department of Tropical Pediatrics, Faculty of Tropical Medicine, Mahidol University

## **10. Environmental monitoring for early disease prediction**

Organizer: Assoc. Prof. Saranath Lawpoolsri Niyom

Chairpersons: Assoc. Prof. Saranath Lawpoolsri Niyom and Dr. Myat Su Yin

Speakers:

1. Using Container Counts from Google Street View Images to Predict Mosquito Population and Dengue

**Prof. Peter Haddawy**

Faculty of ICT, Mahidol University

2. Wastewater and Dust as Early Warning Systems for COVID-19 Outbreaks: Lessons from Thailand

**Assoc. Prof. Charin Modchang**

Department of Immunology, Faculty of Medicine Siriraj Hospital, Mahidol University

3. Wastewater Sampling Methods: Challenges for Long-Term Wastewater Surveillance

**Asst. Prof. Thammanitchpol Denpetkul**

Department of Social and Environmental Medicine, Faculty of Tropical Medicine, Mahidol University

4. TBA

## **11. Unveiling Novel Tools: Progress in Tropical Disease Diagnostics**

Organizer: Assoc. Prof. Wang Nguitragee

Chairpersons: Assoc. Prof. Wang Nguitragee and Assoc. Prof. Naowarat Saralamba

Speakers:

1. Exploring Urinary Proteomics and Peptidomics Biomarkers for the Diagnosis of Mekong Schistosomiasis

**Ms. Tipparat Thiangtrongjit**

Department of Molecular Tropical Medicine, Faculty of Tropical Medicine, Mahidol University

2. Enhancing disease detection with new diagnostic tests for melioidosis and tuberculosis

**Dr. Hasyanee Binmaeil and Prof. Narisara Chantratita**

Department of Microbiology and Immunology, Faculty of Tropical Medicine, Mahidol University

3. Portable and Smart Diagnostics for Tropical Diseases: The Impact of Electrochemical Biosensors and Amplification Techniques

**Assoc. Prof. Benjaporn Lertanantawong**

Department of Biomedical Engineering, Faculty of Engineering, Mahidol University

4. Innovative Diagnostics: Paving the Way to Zero Malaria

**Prof. Shigeyuki Kano**

Department of Tropical Medicine and Malaria, Research Institute, National Center for Global Health and Medicine

## **12. Nanomedicine**

Organizer and Chairpersons: Prof. Kesinee Chotivanich and Prof. Norased Nasongkla

Speakers:

1. Photocatalytic nano carrier for ferroptotic therapy of KRAS mutant colorectal cancer

**Prof. Su-Geun Yang**

Inha University College of Medicine, South Korea

2. Advancing Nanotherapeutics: The Role of Polymerization-Induced Self-Assembly (PISA) in Developing Drug Delivery Systems

**Dr. Chalaisorn Thanapongpibul**

Department of Biomedical Engineering, Faculty of Engineering, Mahidol University

3. Progress and potential of nanobubbles for ultrasound-mediated drug/gene delivery

Ms. Pinunta Nittayacharn

Department of Biomedical Engineering, Faculty of Engineering, Mahidol University

4. Multifunctional Micelles targeted malarial parasites for tracking and treatment

**Dr. Wirat Assawapanumat**

Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Mahidol University

**13. Establishing ParaCite: Biodiversity BioBank for Helminths - Current Initiative and Future Prospects**

Organizer: Assoc. Prof. Urusa Thaenkham and Dr. Pongsakorn Wangkumhang

Chairpersons: Assoc. Prof. Dorn Watthanakulpanich and Assoc. Prof. Urusa Thaenkham

Speakers:

1. Overview and Future Aspects of the ParaCite Biobank

**Assoc. Prof. Urusa Thaenkham**

Department of Helminthology, Faculty of Tropical Medicine, Mahidol University

2. Establishment of the ParaCite platform by National BioBank of Thailand

**Dr. Pongsakorn Wangkumhang**

National Biobank of Thailand, National Science and Technology Development Agency

3. Current and future research applications for parasitic helminths

**Dr. Sompob Saralamba**

Mathematical and Economic MODelling (MAEMOD), Mahidol Oxford Tropical Medicine Research Unit

4. How biobank information supports research in parasitic helminths

**Dr. Abigail Hui En Chan**

Department of Helminthology, Faculty of Tropical Medicine, Mahidol University



5. What information on parasitic helminths is essential for the veterinary sector?

**Assoc. Prof. Sivapong Sungpradit**

Department of Pre-clinical and Applied Animal Science, Faculty of Veterinary Science, Mahidol University

6. What information on parasitic helminths is valuable for wildlife research?

**Dr. Napat Ratnarathorn**

Department of Biology, Faculty of Science, Mahidol University

7. Insights from policymakers: What information on parasitic helminths do they require?

**Assoc. Prof. Saengduen Moonsom**

Coordinator of Thailand One Health University Network (THOHUN) **and staff from Department of Protozoology, Faculty of Tropical Medicine, Mahidol University**

#### **14. Social Determinants of Health: Risks, resilience and misinformation**

Organizer: Mahidol Center for Health, Behavior and Society, Faculty of Tropical Medicine

Chairpersons: Assoc. Prof. Thomas Guadamuz and Ms. Worawalan Waratworawan

Speakers:

1. Misinformation in the age of social media: Online scams, deep fakes, and digital resilience

**Asst. Prof. Sin How Lim**

Faculty of Medicine, University of Malaya

2. Social determinants of STI testing in Thailand

**Mr. Nattharat Samoh**

Mahidol Center for Health, Behavior and Society, Faculty of Tropical Medicine

3. Using qualitative methods to illuminate the MPOX epidemic: Challenges and lessons learned

**Asst. Prof. Charlie Witzel**

Institute for Global Health, University College London

4. Elucidating antimicrobial resistance in a marginalized urban community in Bangkok

**Asst. Prof. Panoopat Poompruek**  
Faculty of Pharmacy, Silpakorn University

**15. Consortium efforts in mRNA Vaccine Development Against Plasmodium vivax Malaria**

Organizer: Assoc. Prof. Wang Nguitragool

Chairpersons: Prof. Jetsumon Sattabongkot and Assoc. Prof. Wang Nguitragool

Speakers:

1. Discovery, Development, and Testing of mRNA vaccines at Mahidol Vivax Research Unit

**Assoc. Prof. Wang Nguitragool and Dr. Nawapol Kunkeaw**

Mahidol Vivax Research Unit, Faculty of Tropical Medicine, Mahidol University

2. Immunoprofiling of Naturally Acquired Transmission-blocking Immunity against Plasmodium vivax

**Ms. Rattanaporn Rojrung**

Division of Malaria Research, Proteo-Science Center, Ehime University

3. mRNA Vaccine Development: Chula VRC and Partnership

**Prof. Kiat Ruxrungham**

Chula Vaccine Research Center, Faculty of Medicine, Chulalongkorn University

4. Advancing Vaccine Innovation through Non-clinical Testing in Non-human Primates and the Role of NPRCT-CU

**Prof. Suchinda Malaivijitn**

National Primate Research Center of Thailand-Chulalongkorn University

5. Capability and capacity for mRNA-based vaccine production

**Dr. Indra Rudiansyah**

Bio Farma

**16. Treatment of uncomplicated malaria in the Greater Mekong Subregion: should we continue with status quo or is there reason for concern?**

Organizer: Dr. Chanaki Amaratunga

Chairpersons: Prof. Arjen Dondorp and Dr. Chanaki Amaratunga

Speakers:

1. When will novel antimalarials become available to communities who need them?

**Dr. Didier Leroy**

Medicines for Malaria Venture, Geneva, Switzerland

2. Should we use triple ACTs for malaria in the Greater Mekong Subregion?

**Dr. Chanaki Amaratunga**

Mahidol Oxford Tropical Medicine Research Unit

3. Do we know reliable molecular markers of lumefantrine resistance?

**Mr. Michal Kucharski**

Nanyang Technological University, Singapore

4. Is molecular surveillance for antimalarial resistance important in the Greater Mekong Subregion?

**Dr. Varanya Wasakul**

Mahidol Oxford Tropical Medicine Research Unit

## **17. Post-COVID-19 Research for Controlling Emerging Viral Diseases**

Organizer: Assoc. Prof. Pornsawan Leungwutiwong

Chairpersons: Assoc. Prof. Tomokazu Tamura and Dr. Khin Saw Myint

Speakers:

1. Discovery of mosquito-borne viruses and their applications

**Prof. Yasuko Oorba**

Division of Molecular Pathobiology, International Institute for Zoonosis Control, Hokkaido University

2. Comprehensive virus detection in ticks leading the identifications of potential threat to One Health

**Assoc. Prof. Keita Matsuno**

Division of Molecular Pathobiology, International Institute for Zoonosis Control, Hokkaido University

3. Novel reverse genetics of RNA viruses including arthropod viruses

**Assoc. Prof. Tomokazu Tamura**

Department of Microbiology and Immunology, Faculty of Medicine, Hokkaido

University

4. TBA

**Dr. Khin Saw Myint**

Exeins Health Initiative, Indonesia

### **18. Guarding our babies: innovative strategies in RSV prevention**

Organizer: Department of Tropical Pediatrics

Chairpersons: Asst. Prof. Watcharee Arunsodsai and Asst. Prof. Salin Srinam

Speakers:

1. RSV vaccine maternal immunization

**Dr. Mark Fletcher**

Senior Director, Global Vaccines & Antivirals/Medical & Scientific Affairs, Pfizer

2. Burden of LRI and risk of RSV in Thailand

**Asst. Prof. Piyarat Suntarattiwong**

Queen Sirikit National Institute of Child Health

3. Innovative strategies in RSV prevention for our little babies

**TBA from Sanofi**

### **19. Emerging Threats and Established Pathogens: A Comprehensive Look at Thailand's Infectious Disease Landscape**

Organizer: Prof. Narisara Chantratita

Chairpersons: Prof. Wasun Chantratita and Asst. Prof. Muthita Vanaporn

Speakers:

1. Thailand's Comprehensive Emergency Response Strategy: Integrating Preparedness for COVID-19, mPOX, H5N1, and Disease X

**Prof. Wasun Chantratita**

Center for Medical Genomics, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

2. Genetic determinants of successful Burkholderia pseudomallei

**Dr. Rathanin Seng**

Department of Microbiology and Immunology, Faculty of Tropical Medicine,  
Mahidol University, Bangkok, Thailand

3. Genetic variation, structural analysis, and virulence implications of BimA and BimC in clinical isolates of *Burkholderia pseudomallei* in Thailand

**Ms. Charlene Cagape**

Department of Microbiology and Immunology, Faculty of Tropical Medicine,  
Mahidol University, Bangkok, Thailand

4. NK cell-mediated regulation of CD8 T cell response in melioidosis

**Dr. Anucha Preechanukul**

Department of Microbiology and Immunology, Faculty of Tropical Medicine,  
Mahidol University, Bangkok, Thailand

## **20. The clinical viewpoint on the impact of endocrine-disrupting chemicals (EDCs) on children's health**

Organizer: Prof. Vichit Supornsilchai (Chulalongkorn University)

Chairperson: Prof. Suttiapon Wacharasindhu

Speakers:

1. General information regarding EDCs and their impact on children's health

**Prof. Vichit Supornsilchai**

School of Global Health, Faculty of Medicine, Chulalongkorn University

2. The research on EDCs in Thai Children

**Dr. Nattakarn Numsriskulrat**

Department of Pediatric, Faculty of Medicine, Chulalongkorn University

## **21. Recent advance in dengue**

Organizer: Tropical Medicine Cluster, Chulalongkorn University

Chairpersons: Prof. Usa Thisyakorn and Prof. Terapong Tantawichien

Speakers:

1. Clinical tools for dengue severity prediction: current developments

**Dr. Phu Nhuyen Trong Tran**

Can Tho University, Vietnam

2. Dengue vaccine: an update

**Prof. Terapong Tantawichien**

Tropical Medicine Cluster, Chulalongkorn University

3. Dengue virus transmission risk in blood donation: any concern in endemic area

**Prof. Nattchai Srisawat**

Tropical Medicine Cluster, Chulalongkorn University