



## Innovations and Insights in Infection and Immunity

The development of strategic ideas and skills are indispensable for controlling and overcoming infectious diseases. The threat of new and reemerging infectious diseases is evidenced by the outbreak of SARS in 2002, together with other viral diseases such as dengue, Chikungunya and pandemic influenza. Singapore is surrounded by neighboring countries where a number of zoonotic infectious diseases are prevalent. The cooperation on infectious disease research via the joint symposia between the National University of Singapore (NUS) and Nagasaki University has helped us significantly in managing these infectious diseases via the exchange of specialists for mutual benefit. NUS is proud to host the 12<sup>th</sup> NUS-Nagasaki Symposium on Infectious Diseases. This 12<sup>th</sup> symposium will be a landmark to commemorate and celebrate the establishment of the Center for Translational Medicine (CeTM) in NUS which will be the venue for the Symposium. Invited speakers will be presenting data on advanced technological innovations and new insights in host-pathogen interactions as a key theme of this symposium for both universities.

We warmly invite graduate students, postdoctoral fellows, clinician scientists, microbiologists, biologists, and immunologists to attend this special event. Come join us and find out the latest developments in infectious disease research!

A/Prof Kevin SW TAN  
Department of Microbiology, NUS  
Chairperson

A/Prof Vincent CHOW & Dr. ZHANG Yongliang  
Department of Microbiology, NUS  
Co-Chairpersons

### Plenary Speakers

Professor Yoshiyuki Nagai  
Center of Research Network  
for Infectious Diseases, Japan

Professor François H Nosten  
University of Oxford and Shoklo  
Malaria Research Unit, Thailand

### Sessions

Viral infections  
Bacterial infections  
Emerging diseases

Malaria  
Immunology and Infections

### Date & Time

11<sup>th</sup> & 12<sup>th</sup> June 2015, 0900-1800 hrs

### Venue

Peter & Mary Fu Lecture Theatre, LT35  
Centre for Translational Medicine, Yong Loo Lin School of Medicine, National University of Singapore  
Block MD6, 14 Medical Drive, Singapore 117599

### Registration is Free

Register @ <http://tinyurl.com/i4symposium>



# The 12<sup>th</sup> NUS-Nagasaki Joint Symposium



## Innovations and Insights in Infection and Immunity

11<sup>th</sup> & 12<sup>th</sup> June 2015, Singapore

**Centre for Translational Medicine**  
**Block MD6, LT 35**

**Day One: 11<sup>th</sup> June 2015**

08:00 - 08:55 Arrival of Guests and Registration  
09:00 - 09:30 Welcome & Opening Address

**Session I** **Viral Infections – Chair: Vincent CHOW, Department of Microbiology, NUS**

09:30 - 10:30 Sendai Virus Vector. Advantages and Applications.  
*Yoshiyuki NAGAI, Center of Research Network for Infectious Diseases, Japan*

10:30 - 11:00 Break

11:00 - 11:30 Broad-Spectrum, Highly Selective Antiviral Macromolecules Targeting Host Factors to Block Viral Entry Steps.  
*Naoki YAMAMOTO, Department of Microbiology, NUS*

11:30 - 12:00 Viruses as Source and Target of RNA Trans-Splicing.  
*Volker PATZEL, Department of Microbiology, NUS*

12:00 - 12:30 The Double Stranded RNA Concealing Defines The Host Specificity Of Dengue And Japanese Encephalitis Viruses.  
*Kouichi MORITA, Department of Virology, Institute of Tropical Medicine, Nagasaki*

12:30 - 13:30 Lunch and Poster Session

**Session II** **Bacterial and Fungal Infections – Chair: Thomas DICK, Department of Microbiology, NUS**

13:30 - 14:00 The Pathogenesis of Chronic Pulmonary Aspergillosis and Azole Resistance.  
*Koichi IZUMIKAWA, Department of Molecular Microbiology and Immunology, Nagasaki*

14:00 - 14:30 Catheter Associated Urinary Tract Infections and the Threat of Antimicrobial Resistance.  
*Paul Anantharajah TAMBYAH, Department of Medicine, NUS*

14:30 - 15:00 New Approaches to Shortening Treatment for Drug-Sensitive TB - the TRUNCATE-TB Trial.  
*Nick PATON, Department of Medicine, NUS*

15:00 - 15:30 Host Glutathione Switches On Bacterial Virulence  
*GAN Yunn-Hwen, Department of Biochemistry, NUS*

15:30 - 16:00 Break

**Session III** **Emerging Diseases – Chair: ZHANG Yongliang, Department of Microbiology, NUS**

16:00 - 16:30 Bats And Viruses: A New Frontier In EID.  
*Linfa WANG, Duke-NUS Graduate Medical School*

16:30 - 17:00 Ecology and Evolution of Emerging Infectious Diseases.  
*Gavin James SMITH, Duke-NUS Graduate Medical School*

17:00 - 17:30 Early Stage Biomarkers of Dengue Shock Syndrome.  
*Kenji HIRAYAMA, Department of Immunogenetics, Institute of Tropical Medicine, Nagasaki*

17:30 - 18:00 Serological Surveillance Development For Multiple Tropical Infectious Diseases Using Simultaneous Microsphere-based Multiplex Assays.  
*Satoshi KANEKO, Department of Eco-epidemiology, Institute of Tropical Medicine, Nagasaki*

**End of Day One. Dinner @ 19:30hrs for Invited Guests Only**

**Centre for Translational Medicine**  
**Block MD6, LT 35**

**Day Two: 12<sup>th</sup> June 2015**

08:30 - 08:55 Arrival of Guests

**Session I** **Malaria – Kevin TAN, Department of Microbiology, NUS**

09:00 - 10:00 Towards Malaria Elimination: The New Challenges In South East Asia.  
*François H NOSTEN, Shoklo Malaria Research Unit, Mae Sot, Thailand*

10:00 - 10:30 Breadth of the Humoral Response and Potential Vaccine Targets Following Experimental *Plasmodium falciparum* Sporozoite Inoculation in Humans.  
*Laurent RÉNIA, Singapore Immunology Network (SIgN), A\*STAR*

10:30 - 11:00 Break

11:00 - 11:30 Regulation Of Immune Responses By IL-27-producing Cd4+ T Cells During Malaria Infection.  
*Katsuyuki YUI, Department of Molecular Microbiology and Immunology, Nagasaki*

11:30 - 12:00 A New Way to Kill: Therapeutic Disruption of Malaria Parasite Rheology.  
*Bruce RUSSELL, Department of Microbiology, NUS*

12:00 - 12:30 Evaluation of Ca<sup>2+</sup> Oscillation in *Plasmodium falciparum* through Yellow Cameleon-Nano Biosensors.  
*Osamu KANEKO, Department of Protozoology, Institute of Tropical Medicine, Nagasaki*

12:30 - 13:30 Lunch and Poster Session

**Session II** **Immunology and Infections – Chair: Sylvie ALONSO, Department of Microbiology, NUS**

13:30 - 14:00 Sensitivity And Specificity Of Biomarkers And RT-QuIC Assay In CSF Samples Of Human Prion Disease.  
*Katsuya SATOH, Department of Molecular Microbiology and Immunology, Nagasaki*

14:00 - 14:30 Bruton's Tyrosine Kinase In Innate Immunity.  
*Kong-Peng LAM, Bioprocessing Technology Institute (BTI), A\*STAR*

14:30 - 15:00 The Risk Factors Associated With Active Visceral Leishmaniasis From Asymptomatic Status.  
*Shinjiro HAMANO, Department of Parasitology, Institute of Tropical Medicine, Nagasaki*

15:00 - 15:30 Natural IgG is Not Passive – Defining Its Role in Innate Immunity.  
*DING Jeak Ling, Department of Biological Sciences, NUS*

15:30 - 16:00 Break

16:00 - 16:30 Antimicrobial Resistance In Japan -How To Prevent The Spread Of Multidrug-resistant Organism?  
*Katsunori YANAGIHARA, Department of Laboratory Medicine, Nagasaki*

16:30 - 17:00 Engineering Fully Human Anti-Infective Antibodies for Dengue Therapy.  
*Paul MACARY, Department of Microbiology, NUS*

17:00 - 17:30 Molecular Technologies To The Study And Diagnosis Of Infectious Diseases.  
*Yoshihide HAYASHIZAKI, RIKEN Japan*

17:30 - 18:00 **Closing Address and Prize Presentations**

**12<sup>th</sup> NUS-Nagasaki Joint Symposium on Infectious Diseases (11 – 12 June 2015) – Poster Prize Award Winners**

<b>Prize</b>	<b>Winner Author</b>	<b>Poster Title</b>
1 <sup>st</sup> Prize	Tan Kai Sen	Micro-RNA Characterization in Influenza Induced Lung Damage and Repair
2 <sup>nd</sup> Prize	Wilfried Moreira	A Target Mechanism-based Whole Cell Screen Identifies Bortezomib as an Inhibitor of Caseinolytic Protease in Mycobacteria
Merit	Parveen Kaur	A Humanized Mouse Model for Chikungunya Virus Infection
Merit	Sitara Ajjampur	<i>Ex vivo</i> Mouse Intestinal Model to Study Adhesion of <i>Blastocystis spp.</i>
Merit	Png Chin Wen	DUSP10 Regulates Intestinal Epithelial Cell Growth and Colorectal Tumorigenesis
Merit	Zhao Xiang	Peptides Co-agonism in CD8+ T Cell Activation
Merit	Carla Claser	Understanding the Immune-pathophysiological Mechanism Triggered in the Lungs during Rodent <i>Plasmodium Ssp</i> Infection
Merit	Chen Huixin	Development and Evaluation of a SYBR Green-Based Multiplex Reverse Transcriptase-Polymerase Chain Reaction for Rapid Diagnosis and Serotyping of Dengue and Chikungunya Viruses
Merit	Jan Marzinek	Multiscale Modelling of Dengue Virus Envelope Protein Dynamics and Protein – Lipid Interactions
Merit	Lee Hong Kai	Predicting Clinical Severity Based on Substitutions Near Epitope A of Influenza A/H3N2