

Program

September 4 (Tue)

12:30 – 13:40 Short Presentation 1

Chair: **Masahito Asada**, Nagasaki University, Japan

- SP-1 (P-4) **Taichiro Takemura**, Vietnam Research Station, Institute of Tropical Medicine, Nagasaki University, Japan
The Dengue Virus Type 1 outbreak in Northern Vietnam in 2017 caused for the locally circulating strains
- SP-2 (P-5) **Manh H Dao**, Department of Immunogenetics, Institute of Tropical Medicine (NEKKEN), Nagasaki University, Japan
Plasma cell-free DNA is a potential biomarker for early prediction of severe dengue
- SP-3 (P-6) **Shyam P Dumre**, Department of Immunogenetics, Institute of Tropical Medicine (NEKKEN), Nagasaki University, Japan
iPS derived dendritic cells for *in vitro* dengue virus infection model
- SP-4 (P-7) **Minh Huong Phu Ly**, Department of Virology, Institute of Tropical Medicine (NEKKEN), Nagasaki University, Japan
Dengue virus infection-enhancement activity in neutralizing antibodies of healthy adults before dengue season as determined by using Fc γ R-expressing cells
- SP-5 (P-8) Cancelled
- SP-6 (P-12) Cancelled
- SP-7 (P-13) **Thu Hong Ta Thi**, National Institute of Hygiene And Epidemiology, Vietnam
Laboratory diagnostic of non-EV-A71 enteroviruses associated with hand, foot and mouth diseases among children aged <5 years in Vietnam: a 10-year review
- SP-8 (P-21) **Yuri Furusawa**, Division of Virology, Department of Microbiology and Immunology, Institute of Medical Science, University of Tokyo, Japan
Host Factor Nucleoporin 93 Is Involved in The Nuclear Export of Influenza Virus RNA
- SP-9 (P-28) **Mohammed S. O. Tagod**, Center for Bioinformatics and Molecular Medicine, Graduate School of Biomedical Sciences, Nagasaki University, Japan.
Expansion of human $\gamma\delta$ T cells for adoptive immunotherapy using a novel bisphosphonate prodrug
- SP-10 (P-32) **Mai Izumida**, Department of Clinical Medicine Institute of Tropical Medicine Nagasaki University, Japan
Antiviral host factor controls endogenous retrovirus-induced placental formation
- SP-11 (P-37) **Ghizal Fatima**, Department of Biochemistry, Era's Medical College, India.
Prevalence of Vitamin D deficiency in newly diagnosed tuberculosis patients: Implications to household contacts
- SP-12 (P-40) **So Nakagawa**, Department of Molecular Life Science, Tokai University School of Medicine, Kanagawa, Japan
A portable system for rapid bacterial composition analysis using a nanopore-based sequencer and laptop computer.
- SP-13 (P-44) **Mohd Faisal Syed**, Molecular Immunology and Nano-Vaccine Laboratory, Interdisciplinary, Biotechnology Unit, Aligarh Muslim University, India
TLR-9 agonist bolsters immunogenicity and protective efficacy of secretory antigen *Rv3620c* of *Mycobacteria tuberculosis H37Rv* against experimental murine tuberculosis
- SP-14 (P-45) **Faraz Ahmad**, Interdisciplinary Biotechnology Unit, Aligarh Muslim University, India
Amyloid antigen based immunopotent nanovaccine: an effective substitute of BCG against experimental tuberculosis
- SP-15 (P-50) **Piyawan Kochayoo**, Department of Clinical Microbiology And Applied Technology, Faculty of Medical Technology, Mahidol University, Thailand
The Responses of Antibody and Memory B cells specific to Rhoptry proteins of *Plasmodium vivax* in patient from area of low malaria transmission

SP-16 (P-52) **Woottichai Nachaiwieng**, Department of Public Health, School of Health Science Mae Fah Luang University, Thailand

Efficiency of the commercial household insecticide aerosol sprays and its impact on knockdown resistance mechanism in controlling of pyrethroid resistant *Aedes aegypti* and *Culex quinquefasciatus* mosquitoes

SP-17 (P-53) **Saowanee Chamnanya**, Department of Parasitology, Faculty of Medicine, Chiang Mai University, Thailand

High-throughput assay for detection of the L1014F mutation in the voltage-gated sodium channel gene in deltamethrin-resistant *Culex quinquefasciatus* and its distribution throughout Thailand

13:50 – 15:00 **Short Presentation 2**

Chair: **Masahito Asada**, Nagasaki University, Japan

SP-18 (P-54) **Eleonor Cervantes**, Immunology Department, Research Institute for Tropical Medicine, Department of Health, Philippines

Expression of *Schistosoma japonicum* recombinant Circulating Cathodic Antigen (*recCCA*): first step to the development of a point of care test for diagnosis of Schistosomiasis infection

SP-19 (P-55) **Jintana Yanola**, Department of Medical Technology, Faculty of Associated Medical Sciences, Chiang Mai University, Thailand

Effectiveness of school based deworming program on the decreasing of intestinal parasitic infection rate among Karen hill-tribe children in Thailand

SP-20 (P-58) **Huai Chuang**, Graduate Institute of Parasitology, College of Medicine, National Taiwan University, Taiwan

Characterization of Functions of *Giardia lamblia* Topoisomerase III α ;

SP-21 (P-59) **Md. Abu Musa**, Department of Parasitology, Institute of Tropical Medicine, Nagasaki University, Japan

Live attenuated *Leishmania major* as a prophylactic vaccine

SP-22 (P-60) **Abul Hasan Sardar**, Department of Microbiology, Sarsuna College, India

Leishmania donovani cytosolic peroxiredoxin is an active enzymes protects the parasite from Oxidative Stress inside the host during infection

SP-23 (P-61) **Amir Zaidi**, School of Life Sciences Jawaharlal Nehru University, India

Deciphering the role of frataxin protein which interacts with mitochondrial scaffold, LdIscU and its expression is modulated by Fe-S proteins in *Leishmania donovani*

SP-24 (P-65) **Hassan Hakimi**, Department of Protozoology, Institute of Tropical Medicine (NEKKEN), Nagasaki University, Japan

Proteomic approach leads to the identification of novel *Babesia bovis* proteins expressed on the surface of infected erythrocytes

SP-25 (P-67) **Morakot Kaewthamasorn**, The Veterinary Parasitology Unit, Department of Veterinary Pathology, Faculty of Veterinary Science, Chulalongkorn University, Thailand

Genetic homogeneity of goat malaria parasites in Asia and Africa suggests their expansion with domestic goat host

SP-26 (P-68) **Odsuren Sukhbaatar**, Division of Immunology, Department of Molecular Microbiology and Immunology, Graduate School of Biomedical Sciences, Nagasaki University, Japan

Immunomodulatory effects of Interleukin-27 on chronic malaria infection

SP-27 (P-69) **Takahiro Ishizaki**, Program for Nurturing Global Leaders in Tropical and Emerging Communicable Diseases, Graduate School of Biomedical Sciences, Nagasaki University, Japan

Distinct timing of secretion of the erythrocyte invasion-related molecules from *Plasmodium yoelii* merozoite

SP-28 (P-70) **Nattawat Chaiyawong**, Department of Protozoology, Institute of Tropical Medicine, Nagasaki University, Japan.

Identification of factor(s) that determine growth rate and virulence in the rodent malaria parasite *Plasmodium yoelii*

- SP-29 (P-71) **Medard Ernest**, Malaria Unit, Department of Pathology, Institute of Tropical Medicine, Nagasaki University, Japan
Genetic Analysis of Drug Resistance Genes in *Plasmodium falciparum*, *Plasmodium malariae* and *Plasmodium ovale* Isolated from Asymptomatic individuals in South-West Nigeria.
- SP-30 (P-72) **Kazuhide Yahata**, Department of Protozoology, Institute of Tropical Medicine (NEKKEN), Nagasaki University, Japan
Evaluation methods for parasite egress inhibition for *Plasmodium falciparum*
- SP-31 (P-73) **Niwat Kangwanrangsang**, Department of Pathobiology, Faculty of Science, Mahidol University, Thailand
P. vivax liver stage maturation and hypnozoite formation in humanized uPA/SCID mice
- SP-32 (P-74) **Masahito Asada**, Department of Protozoology, Institute of Tropical Medicine (NEKKEN), Nagasaki University, Japan
Close relationship of *Plasmodium* sequences detected from South American pampas deer (*Ozotoceros bezoarticus*) to *Plasmodium* spp. in North American white-tailed deer
- SP-33 (P-75) **Xiaotong Zhu**, Department of Immunology, College of Basic Medical Science, China Medical University, China
Plasmodium berghei serine/threonine protein phosphatase PP5 plays a critical role in male gametocyte formation and exflagellation
- SP-34 (P-76) **Meihua Zhang**, Jiangsu Institute of Parasitic Diseases, China
Study on the correlation of M579I mutation in the K13 gene of *Plasmodium falciparum* associated with artemisinin resistance
- SP-35 (P-77) **Benjamin Amoani**, Department of Biomedical Sciences, School of Allied Health Sciences, University of Cape Coast, Ghana
Cytokine profiles of *Necator americanus* and *Plasmodium falciparum* co-infected patients in rural Ghana
- 15:00 *Break (15 min)*
- 15:15 **Opening Remarks for The 17th Awaji International Forum on Infection and Immunity**
Osamu Kaneko, Nagasaki University, Japan
- 15:30 – 18:00 **Session 1: Infection immunity**
Chairs: **Nicolas Chevrier**, The University of Chicago, USA
Kazuhiro Suzuki, Osaka University, Japan
- 15:35 S1-1 **Yuumi Matsuoka-Nakamura**, Department of Dermatology, Chiba University Graduate School of Medicine, Chiba, Japan
Cutaneous retention of *Staphylococcus agr* virulence promotes atopic dermatitis development
- 16:10 S1-2 **Nicolas Chevrier**, Institute for Molecular Engineering, The University of Chicago, USA
A predictive framework for adjuvant combinatorics reveals potent anti-cancer vaccines
- 16:45 S1-3 **Kazuhiro Suzuki**, Immunology Frontier Research Center, Osaka University, Japan
Adrenergic nerves control lymphocyte recirculation through lymph nodes
- 17:20 S1-4 **Shulman Ziv**, Department of Immunology, The Weizmann Institute of Science, Rehovot, Israel
Germinal Center: Arrivals, Departures and T Cell Border Control
- 18:00 *Break (30 min)*
- 18:30 – 20:30 **Welcome Party**
Banquet Hall STELLA (Westin Hotel Awaji)
- 23:30 **Free Discussion**
Reception Hall B

September 5 (Wed)

9:00 – 11:30 **Session 2: Arthropod vector**

Chairs: **Gong Cheng**, Tsinghua University School of Medicine, China

Hiroataka Kanuka, Department of Tropical Medicine, Jikei School of Medicine, Japan

- 9:00 S2-1 **Hiroataka Kanuka**, Department of Tropical Medicine, Jikei School of Medicine, Japan
Boosting new arms to tackle pathogen-vector insects
- 9:35 S2-2 **Naotoshi Tsuji**, Department of Parasitology, Kitasato University School of Medicine, Japan
Physiology of blood feeding, disease vector ticks: bioactive molecules for successful feeding and pathogen transmission
- 10:10 S2-3 **Heather Ferguson**, University of Glasgow, UK
The ecology and behaviour of mosquito vectors of zoonotic malaria *Plasmodium knowlesi* within an expanding focus of human infection in south east Asia.
- 10:45 S2-4 **Gong Cheng**, Tsinghua University School of Medicine, China
Story of Arboviral Lifecycle: Acquisition Mechanism From Hosts to Mosquitoes

11:30 *Break (15 min)*

11:45 – 12:30 **Oral Presentation 1**

Chairs: **Gong Cheng**, Tsinghua University School of Medicine, China

Hiroataka Kanuka, Department of Tropical Medicine, Jikei School of Medicine, Japan

- O-1-1 (P-27) **Elisabeth Braun**, Institute of Molecular Virology, Ulm University Medical Center, Germany
Guanylate-binding proteins 2 and 5 reduce virion infectivity by inhibiting furin-mediated Env processing
- O-1-2 (P-29) **Mairaj Ahmed Ansari**, Rosalind Franklin University of Medicine and Science, USA
cGAS Mediates IFI16 Dependent Sensing of Herpes Simplex virus Type-2 and Type-1 DNA and cGAMP Induction In The Nucleus and IFI16 Independent cGAMP Induction In The Cytoplasm
- O-1-3 (P-30) **Steven Matthew Heaton**, Infection & Immunity Program, Department of Biochemistry & Molecular Biology, Biomedicine Discovery Institute, Monash University, Australia
Subcellular trafficking of host RNA helicase DDX3X modulates innate antiviral signaling and parainfluenza virus immunity

12:30 – 13:30 *Lunch Break*

13:30 – 15:00 **Poster session (Odd Numbers)**

15:00 – 17:30 **Session 3: Protozoan parasite**

Chairs: **Bruce Russell**, University of Otago, New Zealand

Osamu Kaneko, Nagasaki University, Japan

- 15:00 S3-1 **Bruce Russell**, Department of Microbiology and Immunology, University of Otago, New Zealand
Continuous *in vitro* culture of *Plasmodium cynomolgi*: and its application as a model for vivax malaria
- 15:38 S3-2 **Robert Moon**, Faculty of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, UK
Rapid, iterative and scalable CRISPR-Cas9 genome editing in *P. knowlesi*: New tools for invasion biology and *P. vivax* vaccine research
- 16:17 S3-3 **Arnab Pain**, King Abdullah University of Science and Technology (KAUST), Jeddah, Saudi Arabia
A host-cues-responsive circadian clock in malaria parasites

16:55 S3-4 **Fumika Mi-ichi**, Division of Molecular and Cellular Immunoscience, Department of Biomolecular Sciences, Faculty of Medicine, Saga University, Japan
Entamoeba encystation has a causal link to the unique sulfur metabolism

17:30 *Break (15 min)*

17:45 – 18:30 **Oral Presentation 2**

Chairs: **Bruce Russell**, University of Otago, New Zealand
Osamu Kaneko, Nagasaki University, Japan

O-2-1 (P-49) **Siriruk Changrob**, Department of Clinical Microbiology And Applied Technology, Faculty of Medical Technology, Mahidol University, Thailand

The acquisition of naturally acquired binding-inhibitory antibodies and memory B cell to *Plasmodium vivax* blood-stage antigen

O-2-2 (P-64) **Masahito Asada**, Department of Protozoology, Institute of Tropical Medicine (NEKKEN), Nagasaki University, Japan

Babesia bovis ves1 α ; expression is correlated with cytoadhesion of parasite-infected erythrocyte to the endothelial cells

O-2-3 (P-66) **Daniel K Inaoka**, School of Tropical Medicine and Global Health, Nagasaki University, Japan
Studies on *Plasmodium falciparum* mitochondrial L-malate:quinone oxidoreductase as potential drug target

– 23:30 **Free Discussion**
Reception Hall B

September 6 (Thu)

9:00 – 11:30 **Session 4: Bacteria**

Chairs: **Gregory M Cook**, University of Otago, New Zealand
Toshio Kodama, Osaka University, Japan

9:00 S4-1 **Gregory M Cook**, Department of Microbiology and Immunology, University of Otago, New Zealand

Tackling drug-resistant tuberculosis by targeting multiple components of mycobacterial bioenergetics

9:40 S4-2 **Hitoshi Tsugawa**, Department of Biochemistry, Keio University School of Medicine, Japan
Mechanisms of CD44v9-positive cancer stem cell development in *H. pylori*-infected gastric mucosa

10:20 S4-3 **Toshio Kodama**, Department of Bacterial Infections, RIMD, Osaka University, Japan
The regulation of *Vibrio parahaemolyticus* type III secretion

10:55 S4-4 **Hiroshi Ashida**, Department of Bacterial Infection and Host Response, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Japan
The interaction analysis between microbiota and bacterial pathogens

11:30 *Break (15 min)*

11:45 – 12:30 **Oral Presentation 3**

Chairs: **Gregory M Cook**, University of Otago, New Zealand
Toshio Kodama, Osaka University, Japan

O-3-1 (P-35) **Hiroya Oki**, Graduate School of Pharmaceutical Sciences, Osaka University, Japan
Structural basis for colonization of enterotoxigenic *Escherichia coli*

- O-3-2 (P-36) **Yoshio Nakatani**, Department of Microbiology and Immunology, School of Biomedical Sciences, University of Otago, New Zealand
Development of a new anti-tubercular agent that effectively combats chronic tuberculosis
- O-3-3 (P-39) **Takehiro Kado**, Veterinary Public Health, Kitasato University, Japan
Knock out of a putative transporter system in *Vibrio vulnificus* reduces lethality of mice.
- 12:30 – 13:30 *Lunch Break*
- 13:30 – 15:00 **Poster session (Even Numbers)**
- 15:00 – 17:30 **Session 5: Vector-borne virus**
Chairs: **Sujan Shresta**, La Jolla Institute for Allergy & Immunology & Immunology, USA
Meng Ling Moi, Nagasaki University, Japan
- 15:00 S5-1 **Ryosuke Suzuki**, Department of Virology II, National Institute of Infectious Diseases, Japan
Genetic modification of flaviviruses for diagnosis and vaccine
- 15:35 S5-2 **Meng Ling Moi**, Institute of Tropical Medicine, Nagasaki University, Japan
Cross-protection in Dengue virus infection: a revisit on protective immunity
- 16:10 S5-3 **Sujan Shresta**, La Jolla Institute for Allergy & Immunology & Immunology, USA
The impact of prior dengue immunity on subsequent Zika infection and vice versa: A tale of T cells and antibodies
- 16:45 S5-4 **Lisa F.P. Ng**, Laboratory of Microbial Immunity, Singapore Immunology Network (SIgN), A*STAR, Singapore
Cellular and Molecular Mechanism of Arbovirus Pathogenesis: Implications for Disease Interventions
- 17:30 *Break (15 min)*
- 17:45 – 18:30 **Oral Presentation 4**
Chairs: **Sujan Shresta**, La Jolla Institute for Allergy & Immunology & Immunology, USA
Meng Ling Moi, Nagasaki University, Japan
- O-4-1 (P-3) **Thuy T Bui**, Department of Virology, Institute of Tropical Medicine, Nagasaki University, Japan
A single amino acid substitution in the NS4B protein of Dengue virus confers enhanced virus growth and fitness in human cells in vitro through interferon-dependent host response
- O-4-2 (P-20) **Kohei Oishi**, Division of Virology, Institute of Medical Science, University of Tokyo, Japan
N-terminal acetylation by NatB is required for the shutoff activity of influenza A virus PA-X
- O-4-3 (P-26) **Yutaka Terada**, Laboratory of Clinical Research on Infectious Diseases, Research Institute for Microbial Diseases, Osaka University, Japan
Functions of RNA structures within the MERS coronavirus genome
- 18:45 – 21:00 **Banquet**
BBQ Party
(Terrace of Westin Hotel, 2F)
- 23:30 **Free Discussion**
Reception Hall B

