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 Fcγ; 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 γδ 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
Amyloidal 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 Rhopty proteins of Plasmodium vivax in patient from area of low malaria transmission
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

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 IIα

**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, LdScu 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 *Plamodium 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 Kangwanrangsan**, 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)

20:30 – 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  
**Hirotaka Kanuka**, Department of Tropical Medicine, Jikei School of Medicine, Japan

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<td>9:00</td>
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- **Hirotaka Kanuka**, Department of Tropical Medicine, Jikei School of Medicine, Japan  
  Boosting new arms to tackle pathogen-vector insects
- **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
- **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.
- **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  
**Hirotaka Kanuka**, Department of Tropical Medicine, Jikei School of Medicine, Japan

- **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
- **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
- **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

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<td>16:17</td>
<td>S3-3</td>
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- **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
- **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
- **Arnab Pain**, King Abdullah University of Science and Technology (KAUST), Jeddah, Saudi Arabia  
  A host-cues-responsive circadian clock in malaria parasites
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 ves1α 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
### September 7 (Fri)

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<tr>
<th>Time</th>
<th>Session 6: Neo-Virology</th>
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<tr>
<td>9:00</td>
<td><strong>Chairs:</strong> Yoshihiro Kawaoka, The University of Tokyo, Japan</td>
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<td>Kenzo Tomonaga, Kyoto University, Japan</td>
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<td>9:00</td>
<td><strong>S6-1</strong> Shuhei Miyashita, Graduate School of Agricultural Science, Tohoku University, Japan</td>
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<td>Evolution of strategies in space: the never-ending quests for higher fitness by viruses and the hosts driven by differences and changes in spatial structures.</td>
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<td>9:35</td>
<td><strong>S6-2</strong> Ricardo Flores, Instituto de Biologia Molecular y Celular de Plantas (CSIC-UPV), Spain</td>
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<td>Viroids: overturning viruses from the bottom rung of the biological scale</td>
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<td><strong>S6-3</strong> Keizo Nagasaki, Faculty of Science and Technology, Kochi University, Japan</td>
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<td>Algal viruses in natural water environments</td>
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<td><strong>S6-4</strong> Jean-Michel Claverie, Mediterranean Institute of Microbiology, Aix-Marseille University &amp; CNRS, Marseille, France</td>
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<td>Diversity and evolution of the emerging Pandoraviridae family of giant viruses</td>
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<td><strong>S6-5</strong> Kei Sato, Division of Systems Virology, International Research Center for Infectious Diseases, The University of Tokyo, Japan</td>
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<td>Evolutionary episode of primate lentiviruses: conflict of Vif and APOBEC3</td>
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<td><strong>S6-6</strong> Benjamin tenOever, Icahn School of Medicine at Mount Sinai, USA</td>
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<td>Shaping host and viral landscapes through cellular defense systems</td>
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<td>13:30</td>
<td><strong>Chairs:</strong> Roger Hewson, Public Health England, Porton Down, UK</td>
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<td>Asuka Nanbo, Hokkaido University, Japan</td>
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<td>13:30</td>
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<td>13:45</td>
<td><strong>S7-1</strong> Roger Hewson, Department of Virology &amp; Pathogenesis, National Infection Service, Public Health England, Porton Down, UK</td>
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<td>Crimean-Congo Haemorrhagic fever virus an arbovirus of international concern.</td>
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<td><strong>S7-2</strong> Robert A Davey, Department of Microbiology, NEIDL, University of Boston, USA</td>
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<td>Understanding and exploiting Ebolavirus infection mechanism for therapy.</td>
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<td><strong>S7-3</strong> Asuka Nanbo, Department of Cell Physiology, Faculty and Graduate School of Medicine, Hokkaido University, Japan</td>
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<td>Understanding of molecular mechanism of Ebola virus entry</td>
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<td><strong>S7-4</strong> Tokiko Watanabe, Division of Virology, Department of Microbiology and Immunology, Institute of Medical Science, University of Tokyo, Japan</td>
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<td>Control of Ebola virus disease: vaccine development and our project in Sierra Leone</td>
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16:00  | Closing Remarks                                                                                     |