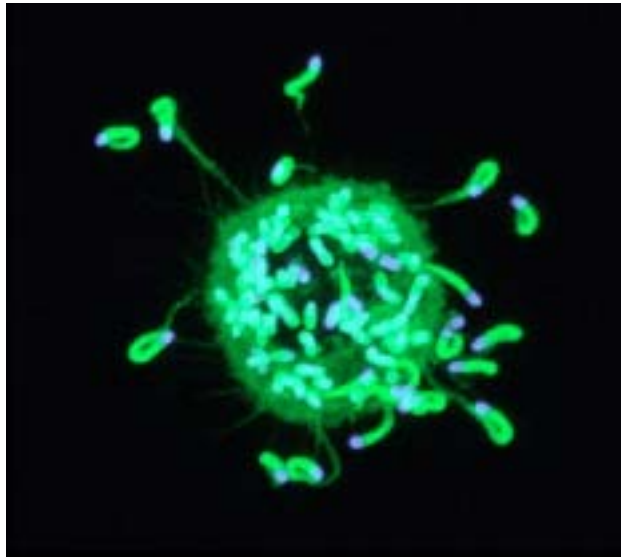


*The Awaji International Forum
on Infection and Immunity*



August 19th thru 21st, 2001

Awaji Yumebutai International Conference Center
Awaji Island, Hyogo, Japan

Organized by

**Research Institute for Microbial Diseases, Osaka University
The Institute of Medical Science, The University of Tokyo**

Organizing Committee

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COE Project “Molecular Biology and Medicine of Infectious and Immunological
Diseases”

Scientific Program

Sunday, August 19th

- 12:50 Opening remarks
- 13:00 **Symposium I. Bacterial Infections**
 Chair : **C. Sasakawa**, Tokyo, Japan
 T. Honda, Osaka, Japan
- 13:05 **I-1. C. Sasakawa**, Tokyo, Japan
 Molecular basis of *Shigella* infection of mucosal barrier: the role of bacterial effector proteins.
- 13:35 **I-2. G. Frankel**, London, UK
 Enteropathogenic and enterohaemorrhagic *E. coli* and the host cell - Molecular Intimacy
- 14:05 **I-3. T. Honda**, Osaka, Japan
 Pathogenesis of *Vibrio parahaemolyticus* food poisoning
- 14:35 **I-4. Y. Horiguchi**, Osaka, Japan
 Membrane translocation of *Bordetella* dermonecrotic toxin into mammalian cells
- 15:05 **I-5. J. T. Barbieri**, Milwaukee, USA
 Inhibition of eukaryotic signal-transduction by *Pseudomonas aeruginosa* ExoS
- 15:35 **I-6. M. Mitsuyama**, Kyoto, Japan
 Dual role of listeriolysin O in the virulence expression and the induction of protective immunity in *Listeria monocytogenes* infection.
- 16:05 Coffee break
- 16:25 **Symposium II. Parasitic Infections 1**
 Chair : **T. Kinoshita**, Osaka, Japan
 N. Inoue, Osaka, Japan
- 16:30 **II-1. K. Himeno**, Fukuoka, Japan
 Heat shock protein in host parasite interaction in infections with obligate intracellular protozoa
- 17:00 **II-2. T. Kinoshita**, Osaka, Japan
 Protein GPI anchors of parasitic protozoa

- 17:30 **II-3. A. F. Cowman**, Melbourne, Australia
Functional analysis of proteins involved in merozoite invasion and cytoadherence of *Plasmodium falciparum*-infected erythrocytes using transfection approaches
- 18:00 **II-4. Y. Urade**, Osaka, Japan
Prostanoid production by Trypanosomatid and Apicomplexan parasites

18:30 - 20:00 Free Time for Dinner

- 20:00 - 21:00 **Oral Poster Presentations 1**
Chair : **K. Tomonaga**, Osaka, Japan
T. Mitamura, Osaka, Japan

Viral Infections

- P-003. Y. Shimizu**: Epithelial-mesenchymal transition induced by Rous Sarcoma Virus in developing stomach.
- P-002. T. Sakaguchi**: Host-dependent Sendai virus replication altered due to the promoter sequence.
- P-001. J. –A. Palacios**: Characterization on higher syncytium formation capacity of HIV-1 defective particles from a persistently infected cell clone.

Parasitic Infections

- P-012. T. Yoshimoto**: Critical roles of IL-12/IFN- γ in blood-stage malaria infection.
- P-005. S. Fukumoto**: Excretory/secretory products from plerocercoids of *Spirometra erinaceieuropaei* suppress TNF- α expression by reducing phosphorylation of ERK1/2 and p38 MAPK in macrophages.
- P-011. T. Mitamura**: Plasmodium falciparum sphingomyelinase is a possible target for malaria chemotherapy.

21:00 - Welcome beer party

Monday, August 20th

9:00 **Symposium III. Parasitic Infections 2**
 Chair : **T. Horii**, Osaka, Japan

9:05 **III-1. P. Druilhe**, Paris, France
 Development of Pre-Erythrocytic stage vaccines against falciparum malaria

9:35 **III-2. T. Horii**, Osaka, Japan
 Serine repeat antigen (SERA) of *Plasmodium falciparum*.

10:05 Coffee break

10:25 **Symposium IV. Viral Infections 1**
 Chair : **K. Ikuta**, Osaka, Japan

10:30 **IV-1. T. Shioda**, Osaka, Japan
 Host factors in the pathogenesis of HIV-1 disease

11:00 **IV-2. B. M. Peterlin**, San Francisco, USA
 Regulation of HIV replication

11:30 **IV-3. Y. Takeuchi**, London, UK
 Cross-species infection and application of retroviruses

12:00 **IV-4. K. Yamanishi**, Osaka, Japan
 Chemokine homologues encoded by human herpesviruses

12:30 – 13:30 Free Time for Lunch

13:30 – 14:30 **Poster Session**

14:30 – 16:30 **Oral Poster Presentations 2**
 Chair : **T. Kaisho**, Osaka, Japan
 T. Iida, Osaka, Japan

Bacterial Infections

P-013. A. Abe: Supermolecular structure of the enteropathogenic *Escherichia coli* type III secretion system and its direct interaction with the EspA-sheath-like structure.

P-036. T. Tobe: Species-specific cell adhesion of enteropathogenic *Escherichia coli* is mediated by type IV bundle-forming pili.

P-023. I. Nakagawa: Cytochrome c-mediated caspase-9 activation triggers apoptosis in *Streptococcus pyogenes*-infected epithelial cells.

P-030. H. Shinomiya: Contribution of p65/L-plastin to the re-organization of the actin cytoskeletons in macrophages via its phosphorylation induced by bacterial components.

P-017. Y. Hong: Aerolysin but not *Clostridium septicum* α toxin recognizes N-glycan on GPI-anchored proteins.

Host Responses

P-044. N. Kadowaki: Subsets of human dendritic cell precursors express distinct sets of Toll-like receptors and respond to different microbial antigens.

P-051. K. Suzue: Analysis of genetic backgrounds involved in the Th1/Th2 differentiation in experimental *Leishmania major* infection.

P-043. S. Ishido: Strategies of immune evasion by Kaposi's Sarcoma-associated Herpes virus K3 and K5 proteins.

P-055. H. Tsutsui: Roles of Toll-like receptors (TLRs)/myeloid differentiation factor 88-activated IL-12 and IL-18 in clearance of *Listeria monocytogenes* in early infectious phase.

P-049. M. Okada: Novel DNA and recombinant BCG vaccinations against tuberculosis by the augmentation of cytotoxic activity.

P-053. T. Takemori: The role of nonlymphoid cells in malaria infection.

16:30 Coffee break

16:50 **Symposium V. Viral Infections 2**
Chair : **Y.Matsuura**, Osaka, Japan

16:55 **V-1. Y. Yanagi**, Fukuoka, Japan
Measles virus: Cellular receptor and pathogenesis

17:25 **V-2. T. S. Dermody**, Nashville, USA
Reovirus Receptors and Apoptosis

17:55 **V-3. Y. Kawaoka**, Tokyo, Japan
Influenza – the challenge for the new millennium

18:25 **Symposium VI. Host Responses 1**
Chair : **H. Kikutani**, Osaka, Japan

18:30 **VI-1. K. Nakanishi**, Nishinomiya, Japan
IL-18 stimulates both Th1 and Th2 responses depending on its cytokine milieu

19:00 **VI-2. T. Kishimoto**, Osaka, Japan
Regulation of cytokine responses: the SSI/SOCS/CIS superfamily

19:30 – 21:30 Banquet

Tuesday, August 21st

- 9:00 **Symposium VII. Host Responses 2**
 Chair : **K. Takatsu**, Tokyo, Japan
 S. Akira, Osaka, Japan
- 9:05 **VII-1. K. Takatsu**, Tokyo, Japan
 IL-5-induced signal response coupling in activation of B cells and
 eosinophils
- 9:35 **VII-2. H. Kikutani**, Osaka, Japan
 Reciprocal Stimulation between T Cells and Dendritic Cells through
 “Immune Semaphorins”
- 10:05 Coffee break
- 10:25 **VII-3. C. Reis e Sousa**, London, UK
 Regulation of dendritic cell function by microbial recognition
- 10:55 **VII-4. S. Akira**, Osaka, Japan
 Toll-like receptor family: A link between innate and acquired immunity
- 11:25 **VII-5. Y. Yoshikai**, Nagoya, Japan
 The roles of toll-like receptors in inflammation caused by bacterial
 infection
- 11:55 Closing remarks

Viral Infections

P-001.

J-A. Palacios

Characterization on higher syncytium formation capacity of HIV-1 defective particles from a persistently infected cell clone.

P-002.

T. Sakaguchi

Host-dependent Sendai virus replication altered due to the promoter sequence.

P-003.

Y. Shimizu

Epithelial-mesenchymal transition induced by Rous Sarcoma Virus in developing stomach.

Parasitic Infections

P-004.

S. Aoki, J. Li, N. Palacpac, T. Mitamura, T. Horii

Co-expression of SERA family genes of *Plasmodium falciparum*

P-005

S. Fukumoto

Excretory/secretory products from plerocercoids of *Spirometra erinaceieuropaei* suppress TNF- α expression by reducing phosphorylation of ERK1/2 and p38 MAPK in macrophages.

P-006.

T. Furuta, T. Kikuchi, N. Watanabe, M. Kimura, K. Takatsu, K. Miyake

A protective role of IgE in *Plasmodium berghei* ANKA infection

P-007.

M. Kanno, S. Fukuhara, M. Miyazaki, H. Ishihara, R. Kanno, H. Inoue, Y. Iwanaga

Mammalian Polycomb group gene, mel-18, Regulates both Cell Death in Thymic T cell and Activation of Dendritic Cell by Parasite antigens.

P-008.

B. K. Kubata, T. Nozaki, Z. Kabututu, M. Lazarus, C. J. Munday, M. Duszenko, Y. Urade

Evidence of Enzymatic Production of Prostaglandins in Kinetoplastida

P-009.

J. Li, H. Matsuoka, T. Mitamura, T. Horii

Characterization of proteases involved in the processing of *Plasmodium falciparum* serine repeat antigen (SERA)

P-010.

H. Maruyama, M. El-Malky, A. Yoshida, N. Ohta

Role of secretory adhesion substances of intestinal nematode, *Strongyloides venezuelensis* in the host mucosal immune responses

P-011.

T. Mitamura

Plasmodium falciparum sphingomyelinase is a possible target for malaria chemotherapy.

P-012.

T. Yoshimoto

Critical roles of IL-12/IFN- γ in blood-stage malaria infection.

Bacterial Infections

P-013.

A. Abe

Supermolecular structure of the enteropathogenic *Escherichia coli* type III secretion system and its direct interaction with the EspA-sheath-like structure.

P-014.

F. Amano, H. Karahashi

Salmonella infection induces macrophage apoptosis through cytotoxic effect of LPS and protein synthesis inhibition

P-015.

K. Ayada, K. Yokota, Y. Fujinami, E. Ishii, T. Toyokawa, R. Takenaka, S. Hayashi, Y. Hirai, K. Oguma

The Mechanism of Cytotoxicity against Gastric Epithelial Cells in Peptic Ulcer Patients Infected by *H. pylori*

P-016.

H. Goto, Y-G Kim, A. Kurita, Y. Kikuchi, N. Okada, H. Danbara

Cytopathic effect of SpvB, a *Salmonella* plasmid virulence protein, is mediated by its inherent ADP-ribosyltransferase activity

P-017

Y. Hong

Aerolysin but not *Clostridium septicum* α toxin recognizes N-glycan on GPI-anchored proteins.

P-018.

M. Iwaki, T. Komiya, T. Fukuda, M. Takahashi

Molecular cloning of antigen genes from *Corynebacterium diphtheriae*

P-019.

Y. Kumagai, K. Konishi, H. Yagishita, A. Yajima, M. Yoshikawa

Dipeptidyl aminopeptidase IV produced by a periodontal pathogen *Porphyromonas gingivalis* is involved in virulence and destruction of the connective tissue

P-020.

A. Kuwae, C. Sasakawa

Shigella Invasion of Macrophage Requires the Insertion of IpaC into the Host Plasma Membrane: Functional analysis of IpaC

P-021.

H. Matsui, Y. Issiki, K. Takehara, M. Nakamura

Oral *Salmonella* vaccines with mutations in the *phoP* gene

P-022.

T. Matsuzawa, Y. Horiguchi

The early stages of *Bordetella* dermonecrotic toxin action on mammalian cells.

P-023

I. Nakagawa

Cytochrome c-mediated caspase-9 activation triggers apoptosis in *Streptococcus pyogenes*-infected epithelial cells.

P-024.

M. Nakata, I. Nakagawa, S. Kawabata, S. Hamada

Overexpression of Bcl-2 can protect *S. pyogenes*-infected epithelial cells from apoptotic cell death

P-025.

T. Nomura, I. Kawamura, K. Tsuchiya, M. Mitsuyama

Essential role of interleukin-12 and interleukin-18 for gamma interferon production induced by listeriolysin O in the spleen cells of mice.

P-026.

S. Ochi, M. Oda, M. Nagahama, J. Sakurai

Hemolysis induced by *Clostridium perfringens* alpha-toxin is related to sphingomyelin metabolism

P-027.

M. Ohara, T. Hayashi, Y. Kusunoki, M. Sugai

Cell-cycle specific inhibitor, Cytolethal Distending Toxin, induces apoptosis in activated lymphocytes.

P-028.

T. Ohshima, K. Koyama, E. Nishimura, N. Maeda

Epidemiological incidence of *Candida* in Japanese people and the defensin susceptibility of each *Candida* species

P-029.

H. Shime, T. Ohnishi, J. Katahira, Y. Horiguchi
Functional domains of *Pasteurella multocida* toxin

P-030

H. Shinomiya

Contribution of p65/L-plastin to the re-organization of the actin cytoskeletons in macrophages via its phosphorylation induced by bacterial components.

P-031.

A. Takahashi, K. Shinkawa, N. Tanoue, K. Maeda, S. Sone, Y. Nakaya

Inflammatory cytokine, interferon- γ , modulate ion transport in human bronchial epithelial cell.

P-032.

A. Takaya, T. Tomoyasu, A. Tokumitsu, T. Ohkishi, T. Yamamoto

Regulation of *Salmonella* Pathogenicity Island 1 (SPI1)-Encoded Invasion Gene Expression by AAA Protease Family

P-033.

K. Tamano, C. Sasakawa

Supramolecular structure of the *Shigella* type III secretion machinery: the needle part is changeable in length and essential for delivery of the effector proteins

P-034.

I. Tatsuno, C. Sasakawa

The *toxB* gene on pO157 of enterohaemorrhagic *Escherichia coli* O157:H7 required for full adherence phenotype to epithelial cells.

P-035.

Y. Terao, S. Kawabata, I. Nakagawa, S. Hamada

Fba, a novel fibronectin-binding protein from *Streptococcus pyogenes*, promotes bacterial entry into epithelial cells

P-036.

T. Tobe

Species-specific cell adhesion of enteropathogenic *Escherichia coli* is mediated by type IV bundle-forming pili.

P-037.

T. Toyotome, T. Suzuki, A. Kuwae, C. Sasakawa

Shigella protein, IpaH_{9,8} secreted from bacteria within mammalian cells and transported to the nucleus.

P-038.

A. Wada, K. Ogushi, T. Hirayama

Induction of human α -defensin-2 in human colon adenocarcinoma cell, Caco-2, by *Salmonella enteritidis* FliC (flagella filament protein)

P-039.

K. Yokota, S. Hayashi, H. Ono, H. Mano, D. U. Saitou, Y. Hirai, E. Ishii, R. Yamazaki, L. Hughes, K. Ayada, K. Oguma

Helicobacter pylori infection and host immunity in patients with MALT lymphoma.

Host Responses

P-040.

K. Adachi, H. Tsutsui, S. Kashiwamura, H. Okamura, A. Shizuo, K. Nakanishi

Critical roles of TLRs/MyD88 pathways in induction of *P. berghei*-induced liver injury

P-041.

A. Amano, M. Kuboniwa, S. Shizukuishi, I. Nakagawa, S. Hamada

DNA vaccination of Lys-specific cysteine proteinase protects mice from *Porphyromonas gingivalis* Infection

P-042.

K. Hoshino, T. Kaisho, A. Shizuo

LPS-induced maturation of the MyD88-deficient dendritic cells

P-043.

S. Ishido, R. Means, J. Jung

Strategies of Immune Evasion by Kaposi's Sarcoma-Associated Herpesvirus K3 and K5 proteins

P-044.

N. Kadowaki

Subsets of human dendritic cell precursors express distinct sets of Toll-like receptors and respond to different microbial antigens.

P-045.

A. Kumanogoh, K. Suzuki, C. Watanabe, H. Kikutani

The lymphocyte semaphorin CD100 plays a critical role in T cell activation via dendritic cells

P-046.

T. Nishimura

The functions of glycosylation-dependent cell adhesion molecule-1 (GlyCAM-1) and mucosal addressin cell adhesion molecule-1 (MAdCAM-1) in the lactating mouse mammary gland

P-047.

K. Ohnishi, T. Shimizu, F. Melchers

A NONCLASSICAL CADHERIN EXPRESSED ON B-LYMPHOCYTES AND MUCOSAL TISSUES.

P-048.

K. Ohya, N. Itchoda, K. Ohashi, M. Onuma, T. Matsumura, C. Sugimoto
Expression of biologically active cytokines in transgenic plants

P-049.

M. Okada

Novel DNA and recombinant BCG vaccinations against tuberculosis by the augmentation of cytotoxic activity.

P-050.

S. Sato, F. Nomura, K. Takeda, A. Shizuo

Induction of tolerance to microbial components in macrophages

P-051.

K. Suzue

Analysis of genetic backgrounds involved in the Th1/Th2 differentiation in experimental *Leishmania* major infection.

P-052.

S. Takaki, H. Morita, Y. Tezuka, K. Takatsu

Lnk, an intracellular adaptor protein that regulates B cell production and hematopoietic stem cell function

P-053.

T. Takemori

The role of nonlymphoid cells in malaria infection.

P-054.

O. Takeuchi, T. Horiuchi, A. Shizuo

A role of Toll-like receptor (TLR) 6 and TLR2 in discrimination of bacterial lipoproteins

P-055.

H. Tsutsui

Roles of Toll-like receptors (TLRs)/myeloid differentiation factor 88-activated IL-12 and IL-18 in clearance of *Listeria monocytogenes* in early infectious phase.

P-056.

T. Uchiyama, N. Takahashi, M. Miki, H. Kato, K. Imanishi, H. Ueno, H. Nishida

Immunological events in infectious diseases induced by a bacterial superantigen, toxic shock syndrome (TSS) and neonatal TSS-like exanthematous disease - to the solution of several contradictions

P-057.

C. Watanabe, A. Kumanogoh, W. Shi, S. Yamada, M. Okabe, K. Yoshida, H. Kikutani

Enhanced immune responses in mice expressing a truncated form of the lymphocyte semaphorin CD100

P-058.

K. Yoshida, N. Nakano, H-G. Rammensee, T. Sasazuki, K. Haskins, H. Kikutani
Identification of peptide ligands recognized by I-A^{g7} restricted islet-reactive T cells