

**Kyoto University 21st Century COE program
COE Formation in Frontier Life Science by Unifying Interactions**

The 4th International Student Seminar

March 6 – 9, 2006

Symposium

[March 6 and 7, 2006]

Program

Graduate School of Biostudies,

Institute for Virus Research,

Kyoto University, Japan

Tuesday, 6th March 2006

Judges:

Dr. Koyasu, Dr. Hiromi, Dr. Imanaka, Dr. Ladher, Dr. Nakauchi,
Dr. Matsuoka, Dr. Okada, Mr. Sipp, Dr. Takahashi, Dr. Ueda, Dr. Urano

8:30 - **Registration**

9:00 - 9:10 **Welcome Address and Opening Remarks**

Session A / Metabolism and Environmental Response

9:10 - 10:53 Chair: Nobuhiko Kato & Michika Mochizuki

9:10 - 9:13 Introduction

S- A1 9:13 - 9:33

Takashi Yamano (Graduate School of Biostudies, Kyoto University)

Physiological and transcriptional responses to high-light and low-CO₂ in *Chlamydomonas reinhardtii*.

S- A2 9:33 - 9:53

Lina Li (Department of Biology, Indiana University, USA)

Regulation of a complex response regulator involved in complementary chromatic adaptation in *Fremyella diplosiphon*.

S- A3 9:53 - 10:13

Takayuki Inui (Graduate School of Biostudies, Kyoto University)

Characterization of the rate-limiting step of benzylisoquinoline alkaloid biosynthesis in *Eschscholzia californica*.

S- A4 10:13 - 10:33

Shin Kurihara (Graduate School of Biostudies, Kyoto University)

A NOVEL γ -glutamylputrescine SYNTHETASE IN THE PUTRESCINE UTILIZATION PATHWAY OF *ESCHERICHIA COLI*K-12.

S- A5 10:33 - 10:53

Tomoyuki Suzuki (Graduate School of Biostudies, Kyoto University)

Two Different Zinc Transport Complexes, ZnT5/ZnT6 Hetero-oligomers and ZnT7 Homo-oligomers, Localized in the Secretory Pathway Operate to Activate Zinc- requiring Enzymes, Alkaline Phosphatases.

10:53 - 11:05 **Break**

Session B / Protein Dynamics

11:05 - 12:08 Chair: Toshiyuki Harumoto & Masafumi Yoroisaka

11:05 - 11:08 Introduction

S- B1 11:08 - 11:28

Yoshiko Kametani (Graduate School of Biostudies, Kyoto University)

Cadherin flow at cell junctions.

S- B2 11:28 - 11:48

Ma. Xenia G. Ilagan (Department of Molecular Biology and Pharmacology, Washington University School of Medicine, USA)

Reporters for real-time monitoring of protein interactions during Notch signaling.

S- B3 11:48 - 12:08

Yoshito Masamizu (Institute for Virus Research, Kyoto University)

Real-time imaging of Hes1 oscillation and simulation of the somite segmentation clock.

12:08 - 13:05 **Lunchtime**

Poster Session

13:05 - 14:05 **Poster viewing and discussion (A1-A54)**

Session C / Development

14:05 - 15:08 Chair: Hiromi Shimojo & Keiji Okamoto

14:05 - 14:08 Introduction

S- C1 14:08 - 14:28

Horace Rhee (Howard Hughes Medical Institute, The Rockefeller University, USA)

Molecular Regulation of Hair Follicle Morphogenesis.

S- C2 14:28 - 14:48

Takaki Komiyama (Neurosciences Program and Dept. of Biological Sciences, Howard Hughes Medical Institute, Stanford University, Stanford, USA)

Unraveling the Logic of Olfactory Circuit Assembly.

S- C3 14:48 - 15:08

Yuko Shimada (Graduate School of Biostudies, Kyoto University)

Polarized transport of Flizzled along the planar microtubule arrays in *Drosophila* wing epithelium.

15:08 - 15:25 **Coffee break**

Session D / Molecular Structure and Biophysics

15:25 - 17:08 Chair: Takashi Yamano & Mina Kikuchi

15:25 - 15:28 Introduction

S- D1 15:28 - 15:48

Yeh-Shiu Chu (UMR 144 CNRS-Institut Curie, France)

The mechanics of cadherin-mediated cell-cell adhesion.

S- D2 15:48 - 16:08

Atsuko Tsuchiya (Graduate School of Biostudies, Kyoto University)

Crystal structure of 1,2- α -L-fucosidase from *Bifidobacterium bifidum*.

S- D3 16:08 - 16:28

Marc Bailly (Institute de Biologie Moleculaire et Cellulaire (IBMC), University Louis Pasteur, France)

When tRNA^{Asn} encodes formation of its own aa: tRNA-dependent asparagine formation is mediated by a single base pair in the acceptor arm of tRNA^{Asn}.

S- D4 16:28 - 16:48

Jeffrey Viereggs (Department of Physics, University of California, Berkeley, USA)

Studying RNA Folding with Mechanical Force.

S- D5 16:48 - 17:08

Ryosuke L. Ohniwa (Graduate School of Biostudies, Kyoto University)

Regulation of genome architecture in *Escherichia coli*: the depletion of Fis and the presence of Topo1 is essential to compact nucleoid induced by DPS.

17:08 - 17:20 **Break**

Session E / Regulation of DNA and RNA

17:20 - 18:43 Chair: Keiko Muraki & Yasufumi Hashimoto

17:20 - 17:23 Introduction

S- E1 17:23 - 17:43

Sophie Dumont (University of California Berkeley, USA)

RNA Unwinding by HCV NS3 Helicase and its Dependence on ATP and RNA Sequence.

S- E2 17:43 - 18:03

Hiroaki Kato (Institute for Virus Research, Kyoto University)

RNA polymerase II is required for RNAi-dependent heterochromatin assembly.

S- E3 18:03 - 18:23

Yoontae Lee (Department of Biological Sciences and Research Center for Functional Cellulomics, Seoul National University, Korea)

The Role of PACT in the RNA silencing pathway.

S- E4 18:23 - 18:43

Mark Zarnegar (California Institute of Technology, Division of Biology, USA)

Cis Regulation of transcription factor PU.1 in pro-T-cells.

19:00 - 21:00 **Recognition of Excellent Oral and Poster Presentations (Room 201)**

Tuesday, 7th March 2006

Judges:

Dr. Koyasu, Dr. Hiromi, Dr. Ichijyo, Dr. Gotoh, Dr. Ladher,
Dr. Nagata, Dr. Nakano, Dr. Hagiwara, Mr. Sipp, Dr. Urano

Session F/ Protein Modification and Localization

9:00 - 10:23 Chair: Masafumi Yoroisaka & Nobuhiko Kato

9:00 - 9:03 Introduction

S- F1 9:03 - 9:23

Ichiro Taniguchi (Institute for Virus Research, Kyoto University)

ATP-dependent recruitment of mRNA export factor ERF/Aly onto mRNAs as mediated by RNA helicase-like protein UAP56.

S- F2 9:23 - 9:43

Hiroki Muto (Institute for Virus Research, Kyoto University)

Genetically Encoded But Non-Polypeptide Prolyl-tRNA Functions in the A-Site for SecM-Mediated Ribosomal Stall.

S- F3 9:43 - 10:03

Jeffrey J. Kovacs (Department of Pharmacology and Cancer Biology, Duke University, USA)

The deacetylase HDAC6 regulates Hsp90 acetylation and chaperone-dependent activation of glucocorticoid receptor.

S- F4 10:03 - 10:23

Kunio Kondoh (Graduate School of Biostudies, Kyoto University)

Regulation of nuclear translocation of ERK5.

10:23 - 10:35 **Break**

Session G / Cell Cycle and Cell Senescence

10:35 - 11:58 Chair: Keiji Okamoto & Hiromi Shimojo

10:35 - 10:38 Introduction

S- G1 10:38 - 10:58

Emily E. Arias (Department of Biological Chemistry and Molecular Pharmacology, Harvard

Medical School, USA)

PCNA functions as a molecular platform to trigger Cdt1 destruction and prevent re-replication.

S- G2 10:58 - 11:18

Shun Adachi (Graduate School of Biostudies, Kyoto University)

Subcellular positioning of F plasmid mediated by dynamic localizing of SopA and SopB based on reaction-diffusion system.

S- G3 11:18 - 11:38

Nathan W. Goehring (Department of Microbiology, Harvard Medical School, USA)

Premature targeting of cell division proteins to midcell – insights into the assembly of the *E. coli* division machinery.

S- G4 11:38 - 11:58

Ryo Funayama (Graduate School of Biostudies, Kyoto University)

Disappearance of Linker Histone H1 in Cellular Senescence.

11:58 - 13:00 **Lunchtime**

Poster Session

13:00 - 14:00 **Poster Viewing and discussion (B1-B54)**

Session H / Redox Regulation and Cell Death

14:00 - 15:43 Chair: Mina Kikuchi & Keiko Muraki

14:00 - 14:03 Introduction

S- H1 14:03 - 14:23

Masakatsu Noguchi (Graduate School of Biostudies, Kyoto University)

VCP oxidation causes endoplasmic reticulum dysfunction and cell death.

S- H2 14:23 - 14:43

Dongmei Wang (Institute for Virus Research, Kyoto University)

CONTROL OF MITOCHONFRIAL OUTER MEMBRANE PERMEABILIZATION AND BLC-XI LEVELS BY THIOREDOXIN2 IN DT40 CELLS.

S- H3 14:43 - 15:03

M.E. Lonn (Department of Medical biochemistry and Biophysics, Karolinska Institute, Sweden)

Glutaredoxin 2, oxidative stress and cell death.

S- H4 15:03 - 15:23

Edwina Naik (The Walter and Eliza Hall Institute of Medical Research, Australia)

Angiogenesis, UV and p53.

S- H5 15:23 - 15:43

Yohei Kobayashi (Graduate School of Biostudies, Kyoto University)

Impaired mitotic chromosome condensations generating tetraploids induces a novel type of cell death through reduced expression eEF1A1-1 α .

15:43 - 16:05 **Coffee break**

Session I / Mechanism of Virus Infection and Prevention

16:05 - 17:28 Chair: Michika Mochizuki & Toshiyuki Harumoto

16:05 - 16:08 Introduction

S- I1 16:08 - 16:28

Yorifumi Satoh (Institute for Virus Research, Kyoto University)

The HTLV-IbZIP factor gene mRNA supports proliferation of adult T-cell leukemia cells.

S- I2 16:28 - 16:48

Cynthia Johnson (University of Texas Southwestern Medical Center, Dallas Texas USA)

Regulation and therapeutic control of the RIG-I pathway during hepatitis C virus infection.

S- I3 16:48 - 17:08

Jun Aoki (Institute for Virus Research, Kyoto University)

CD63 play an important role in env incorporation into HIV-1 virions.

S- I4 17:08 - 17:28

Kiran N. Meekings (Wright-Fleming Institute, Imperial College London, UK)

Viral Factors Controlling HTLV-1 Proviral Load and Provirus Expression.

17:28 - 17:40 **Break**

Session J / Immunology

17:40 - 19:03 Chair: Yasufumi Hashimoto & Takashi Yamano

17:40 - 17:43 Introduction

S- J1 17:43 - 18:03

Scott G. Kitchen (The David Geffen School of Medicine at the University of California at Los Angeles, USA)

Los Angeles, USA)

The CD4 molecule on CD8+ T cells directly enhances effector function and is a target for HIV infection.

S- J2 18:03 - 18:23

Hirofumi Shibata (Institute for Virus Research, Kyoto University)

Regulation of interleukin-7 receptor alpha chain expression by T cell receptor.

S- J3 18:23 - 18:43

Peter van den Elzen (Department of Pathology, Harvard Medical School, USA)

Apolipoprotein-mediated pathways of lipid antigen presentation.

S- J4 18:43 - 19:03

Lance Thomas (Department of Microbiology and Immunology, Vanderbilt University Medical Center, USA)

Center, USA)

Control of B cell function by histone methylation.

19:03 - 19:08 **Closing Remarks** by Yasufumi Hashimoto

19:30 - 21:00 **Recognition of Excellent Oral and Poster Presentations (Room 201)**

Poster Presentation

Monday, 6th March 2006 (A- 1 ~ A- 54)

Group 1 / Science Communication Room: 211

- A- 1 **Jin Higashijima, Kazuto Kato**
(Graduate School of Biostudies, Kyoto University)
Opinions of Japanese Life Scientists on Science Communication.
- A- 2 **Kei Kano, Kazuto Kato**
(Graduate School of Biostudies, Kyoto University)
The state of Life science education in Japan.

Group 2 / Environmental Response Room: 211

- A- 3 **Shouta Chiyoda, Philip J. Linley, Akiho Yokota, Hideya Fukuzawa, and Takayuki Kochi**
(Graduate School of Biostudies, Kyoto University)
A chloroplast transformation system for liverwort suspension-culture cells.
- A- 4 **Mari Banba, Svetlana A. Chechetka, Yasuhiro Ooki, Shingo Hata**
(Graduate School of Biostudies, Kyoto University)
Comparative transcriptome analysis among three types of root nodule senescence in a model legume *Lotus japonicus*.
- A- 5 **Atsushi Takabayashi, Masahiro Kishine, Kozi Asada, Tsuyoshi Endo, Fumihiko Sato**
(Graduate School of Biostudies, Kyoto University)
The driving force for CO₂ concentration mechanism in C4 photosynthesis is the cyclic electron flow around photosystem I via NAD(P)H dehydrogenase.
- A- 6 **Tsutomu Kohinata, Haruku Nishino, Yousuke Yamahara, Hideya Fukuzawa**
(Graduate School of Biostudies, Kyoto University)
A regulatory factor *Ccm1* indispensable for limiting-CO₂ stress responses binds zinc and forms a high molecular weight complex in *Chlamydomonas reinhardtii*.
- A- 7 **Lina Li, David M. Kehoe**
(S- A2) (Department of Biology, Indiana University, USA)
Regulation of a complex response regulator involved in complementary chromatic adaptation in *Fremyella diplosiphon*.
- A- 8 **Takashi Yamano, Kenji Miura, Katsuyuki T. Yamato, Takayuki Kohchi and Hideya Fukuzawa**
(S- A1) (Graduate School of Biostudies, Kyoto University)
Physiological and transcriptional responses to high-light and low-CO₂ in *Chlamydomonas reinhardtii*.

Group 3 / Metabolism Room: 211

- A- 9 **Takayuki Inui, Ken-ichi Tamura and Fumihiko Sato**
(S- A3) (Graduate School of Biostudies, Kyoto University)
Characterization of the rate-limiting step of benzylisoquinoline alkaloid biosynthesis in *Eschscholzia californica*.
- A- 10 **Hirumichi Minami, Fumihiko Sato**
(Graduate School of Biostudies, Kyoto University)
Functional analysis of norcoclaurine synthase in *Coptis japonica*.
- A- 11 **Nobuhiro Ikezawa, Fumihiko Sato**
(Graduate School of Biostudies, Kyoto University)
Molecular cloning of methylenedioxy bridge-forming enzymes that belong to a novel I450 family from isoquinoline-alkaloid producing cells.
- A- 12 **Shin Kurihara, Shinpei Oda, Hyeon Guk Kim, Hidehiko Kumagai, Hideyuki Suzuki**
(S- A4) (Graduate School of Biostudies, Kyoto University)
A NOVEL γ -GLUTAMYLPUTRESCINE SYNTHETASE IN THE PUTRESCINE UTILIZATION PATHWAY OF *ESCHERICHIA COLI*K-12.
- A- 13 **Tomoyuki Suzuki, Kaori Ishihara, Hitoshi Migaki, Yuko Yamaguchi-Iwai, and Taiho Kambe**
(S- A5) (Graduate School of Biostudies, Kyoto University)
Two Different Zinc Transport Complexes, ZnT5/ZnT6 Hetero-oligomers and ZnT7 Homo-oligomers, Localized in the Secretory Pathway Operate to Activate Zinc-requiring Enzymes, Alkaline Phosphatases.

Group 4 / Carbohydrates and Lipids Room: 212

- A- 14 **Hayato Ozawa, Fusako Oura, Kiyotaka Fujita, Masanori Yamaguchi, and Kenji Yamamoto**
(Graduate School of Biostudies, Kyoto University)
Syntheses of functional glycoconjugates using transglycosylation activity of endoglycosidase from Bifidobacteria.
- A- 15 **Toshihiko Katoh, Kumiko Kitamura, Megumi Maeda, Yoshinobu Kimura, Kenji Yamamoto**
(Graduate School of Biostudies, Kyoto University)
Analysis of Free Oligosaccharides in the Cytosol of *C. elegans* Lacking Endo- β -*N*-acetylglucosaminidase.
- A- 16 **Estuko Kishimoto, Hiromu Takematsu, Yasunori Kozutsumi**
(Graduate School of Biostudies, Kyoto University)
Identification of novel kinases that regulate the phosphorylation of Ypk1p.

A- 17 **Hiroshi Yamamoto, Hiromu Takematsu, Yasunori Kozutsumi**

(Graduate School of Biostudies, Kyoto University)

Effect of lysosphingolipids on monocyte differentiation into macrophage.

A- 18 **Yuko Naito, Hiromu Takematsu, Yasunori Kozutsumi**

(Graduate School of Biostudies, Kyoto University)

Identification of GL7-epitope, the antigen expressed on activated B cells in germinal center.

Group 5 / Cell Structure and Cell Migration Room: 212

A- 19 **Keiko Fukuda, Yukiko Nakase, and Tomohiro Matsumoto**

(Graduate School of Biostudies, Kyoto University)

Study of Rheb GTPase correlated with Tuberous sclerosis complex (TSC) signaling cascade.

A- 20 **Hironori Katoh, Kiyo Hiramoto, and Manabu Negishi**

(Graduate School of Biostudies, Kyoto University)

Activation of Rac1 by RhoG regulates cell migration.

A- 21 **Yasuhito Onodera, Shigeru Hashimoto, Jim C. Norman and Hisataka Sabe**

(Graduate School of Biostudies, Kyoto University)

Analysis of integrin dynamics in breast cancer invasion: roles of AMAP1-mediated protein interactions.

A- 22 **Yeh-Shiu Chu, Olivier Eder, William A. Thomas, Frederic Pincet**

(S- D1) (UMR 144 CNRS-Institut Curie, France)

The mechanics of cadherin-mediated cell-cell adhesion.

A- 23 **Yoshiko Kametani, Masatoshi Takeichi**

(S- B1) (Graduate School of Biostudies, Kyoto University)

Cadherin flow at cell junctions.

Group 6 / Development and Neuron Room: 201 & 212

A- 24 **Yuko Shimada, Shigenobu Yonemura, Hiro Ohkura, David Strutt, and Tadashi Uemura**

(S- C3) (Graduate School of Biostudies, Kyoto University)

Polarized transport of Flizzled along the planar microtubule arrays in Drosophila wing epithelium.

A- 25 **Yuri Ito, Izumi Oinuma, Hironori Katoh, and Manabu Negishi**

(Graduate School of Biostudies, Kyoto University)

Sema4D/PlexinB1 activates GSK-3 β via R-Ras GAP activity, inducing growth cone collapse.

- A- 26 **Takaki Komiyama, Lora Sweeney, and Liqun Luo**
(S- C2) (Neurosciences Program and Dept. of Biological Sciences, Howard Hughes Medical Institute, Stanford University, Stanford, USA)
Unraveling the Logic of Olfactory Circuit Assembly.
- A- 27 **Itaru Imayoshi, Ryoichiro Kageyama**
(Institute for virus Research, Kyoto University)
Temporal regulation of Cre recombinase activity in neural stem cells.
- A- 28 **Shigenori Nagae, Takuj Tanoue, and Masatoshi Takeichi**
(Graduate School of Biostudies, Kyoto University)
Fat3, a huge cadherin molecule with 34 cadherin repeats, is mainly expressed in central nervous system at the embryonic stages.
- A- 29 **Hiroshi Kimura, Tadao Usui, Michiteru Konno, Tadashi Uemura**
(Graduate School of Biostudies, Kyoto University)
Homophilic or Heterophilic, that is a question: hunting for a hypothetical ligand of seven-pass transmembrane cadherins.
- A- 30 **Daisuke Satoh, Daichi Sato, and Tadashi Uemura**
(Graduate School of Biostudies, Kyoto University)
Control of proximal-distal distribution of branching points in dendritic trees of Drosophila sensory neurons.
- A- 31 **Misato Yamamoto, Ryu Ueda, Kuniaki Takahashi, Kaoru Saigo, and Tadashi Uemura**
(Graduate School of Biostudies, Kyoto University)
Neuron, glia, and epidermal cells: tricellular regulation of neuronal morphology through an immunoglobulin superfamily molecule Neurogjan.
- A- 32 **Horace Rhee and Elaine Fuchs**
(S- C1) (Howard Hughes Medical Institute, The Rockefeller University, USA)
Molecular Regulation of Hair Follicle Morphogenesis.
- A- 33 **Takashi Ishiuchi, Takuj Tanoue, and Masatoshi Takeichi**
(Graduate School of Biostudies, Kyoto University)
The developmental expression patterns of mammalian Dachsous cadherins show evolutionary conserved and species-specific characteristics.
- A- 34 **Ma. Xenia G. Ilagan, Mary Blandford, David Piwnica-Worms, and Raphael Kopan**
(S- B2) (Department of Molecular Biology and Pharmacology, Washington University School of Medicine, USA)
Reporters for real-time monitoring of protein interactions during Notch signaling.

A- 35 **Yoshiki Takashima, Yoshito Masamizu, Toshiyuki Ohtsuka, Syuichi Yamada, Ryoichiro Kageyama**

(Institute for Virus Research, Kyoto University)

Visualization of the segmentation clock.

A- 36 **Yoshito Masamizu, Toshiyuki Ohtsuka, Yoshiki Takashima, Hiroki Nagahara,**

(S- B3) **Yoshiko Takenaka, Kenichi Yoshikawa, Hitoshi Okamura, Ryoichiro Kageyama**

(Institute for Virus Research, Kyoto University)

Real-time imaging of Hes1 oscillation and simulation of the somite segmentation clock.

Group 7 / Regulation of DNA and RNA Room: 201

A- 37 **Mark Zarnegar, Ellen Rothenberg**

(S- E4) (California Institute of Technology, Division of Biology, USA)

Cis Regulation of transcription factor PU.1 in pro-T-cells

A- 38 **Arata Yamaki, Katsuyuki Yamato, Kohei Yodoya, Hiroki Bando, Masataka Kajikawa, Shigeki**

Nakayama, Mariko Fujishita, Tadasu Shin-i, Yuji Kohara, Takayuki Kohchi, Hideya Fukuzawa,

Kanji Ohyama

(Graduate School of Biostudies, Kyoto University)

The Structure and Evolution of the Y chromosome in the liverwort *Marchantia polymorpha* L.

A- 39 **Yoontae Lee, Inha Hur, Seong-Yeon Park, Young-Kook Kim and V. Narry Kim**

(S- E3) (Department of Biological Sciences and Research Center for Functional Cellulomics,

Seoul National University, Korea)

The Role of PACT in the RNA silencing pathway.

A- 40 **Hiroaki Kato, Derek B. Goto, Robert A. Martienssen, Takeshi Urano, Koichi Furukawa,**

(S- E2) **Yota Murakami**

(Institute for Virus Research, Kyoto University)

RNA polymerase II is required for RNAi-dependent heterochromatin assembly.

Group 8 / Structure and Maintenance of DNA and RNA Room: 201

A- 41 **Kohei Dohke, Shiv I. S. Grewal, Katsunori Tanaka, Satoshi Katayama, Takeshi Urano, Koichi Furukawa, Yota Murakami**

(Institute for Virus Research, Kyoto University)

Functional Studies of Chromatin Assembly Factor in Fission Yeast.

A- 42 **Keiji Okamoto, Tomohiko Iwano, Makoto Tachibana, Yoichi Shinkai**

(Institute for Virus Research, Kyoto University)

The Function of mouse TRF1 for the maintenance of the telomere structure.

- A- 43 **Mirai Nakamura, Fuyuki Ishikawa**
(Graduate School of Biostudies, Kyoto University)
Role of the mammalian OBFC1 protein, a putative homologue of yeast Stn1, in telomere maintenance.
- A- 44 **Sophie Dumont*, Wei Cheng*, Victor Serebrov, Rudolf K. Beran, Ignacio Tinoco. Jr. Anna Marie Pyle, Carlos Bustamante ^{*equally contributed}**
(S- E1) (University of California Berkeley, USA)
RNA Unwinding by HCV NS3 Helicase and its Dependence on ATP and RNA Sequence.
- A- 45 **Ken Takai, Shuichi Sakamoto, Tatsunori Sakai, Jun-ichiro Yasunaga, Kenshi Komatsu, and Masao Matsuoka**
(Institute for Virus Research, Kyoto University)
Alternative splicing regulates NBS1 expression after DNA break.
- A- 46 **Eiji Ohashi, Tomo Hanafusa, Keijiro Kamei, and Haruo Ohmori**
(Institute for Virus Research, Kyoto University)
Interactions between hREV1 and three Y-family DNA polymerases.
- A- 47 **Jeffrey Vieregg, Ignacio Tinoco. Jr.**
(S- D4) (Department of Physics, University of California, Berkeley, USA)
Studying RNA Folding with Mechanical Force.
- A- 48 **Joongbaek Kim, Kohji Hizume, Shige H. Yoshimura, Ryosuke L. Ohniwa, Chieko Wada, Akira Ishihama and Kunio Takeyasu**
(Graduate School of Biostudies, Kyoto University)
The protein and DNA compositions of fundamental structure of bacterial chromosome by the plasmid structural analysis.
- A- 49 **Ryosuke L. Ohniwa, Kazuya Morikawa, Joongbaek Kim, Toshiko Ohta, Chieko Wada, and Kunio Takeyasu**
(S- D5) (Graduate School of Biostudies, Kyoto University)
Regulation of genome architecture in *Escherichia coli*: the depletion of Fis and the presence of Topo1 is essential to compact nucleoid induced by DPS.
- A- 50 **Marc Bailly, Mickael Blaise, Hubert D Becker, Daniel Kern**
(S- D3) (Institut de Biologie Moléculaire et Cellulaire (IBMC), France)
When tRNA^{Asn} encodes formation of its own aa: tRNA-dependent asparagine formation is mediated by a single base pair in the acceptor arm of tRNA^{Asn}.

Group 9 / Structure of Protein Room: 201

- A- 51 **Takashi Koyanagi, Takane Katayama, Hideyuki Suzuki, Hidehiko Kumagai**
(Graduate School of Biostudies, Kyoto University)
Functional analysis of the mutant transcriptional regulator TyrR with an enhanced ability of self-association.
- A- 52 **Kayo Koide, Koreaki Ito, Yoshinori Akiyama**
(Institute for Virus Research, Kyoto University)
Environments of the protease active site of Rse Pas assessed by site-specific cysteine modification.
- A- 53 **Atsuko Tsuchiya, Masamichi Nagae, Soichi Wakatsuki, Ryuichi Kato, Takane Katayama,**
(S- D2) **Kenji Yamamoto**
(Graduate School of Biostudies, Kyoto University)
Crystal structure of 1,2- α -L-fucosidase from *Bifidobacterium bitidum*.
- A- 54 **Tomoya Tsukazaki, Hiroyuki Mori, Shuya Fukai, Tomoyuki Numata, Anna Perederina, Hiroaki Adachi, Hiroyoshi Matsumura, Kazufumi Takano, Satoshi Murakami, Tsuyoshi Inoue, Yusuke Mori, Takatomo Sasaki, Dmitry G. Vassilyev, Osamu Nureki, and Koreaki Ito**
(Institute for Virus Research, Kyoto University)
Purification, crystallization and preliminary X-ray diffraction of SecDF, a translocon-associated membrane protein, from *Thermus thermophilus*.

Tuesday, 7th March 2006 (B- 1 ~ B- 54)

Group 10 / RNA Procession and Translation Room: 211

- B- 1 **Ichiro Taniguchi, Mutsuhito Ohno**
(S- F1) (Institute for Virus Research, Kyoto University)
ATP-dependent recruitment of mRNA export factor RNF/Aly onto mRNAs as mediated by RNA helicase-like protein UAP56.
- B- 2 **Hiroki Muto, Hitoshi Nakatogawa, and Koreaki Ito**
(S- F2) (Institute for Virus Research, Kyoto University)
Genetically Encoded But Non-Polypeptide Prolyl-tRNA Functions in the A-Site for SecM-Mediated Ribosomal Stall.
- B- 3 **Chihiro Hatai, Naoyuki Kataoka, and Mutsuhito Ohno**
(Institute for Virus Research, Kyoto University)
Biochemical analysis of magoh protein: a human homolog of *Drosophila* mago nashi protein.
- B- 4 **Rei Yoshimoto, Naoyuki Kataoka, and Mutsuhito Ohno**
(Institute for Virus Research, Kyoto University)
Isolation of the post-splicing intron complex.

Group 11 / Protein Modification and Localization Room: 211

- B- 5 **Jeffrey J. Kovacs, Patrick J.M. Murphy, Stephanie Gaillard, Xuan Zhao, June-Tai Wu,**
(S- F3) **Christopher V. Nicchitta, Minoru Yoshida, David O. Toft, William B. Pratt, and Tso-Pang Yao**
(Department of Pharmacology and Cancer Biology, Duke University, USA)
The deacetylase HDAC6 regulates Hsp90 acetylation and chaperone-dependent activation of glucocorticoid receptor.
- B- 6 **Chiho Mori, Seiji Hori, and Akira Kakizuka**
(Graduate School of Biostudies, Kyoto University)
Post- Translational Modifications in the C-Terminal Region Regulates ATPase activity of VCP (Valosin-Containing Protein).
- B- 7 **Kunio Kondoh, Kazuya Terasawa, Hiroko Morimoto, and Eisuke Nishida**
(S- F4) (Graduate School of Biostudies, Kyoto University)
Regulation of nuclear translocation of ERK5.

Group 12 / Signal Transduction Room: 211

- B- 8 **Hiroko Morimoto, Kunio Kondoh, and Eisuke Nishida**
(Graduate School of Biostudies, Kyoto University)
A novel molecular mechanism in ERK5 signaling.
- B- 9 **Junya Yamazaki, Hironori Katoh, Yoshiaki Yamaguchi, Manabu Negishi**
(Graduate School of Biostudies, Kyoto University)
Two G₁₂ family G proteins, G₁₂ and G₁₃, Show different subcellular localization.
- B- 10 **Yasufumi Hashimoto, Sadatsugu Ookuma, Eisuke Nishida**
(Graduate School of Biostudies, Kyoto University)
Autophagy genes negatively regulate lifespan in *Caenorhabditis elegans*.
- B- 11 **Aiguo Tan, Shin-ichi Oka, Michika Mochizuki, Hiroshi Masutani, Juniji Yodoi**
(Institute for Virus Research, Kyoto University)
Thioredoxin-binding protein-2 (TBP-2) –like protein associated with spliceosome (TLAS) is novel growth repressor and colocalizes with a splicing factor SC35.
- B- 12 **Shiho Nakagiri, Akira Murakami, Shinji Takada, Tetsu Akiyama, and Shin Yonehara**
(Graduate School of Biostudies, Kyoto University)
Viral FLIP Enhances Wnt Signaling Downstream of Stabilized β -catenin, Leading to Control of Cell Growth.
- B- 13 **Takuma Sugi, Takuji Oyama, Hisataka Sabe, Kousuke Morikawa, and Hisato Jingami**
(Graduate School of Biostudies, Kyoto University)
Molecular Mechanism Underlying the Scaffold Protein-mediated Trafficking of the Metabotropic Glutamate Receptor.

Group 13 / Cell Cycle and Cell Senescence Room: 212

- B- 14 **Satoshi Yoshida, Kenta Sasaki, Naoko Kajitani, Ayano Satsuka, Hiroyasu Nakamura, Hiroyuki Sakai**
(Institute for Virus Research, Kyoto University)
Modulation of HPV-infected Cell Proliferation and Invasion by oncogenic Ras Protein.
- B- 15 **Ryo Funayama, Motoki Saito, Hiroko Tanobe and Fuyuki Ishikawa**
(S- G4) (Graduate School of Biostudies, Kyoto University)
Disappearance of Linker Histone H1 in Cellular Senescence.
- B- 16 **Atsuya Nishiyama and Fuyuki Ishikawa**
(Graduate School of Biostudies, Kyoto University)
Analysis of the mechanism of maintenance methylation by *Xenopus* Dnmt1 through DNA Replication

- B- 17 **Emily E. Arias and Johannes C. Walter**
(S- G1) (Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School)
PCNA functions as a molecular platform to trigger Cdt1 destruction and prevent re-replication.
- B- 18 **Yasunori Holykoshi, Kyoko Matsui and Tomohiro Matsumoto**
(Graduate School of Biostudies, Kyoto University)
Toward identification of a factor involved in silencing the spindle checkpoint in Fission yeast.
- B- 19 **Makoto Iimori and Tomohiro Matsumoto**
(Graduate School of Biostudies, Kyoto University)
Role of Mal3, the fission yeast EB1 homologue, in mitosis.
- B- 20 **Nathan W. Goehring and Jon Beckwith**
(S- G3) (Department of Microbiology, Harvard Medical School)
Premature targeting of cell division proteins to midcell – insights into the assembly of the *E. coli* division machinery.
- B- 21 **Shun Adachi, Sota Hiraga**
(S- G2) (Graduate School of Biostudies, Kyoto University)
Subcellular positioning of F plasmid mediated by dynamic localization of SopA and SopB based on reaction-diffusion system.
- B- 22 **Asako McCloskey, Makoto Kitabatake and Mutsuhito Ohno**
(Institute for Virus Research, Kyoto University)
A comprehensive analysis of miRNA expression during human cell cycle progression.
- B- 23 **Naryoshi Kato, Katsuhiko Murakami, Chiho Mori, Seiji Hori and Akira Kakizuka**
(Graduate School of Biostudies, Kyoto University)
Roles of VCP phosphorylation in cell cycle progression.

Group 14 / Redox Regulation and Cell Death Room: 201 & 212

- B- 24 **Masakatsu Noguchi, Takahiro Takata, Yoko Kimura, Atsushi Manno, Katsuhiko**
(S- H1) **Murakami, Masaaki Koike, Hiroshi Ohizumi, Seiji Hori and Akira Kakizuka**
(Graduate School of Biostudies, Kyoto University)
VCP oxidation causes endoplasmic reticulum dysfunction and cell death.
- B- 25 **Maria Lönn, Christopher Horst Lillig and Arne Holmgren**
(S- H3) (Department of Medical biochemistry and Biophysics, Karolinska Institute, Sweden)
Glutaredoxin 2, oxidative stress and cell death.

- B- 26 **Dongmei Wang, Hiroshi Masutani, Shin-ichi Oka, Toru Tanaka,**
 (S- H2) **Yuko Yamaguchi-Iwai, Hajime Nakamura and Junji Yodoi**
 (Institute for Virus Research, Kyoto University)
 CONTROL OF MITOCHONDRIAL OUTER MEMBRANE PERMEABILIZATION AND Bcl-XI
 LEVELS BY THIOREDOXIN2 IN DT40 CELLS.
- B- 27 **Michika Mochizuki, Yong Wong Kwon, Hiroshi Masutani and Junji Yodoi**
 (Institute for Virus Research, Kyoto University)
 Role of human Thioredoxin in Cell cycle control and cell survival.
- B- 28 **Shunsuke Kuroki and Shin Yonehara**
 (Graduate School of Biostudies, Kyoto University)
 Double knockout mice of caspase-8 and -9 exhibit normal elimination of cells
 without caspase activation during embryogenesis.
- B- 29 **Edwina Naik, Ewa Michalak, Jerry Adams and Andreas Strasser**
 (S- H4) (The Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia)
 Angiogenesis, UV and p53.
- B- 30 **Masatoshi Ohgushi, Takuya Yamamoto, Eisuke Nishida and Shin Yonehara**
 (Graduate School of Biostudies, Kyoto University)
 TGF- α -induced activation of Smad and JNK regulates cellular response between death
 and survival.
- B- 31 **Yohei Kobayashi and Shin Yonehara**
 (S- H5) (Graduate School of Biostudies, Kyoto University)
 Impaired mitotic chromosome condensation generating tetraploids induces a novel type
 of cell death through reduced expression of eEF1A1/EF-1 α .

Group 15 / Virus Room: 201

- B- 32 **Cynthia Johnson, Yueh-Ming Loo, Takeshi Saito and Michael Gale Jr.**
 (S- I2) (University of Texas Southwestern Medical Center, Dallas Texas USA)
 Regulation and therapeutic control of the RIG-I pathway during hepatitis C virus
 infection.
- B- 33 **Makoto Shirakawa and Masao Matsuoka**
 (Institute for Virus Research Kyoto University)
 Role of DNA double strand break repair enzymes in retroviral integration.
- B- 34 **Takayuki Hishiki, Takayuki Ohshima and Kunitada Shimotohno**
 (Institute for Virus Research, Kyoto University)
 Mechanism of transcriptional regulation from HTLV-1 LTR by BCL-3.

- B- 35 **Yorifumi Satou, Jun-ichirou Yasunaga, Mika Yoshida and Masao Matsuoka**
(S- I1) (Institute for Virus Research, Kyoto University)
The HTLV-I bZIP factor gene mRNA supports proliferation of adult T-cell leukemia cells.
- B- 36 **Kazuo Okamoto, Jun-ichi Fujisawa, Michael Reth and Shin Yonehara**
(Institute for Virus Research, Kyoto University)
Human T-cell leukemia virus type-I oncoprotein Tax inhibits Fas-mediated apoptosis by inducing cellular FLIP through activation of NF-kB.
- B- 37 **Maki Miyazaki, Yuko Taniguchi, Jun-ichirou Yasunaga, and Masao Matsuoka**
(Institute for Virus Research, Kyoto University)
Mechanism generating defective HTLV-I provirus lacking 5'-LTR.
- B- 38 **Hiroko Kitayama, Yoshiharu Miura, Yoshinori Ando, and Yoshio Koyanagi**
(Institute for Virus Research, Kyoto University)
Production of inhibitory factors for axon outgrowth of neurons from HIV-1 infected macrophages.
- B- 39 **Paola Miyazato, Jun-ichirou Yasunaga, Yuko Taniguchi, Yoshio Koyanagi, Hiroaki Mitsuya, Masao Matsuoka**
(Institute for Virus Research, Kyoto University)
Primary HTLV-I infection to human lymphocytes in NOD/SCID common gamma chain knock-out mice.
- B- 40 **Kiran N. Meekings, Becca Asquith, Angelina J Mosley, Charles R M Bangham**
(S- I4) (Wright-Fleming Institute, Imperial College London, Norfolk Place, UK)
Viral Factors Controlling HTLV-1 Proviral Load and Provirus Expression.
- B- 41 **Takeshi Yoshida, Yuji Kawano, Jun Aoki, Yoshiharu Miura, Yuetsu Tanaka and Yoshio Koyanagi**
(Institute for Virus Research, Kyoto University)
A specific modification of the membrane trafficking: Blocking of HIV entry.
- B- 42 **Jun Aoki, Kei Sato and Yoshio Koyanagi**
(S- I3) (Institute for Virus Research, Kyoto University)
CD63 play an important role in env incorporation into HIV-1 virions.
- B- 43 **Yoshinori Fukazawa and Masanori Hayami**
(Institute for Virus Research, Kyoto University)
Analysis on Systemic distribution of High and Low pathogenic SHIV during the early phase of intrarectal infection.

Group 16 / Immunology Room: 201

- B- 44 **Reii Horiuchi, Eiji Ido, Wataru Akahata, Yoshimi Enose, Kentaro Ibuki, Tomoyuki Miura, Toshiyuki Goto, Hidemi Takahashi and Masanori Hayami**
(Institute for Virus Research, Kyoto University)
DNA vaccination of macaques by full-sized SHIV plasmids that produce non-infectious virus particles.
- B- 45 **Kentaro Kaneyasu and Masanori Hayami**
(Institute for Virus Research, Kyoto University)
Protective efficacy of nonpathogenic nef-deleted SHIV vaccination combined with recombinant IFN- α administration against a pathogenic SHIV challenge in rhesus monkeys
- B- 46 **Koji Nagaoka, Kazuhiko Takahara, Shin-ichiro Saitoh, Tatsuki Takeda, Sachiko Akashi-Takamura, Kensuke Miyake and Kayo Inaba**
(Graduate School of Biostudies, Kyoto University)
Enhancement of TLR4 response by SIGNR1.
- B- 47 **Kazuhide Onoguchi, Mitsutoshi Yoneyama, Shizuo Akira, Tadatsugu Taniguchi and Takashi Fujita**
(Institute for Virus Research, Kyoto University)
IRF-3 regulates interferon lambda expression in epithelial cells.
- B- 48 **Scott G. Kitchen and Jerome A.Zack**
(S- J1) (The David Geffen School of Medicine, University of California at Los Angeles)
The CD4 molecule on CD8+ T cells directly enhances effector function and is a target for HIV infection.
- B- 49 **Hirofumi Shibata, Lee Hai-Cho, Kazushige Maki and Koichi Ikuta**
(S- J2) (Institute for Virus Research, Kyoto University)
Regulation of interleukin-7 receptor alpha chain expression by T cell receptor.
- B- 50 **Shinya Ogawa and Koichi Ikuta**
(Institute for Virus Research, Kyoto University)
Role of STAT5 in Positive Selection of CD8 T Cells in the Thymus.
- B- 51 **Peter van den Elzen, Salil Garg, Luis León, Manfred Brigl, Elizabeth Leadbetter, Jenny Gumperz, Chris C. Dascher, Tan-Yun Cheng, Frank Sacks, Petr A. Illarionov, Gurdyal S. Besra, Sally C. Kent, D. Branch Moody and Michael Brenner**
(S- J3) (Department of Pathology, Harvard Medical School)
Apolipoprotein-mediated pathways of lipid antigen presentation.

B- 52 **Yoshiki Omatsu, Tomonori Iyoda, Yukino Kimura, Masaki Ishimori
and Kayo Inaba**

(Graduate School of Biostudies, Kyoto University)

Maturation of Plasmacytoid Dendritic Cells Defined by Increased Expression of
an Inhibitory Receptor, Ly49Q.

B- 53 **Lance Thomas, Makato Tachibana, Yoichi Shinkai and Eugene Oltz**

(S- J4) (Department of Microbiology and Immunology, Vanderbilt University Medical Center)

Control of B cell function by histone methylation.

B- 54 **Taku Yoshida, Taku Okazaki, Jian Wang, Nagahiro Minato and Tasuku Honjo**

(Graduate School of Biostudies, Kyoto University)

Establishment of NOD-Pdcd1^{-/-} mice as an efficient animal model of type I diabetes.