

NAIST Global COE
International Symposium 2009
**ENVIRONMENTAL
ADAPTATION**

NOVEMBER 12-13, 2009
NARA INSTITUTE OF SCIENCE AND TECHNOLOGY (NAIST)
MILLENNIUM HALL

ORGANIZER : HIROSHI TAKAGI · KENJI KOHNO (NAIST, NARA)

NOVEMBER 12 (THU) 2009

13:00-13:10 Opening remarks: **Ko Shimamoto (NAIST, Global COE Program Leader)**

Session 1 (Microbial cells)

Chair person: **Hiroshi Takagi & Yukio Kimata**

13:10-13:40 **Masayori Inouye (Robert Wood Johnson Medical School, U.S.A.)**
Bacterial toxin-antitoxin systems

13:40-14:10 **Naoki Takaya (University of Tsukuba, Ibaraki)**
Hypoxia response by the filamentous fungus *Aspergillus nidulans*

14:10-14:40 **Hiroshi Takagi (NAIST, Nara)**
A novel antioxidative mechanism mediated by the yeast *N*-acetyltransferase Mpr1:
Induction of arginine-dependent nitric oxide synthesis under oxidative stress
conditions

14:40-15:10 **Valter D. Longo (University of Southern California, U.S.A.)**
Regulation of metabolic pathways, superoxide generation, stress resistance, and DNA
damage in aging *S. cerevisiae*

15:10-15:40 Coffee Break

Session 2 (Mammalian cells)

Chair person: **Kenji Kohno & Hidenori Ichijo**

15:40-16:10 **Dennis J. Thiele (Duke University Medical School, U.S.A.)**
Modulating proteotoxic stress responses for neurodegenerative disease therapy

16:10-16:40 **Hidenori Ichijo (The University of Tokyo, Tokyo)**
ASK-dependent stress signaling in cell death, inflammation and disease

16:40-17:10 **Akira Kobayashi (Doshisha University, Kyoto)**
Oxidative stress response by the Keap1-Nrf2 system

17:10-17:40 **Kenji Kohno (NAIST, Nara)**
ER stress sensor IRE1 is a key molecule for ER quality control

18:00-20:00 **Mixer**

NOVEMBER 13 (FRI) 2009

Session 3 (Plant cells)

Chair person: **Ko Shimamoto & Motoyuki Ashikari**

10:00-10:30	Motoyuki Ashikari (Nagoya University, Aichi) How did rice adapt to deepwater ?
10:30-11:00	Ken'ichi Ogawa (Research Institute for Biological Science, Okayama) The master tripeptide glutathione: beyond a simple antioxidant
11:00-11:30	Jun Minagawa (Hokkaido University, Hokkaido) What is occurring during photosynthetic state transitions ? -Remodeling of pigment-protein supercomplexes for photosynthesis-
11:30-12:00	Ko Shimamoto (NAIST, Nara) Plant innate immunity
12:00-13:00	Lunch
13:00-14:20	Poster Session

Session 4 (Microbial cells)

Chair person: **Hiroshi Takagi & Hisaji Maki**

14:30-15:00	Haruyuki Atomi (Kyoto University, Kyoto) Transcription regulators in hyperthermophilic Archaea
15:00-15:30	Tatsuo Kurihara (Kyoto University, Kyoto) Phospholipids involved in cold adaptation of an Antarctic psychrotrophic bacterium, <i>Shewanella livingstonensis</i> Ac10
15:30-16:00	Tatsuo Nunoshiba (International Christian University, Tokyo) Genetic instability inducers in <i>Saccharomyces cerevisiae</i> : Mutation in sanitizing enzyme for nucleotide lesions, and non-mutagenic carcinogens
16:00-16:30	Robert P. Fuchs (CNRS Marseille, France) An integrated view of induced-mutagenesis in <i>E. coli</i>
16:30-16:40	Concluding remarks: Robert P. Fuchs (CNRS Marseille, France)

POSTER SESSION

NO.	NAME	TITLE
P-01	Phillip CONKLIN (UCD)	Developmental regulation of DNA damage response in <i>Arabidopsis</i>
P-02	Cory ELLISON (UCD)	Analysis of the role of XCT in regulating phytohormone pathways and the circadian clock in <i>Arabidopsis thaliana</i>
P-03	Yunfeng LIU (IGDB-CAS)	OsSIK1, a receptor-like kinase that functions in drought and salt tolerance in rice (<i>Oryza sativa</i>)
P-04	Takashi NOBUSAWA (BS-NAIST)	Synthesis of very long chain fatty acids controls cell proliferation in <i>Arabidopsis</i>
P-05	Akira NISHIMURA (BS-NAIST)	Novel anti-oxidative mechanism of <i>N</i> -acetyltransferase Mpr1 found in <i>Saccharomyces cerevisiae</i> Σ 1278b strain: The oxidative stress-induced arginine/NO synthesis and its physiological role
P-06	Satoshi HAMADA (BS-NAIST)	Analysis of the OsRac1 complex (Defensome) involved in rice innate immunity
P-07	Yiping WANG (IGDB-CAS)	Cloning and functional analysis of <i>mil2</i> , a negative regulator of defense response in <i>Arabidopsis</i>
P-08	Bo ZHANG (IGDB-CAS)	Roles of a protein kinase gene in plant ethylene response and stress responses in <i>Arabidopsis</i>
P-09	Tao WANG (IGDB-CAS)	Characterization and functional analysis of <i>STS1</i> , a regulator in response to ABA and ionic stress
P-10	Harry CHRISTMAN (UCD)	Global transcription profiles of nitrogen starved <i>Nostoc punctiforme</i> reveal similarities in heterocyst and hormogonium differentiation
P-11	Xianzhong HUANG (IGDB-CAS)	Natural variation at the <i>DEP1</i> locus enhances grain yield in rice
P-12	Hongmei LI (IGDB-CAS)	The <i>Arabidopsis</i> RING Finger E3 ligase RHA2a is a novel positive regulator of ABA signaling during seed germination and early seedling development
P-13	Chen WANG (UCD)	Deleting the 14-3-3 protein Bmh1 extends life span in <i>Saccharomyces cerevisiae</i> by increasing stress response
P-14	Yongzhe REN (IGDB-CAS)	Fine mapping a major locus regulating root morphology of wheat (<i>Triticum aestivum</i> L.) at seedling stage
P-15	Onuma CHUMSAKUL (BS-NAIST)	Study on the regulatory role of the transition state regulator, AbrB and its paralog, Abh in <i>Bacillus subtilis</i>
P-16	Diana BURKART-WACO (UCD)	The genetic basis of dosage-dependant hybrid inviability in <i>Arabidopsis</i>
P-17	Hsia-Yin LIN (UCD)	Identifying specificity determinants within the Nar dual two-component regulatory systems in <i>Escherichia coli</i> K-12
P-18	Kenichi KANAI (BS-NAIST)	Regulation of transactivator and non-transactivator functions of MafA by SUMOylation and phosphorylations in oncogenic transformation
P-19	Yanping YANG (IGDB-CAS)	Functional analysis of <i>TaRLK</i> receptor-like kinase gene family in wheat

P-20	Mizuho SATO (BS-NAIST)	Identification and functional analysis of tyrosine phosphorylation sites of Abi-1 by c-Abl
P-21	Takanori NAGANO (BS-NAIST)	Involvement of GPR56 in self-renewal and proliferation of neural progenitor cells
P-22	Aimee JARAMILLO-LAMBERT (UCD)	Sex-specific germline surveillance mechanisms
P-23	Eisuke SHIMOKITA (BS-NAIST)	Secondary neurulation: a novel model to study tubulogenesis
P-24	Keita TSUJIMURA (BS-NAIST)	Neuronal differentiation mediated by methyl-CpG binding protein MeCP2 and its therapeutic application to CNS injury
P-25	Dan WARREN (UCD)	How mechanistic studies of adaptation can inform the development of environmental niche models for use in evolutionary and ecological studies
P-26	Natthawut WIRIYATHANAWUDHI WONG (BS-NAIST)	Molecular mechanism of growth inhibition of <i>Escherichia coli</i> by L-cysteine
P-27	Zhenxian GAO (IGDB-CAS)	Cloning and functional analysis of the gene <i>TaSOS1</i> in wheat
P-28	Kristina M. MAHAN (UCD)	Oxidation and detoxification of man-made chemicals by nitrobenzene dioxygenase
P-29	Toshiya SASAKI (BS-NAIST)	Role of the HECT-type E3 ubiquitin ligase Rsp5 in the regulation of proline permease activity in <i>Saccharomyces cerevisiae</i>
P-30	Xilingqige BAO (BS-NAIST)	Functional analysis of acid sphingomyelinase in osteoclastogenesis
P-31	Dai KANAGAWA (BS-NAIST)	Environmental enrichment enhances mRNA of proteases and cell adhesion molecules in the hippocampus
P-32	Sayoko SHINYA (BS-NAIST)	Analysis of <i>XBPI</i> mRNA splicing reaction in ER stress response
P-33	Yinan WANG (IGDB-CAS)	Genome wide study on alternative isoforms expressed under various stress conditions in <i>Arabidopsis</i>
P-34	Hsuan-Chung HO (UCD)	Checkpoint-surveillance mechanisms govern both outcomes of recombination and genome integrity during meiosis in budding yeast
P-35	Janice A. FRIAS (Univ. of Minnesota)	Petroleum-like fuel molecules synthesized by microbes
P-36	Joshua D. OCHOCKI (Univ. of Minnesota)	Cell penetrating prenylated peptides to study <i>in vivo</i> prenylation
P-37	Chad SATORI (Univ. of Minnesota)	Identification of xenobiotic and prodrug metabolites from highly enriched acidic organelles
P-38	Kat VÖLZING (Univ. of Minnesota)	Novel synthetic inducible biological regulators