

## June 26 (Tue)

15:00-17:00 Registration

17:20-17:30 Opening Remarks: Masayuki YAMAMOTO

### *Plenary Lecture*

Chair: Masayuki YAMAMOTO

17:30-18:30

Epigenetic regulatory mechanisms underlying the cellular response to hypoxia

Department of Cell and Molecular Biology, Karolinska Institute, Sweden

Lorenz POELLINGER

18:40-20:00 Welcome Reception

**June 27 (Wed)**

7:00-7:50

Breakfast

***Session A: Oxidative Stress***

Chairs: Masayuki YAMAMOTO, Thomas W. KENSLER

8:00-8:30	A-1	<b>Keap1-Nrf2 system: A master regulator of redox signaling</b> Department of Medical Biochemistry, Tohoku University Graduate School of Medicine, Japan  Masayuki YAMAMOTO
8:30-9:00	A-2	<b>Genetic determinants of acute cardiopulmonary injury induced by exposure to hyperoxia in adult and neonatal inbred mice</b> National Institute of Environmental Health Sciences, National Institutes of Health, USA  Steven R. KLEEBERGER
9:00-9:30	A-3	<b>Epigenetic regulation of oxidative stress response</b> Department of Biochemistry, Tohoku University School of Medicine, Japan  Kazuhiko IGARASHI

9:30-10:00

Coffee Break

10:00-10:30	A-4	<b>Nrf2 in the bone marrow-derived cells contributes to the high-fat diet induced atherosclerotic plaque formation</b> Department of Stress Response Science, Hirosaki University Graduate School of Medicine, Japan  Ken ITOH
10:30-11:00	A-5	<b>Keap1-Nrf2 signaling: Targets for disease prevention</b> Department of Pharmacology & Chemical Biology, University of Pittsburgh, USA  Thomas W. KENSLER
11:00-11:15	A-6 (55)*	<b>Redox-sensitive TRP channels control tumor progression in hypoxic and inflammatory microenvironment</b> Department of Synthetic Chemistry and Biological Chemistry, Graduate School of Engineering, Kyoto University, Japan  Yasuo MORI

\*Number in parenthesis: poster number

11:15-11:30	A-7 (18)*	Negative regulation of CBS to generate hydrogen sulfide on activation of an electrophilic signaling in human epithelial A431 cells Environmental Medicine Section, Faculty of Medicine, University of Tsukuba, Japan Yoshito KUMAGAI
11:30-11:45	A-8 (17)*	Hydrogen sulfide suppresses H-Ras-mediated cardiac senescence after myocardial infarction via electrophile sulfhydration Department of Pharmacology and Toxicology, Graduate School of Pharmaceutical Sciences, Kyushu University, Japan Motohiro NISHIDA
11:45-12:00	A-9 (01)*	Oxygen sensor PHD as a therapeutic target Department of Biochemistry, School of Medicine, Keio University, Japan Yoji A. MINAMISHIMA

\*Number in parenthesis: poster number

12:00-15:00

Lunch

## ***Session B: Hypoxia***

**Chairs: Masahiro INOUE, Gregg L. SEMENZA**

15:00-15:30	B-1	Hypoxia-inducible factors: the yin and yang of cardio-respiratory homeostasis Vascular Program, Institute for Cell Engineering, Johns Hopkins University School of Medicine, USA Gregg L. SEMENZA
15:30-16:00	B-2	Erythropoiesis in the HIF2alpha knockdown mouse Department of Regenerative medicine and Stem cell biology, University of Tsukuba, Japan Osamu OHNEDA
16:00-16:30	B-3	Imaging and targeting of cells with hypoxia-inducible factor activity Department of Biomolecular Engineering, Tokyo Institute of Technology, Japan Shinae KONDOH

16:30-17:00

Coffee Break

17:00-17:30	B-4	<p><b>Regulation of homeostasis via the HIF isoforms</b></p> <p>University of Cambridge, UK</p> <p style="text-align: right;"><b>Randall JOHNSON</b></p>
17:30-18:00	B-5	<p><b>Dormancy of cancer cells in hypoxia</b></p> <p>Osaka Medical Center for Cancer and Cardiovascular Diseases, Japan</p> <p style="text-align: right;"><b>Masahiro INOUE</b></p>
18:00-18:15	B-6 (23)*	<p><b>Molecular mechanism of nucleosome reorganization in hypoxia-responsive gene promoters</b></p> <p>Center for Oxygen Medicine, United Centers for Advanced Research and Translational Medicine, Tohoku University Graduate School of Medicine, Japan</p> <p style="text-align: right;"><b>Norio SUZUKI</b></p>
18:15-18:30	B-7 (27)*	<p><b>Switching of HIF-alpha isoforms is critical in the resolution of inflammation</b></p> <p>Department of Cardiovascular Medicine, Graduate School of Medicine, The University of Tokyo, Japan</p> <p style="text-align: right;"><b>Norihiko TAKEDA</b></p>

\*Number in parenthesis: poster number

18:30-20:00

Dinner

20:00-22:00	Poster Session [I]
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## June 28 (Thu)

7:00-7:50

Breakfast

### *Session C: Signal Transduction*

Chairs: Hidenori ICHIJO, Ze'ev RONAI

8:00-8:30	C-1	<p>The ubiquitin ligase Siah2 in ER stress, hypoxia and tumorigenesis</p> <p>Signal Transduction Program, Sanford-Burnham Medical Research Institute, USA</p> <p style="text-align: right;">Ze'ev RONAI</p>
8:30-9:00	C-2	<p>Regulation of mTORC1 by the p38 pathway in response to stresses</p> <p>State Key Laboratory of Cellular Stress Biology and School of Life Sciences, Xiamen University, China</p> <p style="text-align: right;">Jiahuai HAN</p>
9:00-9:30	C-3	<p>Real-time functional imaging of living cells and animals with rationally designed fluorescence probes</p> <p>Graduate School of Medicine, The University of Tokyo, Japan</p> <p style="text-align: right;">Yasuteru URANO</p>

9:30-10:00

Coffee Break

10:00-10:30	C-4	<p>A novel machinery by VCP for controlling intracellular ROS levels</p> <p>Kyoto University, Graduate School of Biostudies, Japan</p> <p style="text-align: right;">Akira KAKIZUKA</p>
10:30-11:00	C-5	<p>SOD1 as a molecular switch to initiate the homeostatic ER stress response under conditions of zinc deficiency</p> <p>Laboratory of Cell Signaling, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan</p> <p style="text-align: right;">Hidenori ICHIJO</p>
11:00-11:15	C-6 (12)*	<p>Interleukin 11 links oxidative stress and compensatory proliferation</p> <p>Department of Immunology, Juntendo University Graduate School of Medicine, Japan</p> <p style="text-align: right;">Hiroyasu NAKANO</p>

11:15-11:30	C-7 (43)*	Development of a highly selective fluorescence probe for hydrogen sulfide Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan  Kenjiro HANAOKA
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\*Number in parenthesis: poster number

11:30-15:00

Lunch

## ***Session D: Metabolism***

Chairs: Akiyoshi FUKAMIZU, Boudewijn M.T. BURGERING

15:00-15:30	D-1	Methionine metabolism and arginine methylation Life Science Center, Tsukuba Advanced Research Alliance, University of Tsukuba, Japan  Akiyoshi FUKAMIZU
15:30-16:00	D-2	Aging renal injury: SIRT1 and autophagy Kanazawa Medical University, Japan  Daisuke KOYA
16:00-16:30	D-3	Small molecules and natural products that suppress protein aggregation and slow aging Buck Institute for Research on Aging, USA  Gordon J. LITHGOW

16:30-17:00

Coffee Break

17:00-17:30	D-4	The role of FOXO transcription in cellular redox maintenance Department of Molecular Cancer Research, University Medical Center Utrecht, Netherlands  Boudewijn M.T. BURGERING
17:30-18:00	D-5	Cross-regulation of redox homeostasis and anabolic metabolism by the Keap1-Nrf2 pathway Tohoku University Graduate School of Medicine, Japan  Hozumi MOTOHASHI
18:00-18:15	D-6 (09)*	A novel modulatory “on-off” system for PI 3-kinase-Akt signaling through S-nitrosylation of PTEN Department of Medicinal Pharmacology, Graduate School of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama University, Japan  Takashi UEHARA

18:15-18:30	D-7 (15)*	<p>Dynamic change of the chromatin conformation in response to hypoxia enhances the expression of GLUT3 (SLC2A3) by cooperative interaction of HIF1 and KDM3A</p> <p>Division of Nephrology and Endocrinology, The University of Tokyo, Japan</p> <p>Masaomi NANGAKU</p>
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\*Number in parenthesis: poster number

18:30-20:00

Dinner

20:00-22:00	Poster Session [II]
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**June 29 (Fri)**

7:00-7:50

Breakfast

***Session E: Diseases***

**Chairs: Takaaki AKAIKE, Bruce A. FREEMAN**

8:00-8:30	E-1	Nitrated cyclic nucleotide mediates endogenous electrophilic signaling for Ras-dependent senescence and autophagy Department of Microbiology, Graduate School of Medical Sciences, Kumamoto University, Japan <b>Takaaki AKAIKE</b>
8:30-9:00	E-2	Redox-derived anti-inflammatory lipid mediators Department of Pharmacology and Chemical Biology, University of Pittsburgh, USA <b>Bruce A. FREEMAN</b>
9:00-9:30	E-3	Regulation of Nox family NADPH oxidases that deliberately produce reactive oxygen species Department of Biochemistry, Kyushu University Graduate School of Medical Sciences, Japan <b>Hideki SUMIMOTO</b>

9:30-10:00

Coffee Break

10:00-10:30	E-4	Structural and functional interrogation of protein cysteine S-nitrosylation Children's Hospital of Philadelphia Research Institute and the Raymond and Ruth Perelman School of Medicine at the University of Pennsylvania, USA <b>Harry ISCHIROPOULOS</b>
10:30-11:00	E-5	Oxidation-derived DAMPs targeted by autoantibodies Laboratory of Food and Biodynamics, Graduate School of Bioagricultural Sciences, Nagoya University, Japan <b>Koji UCHIDA</b>

11:00-11:10

Announcement

11:10-11:15

Closing Remarks: Takaaki AKAIKE

11:15-12:00

Lunch