

PROGRAM

January 20 (Thu.)

Opening Ceremony	17:00-17:30
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Chairpersons: Etsuo Niki, Matthew B. Grisham

Special Lecture 1	17:30-18:10
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Chairperson: Helmut Sies

SL1 Free Radical-Mediated Lipid Peroxidation; Contribution to Medicine

Toshikazu Yoshikawa

Molecular Gastroenterology and Hepatology, Kyoto Pref. Univ. of Med., Japan

Special Lecture 2	18:10-18:50
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Chairperson: Toshikazu Yoshikawa

SL2 The RCAN1 Gene May Link Oxidative Stress with Alzheimer Disease, Down Syndrome, and Huntington Disease

Kelvin J. A. Davies

Ethel Percy Andrus Gerontology Cent. of the Davis Sch. of Gerontology; and Div. of Molecular & Computational Biology, Dept. of Biological Sci. of the Coll. of Letters, Arts & Sci., the Univ. of Southern California, USA

Welcome Reception	19:00-20:30
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January 21 (Fri.)

Session 1	8:30-10:00
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Chairpersons: Toshihiko Ozawa, Michael J. Davies

1 *In vivo* Free Radical Imaging using New Modality, OMRI

Hideo Utsumi

Innovation Center for Med. Redox Navigation Kyushu Univ., Japan

2 Mitochondrial Oxidative Stress in Cardiac Remodeling and Failure

Hiroyuki Tsutsui

Dept. of Cardiovascular Med., Hokkaido Univ. Grad. Sch. of Med., Japan

3 Mitochondrial Function in a Neurodegenerative Model

Harsh Sancheti, Fei Yin, Enrique Cadenas

Pharmacology & Pharmaceutical Sci., Sch. of Pharmacy, Univ. of Southern California, USA

Coffee Break	10:00-10:30
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Session 2	10:30-12:00
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Chairpersons: Yuji Naito, Young-Joon Surh

4 Carbon Monoxide (CO)-Dependent Modulation of Inflammatory Response in Polymorphonuclear Leukocytes and Vascular Endothelial Cells in Experimental Model of Sepsis

Gediminas Cepinskas¹, Shinjiro Mizuguchi^{1,2}

¹Centre for Critical Illness Research, Lawson Health Research Inst., ²Dept. of Thoracic Surgery, Osaka City Univ. Hosp., Japan

5 Vascular Protection by Heme Oxygenase-1

Roland Stocker

Sch. of Medical Sci. (Pathology) and Bosch Inst., The Univ. of Sydney, Australia

6 CO-mediated Regulation of Remethylation and Transsulfuration Pathways: The Impact through Global Macromolecular Methylation and H₂S

Makoto Suematsu¹, Takehiro Yamamoto², Naoharu Takano², Mayumi Kajimura¹

¹Dept. of Biochemistry & JST ERATO Suematsu Gas Biology Project, ²Sch. of Med., Keio Univ., Japan

Lunch	12:00-13:00
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Session 3	13:00-14:30
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Chairpersons: Kazunori Anzai, Matthew B. Grisham

- 7 Myeloperoxidase-catalysed Oxidation: Mechanisms of Biological Damage and its Prevention**
Michael J. Davies
The Heart Research Inst., Univ. of Sydney, Australia
- 8 Control of Adrenal Steroidogenesis via H₂O₂-Dependent, Reversible Inactivation of Peroxiredoxin III in Mitochondriae**
Sue Goo Rhee, In Sup Kil
Div. of Life and Pharmaceutical Sci., Ewha Woman's Univ., Korea
- 9 Mechanisms of Neuronal Cell Death Induced by 24(S)-Hydroxycholesterol**
Noriko Noguchi, Kazunori Yamanaka, Yoshiro Saito, Yasuomi Urano
Dept. of Medical Life Systems, Doshisha Univ., Japan

Coffee Break	14:30-15:00
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Session 4	15:00-16:30
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Chairpersons: Junichi Fujii, Kelvin J. A. Davies

- 10 Regeneration of Infarcted Myocardium with Resveratrol-Modified Cardiac Stem Cells-Role of Micro RNA**
Dipak K. Das
Harvard Univ. Medical Center, USA
- 11 Redox Signaling Modulated by Electrophilic Cyclopentenone Prostaglandins**
Young-Joon Surh
WCU Dept. of Biopharmaceutical Sci. and Molecular Med. and Nat'l Research Laboratory of Molecular Carcinogenesis and Chemoprevention, Coll. of Pharmacy, Seoul Nat'l Univ., Korea
- 12 Cell Signaling Mediated by Nitrated Cyclic Guanine Nucleotide**
Takaaki Akaike
Dept. of Microbiology, Graduate Sch. of Medical Sci., Kumamoto Univ., Japan

Photo with Prof. Toshikazu Yoshikawa	16:30-17:00
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Poster discussion	17:00-19:00
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Banquet	19:00-21:00
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January 22 (Sat.)

Session 5	8:30-10:00
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Chairpersons: Keiichiro Suzuki, Enrique Cadenas

13 Multitargets of Dietary Flavonoids in Modulation of Oxidative Stress

Junji Terao

Dept. of Food Sci., Grad. Sch. of Nutr. and Bioscience, the Univ. of Tokushima, Japan

14 Glyco-redox Research: A Link between Redox Research and Glycobiology

Ken Shirato¹, Kazuki Nakajima¹, Hiroaki Korekane¹, Shinji Takamatsu¹, Takashi Angata²,
Kazuaki Ohtsubo¹, Naoyuki Taniguchi^{1,3}.

¹Inst. for Scientific and Industrial Research Osaka Univ., ²Osaka Univ. Grad. Sch. of Med., ³RIKEN
Advanced Sci. Inst., Systems Glycobiology Group, Japan

15 Flavanols, Vascular Nitric Oxide, and Hypertension

Cesar G. Fraga

Physical Chemistry-PRALIB, Sch. of Pharmacy and Biochemistry, Univ. of Buenos Aires-
CONICET, Argentina, Dept. of Nutr., Univ. of California, Davis, USA

Coffee Break	10:00-10:30
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Session 6	10:30-12:00
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Chairpersons: Shigeru Okada, Gediminas Cepinskas

16 Chemical and Immunochemical Detection of Oxidative Stress Biomarkers at Early Stage Inflammation

Toshihiko Osawa

Dept. of Health and Nutr., Faculty of Psychological & Physical Sci., Aichi Gakuin Univ., Japan

17 Divergent Roles of Superoxide and Nitric Oxide in Liver Ischemia and Reperfusion Injury

Matthew B. Grisham

Immunology Research Group, LSU Health Sci. Center, USA

18 Oxidative Stress Markers and a Free Radical Scavenger Drug, Edaravone

Yorihiro Yamamoto

Sch. of Bioscience and Biotechnology, Tokyo Univ. of Tec., Japan

Lunch	12:00-13:00
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Session 7**13:00-14:30****Chairpersons: Patricia Oteiza, Yuichiro J. Suzuki**

- 19 Cholesterol Oxidation Products in the Pathogenesis of Human Major Chronic Diseases**
Gabriella Leonarduzzi, Fiorella Biasi, Paola Gamba, Simona Gargiulo, Cinzia Mascia,
Gabriella Testa, Marco Maina, Giuseppe Poli
Dept. of Clinical and Biological Sci., Univ. of Turin, Italy
- 20 Clinical and Experimental Evidence for Oxidative Stress as an Exacerbating Factor of Diabetes Mellitus**
Ryoichi Takayanagi¹, Toyoshi Inoguchi^{1,2}, Keizo Ohnaka³
¹Dept. of Internal Med. and Bioregulatory Sci., Grad. Sch. of Medical Sci., Kyushu Univ., Japan,
²Innovation Center for Medical Redox Navigation, Kyushu Univ., Japan, ³Dept. of Geriatric Med.,
Grad. Sch. of Medical Sci., Kyushu Univ., Japan
- 21 Role of Iron in Carcinogenesis**
Shinya Toyokuni
Dept. of Pathology and Biological Responses, Nagoya Univ. Grad. Sch. of Med., Japan

Session 8**14:30-16:00****Chairpersons: Etsuo Niki, Giuseppe Poli**

- 22 Oxidative Fate of Mitochondrial Fat in Cell Death**
Valerian E. Kagan
Center for Free Radical and Antioxidant Health, Dept. of Environmental Health, Univ. of Pittsburgh,
USA
- 23 High Selenium Intake and Increased Diabetes Risk: Experimental Evidence for Interplay between Selenium and Carbohydrate Metabolism**
Holger Steinbrenner, Bodo Speckmann, Antonio Pinto, Helmut Sies
Inst. for Biochemistry and Molecular Biology I, Heinrich Heine Univ., Germany
- 24 Whether, When and How Vitamin E can Protect against Pathogenic Oxygen-Originated Free Radicals**
Angelo Azzi
Vascular Biology Laboratory, JM USDA-HNRCA at Tufts Univ., USA

Closing Remarks**16:00-16:15****Chairperson: Matthew B. Grisham**

- P01 Dual regulation of hepatocyte apoptosis by reactive oxygen species: increases in transcriptional expression and decreases in proteasomal degradation of BimEL**
Yasuhiro Ishihara¹, Kenji Takeuchi², Fumiaki Ito², Norio Shimamoto¹
¹Lab. of Pharmacol., Fac. of Pharm. Sci. Kagawa, Tokushima Bunri Univ., ²Dept. of Biochem., Fac. of Pharm. Sci., Setsunan Univ., Japan
- P02 SOD1 deficiency induces the cellular senescence in mouse embryonic fibroblast even at low oxygen condition.**
Satoshi Tsunoda, Noriko Kibe, Toshihiro Kurahashi, Junichi Fujii
Dept. of Biochem. and Mol. Biol., Grad. Sch. of Med. Sci., Yamagata Univ., Japan
- P03 Changes in renal iron metabolism by SOD1 deficiency**
Daisaku Yoshihara, Noriko Fujiwara, Haruhiko Sakiyama, Hironobu Eguchi, Keiichiro Suzuki
Dept. of Biochem., Hyogo Coll. Med., Japan
- P04 Activation of Bax gene and caspase 3 in hydrogen peroxide-induced premature senescence of human diploid fibroblasts and its modulation by gamma-tocotrienol**
Suzana Makpol¹, Norhazira Abdul Rahim¹, Kien Hui Chua², Wan Zurinah Wan Ngah¹
¹Dept. of Biochem., Fac. of Med., Nat'l Univ. of Malaysia, ²Dept. of Physiology, Fac. of Med., Nat'l Univ. of Malaysia, Malaysia
- P05 Peroxiredoxin 4 is a multifunctional redox protein working in endoplasmic reticulum and cytoplasm**
Junichi Fujii¹, Yoshihito Iuchi¹, Xuhong Zhang¹, Satoshi Tsunoda¹, Yoshitaka Ikeda²
¹Dept. of Biochem. & Mol. Biol., Grad. Sch. of Med. Sci., Yamagata Univ., ²Div. of Mol. Cell Biol., Dept. of Biomol. Sci., Saga Univ. Fac. of Med., Japan
- P06 Oxidative stress and matrix metalloproteinase activity in preeclampsia**
Rashmi Mukherjee¹, Koel Chaudhury¹, Chaitali D Ray², Swagata Dasgupta³
¹Sch. of Med. Sci. and Tec., Indian Inst. of Tec., ²Dept. of Obstetrics and Gynecology, Inst. of Post Grad. Med. Education and Research, ³Dept. of Chemistry, Indian Inst. of Tec., India
- P07 Metabolomic analysis of uremic solute and its toxic potential**
Takaaki Abe¹, Tomoyoshi Soga²
¹Tohoku Univ. Grad. Sch. of Med., ²Keio Univ., Japan
- P08 Heme carrier protein 1 involves a cancer specific porphyrin accumulation**
Hirofumi Matsui, Kazuhiro Hiyama, Tsuyoshi Kaneko, Yumiko N Nagano, Ichinosuke Hyodo
Div. of Gastroenterology, Grad. Sch. of Comprehensive Human Sci., Univ. of Tsukuba, Japan

- P09 Reaction of melatonin with free radicals in a protic medium and the mechanism**
Ikuro Nakanishi¹, Kabir Zoardar², Masato Kamibayashi¹, Kei Ohkubo³, Tomonori Kawashima¹, Ken-ichiro Matsumoto¹, Shunichi Fukuzumi³, Toshihiko Ozawa⁴, Kazunori Anzai⁵
¹Research Center for Charged Particle Therapy, Nat'l Inst. of Radiological Sci., Japan, ²Bangladesh Atomic Energy Commission, Bangladesh, ³Dept. of Material and Life Sci., Grad. Sch. of Engineering, Osaka Univ., ⁴Dept. of Health Pharmacy, Yokohama Coll. of Pharmacy Nihon Pharmaceutical Univ., Japan
- P10 Novel mechanism of ROS signaling: Protein carbonylation**
Yuichiro J. Suzuki
Dept. of Pharmacology, Georgetown Univ. Med. Center, USA
- P11 Determination of reactive oxygen species associated with the degeneration of dopaminergic neurons during dopamine metabolism**
Mayumi Yamato¹, Wataru Kudo², Takeshi Shiba², Ken-ichi Yamada², Toshiaki Watanabe², Hideo Utsumi²
¹Med. Redox Navi., Kyushu Univ., ²Fac. of Pharm Sci., Kyushu Univ., Japan
- P12 Nitration of tryptophan residues is a novel post-translational modification occurring in naive and differentiated PC12 cells.**
Fumiyuki Yamakura¹, Hiroaki Kawasaki², Ayako Shigenaga³, Takeshi Baba⁴, Munehiro Uda⁴, Hideoki Ogawa⁴, Kenji Takamori⁴
¹Sch. of Health Care and Nurs. Juntendo Univ., ²Inst. for Environ. and Gende-spec. Med. Juntendo Univ., ³Sch. of Health and Sports Sci. Juntendo Univ., ⁴Sch. of Med. Juntendo Univ.
- P13 Oxidative formation of 8-hydroxy-2'-deoxyguanosine in DNA is mediated by aliphatic peroxides but not by hydrogen peroxide**
Yoriko Ishigaki, Keisuke Ueda, Hashimoto Takashi, Kazuki Kanazawa
Kobe Univ., Japan
- P14 Posttranslational modification of peroxiredoxin 6 by methylglyoxal in diabetic acetic acid-induced gastric ulcer**
Tomoko Oya-Ito¹, Yuji Naito¹, Tomohisa Takagi¹, Hitomi Okada¹, Keisuke Shima², Toshikazu Yoshikawa¹
¹Molecular Gastroenterology and Hepatology, Kyoto Pref. Univ. of Med. Grad. Sch. of Med. Sci., ²Shimadzu Corp., Japan
- P15 Analysis of acrolein modified proteins associated with the etiology of delayed gastric ulcer healing in mice with diabetes**
Ryusuke Horie¹, Yuji Naito¹, Tomohisa Takagi¹, Tomoko Oya-Ito¹, Hitomi Okada¹, Kazuhiko Uchiyama¹, Osamu Handa¹, Hiroshi Ichikawa¹, Koji Uchida², Toshikazu Yoshikawa¹
¹Molecular Gastroenterology and Hepatology, Kyoto Pref. Univ. of Med., ²Nagoya Univ., Japan

- P16** **Detection of N^ε-(hexanoyl) lysine-modified tropomyosin 1 in RGK-1 cells**
 Kohei Fukumoto¹, Yuji Naito¹, Hitomi Okada¹, Tomohisa Takagi¹, Tomoko Oya-Ito¹, Yumiko Nagano², Hirofumi Matsui², Yoji Kato³, Toshihiko Osawa⁴, Toshikazu Yoshikawa¹
¹Molecular Gastroenterology and Hepatology, Kyoto Pref. Univ. of Med., ²Dept. of Gastroenterology, Inst. of Clinical Med., Univ. of Tsukuba, ³Sch. of Human Sci. and Environment, Univ. of Hyogo, ⁴Dept. of Nutr. Sci., Aichi Gakuin Univ., Japan
- P17** ***In vivo* evaluation of novel nitroxyl radicals with reduction stability**
 Ken-ichi Yamada¹, Yuichi Kinoshita¹, Toshihide Yamasaki¹, Fumiya Mito¹, Mayumi Yamato², Nuttabut Kosem², Kiyoshi Sakai², Hideo Utsumi^{1,2}
¹Fac. of Pharm. Sci., Kyushu Univ., ²Med. Redox Navi., Kyushu Univ., Japan
- P18** **Tocotrienol rich fraction modulates cell cycle in cellular aging**
 Lina Wati Durani¹, Musalmah Mazlan¹, Chua K Hui², Wan Zurinah Wan Ngah¹, Suzana Makpol¹
¹Dept. of Bioch., Fac. of Med., The Nat. Univ. of Malaysia, ²Dept. of Physiol., The Nat. Univ. of Malaysia, Malaysia
- P19** **Influence of histidine on the wound restoration mechanism of the rat intestinal epithelial cells**
 Hiroshi Ichikawa¹, Ayako Wakahara¹, Tomohisa Takagi², Satoko Adachi², Madoka Yasui¹, Chikako Minami¹, Kazuhiko Uchiyama², Yuji Naito², Yukiko Minamiyama³, Toshikazu Yoshikawa²
¹Grad. Sch. of Life and Med. Sci., Doshisha Univ., ²Molecular Gastroenterology and Hepatology, Kyoto Pref. Univ. of Med., ³Grad. Sch. of Life and Environmental Sci., Kyoto Pref. Univ., Japan
- P20** **Increase in the cellular NAD⁺/NADH ratio by NQO1 activation prevents age-related hearing loss in mice**
 Hong-Seob So, Raekil Park
 Dept. of Microbio. Wonkwang Univ. Sch. of Med., Korea
- P21** **Nitric oxide (NO) signaling is involved in the maintenance of stemness and malignancies in glioma stem-like cells**
 Chang-Hwan Yoon¹, Kyung-Hwan Hyun¹, Rae-Kwon Kim¹, Hyejin Lee¹, Eun-Jung Lim¹, Hee Chung², Min-Jung Kim¹, Su-Jae Lee¹
¹Dept. of Chemistry, Research Inst. for Natural Sci., Hanyang Univ., ²Dept. of Microbiology, Coll. of Med., Hanyang Univ., Korea
- P22** **Ionizing radiation increased mitochondrial electron transport chain activity and mitochondrial content in human lung carcinoma A549 cells**
 Tohru Yamamori¹, Hironobu Yasui¹, Hideo Nakamura², Masayuki Yamazumi¹, Osamu Inanami¹
¹Lab. of Radiat. Biol., Grad. Sch. of Vet. Med. Sci., Hokkaido Univ., ²Dept. of Humanities and Regional Sci., Hokkaido Univ. of Edu., Japan

- P23 pH dependent reaction of nitroxyl radicals and glutathione**
Ken-ichiro Matsumoto¹, Ikuo Nakanishi¹, Murali Krishna²
¹Nat'l Inst. of Radiological Sci., ²Nat'l Cancer Inst./Nat'l Inst. of Health, Japan
- P24 Reactive oxygen species-mediated Radiosensitizing effects of xanthohumol on MCF-7 and MCF-7/ADR cells**
Youra Kang¹, Se-Woong Heo¹, Sumin Park¹, Keon Wook Kang², Jung-Ae Kim¹
¹Coll. of Pharmacy, Yeungnam Univ., ²Coll. of Pharmacy, Chosun Univ., Korea
- P25 A synthetic polyphenol compound, 3-geranyl-2, 4, 6-trihydroxy-acetophenone, induces apoptosis and chemosensitization of adriamycin-resistant MCF-7 breast cancer cells**
Su-Young Park¹, Mi-Yeon Cho¹, Min-A Park¹, Yu-Ra Kang¹, Yong Rok Lee², Keon Wook Kang³, Jung-Ae Kim¹
¹Coll. of Pharmacy, Yeungnam Univ., ²Sch. of Chemical Engineering and Tec., Yeungnam Univ., ³Coll. of Pharmacy, Chosun Univ., Korea
- P26 Free radical scavenging activities of Salvia brachyantha and its protective effect against oxidative cardiac cell injury**
Mohammad Ali Esmaeili, Fereshteh Zohari
Dep. Of Biol., Med. Plants and Drug research Inst., Shahid Beheshti Univ., Iran
- P27 Nanoparticle therapy nitroxyl radicals in nanoparticle enhance therapeutic efficiency**
Yukio Nagasaki^{1,2,3,4,5}, Toru Yoshitomi^{1,2}, Yuki Ozaki^{1,2}, Kazuko Toh^{1,2}, Yutaka Ikeda^{2,4}
¹Tsukuba Research Center for Interdisciplinary Materials Sci., Univ. of Tsukuba, ²Grad. Sch. of Pure and Applied Sci., ³Master's Sch. of Med. Sci., ⁴Center for Tsukuba Advanced Research Alliance, ⁵Satellite Laboratory of International Center for Materials Nanoarchitectonics, MINS, Japan
- P28 Tocotrienol modulated oxidative stress response in lymphocyte by protecting against cell death**
Chin Siok Fong, Wan Zurinah Wan Ngah
Dept. of Biochemistry, Fac. of Med., Univ. Kebangsaan Malaysia, Malaysia
- P29 Kinetics of free-radical-scavenging rates of vitamin E in membranes**
Kenji Fukuzawa¹, Akira Shibata¹, Aya Ouchi², Shin-ichi Nagaoka², Kazuo Mukai²
¹Fac. of Pharmacy, Yasuda Womens Univ., ²Fac. of Sci., Ehime Univ., Japan
- P30 Cytoprotective effects of α -tocopherol against glutamate-induced cell death in immature primary cortical neuron cultures: Tocopherols and tocotrienols exerts similar effects by antioxidant function**
Yoshiro Saito¹, Noriko Noguchi¹, Etsuo Niki²
¹Dept. of Med. Life Sys., Fac. of Life Med. Sci., Doshisha Univ., ²Health Res. Ins., Nat. Ins. of Adv. Ind. Sci. (AIST), Japan

- P31 Free radical scavenging property of few plants from Tribal areas of Southern Orissa, India.**
Rojita Mishra, Satpal Singh Bisht
Roland Inst. of Pharmaceutical Sci., India
- P32 Peroxynitrite scavenging activity of antioxidative synthetic uric acid analogs.**
Kyoko Takahashi, Mai Ito, Daisuke Yasuda, Shigeo Nakamura, Tadahiko Mashino
Fac. of Pharmacy, Keio Univ., Japan
- P33 Role of endogenous hydrogen sulfide in hepatic oxidative damage in rats with water-immersion restraint stress**
Yoshiji Ohta¹, Shingo Kaida², Yoichiro Imai³, Koji Ohashi⁴, Minoru Kawanishi²
¹Dept. of Chem., Fujita Health Univ. Sch. of Med., ²Dept. of Anesthesiol., Fujita Health Univ. Sch. of Med., Japan, ³Dept. of Biochem., Fac. of Clin. Engineer., Fujita Health Univ. Sch. of Health Sci., Japan, ⁴Dept. of Clin. Biochem., Fac. of Med. Tech., Fujita Health Univ. Sch. of Health Sci., Japan
- P34 Piper betle induces cytoprotective genes via Nrf2-ARE pathway in young and old mice**
Yasmin Anum Mohd Yusof¹, Wan Nuraini Wan Hasan¹, Thuan Bui², Suzana Makpol¹, Wan Zurinah Wan Ngah¹
¹Dept of Biochemistry, Fac. of Med., Univ. Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, Kuala Lumpur, ²i-DNA Biotechnology Pte Ltd, Singapore
- P35 Prevention of hepatic ischemia/reperfusion injury by intravenous injection of platinum nanoparticles in mice**
Kentaro Fukui¹, Hidemasa Katumi¹, Noriko Kitamura¹, Haruka Ishikura¹, Kanako Sato¹, Shotaro Nakahara¹, Masataka Sano², Munetaka Oyama³, Toshiyasu Sakane¹, Akira Yamamoto¹
¹Kyoto Pharmaceutical Univ., ²Ceramics Craft Co. Ltd, ³Grad. Sch. of Engineering, Kyoto Univ., Japan
- P36 Deficiency of Bach1 ameliorates dextran sodium sulfate (DSS)-induced colitis in mice**
Toshifumi Tsuji¹, Yuji Naito¹, Tomohisa Takagi¹, Kazuhiko Uchiyama¹, Akihito Harusato¹, Osamu Handa¹, Hiroshi Ichikawa¹, Akihiko Muto², Kazuhiko Igarashi², Toshikazu Yoshikawa¹
¹Molecular Gastroenterology and Hepatology, Kyoto Pref. Univ. of Med., ²Dept. of Biochemistry, Tohoku Univ. Grad. Sch. of Med., Japan
- P37 Prevention of reactive oxygen species-mediated pulmonary injury by intrapulmonary administration of platinum nanoparticles in rats**
Hidemasa Katsumi¹, Kentaro Fukui¹, Noriko Kitamura¹, Haruka Ishikura¹, Kanako Sato¹, Shoko Maruyama¹, Masataka Sano², Munetaka Oyama³, Toshiyasu Sakane¹, Akira Yamamoto¹
¹Kyoto Pharmaceutical Univ., ²Ceramics Craft Co. Ltd, ³Dept. of Material Chemistry, Grad. Sch. of Engineering, Kyoto Univ., Japan

- P38 α -Tocopherol status and expression of α -tocopherol transfer protein in type 2 diabetic Goto-Kakizaki rats**
 Hiroshi Miyazaki^{1,2}, Kimitaka Takitani¹, Hiroshi Tamai¹
¹Dept. of Pediatrics, Osaka Med. Coll., ²Dept. of Pediatrics, Osaka Rosai Hosp., Japan
- P39 Protection of aged black garlic against oxidative stress in rats fed high cholesterol diet.**
 Hyo Jin Kim, Mee Ree Kim
 Dept. of Food and Nutr., Chungnam Nat'l Univ., Korea
- P40 Aged black garlic protects against alcohol-induced oxidative liver damage in rats**
 Ji Yeon Lee, Mee Ree Kim
 Dept. of Food and Nutr., Chungnam Nat'l Univ., Korea
- P41 Does an aqueous extract of cactus *Opuntia ficus indica* possess regulatory effect on oxidative stress induced by water immersion in gerbils?**
 Gladis Coral¹, Margarita Diaz¹, Alberto Huberman¹, Jose L Silencio¹, Armando Gamboa¹, Jackeline Capistran², Fernanda Flores², Rebeca Ramirez², Antonio Diaz³
¹Inst. Nat'l de Nutricion Salvador Zubiran, ²Facultad de Quimica, UNAM, ³Facultad de Veterinaria y Zootecnia, UNAM, Mexico
- P42 α -Tocopherol suppresses lipid peroxidation and behavioral and cognitive impairment in the Ts65Dn mouse model of Down syndrome**
 Mototada Shichiri^{1,2}, Yasukazu Yoshida¹, Yoshihisa Hagihara¹, Hiroshi Tamai², Etsuo Niki¹
¹Stress Response Resesrch Group, Health Research Inst., Nat'l Inst. of Advanced Industrial Sci. and Tec. (AIST), ²Dept. of Pediatrics, Osaka Med. Coll., Japan
- P43 Differential responses to blood pressure and oxidative stress in streptozotocin-treated spontaneously hypertensive and Wistar-Kyoto rats: Differential effects of antioxidant (honey) treatment**
 Omotayo O. Erejuwa¹, Siti A A. Sulaiman¹, Mohd S Ab Wahab¹, Kuttulebbai K Sirajudeen¹, Md Salzihan Md Salleh¹, Sunil Gurtu²
¹Dept. of Pharmacology, Sch. of Med. Sci., Univ. Sains Malaysia., ²Sch. of Med. and Health Sci., Monash Univ. Sunway Campus, Malaysia
- P44 Effects of spirulina on non-alcoholic steatohepatitis through anti-oxidative and anti-inflammatory mechanisms**
 Wing Pak¹, Manaka Mine¹, Mitsumasa Mankura¹, Toru Egashira¹, Shigeru Okada¹, Akitane Mori¹, Hiromu Kawasaki¹, Yasumasa Kodo², Fusako Takayama¹
¹Grad. Sch. of Med., Dentistry, and Pharmaceutical Sci., Okayama Univ., ²Spirulina Bio-Lab. Co., Ltd., Japan

- P45 Effect of oyster preparation and its constitutional n-3 polyunsaturated fatty acid on NASH through redox balance regulation**
Chengzhu Zhao, Mitsumasa Mankura, Toru Egashira, Hiromu Kawasaki, Shigeru Okada, Akitane Mori, Fusako Takayama
Grad. Sch. of Med., Dentistry and Pharmaceutical Sci., Okayama Univ., Japan
- P46 A vitamin E analog (γ -Tocopherol-N, N-dimethylglycine ester) is a potent radiation mitigator against bone marrow death of mice induced by whole body irradiation of X-rays and carbon-beams**
Kazunori Anzai^{1,2}, Megumi Ueno², Nobuo Ikota³, Jiro Takata⁴
¹Nihonn Pharmaceutical Univ., ²Nat'l Inst. of Radiological Sci., ³Sch. of Pharmacy, Shujitsu Univ., ⁴Fac. of Pharmaceutical Sci., Fukuoka Univ., Japan
- P47 Disuse muscle atrophy is suppressed by antioxidative flavonoid quercetin**
Rie Mukai¹, Takeshi Nikawa², Hisao Nemoto³, Hironori Yamamoto⁴, Eiji Takeda⁴, Yoshichika Kawai¹, Junji Terao¹
¹Dept. of Food Sci., Inst. of Health Biosciences, the Univ. of Tokushima Grad. Sch., ²Dept. of Nutr. Physiology, Inst. of Health Biosciences, the Univ. of Tokushima Grad. Sch., ³Dept. of Pharmaceutical Chemistry, Inst. of Health Biosciences, the Univ. of Tokushima Grad. Sch., ⁴Dept. of Clinical Nutr., Inst. of Health Biosciences, the Univ. of Tokushima Grad. Sch., Japan
- P48 The role of aldehyde reductase in biosynthesis of ascorbic acid in mice**
Motoko Takahashi¹, Satoshi Miyata², Junichi Fujii³, Shigemitsu Ueyama², Motoko Araki¹, Tomoyoshi Soga⁴, Reiko Fujinawa⁵, Naoyuki Taniguchi⁵, Yoshio Kuroki¹
¹Dept. Biochem., Sapporo Med Univ, ²Dept. Internal Med., Kobe Univ. Grad. Sch. Med., ³Dept. Biochem., Yamagata Univ. Sch. Med., ⁴Inst. Adv. Biosci., Keio Univ. Disease Glycomics Team, RIKEN, Japan
- P49 Toxicity of alpha-synuclein in dopaminergic cells: oxidative modification and a candidate of therapeutic target for Parkinson's disease**
Kazuhiro Nakaso, Tatsuya Matsura
Div. of Med. Biochem., Dep. of Pathophysiol. and Therapeut. Sci., Fac., of Med., Tottori Univ., Japan
- P50 Immunohistochemical detection of serotonin oxidation products in human atherosclerotic lesion**
Yoji Kato¹, Yoko Miura², Michitaka Naito³, Noritoshi Kitamoto¹, Anthony J Kettle⁴
¹Sch. of Human Sci. and Environment, Univ. of Hyogo, ²Dept. of Health & Nutr., Nagoya Bunri Univ., ³Div. of Nutr. & Health, Sch. and Grad. Sch. of Life Studies, Sugiyama Jogakuen Univ., ⁴Free Radical Research Group, Dept. of Pathology, Univ. of Otago, New Zealand

- P51 Planar catechin derivatives incorporating basic amino acids for chemoprevention of oxidative stress related diseases**
 Kiyoshi Fukuhara¹, Ikuo Nakanishi², Kohei Imai³, Akiko Ohno¹, Asao Nakamura³, Kazunori Anzai², Toshihiko Ozawa⁴, Naoki Miyata⁵, Haruhiro Okuda¹
¹Nat'l Inst. of Health Sci., ²Nat'l Inst. of Radiological Sci., ³Shibaura Inst. of Tec., ⁴Yokohama Coll. of Pharmacy Nagoya City Univ., Japan
- P52 Plasma protein carbonyl contents increased as plasma vitamin C concentration decreased in emergency room patients**
 Hee-Shang Youn¹, Hee-Jeong Park¹, Ji-Hyun Seo¹, Jae-Youn Lim¹, Chan-Hoo Park¹, Hyang-Ok Woo¹, Myung-Je Cho², Kwang-Ho Rhee²
¹Dept of Pediatrics, Gyeongsang Nat'l Univ. Sch. of Med., ²Dept of Microbiology, Gyeongsang Nat'l Univ. Sch. of Med., Korea
- P53 ASA induced ROS production and protein expression in small intestinal epithelial cells.**
 Akifumi Fukui, Yuji Naito, Osamu Handa, Qin Ying, Natsuko Hayashi, Kazuhiko Uchiyama, Tomohisa Takagi, Nobuaki Yagi, Satoshi Kokura, Toshikazu Yoshikawa
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- P54 Analysis of halogenated proteins in indomethacin-induced intestinal injury**
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- P55 Polaprezinc protects small intestinal epithelial cell from aspirin-induced apoptotic stimuli.**
 Ying Qin, Yuji Naito, Osamu Handa, Natsuko Hayashi, Kazuhiko Uchiyama, Takeshi Ishikawa, Tomohisa Takagi, Nobuaki Yagi, Satoshi Kokura, Toshikazu Yoshikawa
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- P56 Detection of hexanoyl-lysine (HEL)-modified proteins in indomethacin induced intestinal injury in rats**
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- P57 The iron-uptake system for the antioxidant ability of Helicobacter pylori**
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P58 Oxidative stress and nanoparticle

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P59 Differential oxidative stress in nuclei revealed by organelle-specific redox spin probe

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P60 Combination nanotherapy for drug delivery by antioxidative nanocarrier

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P61 Indoxyl sulfate and guanidine succinic acid induce mitochondrial superoxide production

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P62 Two electron oxidation of cefazolin antibiotic gives cefazolinsulfoxide and its cleavage yields 5-methyl-1, 3, 4-thiadiazol-2-thiol

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