

August 26, 2012 - Sunday

16:50-17:40 Opening ceremony

Room A

Opening remarks

Tetsuro Takamatsu
President, ICHC 2012

Robert Y. Osamura
President, IFSHC

17:40-18:20 David Glick Lecture 1

Room A

Chair: R.Y. Osamura (Tokyo, Japan)

DGL1 Gastric leptin: From immunocytochemistry to clinical application

Moïse Bendayan (Montréal, Canada)

18:20-19:00 Keynote Lecture / David Glick Lecture 2

Room A

Chair: N. Saito (Kobe, Japan)

KL/DGL2 Navigating the cellular landscape with new optical probes, imaging strategies and technical innovations

Jennifer Lippincott-Schwartz (Bethesda, USA)

19:10- Welcome Reception

Banquet Hall Swan

Kyoto International Conference Center, Banquet Hall Swan
All participants including accompanying persons are cordially invited.

August 27, 2012 - Monday

8:20-8:50 Plenary Lecture 1

Room A

Chair: T. Takamatsu (Kyoto, Japan)

PL1 Optical sectioning and fast optical focussing in microscopy
Tony Wilson (Oxford, UK)

8:50-9:20 Plenary Lecture 2

Room A

Chair: P. Nakane (San Luis Obispo, USA)

PL2 Autophagosome formation site and recruitment of selective substrates
Noboru Mizushima (Tokyo, Japan)

9:30-11:30 Symposium 1

Room A

Super resolution microscopy

Chairs: K. Fujita (Suita, Japan)
A. Egnér (Göttingen, Germany)

S1-1 Developments in fluorescence nanoscopy
Alexander Egnér (Göttingen, Germany) (40 min)

S1-2 Three-dimensional structured illumination imaging of chromosome structure in meiotic cells
Peter M. Carlton (Kyoto, Japan) (30 min)

S1-3 Resolution enhancement methods using a wide field fluorescence microscope
Tomonobu Watanabe (Osaka, Japan) (30 min)

S1-4 Super-resolution confocal microscopy using saturated and nonlinear excitation
Katsumasa Fujita (Osaka, Japan) (20 min)

12:50-13:20 Journal sponsored lecture: HCB Lecture

Room A

Chair: J. Roth (Seoul, Korea)

J1 Nuage proteins – Their localization in subcellular structures of spermatogenic cells revealed by immunoelectron microscopy
Sadaki Yokota (Sasebo, Japan)

13:20-14:50 Workshop 1

Room A

Histochemical Society-sponsored session “Correlative integrative microscopy”

Chair: C. Frevort (Seattle, USA)

WS1-1 On-line correlative light and electron cryo-microscopy: Development of an integrated fluorescence and electron microscope
Hirofumi Iijima (Tokyo, Japan) (20 min)

WS1-2 Merging ultrastructural and molecular data for connectomics
Robert E. Marc (Salt Lake City, USA) (20 min)

WS1-3 Live correlative light and electron microscopy of mammalian and yeast cells
Yasushi Hiraoka (Osaka, Japan) (20 min)

WS1-4 Building a synaptome: Tools for delineating true boundaries for segmenting and reconstructing synapses in their three-dimensional space
Eduardo Rosa-Molinar (San Juan, USA) (20 min)

16:20-18:20 Symposium 5

Room A

New technologies of fluorescent probes for life science

Chairs: Y. Urano (Tokyo, Japan)
K. Johnsson (Lausanne, Switzerland)

S5-1 Visualizing biochemical activities in living cells through chemistry

Kai Johnsson (Lausanne, Switzerland) (27 min)

S5-2 Functional imaging of intracellular signals using protein-fragment reconstitution techniques

Takeaki Ozawa (Tokyo, Japan) (27 min)

S5-3 Phosphorescence imaging of tumors using iridium complexes

Toshitada Yoshihara (Kiryu, Japan) (27 min)

S5-4 Rapid in vivo cancer imaging by topically spraying a newly designed activatable fluorescence probe

Yasuteru Urano (Tokyo, Japan) (27 min)

18:30-19:00 Plenary Lecture 3

Room A

Chair: C. van Noorden (Amsterdam, The Netherlands)

PL3 Pathogen recognition and innate immunity

Shizuo Akira (Suita, Japan)

19:00-19:30 Plenary Lecture 4

Room A

Chair: D. Aoki (Tokyo, Japan)

PL4 The multiple uses of fluorescent proteins to visualize cancer *in vivo*

Robert M. Hoffman (San Diego, USA)

19:30- Banquet

Banquet Hall Sakura

Kyoto International Conference Center, Banquet Hall Sakura

9:30-11:30 Symposium 2

Room B-1

Epigenetic parameters involved in cell differentiation and carcinogenesis

Chairs: T. Koji (Nagasaki, Japan)
P.L. Molloy (Sydney, Australia)

- S2-1 Identification and application of DNA methylation biomarkers in colorectal cancer**
Peter Molloy (Sydney, Australia) (24 min)
- S2-2 Genetic and epigenetic etiology of Parkinson diseases**
Zhuohua Zhang (Changsha, China) (24 min)
- S2-3 Epigenetic dysregulation in human thyroid cancer**
Tetsuo Kondo (Chuo, Japan) (24 min)
- S2-4 Detection of DNA methylation in pathology sections**
Sohei Kitazawa (Toon, Japan) (24 min)
- S2-5 Differentiation-dependent changes in DNA methylation level of specific base sequences during mouse spermatogenesis, as assessed by HELMET**
Takehiko Koji (Nagasaki, Japan) (24 min)

11:40-12:40 Luncheon Seminar 1

Room B-1

Sponsored by Takeda Pharmaceutical Co. Ltd.

From observation to manipulation: Protein ablation method by using light (CALI method)

Chair: K. Takei (Yokohama, Japan)

- LS1-1 Screening for new proteins required for cellular function by Chromophore Assisted Light Inactivation**
Daniel G. Jay (Boston, USA)
- LS1-2 Genetically-encoded tools for chromophore-assisted light inactivation of biomolecule functions**
Takeharu Nagai (Osaka, Japan)

13:20-14:50 Workshop 2

Room B-1

Light-mediated protein ablation in living tissues and cells

Chairs: K. Takei (Yokohama, Japan)
D.G. Jay (Boston, USA)

- WS2-1 Chromophore assisted light inactivation: A history and future**
Daniel G. Jay (Boston, USA) (20 min)
- WS2-2 Multiphoton excitation-evoked CALI for understanding cardiac pathophysiology**
Hideo Tanaka (Kyoto, Japan) (15 min)
- WS2-3 Inhibition of synaptic release with chromophore-assisted light inactivation utilizing a genetically-encoded singlet oxygen generator**
John Y. Lin (La Jolla, USA) (20 min)
- WS2-4 Genetically-encoded functional probes applicable in conjunction with photo-manipulation technologies**
Takeharu Nagai (Suita, Japan) (15 min)
- WS2-5 Irradiation-induced protein inactivation reveals acute requirements in biogenesis of the Golgi complex**
Adam D. Linstedt (Pittsburgh, USA) (20 min)

Autophagy and cell death

Chairs: Y. Uchiyama (Tokyo, Japan)
K.A. Roth (Birmingham, USA)

- S6-1 Autophagy targeted therapies for malignant glial neoplasms**
Kevin A. Roth (Birmingham, USA) (24 min)
- S6-2 Bafilomycin and ATP6V0C as putative mediators of autophagy lysosome pathway function**
John J. Shacka (Birmingham, USA) (24 min)
- S6-3 Autophagy inhibition reduces neonatal mouse hypoxic-ischemic brain injury**
Klas Blomgren (Stockholm, Sweden) (24 min)
- S6-4 Hyaluronan tetrasaccharide rescues hippocampal pyramidal neuron death after hypoxic-ischemic injury**
Yasuo Uchiyama (Tokyo, Japan) (24 min)
- S6-5 Function of apoptosis in early brain development**
Masayuki Miura (Tokyo, Japan) (24 min)

9:30-11:30 Symposium 3

Room B-2

Glycogene and disease

Chairs: J. Nakayama (Matsumoto, Japan)
G.W. Hart (Baltimore, USA)

- S3-1 Crosstalk between O-GlcNAcylation & phosphorylation: Roles in diabetes, cancer and Alzheimer's disease**
Gerald W. Hart (Baltimore, USA) (27 min)
- S3-2 Roles of globo-series glycolipids in the regulation of LPS-TLR4 signals**
Koichi Furukawa (Nagoya, Japan) (27 min)
- S3-3 Dual roles of gastric gland mucin-specific O-glycan on prevention of gastric cancer**
Jun Nakayama (Matsumoto, Japan) (27 min)
- S3-4 *Helicobacter pylori* cholesteryl α -glucosides control its pathogenesis through host immune response by invariant natural killer T cells**
Minoru Fukuda (La Jolla, USA) (27 min)

11:40-12:40 Luncheon Seminar 2

Room B-2

**Virtual microscopy (VM) vendor group presents;
"Frontiers of virtual microscopy; introducing the newest machines"**

Organized by JRSTPI (Japanese Research Society of Telepathology and Pathology Informatics)

Chairs: R. Coleman (Haifa, Israel)
Y. Tsuchihashi (Kyoto, Japan)

LS2 Detailed Program to be presented at the congress site

13:20-14:50 Workshop 3

Room B-2

Differentiation and death of germ cells

Chairs: T. Takizawa (Tokyo, Japan)
R.E. Braun (Bar Harbor, USA)

- WS3-1 Somatic regulation of germ cell differentiation in mice**
Robert E. Braun (Bar Harbor, USA) (30 min)
- WS3-2 Notch signaling as modulator of gonocyte fate in the perinatal testis**
Marie-Claude Hofmann (Houston, USA) (30 min)
- WS3-3 Essence of "fertile" spermatogenesis and GPI anchored proteins**
Yoshihiko Araki (Urayasu, Japan) (30 min)

16:20-18:20 Symposium 7

Room B-2

Virtual microscopy (Acta Histochemica-JRSTPI* session)

***Japanese Research Society of Telepathology and Pathology Informatics**

Chairs: R. Coleman (Haifa, Israel)
Y. Tsuchihashi (Kyoto, Japan)

- S7-1 Keynote lecture 1: Virtual microscopy: A review and update of the current equipment, methods and E-learning possibilities**
Raymond Coleman (Haifa, Israel) (30 min)
- S7-2 Keynote lecture 2: Acta Histochemica Keynote Lecture Sponsored by Elsevier, Germany Quantitative pathology in virtual microscopy – History, possibilities, perspectives**
Gian Kayser (Freiburg, Germany), Klaus Kayser (Berlin, Germany) (30 min)
- S7-3 Practice of pathology education with a virtual slide system for medical students in Yamaguchi University**
Atsunori Oga (Ube, Japan) (20 min)
- S7-4 Use of virtual microscopy (VM) for diagnosis and research purposes**
Yasunari Tsuchihashi (Kyoto, Japan) (20 min)

Turkish Society for Electron Microscopy-sponsored session

Chair: S. Arbak (Istanbul, Turkey)
S. Yilmazer (Istanbul, Turkey)

- S4-1 The interaction of nanomaterial guided mesenchymal stem cells with the inflammatory milieu**
Petek Korkusuz (Ankara, Turkey) (30 min)
- S4-2 A potential reason for mesenchymal stem cell (MSC) therapy in osteochondrodysplasias: C-type natriuretic peptide signaling**
A. Cevik Tufan (Denizli, Turkey) (30 min)
- S4-3 Mesenchymal stem cells and their applications in tissue engineering**
Deniz Yucel (Istanbul, Turkey) (30 min)
- S4-4 Stem cell and extracellular matrix related molecular changes in the skin of postmenopausal rats: Effects of melatonin**
Serap Arbak (Istanbul, Turkey) (30 min)

Molecular targeted cancer therapy and histochemistry

Chairs: S. Masuda (Tokyo, Japan)
L. Fu (Tianjin, China)

- WS4-1 Individualized diagnosis by molecular markers in breast cancer**
Li Fu (Tianjin, China) (20 min)
- WS4-2 Breast biomarkers: External quality control and direct impact of patient treatment regime**
Merdol Ibrahim (London, UK) (20 min)
- WS4-3 Role of microRNAs in estrogen receptor α -positive breast cancer**
Hiroko Yamashita (Sapporo, Japan) (20 min)
- WS4-4 Gene amplification of *ESR1* in breast cancers - Fact or fiction? - A fluorescence *in situ* hybridization and multiplex ligation-dependent probe amplification study**
Akishi Ooi (Kanazawa, Japan) (20 min)

Development and function of endocrine (cancer) cells

Chairs: R.Y. Osamura (Tokyo, Japan)
S.A. Camper (Ann Arbor, USA)

- S8-1 Pituitary gland development and function: Stem cell biology and roles of β -catenin**
Sally A. Camper (Ann Arbor, USA) (30 min)
- S8-2 Molecular insights into the benign nature of pituitary tumors**
Vera Chesnokova (Los Angeles, USA) (30 min)
- S8-3 Identifying the sites of aldosterone production in human adrenal and its disorders: recent progress**
Hironobu Sasano (Sendai, Japan) (30 min)
- S8-4 Pathobiology and Histochemistry of Neuroendocrine Tumors (NET): Diagnosis, prognosis and therapy**
Robert Y. Osamura (Tokyo, Japan) (30 min)

8:20-8:50 Plenary Lecture 5 Room A

Chair: A. Matsuno (Ichihara, Japan)

- PL5 Nanoparticle-based immunocytochemistry reveals micro-architecture of the cell nucleus**
Pavel Hozák (Prague, Czech Republic)

8:50-9:20 Plenary Lecture 6 Room A

Chair: T. Ito (Kumamoto, Japan)

- PL6 TGF- β signaling in progression of cancer**
Kohei Miyazono (Tokyo, Japan)

9:30-11:30 Symposium 9 Room A

In vivo optical imaging and its applications to medicine

Chairs: T. Takamatsu (Kyoto, Japan)
D. Orringer (Boston, USA)

- S9-1 Label free in vivo stimulated Raman scattering microscopy for cancer surgery**
Daniel Orringer (Boston, USA)
- S9-2 Label-free optical imaging of biological molecules for the detection of lesional tissues**
Yoshinori Harada (Kyoto, Japan)
- S9-3 Photoacoustic imaging and sensing in medicine**
Miya Ishihara (Tokorozawa, Japan)
- S9-4 Intravital multiphoton imaging revealing cellular dynamics in bone physiology, inflammation and cancers**
Masaru Ishii (Osaka, Japan)
- S9-5 In vivo optical diagnosis and detection of gastric precancer and cancer at endoscopy'**
Zhiwei Huang (Singapore, Singapore)

12:50-13:20 Journal sponsored lecture: AHC Lecture Room A

Chair: T. Koji (Nagasaki, Japan)

- J2 Aquaporin water channels of the cell membrane**
Kuniaki Takata (Maebashi, Japan)

13:20-14:50 Workshop 5 Room A

Deep tissue two-photon microscopy

Chairs: K. Takata (Maebashi, Japan)
T. Misgeld (München, Germany)

- WS5-1 In vivo imaging in the mouse spinal cord**
Thomas Misgeld (München, Germany) (22 min)
- WS5-2 In vivo imaging of axon branch stabilization by correlated neuronal activity**
Edward S. Ruthazer (Montreal, Canada) (22 min)
- WS5-3 Imaging analysis of synapse dynamics in vivo**
Shigeo Okabe (Tokyo, Japan) (22 min)
- WS5-4 Imaging of cellular dynamics during the adaptive immune response**
Takaharu Okada (Yokohama, Japan) (22 min)

16:20-18:20 Symposium 13

Room A

**Bruker-sponsored symposium
Mass spectro imaging**

Chairs: A. Walch, (Münich, Germany)
M. Ikegawa (Kyoto, Japan)

S13-1 *In situ* proteomics by MALDI-imaging mass spectrometry
Masaya Ikegawa (Kyoto, Japan)

S13-2 Histochemistry of phospholipids
Mitsutoshi Setou (Hamamatsu, Japan)

S13-3 Approaching MALDI imaging mass spectrometry for clinical research: Current state and fields of application
Axel Walch (Neuherberg, Germany)

S13-4 MALDI-Imaging MS: Integrating molecular structure and histology in drug development
Stephen Castellino (Research Triangle Park, USA)

18:30-19:00 Plenary Lecture 7

Room A

Chair: T. Matsuzaki (Maebashi, Japan)

PL7 New fluorescent probes and new perspectives in neuroscience
Atsushi Miyawaki (Wako, Japan)

19:00 Sponsored Evening Session

Banquet Hall Swan

Sponsored by Olympus

All participants and accompanying persons are cordially invited.

9:30-11:30 Symposium 10

Room B-1

Lipid droplet, a dynamic organelle with many different faces

Chairs: T. Fujimoto (Nagoya, Japan)
P. Liu (Beijing, China)

- S10-1 Physiological significance of heart lipid droplets and droplet-associated proteins**
Takashi Osumi (Kamigori, Japan) (30 min)
- S10-2 Role of lipid droplets in metabolic diseases**
Pingsheng Liu (Beijing, China) (30 min)
- S10-3 Lipid droplet and lipid storage regulation in *Drosophila***
Xun Huang (Beijing, China) (30 min)
- S10-4 Derlin-1 and UBXD8 are related to dislocation and degradation of lipidated ApoB-100 at the ER-LD juncture**
Michitaka Suzuki (Nagoya, Japan) (30 min)

11:40-12:40 Luncheon Seminar 3

Room B-1

Sponsored by Roche

Chair: S. Masuda (Tokyo, Japan)

- LS3 TBA**
Merdol Ibrahim (London, UK)

13:20-14:50 Workshop 6

Room B-1

Neurobiology of social behavior

Chairs: M.Nishi (Kashihara, Japan)
H. Hu (Shanghai, China)

- WS6-1 Genetic and neuronal contributions to emotional changes in the postpartum brain**
Stephen C. Gammie (Madison, USA) (20 min)
- WS6-2 Effects of early life adverse events on the brain plasticity**
Mayumi Nishi (Kashihara, Japan) (20 min)
- WS6-3 Behavioral choice between parenting or infanticide and the underlying neural mechanism in mice**
Kumi O. Kuroda (Wako, Japan) (20 min)
- WS6-4 Neural circuit mechanism of social hierarchy**
Hailan Hu (Shanghai, China) (20 min)

16:20-18:20 Symposium 14

Room B-1

Neuronal degeneration and regeneration

Chairs: N. Saito (Kobe, Japan)
A. Kanthasamy (Ames, USA)

- S14-1 Novel protein kinase-C signaling in experimental models of Parkinson's disease: Relevance to translational strategies in neuronal degeneration**
Anumantha Kanthasamy (Ames, USA) (30 min)
- S14-2 Involvement of PKC γ in neurodegenerative disease**
Naoaki Saito (Kobe, Japan) (30 min)
- S14-3 Running exercise prevents inflammation-induced dopaminergic neuron loss in the substantia nigra**
Yu-Min Kuo (Tainan, Taiwan) (30 min)
- S14-4 Novel mechanism of functional recovery from spinal cord injury**
Chihiro Tohda (Toyama, Japan) (30 min)

9:30-11:30 Symposium 11

Room B-2

What's new and what's coming in molecular pathology

Chairs: R. Katoh (Yamanashi, Japan)
B. Jasani (Cardiff, UK)

- S11-1 What's new and what's coming in molecular pathology**
Bharat Jasani (Cardiff, UK) (30 min)
- S11-2 What's new in cancer diagnostics? - An upcoming innovative approach based on mass spectrometry and regression logistics -**
Sen Takeda (Chuo, Japan) (30 min)
- S11-3 What's new in diagnostic pathology of thyroid tumors**
Ryohei Katoh (Yamanashi, Japan) (30 min)
- S11-4 New era of dynamic morphology by the realtime confocal microscopy: With special reference to Ca²⁺ dynamics in living tissues**
Yoh-ichi Satoh (Yahaba, Japan) (30 mn)

11:40-12:40 Luncheon Seminar 4

Room B-2

Sponsored by FEI company

- LS4 Correlative microscopy - Different flavors**
Ben Lich & Alevtyna Yakushevskaya (FEI Company, Eindhoven, The Netherlands)

13:20-14:50 Workshop 7

Room B-2

Vesicle formation and trafficking

Chairs: J. Heuser (St. Louis, USA)
J.A. Swanson (Ann Arbor, USA)

- WS7-1 Phosphoinositide signal cascades in macropinocytic cups**
Joel A. Swanson (Ann Arbor, USA) (25 min)
- WS7-2 Control of macropinocytosis by photo-manipulation of Rac1 activity**
Nobukazu Araki (Miki, Japan) (20 min)
- WS7-3 Morphological aspects of the biogenesis of ER-derived autophagic isolation membranes**
Satoshi Waguri (Fukushima, Japan) (20 min)
- WS7-4 Deciphering caveolar dynamics by "deep-etch" electron microscopy**
John Heuser (Kyoto, Japan) (25 min)

16:20-18:20 Symposium 15

Room B-2

Recent advances in electron microscopic methods for imaging

Chairs: S. Ohno (Chuo, Japan)
N. Ohno (Cleveland, USA)

- S15-1 Novel morphological characteristics of actin bundle using quantitative electron tomography**
Keisuke Ohta (Kurume, Japan) (30 min)
- S15-2 Semi-automated reconstruction of neural circuits using serial-section electron microscopy**
Shin-ya Takemura (Ashburn, USA) (30 min)
- S15-3 Mitochondrial dynamics in axons revealed by focused ion beam- (FIB-) and serial block face- (SBF-) scanning electron microscopy (SEM)**
Nobuhiko Ohno (Cleveland, USA) (30 min)
- S15-4 Strategies for doing cryo-electron tomography *in situ***
Alexander Rigort (Martinsried, Germany) (30 min)

9:30-11:30 Symposium 12

Room C-2

Chinese Society-sponsored session "Neuronal injury and repair"

Chair: H. Li (Wuhan, China)

- S12-1 Directed differentiation of GABAergic projection neurons from human embryonic stem cells**
Lixiang Ma (Shanghai, China) (24 min)
- S12-2 Peptidyl-prolyl cis-trans isomerase PIN1 inhibits cytotoxicity of mutant huntingtin through modulating activity of nuclear proteasome and Akt**
Ting Peng (Wuhan, China) (24 min)
- S12-3 Phosphorylation of transcription factor Olig1 regulates differentiation and myelination of oligodendroglia**
Lan Xiao (Chongqing, China) (24 min)
- S12-4 HMGB1 is not originally a hallmark of DAMPs during evolution**
Yongjun Wang (Nantong, China) (24 min)
- S12-5 Electroacupuncture promotes the differentiation of transplanted bone marrow mesenchymal stem cells overexpressing TrkC and functional recovery in rat spinal cord transected**
Ying Ding (Guangzhou, China) (24 min)

13:20-14:50 Workshop 8

Room C-2

Quantitative methods in histochemistry and cytochemistry

Chair: V. Zinchuk (Kochi, Japan)
B. Wollscheid (Zurich, Switzerland)

- WS8-1 A chemoproteomic technology for the ligand-based receptor identification on living cells and tissues**
Bernd Wollscheid (Zurich, Switzerland) (30 min)
- WS8-2 Strategy to test fluorophores stability for typical histological samples**
Arne Seitz (Lausanne, Switzerland) (30 min)
- WS8-3 Quantification of spatial correlations of fluorescent markers for studying interactions of proteins**
Vadim Zinchuk (Kochi, Japan) (30 min)

16:20-18:20 Symposium 16

Room C-2

Health effects of radiation-experimental and epidemiological studies

Chairs: S. Fushiki (Kyoto, Japan)
Q. Sun (Beijing, China)

- S16-1 Introduction**
Shinji Fushiki (Kyoto, Japan) (5 min)
- S16-2 Effects of long-term low-dose-rate irradiation on gene structure and gene expression in mice**
Tetsuya Ono (Rokkasho, Japan) (28 min)
- S16-3 Pathological study of Aspm deficient mice; an animal model for human type V microcephaly (MCPH5)**
Akira Fujimori (Chiba, Japan) (28 min)
- S16-4 Overview of the studies on health effects among the residents in Yangjiang high-background radiation area, China**
Quanfu Sun (Beijing, China) (28 min)
- S16-5 Urinary bladder lesions influenced by persistent long-term, low-dose ionizing radiation after the Chernobyl accident**
Alina M. Romanenko (Kiev, Ukraine) (28 min)

8:20-8:50 Plenary Lecture 8 Room A

Chair: H. Ozawa (Tokyo, Japan)

PL8 Mechanisms of endosomal cholesterol trafficking
Elina Ikonen (Helsinki, Finland)

8:50-9:20 Plenary Lecture 9 Room A

Chair: Y. Ibata (Kyoto, Japan)

PL9 50 Years of the matrix cell research -Phenomena and the genetic basis of cytodifferentiation in CNS-
Setsuya Fujita (Kyoto, Japan)

9:30-11:30 Symposium 17 Room A

Joint session of Japan Society for Laser Microscopy: Novel techniques in microscopy

Chair: Y. Kawata (Hamamatsu, Japan)

S17-1 Customizable super-resolution imaging with random and periodic nanoplasmonic substrates
Donghyun Kim (Seoul, Korea) (20 min)

S17-2 Molecular imaging with x-ray free electron lasers
Changyong Song (Sayo, Japan) (20 min)

S17-3 Live cell nanoimaging by direct excitation of focused electron beam
Wataru Inami (Hamamatsu, Japan) (20 min)

S17-4 In-solution EM observation of cells and tissues using the Atmospheric Scanning Electron Microscope (ASEM): High throughput immunocytochemistry and intra operative cancer diagnosis with wet tissues
Chikara Sato (Tsukuba, Japan) (20 min)

S17-5 On-line correlative light and electron cryo-microscopy: Applications to biological systems close to living states
Kuniaki Nagayama (Okazaki, Japan) (20 min)

12:50-13:20 Journal sponsored lecture – JHC lecture Room A

Chair: J.R. Couchman (Copenhagen, Denmark)

J3 Protein phosphorylation remains a black box in signal transduction: Developing a new method to search for substrates of protein kinases
Kozo Kaibuchi (Nagoya, Japan)

14:50-15:00 Closing Ceremony Room A

Poster awards ceremony

Closing remarks

Tetsuro Takamatsu
President, ICHC 2012

Toyoshi Fujimoto
Vice-president, ICHC 2012

Hormone and brain

Chairs: M. Kawata (Kyoto, Japan)
J. Morris (Oxford, UK)

- S18-1 Annexin 1: Control of proliferation of stem cell populations in the brain and other tissues**
John Morris (Oxford, UK) (24 min)
- S18-2 Fluorescent visualization of vasopressin and oxytocin neurons in the hypothalamus and their terminals in the hypothalamus in transgenic rats**
Yoichi Ueta (Kita-kyushu, Japan) (24 min)
- S18-3 Long-lasting Influence of maternal stress on the brain functions of adult offspring**
Kyungjin Kim (Seoul, Korea) (24 min)
- S18-4 Feedback effects of gonadal steroids on kisspeptin signaling system in the rat brain**
Hitoshi Ozawa (Tokyo, Japan) (24 min)
- S18-5 Effects of gonadal steroid hormones on the nervous system: From molecular imaging to behavior**
Mitsuhiro Kawata (Kyoto, Japan) (24 min)

Sponsored by Yakult Honsha Co., Ltd.

Chair: E. Otsuji (Kyoto, Japan)

- LS5-1 Cell-autonomous development of mammalian circadian clock during the differentiation culture of ES cells**
Kazuhiro Yagita (Kyoto, Japan)
- LS5-2 What can we see using diffusion-weighted MR imaging?**
Kei Yamada (Kyoto, Japan)

Future challenges of immunohistochemistry in pathology

Chairs: N. Nemoto (Tokyo, Japan)
Y. Ishikawa (Tokyo, Japan)

- S19-1 Roles of immunohistochemistry for lung cancer subclassification: Neuroendocrine nature in small cell carcinoma and adenocarcinoma**
Yuichi Ishikawa (Tokyo, Japan) (30 min)
- S19-2 Screening of anaplastic lymphoma kinase rearrangement by immunohistochemistry in non-small cell lung cancer - Correlation with fluorescence in situ hybridization**
Jin-Haeng Chung (Seoul, Korea) (30 min)
- S19-3 ALK over-expression by immunohistochemical study correlated with *EML4-ALK* fusion gene in non-small cell lung cancers**
Shiu-Feng Huang (Miaoli, Taiwan) (30 min)
- S19-4 Combination of morphology and molecular analysis as a companion diagnostics for personalized medicine**
Norimichi Nemoto (Tokyo, Japan) (30 min)

Sponsored by FEI company

- LS6 Overview 3D electron microscopy techniques**
Ben Lich & Alevtyna Yakushevskaya (FEI Company, Eindhoven, The Netherlands)

Chair: H. Multhaupt (Helsinki, Finland)
Z. Kmiec (Gdansk, Poland)

- YHA 1 Role of vinculin in meiosis during the mouse spermatogenesis**
Jana Rohožková (Prague, Czech Republic) (20 min)
- YHA 2 Analysis of Fas>Raf>MST2>RASSF1A>LATS1>YAP1>p73>PUMA >BAX p53-independent apoptotic pathway in colorectal cancer**
Piotr M. Wierzbicki (Gdansk, Poland) (20 min)
- YHA 3 Metabolic mapping reveals functional mechanisms of IDH1 mutation in *glioblastoma multiforme***
Nadia A. Atai (Amsterdam, The Netherlands) (20 min)
- YHA 4 Mesenchymal stem cells and their applications in tissue engineering**
Deniz Yucel (Istanbul, Turkey) (20 min)
- YHA 5 Visualization of plasma cells producing disease-specific antibodies with the enzyme-labeled antigen method**
Yasuyoshi Mizutani (Toyoake, Japan) (20 min)
- YHA 6 Mutant huntingtin reduces free zinc level in the brain of Huntington's disease transgenic mouse by inhibiting binding of Sp1 to promoter of zinc transporter 3 gene**
Li Niu (Wuhan, China) (20 min)

Note: YHA1 – YHA6 are also presented as posters throughout the congress in Room D.