

**The 41st Annual Meeting of the Japanese Society  
for Biomedical Mass Spectrometry**



**Program**

**September 15th (Thu) – 16th (Fri), 2016**

**Aichi Industry & Labor Center (WINC AICHI) 5F  
4-4-38 Meieki, Nakamura-ku, Nagoya, Aichi, 450-0002 JAPAN**

**Hiroshi Seno**

**President of the 41st Annual Meeting of  
the Japanese Society for Biomedical Mass Spectrometry**

**Professor and Director, Department of Legal Medicine,  
Aichi Medical University School of Medicine**

## **Time Schedule**

### **September 15th (Thu)**

<b>8:45-</b>	<b>Registration</b>
<b>9:45- 9:50</b>	<b>Opening Remarks</b>
<b>9:50-11:30</b>	<b>Symposium 1</b>
<b>11:40-12:20</b>	<b>JSBMS Board Meeting</b>
<b>11:40-12:30</b>	<b>Luncheon Seminar 1</b>
<b>12:40-13:20</b>	<b>JSBMS General Meeting</b>
<b>13:30-14:30</b>	<b>Poster Presentation (Odd poster number)</b>
<b>14:40-16:20</b>	<b>Technology Forum</b>
<b>16:30-17:30</b>	<b>Special Lecture</b>
<b>18:00-</b>	<b>Post-Society Party</b>

### **September 16th (Fri)**

<b>8:45-</b>	<b>Registration</b>
<b>9:30-11:10</b>	<b>Symposium 2</b>
<b>11:20-12:20</b>	<b>Poster Presentation (Even poster number)</b>
<b>12:30-13:20</b>	<b>Luncheon Seminar 2</b>
<b>13:30-15:10</b>	<b>Symposium 3</b>
<b>15:10-15:15</b>	<b>Closing Remarks</b>

# Program

**September 15th (Thu)**

**8:45- Registration**

**9:45-9:50 Opening Remarks**

**9:50-11:30 Symposium 1**

**“Measurement of blood drug concentration using LC/MS”**

Organizer: Hisao Oka (Kinjo Gakuin University)

Yasuhiro Maeda (Nagoya City University)

**S1-1 Influence of the CYP2C19 gene polymorphism in the diazepam metabolism**

Yasuhiro Maeda<sup>1</sup>, Yoko Nakajima<sup>2</sup>, Tetsuya Ito<sup>2</sup>, Kazunori Kimura<sup>1,3</sup>

<sup>1</sup>Graduate School of Pharmaceutical Sciences, Nagoya City University

<sup>2</sup>School of Medicine, Fujita Health University

<sup>3</sup>Graduate School of Medical Sciences, Nagoya City University

**S1-2 LC-MS/MS analysis of sedative drugs in blood samples for anesthesiology and medical crisis management**

Kochi Inoue<sup>1</sup>, Yoshito Fujita<sup>2</sup>

<sup>1</sup>Ritsumeikan University College of Pharmaceutical Sciences

<sup>2</sup>Aichi Medical University School of Medicine

**S1-3 Usefulness of LC-MS in the study of crude drugs and Kampo medicine**

Toshiaki Makino

Graduate School of Pharmaceutical Sciences, Nagoya City University

**S1-4 New strategy to obtain deuterated internal standards for mass spectrometry: H-D exchange reaction with heterogenous platinum group metal catalyst**

Kaname Tsutsumiuchi<sup>1</sup>, Hisao Oka<sup>2</sup>

<sup>1</sup>College of Bioscience and Biotechnology, Chubu University

<sup>2</sup>Institute for Consumer Sciences and Human Life, Kinjo Gakuin University

**11:40-12:20 JSBMS Board Meeting**

**11:40-12:30 Luncheon Seminar 1**

**LS1 High resolution mass spectrometer with various chromatograph techniques**

Masayuki Kubota

Thermo Fisher Scientific K.K. Japan

**12:40-13:20 JSBMS General Meeting**

**13:30-14:30 Poster Presentation (Odd poster number)**

**P1 Performance of the MALDI-TOF Mass Spectrometry system in our hospital**

Sakura Aso

Department of Clinical Laboratory, Niigata City General Hospital

**P3 -Introduction of using mass spectrometry- Bacterial identification by MALDI-TOF MS in clinical microbiology/Quantitative bioanalysis of drug by LC-MS/MS**

Akihiko Aihara, Morio Honma, Tatsumi Kato, Akikazu Shiraishi, Hiroaki Umebayashi

JAPAN CLINICAL LABORATORIES

- P5 Protein distribution analysis on mouse brain tissue by desorption electrospray ionization-ion mobility-imaging mass spectrometry**  
Shoko Matsushita<sup>1,2</sup>, Thanai Paxton<sup>3</sup>, Noritaka Masaki<sup>1,2</sup>, Kohei Sato<sup>4</sup>, Eiji Sugiyama<sup>1,2</sup>, Futoshi Sato<sup>3</sup>, Maki Terasaki<sup>3</sup>, Nobuyuki Mase<sup>4</sup>, Mitsutoshi Setou<sup>1,2</sup>  
<sup>1</sup>Department of Cellular & Molecular Anatomy, Hamamatsu University School of Medicine  
<sup>2</sup>International Mass Imaging Center  
<sup>3</sup>Nihon Waters K.K.  
<sup>4</sup>Department of Applied Chemistry and Biochemical Engineering, Faculty of Engineering, Shizuoka University
- P7 Analysis of serotonin distribution in mouse intestinal tissue using MALDI imaging mass spectrometry**  
Asako Saiki<sup>1,2,4</sup>, Aru Konno<sup>2</sup>, Shiro Takei<sup>2,4</sup>, Yoshihiro Takata<sup>1</sup>, Hirota Kaneda<sup>1</sup>, Youichi Tsuchiya<sup>1</sup>, Mitsutoshi Setou<sup>2,4</sup>, Ikuko Yao<sup>2,4</sup>  
<sup>1</sup>Frontier Laboratories for Value Creation, SAPPORO HOLDINGS LTD.  
<sup>2</sup>Preeminent Medical Photonics Education & Research Center, Institute for Medical Photonics Research, Hamamatsu University School of Medicine  
<sup>3</sup>Department of Cellular & Molecular Anatomy, Hamamatsu University School of Medicine  
<sup>4</sup>International Mass Imaging Center
- P9 Imaging of rat buccal mucosa by MALDI-IMS**  
Mariko Miyagi<sup>1,3</sup>, Ikuko Yao<sup>2,3</sup>, Mitsutoshi Setou<sup>1,3</sup>  
<sup>1</sup>Department of Cellular & Molecular Anatomy, Hamamatsu Medical University School of Medicine  
<sup>2</sup>Preeminent Medical Photonics Education & Research Center, Institute for Medical Photonics Research, Hamamatsu University School of Medicine  
<sup>3</sup>International Mass Imaging Center
- P11 Measurement of acylcarnitine in urine and blood of a patient administration of sivelestat sodium**  
Yoko Maeda<sup>1</sup>, Yasuhiro Maeda<sup>1</sup>, Yasuko Togawa<sup>2</sup>, Kana Gotoh<sup>1</sup>, Yuji Hotta<sup>1</sup>, Tomoya Kataoka<sup>3</sup>, Yoshihiro Kawade<sup>1</sup>, Norihisa Koyama<sup>2</sup>, Masanori Kouwaki<sup>2</sup>, Naruji Sugiyama<sup>4</sup>, Kazunori Kimura<sup>1</sup>  
<sup>1</sup>Graduate School of Pharmaceutical Sciences, Nagoya City University  
<sup>2</sup>Pediatrics Toyohashi Municipal Hospital  
<sup>3</sup>Graduate School of Medical Sciences, Nagoya City University  
<sup>4</sup>Aichi Medical College for Physical and Occupational Therapy
- P13 Measurement of the enzyme activities of patients with propionic academia using UPLC-MS/MS**  
Kana Gotoh<sup>1</sup>, Yasuhiro Maeda<sup>1</sup>, Yoko Nakajima<sup>2</sup>, Tetsuya Ito<sup>2</sup>, Go Tajima<sup>3</sup>, Yoko Maeda<sup>1</sup>, Yuji Hotta<sup>1</sup>, Tomoya Kataoka<sup>4</sup>, Yoshihiro Kawade<sup>1</sup>, Kazunori Kimura<sup>1,4</sup>  
<sup>1</sup>Graduate School of Pharmaceutical Sciences, Nagoya City University  
<sup>2</sup>Department of Pediatrics, Fujita Health University  
<sup>3</sup>National Center for Child Health and Development  
<sup>4</sup>Graduate School of Medical Sciences, Nagoya City University
- P15 Therapeutic drug monitoring of Zonisamide by liquid chromatography-tandem mass spectrometry in veterinary clinics**  
Kazuo Azuma<sup>1</sup>, Syuntaro Komada<sup>1</sup>, Saya Kunihiro<sup>1</sup>, Kaori Araki<sup>1</sup>, Tomohiro Osaki<sup>1</sup>, Tomohiro Imagawa<sup>1</sup>, Takeshi Tsuka<sup>1</sup>, Yusuke Murahata<sup>1</sup>, Yoshiharu Okamoto<sup>1</sup>, Norihiko Ito<sup>1,2</sup>  
<sup>1</sup>Tottori University, Faculty of Agriculture, Joint Department of Veterinary Medicine  
<sup>2</sup>Tokyo Medical University, Department of Ophthalmology
- P17 Development of a method for gas chromatography–mass spectrometry based metabolomics of children urine extracted from disposable diaper**  
Yuko Ueda<sup>1</sup>, Jun Ueyama<sup>1</sup>, Yuka Sugiura<sup>1</sup>, Michihiro Kamijima<sup>2</sup>, Takaaki Kondo<sup>1</sup>, Isao Saito<sup>3</sup>, Shinya Wakusawa<sup>1</sup>  
<sup>1</sup>Department of Pathophysiological Laboratory Sciences, Nagoya University Graduate School of Medicine

<sup>2</sup>Department of Occupational and Environmental Health, Nagoya City University Graduate School of Medical Sciences

<sup>3</sup>Food Safety and Quality Research Center, Tokai COOP Federation

- P19 A metabolomics study on autism spectrum disorders by mass spectrometry**  
Qi Li, Chunhua Zhang  
Department of Research & Development of MILS International, Japan
- P21 Proteomic profiling of antigens in circulating immune complexes associated with liver transplantation**  
Nozomi Aibara<sup>1</sup>, Kaname Ohyama<sup>1</sup>, Masaaki Hidaka<sup>2</sup>, Naoya Kishikawa<sup>1</sup>, Naotaka Kuroda<sup>1</sup>  
<sup>1</sup>Graduate School of Biomedical Sciences, Nagasaki University  
<sup>2</sup>Department of Surgery, Nagasaki University Graduate School of Biomedical Sciences
- P23 Development of next-generation quantitative proteomics “iMPAQT”**  
Susumu Yoshioka<sup>1,3</sup>, Masaki Matsumoto<sup>1</sup>, Keiichi Nakayama<sup>2</sup>  
<sup>1</sup>Division of Proteomics, Multi-scale Research Center for Prevention of Medical Science, Medical Institute of Bioregulation, Kyushu University  
<sup>2</sup>Department of Molecular and Cellular Biology, Medical Institute of Bioregulation, Kyushu University  
<sup>3</sup>Medical Solution Promotion Department, Business Management Center, LSI Medience Corporation
- P25 Investigation of rapid metabolome analysis using nano-flow injection ESI/Q-TOFMS**  
Kentarō Taki<sup>1</sup>, Kei Zaito<sup>1,2</sup>, Yumi Hayashi<sup>1,2</sup>, Tomomi Asano<sup>1</sup>, Maiko Kusano<sup>1</sup>, Hitoshi Tsuchihashi<sup>1</sup>, Akira Ishii<sup>1</sup>  
<sup>1</sup>Nagoya University Graduate School of Medicine  
<sup>2</sup>Institute for Advanced Research, Nagoya University
- P27 Simultaneous analysis of equol and their metabolites in human plasma by liquid chromatography-tandem mass spectrometry**  
Mizuki Kinoshita<sup>1</sup>, Kaori Hosoda<sup>1</sup>, Aki Obara<sup>1</sup>, Hiromi Shibasaki<sup>2</sup>, Akitomo Yokokawa<sup>2</sup>, Kazuo Ishii<sup>1</sup>  
<sup>1</sup>Kyorin University Faculty of Health Sciences  
<sup>2</sup>Tokyo University of Pharmacy and Life Sciences School of Pharmacy
- P29 Highly sensitive determination of 6 $\beta$ -hydroxycortisol and cortisol in human plasma by LC-MS/MS**  
Ryohei Hirano, Hiromi Shibasaki, Akitomo Yokokawa, Takashi Furuta  
Tokyo University of Pharmacy and Life Sciences, School of Pharmacy
- P31 Simultaneous measurement of estrogens and clinical applications using the LC-MS/MS**  
Yui Miyabayashi<sup>1</sup>, Mamoru Satoh<sup>2</sup>, Masaki Takiwaki<sup>2</sup>, Motoi Nishimura<sup>1</sup>, Kazuyuki Matsushita<sup>1</sup>, Fumio Nomura<sup>2</sup>  
<sup>1</sup>Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University  
<sup>2</sup>Division of Clinical Mass Spectrometry, Chiba University Hospital
- P33 Long-term and high concentration dopamine exposure enhances the glial endocannabinoid signaling**  
Hiroshi Ochi, Yukari Hirata, Makoto Hamajima, Ichiro Isobe  
Department of Legal Medicine, Fujita Health University School of Medicine
- P35 Detection of testosterone esters in Dried Blood Spot (DBS) on sports doping testing**  
Asami Miyamoto<sup>1</sup>, Sho Shiomura<sup>1</sup>, Masato Okano<sup>1</sup>, Michiko Dohi<sup>2</sup>, Shinji Kageyama<sup>1</sup>  
<sup>1</sup>Anti-Doping Laboratory, LSI Medience Corporation  
<sup>2</sup>Medical Centre, Japan Institute of Sports Sciences
- P37 Deuteration of atropine by H-D exchange reaction with Pt/C-D<sub>2</sub>O-H<sub>2</sub> system**  
Akihiro Miura<sup>1</sup>, Yuji Yokoyama<sup>1</sup>, Kaname Tsutsumiuchi<sup>1</sup>, Hisao Oka<sup>2</sup>  
<sup>1</sup>College of Bioscience and Biotechnology, Chubu University

<sup>2</sup>Institute for Consumer Sciences and Human Life

**P39 Evaluation of a preparation method that can be applied to both LC-MS/MS and GC-MS for the screening of postmortem specimens**

Brian Waters<sup>1</sup>, Kenji Hara<sup>1</sup>, Natsuki Ikematsu<sup>1</sup>, Tomoko Tokuyasu<sup>1</sup>, Hiroshi Fujii<sup>1,2</sup>, Mio Takayama<sup>1</sup>, Aya Matsusue<sup>1</sup>, Masayuki Kashiwagi<sup>1</sup>, Shin-ichi Kubo<sup>1</sup>

<sup>1</sup>Fukuoka University, Faculty of Medicine, Department of Forensic Medicine

<sup>2</sup>Narcotics Control Department, Kyushu Regional Bureau of Health and Welfare, Ministry of Health, Labour and Welfare, Fukuoka, Japan

**P41 Analysis of Plant Alkaloids Through Accurate Mass Screening and Next Generation Informatics Platform**

Maki Terasaki<sup>1</sup>, Jeff Goshawk<sup>2</sup>, Michelle Wood<sup>2</sup>

<sup>1</sup>Nihon Waters K. K.

<sup>2</sup>Waters Corporation

**P43 Efforts of building the drug screening system for drug statistical survey in forensic autopsy (2) – The quality management in drug analysis with blind tests –**

Chizuko Sasaki<sup>1</sup>, Hiroko Abe<sup>2</sup>, Kyoko Maebashi<sup>3</sup>, Hirotaro Iwase<sup>2</sup>, Kimiharu Iwadate<sup>3</sup>, Fumiko Satoh<sup>1</sup>

<sup>1</sup>Department of Legal Medicine, Kitasato University School of Medicine

<sup>2</sup>Department of Legal Medicine, Graduate School of Medicine, Chiba University

<sup>3</sup>Department of Forensic Medicine, The Jikei University School of Medicine

**P45 High resolution and high precision analysis of barbiturates in human body fluids using a monolithic C<sub>18</sub> gel-packed spin tip and UPLC-Q-Tof-MS**

Xiao-Pen Lee<sup>1</sup>, Chika Hasegawa<sup>2</sup>, Takeshi Kumazawa<sup>1,3</sup>, Shota Miyazaki<sup>4</sup>, Yukiko Shouji<sup>1</sup>, Masaya Fujishiro<sup>1</sup>, Akemi Marumo<sup>1</sup>, Keizo Sato<sup>1</sup>

<sup>1</sup>Department of Legal Medicine, Showa University School of Medicine

<sup>2</sup>Department of Legal Medicine, Toho University School of Medicine

<sup>3</sup>Seirei Christopher University School of Nursing

<sup>4</sup>GL Sciences Inc.

**P47 Xanthine Oxidoreductase Activity assay using Liquid Chromatography-Mass Spectrometry**

Takayo Murase, Atsushi Miyachi, Takashi Nakamura

Mie Research Laboratories, Sanwa Kagaku Kenkyusyo Co., Ltd.

**14:40-16:20 Technology Forum**

Chairperson: Yoshitomo Ikai (Aichi Prefectural Institute of Public Health)

Fumio Kondo (Aichi Medical University)

**TF1 Elements for Metabolomics to process, organize and interpret large scale metabolomics experiments datasets**

Shigetoshi Yoshikawa

INFOCOM CORPORATION

**TF2 X500R QTOF system: New high resolution MS system**

Ushio Takeda

SCIEX

**TF3 Introduction of triple quadrupole mass spectrometer**

Jun Watanabe

Shimadzu Corporation

**TF4 Introduction of High resolution GC-MS/MS system equipped with Orbitrap**

Masayuki Kubota

Thermo Fisher Scientific K.K. Japan

- TF5 Exosome purification columns**  
 Nozomi Iwanami<sup>1</sup>, Koji Ueda<sup>2</sup>  
<sup>1</sup>GL Sciences Inc.  
<sup>2</sup>Project for Realization of Personalized Cancer Medicine, Genome Center, Japanese Foundation for Cancer Research
- TF6 Certified Reference Materials for reliability of analysis**  
 Taisuke Ueda  
 Sigma Aldrich Japan G.K.
- TF7 UniSpray ion source, an alternative to ESI, APCI and APPI**  
 Maki Terasaki  
 Nihon Waters K. K.
- TF8 High-sensitivity, high-throughput quantitation of catecholamines and metabolites in plasma by LC/MS/MS analysis**  
 Maiko Kaneko  
 Biotage Japan, Ltd.

**16:30-17:30 Special Lecture**

Chairperson: Hiroshi Seno (Aichi Medical University)

- SL Metabolomics and its Application to Medical and Food Sciences**  
 Masaru Tomita  
 Institute for Advanced Biosciences, Keio University

- 18:00- Post-conference Party**  
**Nagoya Marriott Associa Hotel - Azalea - (16F)**

**September 16th (Fri)**

- 8:45- Registration**

- 9:30-11:10 Symposium 2**  
**“Mass spectrometry in the diagnosis of infectious diseases -Current status and issues-”**

Organizer: Hiroshige Mikamo (Aichi Medical University)  
 Kiyofumi Okusu (Tokyo Medical University)

- S2-1 Current status of MALDI-TOF MS in Aichi Medical University Hospital Microbiological Laboratory**

Yuka Yamagishi<sup>1,2</sup>, Atsuko Yamada<sup>2</sup>, Rieko Yamashita<sup>2</sup>, Tomoko Ohno<sup>2</sup>, Yuzuka Kawamoto<sup>2</sup>, Narimi Miyazaki<sup>2</sup>, Daisuke Sakanashi<sup>2</sup>, Isao Koita<sup>2</sup>, Setsuo Miyajima<sup>2</sup>, Hiroyuki Suematsu<sup>2</sup>, Hiroshige Mikamo<sup>1,2</sup>

<sup>1</sup>Department of Clinical Infectious Diseases, Aichi Medical University Hospital

<sup>2</sup>Department of Infection Control and Prevention, Aichi Medical University Hospital

- S2-2 The operation and the issues of bacterial identification using the mass spectrometry at Shinshu University Hospital**

Go Matsumoto<sup>1</sup>, Takehisa Matsumoto<sup>2</sup>, Eriko Kasuga<sup>3</sup>, Tatsuya Natori<sup>3</sup>, Shinitiro Kanai<sup>1</sup>, Takayuki Honda<sup>1,3</sup>

<sup>1</sup>Infection control team, Shinshu University Hospital

<sup>2</sup>Department of Laboratory Sciences, Gunma University Graduate School of Health Sciences

<sup>3</sup>Department of Laboratory Medicine, Shinshu University School of Medicine

- S2-3 A few tricks on running microbiology laboratory using VITEK MS and our future challenges**  
Tomohisa Watari  
Department of Medical Laboratory and Blood Center, Asahikawa Medical University Hospital
- S2-4 The challenges in introduction of MALDI-TOF MS (VITEK MS) for clinical microbiology laboratory at Kyusyu University Hospital**  
Makiko Kiyosuke  
Clinical Chemistry and Laboratory Medicine, Kyushu University

**11:20-12:20 Poster Presentation (Even poster number)**

- P2 Examination of the bacteria identification rate improvement by the MALDI-TOF MS (Matrix ·Sandwich Method)**  
Takenori Yamashita  
Yodogawa Christian Hospital Department of Clinical Laboratory bacteria laboratory
- P4 Imaging Mass Spectrometry Analysis of ganglioside GM1 molecular species in the dentate gyrus of Alzheimer's disease patients**  
Wakako Hirano-Sakamaki<sup>1</sup>, Eiji Sugiyama<sup>2</sup>, Takahiro Hayasaka<sup>3</sup>, Rivka Ravid<sup>4</sup>, Mitsutoshi Setou<sup>2</sup>, Takao Taki<sup>5</sup>  
<sup>1</sup>Department of Medical Innovations, New Drug Research Division, Otsuka Pharmaceutical Co., Ltd.  
<sup>2</sup>Department of Cell Biology and Anatomy, Hamamatsu University School of Medicine  
<sup>3</sup>Faculty of Health Sciences, Hokkaido University  
<sup>4</sup>Brain Bank Consultants, The Netherlands  
<sup>5</sup>Tokushima University
- P6 Application of mass spectrometry imaging for the screening of novel factors involved in regulation of AMPK activity in diabetic kidney disease**  
Satoshi Miyamoto<sup>1-4</sup>, Cheng-Chih Hsu<sup>5</sup>, Gregory Hamm<sup>6</sup>, Manjula Darshi<sup>2,3</sup>, Jonathan Stauber<sup>6</sup>, Pieter C. Dorrestein<sup>2,5</sup>, Kenichi Shikata<sup>1</sup>, Kumar Sharma<sup>2-4</sup>  
<sup>1</sup>Center for Innovative Clinical Medicine, Okayama University Hospital  
<sup>2</sup>Institute of Metabolomic Medicine, University of California San Diego  
<sup>3</sup>Center for Renal Translational Medicine, University of California San Diego  
<sup>4</sup>Veterans Affairs San Diego Healthcare System  
<sup>5</sup>Therapeutic Discovery Mass Spectrometry Center, University of California San Diego  
<sup>6</sup>ImaBiotech, MS Imaging Department, Lille, France
- P8 Cystathionine  $\beta$ -synthase is required for maintaining levels of glutathione hydropersulfide, a novel antioxidant molecule in the murine lens**  
Akiko Kubo<sup>1</sup>, Takafumi Yoshioka<sup>1,2</sup>, Shinichi Goto<sup>1</sup>, Isao Ishii<sup>3</sup>, Takako Hishiki<sup>1</sup>, Takehiro Yamamoto<sup>1</sup>, Naoharu Takano<sup>1</sup>, Takao Hoshino<sup>1</sup>, Takashi Nakamura<sup>1</sup>, Akitoshi Yoshida<sup>2</sup>, Mayumi Kajimura<sup>1</sup>, Makoto Suematsu<sup>1</sup>  
<sup>1</sup>Keio University School of Medicine  
<sup>2</sup>Asahikawa Medical University  
<sup>3</sup>Showa Pharmaceutical University
- P10 Development of new non-derivatization method for quantitative analysis of serum acylcarnitines using LC-MS/MS and comparison with existing method of abbreviated analysis**  
Hironori Kobayashi<sup>1</sup>, Kenji Yamada<sup>1</sup>, Ryosuke Bo<sup>1</sup>, Yuki Hasegawa<sup>1</sup>, Seiji Yamaguchi<sup>1</sup>, Naoko Ohyama<sup>2</sup>, Kazuhiro Takeuchi<sup>2</sup>, Tomoyoshi Shiroshita<sup>2</sup>, Akira Ideno<sup>2</sup>  
<sup>1</sup>Department of Pediatrics, Shimane University, Faculty of Medicine  
<sup>2</sup>SEKISUI MEDICAL CO., LTD.
- P12 The diagnosis of Japanese patients with HMG-CoA synthase deficiency by urinary organic acids analysis using GC/MS**  
Yuki Omura-Hasegawa, Kenji Yamada, Hironori Kobayashi, Seiji Yamaguchi  
Department of Pediatrics, Shimane University School of Medicine



- P14 Measurement of reverse T3 by LC-MS/MS and development of early diagnosis for MCT8 deficiency**  
Hideyuki Iwayama<sup>1</sup>, Masaru Nakano<sup>2</sup>, Minoru Fukayama<sup>1</sup>, Akihisa Okumura<sup>1</sup>  
<sup>1</sup>Aichi Medical University School of Medicine  
<sup>2</sup>Nagoya City University Graduate School of Medical Sciences
- P16 Study on clinical significance of urinary high methionine by GC/MS analysis**  
Mingji Jin, Qi Li, Zonghai Ruan, Chunhua Zhang  
Department of Research & Development of MILS International
- P18 Study on clinical significance of urinary cyclic citrulline in CTLN2 patient by GC/MS**  
Chunhua Zhang, Zonghai Ruan, Qi Li, Mingji Jin, Ning Zhao  
Department of Research & Development of MILS International
- P20 Diagnostic method for X-linked adrenoleukodystrophy using liquid chromatography-tandem mass spectrometry**  
Ryuichi Mashima<sup>1</sup>, Misa Tanaka<sup>1</sup>, Eri Sakai<sup>1</sup>, Tadayuki Kumagai<sup>1</sup>, Motomichi Kosuga<sup>1-3</sup>, Torayuki Okuyama<sup>1,2</sup>  
<sup>1</sup>Department of Clinical Laboratory Medicine, National Center for Child Health and Development  
<sup>2</sup>Center for Lysosomal Storage Disease, National Center for Child Health and Development  
<sup>3</sup>Division of Medical Genetics, National Center for Child Health and Development
- P22 Elucidation of the anticancer drug resistant mechanisms using a global lipid analysis**  
Takanori Hiraide<sup>1,2</sup>, Takanori Sakaguchi<sup>1</sup>, Satoru Furuhashi<sup>1,2</sup>, Ryota Kiuchi<sup>1,2</sup>, Makoto Takeda<sup>1,2</sup>, Yasushi Shibasaki<sup>1,2</sup>, Yoshifumi Morita<sup>1,2</sup>, Eiji Sugiyama<sup>2,3</sup>, Hiroyuki Konno<sup>1</sup>, Mitsutoshi Setou<sup>2,3</sup>  
<sup>1</sup>Second Department of Surgery, Hamamatsu University School of Medicine  
<sup>2</sup>International Mass Imaging Center, Hamamatsu University School of Medicine  
<sup>3</sup>Department of Cellular & Molecular Anatomy, Hamamatsu University School of Medicine
- P24 Quantitative and qualitative analysis of glucosylated lipids by HILIC-ESI-MS/MS and clinical applications**  
Kazuki Nakajima<sup>1,3</sup>, Hisako Akiyama<sup>1</sup>, Emi Ito<sup>1</sup>, Kazuhisa Iwabuchi<sup>2</sup>, Yukio Yuzawa<sup>3</sup>, Yoshio Hirabayashi<sup>1</sup>  
<sup>1</sup>RIKEN, BSI  
<sup>2</sup>Juntendo University School of Medicine  
<sup>3</sup>Fujita Health University
- P26 Development of a nano LC/MS/MS method for simultaneous analysis of bile acids and its application to bile-profiling of rat liver**  
Tomomi Asano<sup>1,2</sup>, Kei Zaito<sup>1</sup>, Kentaro Taki<sup>1</sup>, Maiko Kusano<sup>1</sup>, Kazuya Kitamori<sup>2</sup>, Hisao Naito<sup>3</sup>, Tamie Nasu<sup>4</sup>, Hitoshi Tsuchihashi<sup>1</sup>, Akira Ishii<sup>1</sup>  
<sup>1</sup>Nagoya University Graduate School of Medicine  
<sup>2</sup>College of Human Life and Environment, Kinjo Gakuin University  
<sup>3</sup>Fujita Health University School of Medicine  
<sup>4</sup>College of Life and Health Sciences, Chubu University
- P28 Analyses of fatty acids in used culture media for human embryos by LC/MS**  
Shu-Ping Hui<sup>1</sup>, Akiko Yagi<sup>2</sup>, Satoshi Miyanaga<sup>1</sup>, Rojeet Shrestha<sup>1</sup>, Seiji Takeda<sup>1</sup>, Hirobumi Kamiya<sup>2</sup>, Hitoshi Chiba<sup>1</sup>  
<sup>1</sup>Faculty of Health Science, Hokkaido University  
<sup>2</sup>Kamiya Ladies Clinic
- P30 Sphingomyelin profile of *Abcd1* knockout mouse brain**  
Kotaro Hama<sup>1</sup>, Yuko Fujiwara<sup>1</sup>, Masashi Morita<sup>2</sup>, Tsuneo Imanaka<sup>2</sup>, Nobuyuki Shimozawa<sup>3</sup>, Kazuaki Yokoyama<sup>1</sup>  
<sup>1</sup>Teikyo University Faculty of Pharmaceutical Sciences  
<sup>2</sup>University of Toyama Graduate School of Medicine & Pharmaceutical Sciences  
<sup>3</sup>Gifu University Life Science Research Center

- P32 Evaluation of the physiologic change of serum HODE using LC/MS/MS**  
Akiko Nobata<sup>1</sup>, Yoshitomo Notsu<sup>1</sup>, Seiji Mishima<sup>1</sup>, Atsushi Nagai<sup>1</sup>, Toru Nabika<sup>2</sup>  
<sup>1</sup>Department of Laboratory Medicine, Shimane University, Faculty of Medicine  
<sup>2</sup>Department of Functional Pathology, Shimane University, Faculty of Medicine
- P34 Analysis of GAG in human l lumbar ligamentum flavum**  
Harumi Osago<sup>1</sup>, Michihaya Kono<sup>2</sup>, Mikiko Miura<sup>1</sup>, Yoshifumi Hamasaki<sup>1</sup>, Nobumasa Hara<sup>1</sup>, Mineyoshi Hiyoshi<sup>1</sup>, Yuji Uchio<sup>2</sup>, Mikako Tsuchiya<sup>1</sup>  
<sup>1</sup>Department of Biochemistry, Shimane University, Faculty of Medicine  
<sup>2</sup>Department of Orthopedic Surgery, Shimane University, Faculty of Medicine
- P36 Development of relative quantitative analysis method for oligosaccharide based upon transglycosylation reaction by mutant enzyme Endo-M-N175Q**  
Jun Zhe Min, Hashimoto Ryugo, Kenichiro Todoroki, Hajime Mizuno, Toshimasa Toyooka  
School of Pharmaceutical Sciences, University of Shizuoka
- P38 Application of imipramine metabolite for functional material**  
Hideki Hayashi<sup>1,2</sup>, Junpei Kuno<sup>3</sup>, Taiki Naruo<sup>3</sup>, Hiroki Hirota<sup>3</sup>, Tadashi Ogawa<sup>2</sup>, Hideki Hattori<sup>2</sup>, Hiroshi Seno<sup>2</sup>, Yukio Onouchi<sup>3</sup>, Yuzo Ishigaki<sup>1</sup>  
<sup>1</sup>Nagoya Municipal Industrial Research Institute  
<sup>2</sup>Aichi Medical University School of Medicine  
<sup>3</sup>Faculty of Engineering, Aichi Institute of Technology
- P40 Analysis of metabolites of biperiden by MALDI-QTOF-mass spectrometry**  
Kayoko Minakata<sup>1</sup>, Masako Suzuki<sup>2</sup>, Hideki Nozawa<sup>1</sup>, Itaru Yamagishi<sup>1</sup>, Kunio Gonmori<sup>1</sup>, Koutaro Hasegawa<sup>1</sup>, Osamu Suzuki<sup>1</sup>, Kanako Watanabe<sup>1</sup>  
<sup>1</sup>Department of Legal Medicine, Hamamatsu University School of Medicine  
<sup>2</sup>Research Equipment Center, Hamamatsu University School of Medicine
- P42 Efforts of building the drug screening system for drug statistical survey in forensic autopsy (1) – Introduction of Drug Screening Method Sharing Project –**  
Kyoko Maebashi<sup>1</sup>, Hiroko Abe<sup>2</sup>, Chizuko Sasaki<sup>3</sup>, Hirotaro Iwase<sup>2</sup>, Fumiko Satoh<sup>3</sup>, Kimiharu Iwadate<sup>1</sup>  
<sup>1</sup>Department of Forensic Medicine, The Jikei University School of Medicine  
<sup>2</sup>Department of Legal Medicine, Graduate School of Medicine, Chiba University  
<sup>3</sup>Department of Legal Medicine, Kitasato University School of Medicine
- P44 Efforts of building the drug screening system for drug statistical survey in forensic autopsy (3) – Introduction of Drug Screening Report System –**  
Hiroko Abe<sup>1</sup>, Shinya Nakashima<sup>2</sup>, Yuji Ito<sup>3</sup>, Kyoko Maebashi<sup>4</sup>, Isora Tatematsu<sup>4</sup>, Chizuko Sasaki<sup>5</sup>, Kimiharu Iwadate<sup>4</sup>, Fumiko Satoh<sup>5</sup>, Hirotaro Iwase<sup>1</sup>  
<sup>1</sup>Department of Legal Medicine, Graduate School of Medicine, Chiba University  
<sup>2</sup>Science Software Inc.  
<sup>3</sup>Nihon Techno Kaihatsu Co., Ltd.  
<sup>4</sup>Department of Forensic Medicine, The Jikei University School of Medicine  
<sup>5</sup>Department of Legal Medicine, Kitasato University School of Medicine
- P46 Application of a new monolithic SPE spin tip and mass spectrometry for analysis of drugs in human blood**  
Chika Hasegawa<sup>1,3</sup>, Takeshi Kumazawa<sup>2,3</sup>, Xiao-Pen Lee<sup>3</sup>, Shota Miyazaki<sup>4</sup>, Keizo Sato<sup>3</sup>, Hiroshi Seno<sup>5</sup>, Kunihiko Kurosaki<sup>1</sup>  
<sup>1</sup>Department of Legal Medicine, Toho University School of Medicine  
<sup>2</sup>Seirei Christopher University School of Nursing  
<sup>3</sup>Department of Legal Medicine, Showa University School of Medicine  
<sup>4</sup>GL Sciences Inc.  
<sup>5</sup>Department of Legal Medicine, Aichi University School of Medicine

## **12:30-13:20 Luncheon Seminar 2**

### **LS2 Approach to Omics Research using LC/MS/MS**

Jun Watanabe

Shimadzu Corporation

## **13:30-15:10 Symposium 3**

### **“Novel Development of Disease Lipoquality Research”**

Organizer: Mitsutoshi Setou (Hamamatsu University School of Medicine)

Kazutaka Ikeda (RIKEN)

#### **S3-1 Discovery of novel brain glycolipid involved in Parkinson’s disease by HILIC-MS/MS**

Hisako Akiyama<sup>1</sup>, Kazuki Nakajima<sup>1</sup>, Yoshiyuki Itoh<sup>2</sup>, Tomoko Sayano<sup>1</sup>, Yasuko Nagatsuka<sup>1</sup>, Yoko Ohashi<sup>1</sup>, Yoshiki Yamaguchi<sup>3</sup>, Peter Greimel<sup>4</sup>, Yoshio Hirabayashi<sup>1</sup>

<sup>1</sup>Laboratory for Molecular Membrane Neuroscience, RIKEN Brain Science Institute

<sup>2</sup>JEOL Ltd.

<sup>3</sup>Structural Glycobiology Team, Systems Glycobiology Research Group, RIKEN-Max Planck Joint Research Center, Global Research Cluster, RIKEN

<sup>4</sup>Lipid Biology Laboratory, RIKEN

#### **S3-2 New insight into lipoquality research with non-target analysis**

Kazutaka Ikeda<sup>1,2</sup>, Yuuya Senoo<sup>1</sup>, Makoto Arita<sup>1,3</sup>

<sup>1</sup>RIKEN Center for Integrative Medical Sciences (IMS)

<sup>2</sup>AMED-PRIME

<sup>3</sup>Graduate School of Pharmaceutical Sciences, Keio University

#### **S3-3 Lipid analysis of spinal disease by matrix-assisted laser desorption/ionization imaging mass spectrometry**

Tomohiro Banno<sup>1,2</sup>, Hideyuki Arima<sup>1</sup>, Mitsuru Hanada<sup>1</sup>, Yukihiro Matsuyama<sup>1</sup>, Mitsutoshi Setou<sup>2,3</sup>

<sup>1</sup>Department of Orthopaedic Surgery, Hamamatsu Medical University School of Medicine

<sup>2</sup>Department of Cellular and Molecular Anatomy, Hamamatsu Medical University School of Medicine

<sup>3</sup>International Mass Imaging Center

#### **S3-4 Imaging mass spectrometry for visualization of steroid hormones in tissues**

Yuki Sugiura<sup>1</sup>, Shuichi Shimma<sup>1</sup>, Tatsuya Higashi<sup>2</sup>, Koshiro Nishimoto<sup>1</sup>

<sup>1</sup>Department of Biochemistry, School of Medicine, Keio University

<sup>2</sup>Department of Biotechnology, Graduate School of Engineering, Osaka University

<sup>3</sup>Tokyo University of Science, Faculty of Pharmaceutical Sciences, Department of Pharmacy

## **15:10-15:15 Closing Remarks**