

**The 38th Annual Meeting of the Japanese Society  
for Biomedical Mass Spectrometry**



**Program**

**September 26th (Thu) – 27th (Fri), 2013**

**Kobe Industrial Promotion Center  
3F Harbor Hall and 8F Exhibition Space  
8-4-1 East Kawasaki-cho, Chuo-ku, Kobe, Hyogo 650-0044, Japan**

**Kazuo Igarashi, Ph.D.**

**President of the 38th Annual Meeting of  
the Japanese Society for Biomedical Mass Spectrometry**

**Association of Medicinal Analysis  
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## **Time Schedule**

### **September 26 (Thursday)**

- 9:25- 9:30    Opening Remarks**
- 9:30- 11:00   Symposium 1**
- 11:15~12:15   Poster Presentation**
- 12:25- 13:05   Luncheon Seminar / Board Meeting**
- 13:20- 14:00   JSBMS General Meeting**
- 14:00- 15:00   Special Lecture**
- 15:00- 15:45   Oral Session 1**
- 15:45- 17:15   Symposium 2**
- 17:40- 19:40   Banquet**

### **September 27 (Friday)**

- 9:15-10:45    Symposium 3**
- 10:45-11:25   Invited Lecture**
- 11:30~11:50   Encouragement Award Lecture**
- 12:05-12:45   Luncheon Seminar**
- 13:00-14:00   Oral Session 2**
- 14:00-15:30   Symposium 4**
- 15:30-17:40   Technical Workshop**
- 17:40            Closing Remarks**

# Program

September 26 (Thursday)

**9:25- 9:30 Opening Remarks (Kazuo Igarashi)**

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

Organizer: Seiji Yamaguchi (Shimane University),

**S1-1 Significance of acylcarnitines and acyl-CoAs analysis.**

Yasuhiro Maeda (Graduate School of Pharmaceutical Sciences Nagoya City University)

**S1-2 Application to the diagnosis of inborn errors of bile acid metabolism by mass spectrometry**

Hajime Takei (Junshin Clinic Bile Acid Institute)

**S1-3 Biochemical diagnosis of abnormal steroidogenesis by urine steroid profiles using GC/MS**

Keiko Homma (Central Clinical Laboratories, Keio University Hospital)

**11:15- 12:15 Poster Presentation**

**P-1 Establishing a new method of adrenal steroids by LC-MS/MS.**

Hironori Kobayashi<sup>1</sup>, Toshikazu Minohata<sup>1,2</sup>, Kenji Yamada<sup>1</sup>, Tomoo Takahashi<sup>1</sup>, Yuki Hasegawa<sup>1</sup>, Seiji Yamaguchi<sup>1</sup> (<sup>1</sup> Department of Pediatrics, Shimane University Faculty of Medicine, <sup>2</sup> Shimadzu Corporation)

**P-2 Analysis of acyl-CoA by UPLC/MS/MS for methylmalonyl-CoA mutase assay.**

Yasuhiro Maeda<sup>1</sup>, Tetsuya Ito<sup>2</sup>, Kana Gotoh<sup>1</sup>, Yuji Hotta<sup>1</sup>, Yoko Nakajima<sup>2</sup>, Sayaka Kato<sup>2</sup>, Shinji Saito<sup>2</sup>, Kazunori Kimura<sup>1</sup> (<sup>1</sup> Graduate School of Pharmaceutical Sciences, Nagoya City University, <sup>2</sup> Graduate School of Medical Sciences, Nagoya City University)

**P-3 Determination of sulfur amino acids using GC-MS.**

Hyun-su Jung and Hye-Ran Yoon (Laboratory of Biomedical & Pharmaceutical Analysis, College of Pharmacy, Duksung Women's University, Seoul, Korea)

**P-4 A metabolic profiling study by GC-MS for diagnosing dog oral malignant melanoma and for evaluation of radiation therapy on it.**

Yuta Baba<sup>1</sup>, Reo Tamai<sup>2</sup>, Mifumi Yamazaki<sup>3</sup>, Takashi Mori<sup>3</sup>, Masayuki Komori<sup>2</sup>, Shigeo Takenaka<sup>2</sup> (<sup>1</sup> Osaka Prefecture University, Department of Life and Environmental Sciences, <sup>2</sup> Osaka Prefecture University, Graduate School of Life and Environmental Sciences, <sup>3</sup> Gifu University, Animal Medical Center)

**P-5 Direct analysis of polyunsaturated fatty acid-containing phospholipids by Liquid**

**extraction surface analysis (LESA).**

Akinori Mizuno<sup>1</sup>, Yusuke Kawashima<sup>2,3</sup>, Yoshio Kodera<sup>3,4</sup>, Hiroyuki Matsumoto<sup>2</sup>, Ryo Taguchi<sup>1</sup> (<sup>1</sup> Department of biomedical Sciences, College of Life and Health Sciences, Chubu University, <sup>2</sup> Department of Biochemistry and Molecular Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA, <sup>3</sup> Department of Physics, School of Science, Kitasato University, <sup>4</sup>Center for Disease Proteomics, School of Science, Kitasato University)

**P-6 Fatty acid composition changes in multiple myeloma cells.**

Yasuyuki Nagata<sup>1,2</sup>, Itsuko Ishizaki<sup>3</sup>, Yoshimi Ide<sup>1,4</sup>, Michihiko Waki<sup>1</sup>, Kazunori Ohnishi<sup>2</sup>, Noriaki Sanada<sup>3</sup>, Mitsutoshi Setou<sup>1</sup> (<sup>1</sup>Department of Cell Biology and Anatomy, Hamamatsu University School of Medicine, <sup>2</sup>Oncology Center, Hamamatsu University School of Medicine, <sup>3</sup>ULVAC-PHI, Inc., <sup>4</sup>Department of Surgery 1, Hamamatsu University School of Medicine)

**P-7 Effectiveness of the GC-/MS/MS in an analysis of biological samples.**

Shuichi Kawana, Yukihiro Kudo, Takashi Suzuki, Katsuhiko Nakagawa, Haruhiko Miyagawa (Shimadzu Corporation)

**P-8 Multivariate statistical analysis of epidermal surface lipids obtained through noninvasive sampling.**

Maiko Kusano<sup>1</sup>, Yuichiro Fujita<sup>1</sup>, Shigeki Kajihara<sup>1</sup>, Shin-ichirou Kawabata<sup>1</sup>, Koichi Tanaka<sup>1</sup> (<sup>1</sup> Koichi Tanaka Laboratory of Advanced Science and Technology, Shimadzu Corporation)

**P-9 The analysis of fatty acids in serum using GC/MS/MS with an electron impact and a positive chemical ionization.**

Yukihiro Kudo, Shuichi Kawana, Yuki Sakamoto, Katsuhiko Nakagawa, Haruhiko Miyagawa (Shimadzu Corporation)

**P-10 Synthesis of a surrogate compound of evodiamine by H-D exchange reaction.**

Kaname Tsutsumiuchi<sup>1</sup>, Shogo Hirano<sup>1</sup>, Hitoshi Yamashita<sup>2</sup> (<sup>1</sup> College of Bioscience and Biotechnology, Chubu University, <sup>2</sup> College of Life and Health Sciences, Chubu University)

**P-11 Development of sensitive analyses of diacetylpolyamines in fingernail of the lung cancer patients.**

Jun Zhe Min, Morota Yuka, Kenichiro Todoroki, Koichi Inoue, Toshimasa Toyooka (School of Pharmaceutical Sciences, University of Shizuoka)

**P-12 Analysis of neurotransmitters in rat brain microdialysis sample by liquid chromatography ion trap tandem mass spectrometry..**

Fumio Kondo, Masahiko Tachi, Katsuhiko Matsuura, Minoru Fukayama, Kazuhiro Yoshikawa, Shoshiro Okada (Aichi Medical University School of Medicine)

**P-13 Analysis for antioxidants of human cell lines exposed to water pollutants using ultra-fast LC/MS/MS.**

Yukiko Hirabayashi, Ayako Nishimura, Yumiko Igarashi (Central Research Laboratory,

Hitachi, Ltd.)

- P-14 Analyses of lipid hydroperoxides in triglyceride-rich lipoproteins.**  
Rojeet Shrestha, Shu-Ping Hui, Akiko Yagi, Toshihiro Sakurai, Yuji Takahashi, Seiji Takeda, Shigeki Jin, Hirotohi Fuda, Shigeo Ikegawa, Hitoshi Chiba (Faculty of Health Sciences, Hokkaido University, Sapporo)
- P-15 Detection of lipid hydroperoxides in mineral oil for assisted reproductive technology by LC/MS.**  
Akiko Yagi<sup>1, 2</sup>, Shu-Ping Hui<sup>1</sup>, Shrestha Rojeet<sup>1</sup>, Seiichi Kobayashi<sup>1</sup>, Hitoshi Chiba<sup>1</sup>, Hirobumi Kamiya<sup>2</sup> (<sup>1</sup> Faculty of Health Sciences, Hokkaido University, <sup>2</sup> Kamiya Ladies Clinic)
- P-16 Analysis of triglycerides in skin fibroblast from TGCV by LC/MS.**  
Shu-Ping Hui<sup>1</sup>, Kenichi Hirano<sup>2</sup>, Rojeet Shrestha<sup>1</sup>, Hitoshi Chiba<sup>1</sup> (<sup>1</sup> Faculty of Health Sciences, Hokkaido University, <sup>2</sup> Graduate school of medicine/faculty of medicine, Osaka University)
- P-17 25OH-Vitamin D and 1, 25(OH)<sub>2</sub>-vitamin D measurement by LC-MS/MS with PTAD derivatization.**  
Takayuki Ishige<sup>1,2</sup>, Mamoru Satoh<sup>1,3</sup>, Motoi Nishimura<sup>1,2,3</sup>, Tatsuya Saito<sup>4</sup>, Sachio Tsuchida<sup>1,3</sup>, Setsu Sawai<sup>1,2,3</sup>, Kazuyuki Mtsushita<sup>1,2,3</sup>, Yoshio Koderu<sup>3,4,5</sup>, Fumio Nomura<sup>1,2,3</sup> (<sup>1</sup> Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University, <sup>2</sup> Division of Laboratory Medicine, <sup>3</sup> Clinical Proteomics Research Center, Chiba University Hospital, <sup>4</sup>Laboratory of Biomolecular Dynamics, <sup>5</sup>Center for Disease Proteomics, School of Science, Kitasato University)
- P-18 Exploring of predictive plasma markers for chronic renal failure by LC/MS.**  
Toshihiro Kobayashi<sup>1</sup>, Masahiro Kohno<sup>1</sup>, Yuriko Matsumura<sup>1</sup>, Toshihiko Ozawa<sup>1</sup>, Hiroyuki Yanai<sup>1</sup>, Atsuo Iwasawa<sup>1</sup>, Toshiaki Kamachi<sup>1</sup>, Tatsuya Fujisawa<sup>2</sup>, Kouichi Fujiwara<sup>2</sup>, Noriaki Tanaka<sup>2</sup> (<sup>1</sup> Tokyo Institute of Technology, <sup>2</sup> Tanaka-Kitanoda Hospital)
- P-19 Serum metabolomics-based screening method for pancreatic cancer.**  
Makoto Suzuki, Takashi Kobayashi, Shin Nishiumi, Atsuki Matsubara, Masaru Yoshida, Takeshi Azuma (Division of Gastroenterology, Department of Internal Medicine, Kobe University Graduate School of Medicine)
- P-20 Application of mass spectrometry to discover and identify biomarkers for periodontal diseases.**  
Sachio Tsuchida<sup>1,2</sup>, Mamoru Satoh<sup>1,2,4</sup>, Yusuke Kawashima<sup>3</sup>, Kazuyuki Sogawa<sup>1,2</sup>, Sayaka Kado<sup>4</sup>, Setsu Sawai<sup>1,2</sup>, Motoi Nishimura<sup>1,2</sup>, Mayumi Ogita<sup>5</sup>, Yasuo Takeuchi<sup>5</sup>, Hiroaki Kobayashi<sup>5</sup>, Akira Aoki<sup>5</sup>, Yoshio Koderu<sup>2,3</sup>, Kazuyuki Matsushita<sup>1,2</sup>, Yuichi Izumi<sup>5</sup>, Fumio Nomura<sup>1,2</sup> (<sup>1</sup> Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University, <sup>2</sup> Clinical Proteomics Research Center, Chiba University Hospital, <sup>3</sup> Laboratory of Biomolecular Dynamics, Department of Physics, School of SCIENCE, Kitasato University,

<sup>4</sup>Chemical Analysis Center, Chiba University, <sup>5</sup>Department of Periodontology, Graduate school, Tokyo Medical and Dental University)

**P-21 Processed B-type natriuretic peptide is a biomarker of postinterventional restenosis in ischemic heart disease.**

Kenichi Aizawa<sup>1</sup>, Toru Suzuki<sup>1,2</sup>, Hiroataka Fujimoto<sup>1,3</sup>, Daigo Sawaki<sup>1,2</sup>, Junichi Ishida<sup>1</sup>, Jiro Ando<sup>1</sup>, Hideo Fujita<sup>1</sup>, Issei Komuro<sup>1</sup>, Ryozo Nagai<sup>1</sup> (<sup>1</sup>Department of Cardiovascular Medicine, The University of Tokyo, <sup>2</sup>Department of Ubiquitous Preventive Medicine, The University of Tokyo, <sup>3</sup>Life Science Research Center, Technology Research Laboratory, Shimadzu Corp)

**P-22 Toward the development of diagnostic applications from proteome analysis.**

Mamoru Satoh<sup>1,2,3</sup>, Yusuke Kawashima<sup>4</sup>, Tatsuya Saito<sup>1,4</sup>, Masumi Ishibashi<sup>1</sup>, Kazuyuki Sogawa<sup>1,5</sup>, Sayaka Kado<sup>3</sup>, Yoshio Kodera<sup>1,4</sup>, Fumio Nomura<sup>1,2</sup> (<sup>1</sup>Clinical Proteomics Research Center, Chiba University Hospital, <sup>2</sup>Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University, <sup>3</sup>Center for Analytical Instrumentation, Chiba University, <sup>4</sup>Center for Disease Proteomics, School of Science, Kitasato University)

**P-23 Comparative proteomic analysis of AraC resistant cells versus AraC sensitive cells reveals RALDH2 Up-regulation effect the drug resistance property.**

Ayaka Matsuoka, Yasuko Yamamoto, Kuniaki Saito (Kyoto University Graduate School of Medicine and Faculty of Medicine)

**P-24 Analysis of N-terminal amyloid $\beta$  in human brain from Alzheimer's disease using UPLC-MS/MS with derivatization.**

Daiju Hosaka<sup>1</sup>, Koichi Inoue<sup>1</sup>, Hiroyasu Akatsu<sup>2,3</sup>, Noriyuki Akamatsu<sup>3</sup>, Yoshio Hashizume<sup>2</sup>, Takayuki Yamamoto<sup>2</sup>, Toshimasa Toyo'oka<sup>1</sup> (<sup>1</sup>School of pharmaceutical Science, University of shizuoka, <sup>2</sup>Fukushima Hospital, <sup>3</sup>Graduate School of Medical Sciences and Medical School, Nagoya City University)

**P-25 Proteomic based typing of systemic amyloidoses: a prospective study.**

Masayoshi Tasaki<sup>1,2</sup>, Mitsuharu Ueda<sup>1</sup>, Konen Obayashi<sup>3</sup>, Keisuke Kitagawa<sup>1</sup>, Yasuhiro Ogi<sup>1</sup>, Toshinori Oshima<sup>1</sup>, Yohei Misumi<sup>1</sup>, Yukio Ando<sup>1</sup> (<sup>1</sup>Department of Neurology, Graduate School of Medical Sciences, Kumamoto University, <sup>2</sup>Department of Biomedical Laboratory Sciences, Graduate School of Medical Sciences, Kumamoto University, <sup>3</sup>Diagnostic Unit for Amyloidosis, Department of Laboratory Medicine, Kumamoto University Hospital)

**P-26 Development of sepsis treatment with an anaphylatoxin inhibitory peptide (AcPepA) —Analysis of AcPepA concentration by UPLC/MS/MS—**

Kana Gotoh<sup>1</sup>, Yasuhiro Maeda<sup>1</sup>, Yuji Hotta<sup>1</sup>, Tomoya Kataoka<sup>1</sup>, Alan Okada<sup>2</sup>, Hidechika Okada<sup>2</sup>, Kazunori Kimura<sup>1</sup> (<sup>1</sup> Graduated School of Pharmaceutical Sciences, Nagoya City University, <sup>2</sup> Research Institute for Protein Science Co.)

**P-27 Identification of growth hormone secretagogue GHRP-2 in dietary supplements and confirmation analysis of GHRP-2 metabolite in human urine collected after administration.**

Mitsuhiko Sato, Masato Okano, Shinji Kageyama (Anti-Doping Laboratory, Mitsubishi Chemical Medience Corporation)

**P-28 Determination of darbepoetin alfa in human urine by means of UPLC-MS/MS.**

Masato Okano, Mitsuhiko Sato, Shinji Kageyama (Anti-Doping Laboratory, Mitsubishi Chemical Medience Corporation)

**P-29 An interference by the concomitant drugs upon measuring the concentration of Dexmedetomidine (Precedex®) in human plasma.**

Kazuyo Yokohata, Teruyo Mori, Yukihiro Watanebe, Yoshiro Yamamura, Masahiro Ikeda (Central Research Laboratory, Maruishi Pharmaceutical Co., Ltd)

**P-30 MALDI-Q-TOF mass spectrometric determination of cathinone derivatives in blood.**

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>, Amin Wurita<sup>1</sup>, Kanako Watanabe<sup>1</sup>, Osamu Suzuki<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)

**P-31 The *in vitro* metabolism of tryptamines designer drugs by human and mouse liver microsomes.**

Kazuna Miyamoto<sup>1,2</sup>, Takuya Yamashita<sup>1</sup>, Tomomi Shibahara<sup>1</sup>, Mai Date<sup>1</sup>, Yukiko Nakazono<sup>3,2</sup>, Kenji Kuwayama<sup>3</sup>, Kenji Tsujikawa<sup>3</sup>, Hiroyuki Inoue<sup>3</sup>, Fumiyo Kasuya<sup>1</sup> (<sup>1</sup> Faculty of Pharmaceutical Sciences, Kobegakuin University, <sup>2</sup>Hitec, Inc., <sup>3</sup>National Research Institute of Police Science)

**P-32 Neurotoxicity evaluation of phenethylamine-type designer drugs in dopaminergic nerve cells.**

Takuya Yamashita<sup>1</sup>, Daikei Fujimoto<sup>1</sup>, Toshiaki Inoue<sup>1</sup>, Ryuya Yanamoto<sup>1</sup>, Nami Arakawa<sup>1</sup>, Kazuna Miyamoto<sup>1</sup>, Kenji Kuwayama<sup>2</sup>, Kenji Tsujikawa<sup>2</sup>, Hiroyuki Inoue<sup>2</sup>, Fumiyo kasuya<sup>1</sup> (<sup>1</sup> Faculty of Pharmaceutical Sciences, Kobegakuin University, <sup>2</sup>National Research Institute of Police Science)

**P-33 High sensitive analysis of benzodiazepine drugs in human plasma by UFLC-MRM<sup>3</sup>.**

Xiao-Pen Lee<sup>1</sup>, Takeshi Kumazawa<sup>1</sup>, Chika Hasegawa<sup>2</sup>, Susumu Nittono<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)

**P-34 A case of postmortem detected nitrite and nitrate.**

Kyoko Maebashi<sup>1</sup>, Kumiko Asakura<sup>1, 2</sup>, Kimiharu Iwadata<sup>1</sup> (<sup>1</sup> Department of Forensic Medicine, The Jikei University School of Medicine, <sup>2</sup> Tokyo Medical Examiner's Office, Tokyo Metropolitan Government)

**P-35 A fatal case associated with inhalation of HCFC-22 (chlorodifluoromethane) .**

Hiroshi Ochi, Yukari Hirata, Makoto Hamajima, Masato Nakatome, Ichiro Isobe (Fujita Health University School of Medicine *Department of Legal Medicine*)

**P-36 A fatal case related to poisoning by overdoses of antipsychotic drug olanzapine.**

Motonari Yoshida<sup>1</sup>, Hiroshi Ochi<sup>2</sup>, Takeshi Hayashi<sup>1</sup>, Ryouji Matoba<sup>1</sup>, Hiroshi Matsumoto<sup>1</sup>, Kazuo Igarashi<sup>1,3</sup> (<sup>1</sup> Osaka University Graduate, School of Medicine, <sup>2</sup> Fujita Health University, School of Medicine, <sup>3</sup> Research Center, Association of Medicinal Analysis)

**P-37 An autopsy case of an infant in which mifepristone was detected using MS-MS.**

Akira Ishii<sup>1</sup>, Kei Zaitzu<sup>1</sup>, Takashi Yoshimoto<sup>1</sup>, Toshimichi Yamamoto<sup>1</sup>, Tadashi Ogawa<sup>2</sup>, Hideki Hattori<sup>2</sup>, Hiroshi Seno<sup>2</sup> (<sup>1</sup> Nagoya University Graduate School of Medicine, Department of Legal Medicine and Bioethics, <sup>2</sup> Aichi Medical University School of Medicine, Department of Legal Medicine)

**P-38 Building a lipid identification system using Mass++ and MassBank.**

Satoshi Tanaka<sup>1</sup>, Akiyasu C. Yoshizawa<sup>1</sup>, Maiko Kusano<sup>1</sup>, Yuichiro Fujita<sup>1</sup>, Mitsuru Fukuda<sup>2,3</sup>, Shin-ichi Utsunomiya<sup>1</sup>, Shigeki Kajihara<sup>1</sup>, Tsuyoshi Tabata<sup>2</sup>, Kentaro Takahashi<sup>2</sup>, Ken Aoshima<sup>2</sup>, Yoshiya Oda<sup>2</sup>, Yoshito Nihei<sup>4</sup>, Takaaki Nishioka<sup>4</sup>, Koichi Tanaka<sup>1</sup> (<sup>1</sup> Koichi Tanaka Laboratory of Advanced Science and Technology, Shimadzu Corporation, <sup>2</sup> Eisal Product Creation Systems, Eisai CO., Ltd., <sup>3</sup> iBio Tech Co., <sup>4</sup> Graduate School of Information Science, Nara Institute of Science and Technology)

**P-39 Visualization of lipid metabolites in skeletal muscle by imaging mass spectrometry.**

Naoko Goto-Inoue<sup>1</sup>, Mitsutoshi Setou<sup>2</sup>, Nobuharu L. Fujii<sup>1</sup> (<sup>1</sup> Tokyo Metropolitan University Department of Health Promotion Sciences, <sup>2</sup> Hamamatsu University School of Medicine Department of Cell biology and anatomy)

**P-40 Fundamental examinations for the rapid identification of two species of microorganism mixture samples by the MALDI-TOF MS (Second report).**

Toyofumi Nakanishi<sup>1</sup>, Tomohiro Higashiyama<sup>2</sup>, Yumiko Matsuyama<sup>3</sup>, Takayuki Takubo<sup>1&2</sup> (<sup>1</sup> Department of Clinical and Laboratory Medicine, Osaka Medical College, <sup>2</sup> Central Clinical Laboratory, Osaka Medical College Hospital, <sup>3</sup> Customer Support Center, Bruker Daltonics)

**P-41 Specific biomolecules in human salivary gland tumor were detected by Imaging Mass Spectrometry.**

Qian He<sup>1</sup>, Yoshinori Takizawa<sup>2</sup>, Takahiro Hayasaka<sup>3</sup>, Noritaka Masaki<sup>3</sup>, Jiping Su<sup>1</sup>, Hiroyuki Mineta<sup>2</sup>, Mitsutoshi Setou<sup>3</sup> (<sup>1</sup> Department of Otorhinolaryngology Head and Neck surgery, Guangxi Medical University, Guangxi, China, <sup>2</sup> Department of Otolaryngology/Head and Neck Surgery, Hamamatsu University School of Medicine, Hamamatsu, Japan, <sup>3</sup> Department of Cell Biology and Anatomy, Hamamatsu University, School of Medicine, Hamamatsu, Japan)

**P-42 Investigation of simultaneous analysis method of non-depolarizing muscle relaxants in whole blood by ultra-performance liquid chromatography tandem mass spectrometry with ESI-APCI mix ionization mode.**

Tadashi Ogawa<sup>1</sup>, Hideki Hattori<sup>1</sup>, Yosuke Shiraishi<sup>1</sup>, Masae Iwai<sup>1</sup>, Kei Zaitzu<sup>2</sup>, Akira Ishii<sup>2</sup>, Osamu Suzuki<sup>3</sup>, Hiroshi Seno<sup>1</sup> (<sup>1</sup> Aichi Medical University School of Medicine, <sup>2</sup> Nagoya University Graduate School of Medicine, <sup>3</sup> Hamamatsu University School of Medicine)



## **12:25~13:05 Luncheon Seminar / Board Meeting**

### **Introduction of Orbitrap Fusion Tribrid Mass Spectrometer.**

Masayuki Kubota (Thermo Fisher Scientific K.K. Japan)

## **13:20- 14:00 JSBMS General Meeting**

## **14:00- 15:00 Special Lecture**

Chairperson: Kuniaki Saitou (Kyoto University)

### **Expression microdissection: combining histology with proteomics/mass spectrometry**

Sanford P. Markey (National Institutes of Health (NIH, USA))

## **15:00- 15:45 Oral Session 1**

Chairperson: Tetsuya Itou (Nagoya City University)

Mitsutoshi Setou (Hamamatsu University School of Medicine)

### **O1-1 Effectively metabolic pathological analysis for high risk patient by GC/MS and LC/MSMS simultaneously analysis.**

Chunhua Zhang (Department of research & development of MILS International)

### **O1-2 Influence of beta- oxidation by salicylic acid: evaluation by in vitro probe assay.**

Tomoo Takahashi, Kenji Yamada, Hironori Kobayashi, Yuki Hasegawa, Seiji Yamaguchi  
(Shimane University Faculty of Medicine, Department of Pediatrics)

### **O1-3 Simultaneous analysis of sildenafil, vardenafil, tadalafil and their desalkyl metabolites in human whole blood and urine by isotope dilution LC-MS-MS.**

Koutaro Hasegawa, Osamu Suzuki, Kunio Gonmori, Itaru Yamagishi, Hideki Nozawa, Kanako Watanabe (Hamamatsu University School of Medicine, Department of Legal Medicine)

## **15:45- 17:15 Symposium 2**

Organizer: Fumiyo Kasuya (Kobegakuin University)

### **S2-1 Metabolomics analysis for medical research.**

Masaru Yoshida (Kobe University Graduate School of Medicine)

### **S2-2 Chiral amino acid metabolomics: a new approach for clinical biomarker assay.**

Kenji Hamase<sup>1</sup>, Yurika Miyoshi<sup>1</sup>, Jumpei Sasabe<sup>2</sup>, Tomonori Kimura<sup>3</sup>, Ryohei Yamamoto<sup>3</sup>, Masashi Mita<sup>4</sup>, Yoshitaka Isaka<sup>3</sup>, Sadakazu Aiso<sup>2</sup> (<sup>1</sup>Kyushu University, Graduate School of Pharmaceutical Sciences, <sup>2</sup>Keio University, School of Medicine, <sup>3</sup>Osaka University, Graduate

School of Medicine, <sup>4</sup>Shiseido, Co., Ltd.)

**S2-3 A Development of medical device with metabolomics methodology and its problems – approach from a vendor –**

Noriyuki Ojima, Tsutomu Nishine (Shimadzu Corporation, Analytical & Measuring Instruments Division, Global Marketing Department)

**17:40- 19:40 Banquet**

**September 27 (Friday)**

**9:15-10:50 Symposium 3**

Organizer: Kenji Hara (Fukuoka University)

**S3-1 Application of mass spectrometry in forensic medicine—the pathologist’s point of view—**

Masayuki Kashiwagi, Shin-ichi Kubo (Department of Forensic Medicine, Faculty of Medicine, Fukuoka University)

**S3-2 Mass spectrometry is important for the analysis of patient sample in emergency medicine—Analysis of several cases in our clinical toxicology laboratory—**

Yutaka Komiyama (Department of Clinical Sciences and Laboratory Medicine, Kansai Medical University)

**S3-3 Determination of newly encountered cathinone-derived designer drugs and their metabolites in human urine.**

Munehiro Katagi<sup>1</sup>, Noriaki Shima<sup>1</sup>, Hiroe Kamata<sup>1</sup>, Keiko Sasaki<sup>1</sup>, Shuntaro Matsuta<sup>1</sup>, Kei Zaito<sup>2</sup>, Akira Ishii<sup>2</sup>, Hitoshi Tsuchihashi<sup>3</sup>, Koichi Suzuki<sup>3</sup> (<sup>1</sup> Forensic Science Laboratory, Osaka Prefectural Police Headquarters, <sup>2</sup> Nagoya University Graduate School of Medicine, <sup>3</sup>Department of Legal Medicine, Osaka Medical College)

**10:50-11:30 Invited lecture**

Chairperson: Kazuo Igarashi (Association of Medicinal Analysis)

**Mass spectrometry in forensic science**

Hiroyuki Inoue (National Research Institute of Police Science)

**11:30-11:50 Encouragement Award Lecture**

Chairperson: Toshimitsu Niwa (Nagoya University)

**Visualization of brain information with imaging mass spectrometry for medical**

**application.**

Ikuko Yao<sup>1, 2, 3</sup> (<sup>1</sup>Department of Optical Imaging, Basic Medical Photonics Laboratory, Medical Photonics Research Center, Hamamatsu University School of Medicine, <sup>2</sup>Department of Medical Chemistry, Kansai Medical University, <sup>3</sup>JST PRESTO)

**12:05-12:45 Luncheon Seminar**

**Metabolomics Approach Using the GC/MS and GC-MS/MS database.**

Shuichi Kawana (Shimadzu Corporation)

**13:00-14:00 Oral Session 2**

Chairperson: Fumio Nomura (Chiba University)

Shigeo Ikegawa (Hokkaido University)

**O2-1 Proteomic profiling of the glomerulus of human kidney.**

Hiroko Odani<sup>1</sup>, Toyofumi Nakanishi<sup>2</sup>, Nobuteru Usuda<sup>3</sup>, Toyoaki Ogawa<sup>1</sup>, Satoshi Sugiyama<sup>4</sup>  
(<sup>1</sup>Nagoya University Graduate School of Medicine, <sup>2</sup>Osaka Medical Collage, <sup>3</sup>Fujita Health University School of Medicine, <sup>4</sup>Kanayama Clinic)

**O2-2 Proteomic profiling for multilayer structure of bovine periosteal cells.**

Mari Akiyama (Osaka Dental University, Department of Biomaterials)

**O2-3 Identification of *Nocardia* species using matrix-assisted laser desorption ionization-time of flight.**

Shunsuke Segawa<sup>1,2</sup>, Motoi nishimura<sup>1,2,3</sup>, Kazuyuki Sogawa<sup>3,5</sup>, Murata Shota<sup>2</sup>, Tomoko Saito<sup>2</sup>, Akiko Miyabe<sup>2</sup>, Tomoko Sakai<sup>2</sup>, Mami Uehara<sup>2</sup>, Masaharu Watanabe<sup>2</sup>, Katsuhiko Kamei<sup>4</sup>, Fumio Nomura<sup>1,2,3</sup> (<sup>1</sup>Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University, <sup>2</sup>Department of Clinical Laboratory, Chiba University Hospital, <sup>3</sup>Clinical Proteomics Research Center, Chiba University Hospital, <sup>4</sup>Medical Mycology Research Center, Chiba University, <sup>5</sup>Department of Food Biochemistry, School of Life and Environmental Science, Azabu University)

**O2-4 Visualization of glucose metabolic flux by imaging mass spectrometry.**

Yuki Sugiura (Precursory Research for Embryonic Science and Technology (PRESTO), Japan Science and Technology Agency (JST))

**14:00-15:30 Symposium 4**

Organizer: Toyofumi Nakanishi (Osaka Medical Colleg)

**S4-1 Analysis of lipid oxidation products by using mass spectrometry.**

Mototada Shichiri<sup>1</sup>, Noriko Ishida<sup>1</sup>, Yoshihisa Hagihara<sup>1</sup>, Yasukazu Yoshida<sup>1</sup>, Toyofumi Nakanishi<sup>2</sup> (<sup>1</sup>Health Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), <sup>2</sup>Department of Clinical and Laboratory Medicine, Osaka Medical

College)

**S4-2 The imaging mass spectrometry through requested analysis.**

Takaaki Miyaji (Department of Genomics & Proteomics, Advanced Science Research Center, Okayama University)

**S4-3 Imaging mass spectrometry for the component in the brain.**

Ikuko Yao <sup>1,2,3</sup> (<sup>1</sup> Department of Optical Imaging, Basic Medical Photonics Laboratory, Medical Photonics Research Center, Hamamatsu University School of Medicine, <sup>2</sup> Department of Medical Chemistry, Kansai Medical University, <sup>3</sup> JST PRESTO)

**15:30-17:40 Technical workshop**

Chairperson: Yoshitaka Maeno (Nagoya City University)

Tetsuo Kokaji (KK AB SCIEX)

**WS-1 Stable isotopes in bio mass spectrometry.**

Yoshinori Fujimine (Otsuka Pharmaceutical Co., LTD, Diagnostic Division)

**WS-2 Extraction of 22 pain management drugs from human urine using supported liquid extraction (ISOLUTE<sup>®</sup> SLE+) prior to LC-MS/MS analysis.**

Maiko Kaneko<sup>1</sup>, Victor Vandell<sup>2</sup>, Frank Kero<sup>2</sup>, Elena Gairloch<sup>2</sup> (<sup>1</sup> Biotage Japan, Ltd., <sup>2</sup> Biotage, 10430 Harris Oaks Blvd., Suite C, Charlotte North Carolina 28269, USA)

**WS-3 Introduction of sample preparation product suited for small sample volume.**

Kenichi Suzuki, Yuko Yui, Shigenori Ota, Masayoshi Ohira (GL Sciences Inc.)

**WS-4 Introduction of Orbitrap Fusion Tribrid mass spectrometer.**

Masayuki Kubota (Thermo Fisher Scientific K.K. Japan)

**WS-5 Rapid microbial ID and the application base on MALD TOF-MS – MALDI Biotyper -**

Yumiko Matsuyama (Bruker Daltonics K.K)

**WS-6 Introduction: Imaging Mass Microscope “iMScope”.**

Koretsugu Ogata (Shimadzu Corporation, Analytical & Measuring Instruments Division MS Business Unit)

**WS-7 A Method Development of Scheduled Drug Using LC/MS/MS.**

Tetsuo Kokaji<sup>1</sup>, Yuji Fujita<sup>2</sup> (<sup>1</sup>K.K. AB SCIEX, <sup>2</sup>Iwate Medical University)

**WS-8 Non target screening of drugs by LC-QTOF with All ion MSMS.**

Masahikio Takino<sup>1</sup>, Hirokazu Sawada<sup>1</sup>, Makiko Hayashida<sup>2</sup> (<sup>1</sup> Agilent Technologies Japan, Ltd. <sup>2</sup> Department of Legal Medicine, Nippon Medical School)

**17:40 Closing Remarks**

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**The 38th Annual Meeting of the Japanese Society for Biomedical Mass Spectrometry**

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