The 39th Annual Meeting of the Japanese Society for Biomedical Mass Spectrometry

Program

October 16th (Thu) – 17th (Fri), 2014

Mitsui Garden Hotel Chiba
1-11-1 Chuo, Chuo-ku, Chiba, 260-8626 JAPAN

Fumio Nomura, M.D.,Ph.D.

President of the 39th Annual Meeting of
the Japanese Society for Biomedical Mass Spectrometry

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Time Schedule

October 16 (Thursday)

9:00-	Start Accepting
9:50-9:55	Opening Remarks
9:55-11:35	Symposium 1
11:55-12:35	Board Meeting / Luncheon Seminar
12:55-13:55	Poster Presentation (odd number of subjects)
14:10-14:50	Education Lecture 1
15:05-15:45	JSBMS General Meeting
16:00-17:30	Symposium 2
17:40-18:20	Education Lecture 2
18:30-20:30	Banquet

October 17 (Friday)

8:30-	Start Accepting
9:15-9:40	Morning Seminar
10:00-11:40	Symposium 3
12:00-12:40	Luncheon Seminar
13:00-14:00	Poster Presentation (even number of subjects)
14:15-15:05	Invited Lecture
15:10-15:30	Encouragement Award Lecture
15:45-17:15	Technical Workshop
17:15	Closing Remarks

Program

October 16 (Thursday)

9:00- Start Accepting

9:50-9:55 Opening Remarks

9:55-11:35 Symposium 1

Newborn screening for inborn errors by tandem mass spectrometry
Organizer: Seiji Yamaguchi (Shimane University)

S1-1 **Practice for improvement in MS/MS screening accuracy of target disorders**
Yosuke Shigematsu[1], Ikue Hata[2] ([1] Department of Health Science, Faculty of Medical Sciences, University of Fukui, [2] Department of Pediatrics, Faculty of Medical Sciences, University of Fukui)

S1-2 **Clinical features of diseases detected by advanced neonatal mass-screening**
Masaki Takayanagi (Chiba Children's Hospital, Div. of General pediatrics)

S1-3 **Quality control for newborn screening using tandem mass spectrometry in screening laboratories.**
Junji Hanai[1], Masaru Fukushi[2], Nobuyuki Ishige[3], Ryuji Tasaki[4] ([1] Sapporo City Institute of Public Health, [2] Sapporo Immuno diagnostic laboratory, [3] Tokyo Health Service Association, [4] The Chemo Sero-Therapeutic Research Institute)

S1-4 **Development of second tier test system in neonatal screening by LC-MS**
Hideki Nakajima[1], Nobuyuki Ishige[2], Akira Anazawa[2], Torayuki Okuyama[1], Junichro Fujimoto[1], Yosuke Shigematsu[3], Seiji Yamaguchi[4], Shohei Harada[1] ([1] National Center for Child Health and Development, [2] Division of Newborn Screening, Tokyo Health Service Association, [3] Department of Pediatrics, Fukui University School of Medicine, [4] Department of Pediatrics, Shimane University School of Medicine

11:55-12:35 Board Meeting / Luncheon Seminar

Sumitomo Dainippon Pharma

LS-1 **Diagnosis and Therapeutic Care for Fabry Disease**
Hiroshi Kobayashi (Division of Gene Therapy, Research Center for Medical Sciences, The Jikei University School of Medicine)

Thermo Fisher Scientific, Inc.

LS-2 **Metabolome analysis of metabolic disorder patient sample by high-resolution mass spectrometer "Orbitrap"**
Hideki Nakajima[1], Kentaro Takahara[2], Masayuki Kubota[2], Motomichi Kosuga[1], Torayuki Okuyama[1], Masafumi Onodera[1], Junichiro Fujimoto[1] ([1] National Center for Child health and Development, [2] Thermo Fisher Scientific, Inc.)

12:55-13:55 Poster Presentation (odd number of subjects)

P-1 **Dried-blood spot metabolite profile analysis by GC/MS and LC/MSMS simultaneously analysis**

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

P-3 **Confirmatory LC/MS/MS analysis for CAH screening**

Kazutaka Inaoka[1,5], Hiroshi Fujita[1], Shinobu Nakamura[1], Kiyomi Takeshima[1], Toshiki Kasahara[1], Makoto Takeuchi[1], Yoshinao Wada[1], Tetsuo Kokaji[2], Yoshinori Fujimine[3], Kazuhito Sekine[4], Shohei Harada[5], Yosuke Shigematsu[6] ([1] Osaka Medical Center and Research Institute for Maternal and Child Health, [2] AB SCIEX, [3] Otsuka Pharmaceutical Co., LTD, [4] Eiken Chemical Co., LTD, [5] National Center for Child Health and Development, [6] Fukui University.)

P-5 **Analysis for Derivatized Fatty Acids by LC/MS**

Shu-Ping Hui[1], Rojeet Shrestha[1], Ken-ichi Hirano[2], Akira Suzuki[2], Hitoshi Chiba[1]([1] Faculty of Health Sciences, Hokkaido University, [2] Laboratory of Cardiovascular Disease, Novel, Non-Invasive, and Nutritional Therapeutics (CNT), Graduate School of Medicine, Osaka University)

P-7 **Non-target lipidomics approach by new accurate and global screening**

Kazutaka Ikeda[1,2,3], Hiroshi Tsugawa[4], Sanae Yamanaka[2,3], Masanori Arita[4], Makoto Arita[1], Masaru Tomita[2], Tomoyoshi Soga[2] ([1] Laboratory for Metabolomics, RIKEN Center for Integrative Medical Sciences (IMS), [2] Institute for Advanced Biosciences, Keio University, [3] JST-CREST, [4] Metabolome Informatics Research Team, RIKEN Center for Sustainable Resource Science (CSRS))

P-9 **Acyl-CoA synthetase activity and effect of the drugs on the acyl-CoA synthetases in mouse tissues**

Takuya Yamashita, Hiroki Satou, Midori Miura, Fumiyo Kasuya (Faculty of Pharmaceutical Sciences, Kobegakuin University)

P-11 **Development of LC/ESI-MS/MS assay for plasma 25-hydroxyvitamin D_3 3-sulfate**

Ayaka Goto[1], Misato Morohashi[1], Kenji Komatsu[2], Takahiro Sugiura[2], Shoujiro Ogawa[1], Tatsuya Higashi[1] ([1] Faculty of Pharmaceutical Sciences, Tokyo University of Science, [2] Shizuoka Saiseikai General Hospital)

P-13 **Development of highly sensitive quantification method for estradiol in serum by LC-MS/MS**

Hidehiko Sasamoto, Yoshimichi Miyashiro (Aska Pharma Medical Co., LTD.)

P-15 **Simultaneous Determination of Serum 25-hydroxyvitamin D and 1,25-dihydroxyvitamin D by LC-MS/MS with Immunoaffinity Extraction and DAPTAD Derivatization**

Takayuki Ishige[1], Mamoru Satoh[2], Shoujiro Ogawa[3], Motoi Nishimura[1], Sachio Tsuchida[2], Setsu Sawai[1], Kazuyuki Matsushita[1], Tatsuya Higashi[3], Fumio Nomura[1,2] ([1] Depertment of Molecular Diagnosis, Graduate School of Medicine, Chiba University, [2] Clinical Proteomics Research Center, Chiba University Hospital, [3] Faculty of Pharmaceutical Sciences, Tokyo University of Science)

P-17 **Exploration of biomarkers for the detection of heart failure**

Yasuhiro Irino[1], Ryuji Toh[1], Takeshige Mori[2], Manabu Nagao[2], Tomoyuki Honjo[2], Seimi Satomi-Kobayashi[2], Toshiro Shinke[2], Tatsuro Ishida[2], Okiko Miyata[3], and Ken-ichi Hirata[1,2] ([1] Division of Evidence-Based Laboratory Medicine, Kobe University Graduate School of Medicine, [2] Division of Cardiovascular Medicine, Kobe University School of Medicine, [3] Medicinal Chemistry Laboratory, Kobe Pharmaceutical University)

P-19 **Analysis for Oxidative Stress-related Substances 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-21 **Metabolomics-based search for therapeutic agents against non-alcoholic steatohepatitis**

Sin Nishiumi, Yoshihiko Terashima, Takeshi Azuma, Masaru Yoshida (Division of Gastroenterology, Department of Internal Medicine, Kobe University Graduate School of Medicine)

P-23 **Targeted metabolomics approach for Alzheimer's brain and blood samples.**

Koichi Inoue[1], Hiroyasu Akatsu[2], Hirofumi Tsuchiya[1], Takahiro Takayama[1], Noriyuki Matsukawa[2], Yoshio Hashizume[3], Takayuki Yamamoto[3], Toshimasa Toyo'oka[1] ([1] Laboratory of Analytical and Bio-Analytical Chemistry, School of Pharmaceutical Sciences, University of Shizuoka, Shizuoka, Japan, [2] Nagoya City University, Graduate School of Medical Sciences, Nagoya, Japan, [3] Choju Medical Institute, Fukushimura Hospital, Toyohashi, Japan)

P-25 **The C-terminal peptide of prostate-specific antigen as a new urinary biomarker candidate for diagnosing prostate cancer**

Kenji Nakayama[1], Takahiro Inoue[1], Sadanori Sekiya[2], Naoki Terada[1], Yu Miyazaki[1], Takayuki Goto[1], Shigeki Kajihara[2], Shin-Ichiro Kawabata[2], Shinichi Iwamoto[2], Koichi Tanaka[2], Osamu Ogawa[1] ([1] Department of Urology, Graduate School of Medicine, Kyoto University, [2] Koichi Tanaka Laboratory of Advanced Science and Technology, Shimadzu Corporation)

P-27 **Search for novel marker of cats with chronic renal failure using proteome analysis**

Hiroto Maeda[1], Takehiro Maekawa[2], Yui Shibata[2], Saori Abe[1], Waka Horie[1], Shunsuke Mochizuki[3], Toshifumi Watanabe[3], Mamoru Satoh[4], Akihiro Sanda[2], Fumio Nomura[4], Kazuyuki Sogawa[2] ([1] Maeda Veterinary Hospital, [2] Azabu University School of Life and Environmental Science, [3] Azabu University Veterinary Teaching Hospital, [4] Chiba University Graduate School of Medicine)

P-29 **Search for novel allergen of kiwi fruit allergy using IgE-immunoblotting assay**

Ayaka Kawahara[1], Kazuyuki Sogawa[1], Mamoru Satoh[2], Akihiro Sanda[1], Naoki Shimojo[2], Fumio Nomura[2] ([1] Azabu University School of Life and Environmental, [2] Chiba University Graduate School of Medicine)

P-31 **Establishment of method to analyze immunoglobulin G binding peptides aimed at discovering disease biomarkers.**

Yoshiya Hirata[1], Tatsuya Saito[1,2], Rika Kato[1,2], Yusuke Kawashima[2,3], Yoshio Kodera[1,2] ([1] Laboratory of Biophysics, Department of Physics, School of Science, Kitasato University, [2] Center for Disease Proteomics, School of Science, Kitasato University, [3] RIKEN Center for Integrative Medical Sciences)

P-33 **Proteomic analysis of exosomes in serum and plasma aimed at discovering disease-related proteins.**

Eri Takahashi[1], Tatsuya Saito[1,2], Yusuke Kawashima[2,3], Hideaki Kume[4], Takeshi Tomonaga[4], Yoshio Kodera[1,2] ([1] Laboratory of Biophysics, Department of Physics, School of Science, Kitasato University, [2] Center for Disease Proteomics, School of Science, Kitasato University, [3] RIKEN Center for Integrative Medical Sciences, [4] Laboratory of Proteome Research, National Institute of Biomedical Innovation)

P-35 **The effects of preanalytical variables on serum peptidome profiling by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry**

Sachio Tsuchida[1,2], Mamoru Satoh[1,2], Kazuyuki Sogawa[1,2], Hiroshi Umemura[1,2], Minako Beppu[1,2], Setsu Sawai[1,2], Motoi Nishimura[1,2], Yoshio Kodera[2,3], Kazuyuki Matsushita[1,2], Fumio Nomura[1,2] ([1] Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University, [2] Clinical Proteomics Research Center, Chiba University Hospital, [3] Laboratory of Biomolecular Dynamics, Department of physics, School of Science, Kitasato University)

P-37 **Doping control analysis of stimulants using dried blood spot (DBS)**

Asami Kojima[1], Masato Okano[1], Mitsuhiko Sato[1], Yasunori Nishitani[1], Michiko Dohi[2], Shinji Kageyama[1] ([1] Anti-Doping Laboratory, LSI Medience Corporation, [2] Medical Centre, Japan Institute of Sports Sciences)

P-39 **Enantioselective determination of ibuprofen in saliva by LC/MS/MS with chiral ESI-enhancing and stable isotope-coded derivatization**

Hiroaki Tadokoro, Maho Sato, Shoujiro Ogawa, Tatsuya Higashi (Faculty of Pharmaceutical Sciences, Tokyo University of Science)

P-41 **Application of monolithic silica solid-phase extraction tips for GC/MS analysis of NSAIDs in blood**

Chika Hasegawa[1,2,3], Takeshi Kumazawa[2,3], Xiao-Pen Lee[2], Masaru Terada[1], Keizo Sato[2], Hiroshi Seno[3], Kunihiko Kurosaki[1] ([1] Department of Legal Medicine, Toho University School of Medicine, [2] Department of Legal Medicine, Showa University School of Medicine, [3] Department of Legal Medicine, Aichi Medical University School of Medicine)

P-43 **Search for biomarkers of drug intoxication cases of postmortem**

Hiroko Abe[1], Yumi Hoshioka[1], Kayako Suga[2], Yuko Kubo[1], Makiko Hayashida[3], Hirotarou Iwase[1,4] ([1] Department of Legal Medicine, Graduate School of Medicine, Chiba University, [2] AB SCIEX, [3] Department of Legal Medicine, Nippon Medical School, [4] Department of Forensic Medicine, Graduate School of Medicine, The University of Tokyo)

P-45 **Determination of a new generation's Bcr-Abl tyrosine kinase inhibitors in human plasma by LC/MS method**

Yuri Goto[1], Noritaka Ariyoshi[2], Chiaki Nakaseko[3], Chiaki Imai[2], Itsuko Ishii[2] ([1] Department of Clinical Pharmacology, Graduate School of Pharmaceutical Sciences, Chiba University, Chiba, Japan, [2] Division of Pharmacy, University Hospital, Chiba University School of Medicine, Chiba, Japan, [3] Clinical Cell Biology and Medicine, Graduate School of Medicine, Chiba University, Chiba, Japan)

P-47 **A Novel and Sensitive Assay of Kidney Heme Oxygenase Activity**

Saki Iwamori[1], Emiko Sato[1,2], Kouichi Yoshinari[3], Miki Shimada[4], Nariyasu Mano[4], Sadayoshi Ito[2], Hiroshi Sato[1,2], Nobuyuki Takahashi[1,2] ([1] Division of Clinical Pharmacology and Therapeutics, Graduate School of Pharmaceutical Sciences, Tohoku University, Sendai, Japan, [2] Division of Nephrology, Endocrinology and Vascular Medicine, Department of Medicine, Tohoku University, Sendai, Japan [3] Division of Drug Metabolism and Molecular Toxicology, Graduate School of Pharmaceutical Sciences, Tohoku University, Sendai, Japan, [4] Department of Pharmaceutical Sciences, Tohoku University Hospital, Sendai, Japan)

P-49 **Factors involved in the peritoneal clearance of indoxylsulfate in peritoneal dialysis**

Emiko Sato[1,2], Takefumi Mori[2], Sanae Sugawara[2], Ikuko Oba[2], Kenji Koizumi[2], Makiko Chida[2], Eri Naganuma[2], Hiroshi Sato[1,2], Sadayoshi Ito[1] ([1] Division of Clinical Pharmacology and Therapeutics, Graduate School of Pharmaceutical Science, Tohoku University, [2] Division of Nephrology, endocrinology and Vascular Medicine, Graduate School of Medicine, Tohoku University)

P-51 **Determination of epigallocatechin galate in rat retina following oral administration of green tea extract by LC-MS/MS**

Kazuo Igarashi[1], Yuko Emoto[2], Jun Otaki[3], Yasuhiro Aoki[3], Yoshitaka Maeno[4], Katsuhiko Yoshizawa[2], AiroTsubura[2] ([1] Assocoiation of Medicinal Analysis, [2] Division of Diagnostic Cytopathology and Histopathology, Kansai Medical University, [3] Department of Forensic Medicine, Nagoya City University Graduate School of Medical Sciences, [4] Food and Nutritional Sciences, College of Biosciences and Biotechnology, Chubu University)

P-53 **Discrimination between methicillin-sensitive and methicillin-resistant *Staphylococcus aureus* by MALDI-TOF mass spectrometry**

Kazuyuki Sogawa[1,2], Syota Murata[2], Megumi Nakamura[2], Mami Uehara[2], Tomoko Sakai[2], Syunsuke Segawa[2], Akiko Miyabe[2], Tomoko Saito[2], Masaharu Watanabe[2], Akihiro Sanda[1], Fumio Nomura[2,3] ([1] Azabu University School of Life and Environmental Science, [2] Chiba University Hospital, [3] Chiba University Graduate School of Medicine)

P-55 **Visualization of lipid Species in NASH Model Mouse's Kidney Tissue using Imaging Mass Spectrometry**

Takahiro Hayasaka[1], Hirotoshi Fuda[1], Shu-Ping Hui[1], Hitoshi Chiba[1] ([1] Faculuty of Health Sciences, Hokkaido University)

P-57 **Atmospheric pressure MALDI-IMS using p-nitroaniline as the matrix at high spatial resolution in the positive and negative ion modes**

Shoko Matsushita[1], Eiji Sugiyama[1], Takahiro Hayasaka[2], Noritaka Masaki[1], Mitsutoshi Setou[1] ([1] Department of Cell Biology and Anatomy, Hamamatsu University School of Medicine, [2] Faculty of Health Sciences, Hokkaido University)

P-59 **LC/MS analysis of small molecule drugs in biological sample using polymer-based reverse-phase column Shodex ODP2 HP**

Junji Sasuga, Motoaki Kamachi (Showa Denko K.K.)

14:10-14:50 Education Lecture 1

Lecturer: Tatsuya Higashi (Faculty of Pharmaceutical Sciences, Tokyo University of Science)
Organizer: Shigeo Ikegawa (Genmai Koso Co., Ltd.)

L-2 **Derivatization of low-molecular compounds in LC/ESI-MS/MS for increasing sensitivity and isomer discrimination**
Tatsuya Higashi (Faculty of Pharmaceutical Sciences, Tokyo University of Science)

15:05-15:45 JSBMS General Meeting

16:00-17:30 Symposium 2

Mass spectrometric diagnosis of drug abuse
Organizer: Kazuo Igarashi (Association of MedicinalAnalysis)

S2-1 **Approach to acute poisoning causative agent analysis of the hospital pharmacy**
Hiromi Mori (Ogaki Municipal Hospital Pharmacy)

S2-2 **The utility of analysis by mass-spectrometry in possible poisoning autopsy cases**
Koutaro Hasegawa[1], Wurita Amin[1], Itaru Yamagishi[1], Hideki Nozawa[1], Kayoko Minakata[1], Kunio Gonmori[1], Osamu Suzuki[2], Kanako Watanabe[1] ([1] Hamamatsu University School of Medicine, Department of Legal Medicine , [2] Hamamatsu University School of Medicine)

S2-3 **Diagnosis of drug intoxication by mass spectrometry**
- from a forensic medical expert's viewpoint
Hiroshi Seno (Department of Legal Medicine, Aichi Medical University School of Medicine)

17:40-18:20 JSBMS General Meeting

Lecturer: Dayan Goodenowe (Phenomenome Discoveries Inc. , Canada)
Organizer: Takeshi Tomonaga (Project Leader, Laboratory of Proteome Research, Director of Proteome Research Center, National Institute of Biomedical Innovation)

L-3 **Incorporating Mass Spectrometry into Routine Clinical Chemistry Laboratories: Challenges and Opportunities**
Dayan Goodenowe (Phenomenome Discoveries Inc.)

18:30-20:30 Banquet

October 17 (Friday)

8:30- Start Accepting

9:00-9:40 Morning Seminar

Phenomenome Discoveries, Inc.

MS-1 **Method development of high throughput flow injection tandem mass spectrometry analysis**

Asuka Mochizuki[1,2], Yasuyo Yamazaki[1], Dayan Goodenowe[1] ([1] Phenomenome Discoveries, Inc., Saskatoon, Saskatchewan, Canada, [2] Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University, Chiba, Japan)

Agilent Technologies Japan Ltd.

MS-2 **Easy Sample preparation for LC/MS (Purificate, Digest, Cleanup, Fractionate) and Biomarker analysis**

Masayuki Nishigata, Masahiro Maeda (Agilent Technologies Japan Ltd.)

10:00-11:40 Symposium 3

Rapid pathogen identification by MALDI-TOF MS

Organizer: Toyofumi Nakanishi (Osaka Medical College, Clinical Pathology)

S3-1 **Effects of bacterial identification by MALDI-TOF MS in clinical microbiology**

Shota Murata[1], Masaharu Watanabe[1], Tomoko Saito[1], Akiko Miyabe[1], Shunsuke Segawa[1], Tomoko Satokai[1], Mami Uehara[1], Megumi Nakamura[1], Humio Nomura[1,2] ([1] Divisions of Laboratory Medicine, Clinical Genetics and Proteomics, Chiba University Hospital, [2] Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University)

S3-2 **Practice of optimizing preprocessing for identification of non-tuberculous mycobacteria clinical isolates by Matrix-Assisted Laser Desorption Ionization-Time-of-Flight Mass Spectrometry (MALDI-TOF MS)**

Tomohiro Higashiyama[1], Toyofumi Nakanishi[2] ([1] Central Clinical Laboratory, Osaka Medical College Hospital, [2] Department of Clinical and Laboratory Medicine, Osaka Medical College)

S3-3 **Evaluate the usefulness of MALDI-TOF MS for clinical index in blood culture positive patients.**

Toshimasa Nakagawa, Miyoshi Kitazato, Yoshiaki Kiguchi (Yodogawa Christian Hospital Div. of Clinical Laboratory)

S3-4 **Differentiation of *Streptococcus pneumoniae* from *Streptococcus mitis* group by Matrix-Assisted Laser Desorption Ionization-Time-of-Flight Mass Spectrometry (MALDI-TOF MS)**

Takehisa Matsumoto[1], Yusuke Ota[2], Takayuki Honda[1] ([1] Department of Clinical and Laboratory Medicine, Shinshu University Hospital, [2] Department of Health and Medical Siences, Shinshu University)

12:00-12:40 Luncheon Seminar

siemens healthcare diagnostics inc

LS-3 **Application of mass spectrometry in microbiology**
- Classification of plant-symbiotic methylotrophic bacteria by MALDI-TOF/MS
Akio Tani (Institute of Plant Science and Resources, Okayama University)

Bruker Daltonics K.K.

LS-4 **FT-ICR-MS is a powerful tool for tissue imaging / Rapid microbial ID and the new application based on MALD TOF-MS**
Yoshihiko Morishita, Yumiko Matsuyama (Bruker Daltonics K.K.)

13:00-14:00 Poster Presentation (even number of subjects)

P-2 **Assay method of methylmalonyl-CoA mutase activity on patients with mild methylmalonic acidemia by UPLC-MS/MS**
Kana Gotoh[1], Yasuhiro Maeda[1], Tetsuya Ito[2], Yoko Nakajima[2], Yoko Maeda[1], Naruji Sugiyama[3], Yuji Hotta[1], Kazunori Kimura[1] ([1] Graduate School of Pharmaceutical Sciences, Nagoya City University, [2] Department of Pediatrics, School of Medicine, Fujita Health University, [3] School of Pharmacy, Aichi-Gakuin University)

P-4 **The unknown peak in urinary organic acids analysis using GC/MS among patients undergone open-heart surgery for the congenital heart diseases.**
Yuki Omura-Hasegawa, Ryosuke Bo, Yuka Tanabe, Shigeki Nakashima, Kenji Yasuda, Seiji Yamaguchi (Department of Pediatrics, Shimane University School of Medicine)

P-6 **A role of arachidonate release and phospholipase A_2 in activation of human neutrophils *in vitro***
Tetsuyuki Kobayashi[1,2], Keiko Onisawa[1], Hiromi Takeda[2], Saori Mikami[3], Junichi Aiboshi[3] ([1] Ochanomizu University, Graduate School of Humanities and Sciences, [2] Ochanomizu University, Faculty of Science, [3] Tokyo Medical and Dental University, Graduate School of Medical and Dental Sciences)

P-8 **HCC patients without both HBs antigen and HCV antibody were characterized by higher stearic acid-to-palmitic acid ratio in serum**
Eiji Sugiyama[1], Shoko Matsushita[1], Yasushi Shibasaki[2], Koichi Matsuda[3], Hiroyuki Konno[2], Mitsutoshi Setou[1] ([1] Department of Cell Biology and Anatomy, Hamamatsu University School of Medicine, [2] Second Department of Surgery, Hamamatsu University School of Medicine, [3] Laboratory of Genome Technology, Human Genome Center, Institute of Medical Science, University of Tokyo)

P-10 **Development of a method for analysis of urinary vitamin D_3 metabolites by LC/MS/MS with ESI-enhancing and stable isotope-coded derivatization**
Satoshi Ooki, Kenta Shinoda, Shoujiro Ogawa, Tatsuya Higashi (Faculty of Pharmaceutical Sciences, Tokyo University of Science)

P-12 **The Study of high sensitive method for the compounds with 3-oxo-Δ^4-steroid nucleus as the oxime derivatives by LC-ESI-MS/MS**

Hajime Takei[1,2], Susumu Nittono[1], Xiao-Pen Lee[1], Takeshi Kumazawa[1], Tsuyoshi Murai[3], Takao Kurosawa[3], Takashi Iida[4], Hiroshi Nittono[1,2], Keizo Sato[1] ([1] Department of Legal Medicine, Showa University School of Medicine, [2] Junshin Clininc Bile Acid Institute, [3] School of Pharmaceutical Sciences, Health Sciences University of Hokkaido, [4] Department of Chemistry, College of Humanities and Sciences, Nihon University)

P-14 **Analysis of sulfate conjugates of steroids in urine by PQD and CID in LC/ESI-LIT-MS/MS**

Kuniko Mitamura[1], Satoshi Kurabuchi[1], Mamiko Ueda[1], Shigeo Ikegawa[2], Tetsushi Yamamoto[1], Atsushi Taga[1] ([1] Faculty of Pharmacy, Kinki University, [2] Research and Development Division, Genmaikoso Co. Ltd.)

P-16 **Simultaneous measurement of four Vitamin D metabolites in serum using DAPTAD derivatization followed by LC-MS/MS**

Mamoru Satoh[1], Takayuki Ishige[2], Shoujiro Ogawa[3], Motoi Nishimura[2], Kazuyuki Matsushita[2], Tatsuya Higashi[3], Fumio Nomura[1,2] ([1] Clinical Proteomics Research Center, Chiba University Hospital, [2] Depertment of Molecular Diagnosis, Graduate School of Medicine, Chiba University, [3] Faculty of Pharmaceutical Sciences, Tokyo University of Science)

P-18 **The effect of the synthetic cannabinoid MAM-2201 to rat cerebrum metabolome**

Kei Suzuki[1], Kei Zaitsu[1], Yumi Hayashi[2], Hiroshi Nakayama[1], Nanpei Hattori[1], Rina Takahara[1], Maiko Kusano[1], Hitoshi Tsuchihashi[3], Akira Ishii[1] ([1] Department of Legal Medicine & Bioethics, Nagoya University Graduate School of Medicine, [2] Department of Pathophysiological Laboratory Sciences, Nagoya University Graduate School of Medicine, [3] Department of Legal Medicine, Osaka Medical College)

P-20 **The effect of the synthetic cannabinoid MAM-2201 to rat plasma metabolome**

Nanpei Hattori[1], Kei Zaitsu[1], Yumi Hayashi[2], Hiroshi Nakayama[1], Kei Suzuki[1], Rina Takahara[1], Maiko Kusano[1], Hitoshi Tsuchihashi[3], Akira Ishii[1] ([1] Department of Legal Medicine & Bioethics, Nagoya University Graduate School of Medicine, [2] Department of Pathophysiological Laboratory Sciences, Nagoya University Graduate School of Medicine, [3] Department of Legal Medicine, Osaka Medical College)

P-22 **Analysis of Metabolites in Plasma Using Stable Isotope and Ultra-Fast GC-MS/MS System**

Yumi Unno[1], Shuichi Kawana[1], Yukihiko Kudo[1], Shin Nishiumi[2], Masaru Yoshida[2,3], Noriyuki Ojima[1] ([1] Analytical & Measuring Instruments Division, Shimadzu Corporation, [2] Division of Gastroenterology, Department of Internal Medicine, Kobe University Graduate School of Medicine, [3] Division of Metabolomics Research, Department of Internal Related, Kobe University Graduate School of Medicine)

P-24 **Waters metabolomics solution and clinical application**

Maki Terasaki, Thanai Paxton (Nihon Waters K. K.)

P-26 **Absolute quantitation of low abundant plasma surrogate marker of Alzheimer disease APL1β peptides using SRM/MRM and its clinical application**

Shozo Sano[1], Yuuki Hashimoto[1], Shinji Tagami[2], Masayasu Okochi[2], Kumiko Yoshizawa-Kumagaye[3], Masahiko Tsunemi[3], Yusuke Inohana[4], Tsubasa Ibushi[4], Takeshi Tomonaga[1] ([1] Laboratory of Proteome Research, National Institute of Biomedical Innovation, Osaka, [2] Psychiatry, Department of Integrated Medicine, Division of Internal Medicine, Osaka University Graduate School of Medicine, [3] Peptide Institute, Inc., Osaka, [4] Shimadzu Corporation)

P-28 **Search for novel allergen of peanut allergy using IgE-immunoblotting assay**

Kanami Ando[1], Kazuyuki Sogawa[1], Mamoru Satoh[2], Akihiro Sanda[1], Naoki Shimojo[2], Fumio Nomura[2] ([1] Azabu University School of Life and Environmental, [2] Chiba University Graduate School of Medicine)

P-30 **Discovery of disease-related peptides in plasma by using stable-isotope labeling methods**

Tatsuya Saito[1], Yuya Hidoh[1], Rika Kato[1,2], Yusuke Kawashima[2,3], Satoru Minamida[4], Kazumasa Matsumoto[4], Masatsugu Iwamura[4], Yoshio Kodera[1,2] ([1] Laboratory of Biophysics, Kitasato University School of Science, [2] Center for Disease Proteomics, Kitasato University School of Science, [3] RIKEN Center for Integrative Medical Sciences, [4] Department of Urology, Kitasato University School of Medicine)

P-32 **Plasma proteome analysis of stress disorder model mouse using stable isotope labeling method**

Chiharu Kobayashi[1], Rika Kato[1,2], Tatsuya Saito[1,2], Yusuke Kawashima[2,3], Makoto Itakura[4], Saori Yamamori[4], Hiromichi Nagayama[4], Yuuki Iida[5], Hitoshi Miyaoka[5], Masami Takahashi[4], Yoshio Kodera[1,2] ([1] Laboratory of Biophysics, Department of Physics, Kitasato University School of Science, [2] Center for Disease Proteomics, Kitasato University School of Science, [3] RIKEN Center for Integrative Medical Sciences, [4] Department of Biochemistry, Kitasato University School of Medicine, [5] Department of Psychiatry, Kitasato University School of Medicine)

P-34 **Application of proteomic technologies to discover and identify biomarkers for periodontal diseases: Promising technologies for periodontal research**

Sachio Tsuchida[1,2], Mamoru Satoh[1,2], Kazuyuki Sogawa[1,2], Yusuke Kawashima[3], Takayuki Ishige[2], Minako Beppu[1,2], Setsu Sawai[1,2], Motoi Nishimura[1,2], Yoshio Kodera[1,3], Kazuyuki Matsushita[1,2], Fumio Nomura[1,2] ([1] Clinical Proteomics Reserach Center, Chiba University, [2] Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University, [3] Laboratory of Biomolecular Dynamics, Department of Physics, School of Science, Kitasato University)

P-36 **Discovery of cytokeratin fragments from secreted peptides of cancer cells using mass spectrometry**

ChienChia Chen[1], Motoi Nishimura[1,2], Satomi Nishimura[1], Takayuki Isige[1,2], Mamoru Satoh[1], Kazuyuki Matsushita[1,2], Fumio Nomura[1,2] ([1] Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University, Chiba, Japan, [2] Clinical Proteomics Research Center, Chiba University Hospital, Chiba, Japan)

P-38 **Serum and muscle metabolomics profiling: A novel method for estimating post-mortem intervals**

Richard H. Kaszynski[1,2], Shin Nishiumi[3], Takeshi Kondo[1], Motonori Takahashi[1], Azumi Kuse[1], Migiwa Asano[4], Masaru Yoshida[3], Takeshi Azuma[3], Yasuhiro Ueno[1] ([1] Kobe University Graduate School of Medicine, Department of Legal Medicine, [2] Harvard Medical School, Massachusetts General Hospital, [3] Kobe University Graduate School of Medicine, Department of Gastroenterology, [4] Ehime University Graduate School of Medicine, Department of Legal Medicine)

P-40 **Determination of pyrrolidino cathinone derivatives (PV9, PV8, PV4, PVT) in blood by MALDI-Q-TOF mass spectrometry**

Kayoko Minakata[1], Masako Suzuki[2], Hideki Nozawa[1], Itaru Yamagishi[1], Koutaro Hasegawa[1], Amin Wurita[1], Kunio Gonmori[1], Kanako Watanabe[1], Osamu Suzuki[1] ([1] Department of Legal Medicine, Hamamatsu University School of Medicine, [2] Research Equipment Center, Hamamatsu University School of Medicine)

P-42 **Utility of UFLC-IDA-MRM/EPI for high sensitive analysis of benzodiazepine drugs in human blood**

Xiao-Pen Lee[1], Takeshi Kumazawa[1], Chika Hasegawa[2], Susumu Nittono[1], Hajime Takei[1], Yukiko Shouji[1], Keizo Sato[1] ([1] Department of Legal Medicine, Showa University School of Medicine, [2] Department of Legal Medicine, Toho University School of Medicine)

P-44 **The application of Dried Blood Spot technique for drug screening test**

Yuko Kubo[1], Hiroko Abe[1], Kazuhiro Kobayashi[1], Hisako Saito[1], Hirotarou Iwase[1,2] ([1] Department of Legal Medicine, Graduate School of Medicine, Chiba University, [2] Department of Forensic Medicine, Graduate School of Medicine, The University of Tokyo)

P-46 **Determination of ethyl glucuronide and ethanol in human urine after drinking alcohol**

Tadashi Ogawa, Masae Iwai, Aya Nakajima, Ai Nagashima, Masaya Mizutani, Tomohiro Yamaguchi, Koya Wada, Hideki Hattori, Hiroshi Seno (Aichi Medical University School of Medicine)

P-48 **A case of postmortem detected meconin in urine**

Kyoko Maebashi, Yasutaka Asao, Isora Tatematsu, Kimiharu Iwadate (Department of Forensic Medicine, The Jikei University School of Medicine)

P-50 **Identification of acetylfentanyl metabolites using LC-QTOFMS : an autopsy case**

Yumi Hoshioka[1], Hiroko Abe[1], Kayako Suga[2], Masahiko Takino[3], Ayumi Motomura[1], Hirotarou Iwase[1,4] ([1] Department of Legal Medicine, Graduate School of Medicine, Chiba University, [2] AB SCIEX, [3] Agilent Technologies, [4] Department of Forensic Medicine, Graduate School of Medicine, The University of Tokyo)

P-52 **Evaluation of mechanism-based inhibition in cytochrome P450 isozyme by MDA drugs - Interaction between MDA drugs and methamphetamine -**

Kazuna Miyamoto[1,2], Takuya Yamashita[1], Rina Koma[1], Mayu Fukuta[1], Kenji Tsujikawa[3], Yuko Iwata[3], Hiroyuki Inoue[3], Fumiyo Kasuya[1] ([1] Faculty of Pharmaceutical Sciences, Kobegakuin University, [2] TechnoPro, Inc., [3] National Research Institute of Police Science)

P-54 **A Rapid identification of bacteria in CSF using MALDI-TOF MS**

Minako Beppu[1,2], Setsu Sawai[1,2], Shunsuke Segawa[1,2], Shota Murata[1], Kazuyuki Sogawa[2], Masaharu Watanabe[1], Motoi Nishimura[1,2], Mamoru Satoh[2], Kazuyuki Matsushita[1,2], Fumio Nomura[1,2] ([1] Division of Laboratory Medicine, Clinical Genetics and Proteomics, Chiba University Hospital, [2] Department of Molecular Diagnosis, Graduate School of Medicine)

P-56 **Accumulation of arachidonic acid-containing phosphatidylinositol in the edge of colorectal cancer was elucidated by using imaging mass spectrometer**

Takanori Hiraide[1,2], Takanori Sakaguchi[1], Koji Ikegami[2], Eiji Sugiyama[2], Noritaka Masaki[2], Michihiko Waki[2], Makoto Takeda[1,2], Yasushi Shibasaki[1,2], Yoshifumi Morita[1,2], Hiroyuki Konno[1], Mitsutoshi Setou[2] ([1] Second Department of Surgery, Hamamatsu University School of Medicine, [2] Department of Cell Biology and Anatomy, Hamamatsu University School of Medicine)

P-58 **Synthesis of deuterated evodiamine and its application for determination of evodiamine by LC/MS/MS**

Shogo Hirano[1], Hitoshi Yamashita[2], Kaname Tsutsumiuchi[1] ([1] College of Bioscience and Biotechnology, Chubu University, [2] College of Life and Health Sciences, Chubu University)

P-60 **Optimized sample-preparation techniques to prevent postmortem degradation of metabolites for imaging and quantitative metabolomics**

Kurara Honda[1], Yuki Sugiura[1,2], Makoto Suematsu[1] ([1] Department of Biochemistry, Keio University School of Medicine, Japan, [2] Japan Science and Technology Agency, PRESTO Program, Tokyo, Japan)

14:15-15:05 Invited Lecture

Lecturer: Hisashi Hirano (Yokohama City University Graduate School of Medical Life Science/ Advanced Medical Research Center)

Organizer: Fumio Nomura (Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University)

L-1 **Proteomic techniques reveal the relation between abnormal post-translational modifications and diseases**

Hisashi Hirano (Yokohama City University Graduate School of Medical Life Science/Advanced Medical Research Center)

15:10-15:30 Encouragement Award Lecture

Organizer: Toshimitsu Niwa (Faculty of Health and Nutrition, Shubun University)

L-4 **Development of imaging mass spectrometry technology for localized inflammation mediators in tissues**

Yuki Sugiura (Department of Biochemistry, Keio University School of Medicine, Japan, Japan Science and Technology Agency, PRESTO Program, Tokyo, Japan)

15:45-17:15 Technical Workshop

Organizer: Fumiyo Kasuya (Kobe Pharmaceutical University Faculty of Pharmaceutical Sciences)
: Yoshio Kodera (Kitasato University School of Science)

WS-1 **High sensitive analysis of vitamin D metabolites in serum by the removal of phospholipids**
Mariko Matsumoto[1], Craig Aurand[2], David Bell[2], Anders Fridstrom[3], Rudolf Kohling[3]
([1] Sigma-Aldrich Japan G.K., [2] Sigma-Aldrich/Supelco ,[3] Sigma-Aldrich Switzerland)

WS-2 **Latest LC-MS/MS analysis methods developed in Application Laboratories of Biotage**
Maiko Kaneko (Biotage Japan, Ltd.)

WS-3 **Possibility of LC/MS/MS as the instrumental analysis in acute drug intoxication**
Tetsuo Kokaji (K.K.AB SCIEX)

WS-4 **Analysis of biomarker by using GC/MS**
Masahiro Hashimoto, Akihiko Kusai (JEOL Ltd.)

WS-5 **mzCloud data mining software for high resolution Orbitrap MS**
Masayuki Kubota (Thermo Fisher Scientific K.K. Japan)

WS-6 **High throughput analysis accelate mass analysis**
Masahiro Maeda (Agilent Technologies, Inc.)

WS-7 **Screening method using GC/MS or GC/MS/MS**
Katsuiro Nakagawa, Shuichi Kawana, Kouki Tanaka, Haruhiko Miyagawa (Shimadzu Corporation)

WS-8 **Introduction of UHPLC for LC-MS with Straight Injection Technology™**
Yoshikazu Sugito (Shiseido Co., Ltd., Frontier Science Business Division)

WS-9 **Metabolomic Analyses Using Direct Ambient Ionization Mass Spetctrometry**
Teruhisa Shiota, Motoshi Sakakura (AMR, Inc.)

WS-10 **High sensitive mass spectrometry from tissue sample by LESA on the LC/MS**
Yoshiharu Naito (LE Technologies)

WS-11 **Introduction of sample preparation and analytical tool for Omix**
Kenichi Suzuki, Shigenori Ota, Shota Miyazaki, Yuko Yui, Masayoshi Ohira (GL Sciences)

WS-12 **Proteomics approach by highresolution UHR-Q-TOF mass spectrometry Impact Ⅱ**
Nobuyuki Shimura (Bruker Daltonics K.K)

WS-13 **Complete IVD instrument based on MALDI-TOF MS －VITEK MS－**
Yoshifumi Yoshida (SYSMEX bioMerieux Co., Ltd)

WS-14 **A novel preparation kit; rapid BACpro®, for bacterial identification with matrix-assisted laser desorption ionization time-of-flight mass spectrometry**
Kenta Noda, Kaduho Ashizawa, Satoshi Arai, Youhei Shinpo, Naoya Shibata, Chikao Takayama (Nittobo Medical Co., Ltd.)

17:15- Closing Remarks

The 40th Annual Meeting of the Japanese Society for Biomedical Mass Spectrometry

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