

**The 31st Annual Meeting of the Japanese Society
for Biomedical mass Spectrometry**
New Challenge of Mass Spectrometry Technique

Program

September 28 (Thu) – 29 (Fri), 2006

Nagoya Congress Center
1-1 Atsuta-nishimachi, Atsuta-ku,
Nagoya 456-0036, Japan

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Time Schedule

September 28 (Thursday)

8:55	Opening Remark
9:00	Oral Presentation (G1-G8)
11:00	Plenary Lecture 1
12:00	Luncheon Seminar 1
	Board Meeting
13:00	JSBMS Business Meeting
13:40	Oral Presentation (G9-G12)
14:40	<Break>
14:50	The 30th Anniversary Symposium 1
17:20	Evening Seminar
18:30	Banquet

September 29 (Friday)

9:00	The 30th Anniversary Symposium 2
10:30	Oral Presentation (G13-G14)
11:00	Plenary Lecture 2
12:00	Luncheon Seminar 2
13:00	Award Lecture (MIPL1-MIPL2)
13:40	Oral Presentation (G15-G20)
15:10	<Break>
15:20	Oral Presentation (G21-G27)
17:05	Closing Remark

Program

September 28 (Thursday)

8:55- Opening Remark

9:00-10:00 Oral Presentation (G1-G4)

G1 Determination of molybdenum levels in two cisplatin-overdozed patients by electrospray ionization mass spectrometry

Kayoko MINAKATA, Osamu SUZUKI

Department of Legal Medicine, Hamamatsu University School of Medicine

G2 Simple and simultaneous determination of 13 amphetamine related drugs in human whole blood using Focus™ column and GC/MS

Keiko KUDO¹, Tomomi ISHIDA¹, Kenji HARA², Seiichi KASHIMURA²,
Noriaki IKEDA¹

1 Department of Forensic Pathology and Sciences, Graduate School of
Medical Sciences, Kyushu University

2 Department of Forensic Medicine, Fukuoka University School of Medicine

G3 Determination of methamphetamine and amphetamine in human blood by pipette-tip SPE-GC/MS

Chika HASEGAWA¹, Takeshi KUMAZAWA¹, Kenji HARA², Hiroshi SENO³,
Xiao-Pen LEE¹, Yukiko Shoji¹, Keizo SATO¹

1 Department of Legal Medicine, Showa University School of Medicine

2 Department of Forensic Medicine, Fukuoka University School of Medicine

3 Department of Legal Medicine, Aichi Medical University School of
Medicine

G4 Development of practical analysis of urinary amphetamines by a single-step-extraction with TPC-chiral derivatization and a narrow-bore capillary column gas chromatography-mass spectrometry

Hiroshi FUJII^{1,2}, Kenji HARA¹, Seiichi KASHIMURA¹, Mitsuyoshi
KAGEURA¹, Masayuki KASHIWAGI¹

1 Department of Forensic Medicine, Fukuoka University School of Medicine

2 Narcotics Control Department Kokura Branch Kyushu Regional Bureau of
Health and Welfare

10:00-11:00 Oral Presentation (G5-G8)

G5 Backflush column-switching LC/MS for simultaneous determination of

phenothiazines in human serum

Tetsuya ARINOBU¹, Ruri AOKI², Takeshi KUMAZAWA³, Xiao-Pen LEE³, Ishii AKIRA⁴, Sadao KOJIMA¹, Yoko MIZUTANI⁵, Hideki HATTORI⁵, Osamu SUZUKI⁶, Hiroshi NOGUCHI², Hiroshi SENO⁵

1 Department of Chemistry, Aichi Medical University School of Medicine

2 Advanced Critical Care Center, Aichi Medical University School of Medicine

3 Department of Legal Medicine, Showa University School of Medicine

4 Department of Legal Medicine, Fujita Health University School of Medicine

5 Department of Legal Medicine, Hamamatsu University School of Medicine

6 Department of Legal Medicine, Aichi Medical University School of Medicine

G6 Determination of butyrophenones and their analogues by in-tube SPME-HPLC/MS/MS

Takeshi KUMAZAWA¹, Chika HASEGAWA¹, Xiao-Pen LEE¹, Akemi MARUMO¹, Hiroshi SENO², Hideki HATTORI², Keizo SATO¹, Osamu SUZUKI³

1 Department of Legal Medicine, Showa University School of Medicine

2 Department of Legal Medicine, Aichi Medical University School of Medicine

3 Department of Legal Medicine, Hamamatsu University School of Medicine

G7 Simple analysis of non-steroidal anti-inflammatory drugs in human plasma by HPLC/MS/MS

Xiao-Pen LEE¹, Takeshi KUMAZAWA¹, Hironobu UMEZAWA¹, Natsuko SHIMMEN¹, Chika HASEGAWA¹, Akemi MARUMO¹, Tetsuya ARINOBU², Keizo SATO¹

1 Department of Legal Medicine, Showa University School of Medicine

2 Department of Legal Medicine, Aichi Medical University School of Medicine

G8 Analysis of lipids in adipocere by GC-MS

Hideyuki NUSHIDA¹, Junko ADACHI¹, Naoki YOSHIOKA², Migiwa ASANO¹, Yasuhiro UENO¹

1 Department of Legal Medicine, Kobe University Graduate School of Medicine

2 Hyogo Prefectural Institute of Public Health and Environmental Sciences

11:00-12:00

Plenary Lecture 1

PL1 **Organelle proteomics and new methods**
Catherine FENSELAU
University of Maryland

12:00-13:00 Luncheon Seminar 1

L S 1 **Clinical proteomics using ClinProt system- Biomarker discovery, microorganism identification, and imaging MS**
Toshiji KUDO, Yumiko MATSUYAMA
Bruker Daltonics K.K.

12:00-13:00 Board Meeting

13:00-13:40 JSBMS Business Meeting

13:40-14:40 Oral Presentation (G9-G12)

G9 **Effects of NSAID and NQ on lipid metabolism in rat brain and liver**
Yasushi MIWA, Masayuki OHTA, Fumiyo KASUYA
Faculty of Pharmaceutical Sciences, Kobegakuin University

G10 **Development of simultaneous determination method for 8-hydroxy-2'-deoxyguanosine and 8-hydroxyguanosine by liquid chromatography/electrospray ionization-tandem mass spectrometry**
Masayoshi SAITO¹, Kaori SUZUKI¹, Naoto SUZUKI², Hiroaki YAMAGUCHI¹, Yoshihisa TOMIOKA², Atsushi TAKEDA³, Yasuto ITOYAMA³, Takanori HISHINUMA¹ and Junichi GOTO¹
1 Division of Clinical Pharmacy, Graduate School of Pharmaceutical Sciences, Tohoku University
2 Department of Neurology, Tohoku University School of Medicine
3 Faculty of Pharmaceutical Sciences, Josai International University

G11 **Newborn screening of isovaleric acidemia by measuring isovaleryl-glycine in dried blood spots using tandem mass spectrometry**
Yosuke SHIGEMATSU¹, Ikue HATA², Yukie TANAKA³
1 Department of Health Science, Faculty of Medical Sciences, University of Fukui
2 Department of Pediatrics, Faculty of Medical Sciences, University of Fukui
3 Centers for Advanced Research Support, University of Fukui

G12 **Hypocarnitinemia in patients with propionic acidemia precipitated by long-term and repeated courses with pivalate-generating prodrugs**

Makoto YOSHINO¹, Yoriko WATANABE¹, Takahiro INOKUCHI², Kumiko AOKI², Kyoko TASHIRO², Ichiro YOSHIDA^{1,2}, Yosuke SHIGEMATSU³, Koji TAKEMOTO⁴

1 Department of Pediatrics & Child Health

2 Research Institute for Biomedical Mass Spectrometry, Kurume University School of Medicine

3 Fukui University School of Nursing

4 Department of Pediatrics, Ehime University School of Medicine

14:40-14:50 <Break>

14:50-16:05 **The 30th Anniversary Symposium 1 (S1-1-S1-10)**

S1-1 **Mass imaging /mass microscopy analysis of colon cancer liver metastasis**

Mitsutoshi SETOU^{1,2}, Yutaka HOSHIKAWA³, Shuichi SHIMMA¹, Yuki SUGIURA^{1,2}, Takashi NIRASAWA⁴, Takahiro HARADA⁵, Kiyoshi OGAWA⁵, Yoshikazu YOSHIDA⁵

1 National Institute of Physiological Sciences

2 MITILS

3 Cancer Research Institute

4 Bruker Daltonics

5 Shimadzu corporation

S1-2 **From proteomics to drug discovery researches**

Yoshiya ODA

Laboratory of Seeds Finding Technology, Eisai Co., Ltd.

S1-3 **Glycation of human recombinant interferon drugs**

Toshimitsu NIWA¹, Roumyana MIRONOVA²

1 Department of Clinical Preventive Medicine, Nagoya University Hospital

2 Department of Gene Regulations, Institute of Molecular Biology, Bulgarian Academy of Sciences

S1-4 **Development of an O-glycoproteomic strategy**

Yoshinao WADA¹, Michiko TAJIRI²

1 Osaka Medical Center & Research Institute for Maternal & Child Health

2 Japan Science & Technology Agency, CREST

S1-5 **Analyses of amyloidogenic proteins by mass spectrometry in hereditary amyloidosis**

Yukio ANDO

Graduate School of Medical Sciences, Kumamoto University

S1-6 **Identifications of cancer-related biomarkers by proteomics-based analysis**

Toyofumi NAKANISHI, Akira SHIMIZU, Takayuki TAKUBO

Department of Clinical and Laboratory Medicine, Osaka Medical College

S1-7 **Application of mass spectrometry diagnosis for cancer screening**

Tesshi YAMADA, Kazufumi HONDA, Miki SHITASHIGE, and Masaya ONO

Chemotherapy Division and Cancer Proteomics Project, National Cancer Center Research Institute

S1-8 **Detection of serum bioactive hepcidin by using ProteinChip System**

Naohisa TOMOSUGI

Proteomics Research Unit, Division of Advanced Medicine, Medical Research Institute/ Division of Nephrology, Kanazawa Medical University

S1-9 **Clinical proteomics in laboratory medicine focusing on liver diseases**

Fumio NOMURA^{1,2}, Kazuyuki SOGAWA², Takeshi TOMONAGA¹, Masahiko NEZU¹, Masahiko SUNAGA¹

1 Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University Division of Laboratory Medicine and Clinical Genetics, Chiba University Hospital

2 Clinical Proteomics Research Center, Chiba University Hospital

S1-10 **Proteomics analysis of cardiovascular disease**

Toru SUZUKI

Department of Clinical Bioinformatics, The University of Tokyo

17:20-18:20 Evening Seminar

ES1 **SELDI-MS in the clinical setting: Challenges in developing quantitative diagnostic assays for the routine detection of analytes**

Lee LOMAS

18:30-20:00 Banquet

September 29 (Friday)

9:00-10:30 The 30th Anniversary Symposium 2 (S2-1-S2-6)

- S2-1 **Plant metabolomics and functional genomics by mass spectrometry**
Kazuki SAITO
Graduate School of Pharmaceutical Sciences, Chiba University
RIKEN Plant Science Center, Metabolomics Research Group
- S2-2 **Construction of basic analytical system for lipidomics by mass spectrometry**
Ryo TAGUCHI
Graduate School of Medicine, The University of Tokyo
Crest, JST
- S2-3 **Biomarker discovery by metabolome analysis using CE-TOFMS**
Tomoyoshi SOGA
Institute for Advanced Biosciences, Keio University
- S2-4 **Metabolome analysis using interactive metabolic maps**
Masanori ARITA
Department of Computational Biology, Graduate School of Frontier Sciences, The University of Tokyo and PRESTO, JST
- S2-5 **Metabolomics - applications and prospects of capillary electrophoresis - mass spectrometry (CE-MS)**
Takaaki NISHIOKA
Graduate School of Agriculture, Kyoto University
Institute for Advanced Biosciences, Keio University
- S2-6 **Tailored medicine and noninvasive metabolome analysis**
Tomiko KUHARA
Division of Human Genetics, Medical Research Institute, Kanazawa Medical University

10:30-11:00 Oral Presentation (G13-G14)

- G13 **Analysis of bile acid glutathione conjugates using LC/ESI-MSⁿ**
Kuniko MITAMURA¹, Mitsuru SOGABE², Tateaki WAKAMIYA²,
Shigeo IKEGAWA¹
1 School of Pharmaceutical Sciences, Kinki University

2 School of Science and Engineering, Kinki University

G14 **Detection of cholestasis by ESIMS analysis of sulfated bile acids in extracts of urine absorbed on filter paper**

Toshihiro Shinka, Yoshito Inoue, Morimasa Ohse, Tomiko Kuhara
Division of Human Genetics, Medical Research Institute, Kanazawa
Medical University

11:00-12:00 Plenary Lecture 2

PL2 **Tandem TOF mass spectrometry and the curved field reflectron**

Robert J. COTTER
Department of Pharmacology and Molecular Sciences, Middle Atlantic
Mass Spectrometry Laboratory, Johns Hopkins School of Medicine

12:00-13:00 Luncheon Seminar 2

L S 2 **Advanced mass spectrometric tools for proteomics: Introducing LTQ Orbitrap with advantages of mass resolution and accuracy, and Electron Transfer Dissociation (ETD) providing additional information to conventional MS/MS methods**

Masayuki KUBOTA
Thermo Electron K.K.

13:00-13:40 Matsumoto Isamu Award Lecture

MIPL1 **Studies on new characteristic methods for ultra-sensitive detection of drugs or poisons by mass spectrometry**

Osamu SUZUKI
Department of Legal Medicine, Hamamatsu University School of
Medicine

MIPL2 **A pioneering study on the mass spectrometry of proteins with biomedical implications**

Yoshinao WADA
Osaka Medical Center & Research Institute for Maternal & Child Health

13:40-14:25 Oral Presentation (G15-G17)

G15 **Determination of acylcarnitines with isomers by LC-MS/MS**

Yasuhiro MAEDA¹, Tetsuya ITO², Mai NAGAO¹, Akihito UETA², Kyoko YOKOI¹, Yukihiisa KURONO¹, Naruji SUGIYAMA³, Hajime TOGARI²

- 1 Laboratory of Hospital Pharmacy, Graduate School of Pharmaceutical Sciences, Nagoya City University
- 2 Department of Pediatrics, Graduate School of Medical Sciences, Nagoya City University
- 3 Department of Pediatrics, Aichi-Gakuin University, School of Dentistry

G16 Utility of urinary acylcarnitine analysis by ESI-MS/MS for organic acid and fatty acid oxidation disorders

Hironori KOBAYASHI, Yuki HASEGAWA, Mitsuru ENDO, Seiji YAMAGUCHI

Department of Pediatrics, Shimane University School of Medicine

G17 Evaluation of fatty acid oxidation using fibroblasts and ESI-MS/MS

Mitsuru ENDO, Hironori KOBAYASHI, Yuki HASEGAWA, Seiji YAMAGUCHI

Department of Pediatrics, Shimane University School of Medicine

14:25-15:10 Oral Presentation (G18-G20)

G18 Diurnal variation in urinary levels and configuration ratios of D-lactic acid in patients with short bowels syndrome

Yoshito INOUE¹, Morimasa OHSE¹, Toshihiro SHINKA¹, Miyuki KOHNO², Kunio KONUMA², Hiromichi IKAWA², Tomiko KUHARA¹

1 Department of Human Genetics, Medical Research Institute, Kanazawa Medical University

2 Department of Pediatric Surgery, Kanazawa Medical University

G19 Variant urinary metabolites of patient with hyperammonemia and chemical diagnosis by GC/MS analysis

Chunhua ZHANG, Zonghai RUAN and Shiziko KOMATSUBARA MILS international

G20 A new neonatal screening method for mucopolysaccharidoses using LC/MS/MS

Toshihiro OGUMA¹, Shunji TOMATSU², Osamu OKAZAKI¹, Kenichi SUDO²

1 Drug Metabolism & Physicochemistry Research Laboratory, R&D Division, DAIICHI PHARMACEUTICAL CO., LTD.

2 Department of Pediatrics, Saint Louis University, Pediatric Research Institute

15:10-15:20 <Break>

15:20-16:20 Oral Presentation (G21-G24)

G21 **Analysis of phosphoproteins in liver extract of microcystin-treated mouse using MALDI-TOFMS**

Ken-ichi HARADA^{1,2}, Masahiko TACHI¹, Hiroyuki BABA²

1 Graduate School of Environmental and Human Sciences,
Meijo University

2 Faculty of Pharmacy, Meijo University

G22 **Detections of tyrosine-phosphoproteins in vitreous fluids derived from patients with vitreoretinal diseases by proteome analysis**

Noriko MUKAI¹, Toyofumi NAKANISHI², Akira SHIMIZU², Takayuki TAKUBO², Tsunehiko IKEDA¹

1 Department of Ophthalmology

2 Clinical and Laboratory Medicine, Osaka Medical College

G23 **Detection of citrullinated proteins in synovial fluids derived from patients with rheumatoid arthritis and osteoarthritis by proteomics-based analysis**

Yoko TABUSHI¹, Toyofumi NAKANISHI¹, Ayako MIYAZAKI¹, Tohru TAKEUCHI², Akira SHIMIZU¹, Takayuki TAKUBO¹

1 Department of Clinical and Laboratory Medicine

2 First Internal Medicine, Osaka Medical College

G24 **Serum protein profile of rheumatoid arthritis treated with anti-TNF therapy**

Tohru TAKEUCHI¹, Toyofumi NAKANISHI², Akira SHIMIZU²,
Takayuki TAKUBO²

1 First Department of Internal Medicine, Osaka Medical College

2 Department of Clinical Pathology, Osaka Medical College

16:20-17:20 Oral Presentation (G25-G28)

G25 **Identifications of tumor-associated autoantibodies in plasma derived from patients with hematological malignancies by proteomics-based technique**

Kazuhito UEDA¹, Toyofumi NAKANISHI², Akira SHIMIZU², Takayuki TAKUBO²

1 Department of Central Clinical Laboratory,

Osaka Medical College Hospital
2 Department of Clinical and Laboratory Medicine,
Osaka Medical College

G26 Identifications of abnormal hemoglobins by electrospray ionization mass spectrometry for the past one year

Ayako MIYAZAKI, Toyofumi NAKANISHI, Akira SHIMIZU, Takayuki TAKUBO

Department of Clinical Pathology, Osaka Medical College

G27 Non-covalent binding complex formation between IgA1 and extracellular matrix model peptides observed by ESI/LC/MS

Hiroko ODANI, Yoshiyuki HIKI, Kazuo TAKAHASHI, Sachiko SHIMOSATO, Satoshi SUGIYAMA

Department of Nephrology, Fujita Health University School of Medicine

G28 Amino acid analysis in blood spot samples using the quick and simple sample preparation and the GC/MS

Shuichi Kawana¹, Katsuhiro Nakagawa¹,

Hironori Kobayashi², Yuki Hasegawa² and Seiji Yamaguchi²

1 Shimadzu Corporation

2 Department of Pediatrics, Shimane University School of Medicine

17:20 Closing Remark