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-overdosed 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 FUJII1,2, 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 ARINOBU, Ruri AOKI, Takeshi KUMAZAWA, Xiao-Pen LEE, Ishii AKIRA, Sadao KOJIMA, Yoko MIZUTANI, Hideki HATTORI, Osamu SUZUKI, Hiroshi NOGUCHI, Hiroshi SENO
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 KUMAZAWA, Chika HASEGAWA, Xiao-Pen LEE, Akemi MARUMO, Hiroshi SENO, Hideki HATTORI, Keizo SATO, Osamu SUZUKI
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 LEE, Takeshi KUMAZAWA, Hironobu UMEZAWA, Natsuko SHIMMEN, Chika HASEGAWA, Akemi MARUMO, Tetsuya ARINOBU, Keizo SATO
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 NUSHIDA, Junko ADACHI, Naoki YOSHIOKA, Migiwa ASANO, Yasuhiro UENO
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  Organellar proteomics and new methods
     Catherine FENSELAU
     University of Maryland

12:00-13:00  Luncheon Seminar 1

LS1  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 isovalerylglucose 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 YOSHIDA¹,², 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 SETOU¹,², Yutaka HOSHIKAWA³, Shuichi SHIMMA¹, Yuki SUGIURA¹,², 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
Analyses of amyloidogenic proteins by mass spectrometry in hereditary amyloidosis
Yukio ANDO
Graduate School of Medical Sciences, Kumamoto University

Identifications of cancer-related biomarkers by proteomics-based analysis
Toyofumi NAKANISHI, Akira SHIMIZU, Takayuki TAKUBO
Department of Clinical and Laboratory Medicine, Osaka Medical College

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

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

Clinical proteomics in laboratory medicine focusing on liver diseases
Fumio NOMURA, Kazuyuki SOGAWA, Takeshi TOMONAGA, Masahiko NEZU, Masahiko SUNAGA
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

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-MS
Kuniko MITAMURA1, Mitsuru SOGABE2, Tateaki WAKAMIYA2, Shigeo IKEGAWA1
1  School of Pharmaceutical Sciences, Kinki University
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

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

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

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

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)

Determination of acylcarnitines with isomers by LC-MS/MS
Yasuhiro MAEDA¹, Tetsuya ITO², Mai NAGAO¹, Akihito UETA², Kyoko YOKOI¹, Yukihisa KURONO¹, Naruji SUGIYAMA³, Hajime TOGARI²
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

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

Oral Presentation (G18-G20)

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

Variant urinary metabolites of patient with hyperammonemia and chemical diagnosis by GC/MS analysis
Chunhua ZHANG, Zonghai RUAN and Shiziko KOMATSUBARA
MILS international

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 HARADA¹,², 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
Kazuhiro UEDA¹, Toyofumi NAKANISHI², Akira SHIMIZU², Takayuki TAKUBO²
1  Department of Central Clinical Laboratory,
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

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

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