

The 35th Annual Meeting of the Japanese Society for Biomedical Mass Spectrometry

Program

September 9th (Thu.) - 10th (Fri.)

W9-106, Kinjo Gakuin University

2-1723, Omori, Moriyama-ku, Nagoya 463-8521, Japan



Hisao Oka, Ph.D.

President of the 35th Annual Meeting of
the Japanese Society for Biomedical Mass Spectrometry

School of Pharmacy, Kinjo Gakuin University

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Time Schedule

September 9 (Thursday)

9:25- 9:30	Opening Remarks
9:30-11:30	Symposium 1 (S1-1 - S1-4)
11:40-12:30	Luncheon Seminar, <Board Meeting>
12:30-13:00	<JSBMS General Meeting>
13:10-13:50	Plenary Lecture (L1)
13:50-15:20	Poster Presentation (P1 – P40)
15:20-17:20	Symposium 2 (S2-1 – S2-4)
17:30-19:00	Banquet

September 10 (Friday)

9:00-11:00	Symposium 3 (S3-1 – S3-5)
11:00-11:30	“Isamu Matsumoto” Prize Lecture (L2)
11:30-12:30	Luncheon Seminar
12:50-13:30	Presidential Lecture (L3)
13:40-15:40	Symposium 4 (S4-1 – S4-6)
15:50-16:50	Technical Workshop
17:00	Closing Remarks

Program

September 9 (Thursday)

9:25 Opening Remarks (Hisao Oka)

9:30-11:30 Symposium 1 “Metabolomics for lifestyle-related diseases”

Organizer: Ryo Taguchi, Tetsuyuki Kobayashi

- S1-1 Phospholipase A₂, metabolic syndrome, and lipid metabolomics**
Makoto Murakami
Lipid Metabolism Project, The Tokyo Metropolitan Institute of Medical Science
- S1-2 Diseases caused by failure in the cysteine biosynthetic pathway**
Isao Ishii, Noriyuki Akahoshi, Hidenori Yamada, Makoto Suematsu
Department of Biochemistry and Integrative Medical Biology, Keio University
School of Medicine
- S1-3 Analysis on life-style related disease by lipidomic**
Ryo Taguchi
¹ Department of Biomedical Sciences, College of Life and Health Sciences
² Department of Metabolomics, Graduate School of Medicine, The University of
Tokyo
³ JST, CREST
- S1-4 Development of stable isotope dilution LC-MS/MS analysis of asymmetric
Dimethylarginine (ADMA) in clinical samples.**
Toru Obata¹, Mayumi Nomura²
¹ Microbial Chemistry Research Foundation, Specified Research Promoting
Group
² Dept. of Molecular Cell Biology, Inst. of DNA Medicine, Jikei University
School of Medicine

11:40-12:30 Luncheon Seminar <Board Meeting>

**The practical approach to the analysis of newly-encountered designer
drugs.**

Hitoshi Tsuchihashi
Department of Legal Medicine, Osaka Medical College

12:30-13:00 JSBMS General Meeting

13:10-13:50 Plenary Lecture (Chair: Osamu Suzuki)

- L1 Mass Spectrometry in Sports Doping Tests**
Makoto Ueki
Anti-Doping Research Laboratory, Japan Chemical Analysis Center

13:50-15:20 Poster Presentation

- P1 Rapid identification of microorganism from MALDI BioTyper system using
MALDI-TOF mass spectrometry.**
Kazuyuki Sogawa¹, Hiroshi Umemura^{2,3}, Masaharu Watanabe², Yumiko
Matsuyama⁴, Takashi Nirasawa⁴, Syunsuke Segawa², Chisato Ishii², Akiko
Miyabe², Syota Murata², Tomoko Saito², Mamoru Satoh¹, Setsu Sawai^{1,2,3},

Motoi Nishimura^{1,2,3}, Kazuyuki Matsushita^{1,2,3}, Fumio Nomura^{1,2,3}
¹ Clinical Proteomics Research Center, Chiba University Hospital
² Department of Clinical Laboratory, Chiba University Hospital
³ Department of Molecular Diagnosis, Graduate School of Medicine, Chiba University
⁴ Bruker Daltonics K.K.

- P2 **Analysis of drug in human saliva and serum using column-switching ultra-fast LC/MS/MS**
Yukiko Hirabayashi¹, Yukari Yamamoto¹, Takashi Shinagawa², Joji Suzuki², Toshio Kaji²
¹ Advanced Research Laboratory, Hitachi, Ltd.
² Hitachi Yokohama Hospital, Hitachi, Ltd.
- P3 **Analyses for Plasmalogens by LC/MS**
Shuping Hui¹, Hitoshi Chiba², Takao Kurosawa¹
¹ Faculty of Pharmaceutical Sciences, Health Sciences University of Hokkaido
² Faculty of Health Sciences, Hokkaido University
- P4 **A rapid and sensitive method for the determination of cyanide in blood using ESI-MS-MS**
Kayoko Minakata¹, Masako Suzuki², Hideki Nozawa¹, Itaru Yamagishi¹, Sanee Kanno³, Kunio Gonmori¹, Koutaro Hasegawa¹, Kanako Watanabe¹, Osamu Suzuki¹
¹ Department of Legal Medicine, Hamamatsu University School of Medicine
² Research Equipment Center, Hamamatsu University School of Medicine
³ Photon Medical Research Center, Hamamatsu University School of Medicine
- P5 **Analysis of trans-acylation reaction of reactive metabolite of bile acids with biomolecules carrying thiol and amino group by means of ion cluster technique**
Kuniko Mitamura, Eriko Aoyama, Hazuki Murakami, Naohiro Hori, Toshihiro Sakai, Shigeo Ikegawa
Faculty of Pharmaceutical Sciences, Kinki University
- P6 **Proteomic profiling of the glomerulus of human kidney using LC-MS/MS in combination with laser capture microdissection**
Hiroko Odani¹, Miyuki Ito¹, Akihiko Takasaki², Satoshi Sugiyama³, Yukio Yuzawa¹
¹ Fujita Health University School of Medicine, Department of Nephrology
² Gifu University of Medical Science, Department of Health Science
³ Kanayama Clinic
- P7 **MS/MS analysis of acylcarnitines in bile samples obtained from sudden-infant- death cases to detect inherited metabolic disorders**
Yosuke Shigematsu¹, Ikue Hata¹, Go Tajima², Yuki Hasegawa³, Ryoujun Takeda⁴, Akira Ohtake⁵
¹ Department of Pediatrics, University of Fukui
² Department of Pediatrics, Hiroshima University Graduate School of Biomedical Sciences
³ Department of Pediatrics, Shimane University,
⁴ Division of Endocrinology and Metabolism, Tokyo Metropolitan Children's Medical Center,
⁵ Department of Pediatrics, Faculty of Medicine, Saitama Medical University
- P8 **Prenatal diagnosis of methylmalonic aciduria by measuring methylmalonic acid in dried amniotic fluid on filter paper using GC/MS**

Yoshito Inoue, Morimasa Ohse
Division of Human Genetics, Medical Research Institute, Kanazawa Medical
University

- P9 **Study of urinary metabolites profile with high excretion of xanthine**
Chunhua Zhang, Zonghai Ruan, Mingji Jin
Department of research & development of MILS International
- P10 **Metabolomic search for uremic toxins as biomarkers of the effect of Kremezin®**
Kaori Kikuchi¹, Yoshiharu Itoh¹, Ryoko Tateoka¹, Atsuko Ezawa¹, Kenjiro Murakami¹, Miki Yamashita¹, Toshimitsu Niwa²
¹Biomedical Research Laboratories, Kureha Corporation
²Department of Advanced Medicine for Uremia, Nagoya University Graduate School of Medicine
- P11 **A rapid and simultaneous analysis of muscle relaxants in blood with ultra-performance liquid chromatography tandem mass spectrometry**
Tadashi Ogawa¹, Hideki Hattori¹, Rina Kaneko², Kenjiro Ito¹, Masae Iwai¹, Yoko Mizutani¹, Tetsuya Arinobu¹, Akira Ishii², Osamu Suzuki³, Hiroshi Seno¹
¹Aichi Medical University School of Medicine
²Nagoya University Graduate School of Medicine
³Hamamatsu University School of Medicine
- P12 **Quantification of lysophosphatidylcholines using liquid chromatography-tandem mass spectrometry in human breast milk, dried milk and cow's milk**
Chika Takashima¹, Atsuko Takeuchi¹, Akimori Wada¹, Ichiro Morioka², Masafumi Matsuo²
¹Kobe Pharmaceutical University
²Department of Pediatrics, Kobe University Graduate School of Medicine
- P13 **A highly sensitive and selective LC-MS/MS method for the simultaneous determination of isoflavone metabolites in human plasma and urine**
Kaori Hosoda¹, Emi Yamane¹, Takashi Furuta², Kazuo Ishii¹
¹School of Health Sciences, Kyorin University
²School of Pharmacy, Tokyo University of Pharmacy and Life Sciences
- P14 **Clinical importance of determination of serum ADMA by LC-MS/MS**
Mayumi Mikumo¹, Yusuke Agata¹, Yasuhiro Maeda¹, Hakutaka Hashizume², Masataka Ono², Miho Sarai², Hiroshi Ogawa², Yukihisa Kurono¹, Kazunori Kimura¹
¹Graduate School of Pharmaceutical Sciences, Nagoya City University
²Shinseikai Daiichi Hospital
- P15 **Development of New metabolomics method using GC-TOFMS with Automated derivatization system**
Tomoko Hiraishi¹, Fumihiko Tsuchiya², Ryoichi Sasano³, Kenichi Suzumura¹
¹Astellas Pharma Inc.
²LECO Japan Corporation
³AiSTI SCIENCE
- P16 **Detection of tandospirone citrate from autopsy cases with suspected acute drug intoxication**
Kyoko Maebashi, Kenji Fukui, Tomonori Nagai, Kentaro Sakai, Eriko Ochiai, Kimiharu Iwadate
Department of Forensic Medicine, The Jikei University School of Medicine

- P17 Molecular diagnostic program for congenital disorders of glycosylation, CDG –report 3-**
Yoshinao Wada¹, Machiko Kadoya¹, Nobuhiko Okamoto¹
Osaka Medical Center and Research Institute for Maternal and Child Health
- P18 High sensitivity MALDI analyses of glycopeptides using 3-AQ/CHCA as a liquid matrix**
Yuko Fukuyama, Natsumi Funakoshi, Koichi Tanaka
Koichi Tanaka Laboratory of Advanced Science and Technology, Shimadzu Corporation
- P19 Determination of pivaloylcarnitine and pivaloyl-CoA in tissues of rat taking cefditoren pivoxil**
Yasuhiro Maeda^{1,2}, Sayaka Ichiki², Tetsuya Ito², Tetsuya Nasu¹, Yoko Nakajima², Haruka Oda¹, Yukihiro Kurono¹, Kazunori Kimura^{1,2}, Naruji Sugiyama³, Hajime Togari²
¹ Graduate School of Pharmaceutical Sciences, Nagoya City University
² Graduate School of Medical Sciences, Nagoya City University
³ Aichi-Gakuin University, School of Pharmacy
- P20 Evaluation of steroid sulfatase activity in human PBMC: Stable isotope dilution analysis of plasma androgens by GC-MS**
Akitomo Yokokawa, Seri Sakai, Hiromi Shibasaki, Takashi Furuta
School of Pharmacy, Tokyo University of Pharmacy and Life Sciences
- P21 Simultaneous analysis of amino acids in serum using fast GC-MS**
Shuichi Kawana¹, Katsuhiro Nakagawa¹, Haruhiko Miyagawa¹, Yuki Hasegawa², Seiji Yamaguchi²
¹ Shimadzu Corporation
² Department of Pediatrics, Shimane University School of Medicine
- P22 Metabolomic analysis of human plasma from hemodialysis patients**
Emiko Sato¹, Junko Aizawa^{1,3}, Masahiro Kohno¹, Tatsuya Fujisawa², Kouichi Fujiwara², Noriaki Tanaka^{2,3}
¹ NICHe, Tohoku University (NICHe)
² Tanaka-Kitanoda Hospital
³ Hojyo-Tanaka Hospital
- P23 Mass spectrometric analysis of metabolites in human plasma of chronic kidney disease patients (II)**
Junko Aizawa^{1,3}, Emiko Sato¹, Masahiro Kohno¹, Tatsuya Fujisawa², Kouichi Fujiwara², Noriaki Tanaka^{2,3}
¹ NICHe, Tohoku University
² Tanaka-Kitanoda Hospital
³ Hojyo-Tanaka Hospital
- P24 Analysis of cardiac glycosides in blood and urine by thermoresponsive LC-MS-MS**
Sanae Kanno¹, Kanako Watanabe², Itaru Yamagishi², Seishiro Hirano³, Kayoko Minakata², Kunio Gonmori², Osamu Suzuki²
¹ Photon Medical Research Center, Hamamatsu University School of Medicine
² Department of Legal Medicine, Hamamatsu University School of Medicine
³ National Institute for Environmental Studies
- P25 Analysis on the localization of PE-plasmalogen molecular species in mouse brain by using Laser micro dissection**

Yoko Tajima^{1,2,3}, Hiroki Nakanishi^{1,2,4}, Ryo Taguchi^{1,2,5}

¹ Department of Metabolome, Graduate school of Medicine, The University of Tokyo

² JST, CREST

³ Division of Biochemistry and Immunochemistry National Institute of Health Sciences

⁴ Department of Biological Information Signal, BERC., Akita University

⁵ Department of Biomedical Sciences, Chubu University

P26 Analysis of histamine in food using stable isotope internal standard

Yuko Ito, Tomomi Goto, Minae Watanabe, Takashi Tanahashi, Yoshitomo Ikai, Harumi Oshima, Eiichi Mikami
Aichi Prefectural Institute of Public Health

P27 Degradation activity of strain B-9 against bioactive peptide and characterization of degradation products by mass spectrometry

Fumio Kondo¹, Naohisa Ishikawa¹, Kiyomi Tsuji², Atsushi Miyachi³, Miki Kurita³, Ken-ichi Harada³

¹ School of Medicine, Aichi Medical University

² Kanagawa Prefectural Public Health Laboratories

³ Faculty of Pharmacy, Meijo University

P28 Lipid metabolomics of the atherosclerosis in ApoE knockout mice

Yuka Hashimoto^{1,2,6}, Mayumi Kawabe³, Hiroki Nakanishi^{2,4,6}, Kazutaka Ikeda^{2,6}, Tetsuyuki Kobayashi^{1,6}, Ryo Taguchi^{2,5,6}

¹ Department of Biological Sciences, Graduate School of Humanities and Sciences, Ochanomizu Univ

² Department of Metabolome, Graduate School of Medicine, The Univ. of Tokyo

³ Department of Pharmacology, Graduate School of Medicine, Nagoya City Univ

⁴ Department of Biological Information Signal, Bioscience Education and Research Center, Akita Univ

⁵ Department of Biomedical Sciences, College of Life and Health Sciences, Chubu Univ

⁶ JST, CREST

P29 A simultaneous determination of benzodiazepines in hair samples with ultra-performance liquid chromatography-tandem mass spectrometry

Akira Ishii¹, Rina Kaneko¹, Tadashi Ogawa², Hideki Hattori², Hiroshi Seno²

¹ Nagoya University Graduate School of Medicine

² Aichi Medical University

P30 High sensitivity MALDI analyses of glycans by a 3-AQ labeling method in 3-AQ/CHCA liquid matrix

Kaoru Kaneshiro, Yuko Fukuyama, Koichi Tanaka

Koichi Tanaka Laboratory of Advanced Science and Technology, Shimadzu Corporation

P31 Determination of phenothiazine derivatives in human plasma using silica Monolith SPE tips and GC/MS

Takeshi Kumazawa¹, Chika Hasegawa², Xiao-Pen Lee¹, Tetsuya Arinobu³, Hiroshi Seno⁴, Osamu Suzuki⁵, Keizo Sato¹

¹ Department of Legal Medicine, Showa University School of Medicine

² Department of Legal Medicine, Toho University School of Medicine

³ Department of Chemistry, Aichi Medical University School of Medicine

⁴ Department of Legal Medicine, Aichi Medical University School of Medicine

⁵ Department of Legal Medicine, Hamamatsu University School of Medicine

- P32 **Common peak picking software for mass spectrometry imaging data**
Masaru Ushijima¹, Shigeki Kajihara², Mitsutoshi Setou³, Masaaki Matsuura¹
¹ Genome Center, Japanese Foundation for Cancer Research
² Shimadzu Corporation
³ Hamamatsu University School of Medicine
- P33 **Rapid and high sensitive analysis of benzodiazepine drugs in human plasma by automated on-line column-switching UFLC/MS/MS and MS³**
Xiao-Pen Lee¹, Takeshi Kumazawa¹, Yasutoshi Kawase², Chika Hasegawa³,
Daigo Hayashi¹, Tetsuya Arinobu⁴, Keizo Sato¹
¹ Department of Legal Medicine, Showa University School of Medicine
² TAKARA BIO INC.
³ Department of Legal Medicine, Toho University School of Medicine
⁴ Department of Legal Medicine, Aichi Medical University School of Medicine
- P34 **Forensic Multi-Target Screening and General Unknown Screening on an LC/MS/MS System with Automatic Library Searching for Compound Identification**
Miho Tada, Tetsuo Kokaji, Kaoru Karasawa
K.K.AB SCIEX
- P35 **Analysis of 21 acyl-CoAs in each portion of mouse brain by LC-ESI-MS/MS**
Masuyama Teiichi, Ryota Nishizawa, Maya Kazumi, Kazuo Nakamoto, Shougo Tokuyama, Fumiyo Kasuya,
Faculty of Pharmaceutical Sciences, Kobegakuin University,
- P36 **Analysis of mechanism of function for PANC-1 with anticancer drug Gemcitabine treatment *in vitro*.**
Takanobu Takata¹, Hideyuki Tsuchida¹, Takao Shimazaki², Yasuhiro Ishigaki¹,
Toshinari Minamoto³, Ryouji Motoo², Naohisa Tomosugi^{1,2}
¹ Medical Research Institute of Kanazawa Medical University
² Kanazawa Medical University
³ Cancer Research Institute of Kanazawa University
- P37 **On-line Electrochemistry/MS – A Novel Tool For Predicting Drug Metabolism**
Yoshiaki Kimura¹, Agnieszka Kraj², Hendrik-Jan Brouwer², Lusi van Heerwaarden², Martin Eysberg²
¹SANWA TSUSHO CO., LTD., 13-2, Nishi-Gotanda 3-chome, Shinagawa-ku, Tokyo, 141-0031, Japan
²Antec BV., Industrieweg 12, 2382 NV Zoeterwoude, The Netherlands
- P38 **Urinary Biomarkers of Primary and Secondary Hyperammonemias**
Tomiko Kuhara¹, Yoshito Inoue¹, Morimasa Ohse¹, Arthur J. L. Cooper²
¹ Division of Human Genetics, Medical Research Institute, Kanazawa Medical University
² Department of Biochemistry and Molecular Biology, New York Medical College
- P39 **On-line solid phase extraction LC-MS/MS for the determination of Ac-SDKP peptide in human plasma of hemodialysis patients**
Ayaka Ikemura¹, Koichi Inoue¹, Yoshinari Tsuruta², Kaname Tsutsumiuchi³,
Tomoaki Hino^{1,4}, Hisao Oka^{1,4}
¹ Department of Physical and Analytical Chemistry, School of Pharmacy, Kinjo Gakuin University
² Meiyō Clinic, Meiyōkai Medical Corporation
³ College of Bioscience and Biotechnology, Chubu University
⁴ Graduate School of Human Ecology, Kinjo Gakuin University

- P40 **Structural characterization of A β ₁₋₆ peptide denatured by metal-catalyzed oxidation**
Yuka Mizuyama¹, Chika Kojima¹, Kaname Tsutsumiuchi¹, Koichi Inoue², Hisao Oka^{2,3}
¹ College of Bioscience and Biotechnology, Chubu University
² School of Pharmacy, Kinjo Gakuin University
³ Graduate School of Human Ecology, Kinjo Gakuin University

15:20-17:20 Symposium 2 “Application of MS to environmental issues”
Organizer: Kenichi Harada, Humio Kondo

- S2-1 **Two topics in advanced mass spectrometry**
Takashi Korenaga
Graduate School of Science and Technology, Tokyo Metropolitan University
- S2-2 **Rapid phylogenetic classification of soil bacteria using ribosomal proteins as biomarkers by MALDI-MS**
Kanae Teramoto
JEOL Ltd.
- S2-3 **Development of reliable and sensitive analysis of amino acids in the peptidoglycan of actinomycetes**
Yuriko Nozawa
Medicinal Chemistry Laboratories, Taisho Pharmaceutical Co., LTD.
- S2-4 **Specific hydrolysis of cyclic peptides by microcystin-degrading bacteria, strain B-9**
Hajime Kato¹, Kiyomi Tsuji², Ken-ichi Harada^{3,4}
¹ Tohoku Pharmaceutical University
² Kanagawa Prefectural Institute of Public Health
³ Faculty of Pharmacy, Meijo University
⁴ Graduate School of Environmental and Human Sciences, Meijo University

17:30 Banquet

September 10 (Friday)

9:00-11:00 **Symposium 3 “Discovery and validation of proteomic biomarkers”**
Organizer: Takao Kawakami, Yoshinao Kobayasi

S3-1 Symposium, ‘Discovery and validation of proteomic biomarkers’
Takao Kawakami^{1,2}, Yoshinao Wada³
¹ First Department of Surgery, Tokyo Medical University
² Research and Development Division, Medical ProteoScope Company
³ Osaka Medical Center and Research Institute for Maternal and Child Health

S3-2 Discovery and validation of biomarker proteins and peptides in serum
Yoshio Kodera^{1,2,3}, Fumio Nomura^{3,4}
¹ Center for Disease Proteomics, School of Science, Kitasato University
² Laboratory of Biomolecular Dynamics, Department of Physics, School of Science, Kitasato University
³ Clinical Proteomics Research Center, Chiba University Hospital
⁴ Department of Molecular Diagnosis (F8) Graduate School of Medicine, Chiba University

S3-3 Different molecular forms of B-type natriuretic peptide as biomarkers of coronary artery disease.
Hirotaaka Fujimoto^{1, 2}, Toru Suzuki^{1, 3}, Kenichi Aizawa^{1, 3}, Daigo Sawaki¹, Junichi Ishida¹, Ryoza Nagai¹
¹ Department of Cardiovascular Medicine, The University of Tokyo.
² Technology Research Laboratory, Shimadzu Corporation.
³ Department of Ubiquitous Preventive Medicine, Graduate School of Medicine, The University of Tokyo.

S3-4 An actual case of proteome biomarker discovery conducted in a post-marketing study
Atsushi Ogiwara
Medical ProteoScope Co., Ltd.

S3-5 Multi-institutional validation study for plasma biomarker of pancreatic cancer by mass spectrometry
Kazufumi Honda, Tesshi Yamada
Chemotherapy Division, National Cancer Center Research Institute

11:00-11:30 **“Isamu Matsumoto” Prize Lecture (Chair: Yoshinao Wada)**

L2 Newborn screening using ESI-MS/MS combined with mass spectrometric measurements as second-tier and confirmation tests
Yosuke Shigematsu
Division of Health Science, Faculty of Medical Sciences, University of Fukui

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

12:50-13:30 **Presidential Lecture (L3)(Chair: Hisao Oka)**

L3 Metabolomics: A new scientific tool in medical and pharmaceutical sciences in the 21st century
Tomiko Kuhara
Division of Human Genetics, Medical Research Institute, Kanazawa Medical University

13:40-15:40 Symposium 4 “New frontier of mass spectrometry ”

Organizer: Mitsutosi Seto, Toshimitu Niwa

S4-1 Imaging mass spectrometry revealed unique distribution of lipid molecule in vascular disease tissue

Hiroki Tanaka^{1,2,3}, Nobuhiro Zaima¹, Naoki Unno^{2,3}, Mitsutoshi Setou¹

¹ Department of Molecular Anatomy, Hamamatsu University School of Medicine

² Division of Vascular Surgery, Hamamatsu University School of Medicine

³ Second Department of Surgery, Hamamatsu University School of Medicine

S4-2 Metabolomics as a novel diagnostic approach for cancer –the present situation and the future prospects-

Masaru Yoshida^{1,2,3}, Shin Nishiumi^{2,3}, Masakazu Shinohara³, Naoya Hatano³

¹ Division of Metabolomics Research, Kobe University Graduate School of Medicine

² Division of Gastroenterology, Kobe University Graduate School of Medicine

³ The Integrated Center for Mass Spectrometry, Kobe University Graduate School of Medicine

S4-3 Semi-quantitative mass spectrometric imaging of metabolites in tumor-bearing liver

Akiko Kubo¹, Mitsuyo Ohmura¹, Masatoshi Wakui², Makoto Suematsu¹

¹ Department of Biochemistry, Keio University, School of Medicine

² Department of Laboratory Medicine, Keio University, School of Medicine

S4-4 MassBank: A progress report

Takaaki Nishioka^{1,2}

¹ Institute for Advanced Biosciences, Keio University

² Institute for Bioinformatics Research and Development, Japan Science and Technology Agency

S4-5 Screening for novel substrates of kinases by an interactome approach

Mutsuki Amano¹, Hidenori Harada¹, Satoru Yagi¹, Kentaro Taki¹, Yuta Tsumura¹,

Tomoki Nishioka¹, Kozo Kaibuchi^{1,2}

¹ Graduate School of Medicine, Nagoya University

² JST, CREST

S4-6 Pharmacokinetic analysis of drug disposition based on microdose study

Hiroyuki Kusuhara, Yuichi Sugiyama

Graduate School of Pharmaceutical Sciences, The University of Tokyo

15:50-16:50 Technical Workshop

Organizer: Yoshitomo Ikai

17:00 Closing Remarks

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for Biomedical Mass Spectrometry**

President of the 35th Annual Meeting: Hisao Oka, Ph.D.
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