

*Speed Beyond Comparison*  
**UFGMS**  
*ULTRA FAST MASS SPECTROMETRY*



**NEW**  
THREE MASS  
SPECTROMETERS!

## Shimadzu at IMSC 2012

At Shimadzu, we're focused on providing a total solution to all researchers with an expansive portfolio of instrumentation that provides unparalleled performance. Delivering precise, reliable results, our platforms will help advance your research and development in a multitude of application areas, from screening of hazardous substances for securing human health and earth environment, biomarker discovery, metabolite ID to small molecule analysis, pharmacokinetics, and tissue imaging.

Look inside for details on our events and scientific presentations by Shimadzu or in collaboration with our research partners.

## LCMS-8040

### Ultra Fast with High Sensitivity

#### Ultra Fast MS

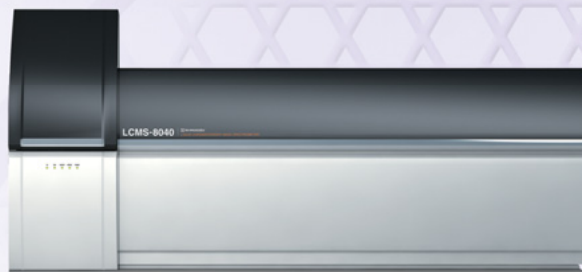
- Ultra Fast Scan Speed of 15,000 u/sec
- 555 MRMs per Second, the Most Ever Possible
- Polarity Switching Speed of 15msec

#### High Sensitivity

- Improved Ion Optics
- Improved Collision Cell Efficiency
- Femtogram Range Detection Limits

#### User-Friendly

- Easy Maintenance for Minimized Instrument Downtime
- Quantitation Browser for Multi-Analyte Quantitation
- Compatible with LCMS-8030 Systems



## GCMS-TQ8030

### Ultra Fast MRM and Ultra Fast Scan Speed

#### Ultra Fast Speed

- Fast Enough to Perform MRM/Scan
- Unmatched Scan Speed of 20,000 u/sec
- Ultra Fast 600 MRM Transitions/sec

#### Sensitivity and Selectivity

- Overdrive Lenses to Reduce Neutral Noise
- High-sensitivity Ion Optics and Low-noise Detector
- Twin-column TQ Configuration for Ultimate Flexibility

#### User-Friendly

- Front-access Source for Easy Maintenance
- Single Software Platform for Both TQ and GCMS
- Automatically Adjusts for Compound RT and MRM Time



## LCMS-8080

### Ultra High Sensitivity for the Most Challenging Applications

#### Ultra High Sensitivity

- Coaxial Flow Source Design
- Hot Source Induced Desolvation
- Axial Field Collision Cell Technology

#### Robust Source

- Multi-Orthogonal Source Design Reduces Need for Cleaning
- Venturi Exhaust System Minimizes Contamination
- Ultra High Sensitivity Even in Complex Matrices

#### User-Friendly

- Fully Integrated LC and MS Software Control
- Quantitation Browser for Multi-Analyte Quantitation
- Wide Polarity Range



## Luncheon Seminar Agenda

Monday, Tuesday, Wednesday, Thursday September 17-20, 12:20h-13:30h

Date	Place	Title and Speaker
Sept. 17 (Mon)	Main Hall	<b>Let's Fish Mass</b> <i>Koichi Tanaka (Shimadzu Corporation)</i> <i>Daniel J. Capon (Blood Systems Research Institute, San Francisco, U.S.A)</i>
Sept. 18 (Tue)	Room D	<b>Challenges in (un)-supervised LC-MS/MS)-based metabolomics.</b> <i>Gérard Hopfgartner</i> <i>Life Sciences Mass Spectrometry, School of Pharmaceutical Sciences, University of Geneva, University of Lausanne, Geneva, Switzerland</i>
Sept. 19 (Wed)	Room D	<b>Ultra Fast and Sensitive: Shimadzu UHPLC-Triple Quadrupole Mass Spectrometers</b> <i>Richard van Breemen</i> <i>University of Illinois College of Pharmacy Director, UIC/NIH Botanical Center for Dietary Supplements Research, U.S.A</i>
Sept. 20 (Thu)	Main Hall	<b>Induction of Pluripotency of Defined Factors</b> <i>Shinya Yamanaka</i> <i>Director, Center for iPS Cell Research and Application, Kyoto University, Japan</i>

## Users' Day Agenda

Sunday, September 16 Registration at 09:00AM

Time	Title and Speaker
10:00	<b>LCMS Product portfolio</b> <i>Ichiro Hirano, Product Manager, Mass Spectrometry Business Unit, Shimadzu Corporation</i>
10:30	<b>Biological Profiling: Complementary Qualitative and Quantitative Analysis using IT-TOF and QQQ Mass Spectrometry</b> <i>Kevin Schug, Department of Chemistry &amp; Biochemistry, University of Texas at Arlington, U.S.A</i>
11:10	<b>MALDI Product portfolio</b> <i>Helen V. Montgomery, Kratos Analytical Ltd.</i>
11:25	<b>Top-down Proteomics using MALDI ISD and MS<sup>n</sup></b> <i>Daniel Lafitte, University Aix-Marseille, France</i>
11:55	<b>GCMS Product portfolio</b> <i>Benjamin J. Figard, Shimadzu Scientific Instruments, U.S.A</i>
12:10	<b>GC x GC-qMS with chemical ionization for highly specific, sensitive, and quantitative steroids</b> <i>J. Thomas Brenna, Professor, Cornell University, U.S.A</i>
12:40	<b>Serum Metabolome Analysis for Early Detection of Colorectal Cancer</b> <i>Masaru Yoshida, Chief, Division of Metabolomics Research, Kobe University Graduate School of Medicine, Japan</i>
13:10	<b>Closing Remarks</b> <i>Kozo Miseki, Director, Life Science Business Department, Shimadzu Corporation</i>

The presentations will last until 13:15 and then we will host a lunch event featuring buffet style food and drinks from 13:30 in the Gold Room, Grand Prince Hotel Kyoto, close to the congress location. We also encourage you to enjoy Japanese traditional attractions with us!



Visit our website to register: [www.shimadzu.com/an/news-events/2012/imsc2012.html](http://www.shimadzu.com/an/news-events/2012/imsc2012.html)



## Oral Presentations

Monday, September 17, 2012

### Session 1: 09:40, Main Hall

S01-0940

**High Mass Resolution MALDI TOF MS/MS with a Curved Field Reflectron (or the CFR Comes Of Age)**

Andrew R Bowdler 1; Ian Brookhouse 1  
1: Kratos Analytical Ltd, Manchester, UK

### Session 1: 10:40, Main Hall

S01-1040

**Identification of trace level process related impurities of small molecule Irbesartan, an angiotensin II receptor antagonist through MSMS analysis**

Saravanan Subramaniam 1; Raman Palvannanathan 1; Rampriya Uthayakumar 1; Govindarajan Chandramohan 1; Mohan Kasi 1; Arvind Thyagarajan 1; Manohar Venkat 1

1: Indian Institute of Chromatography & Mass Spectrometry

### Session 9: 16:00, Room D

S09-1600

**Diagnostic application of Imaging Mass Spectrometry**

Mitsutoshi Setou 1; Kiyoshi Ogawa 2; Akiko Kubo 3; Ikuko Yao 4; Masaaki Matsuura 5

1: Hamamatsu University School of Medicine  
2: Shimadzu Corporation, 3: Keio University, 4: Kansai Medical University, 5: Japanese foundation for cancer research

### Session 9: 16:20, Room D

S09-1620

**High-throughput analysis for metabolic dynamics and in situ metabolite imaging by MALDI mass spectrometry**

Daisuke Miura 1; Yoshinori Fujimura 1; Shin-ichi Yamaguchi 2; Noriyuki Ojima 2; Mitsuru Shindo 1; Hiroyuki Wariishi 1

1: Kyushu University, 2: Shimadzu Corporation

Wednesday, September 19, 2012

### Session 27: 16:40, Room A

S27-1640

**Novel accurate bacterial identification by MALDI-TOFMS based on ribosomal protein coding in S10-spc-alpha Operon at Stain level**

Hiroto Tamura 2; Yudai Hotta 2,3; Hiroaki Sato 4; Keisuke Shima 1; Akifumi Hosoda 2; Noriyuki Ojima 1  
1: Shimadzu Corporation, 2: School of Agriculture, Meijo University, 3: Formulation Technology Institute, Kumiai Chemical Industry Co., 4: Research Institute for Environmental Management Technology, National Institute of Advanced Industrial Science and Technology

### Session 30: 16:40, Room E

S30-1640

**Ab initio peak identification for SRM/MRM data**

Ken Aoshima 1; Koikegami Shigeru 3; Fukuda Mitsuru 3; Takahashi Kentaro 1; Matsuura Kentaro 1; Watanabe Hideki 1; Sato Yoshiaki 1; Uehara Taisuke 1; Kimura Takayuki 1; Nakamura Tatsuji 1; Parry Howell 2; Tanaka Satoshi 2; Utsunomiya Shin-ichi 2; Kajihara Shigeki 2; Tanaka Koichi 2; Oda Yoshiya 1

1: Eisai Co. Ltd., 2: Shimadzu Corporation, 3: Ibio-Tech

Thursday, September 20, 2012

### Session 32: 09:40, Room A

S32-0940

**Ab initio MO Study on the Fragmentation Mechanisms of Protonated Phosphopeptides in "On-Resonance" and "Off-Resonance" Pulsed Gas Introduction Collision-Induced Dissociations**

Takae Takeuchi 1,2; Ayaka Takahashi 1; Erika Sugawara 1; Tomoko Kimura 1; Yuka Kurosaki 1; Shigeki Kajihara 3; Hiroko Morinaga 4; Shinichi Iwamoto 3; Koichi Tanaka 3

1: Department of Chemistry, Faculty of Science, Nara Women's University, Nara, Japan  
2: National Institute of Advanced Industrial Science and Technology (AIST), Ikeda, Osaka, Japan  
3: Koichi Tanaka Laboratory of Advanced Science and Technology, Shimadzu Corporation, Kyoto, Japan  
4: Technical Research Laboratory, Shimadzu Corporation, Kyoto, Japan

### Session 34: 10:40, Room D

S34-1040

**MSPTM-DB: a known PTM database for high-speed and accurate search available on the "ProteoAnalysis" web site**

Akiyasu C Yoshizawa 1; Tsuyoshi Tabata 2; Takuyuki Kimura 2; Ken Aoshima 2; Yoshiya Oda 2; Shigeki Kajihara 1; Koichi Tanaka 1

1: Koichi Tanaka Laboratory of Advanced Science and technology, Shimadzu Corporation, 2: Eisai Product Creation Systems, Eisai Corporation, Ltd.



## Poster Presentations

Monday, September 17, 2012

**PMo-004**

Qualitative analysis of impurities in enalapril using liquid chromatography-ion trap time of flight hybrid mass spectrometry

**PMo-005**

Qualitative Analysis of Gossypol, Free Gossypol, and Gossypol Derivatives in Cottonseeds By Electrospray Ionization Tandem Mass Spectrometry

**PMo-006**

Evaluation of the higher sensitive LC/MS/MS incorporates novel desolvation technologies to achieve low femto-gram LOQ

**PMo-030**

Analysis of Panax ginseng extracts by comprehensive Two-Dimensional Ultra High Performance Liquid Chromatography coupled with IT-TOF

**PMo-031**

Influence of Sample Preparation Techniques on the Sensitive Detection of Peptides by MALDI-MS

**PMo-039**

Analysis of 8 kinds of estrogens in environmental water by ultra high performance liquid chromatograph hybrid triple quadrupole mass spectrometer

**PMo-063**

Comparison of MALDI Imaging modalities using a Peptide Gel matrix for stem cell implantation

**PMo-082**

Molecular detection of breast cancer-related phosphatidylinositol by high-resolution imaging mass spectrometry

**PMo-084**

MALDI Imaging of Metabolites Reconstructed by CE-MS Based Quantitative Analysis

**PMo-094**

Mass spectrometry-based sequencing of protein C-terminal peptide using alpha-carboxyl group specific derivatization and COOH capturing

**PMo-098**

Differentiation of isobaric residues in SPITC-derivatized tryptic peptides using MS/MS technique in a novel Curved Field Reflectron.

**PMo-114**

MALDI MSn analysis of protein oxidation in major diseases

**PMo-120**

Multidimensional LC-MALDI Workflow for High Sensitivity Detection of Low-Abundance Peptides from Complex Samples

**PMo-126**

Identification of a modified amino acid residue in the heme protein using LC/MS/MS

**PMo-169**

High Throughput Molecular Weight Confirmation of Pharmaceutical Compounds Using DART MS Analysis with Ultra-fast Polarity Switching

**PMo-170**

Componential Analysis of Pepper of Various Origins Using DART-MS Using Ultra-fast Polarity Switching

**PMo-189**

Acceleration of gluconeogenesis of the host liver bearing human colon cancer metastases revealed by microscopic imaging mass spectrometry

**PMo-200**

Direct detection of S-nitrosylated peptides with UV-MALDI MS using porphyrin and retinoic acid as a matrix additive

Tuesday, September 18, 2012

**PTu-003**

Detection of the Heterogeneous O-Glycosylation Profile of MT1-MMP Expressed in Cancer Cells by a Simple MALDI-MS Method

**PTu-006**

An MSn platform for detailed characterisation of both the peptide and the glycan moieties and the peptide/glycan linkage in glycoproteins.

**PTu-039**

MALDI MS analysis of N-glycan structures of a cell adhesion molecule, CADM1, in various cancer cells

**PTu-041**

A workflow for identification of isobaric isoforms of glycans using off-line MALDI-MSn system.

**PTu-042**

Negative-ion fragmentation of neutral N-glycans derivatized with 3-aminoquinoline and other non-acidic reagents

**PTu-078**

PGRN: a novel therapeutic target and biomarker for insulin resistance and obesity identified by differential proteome analysis

**PTu-082**

Discovery of novel urinary biomarker candidates for diagnosis of prostate cancer

**PTu-089**

Accurate Mass LC-MS/MS Profiling of Synthetic Cannabinoids

## Poster Presentations

### PTu-099

Ab initio MO Study on the Fragmentation Mechanisms of Protonated Phosphopeptides in "On-Resonance" and "Off-Resonance" Pulsed Gas Introduction Collision-Induced Dissociations

### PTu-117

Adaptive Noise reduction in MALDI TOF Mass Spectrometers

### PTu-118

Development of an ion transmission enhanced tandem ion guide system for triple quadrupole mass spectrometer

### PTu-122

Source Cleaning in Maldi Mass Spectrometers by UV Laser Desorption

### PTu-128

A Novel Precursor Isolation Method using Digital Ion Trap Mass Spectrometer

### PTu-194

Differential Analysis in sulfenamide-based vulcanizing accelerators for rubber products by High mass Accuracy MS and Multivariate Statistical Technique

## Wednesday, September 19, 2012

### PWe-002

Metabolome profiling of human embryonic stem cells by gas chromatography-mass spectrometry

### PWe-007

Ultra Fast Analysis of Amino Acids in Cultured Cell Extracts Using UHPLC/MS/MS

### PWe-010

Plant metabolite analysis using comprehensive two dimensional gas chromatograph quadrupole mass spectrometer

### PWe-021

Differential analysis of fermented beverage using fast polarity switching TOFMS acquisition with high mass accuracy and multivariate analysis

### PWe-023

Development of accelerate quantification analysis for hydrophilic metabolites using ionparing chromatography with a high-speed triple quadrupole mass spectrometer

### PWe-058

Data-dependent acquisition system for N-linked glycopeptides using MALDI-DIT-TOF

### PWe-093

Mass spectrometry based assessment chimeric mouse liver metabolite profiles following oral dosing of troglitazone

### PWe-095

Systems based LC-MS metabolite profiling of mice treated with ethanol enriched liquid diets

### PWe-099

Development of comprehensive glycerophospholipid profiling methods using liquid chromatography / high-speed triple quadrupole mass spectrometry

### PWe-100

Development of comprehensive glycerophospholipid profiling methods using liquid chromatography / high-speed triple quadrupole mass spectrometry

### PWe-110

Design Of Specific methodology For The Identification Of Beta-Lactamase Producing Enterobacteriaceae Using MALDI Mass Spectrometry

### PWe-113

MALDI Mass Spectrometry and MALDI-MS/MS Investigation into Chemically Induced Peptides of Beta-Lactamase Producing Enterobacteriaceae

### PWe-128

Non-targeted identification of novel Buspirone metabolites using a Spectral Similarity score derived from common fragment ion and neutral loss species

### PWe-133

Development of High Performance Liquid Chromatography Tandem Mass Spectrometry Method for Analysis of Bacopaside-I in Rat Urine and Feces Samples

### PWe-147

A Semi-Automated Method for Sequencing Oligonucleotides using ISD and Pseudo-MS3 on a MALDI-Ion Trap-TOF Mass Spectrometer

### PWe-148

Caco-2 Permeability Studies and Determination by LC/MS/MS of Memantine

### PWe-150

Caco-2 Permeability Studies and Determination by LC/MS/MS of Thioctic Acid

### PWe-153

Caco-2 Permeability Studies and Determination by LC/MS/MS of Trimebutine

### PWe-154

Caco-2 Permeability Studies AS A New Alternative Model to Bioequivalence and Biowaiver Tests

### PWe-170

The study of ageing processes using in vitro glycation experiments applied to low density lipoproteins using MALDI Mass Spectrometry

**PWe-174**

Screening of Oxidative Stress induced LDL-modifications on the Molecular Level using (LC-)MALDI-MS/MS based Lipoproteomics

**PWe-200**

Analysis of degradation products in electrolyte for rechargeable lithium-ion battery through high mass accuracy MSn and multivariate statistical technique

**Thursday, September 20, 2012**

**PTh-022**

To determine the activity of Essential Oil from *Blumia eriantha* from Indian origin by HSGC and GCMS

**PTh-023**

Screening of antioxidants present in unripe *Manilkara zapota* fruit of Indian origin by using LCMS/MS.

**PTh-024**

Rapid development of functional extensions for mass spectrometry using freeware software Mass++

**PTh-025**

UHPLC-MS/MS, an Alternative Solution to Conventional Biosensor Approach for Quorum Sensing Signalling Molecules Detection in Complex Environmental Samples

**PTh-031**

Identification of antioxidants in *Fructus aurantii* and its quality evaluation using a new on-line combination of analytical techniques

**PTh-033**

JobRequest - an easy-to-use software platform for proteomics analysis - and ProteoAnalysis, its application for protein identification.

**PTh-036**

Application of high speed LC-MSMS technology towards unambiguous characterization of degraded products of Lenalidomide, an anticancer molecule

**PTh-048**

Simultaneous analysis of anionic, amphoteric and non-ionic surfactant using ultra-high speed LC-MS/MS

**PTh-050**

Multi-component quantitative analysis of pharmaceuticals and personal care products in the environment by LC-MS/MS with fast polarity switching

**PTh-060**

Analysis method of polybrominateddiphenylether using GC-MS and GC-MS/MS coupled with automated identification and quantification system with a database

**PTh-086**

Development and validation of high resolution liquid chromatography-time of flight method of Bacopaside-I and metabolites for pharmacokinetic study

**PTh-105**

Acylcarnitine analysis by ESI-MS/MS with smaller amount of sample and rapid analytical time

**PTh-132**

Rapid screening and confirmation of emerging contaminants in UK river waters by UHPLC-IT-TOF

**PTh-159**

Simultaneous determination of cationic and anionic compounds using a high-speed polarity switching ESI and an online-SPE LC-MS/MS

**PTh-165**

Simultaneous analysis of cationic, anionic and neutral surfactants from different matrices using LCMS/MS

**PTh-175**

Exploring the application of a universal method for pesticide screening in foods using a high data acquisition speed MS/MS

**PTh-176**

Multi-class pesticides residues analysis in challenging vegetable matrices by using fast MRM with 15 msec polarity switching

**PTh-177**

High Throughput Quantitative Analysis of Multi-mycotoxin in Beer-based Drinks using UHPLC-MS/MS

**PTh-186**

Assessing the impact of a novel ion source design in food safety applications using MS/MS detection

**PTh-192**

Development of a generic approach to drugs of abuse screening using fast polarity switching MRM triggered product ion scanning on the fly

**PTh-193**

HPLC method scouting system using ultra high performance liquid chromatography coupled to single quadrupole mass spectrometer

**PTh-196**

Identification of triazolam, etizolam and their metabolites by liquidchromatography tandem mass spectrometry

## Shimadzu Event Schedule

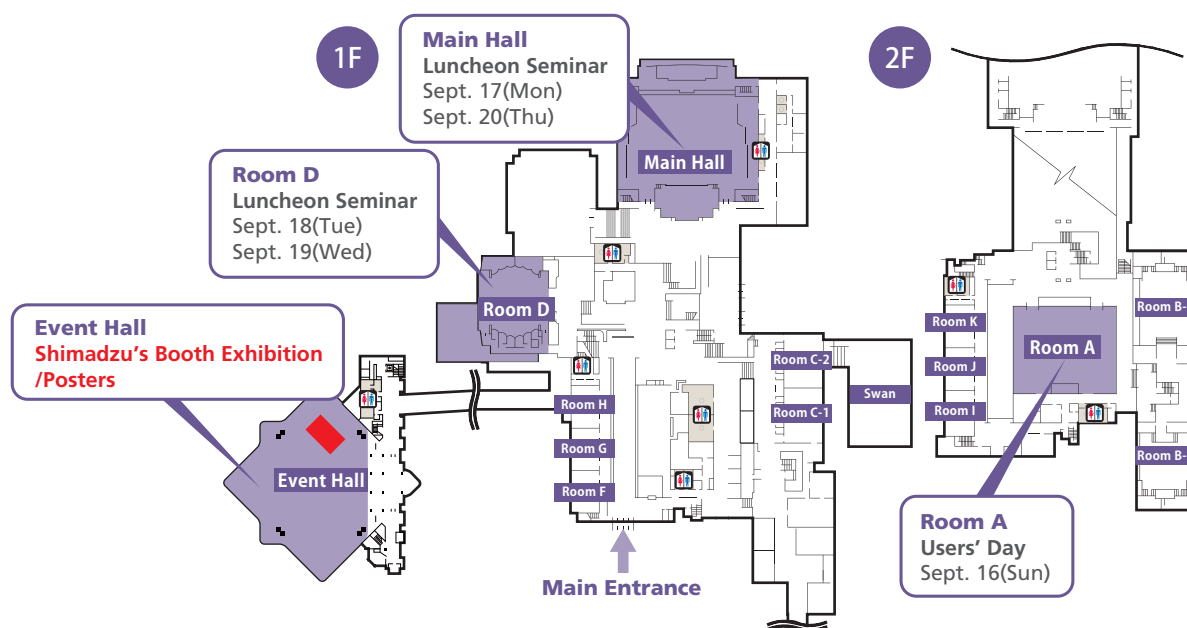
Time	Sept. 16 (Sun)	Sept. 17 (Mon)	Sept. 18 (Tue)	Sept. 19 (Wed)	Sept. 20 (Thu)
10:00	Users' day Room A				
11:00					
12:00		Luncheon Seminar Main Hall	Luncheon Seminar Room D	Luncheon Seminar Room D	Luncheon Seminar Main Hall
13:00					
14:00					
15:00					

## Booth Exhibition

Be sure to visit us at Booth No. F, Event Hall



## Location



Shimadzu Corporation <http://www.shimadzu.com/an/>

