

## Poster presentations

- P-1**      **Glomerular abnormality accompanied by accumulation of phosphatidylethanolamine (40:2e) in *Ubl-3* KO mice kidney revealed by LC-MS/MS and DESI-MSI**  
A.S.M. Waliullah<sup>1</sup>, Md. Mahmudul Hasan<sup>1</sup>, Ariful Islam<sup>1</sup>, Md. Shoriful Islam<sup>1</sup>, Soho Oyama<sup>1</sup>, Akihiko Kato<sup>2</sup>, Hideo Yasuda<sup>3</sup>, Tomoaki Kahyo<sup>1,4</sup>, Mitsutoshi Setou<sup>1,4,5</sup> (<sup>1</sup>Department of Cellular & Molecular Anatomy, Hamamatsu University School of Medicine, Japan, <sup>2</sup>Blood Purification Unit, Hamamatsu University Hospital, Japan, <sup>3</sup>First Department of Medicine, Hamamatsu University School of Medicine, Japan, <sup>4</sup>International Mass Imaging Center, Hamamatsu University School of Medicine, Japan, <sup>5</sup>Department of Systems Molecular Anatomy, Institute for Medical Photonics Research, Preeminent Medical Photonics Education & Research Center Hamamatsu University School of Medicine, Japan)
- P-2**      **Binding analysis of dynamic combinatorial libraries for Galectin-3 by native mass spectrometry**  
Rina Taguchi<sup>1</sup>, Kazuki Hoshi<sup>2</sup>, Akira Katsuyama<sup>2,3</sup>, Satoshi Ichikawa<sup>2,3</sup>, Satoko Akashi<sup>1</sup>, Tsuyoshi Konuma<sup>1</sup> (<sup>1</sup>Grad. Sch. Med Life Science, Yokohama City University, Japan, <sup>2</sup>Faculty of Pharmaceutical Sciences, Hokkaido University, Japan, <sup>3</sup>Center for Research and Education on Drug Discovery, Faculty of Pharmaceutical Sciences, Hokkaido University, Japan)
- P-3**      **Characterization of AAV genome release by Mass Photometry**  
Saki Shimojo<sup>1</sup>, Yuki Yamaguchi<sup>1</sup>, Tomohiko Ikeda<sup>1</sup>, Tetsuo Torisu<sup>1</sup>, Susumu Uchiyama<sup>1,2</sup> (<sup>1</sup>Graduate School of Engineering, Osaka University, Japan, <sup>2</sup>Exploratory Research Center on Life and Living Systems, Japan)
- P-4**      **Quantitative Monitoring of Behcet's Disease-Specific Sialic Acid Epitopes using PGC-LC/MRM-MS**  
Nari Seo<sup>1,2</sup>, Jaehan Kim<sup>3</sup>, Hyun Joo An<sup>1,2</sup> (<sup>1</sup>Graduate School of Analytical Science and Technology, Chungnam National University, Daejeon, South Korea, <sup>2</sup>Asia Glycomics Reference Site, Daejeon, South Korea, <sup>3</sup>Department of Food and Nutrition, Chungnam National University, Daejeon, South Korea)
- P-5**      **Nutritional Characteristics of *Acheta domesticus* (house cricket) : Simultaneous Determination of Primary Metabolite in Edible Insects**  
Mai Yagame<sup>1</sup>, Arisa Ito<sup>2</sup>, Qiuyi Wang<sup>2,3</sup>, Shinya Ota<sup>4</sup>, Yusuke Matsui<sup>5</sup>, Jun Watanabe<sup>2,3</sup>, Junko Iida<sup>2,3</sup> (<sup>1</sup>null co., Ltd., Japan, <sup>2</sup>Shimadzu Analytical Innovation Research Laboratories, Osaka University, Japan, <sup>3</sup>Shimadzu Corporation, Japan, <sup>4</sup>SOUSYA Co., Ltd., Japan, <sup>5</sup>BugMo Co., Ltd., Japan)
- P-6**      **Differentiation of Amino Acid Isomers using Intermolecular Interactions with Tryptophan**  
Tatsuya Matsumoto<sup>1</sup>, Kanako Inoue<sup>1</sup>, Akimasa Fujihara<sup>1</sup> (<sup>1</sup>Graduate School of Science, Osaka Metropolitan University, Japan )

- P-7**      **Development of native mass spectrometry with nanoelectrospray ionization coupled to size exclusion chromatography**  
Kazumi Saikusa<sup>1</sup>, Tomoya Kinumi<sup>1</sup>, Megumi Kato<sup>1</sup>  
(<sup>1</sup>National Metrology Institute of Japan (NMIJ), National Institute of Advanced Industrial Science and Technology (AIST), Japan)
- P-8**      **Imaging Mass Spectrometry reveals distinct localization of skin lipids**  
Shown TOKORO<sup>1</sup>, Tadayuki OGAWA<sup>2</sup>, Ken IGAWA<sup>1</sup> (<sup>1</sup>Department of Dermatology, Dokkyo Medical University, Japan, <sup>2</sup>Research Center for Advanced Medical Sciences, Dokkyo Medical University, Japan)
- P-9**      **Comprehensive Characterization of Keratan Sulfate in Biological Samples Using LC/MRM-MS**  
Dae Sik Cho<sup>1,2</sup>, MyungJinOh<sup>1,2</sup>, Hyun Joo An<sup>1,2</sup> (<sup>1</sup>Asia-Pacific Glycomics Reference Site, Chungnam National University, Daejeon, Korea, <sup>2</sup>Graduate School of Analytical Science and Technology, Chungnam National University, Daejeon, Korea)
- P-10**     **Enhancement of recombinant adeno-associated virus activity by improved stoichiometry and homogeneity of capsid protein assembly**  
Takayuki Onishi<sup>1</sup>, Michika Nonaka<sup>1</sup>, Takahiro Maruno<sup>1,2</sup>, Yuki Yamaguchi<sup>1</sup>, Mitsuko Fukuhara<sup>1,2</sup>, Tetsuo Torisu<sup>1</sup>, Masaharu Maeda<sup>3</sup>, Susan Abbatiello<sup>4</sup>, Anisha Haris<sup>4</sup>, Keith Richardson<sup>5</sup>, Kevin Giles<sup>4</sup>, Steve Preece<sup>5</sup>, Noriko Yamano-Adachi<sup>1</sup>, Takeshi Omasa<sup>1</sup>, Susumu Uchiyama<sup>1</sup> (<sup>1</sup>Department of Biotechnology, Graduate School of Engineering, Osaka University, Japan, <sup>2</sup>U-Medico Inc., Japan., <sup>3</sup>Osaka Consolidated Laboratory, Manufacturing Technology Association of Biologics, Japan, <sup>4</sup>Waters Corporation, United States, <sup>5</sup>Waters Corporation (Micromass UK Ltd), United Kingdom)
- P-11**     **Orthogonal Chromatographic Separation and Mass Spectrometry-based Strategies for Comprehensive Ganglioside Characterization**  
Jong Hyun Yoon<sup>1,2</sup>, Nari Seo<sup>1,2</sup>, Myung Jin Oh<sup>1,2</sup>, Hyun Joo An<sup>1,2</sup>  
(<sup>1</sup>Graduate School of Analytical Science and Technology, Chungnam National University, Daejeon, South Korea, <sup>2</sup>Asia Glycomics Reference Site, Daejeon, South Korea)
- P-12**     **HDX-MS for probing the higher-order structure of adeno-associated virus capsids**  
Tomohiko Ikeda, Yuki Yamaguchi, Mitsuko Fukuhara, Yasuo Tsunaka, Aoba Matsushita, Tetsuo Torisu, Susumu Uchiyama  
(Department of Biotechnology, Graduate School of Engineering, Osaka University)
- P-13**     **Molecular Imaging of the Cardiac Conduction System**  
Mirei Ishikawa<sup>1,2</sup>, Wakana Takeuchi<sup>1,2</sup>, Noriko Oshima, Nobuko Tokuda<sup>1,3</sup>, Tadayuki Ogawa<sup>1,2</sup> (<sup>1</sup>School of Medicine, Dokkyo Medical University, Japan, <sup>2</sup>Research Center for Advanced Medical Sciences, Dokkyo Medical University, Japan, <sup>3</sup>Department of Anatomy, Dokkyo Medical University, Japan)

- P-14**      **Molecular imaging analysis of cerebral infarction**  
Asuka Iwashita<sup>1,2</sup>, Toshinori Sawano<sup>3</sup>, Noriko Oshima<sup>2</sup>, Shigeru Toyoda<sup>1,2,4</sup>,  
Tadayuki Ogawa<sup>1,2</sup> (1School of Medicine, Dokkyo Medical University, Japan,  
2Research Center for Advanced Medical Sciences, Dokkyo Medical University,  
Japan, 3Department of Biomedical Sciences, College of Life Sciences, Ritsumeikan  
University, Japan, 4Department of Cardiovascular Medicine, Dokkyo Medical  
University, Japan)
- P-15**      **Mass Spectrometry Imaging Analysis of Specialized Tissue in Heart**  
Yuuki Nishiyama<sup>1,2</sup>, Shown Tokoro<sup>1,3</sup>, Noriko Oshima<sup>2</sup>, Nobuko Tokuda<sup>1,4</sup>, Shigeru  
Toyoda<sup>1,2,5</sup>, Tadayuki Ogawa<sup>1,2</sup> (1School of Medicine, Dokkyo Medical University,  
Japan, 2Research Center for Advanced Medical Sciences, Dokkyo Medical  
University, Japan, 3Department of Dermatology, Dokkyo Medical University, Japan,  
4Department of Anatomy, Dokkyo Medical University, Japan, 5Department of  
Cardiovascular Medicine, Dokkyo Medical University, Japan)
- P-16**      **Mass Spectrometry Imaging Analysis of Skinwith Hair Remover**  
Taichi Ochiai<sup>1,2,4</sup>, Shown Tokoro<sup>1,3,4</sup>, Noriko Oshima<sup>2,4</sup>, Ken Igawa<sup>1,3,4</sup>, Tadayuki  
Ogawa<sup>1,2,4</sup> (1School of Medicine, Dokkyo Medical University, Japan, 2Research  
Center for Advanced Medical Sciences, Dokkyo Medical University, Japan,  
3Department of Dermatology, Dokkyo Medical University, Japan, 4Skin Penetration  
Project, Dokkyo Medical University, Japan)
- P-17**      **Creation of a molecular imaging atlas of brain tissue**  
Wakana Takeuchi<sup>1,2</sup>, Mirei Ishikawa<sup>1,2</sup>, Noriko Oshima<sup>2</sup>, Nobuko Tokuda<sup>1,3</sup>,  
Tadayuki Ogawa<sup>1,2</sup> (1School of Medicine, Dokkyo Medical University, Japan,  
2Research Center for Advanced Medical Sciences, Dokkyo Medical University,  
Japan, 3Department of Anatomy, Dokkyo Medical University, Japan)
- P-18**      **Metabolomic differential analysis of gene-mutated Drosophila using LC/MS  
and GC/MS**  
Yuki Nakagawa<sup>2</sup>, Soichiro Kashio<sup>1</sup>, Emiko Shimbo<sup>2</sup>, Yohei Yamada<sup>2</sup>, Masayuki  
Miura<sup>1</sup> (1Genetics laboratory, Tokyo University, 2Shimadzu Corporation)
- P-19**      **Novel Ion Fragmentation for Lipid Structural Analysis using Atomic  
Hydrogen/Oxygen Irradiation**  
Hidenori Takahashi, Yohei Arao, Yuta Miyazaki, Atsuhiko Toyama  
(Shimadzu Corporation, Japan)
- P-20**      **Variety-Related Metabolites and Sensory Profiles of Kopyor (*Cocos nucifera*  
L.)**  
Mercy Bientri Yunindanova<sup>1</sup>, Eiichiro Fukusaki<sup>1,2,3</sup>, Sastia Prama Putri<sup>1,2</sup>  
(1Dept. Biotech., Grad. Sch. Eng., Osaka Univ., Japan, 2Industrial Biotechnology  
Initiative Division, Institute for Open and Transdisciplinary Research Initiatives,  
Japan, 3Osaka University Shimadzu Omics Innovation Research Laboratories,  
Japan)

- P-21 Identification of *Mycobacterium abscessus* complex using the peaks of ribosomal protein L29, L30 and hemophore-related protein by MALDI-MS proteotyping**  
Satomi Takei<sup>1,2</sup>, Kanae Teramoto<sup>2,3</sup>, Yuji Sekiguchi<sup>4</sup>, Hiroaki Ihara<sup>5</sup>, Mari Tohya<sup>6</sup>, Shinichi Iwamoto<sup>7</sup>, Koichi Tanaka<sup>7</sup>, Abdullah Khasawneh<sup>1</sup>, Shigeki Misawa<sup>2,8</sup>, Toshio Naito<sup>2,9</sup>, Teruo Kirikae<sup>2,10</sup>, Tatsuya Tada<sup>6</sup>, Yoko Tabe<sup>1,2</sup> (<sup>1</sup>Department of Clinical Laboratory Medicine, Juntendo University Graduate School of Medicine, Japan, <sup>2</sup>Department of MALDI-TOF MS Practical Application Research, Juntendo University Graduate School of Medicine, Japan, <sup>3</sup>Analytical & Measurement Instruments Division, Shimadzu Corporation, Japan, <sup>4</sup>Biomedical Research Institute National Institute of Advanced Industrial Science and Technology (AIST), Japan, <sup>5</sup>Department of Respiratory Medicine, Juntendo University Graduate School of Medicine, Japan, <sup>6</sup>Department of Microbiology, Juntendo University Graduate School of Medicine, Japan, <sup>7</sup>Koichi Tanaka Mass Spectrometry Research Laboratory, Shimadzu Corporation, Japan, <sup>8</sup>Department of Clinical Laboratory Technology, Faculty of Medical Science, Juntendo University, Japan, <sup>9</sup>Department of General Medicine, Juntendo University Graduate School of Medicine, Japan, <sup>10</sup>Department of Microbiome Research, Juntendo University Graduate School of Medicine, Japan)
- P-22 Rapid detection of natural plant toxins using probe ESI unit combined with quadrupole time-of-flight mass spectrometer**  
Tetsuo Iida, Kaoru Nakagawa, Jun Watanabe, Manami Kobayashi (Shimadzu Corporation, Japan )
- P-23 Distribution analysis of galanthamine, a plant alkaloid, by MS imaging**  
Kaoru Nakagawa<sup>1</sup>, Tetsuo Iida<sup>1</sup>, Shuichi Shimma<sup>2</sup>, Shinichi Yamaguchi<sup>1</sup>, Eichi Matsuo<sup>1</sup>, Manami Kobayashi<sup>1</sup> (<sup>1</sup>Shimadzu corporation, Japan, <sup>2</sup>Osaka University, Japan)
- P-24 Identification of unknown metabolites of abiraterone in human serum**  
Shizuyo Horiyama<sup>1</sup>, Noboru Hayama<sup>2</sup>, Hiroki Yoneyama<sup>2</sup>, Yoshihide Usami<sup>2</sup>, Jun Haginaka<sup>3</sup> (<sup>1</sup>School of Pharmacy and Pharmaceutical Sciences, Mukogawa Women's University, Japan, <sup>2</sup>Faculty of Pharmacy, Osaka Medical and Pharmaceutical University, Japan, <sup>3</sup>Institute for Biosciences, Mukogawa Women's University, Japan)
- P-25 Multimatrix Variation Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry (MALDI-MS) of Alkaloids**  
Tohru Yamagaki, Mika Nobuhara, Tsukiho Osawa (Suntory Foundation for Life Sciences, Japan)
- P-26 Peptide Solubilization for Bottom-Up Proteomics using Hydrophilic Interaction Chromatography**  
Koshin Akamatsu<sup>1</sup>, Ayana Tomioka<sup>1</sup>, Eisuke Kanao<sup>1,2</sup>, Yasushi Ishihama<sup>1,2</sup> (<sup>1</sup>Graduate School of Pharmaceutical Sciences, Kyoto University, <sup>2</sup>National Institutes of Biomedical Innovation, Health and Nutrition)

**P-27**      **DIA Proteome Analysis using Mass Spectrogram Factorization Allows for Identification of Peptides and Proteins with Higher Sensitivity**  
Jherico Geronca<sup>1</sup>, Kazuyoshi Yoshii<sup>2,3</sup>, Toshiyuki Tanaka<sup>2</sup>, Yasushi Ishihama<sup>1,4</sup>  
(<sup>1</sup>Graduate School of Pharmaceutical Sciences, Kyoto University, Japan, <sup>2</sup>Graduate School of Informatics, Kyoto University, Japan, <sup>3</sup>RIKEN Center for Advanced Intelligence Project (AIP), Japan, <sup>4</sup>National Institute of Biomedical Innovation, Health, and Nutrition, Japan)

**P-28**      **Kinase-specific substrate peptides for kinome activity profiling**  
Junqi Liang<sup>1</sup>, Mao Uehara<sup>1</sup>, Junna Nakazono<sup>1</sup>, Dai Sakamoto<sup>1</sup>, Naoyuki Sugiyama<sup>1</sup>, Yasushi Ishihama<sup>1,2</sup> (<sup>1</sup>Graduate School of Pharmaceutical Sciences, Kyoto University, <sup>2</sup>National Institute of Biomedical Innovation, Health and Nutrition)

## Technical Reports

**L-1**      島津テクノロジーにおける受託分析業務のご紹介  
SHIMADZU CORPORATION

**L-2**      最新timsTOFシリーズが実現する革新的X-Omics解析  
Bruker Japan K.K.

**L-3**      オミックスに至適！ 安定同位体標識した研究用試薬のご紹介  
CIL/Otsuka Pharmaceutical Co., Ltd.

**L-4**      低吸着化のためのHPLC カラム技術と、有機不活性管PS inert の効果  
ChromaNik Technologies Inc.