Biomedical mass spectrometry

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The 36th Annual Meeting of the Japanese Society for Biomedical Mass Spectrometry (JSBMS) was held on September 15 and 16, 2011, in the Galaxy Hole Room in Hotel Hankyu Expo Park, Osaka, Japan. The theme of the meeting was “New challenges not for clinical research but for medical services: from mass profiling to mass imaging” and covered a variety of biomedical applications, such as diagnosis and disease state assessment of inherited metabolic disorders, forensic toxicological analysis, proteomics, metabolomics, and imaging mass spectrometry. At this meeting, we partially collaborated with the Japan Society of Mass Spectrometry (JSMS) during the invited sessions on the first day.

On the first day, there was joint program with the JSMS in the afternoon session. We invited four famous researchers: Prof. Shu-ichi Ikeda from Shinshu University (School of Medicine)—he presented a lecture entitled “Pathogenesis and therapeutic approaches in systemic amyloidosis”; Dr. Pierre Chaurand from Montreal University (Department of Chemistry)—he presented a lecture entitled “Imaging mass spectrometry: current performances and upcoming

Toyofumi Nakanishi is an associate professor of clinical and laboratory medicine at Osaka Medical College. His research interests include clinical application of imaging mass spectrometry and clinical diagnosis of soft-ionization mass spectrometry coupled with immunoprecipitation. He is the author of 65 peer-reviewed papers, 35 scientific papers, and 13 book chapters.

Mitsutoshi Setou has been a full professor of anatomy and cell biology at the Hamamatsu University School of Medicine since 2008. His research interests include development and application of imaging mass spectrometry and systems biology with “omics” technologies. He is the author of over 100 peer-reviewed papers, 150 scientific papers, and ten book chapters, and is the editor of a book on imaging mass spectrometry.

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Tomiko Kuhara, president of JSBMS from 2007 to 2011, is a professor of human genetics at Kanazawa Medical University. Her research interests have included the development and application of metabolic profiling based on gas chromatography/mass spectrometry since the 1970s and metabolomic profiling since the early 1990s. The diagnostic procedures she has developed are extremely useful for noninvasive differential chemical diagnosis of around 130 disease conditions (including more than 100 inherited metabolic disorders) and for personalized medicine. The procedures are also very effective for all stages of drug R & D.

challenges”; Dr. Yoshinao Wada, General Director of the Osaka Prefectural Research Institute for Maternal and Child Health—he presented a lecture entitled “Past and future trends of biomedical applications: measuring quality or quantity”; and Prof. Frantisek Turecek from Washington University (Department of Chemistry)—he presented a lecture entitled “Tandem mass spectrometry and clinical enzymology: toward newborn screening of lysosomal storage disorders.” Also, on the same day, three young scientists (Dr. Daisuke Saegusa from Tohoku University, Dr. Ikuko Yao from Kansai Medical University, and Dr. Mototada Hichiri from the National Institute of AIST) won the awards for the best poster presentations. There was a symposium on forensic and toxicological mass spectrometry, organized by Dr. Hitoshi Tsuchihashi from Osaka Medical College. In this session, a surprise guest presented a lecture entitled “Drug history in a longitudinally sliced hair section by MALDI imaging.” The group concerned were the first to demonstrate the traceability of drug history every few hours using only a sliced hair section (*J. Mass Spectrom.* 46:411–416, 2011).

On the second day, there were two symposia, entitled “New applications to clinical microbiology by mass spectrometry,” organized by Prof. Fumio Nomura from Chiba University, and “Developments of imaging mass spectrometry,” organized by Prof. Mitsutoshi Setou from Hamamatsu Medical University. In workshops I and II, there were technical sessions. One was entitled “Current MS technology and its associate techniques,” organized by Prof. Shigeo Ikegawa from Kinki University and Prof. Kuniaki Saito from Kyoto University. The other was entitled “Applications of MS techniques: questions and answers for good-quality MS data,” organized by Dr. Takeshi Kasama from Tokyo Medical and Dental University and Toshie Takahashi from Tokyo University.

This special issue is based on the presentations at the 36th Annual Meeting of JSBMS in Osaka Senri. There were 23 oral presentations (three regular sessions, three symposia, and four invited lectures), 36 poster presentations, and 202 participants at this meeting (see Fig. 1). We would like to thank all speakers, presenters, participants, and staff members for the excellent papers, earnest discussion, and cooperation at this fruitful meeting.

Fig. 1 Participants of the 36th Annual Meeting of the Japanese Society for Biomedical Mass Spectrometry in Osaka Senri