The '39th International Symposium on High Performance Liquid Phase Separations and Related Techniques' was held in Amsterdam (the Netherlands) at the RAI Congress Center on June 16-20, 2013. The symposium was organized by Prof. Peter Schoenmakers and Prof. Wim Kok (Analytical Chemistry/Forensic Science Department, Van't Hoff Institute for Molecular Sciences, University of Amsterdam). The HPLC 2013 covered all of the diverse aspects of liquid phase separations including advances in the understanding of the fundamental processes underlying liquid chromatography.

Regarding oral communications, the final program was divided into three thematic groups, which were presented in different lounges: The *Hyperformance LC group* which included topics like chromatography fundamentals, improving efficiency, selectivity, column technology including stationary phases, and (ultra-) high pressure liquid chromatography, among others; the *High-impact LC group* dealt with challenges currently facing the HPLC community, sample preparation, novel methods of analysis and applications; and the *HPLC-MS group* focused on the discussion about synergy between LC and MS, mass spectrometer instrumentation, ionization techniques and online and off-line couplings, among others.

Moreover, in other lounges several tutorials with general topics were conducted during the congress. They were very useful for amateur chromatographers. Among them, it is important to remark on the tutorial about silica and non-silica polymer monoliths presented by Prof. Nobuo Tanaka and Prof. Emily Hilder, as well as the tutorial on 'Environmental analysis' and 'Residue analysis' by Prof. Marja-Liisa Riekkola and Prof. Yolanda Picó, respectively. They offered a general view of the extraction techniques suitable for each group of analytes as well as the features of each device for the different types of the analysis. Other notable tutorials as 'Quantitative LC-MS' by Prof. Uwe Karst, 'Comprehensive two dimensional liquid chromatography' by Prof. Paola Dugo and 'Column efficiency' by Dr. Fabrice Gritti took place.

Various scientific discussions on different topics like the need for improvements in pharmaceutical, environmental, food, and polymer analysis, as well as discussion on the needs for metabolomics and forensics, respectively, took place along the entire symposium. Nevertheless, it should be remarked the discussion entitled 'Discussion on needs for polymer analysis' which had high scientific level and participation. Concerning the poster session, they were divided in 35 categories. Among them a large number of posters were included in sample preparation, chromatography fundamentals and monoliths sections (38, 37 and 35 posters, respectively). It is worth noting the high number of poster contributions presented by Spanish researchers (82 of 915 posters). Forensic studies was the category which included the most Spanish posters (approx. 50%), followed by environmental (approx. 40%) and chemometrics (approx. 30%) sections. Oral communications presented by Spanish researchers comprised 5% of the total.

On the first conference day, four short courses were imparted, and two of them were taught by Spanish researchers: 'Sample Preparation' (Dr. Lourdes Ramos and Dr. María Luz Sanz, IQOG, CSIC, Spain), 'Comprehensive Two-Dimensional Liquid Chromatography (LC×LC)' (Dr. Dwight Stoll and Dr. Xiaoli Wang, Gustavus Adolphus College, US and Agilent Technologies, Wilmington, DE, US), 'LC-MS(/MS)' (Dr. Gérard Hopfgartner, University of Geneva, CH) and 'Retention Mechanisms in HPLC' (Prof. María Celia García-Álvarez-Coque and Prof. José Ramón Torres-Lapasió, University of Valencia, Spain). The short courses were followed by the opening ceremony of the conference which was preluded with an incredible African rhythms with Djembes played by 'Drum Café' and followed by four plenary sessions presented by Prof. Jos Beijnen, Dr. Ron Majors, Prof. Michel Nielen and Prof. Stefan Bruns. Finally, Prof. Paul Ferguson presented the ChromSoc Awards.

The second day of HPLC 2013 congress started with interesting lectures about new advances in liquid chromatography columns and separation. The presence of speakers like Prof. Frantisek Svec ('Monolithic Columns in Thin Layer Format for TLC-MS Separations'), Prof. Pat Sandra ('State-of-the-art Liquid Chromatography for (Bio) Pharmaceutical Analysis') and Prof. Marja-Liisa Riekkola ('Analytical Challenges Related to the Elucidation of the Chemical Compounds Taken Part in Atmospheric Aerosol Formation') among others gives an idea of the high level of the lectures in the symposium. Meanwhile, more scientific communications were developed in different rooms giving a total of three or four parallel lectures in the RAI Congress Centre. For instance, some lectures dealt with new ionization methods in mass spectrometry (chip based miniaturized atmospheric pressure ionization techniques, laser-spray ionization (LSI), etc.) in order to overcome some of the limitation of the classic ionization sources, such as electrospray ionization (ESI), with a gain in simplicity and sensitivity. Moreover, several communications exposed the current environmental concerns and they showed that LC×LC or GC×GC coupled to mass spectrometry using powerful analyzers are suitable and reliable techniques for monitoring emerging contaminants in a wide range of environmental samples.

Some of the most remarkable lectures presented on the third conference day were: 'High-efficiency and high peak capacity chromatographic separations methods for proteome analysis' by Prof. Christian G. Huber, 'A new particle for liquid chromatography' by Prof. Peter Myers, corresponding to High-impact LC (Proteomics) and Hyperformance LC (columns) categories, respectively; 'Efficiency in (Ultrahigh-pressure) size-exclusion chromatography' by Dr. Elena Uliyanchenko and 'Recent progress in coreshell and embedded nanoparticle layers for the separations and sensing of biomarkers and cell signaling molecules' by Prof. Jeremy D. Glennon, within the High-impact LC (Polymer separations) and HPLCMS (Biomedical LC-MS) categories, respectively.

On the fourth day, the oral communications 'Orbitrap *vs* QTOF to determine pesticide residues in fruit and vegetable extracts' presented by Prof. Yolanda Picó and 'Orbitrap MS: past, present and future' presented by Dr. Alexander Makarov were relevant. The latter speaker explained future trends and perspectives on Orbitrap mass spectrometry and developments in LC-MS/MS techniques. They tend to create new hybrid devices which contain different mass analyzers (QqQ, IT, LIT, TOF, Orbitrap) in order to combine the individual advantages of each one regarding specificity, mass accuracy, mass resolution and selectivity.

On the last day of the symposium, many novel and interesting topics were introduced to the audience. Forensics was one of the main topics of this day. Some lectures must be remarked as 'Forensic challenges for LC and LC-MS' by Prof. Arian van Asten (Netherlands Forensic Institute, The Hague, Netherlands) and 'Rapid separations of improvised explosives' by Prof. Michael Breadmore (University of Tasmania, Hobart, Tasmania, Australia). Although the use of LC×LC has been extensively treated during the conference, the last day was specifically reserved for a whole session on this topic. It was presented as a truly powerful tool in order to resolve complex samples. Apart from these interesting lectures, the one given by Prof. Pavel Jandera (University of Pardubice, Pardubice, Czech Republic) should be emphasized because he has been one of the pioneers of this methodology in Europe. His lecture, entitled 'Comprehensive two-dimensional LC×LC using combinations of monolithic capillary columns and chort core-chell columns' was mainly focused to current trends on LC×LC separations. Nevertheless, Prof. Koji Otsuka's (Kyoto University, Kyoto, Japan) lecture, entitled 'Towards high-sensitive detection in microscale electrophoresis using on-line sample concentration' should also be highlighted as an interesting talk for researchers working with CE separation technique. He presented an excellent overview about alternatives to improve sensitivity in CE through pre-concentration strategies such as large volume sample stacking (LVSS). These strategies make CE a competitive separation tool when it is compared with LC.

Finally, the HPLC 2013 Symposium ended with the lecture of Prof. Peter Schoenmakers, the meeting organizer. His lecture about 'High-impact liquid chromatography' was a magnificent closure to such an interesting scientific meeting. This closure included the award presentations, where the popular poster award was given to a Spanish research group (Fernando Benavente, Department of Analytical Chemistry, University of Barcelona). Lastly, the 'Farewell reception' was a perfect closure of this event due to its congenial atmosphere. To conclude, the symposium offered presentations and discussions of a high scientific level with an important participation of Spanish researchers in virtually all the scientific fields and a very good organization.

This interesting scientific program was accompanied by several social events. The organizing committee surprised all the attendees with an invitation for a canal cruise along the city. Moreover, it is worth highlighting the social dinner celebrated at Rhone Congress & Party Center on Wednesday, where the organization offered a typical 'Dutch barbecue' that encouraged participants to continue the scientific discussion in a more informal way.

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