



## Foreword

Trier, the Roman-built, oldest city in Germany, was the site of the *17th International Ion Chromatography Symposium*, which was held in cooperation with the University of Trier from 20 to 23 September 2004. One hundred and sixty-two delegates from 25 countries gathered at the city's university to discuss the analysis of small ions and to soak in the culture of this historic region of Europe.

On Monday, two all-day short courses were offered. One was Capillary electrophoresis/capillary electrochromatography and the other was Statistics for analytical chemists. That evening, the conference's first official function was the traditional welcome reception.

The scientific portion of the meeting began in earnest on Tuesday morning, following a welcome address by Professor Dr. Joachim Hill, the Dean of the Faculty of Geography and Geosciences. Professor Dr. Günther Bonn of the University of Innsbruck, Austria, delivered the keynote lecture on High-performance separation technologies for natural product analysis. In his lecture, Professor Bonn pointed out that the phytopharmaceutical industry is a permanently growing domain, and that the analysis of active constituents and corresponding metabolites in blood, sera and urine is of great importance. For these types of analyses, various chromatographic techniques are employed. In addition, the direct coupling of these separation techniques with mass spectrometry, NMR and FT-IR allows both structural elucidation and quantitative analysis. Professor Bonn also outlined several new developments in the design of suitable stationary phases, especially monolithic polymers, which offer excellent mass-transfer properties for large biomolecules. A number of real samples in phytomics and proteomics were shown to demonstrate the challenges in separation science.

This year's Achievement Award recipient was Professor Dr. Wolfgang Buchberger of the University of Linz, Austria. He was recognized for his work in detection in ion chromatography (IC), especially for investigating the use of mass spectrometry in ion chromatography. In his lecture, he first summarized the history of the development of this hyphenated technique. He then discussed some

IC-MS-amenable analytes (e.g., perchlorate contamination, disinfection by-products, amines), as well as some inductively coupled plasma (ICP) MS-compatible species (e.g., arsenic, iodine). The final topic was possible developments in the future (e.g., miniaturization of instrumentation and the use of ion-mobility spectrometry).

Following this plenary session, the rest of the symposium was structured around two parallel oral sessions. Topics were column selectivity/technology, applications of IC (general, regulatory and environmental, pharmaceutical, industrial, food and animal-feed, semiconductor and pure chemicals), advances in IC, biological analysis by IC, ICP-MS and IC-MS, and capillary electrophoresis. Two parallel workshops were held on both Tuesday and Wednesday afternoons. The first day's offerings were biological ion exchange (presented by Jeff Rohrer, Dionex) and electrolytic devices (Yan Liu and Kannan Srinivasan, Dionex). Wednesday's topics were method development and column selection (Chris Pohl, Dionex) and sample preparation and sample-handling techniques (Rosanne Slingsby, Dionex, and Lynn Vanatta, Air Liquide-Balazs). Poster sessions followed the workshops on both days.

Delightful social events were well attended on both Tuesday and Wednesday evenings. Appreciation goes to Dionex Corp. for sponsoring a dinner among the ruins of a Roman bath (Viehmarkt-Therme) the first night. On Wednesday, attendees had the option of experiencing a Roman dinner that was served in the wine cellar of a renowned local family.

Our thanks goes out to many people who helped "work in the trenches" to make this meeting a reality. Symposium Manager Janet Cunningham (Barr Enterprises) and her assistants (Shannon Cunningham, Barr Enterprises, and Angie Jinks, Dionex) unobtrusively and patiently attended to the myriad details that accompany any major function. Professor Dr. Klaus Fischer (University of Trier) and his colleagues did much of the pre-meeting work in securing the university facilities and organizing events. Dr. Erich Heftmann (Elsevier) again graciously and calmly guided the presented manuscripts through the review process and into the symposium proceedings issue.

We also recognize our fellow members of the Scientific Committee: Becky Adams (Dow Chemical), Jim Fritz (Iowa State University), Paul Haddad (University of Tasmania), Chuck Lucy (University of Alberta), Shi-fen Mou (Research Center for Eco-Environmental Sciences), and Chris Pohl.

The 2005 meeting will be held in Canada under the direction of Program Chairman Chuck Lucy. We invite all interested scientists to watch the web site (<http://www.icsymposium.com/>) for details and to participate in this annual gathering.

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