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Foreword

The 17th (Montreux) Symposium on Liquid Chromatography–Mass Spectrometry (LC–MS, SFC–MS, CE–MS, MS–MS) was held in Montreux on 8–10 November 2000. The international symposium with its 20 years of history continues to grow and again an all-time-high number of participants and exhibitors could be hosted: approximately 600 delegates originating from 28 different countries. The attendance of this symposium clearly reflects the exploding interest in LC–MS from a broad range of disciplines and business areas. The major activities are centered on pharmaceutical and biotechnological research and applications, but the growing interest in environmental, food and other areas was also clear.

Although LC–MS as such is a mature technique, many new developments are reported continuously and the introduction of novel hardware developments are a standard and core part of this symposium series. Novel ionization/interfacing principles such as photo-ionization, have been presented, but also novel analyzer developments such as high-resolution triple quadrupole technology or improvements in quadrupole time-of-flight-based hybrid instruments including among others o-matrix-assisted laser desorption ionization combinations and a variety of new software/bioinformatics strategies to handle the large datasets generated.

Basic development trends based on sensitivity and speed of analysis enhancement as well as miniaturization using narrow-bore or chip technology continue to be of major interest, but the sample preparation or intelligent on-line sample handling remains to be a major issue in terms of further improvements in

productivity-based applications. Several papers contained contributions on screening formats using biologically active proteins and mass spectrometry in drug discovery applications. Also proteomics applications have been extensively presented with a variety of novel applications including protein–protein interactions/complexes to be characterized, the combination of isoelectric focusing using free-flow electrophoresis, phosphorylation measurement, high-sensitivity proteomics by nanoLC etc. The use of electromigration methods also received further interest in capillary electrochromatography and capillary electrophoresis coupled with mass spectrometry both from the selectivity as well as sensitivity point of view.

The future outlook for LC–MS remains bright and given the huge market potential still untapped, novel developments will continue to take place at high speed. Improvements will be both in instrumentation and software as well as in novel methodologies for increasing sample handling and sample pretreatment in highly automated modes of operation with miniaturization aspects as an underlying and stimulating option.

The fantastic venue of Montreux seems to generate an excellent environment for exchange of scientific ideas and the LC–MS community will gather again in Montreux for the 19th symposium in the fall of 2002.

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