

# “Practical LC-MS/MS for Chromatographers November 16<sup>th</sup> and 17<sup>th</sup>, 2004

And now the class you've all been waiting for...

"Practical LC-MS/MS for Chromatographers" is a two-day course explaining the principles of mass spectrometric detection, the design and operation of mass spectrometers, and the interfacing of the MS to the liquid chromatograph to obtain both qualitative and quantitative data.

**Program:** Sessions will begin at ~8:00 AM and end at approximately 5:00 PM. Lunch will be provided each day along with morning and afternoon breaks. Parking is available nearby (pay lot).

Instructor: John Dolan of LC Resources  
Date/Time: November 16th & 17th, 2004;  
8:00 am - 5:00 pm

Location: University of Minnesota, St. Paul Campus  
Earle Brown Continuing Education Center  
1890 Buford Avenue, Room 32

## Day 1

1. Overview of Contemporary LC-MS
2. Principles of Quadrupole and Ion Trap Mass Analyzers
3. Basics of Quadrupole Instrumentation
4. The (Pseudo) Molecular Ion
5. Tuning and Calibration

## Day 2

6. Qualitative Analysis
7. Quantitative Analysis: Developing the MS Method
8. Quantitative Analysis: Developing the LC Method
9. Validation
10. Method Conversion

For class information, contact Jan Jopke, at (952) 949-2518. For course content information e-mail John Dolan at John.Dolan@Bioanalytical.com. To register for the course, complete the form below and send it with a check for \$500, payable to the Minnesota Chromatography Forum.

Mail to:  
Minnesota Chromatography Forum      or FAX to:      (952) 934-6741  
c/o CCS Associates  
6611 Countryside Drive  
Eden Prairie, MN 55346

Name, Title: \_\_\_\_\_  
Institution or company: \_\_\_\_\_  
Street Address: \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_  
Telephone/FAX: \_\_\_\_\_  
e-mail Address: \_\_\_\_\_  
Credit Card: \_\_\_\_\_ exp \_\_\_\_\_

Vegetarian lunch?      Yes \_\_\_\_\_      No \_\_\_\_\_

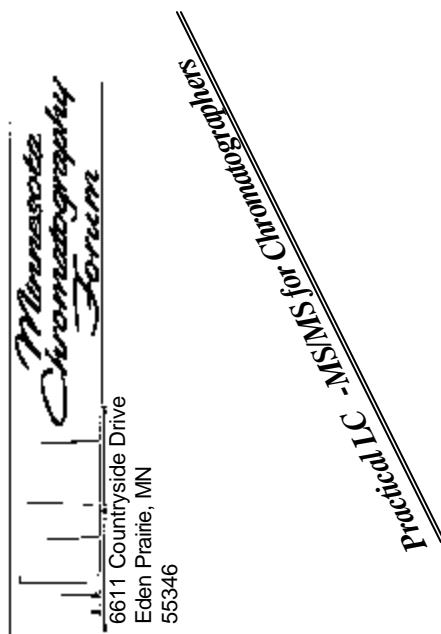
**Cancellation Policy:** Refunds (minus a 10% administration fee) will be issued for cancellations prior to the registration deadline. Refunds for cancellations made after the deadline will be made only if the spot is filled with another student.

**\*Note:** If confirmation is not received within 5 business days, contact Jan at (952) 949-2518

**Deadline for Registration: November 1, 2004**

## ***Meet the Instructor...***

**Dr. John Dolan** is the vice-president and general manager of BASi Northwest Laboratory. John received his Ph.D. from the University of California at Davis in 1976 and has more than 30 years of HPLC experience. After finishing graduate school, he did postdoctoral work at Northeastern University and then joined Technicon Instruments Corporation, where he worked for three years developing clinical HPLC technology. He moved to IBM Instruments, where he was involved in design and support of LC, IR, and UV products. As a columnist for LC/GC magazine, he has written over 200 installments of the "LC Troubleshooting" monthly column since 1983. In 1984, John and Lloyd Snyder founded LC Resources, which offered support to the separations community via teaching, software, consulting, and laboratory services. In 2002, LC Resources was sold to Rheodyne (training and software) and Bioanalytical Systems (laboratory). He continues to teach LC training courses for LC Resources Training Group and manage the laboratory at BASi Northwest. He has written more than 90 scientific papers on LC theory, instrumentation, and applications as well as a book on troubleshooting LC instruments and methods. John is the 2002 recipient of the MCF Palmer Award.



## ***“Practical LC-MS/MS for Chromatographers”***

*November 16<sup>th</sup>-17<sup>th</sup>, 2004*

### **Day 1**

1. *Overview of Contemporary LC-MS*
2. *Principles of Quadrupole and Ion Trap Mass Analyzers*
3. *Basics of Quadrupole Instrumentation*
4. *The (Pseudo) Molecular Ion*
5. *Tuning and Calibration*

### **Day 2**

6. *Qualitative Analysis*
7. *Quantitative Analysis: Developing the MS Method*
8. *Quantitative Analysis: Developing the LC Method*
9. *Validation*
10. *Method Conversion*

### ***Who should take this course?***

This course is designed to provide basic knowledge and practical applications of LC-MS to the analysis of drugs in metabolites in biological extracts. Although no previous experience with HPLC is necessary, the course will be especially valuable to those with some chromatography experience.

### ***What will I get from this course?***

You will learn how a mass spectrometer works, the advantages (and limitations) of adding mass spectrometric detection to your liquid chromatographic analyses, and how to use MS to approach separation and detection problems intractable by other methods. By understanding the central roles of the LC-MS interface and the molecular ion, you will have a solid grounding on which to further build your LC-MS expertise.