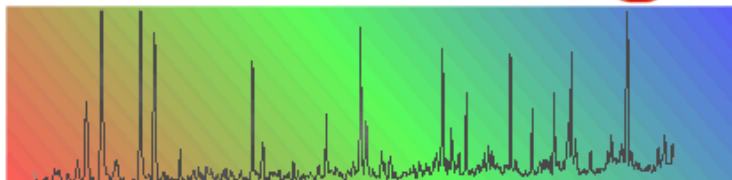




SAS-Chicago



February Meeting

Tuesday, February 10, 2009

The February 2009 meeting will be held at the Holiday Inn, located at 1000 Busse Road, Elk Grove Village, IL 60007. See the map on the following page.

Social Hour: 5:30 PM

Dinner: 6:30 PM

Speaker: 7:30 PM

Screening Complex Natural Product Mixtures for Chemoprevention Agents

by

Richard B. van Breemen, Ph.D.

*Department of Medicinal Chemistry and Pharmacognosy
University of Illinois College of Pharmacy, Chicago, IL*

Traditional remedies, largely based on terrestrial plants, still dominate therapeutic practices throughout the world, and natural products comprise a large portion of current-day pharmaceutical agents, most notably in the areas of antibiotic and cancer therapies. Originally invented in this laboratory for the screening of combinatorial libraries during drug discovery, pulsed ultrafiltration mass spectrometry has been adapted for screening natural product mixtures such as plant extracts and botanical dietary supplements for ligands to enzymes and other macromolecular receptors. The selectivity of this mass spectrometry-based screening technique enables the rapid characterization, isolation and identification of lead compounds from complex mixtures. Target proteins that have been screened for natural product ligands include cyclooxygenase-1 and COX-2, estrogen receptor- α and ER- β , retinoid X receptor- α (RXR α), and quinone reductase-2. In addition, ultrafiltration LC-MS and LC-MS-MS techniques have been developed for the rapid evaluation of the metabolism and bioavailability of active compounds resulting from screening programs. Additional mass spectrometry-based assays have been developed in this laboratory to screen natural product mixtures for cancer chemoprevention agents that function by up-regulating the antioxidant response element via the Keap1-Nrf2 pathway and to identify antioxidants in food products and botanical dietary supplements. Applications of these mass spectrometry-based screening assays will be discussed to the study of botanical dietary supplements and the discovery of natural product chemoprevention agents.

Please make your dinner reservations for the upcoming meeting by email at sas.chicago@bigfoot.com, using our online form <<http://www.sas-chicago.org/Online%20Registration%20at%20Elk%20Grove%20Holiday%20Inn%20.htm>> or by calling Slav Stepanovich at 847-421-2056. Leave **your name, company affiliation, a telephone number, the number of reservations and your choice of entree**. Please call by **noon Friday, February 6th**, so that proper arrangements can be made with the restaurant. If you can't attend, cancel by Friday noon: SAS is charged for no-shows.

Entree choices: London Broil, Chicken Marsala, or Vegetarian Lasagna.

Dinner Cost Members: \$30

Students and Unemployed Members: \$10

Non-members: \$35

Biography of Richard B. van Breemen Ph.D.

Prof. Richard van Breemen received his Ph.D. in Pharmacology from the Johns Hopkins University in Baltimore, Maryland, in 1985. From 1985-1986, he carried out postdoctoral research in the Middle Atlantic Mass Spectrometry Facility at the Johns Hopkins University School of Medicine. After establishing a mass spectrometry facility for biotechnology research as assistant professor of chemistry at North Carolina State University, Prof. van Breemen joined the University of Illinois College of Pharmacy. Since 2000, he has been professor of medicinal chemistry at the University of Illinois. He is the Faculty Director of the Mass Spectrometry Laboratory of the UIC Research Resources Center and the co-director of the UIC/NIH Center for Botanical Dietary Supplements Research.

Prof. van Breemen is author or co-author of more than 200 scientific papers and two patents. Since 1997, he has been Editor-in-Chief of the journal *Combinatorial Chemistry & High Throughput Screening*. In addition, he is on the Editorial Board of *Biomedical Chromatography*. In 1995, he was named by the Editors of *Spectroscopy* as one of 19 "Bright Young Stars" in the field of analytical spectroscopy. He is also the recipient of the University Scholar faculty award from the University of Illinois and the 2008 winner of the Harvey W. Wiley Award from the AOAC International.

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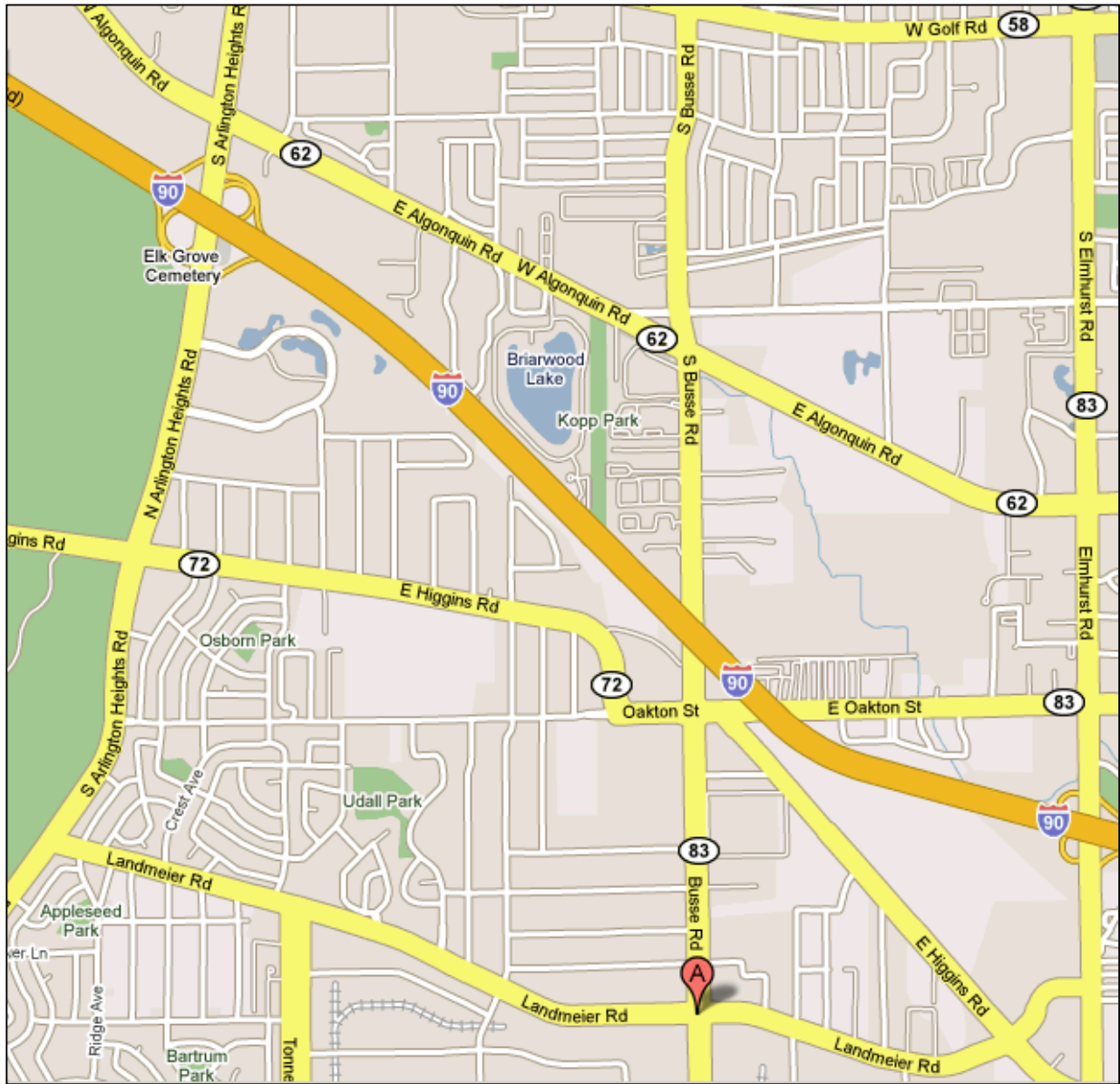
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