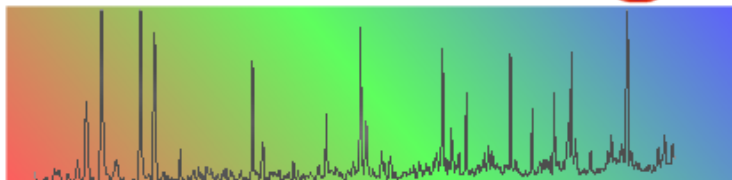




SAS-Chicago



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January Meeting

Tuesday, January 9, 2007

The January 2007 meeting will be held at the Wellington Restaurant, located at 2121 S Arlington Heights Rd, Arlington Heights, IL 60005. See the map on the following page.

Social Hour: 5:30 - 6:30 PM

Dinner: 6:30 PM

Speaker: 7:30 – 9:00 PM

Application of FT-IR and Vibrational Circular Dichroism to Problems of Pharmaceutical Interest: from Proteins to Chiral Drugs

by

Rina K. Dukor, Ph.D.

BioTools, Inc

Proteins play a vital role in the development of new biotechnology drugs and pharmaceuticals. New protein sequences and existing protein based products require rapid, cost-effective methods of characterization. Infrared spectroscopy, such as Fourier Transform Infrared (FT-IR) and vibrational circular dichroism (VCD) are ideally suited for this purpose. The main advantage of infrared techniques is that the protein sample can be studied in any state: liquid, solid, powder, fibrils or suspension. In the past decade, FT-IR and VCD techniques have been shown useful in applications such as developing formulations for stabilizing proteins, drug design, mutation studies, environmental effects and secondary structure prediction for membrane proteins and globular proteins.

The production of chiral pharmaceutical molecules that have known absolute configuration and enantiomeric excess is becoming increasingly important. In order to determine these properties in all types of chiral compounds, improved methods for the routine measurement of absolute configuration and enantiomeric excess are needed. In the past few years, vibrational circular dichroism (VCD) has become increasingly valuable in a variety of applications of pharmaceutical interest. In cases where chromatographic separation of enantiomers is difficult or too time-consuming, VCD can be used instead since the VCD spectrum scales proportionately in size with the percent enantiomeric excess. In cases where the absolute configuration of a chiral substance is needed, and where X-ray crystallography is either impractical due to problems with crystal growth or accessibility to needed instrumentation, VCD offers an alternative for solution-state measurements. In this presentation, we will discuss and demonstrate the sensitivity and advantages of FT-IR and VCD spectroscopy to protein structural studies and chiral molecule analysis.

Please make your dinner reservations for the upcoming meeting by email at sas.chicago@bigfoot.com, by using the form on our web page < <http://www.sas-chicago.org/Online%20Registration%20at%20Wellington.htm>> or by calling Mary Kaplar at 708-449-5767. Leave your name, company affiliation, a telephone number, the number of reservations and your choice of entree. Please call by noon Friday, Jan. 5th, so that proper arrangements can be made with the restaurant. If you can't attend, cancel by Mon. noon: SAS is charged for no-shows.

Entree choices: London Broil with Bordelaise Sauce, Breast of Chicken with Teriyaki Sauce, or Vegetarian Fettuccine.

Dinner Cost Members: \$25

Students and Unemployed Members: \$10
(No Shows may be Billed)

Non-members: \$30

Biography of Rina Dukor, Ph. D.

Rina Dukor received a Ph.D. in physical chemistry from the University of Illinois, Chicago in 1991 under the direction of Professor Timothy Keiderling. Her doctoral thesis topic was in the area of VCD of biological molecules. Upon graduation, she joined the Amoco Technology Company, Biotechnology Division as a postdoctoral research associate and in 1993 was appointed to a full staff position. While at Amoco, Rina established a spectroscopy laboratory focused on the vibrational spectroscopy of proteins and nucleic acids. Rina co-founded BioTools, Inc in 2001 and serves as President and CEO. The company concentrates in the areas of proteins and chirality by specializing in two types of biopharmaceuticals: chiral-organic and protein-based drugs.

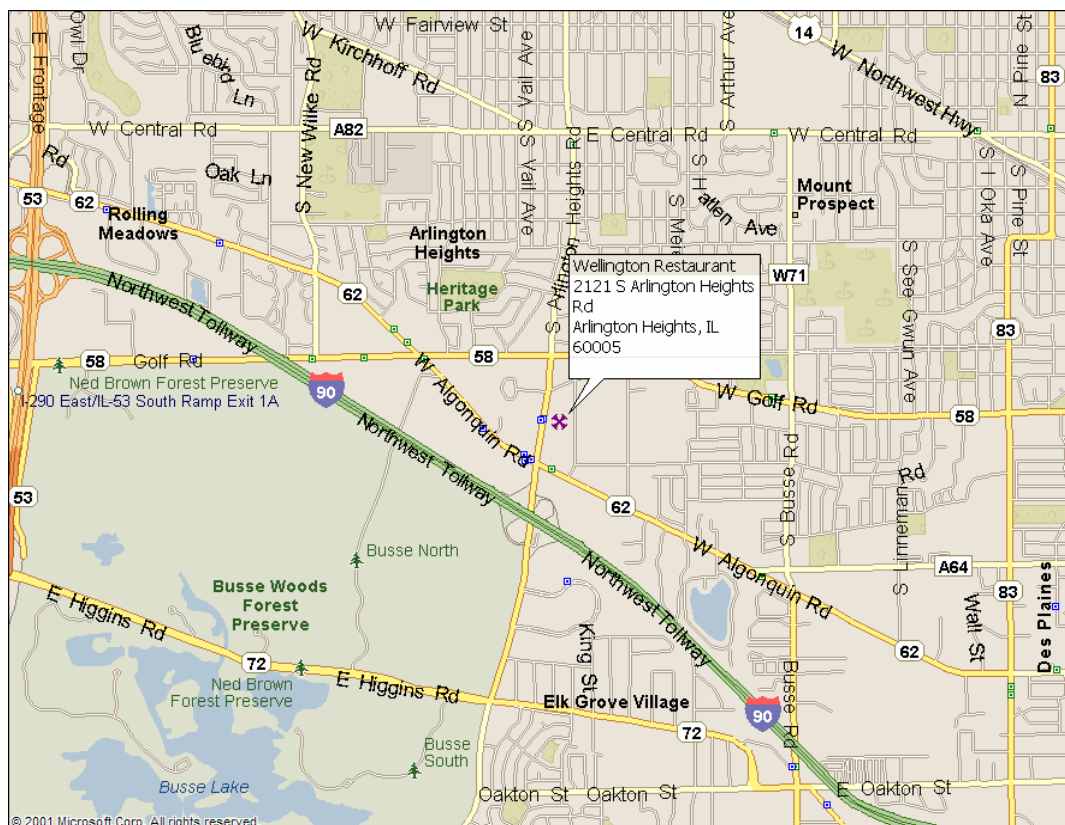
Her current research interests are in applications of vibrational spectroscopy to pharmaceutical problems. She has co-authored over 30 peer-reviewed papers; several review chapters and is a holder of three patents. Rina has presented her work at many international meetings both as contributed and invited lectures. She is a co-instructor on a well-known course on Biological Infrared and Raman Spectroscopy (BIRS), which is offered by the SAS.

Dr. Dukor is very active in the SAS. She was elected President of the National SAS for the year 2000 and is an advisor to Committee on Internationalization and Technical Sections and serves as Focal Point Editor for Molecular Spectroscopy. As a Chicago Section member, she has served as Section Chair in many roles, and continues to serve on the Governing Board. Rina is also a member of the Coblenz Society. Recently, she served on the Governing Board of FACSS and was the General Chair of the FACSS 2003 meeting. She was also Co-Chair of the 2005 International Conference on Advanced Vibrational Spectroscopy (ICAVS-3).

DIRECTIONS TO THE WELLINGTON RESTAURANT

From Chicago: Take Interstate 90 (Northwest Tollway) west to Arlington Heights Road exit. Proceed north to the restaurant.

From the southwest: Take 355 north to Route 53 north and exit at Algonquin Road east. Go to Arlington Heights Road. Turn left (north) and proceed to the restaurant.



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