Advanced Analytical Ultracentrifugation Workshop: *Theory and Practice*
July 11 – 14, 2011

Holloway Commons
University of New Hampshire
Durham NH 03824
603-862-2459

On-line registration will be available April 18th to June 11th, 2011 at:

or you may register by mail by requesting a paper form from sml@unh.edu and mailing the registration with fee to: Sue Lucius, University of New Hampshire, 377 Rudman Hall, 46 College Road, Durham NH 03824.

- Interact with experts in analytical ultracentrifugation
- Learn to characterize macromolecular interactions and complex mixtures
- Receive training in the latest experimental approaches and data analysis methods
- Discuss advanced analytical ultracentrifugation topics and specialized methods
- Bring your own data for on-site analysis and consultation

Description: Analytical Ultracentrifugation (AUC) is a powerful method for the determination of absolute molar mass, shape and for the analysis of reversible interactions and irreversible aggregation formation involving macromolecules in solution. A combination of modern instrumentation, fast computers and new data analysis algorithms has led to an ever-increasing use of AUC in basic research, process development and biotherapeutic formulations.

Scope: This is an **advanced** AUC workshop and is appropriate for academic and industrial scientists who are already familiar with basic experimental and data analysis methods.

Program:

Fundamentals:
  * Basic theory and overview
  * Sedimentation velocity
  * Sedimentation equilibrium

Practical Analytical Ultracentrifugation and Demonstrations:
  * Experimental design and sample preparation
  * Use of specialized centrifuge cells
  * Operation of the Beckman-Coulter XL-I instrument
  * Interference optics: adjustment and optimization

Data Analysis and Interpretation:
  * Sedimentation Velocity:
        Modeling by Lamm equation solutions
        Time derivative methods
        Continuous distributions
        Analysis of mixtures and detection of aggregates
        Analysis of interacting systems
  * Sedimentation Equilibrium:
        Self-association and hetero-association
        Thermodynamic nonideality
        Global multisignal analysis

Advanced topics and specialized approaches:
  *High Concentration Sedimentation
  *Evaluation of participant data:
        On-site data analysis – bring your own data

Symposium Day on Thursday July 14th

Instructors:

Walter Stafford, **PhD**, BBRI

Thomas Laue, **PhD**, BITC/UNH

John Philo, PhD, Alliance Protein Labs

James Cole, PhD, Univ. of Connecticut

Jack Correia, PhD, Univ. of Mississippi Medical Center

Symposium Speakers:
Sergio Aragon, PhD, San Francisco State Univ.
Jeffrey Hoch, PhD, Univ. of Conn. Health Center
Qiao Lin, PhD, Columbia University
Vincent Moy, PhD, Univ of Miami
Richard Neubig, PhD, Univ. of Michigan
Lewis Rothberg, PhD, Univ. of Rochester
John Tsavalas, PhD, University of NH

BITC
Biomolecular Interaction Technologies Center