

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:

https://www.events.unh.edu/RegistrationForm.pm?event_id=8497

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:

John Tsavalas, PhD, UNH

Richard Neubig, PhD, Univ. of Michigan

**Jeffrey Hoch, PhD, Univ. of Connecticut
Health Center**

Vincent Moy, PhD, Univ. of Miami

Lewis Rothberg, PhD, Univ. of Rochester

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Technologies Center



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