



Analytical Ultracentrifugation Workshop:

Theory and Practice: June 18-20, 2002

Symposium: June 21, 2002

National Analytical Ultracentrifugation Facility
Biotechnology Center
University of Connecticut
Storrs, Connecticut

- Interact with national experts in analytical ultracentrifugation.
- Learn characterization of recombinant proteins.
- Work with hardware and software developed in-site at the National Analytical Ultracentrifugation Facility.
- Receive copies of all data analysis programs for your subsequent use.
- See real time interferometry and the absorption technique in operation on Beckman XLI Analytical Ultracentrifuges.
- Learn about new specialized centrifuge cells.
- Receive registration for Analytical Ultracentrifugation Symposium to follow Workshop.

WORKSHOP: JUNE 18-20, 2002

INTENT and DESCRIPTION

Analytical Ultracentrifugation (AU) is a powerful method for the determination of absolute molecular weights and the study of self-association and interactions between biological molecules in solution. The combination of new computerized instrumentation, more rapid experimental protocols, and powerful data analysis techniques have led to a resurgence of interest in AU, particularly in biotechnology and pharmaceutical research. This workshop is designed for those who are reasonably familiar with the experimental details of the technique and the analysis of the data as taught in the Beckman Workshop.

PROGRAM

Review of basic theory and practice

- Sedimentation velocity
- Sedimentation equilibrium

Demonstration of basic experimental procedures using

- Beckman XLI Analytical Centrifuge
- Optical absorption scanner techniques methods
- Rayleigh interference optics
- Short and long column equilibrium sedimentation
- Velocity and equilibrium sedimentation
- Specialized centrifuge cells

Other topics covered

- Ideal and non-ideal behavior
- Interacting systems
- Heterogeneous systems

Data collection demonstrating

- Real-time interferometry
- Absorption scanning

Data analysis and interpretation

- Portable software furnished to participants for analytical procedures

LEARNING OBJECTIVES

Participants will:

- be introduced to basic theory and practice of sedimentation velocity and equilibrium;
- be shown how to design experiments to characterize macromolecular interactions;
- use computer software for data analysis;
- participate in small group discussions;
- hear about current applications of AU at Symposium following Workshop on June 21, 2002.

INSTRUCTORS

Eric Anderson, Research Associate, Teschke Laboratory, Department of Molecular and Cell Biology, University of Connecticut, Storrs, Connecticut.

Emory Braswell, Professor, Department of Molecular and Cell Biology, University of Connecticut, Storrs, Connecticut.

James Cole, Associate Professor, Department of Molecular and Cell Biology, University of Connecticut, Storrs, Connecticut.

Jeffrey Lary, Research Associate, Department of Molecular and Cell Biology, University of Connecticut, Storrs, Connecticut.

Thomas Laue, Professor, Department of Biochemistry and Molecular Biology, University of New Hampshire, Durham, New Hampshire.

Peter Schuck, Scientist, National Institutes of Health, Bethesda, Maryland.

Walter Stafford, Senior Scientist, Department of Muscle Research, Boston Biomedical Institute, Boston, Massachusetts.

John Toedt, Assistant Professor, Eastern Connecticut State University, Willimantic, Connecticut.

David Yphantis, Professor Emeritus, Department of Molecular and Cell Biology, University of Connecticut, Storrs, Connecticut.

Dana Wang, Facility Scientist, Analytical Ultracentrifugation Facility, University of Connecticut, Storrs, Connecticut.

**ANALYTICAL ULTRACENTRIFUGATION
SYMPOSIUM: JUNE 21, 2002
Practices and Recent Advances**

Tentative List of Speakers:

Jack Correia, University of Mississippi Medical Center

Thomas Laue, University of New Hampshire

Peter Schuck, National Institutes of Health

Symposium will begin at 9:00 a.m. and will be held in Room 150, United Technologies Building, 191 Auditorium Road, University of Connecticut, Storrs, CT 06269.

Registration fee of \$200 includes lunch. PRE-REGISTRATION IS NECESSARY. (Graduate student fee is gratis, if request for waiver is accompanied by letter from current Research Advisor.)

A tentative list of sponsors of the Workshop and Symposium are: the UConn Biotechnology Center, UConn Department of Molecular & Cell Biology, the National Science Foundation, and others to be announced at the Workshop.

Special Program Features

- Limited workshop size (21) for tutorial style teaching
- Interactive lecture sessions
- Data analysis software furnished to all participants

The registration fee of \$1800 (or \$900 for registrants of not-for-profit organizations) includes all costs of instruction, materials, software, parking, refreshments, lunches and reception, and registration fee for Symposium. The fee does not include hotel accommodations or travel. **Registration payment is due by May 31, 2002.**

Pre-registration is necessary. Faxed (860) 486-5005 registration forms are encouraged. Generally, only **two** registrants from each laboratory can be accepted. However, if more wish to attend and there are vacancies, we will try to accommodate. Please send their names and telephone numbers in ordered priority. A confirmation letter of acceptance will include information on housing, airport transportation and an invoice for the registration fee, as appropriate.

For Information on . . .

- **Payments and course logistics:** call the Biotechnology Center at (860) 486-5011
- **Fellowship Applications:** call (860) 486-5011
- **E-mail:** biotctr1@uconnvm.uconn.edu
- **Home Page:** <http://www.ucc.uconn.edu/~wwwbiotc/uaf.html>

Fellowships:

A limited number of fellowships (registration fees only) are available to qualified graduate and post-doctoral students. Call or send for a fellowship application form.

Refunds and Cancellations:

Refunds will be processed if the registration is cancelled one week prior to the start of the program. Registrants who do not attend and do not cancel will be subject to the complete fee. **Participant substitutions may be made with prior approval of the teaching staff.**

Registration Deadline: May 10, 2002

Registration Form: **Fax to (860) 486-5005**

Analytical Ultracentrifugation: Theory and Practice Analytical Ultracentrifugation Symposium

National Analytical Ultracentrifugation Facility
Biotechnology Center, University of Connecticut
184 Auditorium Road, U-149, Storrs, Connecticut 06269-3149

Please print clearly:

Name _____

Name to put on Badge _____

Phone (day) _____

Title _____

Organization _____

Organization Address:

Street _____

City _____ State _____ Zip _____

Fax _____

E-mail _____

No state-appropriated funds were used to print this material. The University of Connecticut supports all state and federal laws that promote equal opportunity and prohibit discrimination. All university facilities used for this workshop are accessible to the handicapped.

JUNE 18-20, 2002

JUNE 21, 2002

Registration Fee (check one)

- _____ \$1800 Workshop and Symposium
_____ \$900 Not-for-profit organization
Workshop and Symposium
_____ \$200 June 21, 2002 Symposium only

Method of Payment (once accepted)

Please remit in US \$

- _____ Bill Me
_____ Purchase Order
P.O. # _____

Registration payment is due by May 31, 2002.

Travel: UConn/Storrs is midway between Boston (1 ½ hrs) and New York City (2 ½ hrs) and 35 miles from Bradley International Airport located outside Hartford. Amtrak serves the area with stops in Hartford and New London. There is van shuttle service from Bradley to Storrs by reservation.