Bleeding and Thrombosing Diseases: The Basics and Beyond

Coagulation Wet Workshop
July 25, 2002

Coagulation Conference
July 26 – 27, 2002

Mayo Clinic
Rochester, Minnesota

Sponsors:
Mayo Clinic Division of Hematology and Internal Medicine
Mayo School of Continuing Medical Education
COURSE DESCRIPTION

Hemostasis, blood coagulation disorders and their clinical and laboratory assessment are often looked upon with some apprehension because of their complexity. This conference will examine basic and clinical aspects of hemostasis and blood coagulation in relation to common laboratory tests: platelet count, bleeding time, activated partial thromboplastin time, and prothrombin time.

A simple scheme of hemostasis will be reviewed to initiate discussion of bleeding and thrombosing diseases, followed by practical information and updates about the more complicated disorders, including testing, diagnosis and management. Didactic presentations will be supplemented with case presentations and panel discussions, including review of differential diagnoses and appropriate laboratory testing. Adequate time will be allocated for questions.

COURSE LEARNING OBJECTIVES

By the end of the conference, participants should be able to:
• Describe the mechanism of hemostasis
• Evaluate screening and more complex tests of hemostasis
• Assess common disorders of hemostasis that lead to bleeding or thrombosis
• Explain laboratory evaluation of bleeding or thrombosing diatheses
• Summarize principles of anticoagulant therapy and monitoring

Attendance at this Mayo course does not indicate nor guarantee competence or proficiency in the performance of any procedures which may be discussed or taught in this course.

INTENDED AUDIENCE

Mayo’s Tenth Coagulation Conference (July 26 - 27, 2002) is designed for clinicians, pathologists and laboratory technologists whose practices include bleeding and thrombosing diseases. Mayo’s Fifth Coagulation Wet Workshop (July 25, 2002) will particularly benefit laboratory technologists, physicians and scientists who have responsibilities for diagnostic coagulation laboratory testing.

DATE AND LOCATION

The “Coagulation Wet Workshop” will be held on Thursday, July 25, 2002. “Bleeding and Thrombosing Diseases: The Basics and Beyond” will be held Friday and Saturday, July 26 – 27, 2002. Both programs will be held on the Mayo Clinic campus in the Siebens Medical Education Building, 100 Second Avenue Southwest, Rochester, Minnesota.

CONTINUING EDUCATION CREDIT

Mayo Foundation is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Mayo Foundation designates this educational activity for a maximum of 22 hours in category 1 credit towards the AMA Physician’s Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

Professional Acknowledgement for Continuing Education (P.A.C.E.) certification also will be available.
REGISTRATION

To register, complete the attached registration form and return by mail or fax. The registration fee includes tuition, comprehensive course syllabus, coagulation history book, break refreshments, reception, dinner, and tour. Although it is not Mayo School of Continuing Medical Education policy to limit the number of registrants for a course, conference room facilities may necessitate closing of enrollment; therefore, early registration is strongly advised. A letter of confirmation will be sent upon receipt of payment and completed registration form. Please present this letter when checking in at the meeting registration desk.

SPECIAL EVENT / BOOK

Conference registrants will receive a complimentary copy of the newly published book, “A History of Blood Coagulation” by Dr. Charles A. Owen. During the luncheon on Friday, July 26 there will be a short presentation relevant to blood coagulation history by Dr. William L. Nichols who, together with Dr. E.J. Walter Bowie, co-edited Dr. Owen’s coagulation history book. The presentation will also commemorate Dr. Owen who passed away March 3, 2001.

LODGING ACCOMMODATIONS

Blocks of guestrooms have been reserved with special course rates at each of the following downtown Rochester hotels. To ensure accommodations and the discounted rate, please make your reservations by July 8, 2002 and identify yourself as a participant of the Bleeding and Thrombosing Diseases and Coagulation Wet Workshop course.

**Economy Inn and Executive Suites by Kahler**

- 9 Third Avenue NW
- 800-533-1655 or 507-289-8646
- $65 single/double – standard
- $85 single/double – suite
- $15 per additional person

**Kahler Grand Hotel**

- 20 Second Avenue SW
- 800-533-1655 or 507-282-2581
- $85 single/double
- $15 per additional person

**Rochester Marriott Hotel**

- 101 First Avenue SW
- 877-623-7775 or 507-280-6000
- $129 single/double
- $15 per additional person

**Holiday Inn City Centre**

- 220 South Broadway
- 800-241-1597 or 507-252-8200
- $79 single/double
- $15 per additional person

The hotels listed above are connected by skyway and pedestrian subway to conference facilities, downtown shops, restaurants and theaters. You may also wish to visit the Rochester Convention and Visitors Bureau website (www.rochestercvb.org) for additional accommodation options.

TRAVEL

Rochester, Minnesota, is a friendly city that greets thousands of visitors from around the world each year. The city is serviced by a modern international airport with multiple flights daily from Chicago and Minneapolis via American or Northwest Airlines. Access to and from the airport is provided by taxi cab and shuttle service. The airport is located approximately 10 driving miles from the Mayo Clinic complex.

PARKING

Parking is available in hotel, city, and Mayo patient/visitor ramps. The cost for parking is not included in the registration fee. A map indicating the location of downtown parking facilities will be mailed with the registrant confirmation letter.
COURSE DESCRIPTION AND OBJECTIVES

Following a brief introduction, participants will form teams for supervised coagulation testing and evaluation of 4 “unknown” plasma specimens at 7 workstations, using coagulation instrumentation and reagents provided by commercial sponsors. Testing will include prothrombin time (PT), activated partial thromboplastin time (APTT), thrombin time (TT), dilute Russell’s viper venom time (DRVVT), mixing tests using unknown and normal plasmas, platelet neutralization procedure (PNP) and other phospholipid-inhibitor confirmatory assays, and limited coagulation factor activity assays. In addition, D-dimer immunoassays, and activated protein C (APC)-resistance assays (including demonstration of Factor V “Leiden” DNA-based diagnostic assays) will be performed on selected specimens. Workshop faculty will lead a discussion of results and interpretations, including comments about the clinical disorders studied and the comparability or diversity of results and interpretations obtained with different instruments or reagents. Participation is limited to 56 registrants.

Upon completion of the conference, participants should be able to:
• Examine operation of newer coagulation instrumentation and reagents.
• Demonstrate similarities and differences among coagulation reagents and instruments.
• Assess performance characteristics of different reagents and instruments for evaluating relatively common complex coagulopathies.
• Evaluate “screening tests” and “confirmatory tests” for detection, differentiation and confirmation of differing coagulopathies.
• Explore “mixing tests” for differentiating inhibitors of coagulation from coagulation factor deficiencies.
• Compare differing methods for determining APC-resistance and measuring D-dimer.
• Analyze the diagnostic sensitivity and specificity of results obtained with differing reagent - instrument combinations and test procedures.

WORKSHOP FACULTY

Layna K. Cardel, M.T. (ASCP)  Elizabeth A. Plumhoff, M.T. (ASCP), CLS (NCA)
Michelle A. Elliott, M.D.  Rajiv K. Pruthi, M.D.
John A. Heit, M.D.  Stacy C. Roberts, B.A.
William L. Nichols, M.D.

THURSDAY, JULY 25, 2002

7:00 - 8:00 a.m.  Registration – Phillips Hall, Siebens Building, Main Floor
Breakfast – Rochester Marriott Plaza Ballroom, 2nd Floor

8:00 - 9:30 a.m.  Orientation – Leighton Auditorium, Siebens Building, 2nd Floor
• Introduction
• Basic Coagulation Testing: PT, APTT, DRVVT & TT
• Inhibitor Screening and Diagnostic Assays
• D-dimer Assays
• APC-resistance and Factor V “Leiden” Assays

9:30 a.m. - 12:30 p.m.  Laboratory Testing – Phillips Hall, Siebens Building, Main Floor

12:30 - 1:30 p.m.  Luncheon – Rochester Marriott Plaza Ballroom, 2nd Floor

1:30 – 3:30 p.m.  Data Review and Discussion
Leighton Auditorium, Siebens Building, 2nd Floor

3:30 –4:00 p.m.  Break – Leighton Foyer, Siebens building, 2nd Floor

4:00 - 5:30 p.m.  Data Review and Discussion - continued

6:00 - 8:00 p.m.  Picnic Buffet in the Park
Riverside Room, Mayo Civic Center & Park (transportation provided)
• Coagulation Wet Workshop Group
• Coagulation Conference Group
• Commercial Sponsors
FRIDAY, JULY 26, 2002

Morning Session Chair: Rajiv K. Pruthi, M.D.

6:30 - 7:45 a.m.
Registration – Phillips Hall, Siebens Building, Main Floor
Breakfast – Rochester Marriott Plaza Ballroom, 2nd Floor

7:45 - 8:00 a.m.
Welcome – Robert M. Kisabeth, M.D. and Morie A. Gertz, M.D.
Course Introduction – William L. Nichols, M.D.

8:00 - 8:45 a.m.
The Hemostatic Mechanism – David N. Fass, Ph.D.

8:45 – 9:15 a.m.
The Hemostatic History - The Most Important Test – C. Christopher Hook, M.D.

9:15 – 10:00 a.m.
Screening Tests of Hemostasis – Rajiv K. Pruthi, M.D.

10:00 - 10:30 a.m.
Break – Phillips Hall

10:30 – 11:00 a.m.
The Importance of Quality in Coagulation Testing
Marlies Ledford, M.T. (ASCP), S.H., M.B.A.

11:00 a.m - Noon
Case Presentations – Moderator: Rajiv K. Pruthi, M.D.

Noon - 1:30 p.m.
Luncheon – Rochester Marriott Plaza Ballroom, 2nd Floor

Special Presentation
“The Coagulation Cascade, Personified” – William L. Nichols, M.D.

Afternoon Session Chair: William L. Nichols, M.D.

1:30 – 2:00 p.m.
Point of Care Coagulation Testing Update – Paula A. Santrach, M.D.

2:00 – 2:45 p.m.
Flow Cytometry for Platelet Function Assessment – Alan D. Michelson, M.D.

2:45 – 3:15 p.m.
Bleeding Time & PFA-100 Testing: Friends or Foes? – Robert D. McBane, M.D.

3:15 – 3:45 p.m.
Break – Phillips Hall

3:45 – 4:30 p.m.
Von Willebrand’s Disease in 2002 – Robert R. Montgomery, M.D.

4:30 – 5:15 p.m.
Case Presentations – Moderator: William L. Nichols, M.D.

5:15 p.m.
Mayo Clinic Tours, including Coagulation Laboratories (optional)

6:30 – 8:30 p.m.
Buffet and Product Display – Phillips Hall

SATURDAY, JULY 27, 2002

7:00 - 8:00 a.m.
Breakfast – Rochester Marriott Plaza Courtyard, 3rd Floor

Morning Session Chair: John A. Heit, M.D.

7:50 a.m.
Announcements

8:00 - 8:45 a.m.
Regulation of Hemostasis – Whyte G. Owen, Ph.D.

8:45 – 9:30 a.m.
Hereditary Thrombotic Diseases: Testing and Management – John A. Heit, M.D.

9:30 – 10:15 a.m.
Lupus Anticoagulant and the Antiphospholipid Syndrome
Douglas A. Triplett, M.D.

10:15 - 10:45 a.m.
Break – Phillips Hall

10:45 – 11:15 a.m.
Thrombotic Thrombocytopenic Purpura (TTP) – Michelle A. Elliott, M.D.

11:15 – 11:45 a.m.
Heparin – Induced Thrombocytopenia (HIT) – Douglas A. Triplett, M.D.

11:45 - 12:15 p.m.
Case Presentations – Moderator: John A. Heit, M.D.

12:15 - 1:30 p.m.
Luncheon – Elizabethan Room, Kahler Grand Hotel

Afternoon Session Chair: Robert D. McBane, M.D.

1:30 – 2:15 p.m.
Hemophilia – Hereditary and Acquired – Nigel S. Key, M.D.

2:15 – 3:00 p.m.
Molecular Genetic Diagnosis of Hemophilia and von Willebrand’s Disease
Rajiv K. Pruthi, M.D.

3:00 - 3:30 p.m.
Break – Hage Atrium, Siebens Building, Subway Level

3:30 – 4:00 p.m.
Acquired Plasmatic Coagulopathies – William L. Nichols, M.D.

4:00 – 4:30 p.m.
Anticoagulation Therapy: New Drugs & Methods – Robert D. McBane, M.D.

4:30 - 5:00 p.m.
Panel Discussion: Thrombosis, Diagnostic Testing, Anticoagulation
Therapy and Monitoring – Faculty

5:00 p.m.
Closing Comments – William L. Nichols, M.D.
CANCELLATION POLICY

Your registration fee, less a $50 administrative fee, will be refunded when written notification is received by the Mayo School of Continuing Medical Education before. No refunds will be made after July 10, 2002.

FACULTY

COURSE DIRECTOR

William L. Nichols, M.D.  
Consultant, Hematology / Internal Medicine & Laboratory Medicine  
Mayo Special Coagulation Laboratories and Coagulation Clinical Centers  
Co-Director, Coagulation Education Programs  
Director, Mayo International Hemophilia Training Center (WFH)  
Assistant Professor, Medicine*

FACULTY

COURSE CO-DIRECTORS

Michelle A. Elliott, M.D.  
Consultant, Hematology / Internal Medicine & Laboratory Medicine  
Co-Director, Research & Development, Mayo Coagulation Laboratories  
Director, Mayo General Coagulation Laboratory  
Assistant Professor, Medicine*

John A. Heit, M.D.  
Consultant, Cardiovascular Medicine, Hematology & Laboratory Medicine  
Director, Mayo Coagulation Laboratories / Clinics & Coagulation Group  
Director, Mayo Thrombophilia Center  
Associate Professor, Medicine*

Rajeev R. Pruthi, M.D.  
Consultant, Hematology / Internal Medicine & Laboratory Medicine  
Co-Director, Mayo Special Coagulation DNA Diagnostic Laboratory  
Director, Mayo Comprehensive Hemophilia Center  
Assistant Professor, Medicine*

WET WORKSHOP COORDINATOR

Elizabeth A. Plumhoff, M.T. (ASCP), CLS (NCA)  
Senior Research and Development Technologist  
Mayo Special Coagulation Laboratory

MAYO CLINIC FACULTY

Layna K. Cardel, M.T. (ASCP)  
Educational Technologist / Coordinator  
Mayo Special Coagulation Laboratory

David N. Fass, Ph.D.  
Consultant, Hematology / Internal Medicine & Hematology Research  
Professor, Biochemistry and Molecular Biology*

C. Christopher Hook, M.D.  
Consultant, Hematology / Internal Medicine & Coagulation  
Assistant Professor, Medicine*

Robert D. McBane, M.D.  
Consultant, Cardiovascular Diseases / Internal Medicine & Coagulation  
Assistant Professor, Medicine*

Wylde G. Owen, Ph.D.  
Consultant, Hematology / Internal Medicine & Hematology Research  
Professor, Biochemistry and Molecular Biology*

Paola A. Santrach, M.D.

Consultant, Transfusion Medicine and Clinical Pathology  
Director, Hospital Clinical Laboratories  
Assistant Professor, Laboratory Medicine and Pathology*

*Mayo Medical School

GUEST FACULTY

Nigel S. Key, M.D.  
Faculty Physician, Hematology and Internal Medicine  
Fairview – University Medical Center, Minneapolis, MN  
Associate Professor of Medicine, University of Minnesota, Minneapolis, MN

Marlies Lefford, M.T. (ASCP), S.H., M.B.A.  
Technical Director, Special Coagulation Laboratory  
Pathology Specialty Services, Department of Pathology  
University of Miami School of Medicine, Miami, FL

Alan D. Michelson, M.D.  
Director, Center for Platelet Function Studies  
Professor of Pediatrics, Medicine, and Pathology  
University of Massachusetts Medical School, Worcester, MA

Robert R. Montgomery, M.D.  
Scientific Director, Coagulation Reference Laboratory  
The Blood Center, Milwaukee, WI  
Senior Investigator, Blood Research Institute  
Professor and Vice Chair for Research, Department of Pediatrics  
Medical School of Wisconsin, Milwaukee, WI

Stacy C. Roberts, B.A.  
Research Fellow, Centers for Disease Control & Prevention National Center for Environmental Health Division of Laboratory Science, Molecular Biology Branch  
Atlanta, GA

Douglas A. Triplett, M.D.  
Director, Midwest Hemostasis and Thrombosis Laboratories, Muncie, IN  
Professor of Pathology and Assistant Dean  
Indiana University School of Medicine  
Ball Memorial Hospital, Muncie, IN

FACULTY DISCLOSURE

As a provider accredited by ACCME, Mayo Foundation must ensure balance, independence, objectivity and scientific rigor in its educational activities. All faculty participating in a Mayo Foundation activity are required to disclose commitments to and/or relationships with pharmaceutical companies, biomedical device manufacturers or distributors, or others whose products or services may be considered to be related to the subject matter of the educational activity. Faculty will also disclose any off-label and/or investigational use of pharmaceuticals or instruments discussed in their presentation. Disclosure of these commitments and/or relationships will be published in course materials so those participants in the activity may formulate their own judgments regarding the presentation.
Registration Form

Bleeding and Thrombosing Diseases: The Basics and Beyond
Coagulation Wet Workshop

Mayo Clinic, Rochester MN    •    July 25 – 27, 2002

Mail form and payment to:
Mayo School of Continuing Medical Education
200 First Street SW
Rochester, MN 55905

Telephone: 800-323-2688 or 507-284-2509
FAX: 507-284-0532
Website: www.mayo.edu/cme
E-Mail: cme@mayo.edu

(Please print or type all information. You may duplicate this form for multiple registrations.)

Name______________________________________________________________________________

Degree  MD     PhD     DO    CLS    CLT    Other______________________

Institution __________________________________________________________________________

Medical Specialty____________________________________________________________________

Which is your preferred mailing address:  Work/Business      Home

Address____________________________________________________________________________

City_________________State/PV________ZIP/Postal Code________Country_________________

Home Telephone (______)__________________ Business Telephone (______)_________________

Int’l Telephone (Country code)_________(City code)_________(Phone)______________________

FAX(______)__________________ E-mail Address________________________________________

Type of credit that you are interested in receiving:  AMA/Category 1      PACE

Please check if you have any special assistance needs or dietary restrictions.
Please indicate your needs here:

___________________________________________________________________________________

Registration Fee

Coagulation Wet Workshop (July 25, 2002) $175 $ ________

Please prioritize your choices of workstations from 1 – 3, with 1 being your first choice. We will make every attempt to accommodate your choice, although we may not always be successful.

___ Beckman Coulter – ACL 9000     ___ Beckman Coulter – ADVANCE
___ Beckman Coulter – MDA II     ___ Dade Behring – CA 1500
___ Dade Behring – BCS

Bleeding and Thrombosing Diseases Conference (July 26 – 27, 2002) $425 $ ________

___ Physicians and Scientists
___ Residents, Fellows and Medical Technologists $300 $ ________

Please indicate if you will attend the following event:

Picnic Buffet in the Park  (Thursday, July 25, 6:00 p.m.)  Yes    No  $ Complimentary

Please check (payable to Mayo Foundation)

□ Credit Card:  □ Visa     □ MasterCard     □ Discover

Total Payment Enclosed: $ ____________

Card Number        Expiration date MO/yr

Signature        Date