GENERAL INFORMATION

COURSE DESCRIPTION

*Genomics in Clinical Practice - Genetic Testing: Past, Present and Future* will provide healthcare providers from all medical specialties with an overview of all aspects of genetic testing. In-depth didactic lectures given by experts in each field will cover the core knowledge areas in medical genomics (with an emphasis on genetic testing). During the afternoon of the first day there will be special sessions utilizing innovative learning techniques. These sessions will include one-on-one experiential learning of genetic counseling and informal question and answer sessions using an interactive audience response system with real case examples. The first day will conclude with a performance of the thought-provoking play “The Gift” by Joanna Baldwin. This play deals with the ethical, legal and societal issues raised by the discovery of genetic disease (Friedrich’s ataxia) within a family. Delegates are encouraged to participate in an open discussion between the audience, the cast and an expert panel following the presentation. Lectures on the second day will focus on the future of genetic testing in medicine. During lunch on the second day, facilitators will share results of real-time genetic tests performed on samples from participating delegates. This lunch will end the formal meeting. During the afternoon of the second day, delegates are invited to attend a series of presentations by Dr Eric Wieben and colleagues designed to highlight the Mayo Clinic Genomic Research Center’s efforts to implement the promise of the genomics revolution. Initiatives in genomics research, bioinformatics, data warehousing, genomics education and population-based DNA/tissue banking will be presented.

COURSE OBJECTIVES

At the conclusion of this course, the participant should be able to:

• Distinguish between different genetic /epigenetic alterations that cause disease
• Explain the concept of the genome, transcriptome and proteome
• Compare the strengths and weaknesses of different laboratory methodologies used to perform genetic tests
• Differentiate between diagnostic and predictive genetic testing
• Distinguish between research and clinical genetic tests
• Assess genetic risk in the absence of genetic testing
• Identify ethical, legal and social concerns with genetic tests
• Compare federal and state-specific laws regarding the use of genetic information
• Integrate genetic awareness in all clinical specialties

INTENDED AUDIENCE

This course is designed for healthcare providers from all medical specialties with a strong interest in genomics and a basic understanding of genetics and will provide many practical examples of the impact of the genomic revolution on a range of medical specialties.

DATE AND LOCATION

*The Genomics in Clinical Practice – Genetic Testing: Past, Present and Future* course will be held October 6 – 7, 2003. Course headquarters will be located at Phillips Hall on the first floor of the Siebens Medical Education Building, Mayo Clinic, 100 Second Avenue Southwest, Rochester, Minnesota. Meeting facilities are easily accessible by skyway and pedestrian subway, which connect Mayo Clinic to shops, restaurants, and hotels.

Presented by:
Mayo/George M. Eisenberg Genomics Education Program, Mayo Clinic

Supported in part by the George M. Eisenberg Foundation for Charities, Chicago, IL
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 14.25 category 1 credits towards the AMA Physician’s Recognition Award. Each physician should claim only those credits that he/she actually spent in the educational activity.

Other health care professionals will be provided a certificate of attendance for requesting credits in accordance with state nursing boards, specialty societies, or other professional associations.

REGISTRATION

To register, complete the attached registration form and return by mail or fax. The registration fee includes tuition, comprehensive course syllabus, continental breakfast, break refreshments, luncheon on Monday and Tuesday and dinner Monday evening. Although it is not the policy of Mayo Clinic to limit the number of registrations 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.

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 September 22, 2003. No refunds will be made after September 22, 2003.

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 September 15, 2003 and identify yourself as a participant of the course, *Genomics in Clinical Practice – Genetic Testing: Past, Present and Future*.

**Hilton Garden Inn**
225 South Broadway
800-445-8667 or 507-285-1234
$89 single/double

**Kahler Grand Hotel**
20 Second Avenue SW
800-533-1655 or 507-282-2581
$79 single/double

**Radisson Plaza Hotel**
150 South Broadway
800-333-3333 or 507-281-8000
$95 single/double

**Rochester Marriott Hotel**
101 First Avenue SW
877-623-7775 or 507-280-6000
$129 single/double

Skyway and pedestrian subway to conference facilities, downtown shops, restaurants and theaters connect the hotels listed above. 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.

FACULTY

Mayo Faculty

Michael J. Ackerman, M.D., Ph.D., Department of Pediatric and Adolescent Medicine, Division of Cardiovascular Research
Mark E. Bolander, M.D., Department of Orthopedic Surgery, Division of Orthopedics Research*
David J. Brandhagen, M.D., Division of Gastroenterology and Hepatology, Department of Internal Medicine
John E. Carpenter, Ph.D., Department of Biochemistry and Molecular Biology
Piet C. de Groen, M.D., Division of Gastroenterology and Hepatology, Department of Internal Medicine
David J. Ellison, M.D., Ph.D., Department of Medical Genetics*
Sherine E. Gabriel, M.D., Department of Health Sciences Research, Division of Epidemiology
W. Edward Highsmith, Jr., Ph.D., Department of Laboratory Medicine and Pathology, Division of Laboratory Genetics;
C. Christopher Hook, M.D., Division of Hematology; Chair, Mayo Clinic Ethics Council
Noralane M. Lindor, M.D., Department of Medical Genetics
Pamela S. McGrann, M.D., Department of Medical Genetics
David C. Muddiman, Ph.D., Department of Biochemistry and Molecular Biology
Dennis J. O’Kane, Ph.D., Department of Laboratory Medicine and Pathology; Director, Core Laboratory for Assay
Signal Systems
Gloria M. Petersen, Ph.D., Department of Health Sciences Research, Division of Epidemiology*
David B. Schrader, M.D., Ph.D., Department of Medical Genetics*
Thomas C. Spelsberg, Ph.D., Department of Biochemistry and Molecular Biology, Chair, Genomics Education Program*
Ayalew Tefferi, M.D., Division of Hematology, Department of Medicine*
Terry M. Therneau, Ph.D., Department of Health Sciences Research, Division of Biostatistics
Alan R. Thorland, Ph.D., Section of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology*
Trudy N. Trusla, J.D., Legal Department
Richard M. Weinshilboum M.D., Division of Molecular Pharmacology and Experimental Therapeutics, Department of Medicine
Eric D. Wierb, Ph.D., Department of Biochemistry and Molecular Biology; Director Genomics Research Center*
John M. Wilkinson, M.D., Department of Family Medicine*
Lester E. Wold, M.D., Department of Laboratory Medicine and Pathology; Medical Director, Mayo Collaborative Services, Inc.

*Members of the Genomics Education Steering Committee, Mayo Foundation

Guest Faculty

Allan Bradley, Ph.D.
Director
Wellcome Trust Sanger Institute
Cambridge, United Kingdom

Professor Bradley completed his studies in genetics at the University of Cambridge in 1984. In 1987, Dr Bradley moved to Baylor College of Medicine, Houston, Texas and in 1993 became an Investigator with the Howard Hughes Medical Institute. His laboratory has developed novel methods to engineer the genomes of mice. Dr Bradley is the author of over 170 scientific articles and book chapters. He has been active in commercializing technology from his laboratory by founding several companies including a publicly traded genomics company, Lexicon Genetics Inc. In November 2000, Dr Bradley took up an appointment as Director of the Sanger Institute. In July 2002 he was elected Fellow of the Royal Society.
### Program Schedule

**MONDAY, OCTOBER 6, 2003**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
</table>
| 7:00 am – 8:00 am | Breakfast and Registration  
Interested delegates will be asked to provide a mouthwash sample for genetic testing. |
| 8:00 am – 8:45 am | Genomics 101: What Every Healthcare Provider Needs to Know  
*Thomas C. Spelsberg, Ph.D.* |
| 8:45 am – 9:30 am | Individuality at the Genomic Level: A Basis for Diagnostics  
*Eric D. Wieben, Ph.D.* |
| 9:30 am – 10:00 am | Break/Exhibits/Mouthwash Sampling |
| 10:00 am – 10:40 am | Evolution of the Genetic Test  
*W. Edward Highsmith Jr., Ph.D.* |
| 10:40 am – 11:20 am | Appropriate Use of Genetic Tests in Clinical Practice  
*Jay W. Ellison, M.D., Ph.D.* |
| 11:20 am – 12:00 noon | Ethical and Legal Issues Associated with Genetic Testing  
*Christopher C. Hook, M.D.*  
*Trudi N. Trysla, J.D.* |
| 12:00 noon – 1:00 pm | Lunch |
| 1:00 pm – 5:00 pm | Concurrent Workshops (1 hour each)  
**A:** Genetic Counseling Experience  
Role-playing session involving pre-selected counseling scenarios (breast cancer, hemochromatosis, multiple endocrine neoplasia) conducted by Mayo Clinic genetic counselors.  
Facilitator: *David B. Schowalter, M.D., Ph.D.* |
|               | **B:** Clinical Vignettes – Case Examples Used to Address Issues of Appropriate Genetic Testing  
Interactive sessions using a real-time audience response system. Cases include hemochromatosis, cardiovascular disease, colon cancer, Huntington’s disease and hematological malignancy.  
Facilitators: *Mayo Clinic Faculty* |
|               | **C:** Controversies in Genomics: Are You a Racially-Profiling Doctor?  
Designed to explore the link between genetics and race/ethnicity, this session will critically examine the controversial question of whether or not race is a clinically useful diagnostic tool using examples from different medical specialties.  
Facilitators: *Jay W. Ellison, MD, Ph.D.* and *Alan R. Thorhill, Ph.D.* |
|               | **D:** Exhibits |
| 5:30 pm – 7:00 pm | Dinner |
| 7:00 pm – 8:30 pm | The Gift – A Play by Nicola Baldwin  
Sponsored by the Mayo Center for Humanities in Medicine |
**TUESDAY, OCTOBER 7, 2003**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>7:30 am – 8:00 am</td>
<td>Breakfast</td>
</tr>
<tr>
<td>8:00 am – 8:45 am</td>
<td>Pharmacogenomics: The Promise of Individualized Drug Therapy&lt;br&gt;<strong>Richard M. Weinshilboum, M.D.</strong></td>
</tr>
<tr>
<td>8:45 am – 9:45 am</td>
<td>Keynote Address: Genomes and Human Health&lt;br&gt;<strong>Allan Bradley, Ph.D.</strong></td>
</tr>
<tr>
<td>9:45 am – 10:15 am</td>
<td>Break/Exhibits</td>
</tr>
<tr>
<td>10:15 am – 10:45 am</td>
<td>Better Diagnosis: The Promise of Transcriptomics (Arrays and Bioinformatics)&lt;br&gt;<strong>Dennis J. O’Kane, Ph.D.</strong></td>
</tr>
<tr>
<td>11:15 am – 12:00 noon</td>
<td>Beyond Genomics: The Promise of Proteomics&lt;br&gt;<strong>David C. Muddiman, Ph.D.</strong></td>
</tr>
<tr>
<td>12:00 noon – 1:30 pm</td>
<td>Luncheon <em>(Sponsored by the Mayo Genomics Research Center)</em>&lt;br&gt;During lunch results of real-time genetic tests on delegate mouthwash samples will be provided.&lt;br&gt;<em>Facilitated by W. Edward Highsmith, Jr. Ph.D.</em></td>
</tr>
</tbody>
</table>

**CME COURSE FORMALLY ENDS HERE**

<table>
<thead>
<tr>
<th>1:30 pm – 5:30 pm</th>
<th>SPECIAL AFTERNOON SESSION&lt;br&gt;<em>The Road to Future Medicine</em>&lt;br&gt;<em>(An Introduction to the Mayo Genomics Research Center)</em>&lt;br&gt;Free to all delegates (and Mayo Staff not attending the course)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30 pm – 1:35 pm</td>
<td>Introduction to Genomics Research at Mayo Clinic&lt;br&gt;<strong>Eric D. Wieben, Ph.D.</strong></td>
</tr>
<tr>
<td>1:35 pm – 1:45 pm</td>
<td>Bioinformatics and Informatics at Mayo Clinic&lt;br&gt;<strong>Sherine E. Gabriel, M.D.</strong></td>
</tr>
<tr>
<td>1:45 pm – 2:30 pm</td>
<td>Bioinformatics Resources at Mayo Clinic&lt;br&gt;<strong>John E. Carpenter, Ph.D.</strong>&lt;br&gt;<strong>Terry M. Therneau, Ph.D.</strong></td>
</tr>
<tr>
<td>2:30 pm – 3:15 pm</td>
<td>Overview and Real-Time Demonstration of the Mayo/IBM Collaboration&lt;br&gt;<strong>Piet C. de Groen, M.D.</strong></td>
</tr>
<tr>
<td>3:15 pm – 3:45 pm</td>
<td>Break/Exhibits</td>
</tr>
<tr>
<td>3:45 pm – 4:15 pm</td>
<td>Mayo/Eisenberg Genomics Education Program (Strategies and Resources)&lt;br&gt;<strong>Ayalew Tefferi, M.D.</strong>&lt;br&gt;<strong>Mark E. Bolander, M.D.</strong></td>
</tr>
<tr>
<td>4:15 pm – 5:00 pm</td>
<td>Developing a Population-Based DNA Tissue Bank&lt;br&gt;<strong>David B. Schowalter M.D., Ph.D.</strong>&lt;br&gt;<strong>Gloria M. Peterson, Ph.D.</strong>&lt;br&gt;<strong>Lester E. Wold, M.D.</strong></td>
</tr>
<tr>
<td>5:00 pm – 5:30 pm</td>
<td>Tour of Genomics Technology Area (Guggenheim 10) – Optional Hosted by staff of the Genomics Research Center</td>
</tr>
</tbody>
</table>

**END OF CONFERENCE**
Genomics in Clinical Practice

Genetic Testing: Past, Present & Future

October 6 -7, 2003

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

Telephone: 800-323-2688
FAX: 507-284-0532
Web Site: www.mayo.edu
E-Mail: cme@mayo.edu

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

Name__________________________________________Degree ____________________
Institution ____________________________________________________________________
Medical Specialty________________________________________________________________
E-mail Address__________________________________________________________________
Which do you prefer to be your mailing address: ☐ Work/Business ☐ Home
Work Address__________________________________________________________________
City________________________________State/PV_______ZIP/Postal Code_______Country____
Home address__________________________________________________________________
City________________________________State/PV_______ZIP/Postal Code_______Country____
Home Telephone (______)________________ Business Telephone (______)_______________
Int’l Telephone (Country code)____________(City code)_________Phone___________________
FAX____________________________________________________________________________
Type of credit that you are interested in receiving: ☐ AMA/Category 1 ☐ APA

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

PAYMENT

Registration Fee:
Physicians – $360 $ __________
Residents, Physician Assistants and Nurse Practitioners – $180 $ __________
Total Payment Enclosed: $ __________

☐ Check (payable to Mayo Foundation) ☐ Visa ☐ MasterCard ☐ Discover

Card Number __________ Expiration date MO/yr __________
Signature __________________ Date __________
Genomics in Clinical Practice

Genetic Testing: Past, Present & Future

October 6 – 7, 2003

Phillips Hall
Siebens Medical Education Building
Rochester, Minnesota

Presented by:
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