Psychiatric Genomics: Applications for Clinical Practice

August 4 – 8, 2003

Siebens Building
Rochester, Minnesota
COURSE DESCRIPTION

The course offers a broad array of lecture topics beginning with a review of basic genomics and progressing to clinical applications. The course is designed for individuals with an interest in understanding the ways in which genes not only affect mental illness, but impact disease course and prognosis. Pharmacogenetic principles that guide the treatment of psychiatric illness will be specifically highlighted.

INTENDED AUDIENCE

The target audience will be psychiatrists, psychologists, other mental health workers, neurologists, and medical geneticists interested in the genomic influences on psychiatric illnesses including bipolar disorder, schizophrenia, chemical dependency and major depressive disorder. Special requirements are a strong interest in genomics, an understanding of genetics, and an awareness of the human genome projects.

COURSE LEARNING OBJECTIVES

• Explain the importance of polymorphisms in human psychiatric disease and their usefulness in devising treatment strategies.
• Describe genetic markers such as RFLPs and SNPs.
• Identify genetic diseases where chromosomal aberrations correlate with abnormal behavior.
• Identify two of the ethical, legal, and social implications of the genomic revolution.
• Explain two uses of microarray technology in psychogenomic research.
• Interpret genetic test results and communicate the findings to patients and families.

Attendance at this Mayo course does not indicate or guarantee competence or proficiency in the performance of any procedures which may be discussed or taught in this course.

COURSE HIGHLIGHTS

• Visit a research laboratory and observe PCR, electrophoresis, screening of a human cDNA library for newly predicted genes identified as a result of the human genome project and observe a microarray demonstration.
• Learn how to use publicly-available bioinformatics databases to search for information about genetic influences on psychiatric illnesses.
• Participate in a clinic for patients with genetic diseases with neuropsychiatric features.
• Interactive audience response system will be used to enhance interaction between faculty and attendees.
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 32.75 category 1 credit towards the AMA Physician’s Recognition Award. Each physician should claim only those credits that he/she actually spent in the educational activity.

DATE AND LOCATION

The Psychiatric Genomics course will be held August 4 – 8, 2003. Course headquarters will be located in Leighton Auditorium on the second floor of the Siebens Medical Education Building, Mayo Clinic, 100 Second Avenue SW, Rochester, Minnesota. Meeting facilities are easily accessible by skyway and pedestrian subway, which connect Mayo Clinic to shops, theaters, restaurants, and hotels.

TRAVEL ARRANGEMENTS

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.

American Airlines is the official carrier for this Mayo course. Reduced airfares are available for participants by calling American Airlines at 800-433-1790/817-267-2222 or contact Lynn at Corporate Travel, phone 507-287-7468 or e-mail Lynn@ctsrst.com. Please reference this course under star file #S9988 by destination and date. Corporate Travel can also assist you with ground transportation.

For participants arriving via the Minneapolis/St. Paul International Airport, there is shuttle service to Rochester available through Rochester Direct. For reservations and further information call 507-280-9270.

REGISTRATION

To register, complete the attached registration form and return by mail or fax. The registration fee for physicians of $800 (or $700 if paid by June 1) and $200 (residents & students) includes tuition, comprehensive course syllabus, continental breakfasts and all break refreshments, lunch on Monday and Tuesday, opening night reception for attendee and a guest, course dinner, and tours. The cost for parking is not included in the registration fee. Early registration is strongly advised. A letter of confirmation will be sent upon receipt of payment and completed registration form. Please present your confirmation letter when checking in at the meeting registration desk.
CANCELLATION POLICY

Your registration fee, less a $75 administrative fee, will be refunded when written notification is received by the Mayo School of Continuing Medical Education before July 21, 2003. No refunds will be made after July 21, 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 July 13, 2003, and identify yourself as a participant in the Mayo Clinic Psychiatric Genomics course.

<table>
<thead>
<tr>
<th>Hotel</th>
<th>Address</th>
<th>Phone Numbers</th>
<th>Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hilton Garden Inn</td>
<td>225 South Broadway SW</td>
<td>800-445-8667 or 507-285-1234</td>
<td>$85 single/double</td>
</tr>
<tr>
<td>Radisson Plaza Hotel</td>
<td>150 South Broadway SW</td>
<td>800-333-3333 or 507-281-8000</td>
<td>$89 single/double</td>
</tr>
<tr>
<td>Rochester Marriott Hotel</td>
<td>101 First Avenue SW</td>
<td>877-623-7775 or 507-280-6000</td>
<td>$129 single/double</td>
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</tbody>
</table>

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.

EDUCATIONAL GRANTS

This course is supported in part by educational grants in accordance with ACCME Standards. At the time of this printing, a complete listing of commercial supporters was not available. Appropriate acknowledgment will be given to all supporters at the time of the meeting.

FOR MORE INFORMATION

Phone: 800-323-2688 or 507-323-2688  
Web site: http://www.mayo.edu/cme/psych.htm  
FAX: 507-284-0532  
E-mail: cme@mayo.edu
FACULTY

Mayo Clinic Course Director
David A. Mrazek, M.D., F.R.C.Psych.

Mayo Clinic Course Co-Directors
John L. Black III, M.D.
Brett A. Koplin, M.D.

Mayo Clinic Faculty
Steven I. Aletchuler, M.D., Ph.D.  David A. Mrazek, M.D.
Gordon W. Dewald, Ph.D.        Dennis J. O’Kane, Ph.D.
Peter L. Elkin, M.D., Ph.D.     Stephen J. Russell, M.D., Ph.D.
William E. Highsmith, Ph.D.     Daniel J. Schaid, Ph.D.
C. Christopher Hook, M.D.       Stefanie A. Schwartz, Ph.D.
Noralane M. Lintor, M.D.         Eric D. Wieben, Ph.D.
Demetrius M. (Jim) Maraganore, M.D.

Guest Faculty
James T. McCracken, M.D.
Professor in Residence and Director
Division of Child and Adolescent Psychiatry
UCLA Neuropsychiatric Institute and Hospital

Ricardo Mendoza, M.D.
Professor of Psychiatry
UCLA School of Medicine
Director, Adult Ambulatory Services
Harbor-UCLA

David L. Pauls, Ph.D.
Director, Laboratory of Psychiatric and Neurodevelopmental Genetics
Massachusetts General Hospital
Harvard Medical School

Professor of Behavioral & Brain Sciences
Behavioral & Brain Sciences Unit
Institute of Child Health
United Kingdom

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.
MONDAY, AUGUST 4, 2003

7:00 a.m. Registration and Continental Breakfast  
**Leighton Auditorium Foyer**  
**Siebens Medical Education Building, 2nd Floor**

8:00 a.m. Welcome and Announcements  
*David A. Mrazek, M.D., F.R.C.Psych.*, and *Brett A. Koplin, M.D.*  
**Leighton Auditorium**  
**Siebens Medical Education Building, 2nd Floor**

8:15 a.m. A Review of Basic Genomics by the Institutional Genomics Educational Task Force  
*Eric D. Wieben, Ph.D.*  
*Gordon W. Dewald, Ph.D.*

9:30 a.m. Discussion

9:45 a.m. Refreshment Break

10:00 a.m. A Review of Basic Genomics by the Institutional Genomics Educational Task Force (continued)

11:30 a.m. Panel Discussion, Question and Answer

12:00 p.m. Lunch Provided

1:30 p.m. Description and Analysis of the Human Genome  
*Eric D. Wieben, Ph.D.*

2:30 p.m. Refreshment Break

3:00 p.m. Bioinformatics: Basic Review  
*Peter L. Elkin, M.D., Ph.D.*

3:45 p.m. P450 Microarray to Assess Atypical Drug Responses  
*David A. Mrazek, M.D., F.R.C.Psych.*

5:00 p.m. Adjourn

7:30 – 9:00 p.m. Opening Night Reception

TUESDAY, AUGUST 5, 2003

7:00 a.m.  
Continental Breakfast  
**Leighton Auditorium Foyer**  
**Siebens Medical Education Building-Second Floor**

8:00 a.m. Introduction to Psychiatric Genetics (Part 1)  
*David A. Mrazek, M.D., F.R.C.Psych.*  
**Leighton Auditorium**

9:00 a.m. Pharmacogenomics of the Antipsychotic Response  
*James T. McCracken, M.D.*

10:00 a.m. Refreshment Break

10:15 a.m. Cytochrome p450 2D6 Polymorphisms/Duplications and Serotonin Uptake Inhibitor Response in OCD: A Pilot Study  
*Stefanie A. Schwartz, Ph.D.*

11:15 a.m. The Development of Psychiatric Genomics  
*David L. Pauls, Ph.D.*  
Box Lunch Provided

12:30 p.m. Population Genetics, Linkage, and Complex Trait Analysis: Statistical Analysis  
*Daniel J. Schaid, Ph.D.*
### May 1, 2003

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>1:00 p.m.</td>
<td>Question and Answer</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>Transport time from Leighton Auditorium to Bioinformatics Computer Laboratory</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td>Bioinformatics Laboratory</td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>Clinical Applications</td>
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<tr>
<td></td>
<td>Peter L. Elkin, M.D., Ph.D.</td>
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<tr>
<td>4:30 p.m.</td>
<td>Adjourn</td>
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</tbody>
</table>

### Wednesday, August 6, 2003

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>7:00 a.m.</td>
<td>Continental Breakfast</td>
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<tr>
<td>8:00 a.m.</td>
<td>Molecular Diagnostic Strategies</td>
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<td>William E. Highsmith, Ph.D.</td>
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<tr>
<td>9:00 a.m.</td>
<td>Huntington’s Disease: An Example of Psychiatric Genomics – Medical Genetics</td>
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<td></td>
<td>Noralane M. Lindor, M.D., and Steven I. Altchuler, M.D., Ph.D.</td>
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<tr>
<td>10:30 a.m.</td>
<td>Refreshment Break</td>
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<tr>
<td></td>
<td>Group Picture</td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td>The Genetics of Obsessive Compulsive Disorder</td>
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<td></td>
<td>David L. Pauls, Ph.D.</td>
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<tr>
<td>12:00 p.m.</td>
<td>Lunch On Your Own</td>
</tr>
<tr>
<td>1:30 p.m.</td>
<td>X Chromosome Syndromes</td>
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<td>Professor David H. Skuse, M.D., F.R.C.P., F.R.C.Psych., F.R.C.P.C.H.</td>
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<tr>
<td>2:45 p.m.</td>
<td>Refreshment Break</td>
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<tr>
<td>3:00 p.m.</td>
<td>Clinical Correlation Case Conferences – Huntington’s Chorea</td>
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<td>Steven I. Altchuler, M.D., Ph.D., and Noralane M. Lindor, M.D.</td>
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<tr>
<td>4:30 p.m.</td>
<td>Adjourn</td>
</tr>
<tr>
<td>5:00 p.m.</td>
<td>Optional Tour of Generose Hospital and Research Facilities</td>
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<tr>
<td>6:00 p.m.</td>
<td>Informal Reception after Optional Tour</td>
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<tr>
<td>Time</td>
<td>Event</td>
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<tr>
<td>7:00 a.m.</td>
<td>Continental Breakfast</td>
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<tr>
<td>8:00 a.m.</td>
<td>Treatment of Genetic Diseases and Gene Therapy</td>
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<tr>
<td>9:00 a.m.</td>
<td>Consideration of 2D6 Variability across Hispanic Samples</td>
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<tr>
<td>10:00 a.m.</td>
<td>Refreshment Break</td>
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<tr>
<td>10:15 a.m.</td>
<td>Primer on New Laboratory Technologies</td>
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<tr>
<td>11:45 a.m.</td>
<td>Question and Answer</td>
</tr>
<tr>
<td>12:00 p.m.</td>
<td>Lunch On Your Own</td>
</tr>
<tr>
<td>1:00 p.m.</td>
<td>Informative Polymorphisms Affecting Risk for Addictions</td>
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<tr>
<td>2:30 p.m.</td>
<td>Discussion</td>
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<tr>
<td>2:45 p.m.</td>
<td>Refreshment Break</td>
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<tr>
<td>3:00 p.m.</td>
<td>Optional Laboratory Tour – Molecular Genetics and Microarray Facility</td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>Discussion</td>
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<tr>
<td>5:00 p.m.</td>
<td>Adjourn</td>
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<tr>
<td>6:00 p.m.</td>
<td>Wine Reception</td>
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<tr>
<td>6:30 - 7:00 p.m.</td>
<td>Course Dinner</td>
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<tr>
<td>7:00 p.m.</td>
<td>ELSI Discussion</td>
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<td></td>
<td>Ethical, Legal and Societal Implications of the Human Genome Project</td>
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**THURSDAY, AUGUST 7, 2003**

**FRIDAY, AUGUST 8, 2003**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>7:00 a.m.</td>
<td>Continental Breakfast</td>
<td></td>
</tr>
<tr>
<td>8:00 a.m.</td>
<td>Announcements</td>
<td></td>
</tr>
<tr>
<td>8:15 a.m.</td>
<td>Current Findings in the Genetics of ADHD: Potential Treatment Targets</td>
<td><em>James T. McCracken, M.D.</em></td>
</tr>
<tr>
<td>9:15 a.m.</td>
<td>New Approaches to the Genetic Study of Complex Diseases: The Example of Parkinson’s Disease</td>
<td><em>Demetrius M. (Jim) Maraganore, M.D.</em></td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td>Refreshment Break</td>
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</tr>
<tr>
<td>11:00 a.m.</td>
<td>New Directions in Psychogenomic Research</td>
<td><em>Professor David H. Skuse, M.D., F.R.C.P., F.R.C.Psych., F.R.C.P.C.H.</em></td>
</tr>
<tr>
<td>11:50 a.m.</td>
<td>Panel Discussion, Question and Answer</td>
<td></td>
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<tr>
<td>12:00 a.m.</td>
<td>Final Comments and Feedback</td>
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<tr>
<td>12:30 p.m.</td>
<td>Adjourn</td>
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Psychiatric Genomics: Applications in Clinical Practice
August 4 – 8, 2003

Leighton Auditorium, Siebens Medical Education Building, Rochester, MN

To register complete the registration form and return by mail or fax. The registration fee for physicians of $800 (or $700 if paid by June 1) and $200 (resident/student) includes tuition, comprehensive course syllabus, continental breakfasts & break refreshments Monday - Friday, lunch on Monday & Tuesday, opening night reception for you and a guest, course dinner, and the tours. Pre-registration is required. Registrants will receive a confirmation letter. Enrollment is limited; early registration is advised.

Mail form and payment to: Mayo School of Continuing Medical Education
200 First Street SW
Rochester, MN 55905
Phone: 800-323-2688 or 507-323-2688
FAX: 507-284-0532
Web site: http://www.mayo.edu/cme/psych.htm
E-mail: cme@mayo.edu

Registration Fees:
By June 1 After June 1
Physician: $700 $800
Residents: $200 $800
Guest Dinner Fee: $35 $35
Total Payment Enclosed: $___________

Payment Method: ☐ Check Enclosed (make checks payable to Mayo Foundation)
☐ Credit Card: ☐ Visa ☐ MasterCard ☐ Discover

Card Number  Expiration Date
Signature  Date

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

Name ___________________________________________ Degree ___________________________
Institution ________________________________________
Medical Specialty _________________________________
Which do you prefer to be your mailing address: ☐ Work/Business ☐ Home
Work Address ____________________________
City __________________ State/PC ZIP/PC Country __________________
Home address ____________________________
City __________________ State/PC ZIP/PC Country __________________
Home Telephone (______)________________ Business Telephone (______)________________
Intl Telephone (Country code)_________(City code)_________Phone____________________
FAX (______)__________________ E-mail_________________________________________

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

Attendee Reception, Monday, August 4, 2003
(The price is included in the registration fee.)
I Plan to Attend: ☐ Yes ☐ No
Will You Bring A Guest? ☐ Yes ☐ No
Total Number Attending: # ______

Bioinformatics Laboratories on Tuesday, August 5, 2003 @ 2:30-4:30 PM
Space is limited and registration is on a first come, first served basis.
Do You Plan to Attend? ☐ Yes ☐ No

Optional Tour of Generose Hospital & Research Facilities on Wednesday, August 6, 2003 @ 5:00 PM
Do You Plan to Attend? ☐ Yes ☐ No

Optional Laboratory Tour - Molecular Genetics and Microarray Facility on Thursday, August 7, 2003 @ 3:00 PM
Space is limited and registration is on a first come, first served basis.
Do You Plan to Attend? ☐ Yes ☐ No

Conference Dinner – Thursday, August 7, 2003 @ 6:00 PM
(Attendee price is included in the registration fee; guest fee = $35.00)
I Plan to Attend: ☐ Yes ☐ No
Will You Bring A Guest? ☐ Yes ☐ No
Total Number Attending: # ______
Mayo School of Continuing Medical Education
200 First St. S.W.
Rochester, MN  55905

Mayo Clinic
Psychiatric Genomics:
Applications for Clinical Practice

August 4 – 8, 2003

TO REGISTER
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