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 nor 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 throughout the course.
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 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.

DATE AND LOCATION

The Psychiatric Genomics course will be held July 29 – August 2, 2002. 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 the designated travel agency, AAA, at 800-888-5908. Please reference this course under star file #S9988 by destination and date. AAA can also assist you with ground transportation.

REGISTRATION

To register, complete the attached registration form and return by mail or fax. The registration fee of $800 (clinicians & researchers) and $600 (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. 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.
CANCELATION 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 15, 2002. No refunds will be made after July 15, 2002.

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 in the Psychiatric Genomics course.

<table>
<thead>
<tr>
<th>Hotel</th>
<th>Address</th>
<th>Phone 1</th>
<th>Phone 2</th>
<th>Room Rate</th>
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</thead>
<tbody>
<tr>
<td>Hilton Garden Inn</td>
<td>225 South Broadway SW</td>
<td>800-445-8667 or 507-285-1234</td>
<td>$79 single/double</td>
<td></td>
</tr>
<tr>
<td>Kahler Grand Hotel</td>
<td>20 Second Avenue SW</td>
<td>800-533-1655 or 507-282-2581</td>
<td>$79 single/double</td>
<td></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>
<td></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>
<td></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  FAX: 507-284-0532
Web site: http://www.mayo.edu/cme  E-mail: cme@mayo.edu
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Co-Directors
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Brett A. Koplin, M.D.

Mayo Clinic Faculty
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J. Michael Bostwick, M.D.
John L. Black III, M.D.
Gordon W. Dewald, Ph.D.
Peter L. Elkin, M.D., Ph.D.
Daniel K. Hall-Flavin, M.D.
Christopher C. Hook, M.D.
Noralane M. Lindor, M.D.
Demetrius M. (Jim) Maraganore, M.D.

Cynthia T. McMurray, Ph.D.
Dennis J. O’Kane, Ph.D.
Steven Russell, M.D.
Daniel J. Schaid, Ph.D.
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David Whiteman, M.D.
Eric D. Wieben, Ph.D.

Guest Faculty
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Massachusetts General Hospital
Harvard Medical School

David H. Skuse, M.D., F.R.C.P., F.R.C.Psych, F.R.C.P.C.H.
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.
Program Schedule

MONDAY, JULY 29, 2002

7:00 a.m.  Registration and Continental Breakfast
8:00 a.m.  Welcome and Announcements
            David A. Mrazek, M.D.; John L. Black III, M.D.; and Brett A. Koplin, M.D.
8:15 a.m.  A Review of Basic Genomics by the Institutional Genomics
            Educational Task Force
            Gordon W. Dewald, Ph.D. and Eric D. Wieben, 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.  A Review of Basic Genomics by the Institutional Genomics
            Educational Task Force (continued)
2:30 p.m.  Refreshment Break
3:00 p.m.  Population Genetics, Linkage, and Complex Trait Analysis:
            Statistical Analysis
            Daniel J. Schaid, Ph.D.
4:30 p.m.  Question and Answer
5:00 p.m.  Adjourn
7:30 – 9:00 p.m. Opening Night Reception

TUESDAY, JULY 30, 2002

7:00 a.m.  Continental Breakfast
8:00 a.m.  Introduction to Psychiatric Genetics
            David A. Mrazek, M.D.
9:00 a.m.  Introduction to Psychiatric Genetics
            John L. Black III, M.D.
10:00 a.m. Refreshment Break
10:15 a.m. Bioinformatics: Basic Review
            Peter L. Elkin, M.D., Ph.D.
11:00 a.m. The Voltage-Gated Calcium Channel γ Subunit Story: From
            Bioinformatics to Testing Clinical Hypotheses
            John L. Black III, M.D.
12:15     Keynote Speaker – Clinical Applications of Genomics in Psychiatry
            David L. Pauls, Ph.D.
            Box Lunch Provided
1:30 p.m.  Transport time from Grand Rounds to Bioinformatics Laboratory
2:30 – 4:30 p.m. Bioinformatics Laboratory (seating is limited)
            • Basic Research/Translational Research Applications
              Peter L. Elkin, M.D., Ph.D.
            • Clinical Applications
              David Whiteman, M.D.
3:00 p.m.  Optional Tour of the Mayo Clinic for those not registered for
            Bioinformatics Laboratory
4:30 p.m.  Adjourn
WEDNESDAY, JULY 31, 2002

7:00 a.m.  Continental Breakfast

8:00 a.m.  Molecular Diagnostic Strategies  
Karen Snow-Bailey, Ph.D.

9:00 a.m.  Huntington’s Disease: An Example of Psychiatric Genomics –
Medical Genetics
Noralane M. Lindor, M.D., Steven I. Altchuler, M.D., Ph.D.,
Cynthia T. McMurray, Ph.D.

10:30 a.m.  Refreshment Break  
Group Picture

11:00 a.m.  The Genetics of Obsessive Compulsive Disorder  
David L. Pauls, Ph.D.

12:00 p.m.  Lunch On Your Own

1:30 p.m.  Keynote Speaker  
X Chromosome Syndromes
David H. Skuse, M.D., F.R.C.P., F.R.C.Psych, F.R.C.P.C.H.

2:45 p.m.  Refreshment Break

3:00 p.m.  Clinical Correlation Case Conferences – Bipolar Disorder and
Huntington’s Chorea
David A. Mrazek, M.D.; Steven I. Altchuler, M.D., Ph.D.; and
Noralane M. Lindor, M.D.

5:00 p.m.  Optional Tour of Generose Hospital and Research Facilities

5:30 p.m.  Informal Reception after Optional Tour

6:00 p.m.  Adjourn
THURSDAY, AUGUST 1, 2002

7:00 a.m. Continental Breakfast
8:00 a.m. Treatment of Genetic Diseases and Gene Therapy
Steven Russell, M.D.
9:00 a.m. Psychiatric Pharmacogenomics: Drug Targets
Richard M. Weinshilboim, M.D.
9:30 a.m. Break
9:45 a.m. Primer on New Laboratory Technologies
Dennis J. O’Kane, Ph.D.
11:45 a.m. Question and Answer
12:00 p.m. Lunch On Your Own
1:00 p.m. Addictions
Daniel K. Hall-Flavin, M.D.
2:30 p.m. Discussion
2:45 p.m. Refreshment Break
3:00 p.m. Optional Laboratory Tour – Molecular Genetics and Psychogenomics Laboratories and Microarray Facility
4:30 p.m. Discussion
5:00 p.m. Adjourn
6:00 p.m. Wine Reception
6:30 - 7:00 p.m. Course Dinner
7:00 p.m. ELSI Discussion
Ethical, Legal and Societal Implications (ELSI) of the Human Genome Project
Christopher C. Hook, M.D. and David A. Mrazek, M.D.

FRIDAY, AUGUST 2, 2002

7:00 a.m. Continental Breakfast
8:00 a.m. Announcements
8:15 a.m. Ongoing Research and Psychiatric Genomics in the Department of Psychiatry and Psychology
David A. Mrazek, M.D.
• P450 Microarray to Assess Atypical Drug Responses
David A. Mrazek, M.D.
• Suicide Microarray
John L. Black III, M.D. and J. Michael Bostwick, M.D.
• Parkinson's Disease
Demetrius M. (Jim) Maraganore, M.D.
• Prodynorphin Gene in Schizophrenia
Cynthia T. McMurray, Ph.D.
10:00 a.m. Refreshment Break
10:15 a.m. Keynote Speaker – New Directions in Psychogenomic Research
David H. Skuse, M.D., F.R.C.P., F.R.C.Psych, F.R.C.P.C.H.
11:30 a.m. Panel Discussion, Question and Answer
11:45 a.m. Final Comments and Feedback
12:00 p.m. Adjourn
Psychiatric Genomics: Applications in Clinical Practice
July 29-August 2, 2002

Leighton Auditorium, Siebens Medical Education Building, Rochester, MN

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
E-mail: cme@mayo.edu

Registration Fees:
Clinicians & Researchers: $800 $___________
Residents & Students: $600 $___________
Guest Dinner Fee: $35 $___________
Total Payment Enclosed: $___________

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

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Name_________________________________________Degree________________________
Institution_______________________________________________________________________
Medical Specialty______________________________________________________________
Work Address____________________________________________________________________
City_________________________State/PV_________________ZIP/PC________ZIP/PC________
Country________
Home Address____________________________________________________________________
City_________________________State/PV_________________ZIP/PC________ZIP/PC________
Country________
Home Telephone (______)________________ Business Telephone (______)________________
Int’l 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:
__________________________________________________

Bioinformatics Laboratories on Tuesday, July 30, 2002 @ 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
If yes, indicate your first choice: ☐ Basic Research/Translational Research Applications
☐ Clinical Applications

Optional Laboratory Tour - Molecular Genetics and Psychogenomics Labs and Microarray Facility on Thursday,
August 1, 2002 @ 3:00 PM Space is limited and registration is on a first come, first served basis.
Do You Plan to Attend? ☐ Yes ☐ No

Optional Tour of the Mayo Clinic on Tuesday, July 30, 2002 @ 3:00 PM
Space is limited and registration is on a first come, first served basis.
Do You Plan to Attend? ☐ Yes ☐ No

Optional Tour of Genesee Hospital & Research Facilities on Wednesday, July 31, 2002 @ 5:00 PM
Do You Plan to Attend? ☐ Yes ☐ No

Opening Night Reception on Monday, July 29, 2002 @ 6:00 PM (The price is included in the registration fee.)
Do You Plan to Attend? ☐ Yes ☐ No
Will You Bring a Guest? ☐ Yes ☐ No Total number attending: #__________

Course Dinner on Thursday, August 1, 2002 @ 6:00 PM (Attendee price is included in the registration fee, guest fee is $35.)
Do You Plan to Attend? ☐ Yes ☐ No
Will You Bring a Guest? ☐ Yes ☐ No Total number attending: #__________

Registration Fees: Clinicians & Researchers: $800 $___________
Residents & Students: $600 $___________
Guest Dinner Fee: $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