

Target Audience

The course is designed for health related professionals and other scientists with an interest in neuroscience and autism.

Note: No Continuing Education credit is available for this program.

Symposium Information

The goal of this symposium is to provide a cohesive forum on the latest anatomical approaches to understanding the basic components of cortical modularity and their involvement in different pathological states, e.g., autism. The symposium seeks to encourage communication and in-depth discussion of a broad range of subjects under the unifying theme of cortical modularity. The topics to be covered at the conference span a wide spectrum of resolution, that is, from minicolumns and their parcellation into different components (e.g., apical dendritic bundles) all the way to macrocolumns and networks of the same. The program includes internationally recognized leaders and talented new investigators. By bringing together these researchers the symposium will: 1) help coalesce apparently disparate subjects under the umbrella of cortical modularity and 2) develop a focused group with a coherent view on how to identify cortical modules and their basic components.

Learning Objectives

1. The central goal of the symposium is to present the latest information on the anatomy, genetics and epigenetic mechanisms mediating cortical modularity with a special emphasis on the minicolumnar phenotype.
2. To provide a forum for developing a comprehensive strategy critically required to move the field forwards. Outstanding speakers and chairs who are the most seminal contributors to this field have been recruited to help define and analyze important issues, present technological and scientific advances in this area, highlight areas in need of urgent attention, and develop a road map for the future development of future studies on cortical modularity.
3. To provide an opportunity to foster information exchange and training for undergraduate and graduate neuroscience students. The symposium is meant to provide students with useful information in regards to molecular neurobiology, neurophysiology, neuroanatomy, neurobiology of disease, systems neuroscience, and computational neuroscience. For some students participation in the symposium will help them define a field of interest, identify some of the crucial problems within the field, and to formulate comprehensive strategies for studying these problems. Lectures will be videotaped for future reference in our training program.

Agenda

Friday, October 12, 2007

7:00 p.m. **Reception, Dinner and Keynote Speech:
Creating Creativity in the Cortex**
William Calvin, Ph.D.

Saturday, October 13, 2007

7:30 a.m. Breakfast

8:30 a.m. **Cortical Pyramidal Neurons and Minicolumns**
Javier DeFelipe, M.D.

9:30 a.m. Break

9:45 a.m. **A Lifetime of Neurogenesis in the Primate Cortex**
David Kornack, Ph.D.

10:30 a.m. Break

10:45 a.m. **Principles of Brain Wiring: From Module to Mind**
Michel Hofman, Ph.D.

11:30 a.m. Break

11:45 a.m. **Regulation of Cortical Neuron Number by FGF:
Implications for Autism-Spectrum Disorders**
Flora Vaccarino, M.D.

12:30 p.m. Lunch

1:30 p.m. **Quantitative Architectural Analysis: A New
Approach to Cortical Mapping**
Axel Schleicher, Ph.D.

2:15 p.m. Break

2:30 p.m. **A Functional Role for the Minicolumn in Cortical
Population Coding**
Gerard Rinkus, Ph.D.

3:15 p.m. Break

Agenda-continued

3:45 p.m. **Cortical Region Size Linked to Aging of Cortical
Minicolumns**
Steven Chance, M.D.

4:30 p.m. **In Utero Cocaine Exposure Permanently Alters
Behaviorally Relevant Brain Circuits**
Gregg Stanwood, Ph.D.

5:15 p.m. Saturday Program Adjourns

7:15 p.m. Appetizers

8:00 p.m. Dinner

Sunday, October 14, 2007

7:30 a.m. Breakfast

8:30 a.m. **The Role of Cortical Modularity in Tactile
Information Processing**
Mark Tommerdahl, Ph.D.

9:15 a.m. Break

9:30 a.m. **Cortex, Connectivity, and Neuronal Organization
in Autism**
Nancy Minshew, M.D.

10:15 a.m. Break

10:30 a.m. **The Intense World Syndrome as an Alternative
Theory of Autism**
Kamila Markram, Ph.D.

11:15 a.m. Break

11:30 a.m. **Role of Phosphodiesterases In Etiology and
Treatment of Autism**
S. Hossain Fatemi, Ph.D.

12:15 p.m. Lunch

1:30 p.m. **Cortical Modularity and Autism**
Manuel Casanova, M.D.

2:15 p.m. Evaluation and Adjournment

Faculty

William Calvin, Ph.D.

Affiliate Professor of Psychiatry and Behavioral Sciences University of Washington Seattle, Washington

Manuel Casanova, M.D.

Professor of Psychiatry Department of Psychiatry and Behavioral Sciences University of Louisville

Steven Chance, M.D.

Research Fellow in Clinical Neurology, West Wing, John Radcliffe Hospital Research Fellow in Psychiatry, SANE-POWIC, Warneford Hospital Tutor in Human Sciences, Linguistics Dept University of Oxford Oxford, England

Javier DeFelipe, M.D.

Professor Institution Cajal CSIC Madrid, Spain

S. Hossain Fatemi, Ph.D.

Professor of Psychiatry, Pharmacology & Neuroscience University of Minnesota Minneapolis, Minnesota

Michel Hofman, Ph.D.

Senior Research Scientist Netherlands Institute for Neuroscience, Royal Netherlands Academy of Arts and Sciences

David Kornack, Ph.D.

Assistant Professor Neurobiology and Anatomy University of Rochester Medical Center Rochester, NY

Kamila Markram, Ph.D.

Post-Doctorate at the Laboratory of Neural Ensemble Physiology, Brain Mind Institute, EPFL Lausanne, Switzerland

Gerard Rinkus, Ph.D.

Visiting Scientist - John Lisman's Lab Brandeis University Waltham, Massachusetts

Axel Schleicher, Ph.D.

Professor C & O Vogt Brain Research Institute Heinrich Heine University Dusseldorf, Germany

Gregg D. Stanwood, Ph.D.

Assistant Professor of Pharmacology Vanderbilt Kennedy Center for Research on Human Development Associate Director, Vanderbilt Murine Neurobehavioral Core Vanderbilt University Nashville, Tennessee

Mark Tommerdahl, Ph.D.

Associate Professor Dept. of Biomedical Engineering University of North Carolina Chapel Hill, North Carolina

Flora Vaccarino, M.D.

Associate Professor Child Study Center and Section of Neurobiology Yale University New Haven, Connecticut

Nancy J Minshew, M.D.

Professor of Psychiatry and Neurology University of Pittsburgh School of Medicine Pittsburgh, Pennsylvania

**CORTICAL MODULARITY IN AUTISM
REGISTRATION FORM**

**Saturday & Sunday, October 13-14, 2007
Jewish Hospital Rudd Heart & Lung Conference Center
200 Abraham Flexner Way, Louisville, KY**

Name/Title (Mr., Ms., Dr., etc.) _____
Institution/Dept. _____
Address _____
City/State _____ Country _____ Postal Code _____
Telephone _____ Fax _____
E-mail address _____

**Sat. & Sun. Registration Fee Is \$250 Per Person;
Friday Night Dinner Event Is \$50 Per Person**

<input type="checkbox"/> Sat. & Sun. Registration	\$250.00
<input type="checkbox"/> Dinner	\$50.00
<input type="checkbox"/> Dinner for Guest(s) \$50 each	_____
Total	_____

Method Of Payment:

Check enclosed; payable to University of Louisville
 MasterCard Visa Acct # _____ Exp.Date _____

Name on Card (please print) _____

Cardholder Signature (required) _____

Mail To: U of L HSC Continuing Education, 511 S. Floyd St., MDR Bldg., Room 111, Louisville, KY 40202;
Or Fax To: (502) 852-6300;
Or Register Online At: www.chse.louisville.edu/autism07.html

Cancellation Policy

Requests for cancellation must be e-mailed to chse@louisville.edu on or before Sept. 30, 2007. Requests sent on or before Sept. 30, 2007 will receive a full refund less a \$50 processing fee.



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Continuing Health Sciences Education
UNIVERSITY of LOUISVILLE
Health Sciences Center