



COLUMBIA UNIVERSITY

*College of Physicians
and Surgeons*



the Naomi Berrie **DIABETES CENTER**
Columbia University Medical Center
the care until the cure

16th Annual Conference

Frontiers in Diabetes Research

Next Wave Science in Diabetes and Obesity

Saturday, November 22, 2014



Course Directors

Domenico Accili, M.D., *Russell Berrie Foundation Professor of Medicine (in Diabetes); Director, Diabetes and Endocrinology Research Center, Columbia University College of Physicians & Surgeons, New York, New York*

Robin S. Goland, M.D., *J. Merrill Eastman Professor of Diabetes (in Medicine, Pediatrics, and the Naomi Berries Diabetes Center) at CUMC; Co-Director, Naomi Berrie Diabetes Center, Columbia University College of Physicians & Surgeons, New York, New York*

Rudolph L. Leibel, M.D., *Professor of Pediatrics and Medicine; Christopher J. Murphy Memorial Professor of Diabetes Research; Head, Division of Molecular Genetics; Co-Director, Naomi Berrie Diabetes Center, Columbia University College of Physicians & Surgeons, New York, New York*

Faculty

Wendy K. Chung, M.D., Ph.D., *Associate Professor of Pediatrics (in Medicine); Director of Clinical Genetics, Columbia University College of Physicians & Surgeons, New York, New York*

Ivan E. de Araujo, D.Phil., *Associate Professor of Psychiatry; Associate Fellow, The John B. Pierce Laboratory, Yale University School of Medicine, New Haven, Connecticut*

Kevin L. Grove, Ph.D., *Senior Scientist, Division of Reproductive and Developmental Science; Division Chief, Division of Diabetes, Obesity and Metabolism; Director, Obese NHP Resource, Oregon Health and Science University, Beaverton, Oregon*

Andrew T. Hattersley, M.D., *Professor of Molecular Medicine and Consultant Physician, University of Exeter Medical School, Exeter, United Kingdom*

Randal Kaufman, Ph.D., *Director, Degenerative Research Center for Neuroscience, Aging and Stem Cell Research, Sanford Burnham Medical Research Institute, La Jolla, California*

Ruth J.F. Loos, Ph.D., *Professor of Preventive Medicine; Director of the Genetics of Obesity and Related Metabolic Traits Program, Icahn School of Medicine at Mount Sinai, New York, New York*

Mark I. McCarthy, M.D., *Robert Turner Professor of Diabetic Medicine, University of Oxford, United Kingdom*

David M. Sabatini, M.D., Ph.D., *Investigator, Howard Hughes Medical Institute, Professor of Biology, Massachusetts Institute of Technology, Cambridge, Massachusetts*



Saturday, November 22, 2014

- 8:00 a.m. *Registration; Continental Breakfast*
- 8:45 a.m. Welcome and Introduction
Robin S. Goland, M.D. & Rudolph L. Leibel, M.D.
- 9:00 a.m. The Genetics of Obesity: Going Beyond Common Variants and Common Phenotypes
Ruth J.F. Loos, Ph.D.
- 9:30 a.m. Diamonds in the Dirt: Biological Insights and Translational Opportunities for Type 2 Diabetes in Large-scale Genetic and Genomic Data
Mark I. McCarthy, M.D.
- 10:00 a.m. Panel Discussion
- 10:15 a.m. *Refreshment Break*
- 10:35 a.m. Lessons Learned from Monogenic Forms of Diabetes
Wendy K. Chung, M.D., Ph.D.
- 11:05 a.m. Rare and Beautiful Diamonds: How Monogenic Neonatal Diabetes Can Give New Insights into T1D and T2D
Andrew T. Hattersley, M.D.
- 11:35 a.m. Panel Discussion
- 12:00 p.m. *Lunch*
- 1:15 p.m. Nutrient Sensing by the mTOR Growth Pathway
David M. Sabatini, M.D., Ph.D.
- 1:45 p.m. The Role of ER Stress in Molecular Aspects of the Metabolic Syndrome: NAFLD and Beta Cell Failure
Randal Kaufman, Ph.D.
- 2:15 p.m. Panel Discussion
- 2:30 p.m. *Refreshment Break*
- 2:50 p.m. Diamond in the Rough: The Use of Nonhuman Primates for Key Insights into the Pathogenesis and Treatment of Obesity and Diabetes
Kevin L. Grove, Ph.D.
- 3:20 p.m. Regulation of Brain Reward Circuitry by Glucose Metabolism
Ivan E. de Araujo, D.Phil.
- 3:50 p.m. Panel Discussion
- 4:05 p.m. General Discussion
Domenico Accili, M.D.
- 4:25 p.m. *Adjourn*

Program Description & Objectives

This one-day program at the Naomi Berrie Diabetes Center at Columbia University is designed for research scientists, clinicians and students with an interest in the latest insights with regard to the genetics of diabetes and obesity and the molecular physiology of the causes and consequences of these disorders.

At the conclusion of this activity, participants will be better able to:

- Identify advances in the technologies related to analysis of the genetics of human medical and metabolic phenotypes.
- Describe the latest insights into the genetics of diabetes and obesity.
- Identify the role of specific molecular processes such as ER stress and mTOR signalling in the relevant metabolic physiology.
- Discuss the application of brain imaging and long term nonhuman primate studies to these phenotypes.

The Naomi Berrie Diabetes Center

The Naomi Berrie Diabetes Center, combining premier family-centered patient care and education for children and adults with world-class research, opened in October 1998. The Center offers coordinated, multidisciplinary clinical care adults and children with diabetes. Educational, nutritional and psychosocial counseling help the patient and family to cope effectively with diabetes. Basic and clinical research programs at the Berrie Center focus on the biologic bases for diabetes and obesity. The Naomi Berrie Diabetes Center's commitment to patient care, research and education reflects its mission to improve the lives of people with diabetes and its dedication to finding a cure. For additional information, call the Center at (212) 851-5492 or visit our web site:

www.nbdiabetes.org

Additional Information

Contact: Center for Continuing Medical Education
Columbia University College of Physicians & Surgeons
630 West 168th Street, Unit 39
New York, NY 10032
Telephone: (212) 305-3334
Fax: (212) 305-5740
e-mail: cme@columbia.edu
<http://ColumbiaCME.org>

Meeting Location

Russ Berrie Medical Science Pavilion
Columbia University Medical Center
1150 St. Nicholas Avenue
1st Floor Conference Room
New York, New York 10032

Accreditation Statement

The College of Physicians and Surgeons of Columbia University is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

AMA Credit Designation Statement

The College of Physicians and Surgeons designates this live activity for a maximum of 5.5 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Tuition

Physicians & Research Scientists: \$150; Other Health Professionals: \$90; Residents & Fellows in training (with a letter from program director certifying status): \$50; Students (not affiliated with Columbia University): \$50; CUMC Faculty, Students & Staff (with valid I.D.): Free. The fee includes the academic presentations, continental breakfast, lunch, and refreshments. Confirmation of registration will be sent upon receipt of the registration form. Refund of registration fee, less a \$15 administrative charge, will be made if written notice of cancellation is received by November 12, 2014. No refunds can be made thereafter.

Registration

Space is Limited. Early Registration is Encouraged.

By Mail:

Complete the registration form and mail with full payment to:
**Columbia University
College of Physicians & Surgeons
Center for Continuing Medical Education
630 West 168th Street, Unit 39
New York, NY 10032**

On-Line:

<http://columbiacme.org>

**Telephone registrations and/or
cancellations are not accepted.**

Americans with Disabilities Act

The Columbia University College of Physicians and Surgeons fully complies with the legal requirements of the ADA and the rules and regulations thereof. Any participant with special needs must submit a written request to our office at least one month prior to the course date.

Registration Form

COLUMBIA UNIVERSITY

Diabetes
(Please print or type)

Last Name Degree

First Name Middle Initial

Address

City State Zip

Daytime Phone Daytime Fax

e-mail

Please note: Your e-mail address is used for critical information about the course including: registration confirmation, course evaluation and certificate. Please be sure to include an e-mail address you check daily or frequently.

Institution

Medicine PM 91
November 22, 2014
UR009055/5.5

- ☐ \$150 Physicians & Research Scientists
- ☐ \$90 Other Health Professionals
- ☐ \$50 Residents & Fellows in training
(with a letter from program director certifying status)
- ☐ \$50 Students
(not affiliated with Columbia University)
- ☐ Free CUMC Faculty, Students & Staff
(with valid I.D.)

☐ Enclosed is a check or money order made payable to
Columbia University
Checks must be in U.S. Dollars drawn on a U.S. bank.
Money Orders must be in U.S. Dollars.

For security purposes, credit card payments cannot be accepted by mail or fax. Please visit www.columbiacme.org to register and pay by credit card. American Express, Discover, MasterCard and Visa only.



Columbia University
College of Physicians & Surgeons
630 West 168th Street, Unit 39
New York, New York 10032

Frontiers in Diabetes Research

Next Wave Science in Diabetes and Obesity

Saturday, November 22, 2014

presented by the
Naomi Berrie Diabetes Center
Columbia University
College of Physicians & Surgeons