



COLUMBIA UNIVERSITY

*College of Physicians
and Surgeons*



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

20th Annual Conference

***Frontiers in Diabetes Research:
Biological Bases for Complications of
Diabetes***

Saturday, November 17, 2018



Course Directors

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

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

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

Utpal B. Pajvani, M.D., Ph.D., *Herbert Irving Assistant Professor of Medicine, Columbia University Vagelos College of Physicians and Surgeons, New York, New York*

Faculty

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

Dietrich Meinrad Egli, Ph.D., *Maimonides Assistant Professor of Developmental Cell Biology (in Pediatrics and Obstetrics and Gynecology), Columbia University Vagelos College of Physicians and Surgeons, New York, New York*

Thomas W. Gardner, M.D., M.S., *Senior Scholar, A. Alfred Taubman Medical Research Institute; Associate Chair, Research, Department of Ophthalmology and Visual Sciences; Professor, Ophthalmology and Visual Sciences; Professor, Internal Medicine - Metabolism, Endocrinology, and Diabetes; Professor, Molecular & Integrative Physiology, University of Michigan Kellogg Eye Center, Ann Arbor, Michigan*

Silvio E. Inzucchi, M.D., *Professor of Medicine (Endocrinology), Yale School of Medicine, Medical Director, Yale Diabetes Center, Yale-New Haven Hospital, New Haven, Connecticut*

Jose A. Luchsinger, M.D., M.P.H., *Associate Professor of Medicine and Epidemiology, Columbia University Vagelos College of Physicians and Surgeons, New York, New York*

David M. Nathan, M.D., *Professor of Medicine, Harvard Medical School; Director, Massachusetts General Hospital Diabetes Center, Boston, Massachusetts*

Bernd Schnabl, M.D., *Professor of Medicine, University of California, San Diego, La Jolla, California*

Katalin Susztak, M.D., Ph.D., *Professor of Medicine, Renal Electrolyte and Hypertension Division, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania*

Stephen H. Tsang, M.D., Ph.D., *Laszlo Z. Bito Associate Professor of Ophthalmology; Associate Professor of Pathology and Cell Biology, Columbia University Vagelos College of Physicians and Surgeons, New York, New York*



Saturday, November 17, 2018

- 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. Diabetic Complications: History, Epidemiology and Mechanisms in Patients with T1D and T2D
David M. Nathan, M.D.
- 9:30 a.m. Mechanisms of Macrovascular Disease in Diabetes, and Implications of Recent Cardiovascular Outcome Trials on Disease Management
Silvio E. Inzucchi, M.D.
- 10:00 a.m. Latest Advances in Stem Cell-based Interventions for Diabetes: How Close are We?
Dietrich Meinrad Egli, Ph.D.
- 10:30 a.m. Panel Discussion
- 10:45 a.m. *Refreshment Break*
- 11:15 a.m. Diabetic Nephropathy: Molecular Mechanisms, Therapeutic Opportunities
Katalin Susztak, M.D., Ph.D.
- 11:45 a.m. Diabetic Retinopathy: Molecular Mechanisms, Therapeutic Opportunities
Thomas W. Gardner, M.D., M.S.
- 12:15 p.m. Potential Use of CRISPR for Treatment of Diabetic Retinopathy
Stephen H. Tsang, M.D., Ph.D.
- 12:45 p.m. Panel Discussion
- 1:00 p.m. *Lunch*
- 2:00 p.m. Diabetes-associated Neurological Conditions: Overview, Prevention and Potential Treatments
Jose A. Luchsinger, M.D., M.P.H.
- 2:30 p.m. Mechanisms of NAFLD/NASH, and Contributions to Morbidity/Mortality in Patients with Diabetes
Bernd Schnabl, M.D.
- 3:00 p.m. The Gut as a Renewable Source of Insulin-producing Cells
Domenico Accili, M.D.
- 3:30 p.m. Panel Discussion
- 3:45 p.m. Concluding Remarks
Utpal B. Pajvani, M.D., Ph.D.
- 4:00 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 biological basis for medical complications that affect patients with diabetes, and novel therapeutic approaches that may mitigate these pathologies.

Specifically, while persistent hyperglycemia may cause microvascular (retinopathy, nephropathy and neuropathy) disease, knowledge of downstream molecular effectors is likely to enable more effective therapies to prevent significant morbidity. Further, a direct link between excess glucose per se and cardiovascular and liver disease is far less certain, implying that other comorbid metabolic abnormalities such as hyperinsulinemia/insulin resistance and dyslipidemia may contribute to these associated disorders.

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

- Recognize the major microvascular and macrovascular complications associated with diabetes, and associated current treatment paradigms.
- Specify some of the molecular mechanisms linking these complications to diabetes.
- Discuss novel potential technologies for prevention of diabetes-related complications.

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 for 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 Vagelos College of Physicians and 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 Irving Medical Center
1150 St. Nicholas Avenue
1st Floor Conference Room
New York, New York 10032

Complimentary parking will be available in the Herbert Irving Comprehensive Cancer Center parking lot located at 1130 St. Nicholas Avenue (167th Street between Audubon Avenue and St. Nicholas Avenue).

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 5.25 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Tuition

Tuition: Free. Confirmation of registration will be sent upon receipt of the registration form.

Registration

Space is Limited. Early Registration is Encouraged.

By Mail:

Complete the registration form and mail with full payment to:
Columbia University
Vagelos College of Physicians and 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 Vagelos 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 17, 2018
UR010103/5.25

Free Tuition



Columbia University
Vagelos College of Physicians and Surgeons
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New York, New York 10032

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