

DIABETES AND METABOLISM SEMINAR SERIES

29th ANNUAL KROC LECTURE



The Complex Regulation of Hepatic Metabolism

Morris J. Birnbaum, MD, PhD

Professor of Medicine, Emeritus
University of Pennsylvania School of Medicine
Senior Vice President & Chief Scientific Officer, CVMED
Pfizer, Inc.

Wednesday
May 6, 2015

4:00 - 5:00pm

Orin Smith Auditorium
SLU Campus
850 Republican Street

The Birnbaum lab studies the complex biological response to nutritional stress in two contexts: the initiation of cell growth after transition from nutritional deprivation to abundance and insulin-dependent redistribution of simple substrates into long-term energy stores. The latter process involves a number of distinct but interacting components such as glucose-stimulated insulin secretion, and the insulin-dependent acceleration of hepatic lipid synthesis and glucose uptake into adipocytes and muscle. Two aspects of the regulation of glucose transport by insulin, both of which are studied in the Birnbaum lab, are the way in which insulin regulates the movement of hormone-sensitive Glut4 glucose transporter from the inside of the cell to the plasma membrane, and the signaling pathway by which insulin accomplishes this. There are also a number of projects underway aimed at understanding how the evolutionarily conserved sensor of nutritional stress, AMP-activated protein kinase, regulates carbohydrate and fat metabolism.



Diabetes
Research Center
UNIVERSITY of WASHINGTON

DIABETES AND OBESITY
CENTER OF EXCELLENCE

UW Medicine
UW SCHOOL
OF MEDICINE



NUTRITION OBESITY
RESEARCH CENTER

*The Diabetes Research Center gratefully acknowledges the generous support of
THE GEORGE & MARGARET ZIVELONGHI FOUNDATION, JOHN M. GILBERTSON FOUNDATION and
KIRKLAND FRATERNAL ORDER OF EAGLES, LADIES AUXILIARY*

*To request disability accommodation contact the Disability Services Office at least ten days in advance
at: (206) 543-6450/V, (206) 543-6452/TTY, (206) 543-7264/FAX or dso@u.washington.edu*