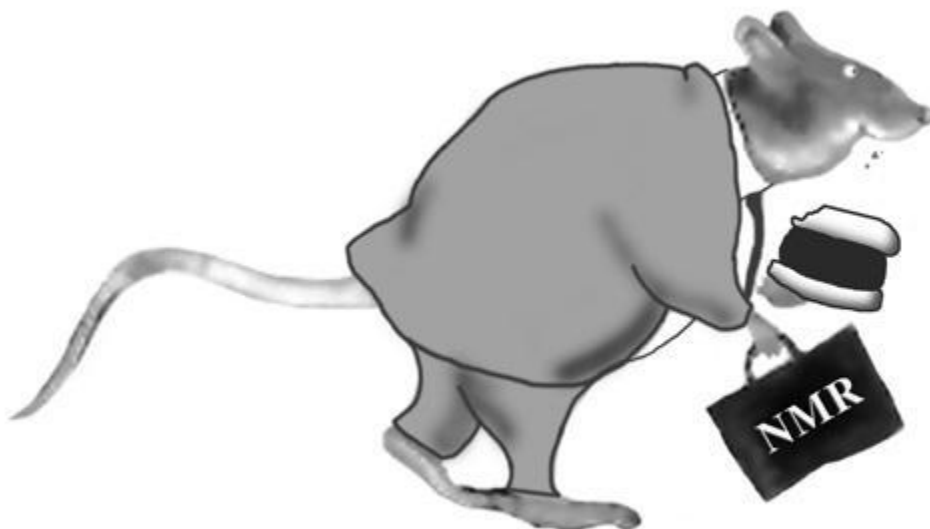


Symposium and Training X: **Understanding Metabolism in the Mouse**



Thursday, May 2, 2002

Presented by

**The Mary Nell and Ralph B. Rogers
Magnetic Resonance Center**

and

The National Center for Research Resources in association with

UT SOUTHWESTERN
MEDICAL CENTER

Program Objective

This program is aimed at basic researchers and clinical investigators with interests in measuring carbohydrate and fat metabolism in intact animals and patients. Systemic disorders such as diabetes and obesity have proven difficult to study due to interactions among multiple biochemical pathways. Mice are becoming important tools for dissecting the role of specific genes in health and disease. However, even simple genetic manipulations may result in a complex phenotype.

The program introduces new NMR-based methods for analysis of metabolic networks in mice. Many of these techniques are applicable in humans. The first session will describe the principles of ^2H and ^{13}C NMR with examples relevant to studies in mice and in patients. In a second session, guest faculty will review recent metabolic studies of normal and abnormal mouse physiology and the relation of these studies to human disease.

Guest Speakers

Molly Bogue, PhD, Mouse Phenome Project Leader, The Jackson Laboratory, Bar Harbor, Maine.

Streamson C. Chua, Jr., MD, PhD Associate Professor of Pediatrics, Columbia University, New York, New York..

Robert H. Eckel, MD, Professor of Medicine, Physiology and Biophysics, Charles A. Boettcher Endowed Chair in Atherosclerosis, University of Colorado Health Sciences Center, Denver, Colorado.

David L. Severson, PhD, Professor of Pharmacology and Therapeutics, University of British Columbia, Vancouver, British Columbia.

UT Southwestern Speakers

Shawn C. Burgess, DSc, Research Scientist, Department of Radiology, UT Southwestern Medical Center at Dallas.

Jay D. Horton, MD, Assistant Professor of Internal Medicine, UT Southwestern Medical Center at Dallas.

Craig R. Malloy, MD, Professor of Radiology and Internal Medicine and Director of the Southwestern Biomedical Magnetic Resonance Facility - an NIH-supported research resource at the Mary Nell and Ralph B. Rogers Magnetic Resonance Center, UT Southwestern Medical Center at Dallas.

Dean Sherry, PhD, Professor of Radiology, UT Southwestern Medical Center at Dallas and Professor of Chemistry, The University of Texas at Dallas.

Brian C. Weis, MD, PhD Assistant Professor of Internal Medicine, UT Southwestern Medical Center at Dallas.

Program Schedule

8:00 a.m.	On-Site Registration - North Campus Continental Breakfast
8:30 a.m.	Metabolic Fluxes in Humans and Mice Craig R. Malloy, MD
9:00 a.m.	Analysis of Gluconeogenesis by ^2H NMR in the Mouse Shawn C. Burgess, DSc
9:30 a.m.	Liver Flux Profiling: Integrated Metabolic Pathways by ^2H and ^{13}C NMR Dean Sherry, PhD
10:00 a.m.	Discussion
10:15 a.m.	Break

10:30 a.m.	Intermediary Metabolism in Patients with Liver Disease Brian C. Weis, MD, PhD
11:15 a.m.	Diabetes, Fatty Livers and SREBPs Jay D. Horton, MD
12:00 a.m.	Catered Lunch
1:00 p.m.	Metabolic Assessment in Mice Transgenic for Overexpression of Lipoprotein in Lipase in Muscle Robert H. Eckel, MD
2:00 p.m.	Metabolism of Perfused Mouse Hearts David L. Severson, PhD
3:00 p.m.	Discussion / Break
3:15 p.m.	Genetic Manipulations of the Leptin Receptor Gene Streamson C. Chua, Jr., MD, PhD
4:15 p.m.	Using the Mouse and the Mouse Genome to Understand Human Metabolism and Disease Molly Bogue, PhD