

Symposium and Training I: **Nuclear Magnetic Resonance:** **Brain and Muscle Pathophysiology**

Thursday, September 17, 1992

Presented by
The Mary Nell and Ralph B. Rogers
Magnetic Resonance Center
and
The National Center for Research Resources in association with



Program Objective

This one day program is aimed at physicians, biomedical scientist, and graduate students who are interested in the application of magnetic resonance spectroscopy to physiology. The role of NMR methods of the investigation of intact organ physiology with particular emphasis on brain and muscle physiology will be discussed.

An overview of current problems pathophysiology will be given by experts in the field and applications of state of the art NMR techniques will be presented.

Guest Speakers

James W Prichard, MD, Professor Yale University Medical Center, Department of Neurology, New Haven, CT

Elizabeth Murphy, PhD, Staff Physiologist, Laboratory of Molecular Biophysics, National Institute for Environmental Health Science, Research Triangle Park, NC

UT Southwestern Speakers

James Fleckenstein, MD, Assistant Professor of Radiology, Director, Meadows Imaging Center, University of Texas Southwestern Medical Center, Dallas, Texas

Ronald G. Victor, MD, Associate Professor of Internal Medicine, University of Texas Southwestern Medical Center, Dallas, Texas

Ralph G. Greenlee, Jr., MD, Associate Professor of Neurology, University of Texas Southwestern Medical Center, Dallas, Texas

Andrew L. Blatz, PhD, Assistant Professor of Physiology, University of Texas Southwestern Medical Center, Dallas, Texas

Craig R. Malloy, MD, Associate Professor of Radiology and Internal Medicine, and Director of the Southwestern Biomedical Magnetic Resonance Facility at the Mary Nell and Ralph B. Rogers Magnetic Resonance Center, University of Texas Southwestern Medical Center, Dallas, Texas

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

Program Schedule

8:30 a.m.	On Site Registration
9:00 a.m.	MRI of Skeletal Muscle in Health and Disease James Fleckenstein, MD
9:30 a.m.	Muscle Metabolism and Muscle Sympathetic Nerve Activity Ronald G. Victor, MD
10:00 a.m.	MRI of the Brain and Spinal Cord: Clinical Issues Ralph G. Greenlee, Jr., MD
10:30 a.m.	Break
11:00 a.m.	MR Spectroscopic Studies of Cerebral Metabolism <i>In Vivo</i> James W Prichard, MD
12:00 a.m.	Lunch
Afternoon Session Moderator: A. Dean Sherry, PhD	
1:30 p.m.	Introduction to Measurement of Intracellular Cations Andrew L. Blatz, PhD
2:00 p.m.	Measurement of Ionized Cytosolic Cation Concentration Using ¹⁹F NMR Elizabeth Murphy, PhD
3:00 p.m.	NMR Observations of Sodium Compartments in Tissue Craig R. Malloy, MD
3:30 p.m.	Break
3:45 p.m.	Chemistry of Cation Shift Agents and MRI Contrast Agents A. Dean Sherry, PhD
4:30 p.m.	Tour of Rogers Center