Symposium and Training II:
Advanced Clinical MRI/MRS and ^{13}C MR Spectroscopy

Thursday, March 10, 1994

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 Symposium was designed to explore the prospects for clinical ^{13}C and especially ^{1}H clinical spectroscopy, and to present research applications of ^{13}C NMR. The morning session was devoted to advanced clinical spectroscopy and emphasized ^{1}H chemical shift imaging of brain tumors and other regional diseases of the brain, ^{13}C NMR spectroscopy of the human brain, and ^{31}P NMR spectroscopy of skeletal muscle in the context of the evaluation of patients with weakness. The afternoon session reviewed ^{13}C NMR isotopomer analysis, and the application of ^{13}C NMR in both animal and human studies.

Guest Speakers

Jeffry R. Alger, PhD, Chief of MR Spectroscopy Section, Neuroimaging Branch, National Institutes of Health, Bethesda, MD

Steven Harms, MD, Director of Magnetic Resonance, Baylor University Medical Center, Dallas, Texas

Heinrich Taegtmeyer, MD, DPhil Professor of Internal Medicine, University of Texas Health Science Center, Houston, Texas

Robert G. Weiss, MD, Associate Professor of Internal Medicine, Johns Hopkins University, Baltimore, MD

Douglas Rothman, PhD, Assistant Professor of Internal Medicine, Yale University, New Haven, CT

Joseph J.H. Ackerman, PhD, Professor and Chairman, Department of Chemistry, Washington University, St. Louis, MO

UT Southwestern Speakers

Ronald Haller, MD, Associate Professor of Neurology, 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

F. Mark Jeffrey, DPhil, Assistant Professor of Radiology, University of Texas Southwestern Medical Center, Dallas, Texas

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Program Schedule

8:00 a.m.	**On Site Registration**
8:30 a.m.	**Correlative FDG-PET and ^{1}H MRSI Studies of Human Brain Tumors** Jeffry R. Alger, PhD
9:30 a.m.	**Breast MRI: A New Way to Image the Breast** Steven Harms, MD
10:15 a.m.	**Break**
10:30 a.m.	**A Review of Clinical NMR Spectroscopy at 1.5 T** Peter Luyten, PhD
11:15 a.m.	**^{31}P NMR Spectroscopy of Metabolic Myopathies** Ronald Haller, MD
12:00 a.m.	**Lunch**
1:00 p.m.	**Control of Cardiac Function by Substrate Flux and Anaplerosis** Heinrich Taegtmeyer, MD, DPhil
1:30 p.m.	**Insights into the Pathophysiology of Myocardial Ischemia and Reperfusion with ^{13}C** Robert G. Weiss, MD
2:15 p.m.	**^{13}C MR Studies of Human Muscle, Liver and Brain Metabolism** Douglas Rothman, PhD
3:00 p.m.	**Break**
3:30 p.m.	**Introduction to ^{13}C NMR Isotopomer Analysis** Craig R. Malloy, MD
4:00 p.m.	**^{13}C MR Monitoring of Evolving and Steady State Metabolism** Joseph J.H. Ackerman, PhD
4:30 p.m.	**Computer Models of the Citric Acid Cycle** F. Mark Jeffrey, DPhil