

Symposium and Training III: **New Directions in Biomedical MR Imaging and Spectroscopy**

Wednesday, May 17, 1995

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 year marked the 100th anniversary of the discovery of x-rays and the 50th anniversary of the first NMR experiment (at least for detection of ^1H). Incidentally, it was also the 100th anniversary of the Langendorff rat heart preparation. This symposium emphasized the rapid evolution of biomedical imaging and spectroscopy. We were fortunate to have Dr. Axel Haase as our evening speaker.

Dr. Haase is a Professor of Physics at the University of Wuerzburg which was the University at which Roentgen discovered x-rays. Dr. Haase was also the organizer of the Roentgen Centennial in Germany. Because of these responsibilities and his position in Roentgen's University, he had access to historical materials such as photographs of original equipment, early experimental results, etc..

This was the first year to include the reception, dinner, and after-dinner speaker. Among other things, this format improved the opportunities for interaction between speakers and attendees.

The Symposium was designed to illustrate the prospects for clinical ^{13}C and ^1H spectroscopy, and to review practical biomedical applications of ^{13}C NMR. The afternoon session was devoted to advanced clinical spectroscopy and emphasized ^1H chemical shift imaging of multiple sclerosis and other regional diseases of the brain, ^{13}C NMR spectroscopy of the human brain, and a comparison of ^{13}C and ^{31}P NMR spectroscopy of skeletal muscle.

Guest Speakers

Paul Matthews, MD, DPhil Assistant Professor of Neurology and Human Genetics, and Director of the Neurometabolic Research Laboratory, Montreal Neurological Institute, Montreal, Quebec, Canada

Peter van Zijl, PhD, Associate Professor of Radiology and Biophysics, Johns Hopkins University Medical School, Baltimore, MD

Axel Haase, PhD, Professor of Physics, University of Wurzburg, Wurzburg, Germany

UT Southwestern Speakers

Ronald Peshock, MD, Associate Professor of Radiology and Internal Medicine, and Medical Director of the Mary Nell and Ralph. B. Rogers Magnetic Resonance Center, University of Texas Southwestern Medical Center, Dallas, Texas

Navin Bansal, PhD, Assistant Professor of Radiology, University of Texas Southwestern Medical Center, Dallas, Texas

Loren Bertocci, PhD, Assistant Professor of Radiology, 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

Program Schedule

12:30 a.m.	On Site Registration
1:00 p.m.	Magnetic Resonance Investigation of the Chemical Pathology of Multiple Sclerosis Paul Matthews, MD, DPhil
1:45 p.m.	Clinical Applications of High Speed and Functional MR Imaging Ronald Peshock, MD
2:30 p.m.	Recent Advances in <i>In Vivo</i> ²³Na MR Spectroscopy and Imaging Navin Bansal, PhD
3:00 p.m.	Break
3:20 p.m.	Substrate Dependent Oxidative Metabolism in Skeletal Muscle Loren Bertocci, PhD
4:00 p.m.	Prospects for ¹³C NMR Isotopomer Analysis in Humans Craig R. Malloy, MD
4:30 p.m.	Methodology for MR Detection of ¹³C Labeled Substrates Peter van Zijl, PhD
5:15 p.m.	Conclusion
5:30 p.m.	Wine and cheese reception
6:30 p.m.	Buffet dinner
7:30 p.m.	The Role of High Speed Imaging in a Functional MR Examination Axel Haase, PhD