



Advanced Medical Imaging Developments and Applications for Neuroscience Research

Co-organized by NCRR, NIBIB, NIDA and NIMH

Lister Hill Center Auditorium, NIH

June 9, 2011

AGENDA

7:45–8:15 a.m. **Registration**

8:15–8:30 a.m. **Welcome**

Christina Liu, Ph.D., P.E., National Center for Research Resources

Session I: Nuts and Bolts of Medical Imaging Technologies

Chair: Da-Yu Wu, Ph.D., National Institute on Drug Abuse

8:30–9:10 a.m. **MRI for Brain Anatomy, Physiology and Functions**

Peter van Zijl, Ph.D., Johns Hopkins University and National Resource for Quantitative Functional MRI

9:10–9:50 a.m. **Dense Array Electrophysiology Technology for Neural Connectivity**

Don Tucker, Ph.D., University of Oregon and Electrical Geodesics, Inc.

9:50–10:05 a.m. **Break**

10:05–10:45 a.m. **Contrast-Enhanced MRI for Molecular Imaging**

Robia G. Pautler, Ph.D., Baylor College of Medicine

10:45–11:25 a.m. **PET for Molecular Imaging**

Joanna Fowler, Ph.D., Brookhaven National Laboratory

11:25 a.m.–12:15 p.m. **Panel Discussions**

Moderator: Yantian Zhang, Ph.D., National Institute of Biomedical Imaging and Bioengineering

Panel Members:

Allan Reiss, M.D., Stanford University

Vinod Menon, Ph.D., Stanford University

Eng Lo, Ph.D., Massachusetts General Hospital/Harvard Medical School

Scott Small, M.D., Columbia University

12:15–1:00 p.m. **Lunch**

Session II: Applications of Medical Imaging Technology in Brain Research

Chair: Michael F. Huerta, Ph.D., National Institute of Mental Health

- 1:00–1:40 p.m. **MRI in Neurodegenerative Disease Research**
Michael Weiner, M.D., University of California, San Francisco and National Center for Imaging of Neurodegenerative Diseases
- 1:40–2:20 p.m. **The Human Connectome Project**
David Van Essen, Ph.D., Washington University in St. Louis
- 2:20–2:35 p.m. **Break**
- 2:35–3:15 p.m. **Application of Molecular MRI to Studies of Brain Function**
Alan Jasanoff, Ph.D., Massachusetts Institute of Technology
- 3:15–3:55 p.m. **PET in Addiction Research**
Leonard Howell, Ph.D., Emory University and Yerkes National Primate Research Center
- 3:55–4:40 p.m. **Panel Discussions/Closing Remarks**
Moderator: Christina Liu, Ph.D., P.E., National Center for Research Resources
- Panel Members: *Allan Reiss, M.D., Stanford University*
Vinod Menon, Ph.D., Stanford University
Eng Lo, Ph.D., Massachusetts General Hospital/Harvard Medical School
Scott Small, M.D., Columbia University