Cell and Molecular Imaging Workshop

University of Florida
McKnight Brain Institute
November 6, 2008
LG-110A

11:00-11:20 Welcome

11:20-12pm **Session A**: **The Challenges of Imaging Regenerative Medicine and Tissue Correction**

11:20-11:40: *Stem Cells and Regenerative Medicine*
Ed Scott
Molecular Genetics and Microbiology
Director of the Program in Stem Cell Biology and Regenerative Medicine

11:40-12:00: *Viral Gene Delivery and Tissue Correction*
Barry Byrne
Department of Pediatrics
Director of the Powell Gene Therapy Center

12pm-1pm: **Lunch** with Speakers and Predoctoral and Postdoctoral fellows

1:00-2:00pm: **Session B**: **Promising materials for cell and molecular imaging**

1:00-1:20: *Core/Shell Luminescent Quantum Dots for Multi-Modal Imaging*
Paul Holloway
Dept. of Materials Science and Engineering
University of Florida

1:20-1:40: *Gene Regulation in Mammalian Cells via InP/ZnS Nanocrystal vectors*
Geoff F. Strouse
Department of Chemistry
Florida State University

1:40-2:00: *Biologically Friendly Nanoparticles*
Swadeshmukul Santra, Ph. D.
Nanoscience Technology Center,
Department of Chem and Biomolecular Science Center
University of Central Florida

2:00-2:20pm **Session C: Optical Tomography and Cellular Imaging**

2:00-2:20 *Fluorescent Proteins, FRET, and Live-Cell Imaging*
Michael W. Davidson
National High Magnetic Field Laboratory

2:00-2:20 **Session D: Molecular and Cellular Imaging**

2:20-2:40: *Molecular Imaging of Cardiac-Differentiated Stem Cells In Vivo*

Steven Ebert
Burnett School of Biomedical Sciences
University of Central Florida

2:40-3:00: *Imaging Repair of Dystrophic Muscle*

Glenn Walter
Department of Physiology and Functional Genomics
University of Florida

3:00-3:20: *Use of Neuroimaging in Regenerative Medicine for Neonates*

Michael Weiss
Department of Pediatrics
University of Florida

3:20-3:40: *Molecular imaging probes for tumors*

Weihong Tan
Department of Chemistry
University of Florida

3:40-4:00pm Break

4:00-5:00pm Alan Koretsky.

"Microfabrication and other novel techniques to visualize brain function and cellular physiology."

Chief of the Laboratory of Functional and Molecular Imaging and Director of the NIH MRI Research

NINDS

This workshop on cell-based imaging is sponsored by the National High Magnetic Field Laboratory, the Regenerative Medicine group and Nanoscale Interdisciplinary Research Team at UF, and Bruker Biospin. Our goal is to have groups from particle and nano science, imaging, NMR, and stem cell sciences participate in the workshop in order to take a broad approach to imaging problems related to regenerative medicine and cellular/gene therapies.