

CONFERENCE REPORT: 2005 MIRT WORKSHOP

Event Name: 2005 Molecular Imaging Radionuclide Therapy (MIRT) Workshop: Translational Applications of Molecular Imaging and Radionuclide Therapy

Date Held: June 17 – 18, 2005 **Attendance:** 103

Location: Intercontinental Toronto Centre Hotel (The Ballroom), Toronto, Canada

This meeting was organized by the Society of Radiopharmaceutical Sciences (SRS) and the Society of Nuclear Medicine Radiopharmaceutical Science Council (RPSC) and Molecular Imaging Task Force. The RPSC has joined with the SRS to present a series of lectures to educate pre-doctoral and post-doctoral radiopharmaceutical scientists in the design of molecular probes. This meeting was supported by a Grant from the U.S. Department of Energy Office of Biological and Environmental Research.

MIRT Organizers/Moderators:

William C. Eckelman, PhD

Michael J. Welch, PhD

David R. Vera, PhD

MIRT Educational Faculty

Yu-Shin Ding, *Brookhaven National Labs*

Bernd Pichler, *University of Tuebingen*

David Vera, *UC-San Diego*

George Sgouros, *Johns Hopkins Medical Institute*

Richard Laforest, *Washington University*

Hank Kung, *University of Pennsylvania*

Kathleen Schmidt, *NIMH*

Paul Scheibe

David Mankoff, *University of Washington*

Karen Kurdziel, *Virginia Commonwealth University*

Kate Dadachova, *Albert Einstein College of Medicine*

Rob Mairs, *University of Glasgow*

Jorge Carrasquillo, *NIH Clinical Center*

Wynn Volkert, *University of Missouri*

Ronald Blasberg, *Memorial Sloan Kettering Cancer Center*

David Scheinberg

Topic

New generation of radiotracers

Labeling of stem cells

A receptor-binding optical imaging agent for in vivo measurement of receptor biochemistry

Trends in dosimetry for therapy

Comparing five methods for obtaining input functions

Mass effects in SPECT, PET, and optical imaging

Resolution, sensitivity, and precision with autoradiography and small animal imaging

What is to be gained by imaging the same animal before and after treatment?

True tracers: Comparing FDG & glucose with FLT and thymidine

Imaging multi-drug resistance

NaI symporter-expressing tissues in vivo

Gene manipulation to enhance targeted radionuclide therapy

Radiolabeled antibodies in the clinic: Individualized therapy

Radiolabeled peptides for diagnosis and therapy

Reporter gene studies with nuclear and optical tracers: The impact of a diagnostic scan on therapy selection

Unique applications of alpha therapy