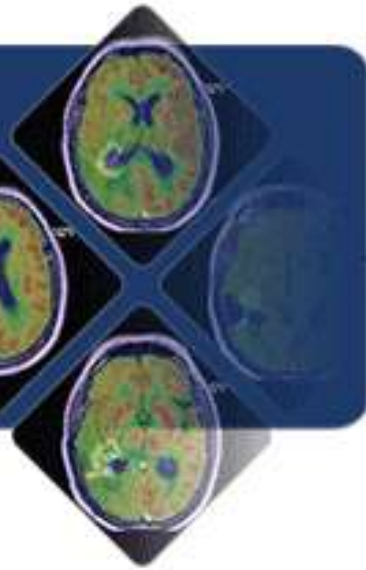


Symposium and Training XVIII:

INTERMEDIARY METABOLISM IN CANCER

Wed. May 19 - Thu May 20, 2010



Presented by
The Advanced Imaging Research Center
and
The National Center for Research Resources
in association with
UT Southwestern Medical Center

Program Objective

Since Warburg's discoveries in the 1920s, physicians and scientists have known that metabolism in cancer is different from normal tissue because of the intense metabolic demands for cell proliferation. More recently, it has been shown with molecular methods that metabolic disorders may in some instances cause cancer. Individualized evaluation and treatment of patients with cancer is a high priority and in this meeting we focus on tumor metabolism because the biochemistry of the malignancy reveals the combined consequences of genetic, environmental and host factors in an individual patient. The power of advanced methods in positron tomography and NMR spectroscopy to display highly specific information about cancer metabolism will be explored. The symposium is supported by an NIH-funded Center for Research resources (RR02584). Research opportunities at the Resource will also be described briefly.

Educational Objectives

Upon completion of the course, the participant should be able to:

- Describe evidence that metabolic features of cancer provide information about the differences between normal tissue and cancer.
 - Discuss the current clinical role of MR spectroscopy and positron tomography for the diagnosis and staging of cancer.
 - Explain the basic differences between metabolic studies using positron tomography and MR spectroscopy.
 - Describe the current status of hyperpolarized carbon in clinical research
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Guest Speakers

Patrick Bolan, PhD, University of Minnesota
Peter Caravan, PhD, Massachusetts General Hospital
Arnaud Comment, PhD, Ecole Polytechnique Federale de Lausanne
Simon Duckett, PhD, University of New York
Juri Gelovani, MD, MD Anderson Cancer Center
Robert Gillies, PhD, Moffitt Cancer Institute
Mathilde Lerche, PhD, Imagina, Sweden
David Mankoff, MD, PhD University of Washington
Carolyn Mountford, PhD, Brigham and Womens Hospital, Boston
Sarah Nelson, PhD, University of California, San Francisco
Daniel Vigneron, PhD, University of California, San Francisco

UT Southwestern Speakers

Shawn Burgess, PhD, UT Southwestern Medical Center, Dallas, Texas
Ralph DeBerardinis, MD, PhD, UT Southwestern Medical Center, Dallas, Texas
Craig Malloy, MD, UT Southwestern Medical Center, Dallas, Texas
Isaac Marin Valencia, MD, UT Southwestern Medical Center, Dallas, Texas
Matthew Merritt, PhD, UT Southwestern Medical Center, Dallas, Texas
Karlos Moreno, PhD, UT Southwestern Medical Center, Dallas, Texas
A. Dean Sherry, PhD, UT Southwestern Medical Center, Dallas, Texas

Program Schedule

TEACHING SESSION
Intermediary Metabolism in Cancer
Wednesday, May 19, 2010

8:00-
8:30 a.m. **On-Site Registration - North Campus**

8:30-
9:15 a.m. **The Basics**
A. Dean Sherry, PhD - University of Texas

9:15-
10:00 a.m. **Isotopomer Analysis for Complex Networks**
Shawn Burgess, PhD - University of Texas

10:00-
10:30 a.m. **Discussion and Break**

10:30-
11:00 a.m. **The Heart**
Karlos Moreno, PhD - University of Texas

11:00- **The Brain**

11:30 a.m.	Issac Marin-Valencia, MD - University of Texas
11:30- 12:00 a.m.	More Examples Santhosh Satapati, M.S. - University of Texas
12:00- 1:00 p.m.	Lunch
1:00- 1:40 p.m.	What is Hyperpolarization? Matthew Merritt, PhD - University of Texas
1:40- 2:20 p.m.	How to Polarize Arnaud Comment, PhD - Ecole Polytechnique Federale de Lausanne
2:20- 3:00 p.m.	Recent Advances in Polarization Methods Simon Duckett, PhD - University of York
3:00- 3:30 p.m.	Discussion and Break
3:30- 4:10 p.m.	Tailored Probes for Specific Pathways Mathilde Lerche, PhD - Imagnia, Sweden
4:10- 4:40 p.m.	Prospects for Medical Applications Craig Malloy, MD - University of Texas

TEACHING SESSION
Intermediary Metabolism in Cancer
Thursday, May 20, 2010

8:00- 8:30 a.m.	On-Site Registration - North Campus
8:30- 9:15 a.m.	Pathogenesis of Cancer and Metastasis: Survival of the Fittest Robert Gillies, PhD - Moffitt Cancer Institute
9:15- 10:00 a.m.	Overview of Cancer Metabolomics by Magnetic Resonance Carolyn Mountford, PhD - Bingham and Women's Hospital, Boston
10:00- 10:30 a.m.	Discussion and Break
10:30- 11:00 a.m.	Breast Patrick Bolan, PhD - University of Minnesota
11:00- 11:30 a.m.	Brain Sarah Nelson, PhD - University of California, San Francisco
11:30- 12:00 a.m.	Prostate Daniel Vigneron, PhD - University of California, San Francisco
12:00- 1:00 p.m.	Lunch
1:00- 1:45 p.m.	PET for Understanding Cancer Biology Juri Gelovani, MD - MD Anderson Cancer Center

1:45-
2:30 p.m. **Prognostic Value of Measuring Perfusions and Metabolism**
David Mankoff, MD, PhD - University of Washington

2:30-
3:00 p.m. **Discussion and Break**

3:00-
3:45 p.m. **Design of MR and PET Agents Targeting Cancer Metabolism**
Peter Caravan, PhD - Massachusetts General Hospital

3:45-
5:00 p.m. **Cancer Therapy Based on Integrated Understanding of Cancer Genetics and Metabolism**
Ralph DeBerardinis, MD - University of Texas

4:30-
5:00 p.m. **Discussion**

5:00 p.m. **Reception**