

Agenda

Monday, October 19

12 noon - 5:00 p.m.	Registration	<i>Manhattan Ballroom Foyer</i>
12 noon - 5:00 p.m.	Set Up Posters	<i>Terrace Ballroom and Parkview</i>
1:30 p.m. - 5:30 p.m.	Tutorial Sessions	<i>Manhattan Ballroom</i>

***Requirements for Introducing Nanotherapeutics to Clinical Trials:
Science to Compliance***

Mark E. Davis, Ph.D.
California Institute of Technology

In Vivo Molecular Imaging Diagnostics in Clinical Cancer Therapeutics

Michael E. Phelps, Ph.D.
University of California, Los Angeles

In Vitro Diagnostic Tools - Multiplexed Assays Based on Nanotechnology

James R. Heath, Ph.D.
California Institute of Technology

**The Development of Genome-Wide Genotyping Technology Using
Microarrays, With General Lessons on What Is Required for Successful
Biotechnology Development**

David L. Barker, Ph.D.
Illumina, Inc.

Tuesday, October 20

7:00 a.m. - 5:00 p.m.	Registration	<i>Manhattan Ballroom Foyer</i>
7:00 a.m. - 8:00 a.m.	Continental Breakfast	<i>Manhattan Ballroom Foyer</i>
8:00 a.m. - 8:30 a.m.	Opening Remarks	<i>Manhattan Ballroom</i>

8:00 a.m. - 8:10 a.m. ***Welcome***
Piotr Grodzinski, Ph.D.
National Cancer Institute, NIH

8:10 a.m. - 8:30 a.m. ***The Nanotechnology Alliance for Cancer: Looking Back on Progress and
Forward to New Challenges***
Anna D. Barker, Ph.D.
National Cancer Institute, NIH

Tuesday, October 20 (continued)

8:30 a.m. - 10:00 a.m.

Plenary Session

8:30 a.m. - 9:15 a.m.

Evolving Concepts Concerning the Name of Malignancy

Larry Norton, M.D.

Memorial Sloan-Kettering Cancer Center

9:15 a.m. - 10:00 a.m.

***Analyzing Interactions Between the Immune System and Cancer,
With Clinical Applications to Glioblastoma Multiforme Diagnostics and
Melanoma Immunotherapy***

James R. Heath, Ph.D.

California Institute of Technology

10:00 a.m. - 10:30 a.m.

Break

10:30 a.m. - 12:15 p.m.

Technology Commercialization Session

Chair: Joseph M. DeSimone, Ph.D.

The University of North Carolina at Chapel Hill

BIND Targeted Nanotherapeutics

Jeff Hrkach, Ph.D.

BIND Biosciences

***New Degrees of Freedom for X-Ray Imaging—Distributed Sources Based
on Carbon Nanotube Field Emitters***

Frank Sprenger, Ph.D.

XinRay Systems, LLC

***Development of a Nanotechnology-Based PSA Assay for Earlier Diagnosis
of Prostate Cancer Recurrence***

James Storhoff, Ph.D.

Nanosphere, Inc.

***A New Era of Therapeutic Design: PRINT® Technology as a Mechanism for
Producing Rationally Designed Nanoparticles for Applications in Cancer***

Seth Rudnick, M.D.

Liquidia Technologies Inc.

12:15 p.m. - 1:45 p.m.

Lunch

Terrace Foyer

1:45 p.m. - 4:00 p.m.

Concurrent Sessions I and II

Session I: Nanotherapeutics I

Salon A, Manhattan Ballroom

Chair: Miqin Zhang, Ph.D.

University of Washington

***Targeted Nanomaterials for Imaging and Photodynamic Therapy in
Orthotopic Cancer Models***

Tayyaba Hasan, Ph.D.

Harvard Medical School and Massachusetts General Hospital

Tuesday, October 20 (continued)

Targeting of Contrast Agents and Therapeutics by Activatable Cell Penetrating Peptides

Roger Y. Tsien, Ph.D.
University of California, San Diego

Nanotherapeutics: Multifunctional Nanoparticles for Drug Delivery and Targeting

Georgia Chen, Ph.D.
Emory University Winship Cancer Institute

Cytolytic Peptides as Cancer Nanoceuticals

Samuel A. Wickline, M.D.
Washington University in St. Louis

Multifunctional Nanosystems to Overcome Tumor Drug Resistance

Mansoor M. Amiji, Ph.D.
Northeastern University

Nanotechnology Platform for Brain Cancer Imaging and Therapy

Miqin Zhang, Ph.D.
University of Washington

Session II: Diagnostic Techniques Based on Nanotechnology

Salon B, Manhattan Ballroom

Chair: Paul J. Mischel, M.D.
University of California, Los Angeles

Service Facility for Direct-Fabricated Nanostructures

Shan X. Wang, Ph.D.
Stanford University

Development of Barcode Assays for the Detection of Prostate Cancer Recurrence

C. Shad Thaxton, M.D., Ph.D.
Northwestern University

Multifunctional Nanoparticles in Diagnosis of Cancer

Paras Prasad, Ph.D.
University at Buffalo

Targeted Nanoproboscopes for Vascular Signatures in Pancreatic Cancer

Henry F. VanBrocklin, Ph.D.
University of California, San Francisco

Rapid Isolation and Detection of Cell Free Circulating DNA Cancer Biomarkers and Nanoparticles Directly from Whole Blood

Michael J. Heller, Ph.D.
University of California, San Diego

Tuesday, October 20 (continued)

Design Considerations for the Translation of In Vitro Diagnostic Technologies Into the Clinic

Paul J. Mischel, M.D.
University of California, Los Angeles

4:00 p.m. - 4:30 p.m.

Break

4:30 p.m. - 6:45 p.m.

Concurrent Sessions III and IV

Session III: Nanotechnology in the Clinic

Salon B, Manhattan Ballroom

Mark E. Davis, Ph.D.
California Institute of Technology

Nanoparticulate Delivery of the Anticancer Drug Arsenic Trioxide Enhances In Vivo Therapeutic Efficacy in Triple Negative Breast Cancer

Vincent Cryns, M.D.
Northwestern University

Multiplexed Nanoparticle Probes for Therapeutic Translational Oncology

Brian Leyland-Jones, M.D., Ph.D.
Emory University

Factor Affecting the Pharmacokinetics and Pharmacodynamics of Pegylated Liposomal Anticancer Agents in Patients

William C. Zamboni, Pharm.D., Ph.D.
The University of North Carolina at Chapel Hill

In the Clinic With Nanoparticles Containing Nucleic Acids

Mark E. Davis, Ph.D.
California Institute of Technology

Novel Technologies for Advanced In Vitro and In Vivo Monitoring of Adoptive Cell Immunotherapies in Cancer

Caius Radu, M.D.
University of California, Los Angeles

Nanotechnology: The Road to the Clinic

Gregory Lanza, M.D., Ph.D.
Washington University in St. Louis

Session IV: Contrast Agents and Imaging Techniques

Salon A, Manhattan Ballroom

Chair: Mounji Bawendi, Ph.D.
Massachusetts Institute of Technology

NanoMolecular Imaging

Sanjiv Sam Gambhir, M.D., Ph.D.
Stanford University

Wide Field Imaging of Nanopyramid Probes to Detect Biomarkers

Teri Odom, Ph.D.
Northwestern University

Tuesday, October 20 (continued)

Theranostic Applications of Nanotechnology in Cancer: The “See and Treat” Strategy

Chun Li, Ph.D.
University of Texas M.D. Anderson Cancer Center

Combinatorial Library Screening Core at Carolina CCNE

Rihe Liu, Ph.D.
The University of North Carolina at Chapel Hill

Multifunctional Nanoparticles for Imaging and Sensing

Moungi Bawendi, Ph.D.
Massachusetts Institute of Technology

Wednesday, October 21

7:00 a.m. - 6:00 p.m. **Registration** *Manhattan Ballroom Foyer*

7:00 a.m. - 8:00 a.m. **Continental Breakfast** *Manhattan Ballroom Foyer*

8:00 a.m. - 9:10 a.m. **Plenary Session** *Manhattan Ballroom*

8:00 a.m. - 8:30 a.m. ***Nano-Science Policy***
Travis M. Earles, M.S., M.B.A.
Office of Science and Technology Policy, EOP

Chad A. Mirkin, Ph.D.
Northwestern University

8:30 a.m. - 8:50 a.m. ***Education and Training in Cancer Nanotechnology***
Carolyn J. Anderson, Ph.D.
Washington University in St. Louis

8:50 a.m. - 9:10 a.m. **Alliance Update and Path Forward**
Piotr Grodzinski, Ph.D.
National Cancer Institute, NIH

9:10 a.m. - 9:40 a.m. **Break**

9:40 a.m. - 11:30 a.m. **Working Group Session I**

In Vitro Diagnostics *Second Floor, Room 223*
Discussion Leader: Shan X. Wang, Ph.D.
Stanford University

Therapy and Post-Therapy Monitoring *Second Floor, Room 200 A*
Discussion Leader: Gayle E. Woloschak, Ph.D.
Northwestern University

Wednesday, October 21 (continued)

Informatics/Data Sharing *Second Floor, Room 200 B*

Discussion Leaders: Sharon Gaheen, M.B.A.
Science Applications International Corporation

Nathan Baker, Ph.D.
Washington University in St. Louis

Communication and Integration Working Group (CIWG) *Second Floor, Room 219*

Discussion Leader: Krzysztof Ptak, Ph.D., M.B.A.
National Cancer Institute, NIH

11:30 a.m. - 1:00 p.m. **Lunch** *Terrace Foyer*

11:30 a.m. - 1:30 p.m. **Alliance Coordination and Governance Committee Working Lunch (by invitation only)** *Second Floor, Shore Room*

1:00 p.m. - 2:45 p.m. **Working Group Session II**

Imaging *Second Floor, Room 200 A*

Discussion Leader: Ravindra K. Pandey, Ph.D.
Roswell Park Cancer Institute

Nanotechnology Tools and Fabrication *Second Floor, Room 200 B*

Discussion Leader: Vinayak P. Dravid, Ph.D.
Northwestern University

Pathway to Clinic: Characterizing and Regulating Nanomaterials *Second Floor, Room 219*

Discussion Leader: Anil Patri, Ph.D.
SAIC-Frederick, Inc.

Subhas Malghan, Ph.D.
U.S. Food and Drug Administration

3:00 p.m. - 6:00 p.m. **Poster Session and Reception** *Terrace Ballroom and Parkview*

3:30 p.m. - 4:00 p.m. **ODD poster presenters to stand by their posters at this time.**

4:00 p.m. - 4:30 p.m. **EVEN poster presenters to stand by their posters at this time.**

6:00 p.m. **Please remove all posters at this time.**

Thursday, October 22

7:30 a.m. - 12:30 p.m. **Registration** *Manhattan Ballroom Foyer*

7:30 a.m. - 8:30 a.m. **Continental Breakfast** *Manhattan Ballroom Foyer*

8:30 a.m. - 9:15 a.m. **Plenary Session** *Manhattan Ballroom*

Molecular Characterization of Circulating Tumor Cells

Daniel A. Haber, M.D., Ph.D.
Massachusetts General Hospital

9:15 a.m. - 9:30 a.m. **Poster Awards**

9:30 a.m. - 9:45 a.m. **Break**

9:45 a.m. - 12 noon **Concurrent Sessions V and VI**

Session V: Nanotherapeutics II

Salon A, Manhattan Ballroom

Chair: Gayle E. Woloschak, Ph.D.
Northwestern University

Nanoparticle Routing In Vivo: Interactions With Cells and Tissues

Erkki Ruoslahti, M.D., Ph.D.
Burnham Institute for Medical Research
University of California, Santa Barbara

Mapping Endothelial Caveolae for Tissue-Specific Nanodelivery In Vivo

Jan E. Schnitzer, M.D.
Proteogenomics Research Institute for Systems Medicine (PRISM)

TiO₂ Nanocomposites for Targeted Treatment and Imaging of Prostate Cancer

Gayle E. Woloschak, Ph.D.
Northwestern University

Biological Modification of Quantum Dots for In Vivo Imaging

Anna M. Wu, Ph.D.
David Geffen School of Medicine at UCLA

Targeted Polymeric Nanoparticles for Cancer Therapeutic Applications

Omid C. Farokhzad, M.D.
Brigham and Women's Hospital/Harvard Medical School

Neovascular Targeted Lipid-Coated Nanogels as Versatile Drug Carriers

David A. Cheresh, Ph.D.
University of California, San Diego

Thursday, October 22 (continued)

**Session VI: Nano Materials Characterization
and Nanoinformatics**

Salon B, Manhattan Ballroom

Chair: Wenbin Lin, Ph.D.

The University of North Carolina at Chapel Hill

Overview of the Nanotechnology Characterization Laboratory

Scott E. McNeil, Ph.D.

Nanotechnology Characterization Laboratory

National Cancer Institute at Frederick

Nanopatterned Surfaces for the Analysis of Tumor Cell Signaling and Migration

Muhammad N. Yousaf, Ph.D.

The University of North Carolina at Chapel Hill

Brain Tumor Imaging and Therapy Using Magnetic Nanoparticles

Wenbin Lin, Ph.D.

The University of North Carolina at Chapel Hill

Stanford Nanocharacterization Laboratory

Robert Sinclair, Ph.D.

Stanford University

Informatics Core: Linking Bioinformatics and caBIG With Cancer Nanotechnology for Personalized Oncology

May Dongmei Wang, Ph.D.

Georgia Institute of Technology and Emory University

NanoPK: A Pharmacokinetics Platform for Nanoparticle-Based Therapeutics

David Sept, Ph.D.

University of Michigan

12 noon - 12:30 p.m.

Closing Remarks/Adjournment