An AACR Special Conference
Advances in Modeling Cancer in Mice: Technology, Biology, and Beyond

September 24-27, 2017
Disney's Boardwalk Inn
Orlando, Florida

Sunday, September 24

Opening Keynote Session
Session Chairs: Cory Abate-Shen, Columbia University Medical Center, Herbert Irving Comprehensive Cancer Center, New York, New York, and Kevin M. Haigis, Beth Israel Deaconess Medical Center, Boston, Massachusetts
6:00 p.m.-8:00 p.m.

Welcome Remarks
Cory Abate-Shen

Engineering the cancer genome
Tyler Jacks, David H. Koch Institute for Integrative Cancer Research at MIT, Cambridge, Massachusetts

Unearthing mechanisms of malignant progression and resistance of cancer stem cells
Elaine Fuchs, The Rockefeller University, New York, New York

Opening Reception
8:00 p.m.-10:00 p.m.

Monday, September 25

Continental Breakfast / Networking Roundtables
7:30 a.m.-8:30 a.m.

Plenary Session 1: Technological Advances for Modeling Cancer in Mice
Session Chair: Julien Sage, Stanford University School of Medicine, Stanford, California
8:30 a.m.-10:30 a.m.

Genetic dissection of cancer development, therapy response, and resistance in mouse models of breast cancer
Jos Jonkers, Netherlands Cancer Institute, Amsterdam, The Netherlands

Cancer modeling in the CRISPR age
Andrea Ventura, Memorial Sloan Kettering Cancer Center, New York, New York

Quantitative and multiplex analysis of the genomic determinants of tumorigenesis
Monte Winslow, Stanford University School of Medicine, Stanford, California

2 short talks from proffered abstracts

Break
10:30 a.m.-11:00 a.m.
Plenary Session 2: Elucidating Cancer Mechanisms Using Mouse Models
*Session Chair: Karen M. Cichowski, Brigham & Women's Hospital, Boston, Massachusetts*
11:00 a.m.-1:00 p.m.

**Driver mutations and cell-of-origin as critical factors determining the phenotypic characteristics of thoracic tumor subtypes**
Anton J.M. Berns, Netherlands Cancer Institute, Amsterdam, The Netherlands

**Deconstructing p53 pathways in tumor suppression**
Laura D. Attardi, Stanford University School of Medicine, Stanford, California

**Somatic p53 mutations drive development of triple negative breast cancer with evolutionarily distinct metastases**
Guillermina Lozano, The University of Texas MD Anderson Cancer Center, Houston, Texas

2 short talks from proffered abstracts

**Poster Session A / Lunch**
1:15 p.m.-3:30 p.m.

Plenary Session 3: Modeling the Tumor Microenvironment
*Session Chair: Kwok-Kin Wong, New York University (NYU) Langone Medical Center, New York, New York*
4:00 p.m.-6:00 p.m.

**Tumor microenvironment: Stroma-tumor cell signaling defined by a cross-species approach**
Gustavo W. Leone, Medical University of South Carolina Hollings Cancer Center, Charleston, South Carolina

**Metabolic recycling in cancer**
Marcia Haigis, Harvard Medical School, Boston, Massachusetts

**Evaluation of the microenvironment in anti-tumor immune responses**
Marcus W. Bosenberg, Yale University School of Medicine, New Haven, Connecticut

2 short talks from proffered abstracts

**Tuesday, September 26**

Continental Breakfast / Networking Roundtables
7:30 a.m.-8:30 a.m.

Plenary Session 4: Stem Cells and Developmental Pathways in Cancer
*Session Chair: Michael M. Shen, Columbia University College of Physicians & Surgeons, New York, New York*
8:30 a.m.-10:30 a.m.

**Lessons from modeling neural tumors in mice**
Luis F. Parada, Memorial Sloan Kettering Cancer Center, New York, New York

**Intra- and inter-tumoral heterogeneity and response to therapy in mouse models of SCLC**
Julien Sage, Stanford University School of Medicine, Stanford, California

**Image-based mapping of cancer heterogeneity and therapy resistance**
Tannishtha Reya, University of California San Diego, La Jolla, California
Plenary Session 5: Genetics, Genomics, and Systems Biology  
*Session Chair: Monte M. Winslow, Stanford University School of Medicine, Stanford, California*  
11:00 a.m.-1:00 p.m.

**Normal and cancer stem cells in multistage carcinogenesis**  
Allan Balmain, UCSF Helen Diller Family Comprehensive Cancer Center, San Francisco, California

**Of mice and men: Using systems biology approaches to study human cancer**  
Cory Abate-Shen, Columbia University Medical Center, Herbert Irving Comprehensive Cancer Center, New York, New York

**Allele-specific oncogenic properties of K-Ras**  
Kevin M. Haigis, Beth Israel Deaconess Medical Center, Boston, Massachusetts

2 short talks from proffered abstracts

**Lunch on Own**  
1:00 p.m.-2:30 p.m.

Plenary Session 6: Beyond Genetically Engineered Mouse Models  
*Session Chair: Guillermina Lozano, The University of Texas MD Anderson Cancer Center, Houston, Texas*  
2:30 p.m.-4:30 p.m.

**Title to be announced**  
David A. Tuveson, Cold Spring Harbor Laboratory Cancer Center, Cold Spring Harbor, New York

**Organoid models of bladder cancer**  
Michael M. Shen, Columbia University College of Physicians & Surgeons, New York, New York

**Title to be announced**  
Pier Paolo Pandolfi, Beth Israel Deaconess Medical Center, Boston, Massachusetts

2 short talks from proffered abstracts

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

Keynote Address  
*Session Chair: Katerina A. Politi, Yale Cancer Center, New Haven, Connecticut*  
5:00 p.m.-5:50 p.m.

**Interrogating cancer drivers and dependencies using non-germline mouse models**  
Scott W. Lowe, Memorial Sloan Kettering Cancer Center, New York, New York
Wednesday, September 27

Continental Breakfast / Networking Roundtables
7:30 a.m.-8:30 a.m.

Plenary Session 7: Targeting the Tumor Microenvironment
Session Chair: Martin McMahon, University of Utah Huntsman Cancer Institute, Salt Lake City, Utah
8:30 a.m.-10:05 a.m.

Lung cancer mouse models for preclinical testing of novel and immune therapies
Kwok-Kin Wong, New York University (NYU) Langone Medical Center, New York, New York

The immune microenvironment in lung cancer: Lessons from mouse models
Katerina A. Politi, Yale Cancer Center, New Haven, Connecticut

Targeting the drug- and immune-privileged sanctuary of pancreas cancer
Sunil R. Hingorani, Fred Hutchinson Cancer Research Center, Seattle, Washington

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

Plenary Session 8: Using Mouse Models to Study Drug Resistance
Session Chair: Marcus W. Bosenberg, Yale University School of Medicine, New Haven, Connecticut
10:15 a.m.-12:15 p.m.

Title to be announced
Michael T. Hemann, David H. Koch Institute for Integrative Cancer Research at MIT, Boston, Massachusetts

Biologic and preclinical studies in mouse leukemias driven by oncogenic Ras
Kevin M. Shannon, University of California San Francisco, San Francisco, California

Mutational activation of PI3-kinase-α promotes de-differentiation of \( \text{BRAF}_{V600E} \)-driven lung tumor cells
Martin McMahon, University of Utah Huntsman Cancer Institute, Salt Lake City, Utah

Using animal models to develop novel combination therapies
Karen M. Cichowski, Brigham & Women's Hospital, Boston, Massachusetts

Meeting Summary
12:15 p.m.-1:00 p.m.

Closing Remarks
Julien Sage, Stanford University School of Medicine, Stanford, California

Departure
1:00 p.m.