An AACR Special Conference on

**Translation of the Cancer Genome:**
Scientific, Clinical, and Operational Challenges

October 15-18, 2011
Hyatt Regency San Francisco
San Francisco, CA

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**Saturday, October 15**

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

**Educational Session**
Grand Ballrooms B&C  
*Chairperson: Tona M. Gilmer, GlaxoSmithKline, Research Triangle Park, NC*

- **Challenges in analyzing cancer genomes for clinical decisions**
  Gad Getz, Broad Institute, Cambridge, MA

- **Cancer genomics in the TCGA, TARGET, and ICGC projects**
  David Haussler, Howard Hughes Medical Institute, Santa Cruz, CA

- **Determinants of response and resistance in drug discovery and development**
  Tona M. Gilmer

- **Bridging the gap between cancer genomics and drug discovery**
  Giulio F. Draetta, University of Texas MD Anderson Cancer Center, Houston, TX

- **Applying massively parallel sequencing technology to the study of cancer genomes**
  Elaine Mardis, Washington University School of Medicine, St. Louis, MO

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**6:00 p.m.-8:00 p.m.**

**Session 1: Biology and Genomics of Cancer Evolution**
Grand Ballrooms B&C  
*Chairperson: Elaine Mardis, Washington University School of Medicine, St. Louis, MO*

- **Genomic compartmentalization of epigenetic alterations in cancer**
  Peter W. Laird, University of Southern California, Los Angeles, CA

- **Evolution of the cancer genome**
  Elaine Mardis

- **Dealing with intra- and intertumoral heterogeneity**
  Gordon B. Mills, University of Texas MD Anderson Cancer Center, Houston, TX

- **Exome sequencing and integrative mutational profiling of lethal castrate-resistant prostate cancer**
  Catherine Grasso, Michigan Center for Translational Pathology, Ann Arbor, MI

- **Genome-wide translocation sequencing reveals mechanisms of chromosome breaks and rearrangements in B cells**
  Yu Zhang, Harvard Medical School, Boston, MA

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*Short talks from proffered papers*
**Sunday, October 16**

8:00 p.m.-9:30 p.m. **Welcome Reception**  
Garden Room A&B

7:00 a.m.-8:00 a.m. **Continental Breakfast**  
Market Street Foyer

8:00 a.m.-9:00 a.m. **Keynote Presentation 1**  
Grand Ballrooms B&C

**Organizing large projects across boundaries: The particle physics experience**  
Pier J. Oddone, Fermilab, Batavia, IL

9:00 a.m.-11:00 a.m. **Session 2: Functional Genomics I**  
Grand Ballrooms B&C

*Chairperson: Scott W. Lowe, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY*

**Functional genomics to decipher cancer dependencies and mechanisms**  
William C. Hahn, Dana-Farber Cancer Institute, Boston, MA

**Constructing and deconstructing cancer using mouse models and RNA interference**  
Scott W. Lowe

**Target discovery through functional genomics**  
Timothy Heffernan, Dana-Farber Cancer Institute, Boston, MA

**From cancer genomes to tumors: Polygenic validation of human cancer mutations by in vivo tumorigenesis**  
Su Kit Chew, Wellcome Trust Sanger Institute, Hinxton, United Kingdom

**Exome sequencing identifies frequent mutation of ARID1A in molecular subtypes of gastric cancer**  
Suet Leung, University of Hong Kong, Hong Kong, China

*Short talks from proffered papers*
11:00 a.m.-11:15 a.m.  **Break**
Market Street Foyer

11:15 a.m.-12:45 p.m.  **Session 3: Functional Genomics II**
Grand Ballrooms B&C
*Chairperson: David A. Largaespada, University of Minnesota, Minneapolis, MN*

Uncovering cancer genes and pathways using unbiased, forward genetic screens
David A. Largaespada

Translational genomics using population-based tumor models
Murray O. Robinson, AVEO Pharmaceuticals, Inc., Cambridge, MA

Characterization of BRAF and NRAS models of zebrafish melanoma through exome sequencing*
Jennifer Yen, Wellcome Trust Sanger Institute, Hinxton, United Kingdom

Cancer genome-based multigenic models of colon cancer in Drosophila*
Erdem Bangi, Mount Sinai School of Medicine, New York, NY

12:45 p.m.-2:30 p.m.  **Lunch on own/Free time**

2:30 p.m.-4:30 p.m.  **Session 4: Functional Genomics III**
Grand Ballrooms B&C
*Chairperson: Lynda Chin, University of Texas MD Anderson Cancer Center, Houston, TX*

Measuring the modeling life-death decisions in single cells
Peter K. Sorger, Harvard Medical School, Boston, MA

Translating the cancer genome
Lynda Chin

Genetic mining of the cancer genome: New entry points for anticancer therapy
Thomas (Trey) F. Westbrook, Baylor College of Medicine, Houston, TX

Optimizing molecularly targeted cancer therapy using functional genomics*
Trever Bivona, University of California, San Francisco, CA

A Sleeping Beauty transposon mutagenesis screen suggests involvement of the imprinted Dlk1-Dio3 domain in hepatocellular carcinoma development*
Jesse Riordan, University of Iowa, Iowa City, IA

4:30 p.m.-6:30 p.m.  **Poster Session A/Reception**
Bayview A&B

*Short talks from proffered papers*
Monday, October 17

7:00 a.m.-8:00 a.m.  Continental Breakfast
Market Street Foyer

8:00 a.m.-9:00 a.m.  Keynote Presentation 2
Grand Ballrooms B&C

Genomic determinants of malignant progression in pancreatic cancers
Douglas Hanahan, Swiss Institute for Experimental Cancer Research, Lausanne, Switzerland

9:00 a.m.-11:00 a.m. Session 5: Target Validation and Biology
Grand Ballrooms B&C
Chairperson: Frank McCormick, University of California, San Francisco, CA

Recurrent gene fusions in prostate cancer: Implications for personalized medicine
Arul M. Chinnaiyan, University of Michigan, Ann Arbor, MI

Targeting the undruggable: Lessons from Ras
Frank McCormick

Identification of high-value targets for oncology drug discovery
Markus Warmuth, H3 Biomedicine, Cambridge, MA

Functional characterization of WAC, a candidate tumor suppressor gene identified by transposon-based genetic screens for intestinal tumors in mice*
Caitlyn Conboy, University of Minnesota, Minneapolis, MN

Viability screens in leukemic and breast cancer cells with pooled lentiviral shRNA libraries identify potential therapeutic targets and synergistic lethal interactions*
Alex Chenchik, Cellecta, Inc., Mountain View, CA

11:00 a.m.-1:00 p.m.  Lunch on own/Free time

*Short talks from proffered papers
1:00 p.m.-3:00 p.m.  **Session 6: Hot Topics**
Grand Ballrooms B&C
*Chairperson: Kornelia Polyak, Dana-Farber Cancer Institute, Boston, MA*

**Chemical and mechanical cues regulate signaling to drive malignancy**
Valerie M. Weaver, University of California, San Francisco, CA

**Diversity in breast cancer: Mechanisms and clinical relevance**
Kornelia Polyak

**Variants in the germline genome that confer large risk of several cancers, including ovarian cancer and gliomas**
Kári Stefánsson, deCODE genetics Reykjavik, Iceland

**RetroSeq: A tool to discover somatic insertion of retrotransposons**
Elena Helman, Harvard-MIT Health Sciences & Technology, Cambridge, MA

**Selection of somatic mtDNA mutations in cancer development**
Estella Chen-Quin, Kennesaw State University, Kennesaw, GA

3:00 p.m.-3:30 p.m. **Break**
Market Street Foyer

3:30 p.m.-5:00 p.m.  **Session 7: Defining the Clinical Path Hypothesis**
Grand Ballrooms B&C
*Chairperson: Joe W. Gray, Oregon Health & Science University Knight Cancer Institute, Portland, OR*

**Models and processes to facilitate preclinical to clinical translation**
Joe W. Gray

**Developing genomic signatures into clinically actionable markers: Lessons from glioblastoma**
Cameron W. Brennan, Memorial Sloan Kettering Cancer Center, New York, NY

**Phase II study of therapy selected by molecular profiling in patients with previously treated metastatic pancreatic cancer: SU2C-001**
Michael Barrett, Translational Genomics Research Institute, Phoenix, AZ

**Next-generation diagnostics: Expanding clinical actionability of the cancer genome**
Alex Parker, Foundation Medicine Inc., Cambridge, MA

5:00 p.m.-7:00 p.m. **Poster Session B/Reception**
Bayview A&B

*Short talks from proffered papers
Tuesday, October 18

7:00 a.m.-8:00 a.m.  Continental Breakfast  
Market Street Foyer

8:00 a.m.-9:00 a.m.  Keynote Presentation 3  
Grand Ballrooms B&C

The genetic basis for cancer therapeutics: The opportunity and the challenge  
William R. Sellers, Novartis Institutes for BioMedical Research, Cambridge, MA

9:00 a.m.-11:00 a.m.  Session 8: Genomics in Clinical Trial Design  
Grand Ballrooms B&C  
Chairperson: William R. Sellers, Novartis Institutes for BioMedical Research, Cambridge, MA

Clinical trials in early-stage cancer patients: Future opportunities and challenges  
Peter Blume-Jensen, Metamark Genetics, Inc., Cambridge, MA

The ALK story: A new paradigm for the development of targeted therapies in NSCLC  
Alice T. Shaw, Massachusetts General Hospital Cancer Center, Boston, MA

Integrated “omics” profiles for patient stratification  
Anne-Lise Børresen-Dale, Institute for Cancer Research, Oslo, Norway

Personalized oncology through integrative high-throughput sequencing: A pilot study*  
Sameek Roychowdhury, University of Michigan, Ann Arbor, MI

Identification of predictive biomarkers and development of patient stratification assay for co-targeting mTOR and AKT*  
Theresa Zhang, Merck, Boston, MA

11:00 a.m.  Departure

*Short talks from proffered papers