Conference Program

Saturday, October 17

7:00 p.m.-8:30 p.m. Welcome and Keynote Lectures
Grand Ballroom E-K
Session Chairperson: Jane E. Visvader, Walter and Eliza Hall Institute of Medical Research, Parkville, Australia

Potential applications of genomics in patients with metastatic breast cancer
Fabrice Andre, Institut Gustave-Roussy, Villejuif, France

Harnessing genetic dependencies in cancer therapy
Alan Ashworth, University of California, San Francisco, CA

8:30 p.m.-10:00 p.m. Opening Reception
Grand Ballroom Foyer

Sunday, October 18

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

8:30 a.m.-10:30 a.m. Plenary Session 1: Genomics - Sporadic and Hereditary
Grand Ballroom E-K
Session Chairperson: Charles M. Perou, Lineberger Comprehensive Cancer Center, UNC School of Medicine, Chapel Hill, NC

Molecular classification of breast tumors based on multiplatform analysis
Charles M. Perou

A compendium of 560 whole-genome sequenced breast cancers
Serena Nik-Zainal, Wellcome Trust Sanger Institute, Cambridge, United Kingdom

Genetic determinants of breast cancer risk
Douglas Easton, University of Cambridge, Cambridge, United Kingdom

Spatial systems biology of cancer
Joe W. Gray, Oregon Health and Science University, Portland, OR

10:30 a.m.-11:00 a.m. Break
Grand Ballroom Foyer
11:00 a.m.-1:00 p.m.  **Plenary Session 2: The Differentiation Hierarchy and Cancer**
Grand Ballroom E-K
*Session Chairperson: Jane E. Visvader, Walter and Eliza Hall Institute of Medical Research, Parkville, Australia*

**Using the breast epithelial hierarchy to dissect tumor heterogeneity**
Jane E. Visvader

**Developmental insights into breast cancer intratumoral heterogeneity**
Jeffrey M. Rosen, Baylor College of Medicine, Houston, TX

**Protein C receptor as a surface marker of mammary stem cells and its implication in breast cancer**
Yi Arial Zeng, Shanghai Institute of Biochemistry and Cell Biology, Shanghai, China

**Sox10 regulates stem/progenitor and mesenchymal cell states in mammary epithelial cells**
Christopher Dravis, Salk Institute for Biological Studies, La Jolla, CA

1:15 p.m.-1:45 p.m.  **Short Talks from Proffered Papers**
Grand Ballroom E-K
*Session Chairperson: Thomas (Trey) F. Westbrook, Baylor College of Medicine, Houston, TX*

**Understanding the role of BCL11A in triple-negative breast cancer**
Walid T. Khaled, University of Cambridge, Cambridge, United Kingdom

**The spliceosome is a therapeutic vulnerability in MYC-driven breast cancer**
Tiffany Hsu, Baylor College of Medicine, Houston, TX

**GLUT1 is required for induction of mammary tumorigenesis by activated ErbB2/HER2/Neu**
Steven M. Anderson, University of Colorado Anschutz Medical Campus, Aurora, CO

1:45 p.m.-4:15 p.m.  **Poster Session A with Lunch**
Grand Ballroom A-D

4:30 p.m.-6:00 p.m.  **Plenary Session 3: Breast Tumor Heterogeneity (Intratumor and Intertumoral)**
Grand Ballroom E-K
*Session Chairperson: Jorge S. Reis-Filho, Memorial Sloan Kettering Cancer Center, New York, NY*

**Functional and clinical relevance of intratumor heterogeneity in breast**
Kornelia Polyak, Dana-Farber Cancer Institute, Boston, MA

**Clonal analysis of the in vivo growth of normal and de novo transformed human mammary cells**
Connie J. Eaves, BC Cancer Agency/Terry Fox Laboratory, Vancouver, BC, Canada

**Breast cancer inter- and intratumor genetic heterogeneity**
Jorge S. Reis-Filho

6:00 p.m.-  **Evening Off/Dinner on Own**

*Short talks from proffered papers*
Monday, October 19

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

8:30 a.m.-10:30 a.m.  Plenary Session 4: Tumor Microenvironment and Immunotherapy  
Grand Ballroom E-K  
Session Chairperson: Valerie M. Weaver, University of California Medical Center, San Francisco, CA

Tissue tension programs tumor aggression  
Valerie M. Weaver

Immune control of breast cancer metastasis  
Alana L. Welm, Oklahoma Medical Research Foundation, Oklahoma City, OK

Importance of anti-host immunity for breast cancer patients  
Sherene Loi, Peter MacCallum Cancer Center, Camberwell, Australia

Personalized immunotherapy  
Naiyer Rizvi, Columbia University, New York, NY

10:30 a.m.-11:00 a.m.  Break  
Grand Ballroom Foyer

11:00 a.m.-1:00 p.m.  Plenary Session 5: Animal Models and Their Applications  
Grand Ballroom E-K  
Session Chairperson: Elaine R. Mardis, Washington University School of Medicine, St. Louis, MO

Development of targeted therapeutics using patient-derived xenografts  
Michael T. Lewis, Baylor College of Medicine Cancer Center, Houston, TX

Targeting the BCL-2 family in breast cancer  
Geoffrey J. Lindeman, Walter and Eliza Hall Institute of Medical Research, Parkville, Australia

Genomics of a STAT1 knockout mouse model of human ER+ breast cancer  
Elaine R. Mardis

Modeling and targeting RB-deficiency in triple-negative breast cancer  
Eldad Zacksenhaus, Toronto General Hospital, Toronto, ON, Canada

1:00 p.m.-3:00 p.m.  Free Time/Lunch on Own
3:00 p.m.-5:00 p.m.  Plenary Session 6: Monitoring Metastasis and CTCs
Grand Ballroom E-K
Session Chairperson: Nicholas C. Turner, Institute of Cancer Research, Breakthrough Breast Cancer Research Center, London, United Kingdom

Circulating tumor DNA and prediction of relapse in early breast cancer
Nicholas C. Turner

Circulating tumor cells, prognosis in metastatic breast cancer, and the SWOG S0500 study
Jeffrey B. Smerage, University of Michigan Comprehensive Cancer Center, Ann Arbor, MI

A stem cell program in early human metastatic breast cancer cells
Zena Werb, UCSF Helen Diller Family Comprehensive Cancer Center, San Francisco, CA

Deep sequencing of circulating tumor DNA for personalized cancer detection and monitoring
Maximilian Diehn, Stanford University, Stanford, CA

5:00 p.m.-5:30 p.m.  Short Talks from Proffered Papers
Grand Ballroom E-K
Session Chairperson: Jeffrey M. Rosen, Baylor College of Medicine, Houston, TX

Tissue tension promotes mammary stemness and breast cancer aggression*
Jason J. Northey, University of California, San Francisco, CA

The effect of chemotherapy on HER2+ breast cancer heterogeneity measured by STAR-FISH: Detection of PIK3CA mutation and HER2 amplification at single-cell level in situ*
Michalina Janiszewska, Dana-Farber Cancer Institute, Boston, MA

Modeling the tumor microenvironment to identify novel loss of function mutations in breast cancer progression*
Racheal Natrajan, The Institute of Cancer Research, London, United Kingdom

5:30 p.m.-7:30 p.m.  Poster Session B/Reception
Grand Ballroom A-D

*Short talks from proffered papers
Tuesday, October 20

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

8:30 a.m.-10:00 a.m.  Plenary Session 7: Targeted Therapies in Luminal Breast Cancer  
Grand Ballroom E-K  
Session Chairperson: Matthew J. Ellis, Lester and Sue Smith Breast Center, Baylor College of Medicine, Houston, TX

Identifying and prioritizing targets in ER+ breast cancer  
Matthew J. Ellis

PI3K/AKT/TOR pathway: Therapeutic targeting and role in breast cancer progression  
Carlos L. Arteaga, Vanderbilt-Ingram Cancer Center, Nashville, TN

Targeting cyclin-dependent kinases in breast cancer  
Richard S. Finn, University of California, Los Angeles, CA

10:00 a.m.-10:15 a.m.  Break  
Grand Ballroom Foyer

10:15 a.m.-11:45 a.m.  Plenary Session 8: New Omics in Breast Cancer  
Grand Ballroom E-K  
Session Chairperson: Gary L. Johnson, University of North Carolina School of Medicine, Chapel Hill, NC

Proteogenomic and phosphoproteomic analysis of human breast cancer  
Philipp Mertins, The Broad Institute of MIT and Harvard, Cambridge, MA

Insights into metabolome of breast cancer  
Arun Sreekumar, Baylor College of Medicine, Houston, TX

Resiliency of the breast cancer kinome to targeted kinase inhibition  
Gary L. Johnson

11:45 a.m.  Departure