

An AACR Special Conference in Cancer Research:
Advances in Breast Cancer Research
October 19-22, 2023 | The Westin San Diego Bayview | San Diego, CA

Conference Cochairs:

Jason S. Carroll, Cancer Research UK Cambridge Research Institute, Cambridge, United Kingdom
Jenny C. Chang, Houston Methodist Hospital Cancer Center, Houston, Texas
Jane E. Visvader, Walter & Eliza Hall Institute of Medical Research, Parkville, Australia

THURSDAY, OCTOBER 19, 2023

6:00 p.m.-7:15 p.m. **Welcome and Keynote Lecture**
Emerald Ballroom

6:00 p.m.-6:15 p.m. **Welcome from Cochairs**
Jane E. Visvader, Walter & Eliza Hall Institute of Medical Research,
Parkville, Australia

6:15 p.m.-7:15 p.m. **Opening Keynote (CME eligible)**
**An atlas of the substrate specificity of all human protein-tyrosine
kinases**
Lewis C. Cantley, Dana-Farber Cancer Institute, Boston, Massachusetts

7:15 p.m.-9:00 p.m. **Opening Reception**
Crystal Ballroom

FRIDAY, OCTOBER 20, 2023

7:00 a.m.-8:00 a.m. **Breakfast**
Diamond Ballroom

8:00 a.m.-10:15 a.m. **Plenary Session 1: Models (CME eligible)**
Emerald Ballroom
Session Chair: Leif Ellisen, Massachusetts General Hospital Cancer Center and Ludwig Center at Harvard
Medical School, Boston, MA

8:00 a.m.-8:35 a.m. **Breast cancer evolution**
Joan S. Brugge, Harvard Medical School, Boston, Massachusetts

8:35 a.m.-8:50 a.m. **Identification and pharmacological targeting of treatment-resistant,
stem-like breast cancer cells for combination therapy***
Heeju Noh, Columbia University, New York, New York

8:50 a.m.-9:25 a.m. **Patient-derived models of breast cancer for discovery science and
precision medicine**
Alana L. Welm, University of Utah Huntsman Cancer Institute, Salt Lake
City, Utah

9:25 a.m.-9:40 a.m. **Modeling breast cancer through somatic precision gene editing with
high flexibility and efficiency***

Wen Bu, Baylor College of Medicine, Houston, Texas

9:40 a.m.-10:15 a.m. **Somatic modeling of breast cancer in mice and rats**
Jos Jonkers, Netherlands Cancer Institute, Amsterdam, Netherlands

10:15 a.m.–10:30 a.m. **Break**
Ballroom Foyer

10:30 a.m.–12:45 p.m. **Plenary Session 2: Inflammation, the Microenvironment, and Metabolism (CME eligible)**
Emerald Ballroom

Session Chair: Gordon B. Mills, Oregon Health and Science University, Portland, Oregon

10:30 a.m.-11:05 a.m. **Leveraging preclinical models of triple negative breast cancer for translational research**
Jeffrey M. Rosen, Baylor College of Medicine, Houston, Texas

11:05 a.m.-11:20 a.m. **CSF-1R antibody targeting therapy with combined metronomic chemotherapy and immune checkpoint blockade enhance a B and T cell response to attenuate metastatic triple negative breast cancer***
Diego Pedroza, Baylor College of Medicine, Houston, Texas

11:20 a.m.-11:55 a.m. **Postpartum breast involution informs breast cancer metastasis to the liver**
Pepper Schedin, Oregon Health and Science University, Portland, Oregon

11:55 a.m.-12:10 p.m. **USP7 inhibitors prevent triple negative breast cancer metastasis by inducing UHRF1 protein degradation***
Ahhyun Kim, University of California Irvine, Irvine, California

12:10 p.m.-12:45 p.m. **Highly multiplexed imaging for personalized breast immuno-oncology**
H. Raza Ali, CRUK Cambridge Institute/University of Cambridge, Cambridge, United Kingdom

12:45 p.m.–2:30 p.m. **Lunch**

2:30 p.m.–4:30 p.m. **Plenary Session 3: Panel Discussion on Biomarkers (CME eligible)**
Emerald Ballroom

Session Chair: Christina Curtis, Stanford University, Stanford, California

2:30 p.m.-2:50 p.m. **Quantitative biomarkers for breast cancer patients**
Charles M. Perou, University of North Carolina, Chapel Hill, North Carolina

*Short talk selected from proffered abstracts

- 2:50 p.m.-3:10 p.m. **Targeting Adaptive Responses in Cancer Through SMMART Clinical Trials**
Gordon B. Mills, Oregon Health and Science University, Portland, Oregon
- 3:10 p.m.-3:30 p.m. **Optimal therapy outcome for high-risk breast cancer patients by response predictive subtypes**
Laura J. van 't Veer, University of California San Francisco, San Francisco, California
- 3:30 p.m.-4:30 p.m. Panel Discussion
- 4:30 p.m.-6:30 p.m.** **Poster Session A/Reception**
Crystal Ballroom

SATURDAY, OCTOBER 21, 2023

- 7:00 a.m.–8:00 a.m.** **Breakfast**
Diamond Ballroom

- 8:00 a.m.–10:15 a.m.** **Plenary Session 4: Functional Interpretation of “Omics” (CME eligible)**
Emerald Ballroom

Session Chair: Charles M. Perou, University of North Carolina, Chapel Hill, North Carolina

- 8:00 a.m.-8:35 a.m. **Using a cancer dependency map**
William C. Hahn, Dana-Farber Cancer Institute, Boston, Massachusetts
- 8:35 a.m.-8:50 a.m. **Spatial transcriptomics of ductal carcinoma in situ reveal subtype specific differences in tumoral and stromal cell compartments***
Helga Bergholtz, Institute for Cancer Research, Oslo University Hospital, Oslo, Norway
- 8:50 a.m.-9:25 a.m. **Genomic, host and microenvironmental determinants of breast cancer progression**
Christina Curtis, Stanford University, Stanford, California
- 9:25 a.m.-9:40 a.m. **Uncovering nuclear expulsion: chromatin-bound signals from dying cancer cells accelerate metastatic outgrowth through S100A4-RAGE pathway***
Wooyong Park, National Institutes of Health, Bethesda, Maryland
- 9:40 a.m.-10:15 a.m. **Molecular and genomic mechanisms of estrogen signaling and gene regulation in breast cancer**
W. Lee Kraus, UT Southwestern Medical Center, Dallas, Texas
- 10:15 a.m.–10:30 a.m.** **Break**
Ballroom Foyer

*Short talk selected from proffered abstracts

10:30 a.m.–12:45 p.m. **Plenary Session 5: Heterogeneity (CME eligible)**
Emerald Ballroom

Session Chair: Jane E. Visvader, Walter & Eliza Hall Institute of Medical Research, Parkville, Australia

- 10:30 a.m.-11:05 a.m. **Decoding normal breast tissues and premalignant cancer with single cell genomics**
Nicholas E. Navin, The University of Texas MD Anderson Cancer Center, Houston, Texas
- 11:05 a.m.-11:20 a.m. **Intratumoral injection of mRNA-2752 and anti-PD-1 results in rapid regression of HER2 positive and or Hormone Receptor Negative DCIS: Phase 1 study results***
Laura Esserman, University of California San Francisco, San Francisco, California
- 11:20 a.m.-11:55 a.m. **Single cell origins and targeting of genomic instability in breast cancers**
Samuel Aparicio, BC Cancer Research Centre, Vancouver, BC, Canada
- 11:55 a.m.-12:10 p.m. **Intratumoral heterogeneity drives resistance to Antibody Drug Conjugate therapy: Analysis of the NeoSTAR trial of neoadjuvant Sacituzumab govitecan for localized TNBC***
Leif Ellisen, Massachusetts General Hospital Cancer Center and Ludwig Center at Harvard Medical School, Boston, MA
- 12:10 p.m.-12:45 p.m. **Creation and preliminary analyses of a full spectrum of breast cancers initiated de novo from normal human mammary cells**
Susanna Tan, BC Cancer Research Institute, Vancouver, BC, Canada

12:45 p.m.–2:45 p.m. **Lunch On Own**

2:45 p.m.–5:00 p.m. **Plenary Session 6: Personalized Risk & Prevention (CME eligible)**
Emerald Ballroom

Session Chair: Geoffrey J. Lindeman, Walter & Eliza Hall Institute of Medical Research, Parkville, Australia

- 2:45 p.m.-3:20 p.m. **Harnessing endocrine control mechanism for breast cancer prevention**
Cathrin Briskin, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland
- 3:20 p.m.-3:35 p.m. **Functional and clinical characterization of hypomorphic missense variants in the BRCA2 cancer predisposition gene***
Huaizhi (Gilbert) Huang, Mayo Clinic, Rochester, Minnesota
- 3:35 p.m.-4:10 p.m. **Genetic susceptibility to breast cancer: Recent advances and application to personalized prevention**
Douglas Easton, University of Cambridge, Cambridge, United Kingdom

*Short talk selected from proffered abstracts

4:10 p.m.-4:25 p.m. **Mammary epithelial architecture modulates field cancerization***
Hendrik Messal, Netherlands Cancer Institute, Amsterdam, Netherlands

4:25 p.m.-5:00 p.m. **Genomic medicine in breast cancer: Risk prediction to cancer interception**
Susan M. Domchek, University of Pennsylvania, Philadelphia, Pennsylvania

5:00 p.m.-7:00 p.m.
Crystal Ballroom **Poster Session B/Reception**

SUNDAY, OCTOBER 22, 2023

7:00 a.m.-8:00 a.m.
Diamond Ballroom **Breakfast**

8:00 a.m.-9:45 a.m.
Emerald Ballroom **Plenary Session 7: Mechanisms of Treatment Resistance (CME eligible)**

Session Chair: Jason S. Carroll, Cancer Research UK Cambridge Research Institute, Cambridge, United Kingdom

8:00 a.m.-8:35 a.m. **Hormonal action in breast cancer: Common features and unique properties that drive tumor development and outcome**
Wilbert Zwart, Netherlands Cancer Institute, Amsterdam, Netherlands

8:35 a.m.-9:10 a.m. **Mechanisms of resistance to HER2 targeted therapies in HER2+ breast cancer**
Rachel Schiff, Baylor College of Medicine, Houston, Texas

9:10 a.m.-9:45 a.m. **Resistance to endocrine therapy in ER+ breast cancer**
Carlos L. Arteaga, UT Southwestern Medical Center, Dallas, Texas

9:45 a.m.-10:00 a.m.
Ballroom Foyer **Break**

10:00 a.m.-12:20 p.m.
Emerald Ballroom **Plenary Session 8: Future Therapies & Immuno-Oncology (CME eligible)**

Session Chair: Pepper Schedin, Oregon Health and Science University, Portland, Oregon

10:20 a.m.-10:50 a.m. **NO target for cancer stem cells**
Jenny C. Chang, Houston Methodist Hospital Cancer Center, Houston, Texas

10:50 a.m.-11:20 a.m. **Microbiota and breast cancer: the power of small things**
Dipali Sharma, Johns Hopkins University School of Medicine, Baltimore, Maryland

*Short talk selected from proffered abstracts

11:20 a.m.-11:50 a.m. **Future of immunotherapy in breast cancer**
Elizabeth Mittendorf, Dana-Farber Cancer Institute, Boston,
Massachusetts

11:50 a.m.-12:20 p.m. **Exploring breast cancer vulnerabilities through apoptotic pathways**
Geoffrey J. Lindeman, Walter & Eliza Hall Institute of Medical Research,
Parkville, Australia

12:20 p.m.-1:05 p.m. **Closing Keynote (CME eligible)**
Emerald Ballroom

Session Chair: Jenny C. Chang, Houston Methodist Hospital Cancer Center, Houston, Texas
Breast cancer: Enormous progress, ongoing challenges
Judy E. Garber, Dana-Farber Cancer Institute, Boston, Massachusetts

1:05 p.m.-1:10 p.m. **Closing Remarks**
Emerald Ballroom

Jenny C. Chang, Houston Methodist Hospital Cancer Center, Houston,
Texas