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*
Somatic modeling of breast cancer in mice and rats
Jos Jonkers, Netherlands Cancer Institute, Amsterdam, Netherlands

Break

Plenary Session 2: Inflammation, the Microenvironment, and Metabolism (CME eligible)
Emerald Ballroom

Leveraging preclinical models of triple negative breast cancer for translational research
Jeffrey M. Rosen, Baylor College of Medicine, Houston, Texas

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

Postpartum breast involution informs breast cancer metastasis to the liver
Pepper Schedin, Oregon Health and Science University, Portland, Oregon

USP7 inhibitors prevent triple negative breast cancer metastasis by inducing UHRF1 protein degradation*
Ahhyun Kim, University of California Irvine, Irvine, California

Highly multiplexed imaging for personalized breast immuno-oncology
H. Raza Ali, CRUK Cambridge Institute/University of Cambridge, Cambridge, United Kingdom

Lunch

Plenary Session 3: Panel Discussion on Biomarkers (CME eligible)
Emerald Ballroom

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

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

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
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>10:30 a.m.–12:45 p.m.</td>
<td>Plenary Session 5: Heterogeneity (CME eligible)</td>
<td>Emerald Ballroom</td>
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<tr>
<td>10:30 a.m.–11:05 a.m.</td>
<td>Decoding normal breast tissues and premalignant cancer with single cell genomics</td>
<td>Nicholas E. Navin, The University of Texas MD Anderson Cancer Center, Houston, Texas</td>
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<tr>
<td>11:05 a.m.–11:20 a.m.</td>
<td>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*</td>
<td>Laura Esserman, University of California San Francisco, San Francisco, California</td>
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<td>11:20 a.m.–11:55 a.m.</td>
<td>Single cell origins and targeting of genomic instability in breast cancers</td>
<td>Samuel Aparicio, BC Cancer Research Centre, Vancouver, BC, Canada</td>
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<td>11:55 a.m.–12:10 p.m.</td>
<td>Intratumoral heterogeneity drives resistance to Antibody Drug Conjugate therapy: Analysis of the NeoSTAR trial of neoadjuvant Sacituzumab govitacan for localized TNBC*</td>
<td>Leif Ellisen, Massachusetts General Hospital Cancer Center and Ludwig Center at Harvard Medical School, Boston, MA</td>
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<td>12:10 p.m.–12:45 p.m.</td>
<td>Creation and preliminary analyses of a full spectrum of breast cancers initiated de novo from normal human mammary cells</td>
<td>Susanna Tan, BC Cancer Research Institute, Vancouver, BC, Canada</td>
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<td>12:45 p.m.–2:45 p.m.</td>
<td>Lunch On Own</td>
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<td>2:45 p.m.–5:00 p.m.</td>
<td>Plenary Session 6: Personalized Risk &amp; Prevention (CME eligible)</td>
<td>Emerald Ballroom</td>
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<td>2:45 p.m.–3:20 p.m.</td>
<td>Harnessing endocrine control mechanism for breast cancer prevention</td>
<td>Cathrin Briskin, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland</td>
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<td>3:20 p.m.–3:35 p.m.</td>
<td>Functional and clinical characterization of hypomorphic missense variants in the BRCA2 cancer predisposition gene*</td>
<td>Huaizhi (Gilbert) Huang, Mayo Clinic, Rochester, Minnesota</td>
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<td>3:35 p.m.–4:10 p.m.</td>
<td>Genetic susceptibility to breast cancer: Recent advances and application to personalized prevention</td>
<td>Douglas Easton, University of Cambridge, Cambridge, United Kingdom</td>
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*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. Poster Session B/Reception
Crystal Ballroom

SUNDAY, OCTOBER 22, 2023

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

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

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

*Short talk selected from proffered abstracts*