Current as of October 19, 2023

Short Talks Selected from Proffered Abstracts

PR01 **Identification and pharmacological targeting of treatment-resistant, stem-like breast cancer cells for combination therapy.** Heeju Noh. Columbia University, New York, NY, United States.

PR02 **Modeling breast cancer through somatic precision gene editing with high flexibility and efficiency.** Wen Bu. Baylor College of Medicine, Houston, TX, United States.

PR03 **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, TX, United States.

PR04 **USP7 inhibitors prevent triple negative breast cancer metastasis by inducing UHRF1 protein degradation.** Ahhyun Kim. University of California, Irvine, Irvine, CA, United States.

PR05 **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.

PR06 **Uncovering nuclear expulsion: chromatin-bound signals from dying cancer cells accelerate metastatic outgrowth through S100A4-RAGE pathway.** Wooyong Park. NIH, Bethesda, MD, United States.

PR07 **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. Department of Surgery, University of California San Francisco, San Francisco, CA, United States.

PR08 **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, United States.

PR09 **Functional and clinical characterization of hypomorphic missense variants in the BRCA2 cancer predisposition gene.** Huaizhi (Gilbert) Huang. Mayo Clinic, Rochester, MN, United States.

PR10 **Mammary epithelial architecture modulates field cancerization.** Hendrik Messal. Netherlands Cancer Institute, Amsterdam, Netherlands.
Poster Session A (To be presented on October 20 from 4:30-6:30 p.m. PT)

Biomarkers

A001 Transcriptomic and microRNA profiling revealed novel therapeutic targets for breast cancer subtypes. Nehad Alajez. Qatar Biomedical Research Institute, Doha, Qatar.

A002 Serum levels of immune markers associated with pathological complete response (pCR) and immune-related adverse events (irAEs) in early-stage breast cancer patients receiving immune checkpoint inhibitor plus chemotherapy in the I-SPY 2 trial. Denise Wolf. University of California San Francisco, San Francisco, CA, United States.


A006 Spatial localization of Caveolin-1 protein in triple negative breast cancer is related to different molecular features. Christopher Godina. Lund University, Lund, United States.


A009 Targeting Structural Variants (DNA palindromes) in plasma cell-free DNA for Liquid Biopsy-based Cancer Detection. Fumie Igari. Juntendo University Department of Breast Oncology, Tokyo, Japan.


A012 Molecular profiling of neoductgenesis in early stage breast cancer for the development of novel diagnostic biomarkers. Laura Lehtinen. 1Institute of Biomedicine and Cancer Research Laboratory FICAN West, University of Turku and Turku Bioscience Centre, University of Turku and Åbo Akademi University, Turku, Finland.

A015 Mutations in mismatch repair genes that alter subcellular localization of the protein predict resistance to standard therapy but response to cell cycle inhibitors. Aloran Mazumder. Sanford Burnham Prebys Medical Discovery Institute, La Jolla, CA, United States.

A016 The breast cancer genome and its association with the breast tissue bacteriome. Ariana McCaw. Pepperdine University, Malibu, CA, United States.


A018 Dihdroceramide desaturase 1 (DES1) promotes anchorage-independent survival and metastasis of HER2-positive and basal breast cancer through regulation of caspase 14. Deanna Peperno. Stony Brook University, Stony Brook, NY, United States.

A019 IGF-1R protein pathway activation is associated with pathologic complete response to an anti-IGF-1R regimen (paclitaxel, ganitumab, and metformin) in the I-SPY2 neoadjuvant breast cancer trial. Emanuel Petricoin. George Mason University, Manassas, VA, United States.

A020 Prostate specific membrane antigen targeted photodynamic therapy agent for the treatment of breast cancer. Aditi Shirke. Case Western Reserve University, Cleveland, OH, United States.


A022 Assessment of clonal and subclonal PIK3CA mutations in patients with breast cancer. Sameer Udhane. Exact Sciences, Phoenix, AZ, United States.

A023 lncRNA-protein interactions that predict response to endocrine therapy in HR+ breast cancer. Kacie Waiters. University of Houston, Houston, TX, United States.

A024 DCE-MRI-based biophysical simulation to forecast NAT response in HER2+ breast cancer patients, with glucose characterization and orthogonal validation using FDG-PET and 64Cu studies. John Whitman. SimBioSys, Inc., Chicago, IL, United States.


A026 An alternative to HER2 IHC 0/1+/2+ status to predict which clinically HER2-negative patients will respond to anti-HER2 therapies: A rationale for the likely superiority of quantitative HER2 pathway
RPPA measurements. Julia Wulfkuhle. Center for Applied Proteomics and Molecular Medicine, George Mason University, Fairfax, VA, United States.

Inflammation, Metabolism, and the Microenvironment


A028 Disparities in suppressive immunity in Hispanic/Latina patients with hormone receptor positive breast cancer. Sabrina Carrel. University of South Carolina School of Medicine at Greenville, Greenville, SC, United States.


A031 The role of nuclear epidermal growth factor receptor in cell migration and wound healing. Danielle DiFranco. University of Arizona, Tucson, AZ, United States.

A032 Low non-immune stromal cell levels and high hypoxic tumor microenvironments are associated with pathologic complete response in the neoadjuvant I-SPY2 TRIAL. Kailey Dubinsky. Laboratory Medicine, University of California San Francisco, San Francisco, CA, United States.


A034 3D in-vitro model picturing cancer-stromal cell crosstalk & bone metastasis. Shrinwanti Ghosh. North Dakota State University, Fargo, ND, United States.

A035 An analysis of the contribution of the glutathione and thioredoxin antioxidant pathways to triple negative breast cancer development. Nomeda Girnius. Harvard Medical School, Boston, MA, United States.

A036 Macropinocytosis mediates metabolic resistance to loss of glutamine transport in triple-negative breast cancer. Jeff Holst. UNSW Sydney, Sydney, NSW, United States.

A037 Metabolic maneuvering of glycolyx hypersialylation is a smart and healthy way of curbing metastatic potential in breast cancer. Mohini Kamra. The University of Texas at Austin, Austin, TX, United States.

A038 BRCA1 Promotes Mesenchymal to Amoeboid Transition (MAT). Hala Kassis. Tel Aviv University, Tel Aviv, Isreal.

A041 Treating liver metastases by reversing cell competition between metastatic cancer cells and hepatocytes. Katherine Lake. UT Southwestern Medical Center, Dallas, TX, United States.

A042 Characterization of the hormone receptor-positive breast tumor immune microenvironment using single cell transcriptomics and multiplex immunofluorescence. Dan Michaud. Brigham & Women’s Hospital, Boston, MA, United States.


A044 P2Y2 signaling disruption reduces ATP-dependent calcium elevation and actin localization to promote breast tumor cell dissemination. Makenzy Mull. University of Maryland Baltimore, Baltimore, MD, United States.

A045 Elevated PGC1α during abrupt mammary gland involution leads to long-term metabolic reprogramming and genomic instability; hallmarks of breast cancer. Kate Ormiston. Ohio State University Medical Center, Columbus, OH, United States.

A046 Liver involution generates a pro-metastatic niche in a murine model of postpartum breast cancer liver metastasis. Michelle Ozaki. Oregon Health & Science University, Portland, OR, United States.

A047 Gamma Aminobutyric Acid Subunit Pi (GABRP) Promotes Breast Cancer Metastasis to the Brain. Rebecca Packard. Ohio State University, Columbus, OH, United States.

A049 Epithelial to mesenchymal transition confers sensitivity to cytotoxic agent Ophiobolin A via alterations in mitochondrial function and metabolic pathways. Haleigh Parker. Department of Biology, Baylor University, Waco, TX, United States.

A050 CD8+ T cell exhaustion and their DNA damage in BRCA1 mutated TNBC. Dana Pueschl. UPENN, Philadelphia, PA, United States.


A052 Dissecting the immune regulatory mechanisms of distinct PI3K alterations in invasive lobular carcinoma. Antoinette van Weverwijk. Netherlands Cancer Institute, Amsterdam, Netherlands.

A053 Dynamic regulation of pyruvate carboxylase is required for immune evasion and pulmonary metastasis. Mike Wendt. Purdue University, West Lafayette, IN, United States.

A054 Transcriptional rhythmicity in mammary glands from pubertal MMTV-PyMT mice fed a high-fat diet. Lin Yan. Grand Forks Human Nutrition Research Center, Grand Forks, ND, United States.

Models
A056 **Lymph and liver metastasis in E2F5 conditional knockout mouse model.** Eran Andrechek. Michigan State University, East Lansing, MI, United States.

A057 **Modeling breast cancer through somatic precision gene editing with high flexibility and efficiency.** Wen Bu. Baylor College of Medicine, Houston, TX, United States.

A059 **Heterogeneous cell populations in organoid models derived from breast preinvasive and invasive carcinomas after endocrine therapy.** Nadine Goldhammer. University of California, San Francisco, San Francisco, CA, United States.


A061 **Grb7 is dispensible for normal development and ERBB2-driven mammary tumorigenesis, but maternal Grb7 deletion causes lactational insufficiency.** Kristopher Lofgren. Kabara Cancer Research Institute, Gundersen Medical Foundation, La Crosse, WI, United States.

A062 **Somatic engineering of rat models to recapitulate human breast cancer evolution and heterogeneity.** Catrin Lutz. Netherlands Cancer Institute (NKI), Amsterdam, Netherlands.


A064 **Identifying cooperating genetic events contributing to disease progression in mutant p53-driven breast cancer.** Rhiannon Morrissey. The University of Texas MD Anderson Cancer Center, Houston, TX, United States.

A065 **Single cell transcriptomics reveals putative tumor promoting subpopulation in Brca1 mutant breast cancer mouse model.** Shailja Pathania. University of Massachusetts Boston, Boston, MA, United States.


A069 **The molecular landscape of injury-induced mammary epithelial cell fate switching.** Queralt Vallmajo-Martin. Gene Expression Laboratory, Salk Institute for Biological Studies, La Jolla, United States.

A070 **Examining patient-specific responses to PARP inhibitors in a novel, human induced pluripotent stem cell-based model of breast cancer.** Carly Weddle. Northwestern University, Chicago, IL, United States.

A072 **Seeking prognostic features of Lymphedema for Breast Cancer patients in Saudi Arabia, Single institute experience.** Abdulaziz Alhamad. PSMMC, Riyadh, Saudi Arabia.

A073 **Prisma Health Cancer Institute: Racial Analysis in Cancer Patients Using Molecular, Clinical, and Demographic Data.** Brittany Austin. University of South Carolina School of Medicine Greenville, Greenville, SC, United States.

A074 **Targeting dormant disseminated tumor cells and their permissive niche by pro-resolving mediators derived from resolution-phase macrophages.** Dalit Barkan. University of Haifa, Haifa, Israel.


A076 **The role of PARP-1-mediated FoxA1 ADP-ribosylation in breast cancer biology.** Cristel Camacho. University of Texas Southwestern Medical Center, Dallas, TX, United States.

A077 **Investigating the relationship of socioeconomic status on the molecular biology of ER+ breast cancer.** Jerry DeWitt. Sanford Burnham Prebys Medical Discovery Institute, San Diego, CA, United States.

A078 **Characterization of normal human male mammary cells and their de novo transformed derivatives.** Shengsen Ding. University of British Columbia, Vancouver, BC, United States.


A080 **An epithelial-specific role for endothelial protein ROBO4 in breast cancer.** Veronica Haro-Acosta. University of California Santa Cruz, Santa Cruz, CA, United States.

A081 **Real-world treatment patterns and clinical outcomes in patients with HER2+ metastatic breast cancer receiving systemic therapy in Ontario, Canada.** Ruth Moulson. Pentavere, Toronto, ON, Canada.

A082 **Stretching towards relief: The Kent-Collins protocol for radiation-induced eustachian tube dysfunction.** Matthew Kent. Drexel University College of Medicine, Philadelphia, PA, United States.

A083 **USP7 inhibitors prevent triple negative breast cancer metastasis by inducing UHRF1 protein degradation.** Ahhyun Kim. University of California, Irvine, Irvine, CA, United States.

A084 **DEK overexpression in the murine mammary gland promotes epithelial hyperplasia.** Ashley Leck. Cincinnati Children's Hospital Medical Center, Cincinnati, OH, United States.
A085 **Stromal PDGFRβ hyperactivation modulates the myeloid lineage in the brain metastatic microenvironment.** Alexis Mossing. The Ohio State University, Columbus, OH, United States.

A086 **Retrospective study on postoperative adjuvant radiotherapy in primary malignant angiosarcoma of the breast patients following mastectomy or breast-conserving surgery using SEER database.** Ramez Odat. Faculty of Medicine, Jordan University of Science and Technology, Irbid, Jordan.

A087 **Morphometric analysis of the terminal ductal lobular unit architecture in human breast.** Emilia Peuhu. University of Turku, Turku, Finland.


A089 **Role of Vardhamana Pippali Rasayana (VPR) in human breast cancer cells.** Richa Tripathi. AIIA: All India Institute of Ayurveda, New Delhi, India.

A090 **Gender Disparities in the National Institutes of Health Funding for Breast Oncology.** Janta Ukrani. Mather Hospital/Northwell Health, PORT JEFFERSON, NY, United States.
Poster Session B (To be presented on October 21 from 5:00-7:00 p.m. PT)

Functional Interpretation of Genomics

B001 Does deep intronic splicing in breast cancer susceptibility genes contribute to breast cancer?. Mwangala Akamandisa. Perelman School of Medicine of the University of Pennsylvania, Philadelphia, PA, United States.


B004 Molecular portraits of cell cycle checkpoint kinases in cancer evolution, progression, and treatment responsiveness. Svasti Haricharan. Sanford Burnham Prebys, La Jolla, CA, United States.


B007 Vandetanib abrogates antiestrogen resistance in MAPK-driven ER+ breast cancer by halting key intracellular signaling pathways and multiple druggable kinases. Rasha Kakati. University of North Carolina at Chapel Hill, Chapel Hill, NC, United States.

B008 KDM4C histone demethylase connects redox balance to chromatin remodeling via histone H3 tail clipping. Zheqi Li. Dana-Farber Cancer Institute, Boston, MA, United States.

B009 TWEAK/Fn14 signalling driven super-enhancer reprogramming promotes pro-metastatic metabolic rewiring in Triple-Negative Breast Cancer. Yinghui Li. Nanyang Technological University, Singapore, Singapore.

B010 Regulation of breast cancer progression by nonmutational epigenetic dependency. Weibo Luo. UT Southwestern Medical Center, Dallas, TX, United States.


B012 Wnt/Ror2 signaling regulates myoepithelial cell fate and luminal cell proliferation during mammary development. Hongjiang Si. Baylor College of Medicine, Houston, TX, United States.

B013 Understanding the anti-metastatic activity of estrogen receptor β in inflammatory breast cancer. Christoferos Thomas. Houston Methodist Research Institute, Houston, TX, United States.
B014 Bioinformatic and in-vitro analyses identify cAMP/PKA/CREB signaling as a major molecular alteration in invasive lobular breast cancer. Abdalla Wedn. University of Pittsburgh, School of Medicine, Pittsburgh, PA, United States.


B017 Elucidating the role of CPPED1 in triple-negative breast cancer. Talieh Zomorrodinia. University of California Santa Cruz, Santa Curz, CA, United States.

Future Therapies & Immuno-Oncology


B020 Pan-RAS inhibitors to treat luminal B breast cancer. Geoff Clark. University of Louisville, Louisville, KY, United States.

B021 Journey of CAR T cells: emphasizing the concept and advancement in breast cancer. Chandrajeet Dhara. Apeejay Stya University Gurugram, Gurugram, India.

B022 Targeting epithelial-mesenchymal plasticity and CD73 to enhance responses of breast cancers to immune checkpoint blockade therapies. Anushka Dongre. Cornell University, Ithaca, NY, United States.

B023 Ectopic Expression of the Obscurin PH-domain in Aggressive Breast Cancer Cells Modulates PI3K/Akt Activity and Inhibits Cellular Migration and Invasion. Matthew Eason. University of Maryland School of Medicine, Baltimore, MD, United States.

B024 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. Kirithiga Ramalingam. University of California San Francisco, San Francisco, CA, United States.

B025 MHC class II and CD1d expressing conventional dendritic cells with immunoglobulin therapy drives anti-tumor abscopal effect by recruiting Natural Killer T cells to the tumor microenvironment. Namrata Gautam. H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL, United States.

B026 Targeting wild type and ESR1 mutations as neoantigens in hormone receptor positive breast cancer. Namrata Gautam. Moffitt Cancer Center, Tampa, FL, United States.
B027 Molecular characterization and therapeutic approaches for VISTA+ triple-negative breast cancers. Joshua Gruber. UT Southwestern Medical Center, Dallas, TX, United States.


B029 Combinations of metformin and BH3-mimetic drugs synergistically induce immunogenic cell death in breast cancer cells. Linda Id. University of Helsinki, Helsinki, Finland.


B033 Targeting CaMKK2 inhibits actin cytoskeletal assembly to suppress cancer metastasis. Debarati Mukherjee. Duke University, Durham, NC, United States.


B035 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, TX, United States.


B037 Utilizing GSK3β and integrin inhibitors to target STAT3 activity in triple negative breast cancer. Emily Pratt. University of New Hampshire, Durham, NH, United States.

B038 CD4Th1 cytokine interferon gamma regulates genome profiles and inhibits tumorigenesis of disseminated cancer cells in breast cancer. Ganesan Ramamoorthi. Moffitt Cancer Center, Tampa, FL, United States.

B039 Butyrate and propionate reduced oncogenic phenotypes in triple negative breast cancer. Liah Román-Calderón. UPR- Rio Piedras, San Juan, PR, United States.
B040 Trispecific killer engagers against IGF1R and fetal form of insulin receptor induce human natural killer cell mediated killing of hormone receptor positive breast cancer in vitro and in vivo. Deepali Sachdev. University of Minnesota, Minneapolis, MN, United States.

B041 Activation of NK cell-driven tumor lysis through the therapeutic targeting of nEGFR. Joyce Schroeder. University of Arizona, Tucson, AZ, United States.

B042 A screen to identify modifiers of BRCA1 protein level for cancer prevention and treatment. Erin Sellar. University of Toronto, Toronto, ON, United States.

B043 Radiolabelled Trastuzumab Fab as a theranostic agent for HER2 expressing breast cancer. Jaya Shukla. Post Graduate Institute of Medical Education & Research, Chandigarh, India.

B044 Intracellular sclerostin plays a vital role in tumor progression and metastasis in triple-negative breast cancer. Meiheng SUN. Law Sau Fai Institute for Advancing Translational Medicine in Bone and Joint Diseases, Hong Kong Baptist University, Hong Kong, China, Hong Kong, Hong Kong.


B046 Exploring the potential of commensal polyomavirus as a promising approach for breast cancer treatment. YUN XIA. Massachusetts General Hospital, Charlestown, MA, United States.

B047 Epigenetic reprogramming by CBP/P300 bromodomain inhibition of triple-negative breast cancer and the immune microenvironment. Xueying Yuan. Baylor College of Medicine, Houston, TX, United States.

Heterogeneity

B048 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.


B052 The role of LMO2 in DNA damage repair pathway choice in metastatic breast cancer. Isobel Fetter. UC Santa Cruz, Santa Cruz, CA, United States.

B053 The role of whole genome doubling in immune escape in TNBC. Pierre Foidart. Dana-Farber Cancer Institute, Boston, MA, United States.
B054 **Deciphering the normal-like molecular subtype of breast cancer.** Ingrid Hedenfalk. Lund University, Lund, Sweden.

B055 **Metabolic stratification of human breast tumors reveal subtypes of clinical and therapeutic relevance.** Mohammad Iqbal. Gulf Medical University, Ajman, United Arab Emirates.

B056 **Chronic hypoxia in TNBC breast cancer induces development of a novel population of CD24+/CD49b-high cells characterized by high expression of CST1.** May Sin Ke. University of Oxford, Oxford, United States.


B060 **Identification and pharmacological targeting of treatment-resistant, stem-like breast cancer cells for combination therapy.** Heeju Noh. Columbia University, New York, NY, United States.

B061 **Discovering co-driver genes and pathways of mutant TP53 in breast cancer by CRISPR screening and multi-omics approaches.** Lilian Nwekwo. Arizona State University, Tempe, AZ, United States.

B062 **Uncovering nuclear expulsion: chromatin-bound signals from dying cancer cells accelerate metastatic outgrowth through S100A4-RAGE pathway.** Wooyong Park. NIH, Bethesda, MD, United States.

B063 **Investigation of tumor heterogeneity using integrated single-cell RNA sequence data based on HER2 status in patients with breast cancer.** Sho Shiino. Department of Breast Surgery, National Cancer Center Hospital, Tokyo, United States.

B064 **Interferon-induced bone marrow stromal antigen 2 (BST2) is a functional tumor-initiating cell marker in triple-negative breast cancer.** Eric Souto. Baylor College of Medicine, Houston, TX, United States.

**Mechanisms of Treatment Resistance**

B066 **PDGFR upregulation functions as a bypass mechanism contributing to FGFR inhibitor resistance in metastatic breast cancer.** Mitchell Ayers. Purdue University, West Lafayette, IN, United States.


B070 **Myc synthetic lethality as a therapeutic strategy for resistance: Insights into the targetability of mitochondrial complex I in Myc-high TNBC.** Antti Hiltunen. University of Helsinki, Helsinki, Finland.
B071 A genetic approach to selectively inhibit macropinocytosis while sparing autophagy. Rebecca Lim. University of California, Irvine, Irvine, CA, United States.

B072 Loss of the tumor and metastasis suppressor RasGAP DAB2IP mediates therapeutic resistance in HER2+ breast cancer. Naiara Perurena. Harvard Medical School and Brigham and Women's Hospital, Boston, MA, United States.


B074 Novel targeting of semaphorin 7a-mediated endocrine therapy resistance in an immune competent ER+ breast cancer model. Rachel Steinmetz. University of Colorado Anschutz Medical Campus, Aurora, CO, United States.

B075 Dual epigenetic-autophagy inhibition is effective in treating triple negative breast cancer. Marilena Tauro. H Lee Moffitt Cancer Center, Tampa, FL, United States.


Personalized Risk and Prevention


B079 Vitamin D metabolism is suppressed postpartum: Implications for targeting the postpartum window for cancer prevention. Sarah Bernhardt. Oregon Health & Science University, Portland, OR, United States.


B087 Causal relationships and familial aggregation of mammogram risk scores for breast cancer: insights from twins and sisters study. Zhoufeng Ye. The University of Melbourne, North Melbourne, VIC, Australia.

B088 A review on mammographic textures as strong breast cancer risk predictors. Zhoufeng Ye. The University of Melbourne, Melbourne, VIC, Australia.