A01 *BRCA1* mutation in the BRCT domain leads to synthetic lethality with ATM deficiency in mice. Chun-Chin Chen, Weill Cornell Graduate School of Medical Sciences, Cornell University, New York, NY, United States.

A02 Small molecules that specifically inhibit the D-loop activity of RAD51. Philip Connell, University of Chicago, Chicago, IL, United States.

A03 The EMSY threonine 207 phospho-site is required for EMSY-driven suppression of DNA damage repair. Petar Jelinic, Perlmutter Cancer Center, NYU Langone Medical Center, New York, NY, United States.

A04 Phosphorylation and ubiquitylation on the RPA-ssDNA platform promote homologous recombination. Alexandre Maréchal, Université de Sherbrooke, Sherbrooke, QC, Canada.

A05 Improving outcome in homologous recombination competent epithelial ovarian cancer: Hyperthermia and surgeon’s perspective. Asima Mukhopadhyay, Tata Medical Center, Kolkata, WB, India.

A06 Regulation of homologous recombination by the SUMO ligase NSMCE2. Kelvin Pond, University of Arizona Cancer Center, Tucson, AZ, United States.

A07 The RAD51 paralog complex SWS1-SWSAP1 is critical for homologous recombination in the mouse. Rohit Prakash, Memorial Sloan Kettering Cancer Center, New York, NY, United States.

A08 PARP1-mediated E2F1 regulation of DNA repair capacity. Matthew Schiewer, Sidney Kimmel Cancer Center at Thomas Jefferson University, Philadelphia, PA, United States.

A09 DEK is critical for homologous recombination and its loss is synthetic lethal with DNA-PK inhibition. Eric Smith, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH, United States.

A10 The impact of cancer-associated RAD51C mutations in homologous recombination. Meghan Sullivan, University of Pittsburgh School of Medicine, Pittsburgh, PA, United States.

A11 RB localizes to DNA double-strand breaks and promotes DNA end resection and homologous recombination through the recruitment of BRG1. Renier Vélez-Cruz, The University of Texas MD Anderson Cancer Center, Smithville, TX, United States.

A12 CTCF facilitates DNA double-strand break repair by homologous recombination. Michael Witcher, The Lady Davis Institute, Montreal, QC, Canada.

A13 SAMHD1 promotes DNA end resection to facilitate DNA double-strand break repair by homologous recombination. David Yu, Emory University School of Medicine, Atlanta, GA, United States.
A14 Identifying factors mediating response and resistance to chemotherapy through a chemical-genetic interaction map. Sourav Bandyopadhyay, University of California, San Francisco, San Francisco, CA, United States.

A15 Identification, validation, and targeting of the mutant p53-PARP-MCM chromatin axis in triple-negative breast cancer. Jill Bargonetti, City University of New York at Hunter College and The Graduate Center, New York, NY, United States.

A16 Potent and selective ATR inhibitors for the treatment of homologous-recombination deficient and PARPi-resistant cancers. Laura Butler, Atrin Pharmaceuticals, Doylestown, PA, United States.

A17 A role for epigenetic regulators in interstrand crosslinker DNA damage and repair in bortezomib-resistant multiple myeloma. Edward Chow, National University of Singapore, Singapore, Singapore.

A18 Mechanism for PARPi resistance: Homologous recombination without BRCA1. Yizhou He, DFCI, Boston, MA, United States.

A19 ATM-deficient colorectal cancer cells are sensitive to the PARP inhibitor, olaparib. Nicholas Jette, University of Calgary, Calgary, AB, Canada.

A20 Synthetic lethality induced by pharmacological inhibition of ATM and PARP1. Joyce Pui Ying MAK, The Hong Kong University of Science and Technology, Hong Kong, Hong Kong.

A21 Enhancing chemotherapeutic responses in CNS malignancy through suppression of hyperactive DNA damage repair pathways. Marina Mostafizur, The University of Manitoba, Winnipeg, MB, Canada.

A22 IGH/MYC translocation in Burkitt lymphoma is associated with BRCA2 deficiency and synthetic lethality by PARP1 inhibitors. Tomasz Skorski, Temple University, Philadelphia, PA, United States.

A23 BRCA1 mutations in the BRCT domain can be removed through alternative splicing and induce PARP inhibitor resistance. Yifan Wang, Fox Chase Cancer Center, Philadelphia, PA, United States.

A24 A genome-wide RNAi screen identifies synthetic lethality of CX-5461 with homologous recombination repair deficiency in ovarian cancer. Shunfei Yan, Peter MacCallum Cancer Centre, Melbourne, Victoria, Australia.

A25 Investigating the co-occurrence of potentially pathogenic DNA repair pathways alleles in BRCA1 or BRCA2 mutation carrier women with ovarian cancer. Wejdan Alenezi, McGill University, Montreal, QC, Canada.
A26 High frequency of Cytosine to Adenine mutations in neuroblastoma correlates with genomic aberrations in 8-Oxo-Guanine repair pathway. Anne Hakkert, Princess Maxima Center, Utrecht, Netherlands.

A27 Assessing somatic tumor-associated RAD51 mutations and screening for novel dominant-interfering RAD51 proteins. Pei Xin Lim, Memorial Sloan Kettering Cancer Center, New York, NY, United States.

A28 Mutational landscape of TP53 in localized prostate cancer. Osman Mahamud, Princess Margaret Cancer Centre, Toronto, ON, Canada.

A29 Somatic ERCC2 mutations, nucleotide excision repair (NER) function, and cisplatin response in muscle-invasive bladder cancer (MIBC). Kent Mouw, Dana-Farber Cancer Institute, Boston, MA, United States.

A30 Unrepaired DNA damage in mother cells leads to quiescence of daughter cells. Mansi Arora, University of Colorado, Boulder, CO, United States.


A32 Exploring the interplay between nucleotide excision repair and DNA replicative stress. Émile Fortier, Maisonneuve-Rosemont Hospital Research Center, Montreal, QC, Canada.

A33 Defect in S phase cell cycle checkpoint renders tumors vulnerable to CHK1 inhibitor single-agent treatment in vitro and in vivo. Brian Gabrielli, Mater Research Institute, The University of Queensland, Brisbane, Qld, Australia.

A34 Distinct BRCA1- and BRCA2-specific functions at stalled replication forks: Clinical implications for differences between BRCA1 and BRCA2 mutation-driven cancer. Shailja Pathania, Dana Farber Cancer Institute, Boston, MA, United States.

A35 Cas9/RNA-based forward genetic screenings in mouse embryonic stem cells uncovered the role of genes mediating resistance to ATR inhibitors. Sergio Ruiz, Spanish National Cancer Research Center (CNIO), Madrid, Spain.


A37 Development of screening methods to identify translesion DNA synthesis inhibitors. Florencia Villafañez, National University of Córdoba, Córdoba, Argentina.

A38 Targeting microenvironment damage responses via PARP inhibition to enhance prostate cancer therapy. Payel Chatterjee, Fred Hutchinson Cancer Research Center, Seattle, WA, United States.
A39 Tumor suppressor protein DAB2IP participates in chromosomal stability maintenance through activating spindle assembly checkpoint and stabilizing kinetochore-microtubule attachments. Benjamin Chen, University of Texas Southwestern Medical Center, Dallas, TX, United States.

A40 Profile of DNA repair status in a recently established panel of patient-derived ovarian carcinoma xenografts. Giovanna Damia, IRCCS-Istituto di Ricerche Farmacologiche Mario Negri, Milano, Italy.

A41 Targeted chemotherapy for Homologous Repair Defects (HRD) in molecularly profiled cancer patients. Joseph Eder, Yale Cancer Center, New Haven, CT, United States.

A42 Identification of glutamate and aspartate ADP-ribosylation sites onto histones by mass spectrometry. Jean-Philippe Gagné, Université Laval, Québec, QC, Canada.

A43 TFG-TEC oncogene modulates beta-enolase expression via both promoter activation and epigenetic modification. Jungho Kim, Sogang University, Seoul, Korea, Republic Of.

A44 The identification of germline mutations in DNA repair genes in Brazilian individuals at-risk for hereditary breast cancer. Tirzah Lajus, Universidade Federal do Rio Grande do Norte, Natal, RN, Brazil.

A46 Nup153 and Nup50 promote recruitment of 53BP1 to DNA repair foci by antagonizing BRCA1-dependent events. Douglas Mackay, University of Utah, Huntsman Cancer Institute, Salt Lake City, Utah, United States.