Rb Bench to Bedside: Novel Functions and Clinical Implications

**B01** pRb activates mitochondrial metabolism and promotes differentiation through the histone demethylase Kdm5a. Elizaveta Benevolenskaya, University of Illinois at Chicago, Chicago, United States

**B02** An E2F score predicts benefit of adjuvant chemotherapy in lung adenocarcinoma. William Cress, H. Lee Moffitt Cancer and Research Institute, Tampa, FL, United States

**B03** Physical and functional interactions between two tumor suppressors, BIN1 and RB1. Watson Folk, Augusta University, Augusta, GA, United States

**B04** Novel Methods to Target RB Pathway Disruption in Osteosarcoma. Philip Hinds, Tufts University School of Medicine, Boston, MA, United States

**B05**, **PR06** Sox2 functions as a critical tumor suppressor in Rb loss initiated tumors. Michael Kareta, Stanford University, Stanford, CA, United States

**B06** Single-cell RNA-seq profiling of transcriptional transition states during human retinoblastoma development. Sunhye Lee, Children's Hospital Los Angeles, Los Angeles, CA, United States

**B07** Intrinsic and Acquired Resistance to CDK4/6 Inhibition: Underlying Genomic Alterations in Bladder Cancer Cells. Ricardo Ramirez, Memorial Sloan Kettering, New York, New York, United States

**B08** Retinoblastoma Protein Orchestrates Cellular Apoptosis in Non-Small Cell Lung Cancer in Response to CDK4/6 inhibition: Novel Targets and Key Mechanisms. Chellappagounder Thangavel, Thomas Jefferson University, Philadelphia, Pennsylvania, United States

**B09**, **PR05** RB localizes to DNA double strand breaks and promotes DNA end resection and homologous recombination through the recruitment of SWI/SNF complex. Renier Velez-Cruz, The University of Texas MD Anderson Cancer Center, Smithville, TX, United States

**E2F Family Functions: Alterations and Consequences**

**B10** E2F function in muscle growth is necessary and sufficient for animal viability. Maxim Frolov, University of Illinois at Chicago, Chicago, IL, United States

**B11** Re-wired E2F function in response to RB loss as a potential driver of castration-resistant prostate cancer. Amy Mandigo, Thomas Jefferson University, Philadelphia, PA, United States

**B12**, **PR08** RB loss elicits extensive re-programming of AR and E2F1 in prostate cancer. Christopher McNair, Thomas Jefferson University, Philadelphia, PA, United States
B13, PR07 Recruitment of Pontin/Reptin by E2F1 amplifies E2F transcriptional response during cancer progression. Patrick Viatour, Children’s Hospital of Philadelphia, Philadelphia, PA, United States

B14 Feedback regulation between atypical E2Fs and APC/CCdh1 coordinates cell cycle progression. Bart Westendorp, Utrecht University, Utrecht, Netherlands.

B15 Synergistic functions of E2F7 and E2F8 are critical to suppress stress induced skin cancer. Bart Westendorp, Utrecht University, Utrecht, Netherlands

Replication Stress and DNA Damage Response

B16 The nuclear IGF-1R regulates DNA damage tolerance through tyrosine phosphorylation of PCNA in human embryonic stem cells. Eiman Aleem, Phoenix Children’s Hospital and University of Arizona College of Medicine-Phoenix, Phoenix, AZ, United States

B17 Targeting MK2 to improve temozolomide efficacy in glioblastoma. Fadi Gurgis, The University of Sydney, Sydney, Australia

B18 Estrogen induces RAD51C expression and localization to sites of DNA damage. Marina Holz, Albert Einstein/ Yeshiva University, New York, NY, United States

B19 The oncogenic TBX2 activates the ATM-CHK2-p53 axis to confer cisplatin resistance in breast cancer and melanoma. Serah Kimani, University of Cape Town, Cape Town, South Africa

B20, PR09 c-MYC preserves genomic integrity during DNA replication: a paradigm shift of c-MYC. Alpana Kumari, Augusta University, Augusta, GA, United States

B21 Gain-of-function p53 mutations promote aggressive phenotypes in prostate cancer. Jennifer McCann, Thomas Jefferson University, Philadelphia, PA, United States

B22 IT-141, a stabilized polymer micelle formulation, prolongs the pharmacodynamic effect of SN-38. Jyothi Sethuraman, Intezyne Technologies, Inc, Tampa, Florida, United States

B23 The deubiquitinating enzyme USP37 stabilizes Chk1 to promote the cellular response to replication stress. Matthew Summers, The Ohio State University, Columbus, OH, United States
B24 Ataxia-telangiectasia and Rad3-related (ATR) Phosphorylation as a Pharmacodynamic Biomarker of ATR Activation in Solid Tumor Tissue Models. Deborah Wilsker, Frederick National Laboratory for Cancer Research, Frederick, MD, United States

Other

B25, PR13 Germ-line mutations in CDC20 result in familial cancers via deregulation of the cell cycle. Ester Castellsague, McGill, Montreal, Canada.

B26 MiR-200 is involved in anti-invasive activity of sulindac in colon cancer. Hong Chang, Mitchell Cancer Institute, University of South Alabama, Mobile, AL, United States

B27 Kinetochore-microtubule attachments as a precision therapy target. Jacob Herman, Fred Hutchinson Cancer Research Center, Seattle, Washington, United States

B28 FKBP6 gene is involved in progression of cervical cancer. Carmen Ili, Universidad de La Frontera, Temuco, Chile

B29 ZNF516 a potential tumor suppressor gene candidate is implied in tumor progression in cervical cancer. Carmen Ili, Universidad de La Frontera, Temuco, Chile

B30 Resistance to Photodynamic Therapy in Non-Melanoma Skin Cancer Cells. Carmen Ili, Universidad de La Frontera, Temuco, Chile.

B31 Sulindac inhibition of tumor cell transformation. Zhipin Liang, University of South Alabama, Mobile, AL, United States

B32 Oncogenic role of snoRD93 in breast cancer cells. Ruixia Ma, Mitchell Cancer Institute, University of South Alabama, Mobile, Alabama, United States

B33 The membrane associated cyclin D1 promotes contact-independent growth via phosphorylation of Akt1 Ser 473. Richard Pestell, Thomas Jefferson University, Philadelphia, PA, United States

B34 Inhibition of breast cancer cell metastasis with a non-cyclooxygenase inhibitory derivative of sulindac by suppressing TGFbeta/miR-21 signaling. Bin Yi, Mitchell Cancer Institute, University of South Alabama, Mobile, Alabama, United States