G1 Advances: Novel Insights into G1 CDK/cyclins

**A01 Trichodermin induces G1/S cell cycle arrest in ovarian cancer cells.** Yi Chen, Alderson Broaddus University, Philippi, West Virginia, United States

**A02 Cyclin A2 and CDK2 as Novel Targets of Aspirin and Salicylic acid: a Potential Role in Cancer Prevention.** Rakesh Dachineni, South Dakota State University, Brookings, South Dakota, United States

**A03 SCF Cyclin F connects AKT signaling to the core cell cycle oscillator.** Michael Emanuele, University of North Carolina at Chapel Hill, Chapel Hill, NC, United States

**A04, PR01 Therapeutic targeting of cdk4 in bladder cancer.** Jesús Paramio, Biomedical Research Institute Univ. Hospital, Madrid, Spain

**A05, PR04 Characterizing the sequence of cell-cycle events during proliferation and quiescence.** Sabrina Spencer, University of Colorado-Boulder, Boulder, CO, United States

Targeting CDK/cyclins: Hormone Dependent Cancers and Beyond

**A06, PR02 Targeting the Brk:p27:cdk4 axis in Breast Cancer.** Stacy Blain, SUNY Downstate Medical Center, Brooklyn, NY, United States

**A07 The identification of combinations for the CDK4 and CDK6 inhibitor, abemaciclib.** Sean Buchanan, Eli Lilly and Co., Indianapolis, IN, United States

**A08 Mechanistic basis of Palbociclib combinatorial activity in ER+ breast cancer and non-breast indications.** Stephen Dann, Pfizer, La Jolla, CA, United States

**A09 Mechanisms of acquired resistance to Cdk4/6 kinase inhibitors: genomic alterations and crosstalk with hormone signaling.** Renée de Leeuw, Thomas Jefferson University, Philadelphia, PA, United States

**A10 A Cdk4-dependent phosphorylation threshold regulates the cell cycle entry decision.** Manuel Kaulich, Goethe University - Institute of Biochemistry II, Frankfurt Am Main, Germany

**A11 Molecular determinants of resistance to CDK4/6 inhibition in ER+ breast cancer.** Flora Luo, Harvard Medical School, Boston, MA, United States

**A12 The CDK4/CDK6 inhibitor abemaciclib inhibits transcriptional targets which facilitate growth in ER+ breast cancer cells.** Ann McNulty, Eli Lilly and Company, Indianapolis, Indiana, United States
A13 A new mitochondrial pool of cyclin E, regulated by Drp1, is linked to cell-density-dependent cell proliferation. Kasturi Mitra, UAB, Birmingham, United States

A14, PR03 Extended inhibition of CDK4/6 inhibits mTORC1 signaling and induces therapeutic senescence in vemurafenib resistant melanoma. Akihiro Yoshida, Medical University of South Carolina, Charleston, SC, United States

Getting out of Cycle: G0 and Senescence

A15 Sin3B: a non-classical tumor suppressor. Anthony Bainor, NYU Langone Medical Center, New York, NY, United States

A16 BCL-xL dictates cell fate decisions in response to BET inhibition in triple negative breast cancer. Sylvia Gayle, Case Western Reserve University, Cleveland, OH, United States

A17 Cell cycle control through DREAM and MMB complexes. Keelan Guiley, UCSC, Santa Cruz, CA, United States

A18 G1 Cell Cycle Arrest is Required for Invasive Behavior. David Matus, Stony Brook University, Stony Brook, NY, United States.

A19, PR14 Real-time in-vivo image-guided cell-cycle perturbation to increase tumor chemosensitivity. Shuya Yano, Department of Gastroenterological Surgery, Okayama University Graduate School of Medicine, Dentis, Okayama, Japan

A20 Excess centrosomes induce p53-dependent senescence in endothelial cells. Zhixian Yu, The University of North Carolina at Chapel Hill, Chapel Hill, NC, United States

Managing G2/M Control

A21 Epigenetic regulation of cell cycle progression at the G2/M transition and mitosis in high-risk leukemia. Sinisa Dovat, Pennsylvania State University College of Medicine, Hershey, PA, United States

A22 Preclinical evaluation of Bmi1 inhibition in Pancreatic Ductal Adenocarcinoma. Jaime Eberle, Columbia University Medical Center, New York, NY, United States

A23, PR12 Genome-wide CRISPR-Cas9 screens reveal loss of redundancy between PKMYT1 and WEE1 in patient-derived Glioblastoma stem-like cells. Patrick Paddison, Fred Hutchinson Cancer Research Center, Seattle, WA, United States.

A24, PR11 APC/CCdh1 maintains primordial follicles, germinal vesicle arrest and ensures balanced segregation of chromosomes by enabling removal of Shugoshin-2 from chromosomes arms. Ahmed Rattani, Mount Auburn Hospital, Harvard Medical School, Cambridge, Massachusetts, United States

A25, PR10 Exploiting the G2-M cell cycle checkpoint dependency in small cell lung cancer (SCLC) using pharmacological inhibitors of CHK1 and WEE1. Triparna Sen, UT MD Anderson Cancer Center, Houston, TX, United States
A26 AURKA dependence underlies the emergence of acquired resistance to 3rd generation EGFR inhibitors in NSCLC by cell cycle modulation. Khyati Shah, University of California, San Francisco, San Francisco, CA, United States

A27 Cell cycle control and drugs targeting the bioenergetics of cancer. Robert Shorr, Cornerstone Pharmaceuticals, Cranbury, New Jersey, United States

A28 Mechanistic Study involving the combined antiproliferative effect of “Etoricoxib” Cyclooxygenase-2 inhibitor and Cholecystokinin -2 Receptor antagonist in Human Pancreatic Cancer Cells. Manisha Sikka, Dr.B.R. Ambedkar Center for Biomedical Research, University of Delhi, Delhi, Delhi, India

A29 Sulindac inhibition of colon tumor cell growth through miRNA182/FOXO3a/Cyclin G2 signaling. Hongyou Zhao, University of South Alabama, Mobile, AL, United States

Other


A31 Reprimo, a potential tumor suppressor gene TP53-dependent, modulates negatively cell migration and invasion in the MDA-MB-231 breast cancer cell line. Priscilla Brebi, Universidad de La Frontera, Temuco, Chile

A32 New cellular models of resistance to paclitaxel and carboplatin in cell lines of ovarian cancer. Priscilla Brebi, Universidad de La Frontera, Temuco, Chile

A33 Biomarkers of Cdk5 driven neuroendocrine tumors. Angela Carter, UT Southwestern Medical Center, Dallas, TX, United States
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

**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