Poster Session A  
May 10, 2022, 5:30 p.m. - 7:30 p.m., Soprano ABC + Foyer

Mesenchymal Stem Cell & Developmental Biology I

A001 Fusion protein-driven IGF-IR signals deregulate hippo pathway promoting oncogenic cooperation of YAP1 and FUS-DDIT3. Ruth Berthold. Münster University Hospital, Münster, Germany.

A002 Dynamic single cell imaging of cancer stem cells and clonality in fusion-negative rhabdomyosarcoma. Tiffany Eng. Massachusetts General Hospital, Charlestown, MA.

A003 ASAP1 regulates myogenic differentiation in rhabdomyosarcoma by modulating YAP localization. Katie E. Hebron. National Cancer Institute, Frederick, MD.

Tumor Ecosystems and Immune Microenvironment I

A004 Radiation-induced changes to the immune microenvironment in an immunocompetent mouse model of Ewing sarcoma. Jessica D. Daley. University of Pittsburgh School of Medicine, Pittsburgh, PA.

A005 STING activation overcomes immune escape in osteosarcoma metastasis. Elizabeth "Betsy" Young. University of California San Francisco Benioff Children's Hospitals, San Francisco, CA.

A006 Defining the microenvironment of alveolar soft part sarcoma & its role in therapeutic outcomes. Alexis M. Philippot. University of Calgary, Calgary, AB, Canada.

A007 Resident memory T cells express PD-1 in high grade liposarcoma. Christina V. Angeles. University of Michigan, Ann Arbor, MI.

A008 Mechanisms of immune escape in NF1-associated peripheral nerve sheath tumors. Lindy Zhang. Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins University,
Baltimore, MD.

**Immunotherapy and Targeted Therapy I**


A010 Antigen presentation and processing pathway is associated with early relapse after neoadjuvant immune checkpoint blockade (ICB) in dedifferentiated liposarcomas (DDLPS). Elise F. Nassif. University of Texas MD Anderson Cancer Center, Houston, TX.

A011 Emergence of persister cells following bromodomain inhibition in Ewing sarcoma. Shireen S. Ganapathi. Seattle Children's Research Institute, Seattle, WA.

A012 Targeting the dysregulation of transcription and splicing in Ewing sarcoma. Liesl A. Lawrence. University of Texas Health Science Center at San Antonio, San Antonio, TX.

A013 CDK2 and CDK4/6 inhibition in GIST: Mechanisms of response and resistance. Inga-Marie Schaefer. Brigham and Women's Hospital, Boston, MA.

A014 The novel anti-inflammatory agent GML (GM1-targeted linoleate-containing TLR2 ligand) inhibits sarcoma metastasis to the lung. Liane Babes. Lady Davis Institute for Medical Research, Montreal, QC, Canada.


A016 Selective delivery of fibroblast activation protein conjugated dual phosphoinositide 3-kinase–AKT Kinase-mTOR inhibitor associated with decreased tumor proliferation and on-target toxicity in high-grade soft-tissue sarcomas. Feredun Azari. University of Pennsylvania Perelman School of Medicine, Philadelphia, PA.

A017 Multiple intratumoral sources of kit ligand promote oncogenic kit signaling in gastrointestinal stomal tumor. Andrew D. Tieniber. University of Pennsylvania, Philadelphia,
YAP signaling promotes resistance to MEK and AKT inhibition in NF1-related MPNSTs. Lauren McGee. Van Andel Institute, Grand Rapids, MI.

Phase 1, first-in-human, dose-expansion study of oral TP-1287, a cyclin dependent kinase 9 (CDK9) inhibitor, in patients with sarcoma. Andrew J. Wagner. Dana-Farber Cancer Institute, Boston, MA.

Combined inhibition of SHP2 and CDK4/6 is active in preclinical models of NF1-associated malignant peripheral nerve sheath tumor. Jiawan Wang. Johns Hopkins University School of Medicine, Baltimore, MD.

Chimeric antigen receptor armored natural killer cell immunotherapy for osteosarcoma. Gabrielle Robbins. University of Minnesota, Minneapolis, MN.


Profiling tumor infiltrating immune cells for better understanding tumor status and better response to therapeutic strategy in soft tissue sarcomas. Eun-Young Lee. National Cancer Center, Gyeonggi, Korea.

Characterization of WEE1 kinase activity in myxoid liposarcoma. Lorena Heinst. Münster University Hospital, Münster, Germany.

Other I

A030  Investigating the feasibility of in-vivo histotripsy ablation for osteosarcoma using an orthotopic murine model and a canine model of spontaneous disease. Alayna N. Hay. Virginia Maryland College of Veterinary Medicine, Blacksburg, VA.

A031  Interplay of YAP1, β-catenin and the SS18-SSX fusion protein in synovial sarcoma. Ilka Isfort. Münster University Hospital, Münster, Germany.

Poster Session B
May 11, 2022, 6:00 p.m. - 8:00 p.m., Soprano ABC + Foyer

Model Systems I

B001  A new invasive zebrafish model of ewing sarcoma reveals EWSR1-FLI1-driven dysregulation of heparan sulfate proteoglycan metabolism and ERK signaling in developing tumors. Elena Vasileva. Children's Hospital Los Angeles, Los Angeles, CA.

B003  Characterization of the precancerous and cancer microenvironment in a zebrafish sarcoma model. Heather R. Shive. The Ohio State University, Columbus, OH.

B004  ATR-CHK1-WEE1 pathway is a critical dependency in the context of DNA damage and replicative stress in osteosarcoma. Leanne C. Sayles. University of California, San Francisco (UCSF), San Francisco, CA.


B006  Development of a NF1-MPNST-PDX liquid biopsy model using whole-genome sequencing and quantitative PCR of mouse-derived cell-free DNA. Paul A. Jones. Washington University in Saint Louis, St. Louis, MO.

B007  Patterns and quantitation of migration and metastasis in a zebrafish xenograft model of ewing sarcoma. Rebecca A. Anderson. Cleveland Clinic; Lerner Research Institute,
B008  Investigating the evolution of undifferentiated soft tissue sarcomas in a genetically engineered mouse model. Jason E. Chan. Memorial Sloan Kettering Cancer Center, New York, NY.


Epigenetics I

B010  The NuRD subunit CHD4 is essential for ewing sarcoma cell survival as it regulates global chromatin architecture. Joana Graca Marques. Dana-Farber Cancer Institute, Boston, MA.

B011  Two epigenetically distinct cellular states in osteosarcoma are regulated by a cluster-specific set of pioneer transcription factors. Eunice Lopez Fuentes. University of California, San Francisco (UCSF), San Francisco, CA.

B012  Visualization of EWSR1’s colocalization with phosphorylated RNA-Polymerase II reveals its concentration at a subset of active regions of transcription in ewing sarcoma cells. Natasha J. Caplen. National Cancer Institute, Bethesda, MD.

Metabolism I

B013  STEAP1 facilitates iron transport in ewing sarcoma to support mitochondrial activity. Taras Shyp. BC Cancer Research Institute, Vancouver, BC, Canada.

B014  Metabolic reprogramming in high-grade sarcomas: repurposing anti-cholesterol agents as a novel therapeutic strategy. Jen Dorsey. Lunenfeld-Tanenbaum Research Institute, Toronto, ON, Canada.


Metastasis I
B016  Cytokines derived from tumor-initiating osteosarcoma cells mediate a novel self-seeding mechanism relevant to growth of primary and metastatic tumors. **Ryan D. Roberts.** Nationwide Children's Hospital, Columbus, OH.

B017  Tumor-secreted collagen VI weakens endothelium and promotes metastasis. **Ying Liu.** University of Pennsylvania, Philadelphia, PA.

B018  A robust system to study human soft-tissue sarcoma lung metastasis. **Maria Muñoz.** University of California Davis Health, Sacramento, CA.

B019  BRCA1: NRF2 pathway as a new therapeutic target in ewing sarcoma. **Nicklas Bassani.** University of Texas Health Science Center at San Antonio, San Antonio, TX.

Genomics/Omics I

B020  Multimodal single-cell analyses reveal identification of unique transcriptional subgroups in ewing sarcoma. **April A. Apfelbaum.** University of Michigan, Ann Arbor, MI.

B021  Long non-coding RNAs that are required for robust cell growth in ewing Sarcoma. **Marcela C. Briones Martin del Campo.** University of California, San Francisco (UCSF), San Francisco, CA.

B022  Subclonal somatic copy number alterations emerge and dominate in relapsed / refractory osteosarcoma. **Michael D. Kinnaman.** Memorial Sloan Kettering Cancer Center, New York, NY.

B023  Prospective clinical genomic profiling of ewing sarcoma: **ERF** and **FGFR1** mutations as recurrent secondary alterations of potential biological and therapeutic relevance. **Arielle Elkrief.** Memorial Sloan Kettering Cancer Center, New York, NY.

B026  Expression levels of chaperonin containing TCP1 in cancer are among the highest in sarcomas. **Amanda J. Cox.** University of Central Florida, Orlando, FL.

B027  The development of a multiscale transcriptional atlas of sarcoma. **Joshua O. Nash.** The Hospital for Sick Children (SickKids), Toronto, ON, Canada.