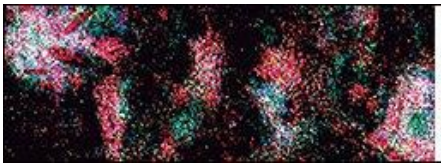

An AACR Special Conference on
Sarcomas
May 9-12, 2022
Montreal, QC, Canada

AACR
American Association for Cancer Research

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 & it's 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

A009 Proteogenomic prioritization of immunotherapeutic targets in rhabdomyosarcoma nominate MEGF10 for preclinical development. Rawan Shraim. Children's Hospital of Philadelphia, Philadelphia, PA.

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.

A015 Biochemical and preclinical anti-tumor activity of a bi-steric mTORC1-selective inhibitor in fusion positive rhabdomyosarcoma. Jacqueline Morales. University of California, San Francisco, San Francisco, CA.

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,

PA.

A018 YAP signaling promotes resistance to MEK and AKT inhibition in NF1-related MPNSTs. Lauren McGee. Van Andel Institute, Grand Rapids, MI.

A019 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.

A020 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.

A021 Chimeric antigen receptor armored natural killer cell immunotherapy for osteosarcoma. Gabrielle Robbins. University of Minnesota, Minneapolis, MN.

A022 Targeting of soft tissue sarcoma cancer stem cells improves doxorubicin-sensitivity *in vitro*. Edmond F. O'Donnell. University of California Davis Medical Center, Sacramento, CA.

A023 Identifying new therapeutic indications for afamitresgene autoleucel ("afami-cel" [formerly ADP-A2M4]) in adult and pediatric sarcomas using MAGE-A4 immunohistochemistry. Swethajit Biswas. Adaptimmune, Philadelphia, PA.

A024 *In vitro* efficacy of a novel dual PARP-HDAC inhibitor in ewing sarcoma. Sarah Truong. Vancouver Prostate Centre, Vancouver, BC, Canada.

A025 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.

Other I

A027 Characterization of WEE1 kinase activity in myxoid liposarcoma. Lorena Heinst. Münster University Hospital, Münster, Germany.

A029 SQ3370: CAPAC platform enables tumor-localized therapy and minimizes systemic toxicities. Jose M. Mejia Oneto. Shasqi, Inc., San Francisco, CA.

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.

B005 Hypoxic sarcoma spheroid on a chip: Insights into treatment response. Elena Refet-Mollof. Polytechnique Montréal - CRCHUM - ICM, Montréal, QC, Canada.

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,

Cleveland, OH.

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.

B009 Establishing new cell lines from undifferentiated pleomorphic sarcoma for sarcoma research. Hye Jin You. National Cancer Center, Goyang, Korea.

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.

B015 Targeting hexosamine biosynthesis pathway for the treatment of desmoid tumors. Joanna Przybyl. The Research Institute of the McGill University Health Centre, Montreal, QC, 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.