Short Talks Selected from Proffered Abstracts

PR-01 Beta-adrenergic blockade licenses the use of immunotherapy in primary brain tumors and brain metastases. Selena Lorrey. Duke University, Durham, NC, United States.


PR-03 In vivo genome-wide CRISPR/Cas9 screens conducted in an immunocompetent mouse model of glioblastoma identify novel in vivo tumor liabilities and potential mechanisms of resistance to chimeric antigen receptor T-cell (CAR-T) therapy. Catherine Koch. MIT and HMS, Boston, MA, United States.

PR-04 Targeting EPHB2/ABL1 restores anti-tumor immunity in a preclinical model of ependymoma. Taylor Uccello. Massachusetts General Hospital and Harvard Medical School, Boston, MA, United States.


PR-06 Brain metastases roadmap reveals conserved regulatory dynamics rooted in dormant tumor cells. Remi Klotz. University of Maryland School of Medicine, Baltimore, MD, United States.

PR-07 H3.3K27M diffuse midline gliomas are sensitive to SWI/SNF chromatin remodeler degradation. Mateus Mota. University of Michigan, Ann Arbor, MI, United States.

PR-08 Modeling epigenetic lesions that cause gliomas. Gilbert Rahme. Dana-Farber Cancer Institute, Boston, MA, United States.


PR-10 Asc1lb progenitor-specific RB conditional inactivation in zebrafish models rare CNS primitive neuroectodermal tumors. Maura McGrail. Iowa State University, Ames, IA, United States.
Emerging Molecular Targets

A001 **Silencing of EYA4 regulates stemness in H3K27M-mutant diffuse midline glioma.** Ivana Barra vecchia. University of Michigan, Ann Arbor, MI, United States.

A002 **MALT1 as a regulator of tumor progression in H3K27-altered diffuse midline glioma.** Hannah Butterfield. University of Pittsburgh School of Medicine, Pittsburgh, PA, United States.

A003 **In vitro and in vivo CRISPR screens identify the ubiquitin E3 ligase RBBP6 as a targetable dependency of glioblastoma stem cells.** Qi Xie. Westlake University, Hangzhou, China.

A004 **GTP signaling links metabolism, DNA repair, and responses to genotoxic stress.** Weihua Zhou. University of Michigan, Ann Arbor, MI, United States.

A006 **Reckless mitotic entry as a novel chemosensitization approach for alkylating agents.** Fengchao Lang. NCI, Bethesda, MD, United States.

A007 **Uncovering novel therapeutic avenues for glioma by exploring the functional interplay of FGFR1, p53, and ribosome biogenesis.** Mikael Lindström. Karolinska Institutet, Stockholm, Sweden.

A008 **Disruption of SLFN5 enhances vulnerability to APR-246, a mutant p53 reactivator in glioblastoma.** Ricardo Perez. Northwestern University-RHLCCC, Chicago, IL, United States.

A009 **Plinabulin, a novel tubulin targeting agent, collapses the tumor microtube network in primary and recurrent patient derived glioblastoma cell lines to inhibit neurosphere invasion and survival.** Kathryn Eisenmann. University of Toledo College of Medicine, Toledo, OH, United States.

A010 **Prostate-Specific Membrane Antigen Use in Glioma Management: Past, Present, and Future.** Neeva Shafiian. Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, Hempstead, NY, United States.

A011 **Stopping brain tumors in their tracks- The role of RhoGTPase activating proteins (ARHGAPs) in glioma cell migration and invasion.** Philippa Vaughn-Beaucaire. Brown University, Providence, RI, United States.

A012 **EZH2 as a therapeutic target for glioma.** Lukmanul Hakkim Faruck. Hormel Institute, University of Minnesota, Austin, MN, United States.
Novel Therapeutic Modalities

A013 **Beta-adrenergic blockade licenses the use of immunotherapy in primary brain tumors and brain metastases.** Selena Lorrey. Duke University, Durham, NC, United States.

A014 **ClpP drives efficacy and mediates acquired resistance with imipridones ONC201 and ONC206 in glioma in vitro.** Varun Prabhu. Chimerix, Inc., Durham, NC, United States.

A015 **Predicting Efficacious Drugs and Drug-Biomarker Relationships for Targeted Glioblastoma Treatment.** Danielle Maeser. University of Minnesota, Minneapolis, MN, United States.

A016 **Leveraging synergy of alpha-particle radiotherapy with low levels of chemotherapy to overcome delivery and resistance in treating Glioblastoma.** Aira Sarkar. Institute for NanoBioTechnology, Johns Hopkins University, Baltimore, MD, United States.

A017 **Cell-specific photodynamic therapy for high grade gliomas.** Alberto Arias. CNEA, San Carlos De Bariloche, Argentina.

A018 **Multi-stage, open cranial approaches for resection of primary intracranial neoplasms: a systematic review of the history and current applications.** Nolan Brown. UC Irvine, Newport Beach, CA, United States.

A019 **Phase II trial evaluating the association of peripheral blood immunologic response and therapeutic response to immune checkpoint inhibition in patients with newly diagnosed glioblastoma and gliosarcoma.** Matthew Watowich. Neuro-Oncology Branch, National Cancer Institute, National Institutes of Health, Bethesda, MD, United States.

A020 **Neural stem cells expressing PTEN-L suppress glioblastoma invasion in vivo.** Ian Lorimer. Ottawa Hospital Research Institute, Ottawa, ON, United States.

A021 **Exosome delivered combinatorial treatment for malignant brain tumors.** Sydney Thomas. University of South Carolina School of Medicine, Columbia, SC, United States.

A022 **Whole Exome Sequencing Reveals Potential Somatic Drivers in Intracranial Epidermoid Cysts (IECs).** Shruthi Kondaboina. University of Washington Medical Center, Seattle, WA, United States.


A024 **Cellular and molecular characterization of cancer stem-like cells isolated from the sub-ventricular zone of glioblastoma patients and treated with Tumor Treating Fields (TTFields).** Yamhilette Licon Munoz. University of New Mexico, Albuquerque, NM, United States.
A025 **Engineering Messenger RNA Therapies for Brain Tumors.** Saigopalakrishna Yerneni. Carnegie Mellon University, Pittsburgh, PA, United States.

A026 **Evaluation of Evodiamine and Cucurbitacin B as Potential Combination Therapy for Glioblastoma Multiforme.** Vrutti Mehta. Long Island University, Brooklyn, NY, United States.

A027 **Feasibility of Diffusing Alpha-emitting Radiotherapy in Orthotopic Glioblastoma Multiforme Murine Tumors and Its Combination With 'Standard-of-care' Drugs in Human Xenografts.** Maayan Vatarescu. Ben-Gurion University of the Negev, Beer-Sheva, Israel, United States.

**Other**

A028 **Subclonal lineage recording in glioblastoma using CRISPR base editing.** Abigail Marshall. Geisel School of Medicine, Dartmouth College, Lebanon, NH, United States.

A029 **Use and predictors of perceived cognitive function using the Neuro-QoL perceived cognitive function scale in patients with primary brain tumors.** Morgan Johnson. NOB, CCR, NCI, NIH, Bethesda, MD, United States.


A031 **Prospective and clinical prediction in a retrospective trial that experimentally validated an AI/ML-derived whole-genome predictor as the most accurate and precise predictor of survival and response to treatment in glioblastoma.** Orly Alter. University of Utah, Salt Lake City, UT, United States.

A032 **Preliminary Evaluation of Sleep-Related Patient-Reported Outcomes (PROs), Morningness-Eveningness Chronotype, Objective Sleep Measures Using Smart Wearables in a Primary Brain Tumor Patient Population.** Maeve Pascoe. Neuro-oncology Branch, National Cancer Institute - Center for Cancer Research, National Institutes of Health, Bethesda, MD, United States.

A033 **Murine CNS and bone marrow distribution of the aurora A kinase inhibitor alisertib: Pharmacokinetics and exposure at the sites of efficacy and toxicity.** Juhee Oh. University of Minnesota, Minneapolis, MN, United States.


A035 **Radiation-induced senescence as a driver of glioblastoma recurrence.** Ben Jordan. UT Health San Antonio, San Antonio, TX, United States.

A036 **Female spouse caregivers of patients with Glioblastoma want better education and communication from health care professionals regarding what to expect during the**

American Association for Cancer Research Special Conference:

**BRAIN CANCER | October 19-22, 2023 | Hilton Minneapolis | Minneapolis, Minnesota**
disease progression. Laurie Minns. University of North Carolina Wilmington, Wilmington, NC, United States.

Tumor Immunology and Microenvironment

A037 The role of tumor microenvironment in metastasis and relapses of medulloblastoma using immunocompetent mouse models. Niusha Khazaei. McGill University, Montreal, QC, United States.

A038 Inhibitory Interneuron Loss in Human Glioma Correlates with Reduced Survival, Neuron-Glioma Interactions, and Altered Neural Activity. Akhil Surapaneni. Dell Medical School at the University of Texas at Austin, Austin, TX, United States.

A039 In vivo genome-wide CRISPR/Cas9 screens conducted in an immunocompetent mouse model of glioblastoma identify novel in vivo tumor liabilities and potential mechanisms of resistance to chimeric antigen receptor T-cell (CAR-T) therapy. Catherine Koch. MIT and HMS, Boston, MA, United States.

A040 The Impact of Antihistamines on the Tumor Microenvironment: Friend or Foe? Jessica Taylor. CRUK Cambridge Institute, University of Cambridge, Cambridge, United Kingdom.

A041 Vascular normalization improves the delivery and efficacy of CAR-T cells in mouse brain cancers. Vasiliki Salameti. Massachusetts General Hospital, Boston, MA, United States.

A042 Targeting EPHB2/ABL1 restores anti-tumor immunity in a preclinical model of ependymoma. Taylor Uccello. Massachusetts General Hospital and Harvard Medical School, Boston, MA, United States.

A043 Pericytes orchestrate a tumor-suppressive microenvironment by impinging on the crosstalk between macrophages and tumor-initiating cells in glioblastoma multiforme. Sebastian Braun. Lund University, Lund, Sweden.

A044 Testing Neuro-Oncology Tenets: Are MRI findings and symptoms different with true progression compared with immunotherapy-related treatment effect in patients with primary brain tumors? Emma Byrne. National Cancer Institute, Bethesda, MD, United States.

A045 Engineered systems for tumor modeling facilitate the assessment of therapeutic interventions. Sara Pedron-Haba. University of Illinois Urbana-Champaign, Urbana, IL, United States.

A046 Exogenous CD200 suppressesing T cells is CD200R1 independent. Zhengming xiong. University of Minnesota, Minneapolis, MN, United States.

A047 Targeting tumor-myeloid cell symbiosis in glioblastoma. Peiwen Chen. Northwestern University, CHICAGO, IL, United States.
A048 Development and validation of a microfluidic cell culture model for examining cerebral microvascular barrier responses to the tumor microenvironment. Donald Miller. University of Manitoba and CancerCare Manitoba, Winnipeg, MB, Canada.


A050 Ferritin, associated with worse Overall Survival in recurrent GBM, is reduced by combination of HDACi, ONC206 and radiation. Vida Tajiknia. Legorreta cancer center, Brown University, Providence, RI, United States.

A051 Treatment outcome of leptomeningeal metastasis from breast cancer. Suzy Kim. Seoul National University Boramae Medical Center, Seoul, South Korea.
Poster Session B (To be presented on October 21 from 4:00-6:00 p.m. ET)

3D Genomes and Spatial Sequencing
B001 Glioblastoma evolution and resistance is mediated by a shift in cell state and tumor microenvironmental interactions. Wajd Al-Holou. University of Michigan, Ann Arbor, MI, United States.

Brain Metastasis
B002 Circulatory Galectin 3 Binding Protein as a Potential Biomarker in Early Detection of Glioma. Rashmi Rana. Sir Ganga Ram Hospital, New Delhi, India.

B003 The OTX2 gene induces tumor growth and triggers leptomeningeal metastasis by regulating the mTOR signaling pathway in medulloblastomas. Elisabet Ampudia Mesias. University of Minnesota, Minneapolis, MN, United States.

B004 Clinico-genomic characteristics of breast cancer brain metastasis: A multi-institutional analysis from AACR Project GENIE BPC. Hannah Fuchs. Memorial Sloan Kettering Cancer Center, New York, NY, United States.


B008 Brain metastases roadmap reveals conserved regulatory dynamics rooted in dormant tumor cells. Remi Klotz. University of Maryland School of Medicine, Baltimore, MD, United States.

Epigenetics and Epitranscriptomics
B009 Characterizing the Super Enhancer Landscape of H3K27me3 Loss in MPNST and DIPG. Christopher Stehn. University of Minnesota, Minneapolis, MN, United States.

B010 PITAR, a p53 Inactivating TRIM28 associated RNA, executes an alternate way of p53 inactivation. Kumar Somasundaram. Indian Institute of Science, Bangalore, India.

B011 Sex-specific chromatin remodelling drives tumorigenesis in glioblastoma. adham halauoi. UCSD, San Diego, CA, United States.

B012 H3.3K27M diffuse midline gliomas are sensitive to SWI/SNF chromatin remodeler degradation. Mateus Mota. University of Michigan, Ann Arbor, MI, United States.

B014 **CHD5 suppresses glioblastoma by inhibiting MYC.** Xueqin Sherine Sun. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, United States.

B015 **RNA N6-methyladenosine (m6A) as a therapeutic target in Diffuse Midline Glioma (DMG).** Samuel Ross. University of Sydney, Sydney, NSW, Australia.

B016 **Targeting the epigenome through combined Facilitates Chromatin Transcription (FACT) and Bromodomain and Extra-Terminal Domain (BET) inhibition in Diffuse Midline Glioma (DMG).** Holly Holliday. Children's Cancer Institute, Sydney, NSW, Australia.

B017 **Modeling epigenetic lesions that cause gliomas.** Gilbert Rahme. Dana-Farber Cancer Institute, Boston, MA, United States.

B018 **Epigenetic targeting improves glioblastoma cell sensitivity to chemotherapy.** Golnaz Asaadi Tehrani. Notre Dame university, South Bend, IN, United States.

Novel Therapeutic Modalities

B019 **A novel repurposed antipsychotic agent for brain cancer acting via the modulation of Akt/FOXO/Bim signaling axis.** Manas Yogendra Agrawal. Texas Tech University Health Sciences Center, Abilene, TX, United States.

B020 **Understanding the role of dNTP pool on double-strand break and resistance to therapy in quiescent hypoxic glioblastoma.** Edidiong Usoro. Augusta University, Augusta, GA, United States.

B021 **Targeting tight junctions at the blood-tumor barrier for improved intratumoral drug delivery in glioblastoma mouse models.** Sean Lawler. Brown University, Providence, RI, United States.

B022 **Interplay Between the Cellular dNTP pool and DNA Double-Strand Break Repair: A Potential Therapeutic Target for Refractory Glioblastoma.** Dominique Monroe. Augusta University, Augusta, GA, United States.

B023 **CNS and systemic pharmacokinetics of antibody-drug conjugate payloads through convection-enhanced delivery.** Jiayan Le. Department of Pharmaceutics, Brain Barriers Research Center, University of Minnesota, Minneapolis, MN, United States.

B024 **New pipeline toward precision therapies for glioblastoma.** Zhi Sheng. Framin Biomedical Research Institute at Virginia Tech Carilion, Roanoke, VA, United States.

B026 Rotational magnetic drug targeting for leptomeningeal metastases. Herbert Engelhard. University of Illinois at Chicago, Chicago, IL, United States.

B027 Repurposing ion channel drugs: the Na+ channel modifying drug DPI-201-106 significantly enhances the anti-tumor activity of multiple classes of drugs targeting DNA damage repair. Terrance Johns. Telethon Kids Institute, Perth, WA, United States.


B029 A novel lupus-associated antibody that inhibits the growth of aggressive high-grade glioma orthotopic xenografts and enhances radiotherapy via a unique mechanism. Terrance Johns. Telethon Kids Institute, Perth, WA, United States.


Other

B033 Histone H3.3 K27M and G34R/V glioma driver mutations inhibit mitotic phosphorylation of H3.3 S31, driving tumor formation by inducing chromosomal instability. Charles Day. University of Minnesota - Hormel Institute, Austin, MN, United States.


B036 Asc1lb progenitor-specific RB conditional inactivation in zebrafish models rare CNS primitive neuroectodermal tumors. Maura McGrail. Iowa State University, Ames, IA, United States.


B040 Former caregivers of patients with glioblastoma multiforme report the Preparedness Assessment for the Transition Home (PATH©) instrument is helpful throughout the disease trajectory. Elizabeth James. University of North Carolina Wilmington, Durham, NC, United States.


B042 A survey of Neuro-Oncology (NOB) Clinical Providers to assess the feasibility and utility of the administration of the Montreal Cognitive Assessment (MoCA) Cognition Duo APP in an Outpatient Clinic. Madhura Managoli. NOB, CCR, NCI, NIH, Bethesda, MD, United States.

B043 The Caregiver Burden of Patients with Glioblastoma multiforme (GBM) and Feeling of Regret for Treatment Decisions associated with GBM Standard of Care using Qualitative Analysis. Marlee Wallace. University of North Carolina at Wilmington, Wilmington, NC, United States.

Tumor Metabolism


B046 Irradiation of patient-derived high-grade gliomas reduces 5-ALA-induced fluorescence utility during re-resection. Paras Minhas. Stanford University, Palo Alto, CA, United States.

B047 Inhibition of the polyamine pathway: a novel therapeutic approach to treat aggressive pediatric medulloblastoma. Aaminah Khan. Children’s Cancer Institute, Sydney, NSW, Australia.

American Association for Cancer Research Special Conference:
BRAIN CANCER | October 19-22, 2023 | Hilton Minneapolis | Minneapolis, Minnesota
B048 **Association between SIRT3 gene polymorphism and increased metabolic rate in brain tumor patients.** Ishrat Mahjabeen. Brown university, providence, RI, United States.

B049 **Uncovering sex-biased immunometabolic roles for NIK in the GBM tumor microenvironment.** Raquel Sitcheran. Texas A&M University School of Medicine, Bryan, TX, United States.

B050 **Metabolic rewiring in human brain cancer.** Daniel Wahl. University of Michigan, Ann Arbor, MI, United States.

B051 **DNA damage signaling activates GTP synthesis to promote glioblastoma treatment resistance.** Andrew Scott. University of Michigan, Ann Arbor, MI, United States.

B052 **Hyaluronic acid influences amino acid metabolism in glioblastoma's U87-MG cell line in a 2D culture via LAT1 transporter expression.** Ashwin Bale. University of Illinois, Urbana Champaign, Urbana, IL, United States.