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RESEARCH ARTICLES
St. Jude Cloud: A Pediatric Cancer Genomic Data-Sharing Ecosystem ............... 1082

Précis: The St. Jude Cloud enables sharing, visualization, and analysis of large datasets on pediatric cancer and other catastrophic childhood illnesses; recent use cases include classification of and investigations of mutation rates in pediatric cancers.
Activated T Cells was associated with breast tumorigenesis, \textit{Bacteroides fragilis} in the gut or breast microbe cancer with cancer, including enzalutamide-resistant prostate tumor growth in xenograft models of prostate tumor growth by immune-related adverse events, prompting the PD-1–PD-L1 axis can be effective but is limited. N\textsubscript{S} Précis: Notch and Progression and Concomitantly Activates Breast Tumorigenesis and Metastatic A Procarcinogenic Colon Microbe Promotes N\textsubscript{R}J Targeting the p300/CBP Axis in Lethal Prostate Cancer \textit{S.J. Dovedi, M.J. Elder, C. Yang, S.I. Sitnikova, L. Irving, A. Hansen, J. Hair, D.C. Jones, S. Hasani, B. Wang, S.-A. Im, B. Tran, D.S. Subramaniam, S.D. Gainer, K. Vashishit, A. Lewis, X. Jin, S. Kentner, K. Mulgrew, Y. Wang, M.G. Overstreet, J. Dodgson, Y. Wu, Á. Palazon, M. Morrow, G.J. Rainey, G.J. Browne, F. Neal, T.V. Murray, A.D. Toloczko, W. Dall’Acqua, I. Achour, D.J. Freeman, R.W. Wilkinson, and Y. Mazor} Pré\textit{c}is: Combined blockade of CTLA4 and the PD-1–PD-L1 axis can be effective but is limited by immune-related adverse events, prompting the development of a bspecific antibody (MEDIS752) targeting PD-1 and CTLA4; this treatment limited tumor growth in vivo. See commentary. p. 1008


Metastasis and Immune Evasion from Extracellular cGAMP Hydrolysis .................. 1212

Précis: When expressed by cancer cells, the transmembrane glycoprotein ENPP1 hydrolyzed cGAS-generated extracellular cGAMP—which would otherwise elicit a STING-mediated antitumor response—to produce AMP that was processed into immunosuppressive adenosine.

MNK Inhibition Sensitizes KRAS-Mutant Colorectal Cancer to mTORC1 Inhibition by Reducing elf4E Phosphorylation and c-MYC Expression .................. 1228

Précis: Loss-of-function APC mutations confer susceptibility to rapamycin in colorectal cancer, but oncogenic KRAS mutations circumvent this; however, blocking the MNK-elf4E translation pathway restored sensitivity of these tumors to rapamycin.

Gut Microbiome Directs Hepatocytes to Recruit MDSCs and Promote Cholangiocarcinoma .................. 1248

Précis: In mice with impaired gut barrier function, liver exposure to Gram-negative commensal bacteria led to TLR4-dependent recruitment of immunosuppressive myeloid-derived suppressor cells, which promoted cholangiocarcinoma.

See commentary, p. 1014

Endogenous Retroelement Activation by Epigenetic Therapy Reverses the Warburg Effect and Elicits Mitochondrial-Mediated Cancer Cell Death .................. 1268

Précis: Epigenetic inhibitors cause transcription of endogenous retroviruses, causing ATP depletion via the double-stranded RNA helicases RIG-I and MDA5 and leading to tumor cell dependence on aerobic glycolysis, in contradiction to the Warburg effect.

Direct and Indirect Regulators of Epithelial–Mesenchymal Transition–Mediated Immunosuppression in Breast Carcinomas .................. 1286

Précis: Quasi-mesenchymal (qM) breast carcinoma cells produced immunomodulatory proteins, including CD73, which conferred resistance to anti-CTLA4. Cd73 knockout in minority populations of qM cells restored anti-CTLA4 sensitivity in entire tumors.

Retraction
Retraction: Increased Levels of COX-2 and Prostaglandin E2 Contribute to Elevated Aromatase Expression in Inflamed Breast Tissue of Obese Women .................. 1306
Pharmacologic disruption of epigenetic enzymes such as DNA methyltransferases, histone methyltransferases, and histone acetyltransferases has shown some efficacy in cancer, likely in part due to their ability to reactivate normally silenced genomic regions. Endogenous retroviruses are among the regions often activated, resulting in a RIG-I–MDA5-dependent innate immune response. Additionally, Fresquet and colleagues found that the helicase activity of RIG-I and MDA5 depleted intracellular ATP, reversing the Warburg effect and increasing cancer cell dependence on aerobic glycolysis. This was associated with succinate dehydrogenase hyperactivation and consequent production of reactive oxygen species, leading to caspase-independent tumor cell necroptosis that could be enhanced by blocking the programmed-cell-death inhibitor BCL2. For more information, see the article by Fresquet and colleagues on page 1268.