

CANCER RESEARCH

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- 3337 Natural Killer Cell Regulation of Breast Cancer Stem Cells Mediates Metastatic Dormancy**
Grace G. Bushnell, Deeksha Sharma, Henry C. Wilmot, Michelle Zheng, Toluwaleke D. Fashina, Chloe M. Hutchens, Samuel Osipov, Monika Burness, and Max S. Wicha
The immune system controls disseminated breast cancer cells during disease latency, highlighting the need to utilize immunocompetent models to identify strategies for targeting dormant cancer cells and reducing metastatic recurrence.
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- 3354 Targeting the Sodium-Potassium Pump as a Therapeutic Strategy in Acute Myeloid Leukemia**
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ATP1B3 is a lethal selective paralog dependency in acute myeloid leukemia that can be eliminated to destabilize the sodium-potassium pump, inducing cell death.

- 3371 Cancer-Associated Fibroblasts Expressing Sulfatase 1 Facilitate VEGFA-Dependent Microenvironmental Remodeling to Support Colorectal Cancer**
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SULF1⁺ cancer-associated fibroblasts play a tumor-promoting role in colorectal cancer by stimulating extracellular matrix deposition and angiogenesis and can serve as a biomarker for the therapeutic response to HDAC inhibitors in patients.

CANCER METABOLISM AND MOLECULAR MECHANISMS

- 3388 Targeting YAP Activity and Glutamine Metabolism Cooperatively Suppresses Tumor Progression by Preventing Extracellular Matrix Accumulation**
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Blocking glutamine utilization activates YAP to promote ECM deposition by fibroblasts, highlighting the potential of YAP inhibitors and antifibrotic strategies as promising approaches for effective combination metabolic therapies in cancer.
- 3402 m⁶A-Mediated Induction of 7-Dehydrocholesterol Reductase Stimulates Cholesterol Synthesis and cAMP Signaling to Promote Bladder Cancer Metastasis**
Youmiao Zeng, Yongbo Luo, Keyuan Zhao, Sheng Liu, Kaiwen Wu, Yudong Wu, Kaixuan Du, Wenbang Pan, Yiheng Dai, Yuanhao Liu, Mengda Ren, Fengyan Tian, Lijie Zhou, and Chaohui Gu
Inhibiting DHCR7 induces cholesterol metabolism reprogramming and lipid raft remodeling to inactivate the cAMP/protein kinase A/FAK axis and suppress bladder cancer metastasis, indicating the therapeutic potential of targeting DHCR7.

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KSQ-4279 is a potent and selective inhibitor of USP1 that induces regression of PARP inhibitor-resistant tumors when dosed in combination with PARP inhibitors, addressing an unmet clinical need for BRCA-mutant tumors.

TRANSLATIONAL CANCER BIOLOGY

- 3435 Single-Stranded DNA Gap Accumulation Is a Functional Biomarker for USP1 Inhibitor Sensitivity**
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- USP1 inhibitors kill BRCA1-deficient cells and cause ssDNA gap accumulation, supporting the potential of using ssDNA gap detection as a functional biomarker for clinical trials on USP1 inhibitors.
- 3447 FANCI Inhibition Induces PARP1 Redistribution to Enhance the Efficacy of PARP Inhibitors in Breast Cancer**
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- Increased expression of multiple rescuer genes on the gained chromosome 7 could compensate for the downregulation of several vulnerable genes on the lost chromosome 10, resolving the long-standing mystery of this frequent cooccurrence in gliomas.

CONVERGENCE SCIENCE

- 3478 A Genomics-Driven Artificial Intelligence-Based Model Classifies Breast Invasive Lobular Carcinoma and Discovers CDH1 Inactivating Mechanisms**
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- Genetic alterations linked to strong genotypic-phenotypic correlations can be utilized to develop AI systems applied to pathology that facilitate cancer diagnosis and biologic discoveries.

RETRACTIONS

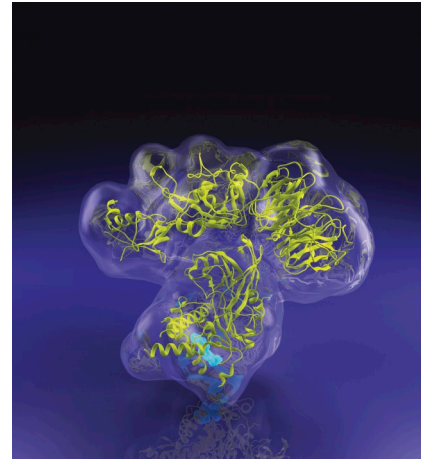
- 3490 Retraction: Differential Effects of VEGFR-1 and VEGFR-2 Inhibition on Tumor Metastases Based on Host Organ Environment**
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- 3491 Retraction: Variable Inhibition of Thrombospondin 1 against Liver and Lung Metastases through Differential Activation of Metalloproteinase ADAMTS1**
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ABOUT THE COVER

Defects in DNA repair pathways play a pivotal role in tumor development and response to therapy. USP1 is a critical dependency in tumors with homologous recombination (HR) repair deficiency. The cover image illustrates a CryoEM structure of the newly developed USP1 inhibitor, KSQ-4279, binding to the USP1/UAF1 deubiquitinase complex. Treatment with KSQ-4279 is an effective strategy for inducing regression of HR-deficient tumors and overcoming PARP inhibitor resistance. For details, see article by Cadzow and colleagues on page 3419.

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