BREAKING ADVANCES

781 Highlights from Recent Cancer Literature

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783 Signaling-Mediated Regulation of MicroRNA Processing
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792 Fearful Symmetry: Subversion of Asymmetric Division in Cancer Development and Progression
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798 The Emerging Protumor Role of γδ T Lymphocytes: Implications for Cancer Immunotherapy
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808 Redundancy: A Critical Obstacle to Improving Cancer Therapy
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813 Akt–Girdin Signaling in Cancer-Associated Fibroblasts Contributes to Tumor Progression
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MOLECULAR AND CELLULAR PATHOBIOLOGY

846 Long Noncoding RNA HULC Modulates Abnormal Lipid Metabolism in Hepatoma Cells through an miR-9–Mediated RXRA Signaling Pathway
Ming Cui, Zelin Xiao, Yue Wang, Minying Zheng, Tianqiang Song, Xiaoli Cai, Baodi Sun, Lihong Ye, and Xiaodong Zhang

Précis: These results elucidate a long noncoding RNA-facilitated pathway of aberrant lipid metabolism that contributes to the development of liver cancer, with potential clinical implications for its prevention and management.
Single-Strand DNA-Binding Protein SSB1 Facilitates TERT Recruitment to Telomeres and Maintains Telomere G-Overhangs

Precis: These findings offer an explanation for how telomerase is recruited to telomeres, a critical step in maintaining telomere ends and cell viability in all cancer cells.

A Central Role for Heme Iron in Colon Carcinogenesis Associated with Red Meat Intake

Precis: Elevated risk of colon cancer associated with red meat consumption is linked to heme iron, which may initiate carcinogenesis by enabling lipid peroxidation, providing a possible etiologic basis to understand this connection.

Crosstalk between KIT and FGFR3 Promotes Gastrointestinal Stromal Tumor Cell Growth and Drug Resistance

Precis: These findings provide a mechanistic rationale for use of existing FGFR inhibitors and multikinase inhibitors that target FGFR3 as strategies to improve treatment of gastrointestinal stromal tumors that exhibit resistance to imatinib mesylate, with immediate implications for clinical evaluation.

Precis: The analysis of circulating tumor cells will contribute to personalized medicine by tailoring anticancer therapies to the genetic and phenotypic characteristics of metastatic cells in individual cancer patients.

Correction: Peptides and Aptamers Targeting HSP70: A Novel Approach for Anticancer Chemotherapy

Correction: Macrophage Inflammatory Protein Derivative ECI301 Enhances the Alarmin-Associated Abscopal Benefits of Tumor Radiotherapy
ABOUT THE COVER

The high concentration of extracellular ATP in inflammatory lesions activates the purinergic P2RX7 receptor, which is expressed on immune and nonimmune cells of the gastrointestinal tract. The P2RX7 receptor participates in the initiation as well as the regulation of the inflammatory response and consequently can favor colon carcinogenesis. Using both genetic and pharmacological models of P2RX7 inactivation, we found that P2RX7 acted at an early stage to suppress the development of colitis-associated cancer. For details, see the article by Hofman and colleagues on page 835.