Highlights from Recent Cancer Literature

p53: Protection against Tumor Growth beyond Effects on Cell Cycle and Apoptosis
Xuyi Wang, Evan R. Simpson, and Kristy A. Brown

Antibody-Dependent Phagocytosis of Tumor Cells by Macrophages: A Potent Effector Mechanism of Monoclonal Antibody Therapy of Cancer
Nuray Gül and Marjolein van Egmond

Mechanisms of Cancer Cell Dormancy—Another Hallmark of Cancer?
Albert C. Yeh and Sridhar Ramaswamy

Fluorophore-NanoLuc BRET Reporters Enable Sensitive In Vivo Optical Imaging and Flow Cytometry for Monitoring Tumorigenesis
Franz X. Schaub, Md. Shamim Reza, Colin A. Flaveny, Weimin Li, Adele M. Musicant, Sany Hoxha, Min Guo, John L. Cleveland, and Antonio L. Amelio

Chemotherapy Induces Programmed Cell Death-Ligand 1 Overexpression via the Nuclear Factor-κB to Foster an Immunosuppressive Tumor Microenvironment in Ovarian Cancer
Jin Peng, Junzo Hamanishi, Noriomi Matsumura, Kaoru Abiko, Kumuruz Murat, Tsukasa Baba, Ken Yamaguchi, Naoki Horikawa, Yuko Hosoe, Susan K. Murphy, Ikuo Konishi, and Masaki Mandai

Fibulin-5 Blocks Microenvironmental ROS in Pancreatic Cancer
Miao Wang, Mary Topalowski, Jason E. Toombs, Christopher M. Wright, Zachary R. Moore, David A. Boothman, Hiromi Yanagisawa, Huanmin Wang, Agnieszka Witsiepwicz, Diego H. Castrillon, and Rolf A. Brekken

The CUL4B/AKT/b-Catenin Axis Restricts the Accumulation of Myeloid-Derived Suppressor Cells to Prohibit the Establishment of a Tumor-Permissive Microenvironment
Yanyan Qian, Jupeng Yuan, Huili Hu, Shuqian Zhang, Baichun Jiang, Changshun Shao, and Yaqiqing Gong

Obesity Contributes to Ovarian Cancer Metastatic Success through Increased Lipogenesis, Enhanced Vascularity, and Decreased Infiltration of M1 Macrophages

These findings highlight the potential mechanisms by which obesity contributes to ovarian cancer metastatic success, with important implications for patient outcomes.

These findings reveal an integrin-based mechanism that attenuates ROS production and promotes cancer progression, with implications for a novel general strategy to reprogram the tumor microenvironment to improve therapeutic response.

These surprising findings describe a previously uncharacterized antitumorigenic role for CUL4B in the hematopoietic system, where it restricts the accumulation of myeloid-derived suppressor cells to prevent the establishment of a tumor permissive microenvironment, underscoring mechanisms by which immunosurveillance may be compromised by certain therapeutic strategies.
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5084 Serum Immunoregulatory Proteins as Predictors of Overall Survival of Metastatic Melanoma Patients Treated with Ipilimumab
Précis: These findings define the immunomodulatory factors CXCL11 and sMICA as predictive markers in melanoma patients least likely to benefit from treatment with the checkpoint inhibitor ipilimumab.

5120 Hyperthermia Selectively Targets Human Papillomavirus in Cervical Tumors via p53-Dependent Apoptosis
Arlene L. Oei, Caspar M. van Leeuwen, Rosemarie ten Cate, Hans M. Rodermond, Marrije R. Buist, Lukas J.A. Stalpers, Johannes Crezee, H. Petra Kok, Jan Paul Medema, and Nicolaas A.P. Franken
Précis: These findings reveal mechanistic insights underlying the response of HPV-positive cervical cancers to hyperthermia therapy, with immediate implications for patient outcomes.

5130 Naturally Occurring Isothiocyanates Exert Anticancer Effects by Inhibiting Deubiquitinating Enzymes
Ann P. Lawson, Marcus J.C. Long, Rory T. Coffey, Yu Qian, Eranthie Weerapana, Farid El Oualid, and Lizbeth Hedstrom
Précis: This study offers a novel unifying mechanism to understand the cancer-fighting properties of a class of natural compounds found in broccoli and other cruciferous vegetables that might help fight a variety of diseases characterized by inflammatory pathology.

5143 WDR5 Supports an N-Myc Transcriptional Complex That Drives a Protumorigenic Gene Expression Signature in Neuroblastoma
Yuting Sun, Jessica L. Bell, Daniel Carter, Samuele Gherardi, Rebecca C. Poulos, Giorgio Milazzo, Jason W.H. Wong, Rima Al-Awar, Andrew E. Tee, Pei Y. Liu, Bing Liu, Bernard Atmadibrata, Matthew Wong, Toby Trahair, Quan Zhao, Jason M. Shohet, Ygal Haupt, Johannes H. Schulte, Peter J. Brown, Cheryl H. Arrowsmith, Glenn M Marshall, Antony Braithwaite, and Tao Liu
Précis: These results identify the histone methylation regulator WDR5 as a key cofactor for N-Myc-driven transcriptional activation and tumorigenesis, offering evidence of its candidacy as a novel therapeutic target for MYCN-amplified neuroblastomas.
ATDC/TRIM29 Drives Invasive Bladder Cancer Formation through miRNA-Mediated and Epigenetic Mechanisms

Phillip L. Palmbos, Lidong Wang, Huibin Yang, Yin Wang, Jacob Leflein, McKenzie I. Ahmet, John E. Wilkinson, Chandan Kumar-Sinha, Gina M. Ney, Scott A. Tomlins, Stephanie Daignault, Lakshmi P. Kunju, Xue-Ru Wu, Yair Lotan, Monica Liebert, Mats E. Ljungman, and Diane M. Simeone

Précis: Identification of a novel oncogenic driver of bladder carcinogenesis introduces a candidate biomarker and therapeutic target in a setting that has not kept pace with progress made in other cancers.

Correction: CD38 in Hairy Cell Leukemia Is a Marker of Poor Prognosis and a New Target for Therapy
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