Précis: Among its many roles in cancer, c-MYC may also serve as a molecular switch of the character of the tumor microenvironment, as illustrated by its ability to convert responses to a proinflammatory factor from suppressive to supportive for tumor growth.

A Comprehensive View of Nuclear Receptor Cancer Cistromes
Qianzi Tang, Yiwen Chen, Clifford Meyer, Tim Geistlinger, Mathieu Lupien, Qian Wang, Tao Liu, Yong Zhang, Myles Brown, and Xiaole Shirley Liu

Précis: Nuclear receptors are widely important in cancer and this database offering comprehensive cistrome, epigenome, and transcriptome data sets and downstream analysis offers a unique and valuable resource to the cancer research community.
Chemotherapy Enhances Metastasis Formation via VEGFR-1–Expressing Endothelial Cells
Laura G.M. Daenen, Jeanine M.L. Roodhart, Miranda van Amersfoort, Mantra Dehnad, Wijnand Roessingh, Laurien H. Ulfman, Patrick W.B. Derksen, and Emile E. Voest

Précis: VEGFR-1 upregulation promotes metastasis induced by chemotherapy, suggesting that in combination with traditional chemotherapy anti-VEGFR-1 treatment may augment antimetastatic responses.

7021
Tumor-Surrogate Blood Vessel Subtypes Exhibit Differential Susceptibility to Anti-VEGF Therapy
Basel Sitohey, Janice A. Nagy, Shou-Ching Shih Jaminet, and Harold F. Dvorak

Précis: Anti-VEGF therapies preferentially antagonize less mature blood vessels, with important implications for understanding the limited effectiveness of these therapies in human tumors where blood vessels that develop independently of tumor-secreted VEGF may predominate.

7029
MOLECULAR AND CELLULAR PATHOBIOLOGY

MYB Is Essential for Mammary Tumorigenesis
Rebecca Yu Miao, Yvette Drabsch, Ryan Stanley Cross, Dane Cheasley, Sandra Carpinteri, Lloyd Pereira, Jordane Malaterre, Thomas J. Gonda, Robin L. Anderson, and Robert G. Ramsay

Précis: The MYB oncogene has been widely studied in blood cancers, but the importance of its function in solid tumors including breast cancers where MYB is often elevated has not been known.

7038
p53 Negatively Regulates the Hepatoma Growth Factor HDGF
Yasushi Sasaki, Hideaki Negishi, Masashi Idogawa, Ikuko Yokota, Ryota Koyama, Masanobu Kusano, Hiromu Suzuki, Masahiro Fujita, Reo Maruyama, Minoru Toyota, Tsuyoshi Saito, and Takashi Tokino

Précis: Tumor suppressor genes may exert a significant part of their activity by regulating autocrine and paracrine growth factor pathways, as illustrated in this study which reveals how the transcriptional repression function of p53 mediates cancer cell growth and migration.

7048
Increased Skin Papilloma Formation in Mice Lacking Glutathione Transferase GSTP
Colin J. Henderson, Kenneth J. Ritchie, Aileen McLaren, Probir Chakravarty, and C. Roland Wolf

Précis: Glutathione transferase GSTP may play a major role in carcinogenesis distinct from its role in detoxification, apparently as a key determinant of the proinflammatory tumor environment.
**Sonic Hedgehog Pathway Promotes Metastasis and Lymphangiogenesis via Activation of Akt, EMT, and MMP-9 Pathway in Gastric Cancer**

Young A. Yoo, Myoung Hee Kang, Hyun Joo Lee, Baek-hui Kim, Jong Kuk Park, Hyun Koo Kim, Jun Suk Kim, and Sang Cheul Oh

Précis: Findings define a role for a major developmental pathway that activates cell migration in invasive and metastatic forms of gastric cancer, highlighting this pathway as a potential therapeutic target in this setting.

**THERAPEUTICS, TARGETS, AND CHEMICAL BIOLOGY**

7071

**p53 Modulates Acquired Resistance to EGFR Inhibitors and Radiation**

Shyhmin Huang, Sergio Benavente, Eric A. Armstrong, Chunrong Li, Deric L. Wheeler, and Paul M. Harari

Précis: Findings identify a central role of p53 in the development of acquired resistance to EGFR inhibitors, stimulating interest in applying p53 restoration strategies in treatment regimens that incorporate EGFR inhibitors and radiation.

7080

**Epithelial Junction Opener JO-1 Improves Monoclonal Antibody Therapy of Cancer**

Ines Beyer, Ruan van Rensburg, Robert Strauss, ZongYi Li, Hongjie Wang, Jonas Persson, Roma Yumul, Qinghua Feng, Hui Song, Jiri Bartek, Pascal Fender, and André Lieber

Précis: An adenoviral protein that loosens tumor epithelial cell junctions can dramatically increase tumor exposure and antimetastatic efficacy of therapeutic monoclonal antibodies, permitting tumor eradication in preclinical mouse models.

**TUMOR AND STEM CELL BIOLOGY**

7091

**AGR2 Is a Novel Surface Antigen That Promotes the Dissemination of Pancreatic Cancer Cells through Regulation of Cathepsins B and D**

Laurent Dumartin, Hannah J. Whiteman, Mark E. Weeks, Deepak Haritharan, Branko Dimitrov, Christine A. Iacobuzio-Donahue, Teresa A. Brentnall, Mary P. Bronner, Roger M. Feakins, John F. Timms, Caroline Brennan, Nicholas R. Lemoine, and Tatjana Crnogorac-Jurcic

Précis: A prometastatic protein expressed on the cell surface of aggressive pancreatic cancers has features of an appealing therapeutic target to improve management of this disease.

7103

**Decreased Lymphangiogenesis and Lymph Node Metastasis by mTOR Inhibition in Head and Neck Cancer**


Précis: Findings rationalize future clinical evaluation of mTOR inhibitors as a strategy to prevent metastasis in head and neck cancers, an aggressive form of cancer with a rapidly rising incidence.

7113

**Tyrosine Isomers Mediate the Classical Phenomenon of Concomitant Tumor Resistance**

Raúl A. Ruggiero, Juan Bruzzo, Paula Chiarella, Pedro di Gianni, Martin A. Istoriz, Susana Linskens, Norma Speziale, Roberto P. Meiss, Oscar D. Bustuabad, and Christiane D. Pasqualini

Précis: This seminal article addresses the long-standing question of why a tumor-bearing animal is often resistant to development of secondary tumors or metastases, a phenomenon known as concomitant tumor resistance, possibly offering a generalized nontoxic approach to block metastatic recurrences after resection and eradication of primary cancers, a pivotal problem for oncologists and their patients.

7125

**EGFR-AKT-Smad Signaling Promotes Formation of Glioma Stem-like Cells and Tumor Angiogenesis by ID3-Driven Cytokine Induction**

Xun Jin, Jinlong Yin, Sung-Hak Kim, Young-Woo Sohn, Samuel Beck, Young-Chang Lim, Do-Hyun Nam, Yun-Jaie Choi, and Hyunggee Kim

Précis: A member of the ID gene family implicated in tumor angiogenesis is also important to mediate EGFR signals that promote stem-like cell characteristics in glioma, linking these two important processes during tumor progression.
ABOUT THE COVER

Pretreating mice with chemotherapy can enhance metastasis formation in the lungs of mice. Daenen and colleagues and Gingis-Velitski and colleagues report that chemotherapy has effects on the microenvironment that account for these protumorigenic effects. Expression of vascular endothelial growth factor receptor 1 (VEGFR-1) is enhanced on a subset of endothelial cells in the lungs of mice following chemotherapy exposure. On the cover, mouse lung endothelial cells after cisplatin pretreatment are shown, characterized by CD31 expression (red) and VEGFR-1 expression (green). Knowledge of the host effects induced by chemotherapy may facilitate strategies to improve therapy efficacy. For details, see the article by Daenen and colleagues on page 6976 and the article by Gingis-Velitski and colleagues on page 6986 of this issue.
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