### PRIORITY REPORTS

**Fra-1 Promotes Breast Cancer Chemosensitivity by Driving Cancer Stem Cells from Dormancy**  
Dan Lu, Si Chen, Xiaoyue Tan, Na Li, Chenghu Liu, Zongjin Li, Ze Liu, Dwayne G. Stupack, Ralph A. Reisfeld, and Rong Xiang  

doi:10.1158/0008-5472.CAN-12-0228  
3457

**Distinct Transcriptional Programs Mediated by the Ligand-Dependent Full-Length Androgen Receptor and Its Splice Variants in Castration-Resistant Prostate Cancer**  

doi:10.1158/0008-5472.CAN-12-0115  
3457

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### INTEGRATED SYSTEMS AND TECHNOLOGIES

**Kidney Tumor Biomarkers Revealed by Simultaneous Multiple Matrix Metabolomics Analysis**  
Sheila Ganti, Sandra L. Taylor, Omran Abu Aboud, Joy Yang, Christopher Evans, Michael V. Osier, Danny C. Alexander, Kyoungmi Kim, and Robert H. Weiss  

doi:10.1158/0008-5472.CAN-12-0116  
3471

**Transcriptional Signatures of Ral GTPase Are Associated with Aggressive Clinicopathologic Characteristics in Human Cancer**  
Steven C. Smith, Alexander S. Baras, Charles R. Owens, Garrett Dancik, and Dan Theodorescu  

doi:10.1158/0008-5472.CAN-12-0082  
3480

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**Integrin α5β1 Plays a Critical Role in Resistance to Temozolomide by Interfering with the p53 Pathway in High-Grade Glioma**  
Hana Janouskova, Anne Maglott, David Y. Leger, Catherine Bossert, Fanny Noulet, Eric Guerin, Dominique Guenot, Sophie Pinel, Pascal Chastagner, François Plenat, Natacha Entz-Werle, Jacqueline Lehmann-Che, Julien Godet, Sophie Martin, Jan Teisinger, and Monique Donenwill  

doi:10.1158/0008-5472.CAN-12-0051  
3463

**Epstein–Barr Virus Infection as an Epigenetic Driver of Tumorigenesis**  
Atsushi Kaneda, Keisuke Matsusaka, Hiroyuki Aburatani, and Masashi Fukayama  

doi:10.1158/0008-5472.CAN-12-0087  
3445

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**Transcriptional Signatures of Ral GTPase Are Associated with Aggressive Clinicopathologic Characteristics in Human Cancer**  
Steven C. Smith, Alexander S. Baras, Charles R. Owens, Garrett Dancik, and Dan Theodorescu  

doi:10.1158/0008-5472.CAN-12-0082  
3480

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3492 Ultrasensitive Measurement of Hotspot Mutations in Tumor DNA in Blood Using Error-Suppressed Multiplexed Deep Sequencing
Précis: NextGen sequencing can be used to measure minute amounts of tumor-derived DNA in the blood, providing a tool to evaluate the diagnostic utility of circulating tumor DNA as a cancer biomarker.

3499 CellMiner: A Web-Based Suite of Genomic and Pharmacologic Tools to Explore Transcript and Drug Patterns in the NCI-60 Cell Line Set
William C. Reinhold, Margot Sunshine, Hongfang Liu, Sudhir Varma, Kurt W. Kohn, Joel Morris, James Doroshow, and Yves Pommier
Précis: This report describes a readily accessible Web-based application that opens for in silico discovery a huge NCI database built around genomic, epigenomic, and pharmacologic analyses of the NCI-60, a collection of 60 widely studied human cancer cell lines.

3512 Microenvironment and Immunology
3512 Deletion of the Endothelial Bmx Tyrosine Kinase Decreases Tumor Angiogenesis and Growth
Tanja Holopainen, Vanessa López-Alpuche, Wei Zheng, Ritva Heljasvaara, Dennis Jones, Yun He, Denis Tvorogov, Gabriela D’Amico, Zoltán Wiener, Leif C. Andersson, Taina Pihlajaniemi, Wang Min, and Kari Alitalo
Précis: Findings offer preclinical support for therapeutic targeting of an arterial endothelial non-receptor tyrosine kinase as a novel antiangiogenic strategy for cancer treatment.

3522 Fibroblast-Derived Dermal Matrix Drives Development of Aggressive Cutaneous Squamous Cell Carcinoma in Patients with Recessive Dystrophic Epidermolysis Bullosa
Yi-Zhen Ng, Celine Pourreyron, Julio C. Salas-Alanus, Jasbani H.S. Dayal, Rodrigo Cepeda-Valdes, Wenfei Yan, Sheila Wright, Mei Chen, Jo-David Fine, Fiona J. Hogg, John A. McGrath, Dedee F. Murrell, Irene M. Leigh, E. Birgit Lane, and Andrew P. South
Précis: The collagen composition of the extracellular matrix in skin is found to be a pivotal determinant of tumor formation in individuals with a genetic skin disease, who are prone to develop aggressive squamous carcinomas.

3535 The Vitamin E Analogue α-TEA Stimulates Tumor Autophagy and Enhances Antigen Cross-Presentation
Yuhuan Li, Tobias Hahn, Kendra Garrison, Zhi-Hua Cui, Andrew Thorburn, Jacqueline Thorburn, Hong-Ming Hu, and Emmanuel T. Akporiaye
Précis: Findings suggest a generalized method to improve antitumor immunity with the use of a vitamin E derivative as a supplement to cancer immunotherapy.

3546 CXCR6 Upregulation Contributes to a Proinflammatory Tumor Microenvironment That Drives Metastasis and Poor Patient Outcomes in Hepatocellular Carcinoma
Qiang Gao, Ying-Jun Zhao, Xiao-Ying Wang, Shuang-Jian Qiu, Ying-Hong Shi, Jian Sun, Yong Yi, Ji-Wei Shi, Guo-Ming Shi, Zhen-Bin Ding, Yong-Sheng Xiao, Zhong-Hua Zhao, Jian Zhou, Xiang-Huo He, and Jia Fan
Précis: This important study defines a pivotal chemokine regulator of inflammation in the microenvironment of human liver tumors, the blockade of which might limit invasion and metastasis and improve therapeutic outcomes.

3557 The T-cell Receptor Repertoire of Tumor-Infiltrating Regulatory T Lymphocytes Is Skewed Toward Public Sequences
Alexander Sainte-Perez, Annick Lim, Brigitte Lemercier, and Claude Leclerc
Précis: This deep-sequencing analysis offers insights into how T-regulatory cells expand within the tumor microenvironment, where they blunt immunosurveillance during malignant progression, by suggesting the dominance of a relatively small number of T-cell clones.

3570 IL-10 Directly Activates and Expands Tumor-Resident CD8+ T Cells without De Novo Infiltration from Secondary Lymphoid Organs
Jan Emmerich, John B. Mumm, Ivan H. Chan, Drake LaFace, Hoa Truong, Terrill McClanahan, Daniel M. Gorman, and Martin Olt
Précis: In the absence of systemic immune activation or any contribution from lymphoid organs, IL-10 can uniquely activate and expand cytotoxic T cells within the tumor, where it may offer an immunotherapeutic option, challenging prevailing views of IL-10 as a tumor-supportive function.
3582 Cancer Angiogenesis Induced by Kaposi Sarcoma–Associated Herpesvirus Is Mediated by EZH2
Meilan He, Wei Zhang, Thomas Bakken, Melissa Schutten, Zsolt Toth, Jae U. Jung, Parkash Gill, Mark Cannon, and Shou-Jiang Gao
Précis: By revealing how an oncogenic herpesvirus associated with an HIV-related skin tumor promotes tumor angiogenesis, this study suggests novel insights into the mechanisms of oncogenesis and novel strategies for antiangiogenic treatment.

3593 ZNF217 Is a Marker of Poor Prognosis in Breast Cancer That Drives Epithelial–Mesenchymal Transition and Invasion
Précis: A relatively uncharacterized zinc finger protein is shown to act as a prognostic biomarker in breast cancer, most likely through upregulation of epithelial–mesenchymal transition and promotion of metastases.

3607 Wnt/Snail Signaling Regulates Cytochrome c Oxidase and Glucose Metabolism
Su Yeon Lee, Hyun Min Jeon, Min Kyung Ju, Cho Hee Kim, Gyesoon Yoon, Song Iy Han, Hye Gyeong Park, and Ho Sung Kang
Précis: This study describes a novel function of the Wnt/Snail signaling pathway in the regulation of mitochondrial respiration and glycolytic switch that contributes to tumor progression.

3618 miRNA-708 Control of CD44+ Prostate Cancer–Initiating Cells
Sharanjot Saini, Shahana Majid, Varahram Shahryari, Sumit Arora, Soichiro Yamamura, Inik Chang, Mohd Saif Zaman, Guoren Deng, Yuichiro Tanaka, and Rajvir Dahiya
Précis: Findings identify a functional role for miR-708 in regulating the cancer stem-like cell marker CD44, with potentially important implications for understanding the progression and prognosis of many human cancers in which CD44+ stem-like cells have been implicated.
Proline Oxidase Promotes Tumor Cell Survival in Hypoxic Tumor Microenvironments
Wei Liu, Kristine Glunde, Zaver M. Bhujwalla, Venu Raman, Anit Sharma, and James M. Phang

Précis: The induction of proline oxidase and proline catabolism under oxygen and/or glucose deprivation contributes to tumor cell survival, thereby providing a better understanding of tumor metabolic reprogramming beyond the Warburg Effect.

Accumulation of Multipotent Progenitors with a Basal Differentiation Bias during Aging of Human Mammary Epithelia
James C. Garbe, Francois Pepin, Fanny A. Pelissier, Klara Sputova, Agla J. Fridriksdottir, Diana E. Guo, Rene Villadsen, Morag Park, Ole W. Petersen, Alexander D. Borowsky, Martha R. Stampfer, and Mark A. LaBarge

Précis: Although most preclinical research in cancer is conducted in young animal models, aging is the most important risk factor for human cancer, and elucidation of changes that occur in the tissue microenvironment during aging will lead to fundamental new insights yet to emerge.

LETTERS TO THE EDITOR

GLI1 Modulates EMT in Pancreatic Cancer—Letter
Shingo Inaguma, Kenji Kasai, Mitsuyoshi Hashimoto, and Hiroshi Ikeda

GLI1 Modulates EMT in Pancreatic Cancer—Response

ABOUT THE COVER

Rescue of a common ABCG2 variant by the HDAC inhibitor romidepsin. While the drug efflux transporter ABCG2 is expressed at the cell surface in transfected Flp-In-293 cells, its Q141K variant is trapped in the aggresome, an intracellular structure where misfolded proteins accumulate. Flp-In-293 cells expressing the Q141K variant were treated with romidepsin for 24 h, after which, immunofluorescence staining was done for ABCG2 (red), the aggresome marker γ-tubulin (green), and nuclei (blue). Romidepsin induced a drastic change in variant protein localization, from aggresome to the cell surface. This was accompanied by an increase in expression and a restoration of ABCG2-mediated drug efflux activity. For details, see article by Basseville and colleagues on page 3642 of this issue.
Updated version  Access the most recent version of this article at:  
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