BREAKING ADVANCES

3707 Highlights from Recent Cancer Literature

REVIEWS

3709 ATP-Citrate Lyase: A Key Player in Cancer Metabolism
Nousheen Zaidi, Johannes V. Swinnen, and Karine Smans

3715 Awaiting a New Era of Cancer Immunotherapy
Cheng William Hong and Qi Zeng

MEETING REPORT

3720 The Global Cancer Genomics Consortium: Interfacing Genomics and Cancer Medicine
The Global Cancer Genomics Consortium

CLINICAL STUDIES

3725 Prognostic PET 18F-FDG Uptake Imaging Features Are Associated with Major Oncogenic Alterations in Patients with Resected Non–Small Cell Lung Cancer
Viswam S. Nair, Olivier Gevaert, Guido Davidzon, Sandy Napel, Edward E. Graves, Chuong D. Hoang, Joseph B. Shragg, Andrew Quon, Daniel L. Rubin, and Sylvia K. Plevritis

3735 NF-κB Hyperactivation in Tumor Tissues Allows Tumor-Selective Reprogramming of the Chemokine Microenvironment to Enhance the Recruitment of Cytolytic T Effector Cells

Précis: Using a whole-colon tissue culture system, this study defines an immediately translatable combination of pharmacologic and biologic factors to promote the infiltration of colon tumors with cytolytic T-effector cells, a feature tightly correlated with improved survival outcomes regardless of tumor staging.

3744 Molecular Identification of GD3 as a Suppressor of the Innate Immune Response in Ovarian Cancer
Tonya J. Webb, Xiangming Li, Robert L. Giuntoli II, Pablo H.H. Lopez, Christoph Heuver, Ronald L. Schnaar, Moriya Tsuji, Christian Kurts, Mathias Oelke, and Jonathan P. Schneck

Précis: Findings identify an endogenous cell surface glycolipid as an immune inhibitory molecule, which, when secreted by ovarian cancers, can block natural killer T-cell activation, offering a novel immunomodulatory target in this setting.

3753 Molecular Signature of Smoking in Human Lung Tissues
Yohan Bossé, Dirkje S. Postma, Don D. Sin, Maxime Lamontagne, Christian Couture, Nathalie Gaudreault, Philippe Joubert, Vivien Wong, Mark Elliott, Maarten van den Berge, Corry A. Brandsma, Catherine Tribouley, Vladislav Malkov, Jeffrey A. Tsou, Gregory J. Opitneck, James C. Hogg, Andrew J. Sandford, Wim Timens, Peter D. Paré, and Michel Laviolette

Précis: This study used whole-genome gene expression to show the long-term impact of smoking on gene expression in nontumor lung tissues from patients with lung cancer.

A Journal of the American Association for Cancer Research

www.aacrjournals.org
**THERAPEUTICS, TARGETS, AND CHEMICAL BIOLOGY**

3807

Manganese Superoxide Dismutase Regulates a Metabolic Switch during the Mammalian Cell Cycle

Ehab H. Sarsour, Amanda L. Kalen, Zhen Xiao, Timothy D. Veenstra, Leena Chaudhuri, Sujatha Venkataramanan, Philip Reigan, Garry R. Buettnier, and Prabhat C. Goswami

*Précis:* Studies of cells deficient in MnSOD, a mitochondrial enzyme that controls cellular redox flux, show that MnSOD regulates glucose consumption during transit through the cell cycle, implying a role in the Warburg Effect.

**TUMOR AND STEM CELL BIOLOGY**

3817

Loss of Rassf1a Synergizes with Deregulated Runx2 Signaling in Tumorigenesis

Louise van der Weyden, Angelos Papaspyropoulos, George Pougiosiannis, Alistair G. Rust, Mamunur Rashid, David J. Adams, Mark J. Arens, and Eric O’Neill

*Précis:* Findings reveal a new intersection between Ras signaling and the HIPPO signaling pathway for cell-cycle and survival control that is critical in leukemia development.

3828

MET Signaling Regulates Glioblastoma Stem Cells

Kyeung Min Joo, Juyoun Jin, Eunhee Kim, Kang Ho Kim, Yonghyun Kim, Bong Gu Kang, Yoam-Jung Kang, Justin D. Lathia, Kwang Ho Cheong, Paul H. Song, Hyunggee Kim, Ho Jun Seol, Doo-Sik Kong, Jung Il Lee, Jeremy N. Rich, Jeongwu Lee, and Do-Hyun Nam

*Précis:* The results of this study suggest that MET kinase may represent a promising therapeutic target in these aggressive brain tumors, a timely issue given the late-stage clinical development of MET kinase inhibitors.

3839

CCR5 Antagonist Blocks Metastasis of Basal Breast Cancer Cells

Marco Velasco-Velázquez, Xuanmao Jiao, Marisol De La Fuente, Timothy G. Pestell, Adam Ertel, Michael P. Lisanti, and Richard G. Pestell

*Précis:* CCR5 antagonists, originally developed as HIV-entry inhibitors, reduce invasiveness and metastatic capability of breast cancer cells with basal phenotype and therefore may be used to prevent metastasis in patients with this currently nontargetable subtype of breast cancer.
Embryonic Protein Nodal Promotes Breast Cancer Vascularization
Daniela F. Quail, Logan A. Walsh, Guihua Zhang, Scott D. Findlay, Juan Moreno, Laura Fung, Amber Ablack, John D. Lewis, Susan J. Done, David A. Hess, and Lynne-Marie Postovit

Précis: Findings suggest that inhibitors of the developmental regulator Nodal may be useful as targeted therapies to block vascularization of breast cancers.

Numb Regulates Stability and Localization of the Mitotic Kinase PLK1 and Is Required for Transit through Mitosis
Travis L. Schmit, Minakshi Nihal, Mary Ndiaye, Vijayasaradhi Setaluri, Vladimir S. Spiegelman, and Nihal Ahmad

Précis: A developmental protein, Numb, which functions in cell fate determination, is found to exert a tumor-suppressive function during symmetric cell division.

Fibulin-3 Promotes Glioma Growth and Resistance through a Novel Paracrine Regulation of Notch Signaling

Précis: This seminal work highlights the major regulatory role of the tumor extracellular matrix on Notch signaling to promote glioma invasion and survival, with immediate clinical implications for improvement of adjuvant treatment strategies in malignant brain tumors.

ABOUT THE COVER
Activation of chemokine receptors on breast cancer cells can control their invasiveness. Analyzing microarray data from human breast cancer samples, increased expression of CCR5 in the basal subtype was found. Using in vivo and ex vivo bioluminescence in xenograft models, it was found that the CCR5 antagonist Maraviroc reduced lung colonization and metastasis in basal breast cancer cells. These results may lead to a new use of CCR5 antagonists as antimetastatic drugs. For details, see article by Velasco-Velázquez and colleagues on page 3839 of this issue.