Advanced Glycation End-Products: A Biological Consequence of Lifestyle Contributing to Cancer Disparity
David P. Turner

Genome Medicine in Cancer: What’s in a Name?
Anne F. Schott, Charles M. Perou, and Daniel F. Hayes

Manic Fringe Promotes a Claudin-Low Breast Cancer Phenotype through Notch-Mediated PIK3CG Induction
Shubing Zhang, Wen-Cheng Chung, Guanming Wu, Sean E. Egan, Lucio Miele, and Keli Xu

Précis: These results define a glucosylpeptide transferase as an oncogene in an aggressive subtype of breast cancer, with mechanistic insights offering a preclinical justification to block PI3K-γ as a treatment strategy in this setting.

PLZF, a Tumor Suppressor Genetically Lost in Metastatic Castration-Resistant Prostate Cancer, Is a Mediator of Resistance to Androgen Deprivation Therapy

Précis: This study interrogates an androgen responsive tumor suppressor gene whose loss of expression is associated with a new molecular subset of prostate cancer that participates in resistance to androgen deprivation therapy.

A Chemical Genetics Approach for the Functional Assessment of Novel Cancer Genes
Qianhe Zhou, Adnan Derti, David Ruddy, Daniel Rakiec, Iris Kao, Philippe Guillaume, Petra Baumgaertner, Daniel E. Speiser, Immanuel Luescher, and Nathalie Rufer

Précis: The Degron-KI method represents a new approach to study the function of cancer genes that is able to better mimic the effects of small molecule inhibitors than current genetic approaches.

TLR5 Ligand–Secreting T Cells Reshape the Tumor Microenvironment and Enhance Antitumor Activity
Degui Geng, Sabina Kaczanowska, Alexander Tsai, Kenisha Younger, Augusto Ochoa, Aaron R. Rapoport, Sue Ostrand-Rosenberg, and Eduardo Davila

Précis: These findings suggest that T cells engineered for use in adoptive T-cell immunotherapy can be further engineered to deliver TLR5 ligands that reshape the tumor environment to enhance antitumor efficacy.

Paracrine WT15A Signaling Inhibits Expansion of Tumor-Initiating Cells
Nicholas Borcherdin, David Kusner, Ryan Kolb, Qing Xie, Wei Li, Fang Yuan, Gabriel Velez, Ryan Aksland, Ronald J. Weigel, and Weizhou Zhang

Précis: These results identify a novel tumor-suppressive signaling event that controls cancer progression and metastasis by limiting the expansion of tumor-initiating cells.

Identification of Rare High-Avidity, Tumor-Reactive CD8+ T Cells by Monomeric TCR–Ligand Off-Rates Measurements on Living Cells
Michael Hebeisen, Julien Schmid, Philippe Guillaume, Petra Baumgaertner, Daniel E. Speiser, Immanuel Luescher, and Nathalie Rufer

Précis: This study reports a novel peptide technology to readily isolate those rare high-avidity tumor-specific cytotoxic T cells from cancer patients that offer the greatest interest for use in adoptive cell therapies for treatment.

The Endogenous Cell-Fate Factor Dachshund Restrains Prostate Epithelial Cell Migration via Repression of Cytokine Secretion via a CXCL1 Signaling Module
Ke Chen, Kongming Wu, Xuanmao Jiao, Liping Wang, Xiaoming Ju, Min Wang, Gabrielle Di Sanza, Shanhua Xu, Qiong Wang, Kevin Li, Xin Sun, Congwen Xu, Zhiping Li, Mathew C. Castimiro, Adam Ertel, Sankar Adhya, Peter A. McGuire, Michael P. Lisanti, Chenguang Wang, Richard J. Davis, Graeme Mardon, and Richard G. Pestell

Précis: These findings show how a cell fate determination factor that functions in normal development acts to inhibit the growth of androgen therapy-resistant prostate cancer.
Decoy Receptor DcR1 Is Induced in a p50/2039
2029
CDK2 Inhibition Causes Anaphase
Catastrophe in Lung Cancer through the
Centrosomal Protein CP110
Précis: This study describes how CDK2 inhibitors preferentially target KRAS mutant lung cancer cells that are genetically unstable, a disease type relatively resistant to other chemotherapeutic strategies.

2039
Decoy Receptor DcR1 Is Induced in a p50/
Bcl3–Dependent Manner and Attenuates the
Efficacy of Temozolomide
Nassir M. Mansour, Giovanna M. Bernal, Longtao Wu, Clayton D. Crawley, Kirk E. Cahill, David J. Voce, Irina V. Babyanshkova, Wei Zhang, Ruben Spretz, Luis Nunez, Gustavo F. Larsen, Raphael W. Reischelbaum, and Bakhtiar Yamini
Précis: Upregulation of a Fas/TNF/TRAIL–related decoy receptor by a cytotoxic drug used widely to treat deadly brain tumors was found to limit drug efficacy, providing a rationale to target this receptor as a drug sensitization strategy.

2049
Nitrostyrene Derivatives Act as RXRα Ligands to
Inhibit TNFα Activation of NF-κB
Zhiping Zeng, Zhe Sun, Mingfeng Huang, Weidong Zhang, Jie Liu, Liqin Chen, Fan Chen, Yuqi Zhou, Jiacheng Lin, Fenghuang Liu, Lin Xu, Zixing Zhuang, Shangjie Gao, Gullimiran Alitongbieke, Guobin Xie, Yang Xu, Bingzhen Lin, Xihua Cao, Ying Su, Xiao-kun Zhang, and Hu Zhou
Précis: These results communicate a new class of small molecule modulators of RXRα that induces apoptosis of cancer cells through a unique binding mode and novel mechanism of action.

2057
Metabolic Signature Identifies Novel Targets for
Drug Resistance in Multiple Myeloma
Patricia Maiso, Daisy Huynh, Michele Moschetta, Antonio Sacco, Yosra Aljawai, Yuji Mishima, John M. Asara, Aldo M. Roccaro, Alec C. Kimmelman, and Irene M. Ghobrial
Précis: Inhibitors of lactate dehydrogenase may be beneficial to block the growth and intrinsic drug resistance of multiple myeloma, still one of the deadliest blood tumors.

2063
MMPI6 Mediates a Proteolytic Switch to
Promote Cell–Cell Adhesion, Collagen
Alignment, and Lymphatic Invasion in
Melanoma
Précis: This study delineates a novel mechanism behind melanoma progression and reveals MMP16 as a prognostic marker candidate that could also guide diagnostic and therapeutic decisions in melanoma.
Tenascin-C Protects Cancer Stem–like Cells from Immune Surveillance by Arresting T-cell Activation

Elena Jachetti, Sara Caputo, Stefania Mazzoleni, Chiara Svetlana Brambillasca, Sara Martina Parigi, Matteo Grioni, Ignazio Stefano Piras, Umberto Restuccia, Arianna Calcino, Massimo Freschi, Angela Bachi, Rossella Galli, and Matteo Bellone

Précis: These results shed light on how early-disseminating cancer stem-like cells seed quiescent future sites of metastasis in tumor-draining lymph nodes by engaging a protumorigenic extracellular matrix protein that mediates local immune escape.

Development of Resistance to EGFR-Targeted Therapy in Malignant Glioma Can Occur through EGFR-Dependent and -Independent Mechanisms

Stefan Klingler, Baofeng Guo, Jun Yao, Haiyan Yan, Ling Zhang, Angelina V. Vaseva, Sida Chen, Peter Canoll, James W. Horner, Y. Alan Wang, Ji-Hye Paik, Haoqiang Ying, and Hongwu Zheng

Précis: These findings provide mechanistic insight into EGFR drug resistance in glioma and offer a platform to test therapies targeting aberrant EGFR signaling in this setting.

Chronic Inflammation Induces a Novel Epigenetic Program That Is Conserved in Intestinal Adenomas and in Colorectal Cancer

Monther Abu-Remaileh, Sebastian Bender, Günter Raddatz, Ihab Ansari, Daphne Cohen, Julian Gutekunst, Tanja Musch, Heinz Linhart, Achim B€echling, Eli Pikarsky, Yehudit Bergman, and Frank Lyko

Précis: These findings showing how an altered epigenetic program links inflammation to colon cancer strongly reinforce the concept that the microenvironment dictates the development and maintenance of malignant characters.

ABOUT THE COVER

Pelvic lymph nodes are the most frequent sites of prostate cancer dissemination, as depicted here by pan-cytokeratin immunohistochemistry on a human specimen. However, there is little knowledge about how precociously disseminated cancer cells seed lymph nodes and protect themselves from immune surveillance. Jachetti and colleagues report that early-disseminating cancer stem-like cells seed quiescent future sites of metastasis in tumor-draining lymph nodes by engaging Tenascin-C, a protumorigenic extracellular matrix protein, which mediates local immune escape by arresting T lymphocyte activation. For details, see article by Jachetti and colleagues on page 2095.
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