Highlights from Recent Cancer Literature

Stalling the Engine of Resistance: Targeting Cancer Metabolism to Overcome Therapeutic Resistance
Ethan B. Butler, Yuhua Zhao, Cristina Muñoz-Pinedo, Jianrong Lu, and Ming Tan

Animal Models of Human Prostate Cancer: The Consensus Report of the New York Meeting of the Mouse Models of Human Cancers Consortium Prostate Pathology Committee

The Emerging "Hallmarks" of Metabolic Reprogramming and Immune Evasion: Distinct or Linked?
Irina Kareva and Philip Hahnfeldt

A Model of Postsurgical Advanced Metastatic Breast Cancer More Accurately Replicates the Clinical Efficacy of Antiangiogenic Drugs
Eric Guerin, Shan Man, Ping Xu, and Robert S. Kerbel

Drug–Gene Modeling in Pediatric T-Cell Acute Lymphoblastic Leukemia Highlights Importance of 6-Mercaptopurine for Outcome
Alex H. Beesley, Martin J. Firth, Denise Anderson, Amy L. Samuels, Jette Ford, and Ursula R. Kees

Spreaders and Sponges Define Metastasis in Lung Cancer: A Markov Chain Monte Carlo Mathematical Model
Paul K. Newton, Jeremy Mason, Kelly Bethel, Lyudmila Bazhenova, Jorge Nieva, Larry Norton, and Peter Kuhn

Fibroblast-Specific Protein 1/S100A4–Positive Cells Prevent Carcinoma through Collagen Production and Encapsulation of Carcinogens
Jinhua Zhang, Lin Chen, Xiaoman Liu, Thomas Kammertoens, Thomas Blankenstein, and Zhihai Qin

CSF1R Signaling Blockade Stanches Tumor-Infiltrating Myeloid Cells and Improves the Efficacy of Radiotherapy in Prostate Cancer
Jingying Xu, Jemima Escanilla, Stephen Mok, John David, Saul Priceman, Brian West, Gideon Bollag, William McBride, and Lily Wu
**MOLECULAR AND CELLULAR PATHOBIOLOGY**

**2795**

**CHD1 Is a 5q21 Tumor Suppressor Required for ERG Rearrangement in Prostate Cancer**
Lia Burkhardt, Sarah Fuchs, Antje Krohn, Sawinee Masser, Malte Mader, Martina Kluth, Frederik Bachmann, Hartwig Huland, Thomas Steuber, Markus Graefen, Thorsten Schlomm, Sarah Minner, Guido Sauter, Huseyin Sirma, and Ronald Simon

**Précis:** Seminal findings identify a key epigenetic driver in advanced prostate cancers that by recruiting mutated forms of the androgen receptor drives ERG fusion-independent forms in this deadly disease.

**2806**

**Deficiency of Phospholipase A2 Group 7 Decreases Intestinal Polyposis and Colon Tumorigenesis in ApcMin/+ Mice**
Changxin Xu, Ethan C. Reichert, Tomoyuki Nakano, Mariah Lohse, Alison A. Gardner, Mónica P. Revelo, Matthew K. Topham, and Diana M. Stafforini

**Précis:** Deficiency in a phospholipase A2 that participates in inflammatory responses inhibits colon tumorigenesis and may be a novel target for reprogramming inflammation as a strategy for therapeutic intervention.

**2817**

**The Major Reverse Transcriptase–Incompetent Splice Variant of the Human Telomerase Protein Inhibits Telomerase Activity but Protects from Apoptosis**
Imke Listerman, Jie Sun, Francesca S. Gazzaniga, Jason L. Lukas, and Elizabeth H. Blackburn

**Précis:** Results reveal that a major hTERT splice variant can confer a growth advantage to cancer cells independent of telomere maintenance, suggesting hTERT makes multiple contributions to cancer pathophysiology.

**2829**

**Dynamics of Senescent Cell Formation and Retention Revealed by p14ARF Induction in the Epidermis**
Ronit Tokarsky-Amiel, Narmen Azazmeh, Aharon Helman, Yan Stein, Alia Hassan, Alexander Maly, and Ittai Ben-Porath

**Précis:** Studies in a novel mouse model deepen insights into the dynamics of cellular senescence, a central mechanism of tumor suppression.

**PREVENTION AND EPIDEMIOLOGY**

**2840**

**TNRC9 Downregulates BRCA1 Expression and Promotes Breast Cancer Aggressiveness**

**Précis:** This potentially seminal study unveils a new paradigm in regulation of BRCA1 that may advance evidence that its epigenetic regulation contributes widely to the development of sporadic breast cancers where BRCA genes are unmutated.

**2850**

**An Essential Requirement for the SCAP/SREBP Signaling Axis to Protect Cancer Cells from Lipotoxicity**

**Précis:** Findings suggest that the differential between a tumor’s ability to synthesize and desaturate fatty acids might stratify cancer patient populations that could respond strongly to inhibitors of fatty acid metabolism.

**2863**

**Genomic Aberrations Occurring in Subsets of Serrated Colorectal Lesions but not Conventional Adenomas**

**Précis:** Findings suggest that a newly characterized type of colorectal polyp, termed a sessile-serrated poly, may be an important precursor for a significant number of colorectal cancers.
### THERAPEUTICS, TARGETS, AND CHEMICAL BIOLOGY

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<td>2873</td>
<td>High-Throughput Tyrosine Kinase Activity Profiling Identifies FAK as a Candidate Therapeutic Target in Ewing Sarcoma</td>
<td>Brian D. Crompton, Anne L. Carlton, Aaron R. Thorner, Amanda L. Christie, Jinyan Du, Monica L. Calicchio, Miguel N. Rivera, Mark D. Fleming, Nancy E. Kohl, Andrew L. Kung, and Kimberly Stegmaier</td>
<td><strong>Précis:</strong> By leveraging a kinase profiling approach to identify new targets, this study identified and validated a druggable target in a well-studied disease where clinical management remains problematic.</td>
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<td>2884</td>
<td>Prooncogenic Factors miR-23b and miR-27b Are Regulated by Her2/Neu, EGF, and TNF-α in Breast Cancer</td>
<td>Lianjin Jin, Oliver Wessely, Eric G. Marcasson, Cristina Ivan, George A. Calin, and Suresh K. Alahari</td>
<td><strong>Précis:</strong> Her2/Neu oncogene is highly expressed in 30% of breast cancers, and this study reveals how Her2 regulates the tumor suppressor Nischarin in breast cancer via miRNA expression.</td>
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<td>2897</td>
<td>Hepatocarcinogenesis Driven by GSNOR Deficiency Is Prevented by iNOS Inhibition</td>
<td>Chi-Hui Tang, Wei Wei, Martha A. Hanes, and Limin Liu</td>
<td><strong>Précis:</strong> This important study offers preclinical proof that iNOS inhibitors can be used to attack liver cancers driven by uncontrolled nitrosative stress, possibly offering an effective therapeutic approach for some liver cancer patients.</td>
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### TUMOR AND STEM CELL BIOLOGY

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<td>2905</td>
<td>ATIP3, a Novel Prognostic Marker of Breast Cancer Patient Survival, Limits Cancer Cell Migration and Slows Metastatic Progression by Regulating Microtubule Dynamics</td>
<td>Angie Molina, Lauriane Velot, Lydia Ghounem, Mohamed Abdelkarim, Benjamin Pierre Bouchet, Anny-Claude Luissint, Imène Bouglé, Marina Morel, Élène Sapharikas, Anne Di Tommaso, Stéphane Honoré, Diane Brague, Nadege Gruel, Anne Vincent-Salomon, Olivier Delattre, Brigitte Sigal-Zafrani, Fabrice André, Benoit Terris, Anna Akhmanova, Melanie Di Benedetto, Clara Nahmias, and Sylvie Rodrigues-Ferreira</td>
<td><strong>Précis:</strong> One of two factors thought to be causative in driving formation of clear cell renal cancers does not appear to be relevant when examined in a tissue-relevant mouse model, challenging an existing orthodoxy.</td>
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### LETTER TO THE EDITOR

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<td>2926</td>
<td>Interactions of Abiraterone, Eplerenone, and Prednisolone with Wild-Type and Mutant Androgen Receptor: A Rationale for Increasing Abiraterone Exposure or Combining with MDV3100—Letter</td>
<td>David End, Arturo Molina, Mary Todd, and Michael L. Meyers</td>
<td><strong>Précis:</strong> As a clinically validated target for cancer drug development, microtubules offer a focus to expand the armamentarium of possible approaches to attack malignant disease.</td>
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