# Contents

## Highlights of This Issue  6953

### SPECIAL FEATURES

#### CCR Translations

6955  **MAGE: The Spell Is Broken**  
Katayoun Rezvani  
*See article p. 7058*

#### CCR Drug Updates

6958  **Ipilimumab: An Anti-CTLA-4 Antibody for Metastatic Melanoma**  
Evan J. Lipson and Charles G. Drake

#### Molecular Pathways

6963  **Novel Insights into the Role of Interleukin-27 and Interleukin-23 in Human Malignant and Normal Plasma Cells**  
Nicola Giuliani and Irma Airoldi

#### Perspective

6971  **DNA Cytometry Testing for Cervical Cancer Screening: Approaches and Reporting Standards for New Technologies**  
Graham A. Colditz and John Crowley

#### Reviews

6973  **DNA Repair: From Genome Maintenance to Biomarker and Therapeutic Target**  
Shadia Jalal, Jennifer N. Earley, and John J. Turchi  
7035  **Indoleamine 2,3-Dioxygenase Expression in Human Cancers: Clinical and Immunologic Perspectives**  
Jessica Godin-Ethier, Laila-Aicha Hanafi, Ciriaoc A. Piccirillo, and Réjean Lapointe

## HUMAN CANCER BIOLOGY

<table>
<thead>
<tr>
<th>Article Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutrophil Degranulation and Immunosuppression in Patients with GBM: Restoration of Cellular Immune Function by Targeting Arginase I</td>
<td>6992</td>
</tr>
<tr>
<td>Trisha R. Sippel, Jason White, Kamalika Nag, Vadim Tsvankin, Marci Klaassen, B.K. Kleinschmidt-DeMasters, and Allen Waziri</td>
<td></td>
</tr>
<tr>
<td>Novel Chromosomal Rearrangements and Break Points at the t(6;9) in Salivary Adenoid Cystic Carcinoma: Association with MYB–NFIB Chimeric Fusion, MYB Expression, and Clinical Outcome</td>
<td>7003</td>
</tr>
<tr>
<td>Mast Cells in Tumor Microenvironment Promotes the In Vivo Growth of Pancreatic Ductal Adenocarcinoma</td>
<td>7015</td>
</tr>
<tr>
<td>David Z. Chang, Ying Ma, Baoan Ji, Huamin Wang, Defeng Deng, Yan Liu, James L. Abbruzzese, Yongjun Liu, Craig D. Logsdon, and Patrick Hwu</td>
<td></td>
</tr>
<tr>
<td>Two Distinct Routes to Oral Cancer Differing in Genome Instability and Risk for Cervical Node Metastasis</td>
<td>7024</td>
</tr>
<tr>
<td>Serum Galectin-2, -4, and -8 Are Greatly Increased in Colon and Breast Cancer Patients and Promote Cancer Cell Adhesion to Blood Vascular Endothelium</td>
<td>7035</td>
</tr>
<tr>
<td>Hannah Barrow, Xiaxi Guo, Hans H. Wandall, Johannes W. Pedersen, Bo Fu, Qicheng Zhao, Chen Chen, Jonathan M. Rhodes, and Lu-Gang Yu</td>
<td></td>
</tr>
</tbody>
</table>
CANCER THERAPY: PRECLINICAL

7047 Tumor-Derived Autophagosome Vaccine: Mechanism of Cross-Presentation and Therapeutic Efficacy
Yuhuan Li, Li-Xin Wang, Puiyi Pang, Zhizhua Cui, Sandra Aung, Daniel Haley, Bernard A. Fox, Walter J. Urba, and Hong-Ming Hu

7058 Improving T-cell Therapy for Relapsed EBV-Negative Hodgkin Lymphoma by Targeting Upregulated MAGE-A4
Conrad R. Cruz, Ulrike Gerdemann, Ann M. Lenn, Jessica A. Shafer, Stephanie Ku, Benjamin Tzou, Terzah M. Horton, Andrea Sheehan, Amanda Copeland, Anas Younes, Cliona M. Rooney, Helen E. Heslop, and Catherine M. Bollard
See commentary p. 6955

IMAGING, DIAGNOSIS, PROGNOSIS

7139 Genetic Variation in Inflammatory Pathways Is Related to Colorectal Cancer Survival
Anna E. Coghill, Polly A. Newcomb, Elizabeth M. Poole, Carolyn M. Hutter, Karen W. Makar, Dave Duggan, John D. Potter, and Cornelia M. Ulrich

7148 A Hypermethylated Phenotype Is a Better Predictor of Survival than MGMT Methylation in Anaplastic Oligodendrogial Brain Tumors: A Report from EORTC Study 26951
Martin J. van den Bent, Loneke A. Gravendeel, Thierry Gorlia, Johan M. Kros, Larisa Lapre, Pieter Wesseling, Johannes L. Teepen, Ahmed Idbail, Marc Sanson, Peter A.E. Sillevis Smitt, and Pim J. French

CANCER THERAPY: CLINICAL

7156 Biologic and Clinical Activity of Tivozanib (AV-951, KRN-951), a Selective Inhibitor of VEGF Receptor-1, -2, and -3 Tyrosine Kinases, in a 4-Week-On, 2-Week-Off Schedule in Patients with Advanced Solid Tumors
Ferry A.L.M. Eskens, Maja J.A. de Jonge, Pankaj Bhargava, ToshiyukiIsoe, Monette M. Cotreau, Brooke Esteves, Kunihiko Hayashi, Herman Burger, Maarten Thomeer, Leni van Doorn, and Jaap Verweij

7164 A Pilot Study of MUC-1/CEA/TRICOM Poxviral-Based Vaccine in Patients with Metastatic Breast and Ovarian Cancer
Malsa Mohamed, Kwong-Yok Tsang, RavI A. Madan, Ngoc-Yee Huen, Diane J. Poole, Caroline Jochems, Jaccquin Jones, Theresa Ferrara, Christopher B. Heery, Philip M. Arel, Seth M. Steinberg, Mary Pazdur, Myrna Rauchhorst, Elizabeth C. Jones, William L. Dahut, Jeffrey Schlom, and James L. Gulley
GLIPR1 Tumor Suppressor Gene Expressed by Adenoviral Vector as Neoadjuvant Intraprostatic Injection for Localized Intermediate or High-Risk Prostate Cancer Preceding Radical Prostatectomy

Guru Sonpavde, Timothy C. Thompson, Rajul K. Jain, Gustavo E. Ayala, Shinji Kurosaka, Kohbi Edamura, Ken-ichi Tabata, Chengzhen Ren, Alexei A. Goltsov, Martha P. Mims, Teresa G. Hayes, Michael M. Ittmann, Thomas M. Wheeler, Adrian Gee, Brian J. Miles, and Dov Kadmon

PREDICTIVE BIOMARKERS AND PERSONALIZED MEDICINE

Cytokeratin-19 and Mammaglobin Gene Expression in Circulating Tumor Cells from Metastatic Breast Cancer Patients Enrolled in North Central Cancer Treatment Group Trials, N0234/336/436/437

Monica M. Reinholz, Kathleen A. Kitzmann, Kathleen Tenner, David Hillman, Amylou C. Dueck, Timothy J. Hobday, Donald W. Northfelt, Alvaro Moreno-Aspitia, Vivek Roy, Betsy LaPlant, Jake B. Allred, Philip J. Stella, Wilma L. Lingle, and Edith A. Perez

ABOUT THE COVER

Human melanoma xenografts of UACC903 cells with activated BRAF mutation (V600E) were either untreated or treated with vehicle (DMSO) or the compounds riluzole, sorafenib, or riluzole with sorafenib. Upon termination of the experiment, the remaining tumors were excised and stained with activated caspase-3. This image is vehicle control. For details, see the article by Lee and colleagues on page 7080 of this issue.