# Contents

### Highlights of This Issue 1511

#### EDITORIAL

- **A Message from the Editor-in-Chief**
  Michael B. Kastan 1513

#### REVIEW

- **Reovirus: A Targeted Therapeutic—Progress And Potential**
  Radhashree Maitra, Mohammad H. Ghalib, and Sanjay Goel 1514

#### ANGIOGENESIS, METASTASIS, AND THE CELLULAR MICROENVIRONMENT

- **Genomic (In)stability of the Breast Tumor Microenvironment**
  Seth Rummel, Allyson L. Valente, Jennifer L. Kane, Craig D. Shriver, and Rachel E. Ellsworth 1526

- **Targeting Tumor Cell Invasion and Dissemination In Vivo by an Aptamer That Inhibits Urokinase-type Plasminogen Activator through a Novel Multifunctional Mechanism**
  Kenneth A. Botkjaer, Elena I. Deryugina, Daniel M. Dupont, Henrik Gårdsvoll, Erin M. Bekes, Cathrine K. Thuesen, Zhou Chen, Michael Ploug, James P. Quigley, and Peter A. Andreasen 1532

- **MUC1 Drives c-Met–Dependent Migration and Scattering**
  Teresa M. Horm, Benjamin G. Bütler, Derrick M. Broka, Jeanne M. Louderbough, and Joyce A. Schroeder 1544

- **PRSS3/Mesotrypsin Is a Therapeutic Target for Metastatic Prostate Cancer**
  Alexandra Hockla, Erin Miller, Moh'd A. Salameh, John A. Copland, Derek C. Radisky, and Evette S. Radisky 1555

#### CELL CYCLE, CELL DEATH, AND SENESCENCE

- **The Role of Bcl-xL in Synergistic Induction of Apoptosis by Mapatumumab and Oxaliplatin in Combination with Hyperthermia on Human Colon Cancer**
  Xinxin Song, Seong-Young Kim, and Yong J. Lee 1567

#### DNA DAMAGE AND CELLULAR STRESS RESPONSES

- **Alkylation Sensitivity Screens Reveal a Conserved Cross-species Functionome**
  David Svilar, Madhu Dyavaiah, Ashley R. Brown, Jiang-bo Tang, Jianfeng Li, Peter R. McDonald, Tong Ying Shun, Andrea Braganza, Xiao-hong Wang, Salony Maniar, Claudette M. St Croix, John S. Lazo, Ian F. Pollack, Thomas J. Begley, and Robert W. Sobol 1580

#### SIGNALING AND REGULATION

- **Expression of Wnt3 Activates Wnt/β-Catenin Pathway and Promotes EMT-like Phenotype in Trastuzumab-Resistant HER2-Overexpressing Breast Cancer Cells**
  Yanyuan Wu, Charles Ginther, Juri Kim, Nicole Mosher, Seyung Chung, Dennis Slamon, and Jaydutt V. Vadgama 1597

- **Analysis of mRNA Profiles after MEK1/2 Inhibition in Human Pancreatic Cancer Cell Lines Reveals Pathways Involved in Drug Sensitivity**
  Stephan Gysin, Jesse Paquette, and Martin McMahon 1607

- **Acknowledgment to Reviewers**

---

**Molecular Cancer Research**

A Journal of the Molecular and Cellular Biology of Cancer

December 2012 • Volume 10 • Number 12
ABOUT THE COVER

Temozolomide is the primary chemotherapy used in the treatment of glioblastoma, but resistance contributes to poor prognosis. A temozolomide/siRNA synthetic lethal screen in a chemotherapy-resistant glioblastoma derived cell line identified many novel genes, including several involved in the response to reactive oxygen species (ROS). Comparison to alkylation screens conducted in *E. coli* and *S. cerevisiae* suggests that alkylation resistance mechanisms are evolutionarily conserved. Using fluorescence-based microscopy, it was found that high-dose temozolomide treatment increases ROS formation in glioma cells, as detected with the superoxide indicator dihydroethidium (DHE). For details, see article by Svilar et al. on page 1580.