### Highlights of This Issue 3103

#### SPOTLIGHT ON MOLECULAR PROFILING

1. **Genome-Wide mRNA and microRNA Profiling of the NCI 60 Cell-Line Screen and Comparison of FdUMP[10] with Fluorouracil, Flouxuridine, and Topoisomerase 1 Poisons**  
   - William H. Gmeiner, William C. Reinhold, and Yves Pommier

1. **Modulation of 4E-BP1 Function as a Critical Determinant of Enzastaurin-Induced Apoptosis**  
   - Chad A. Dumstorf, Bruce W. Konicek, Ann M. McNulty, Stephen H. Parsons, Luc Furic, Nahium Sonenberg, and Jeremy R. Graff

1. **Antagonism of Cytotoxic Chemotherapy in Neuroblastoma Cell Lines by 13-cis-Retinoic Acid Is Mediated by the Antiapoptotic Bcl-2 Family Proteins**  
   - Michael D. Hadjidaniel and C. Patrick Reynolds

1. **Monensin Is a Potent Inducer of Oxidative Stress and Inhibitor of Androgen Signaling Leading to Apoptosis in Prostate Cancer Cells**  
   - Kirsi Ketola, Paula Vainio, Vidal Fey, Olli Kallioniemi, and Kristiina Iljin

1. **Targeting Aldehyde Dehydrogenase Cancer Stem Cells in Ovarian Cancer**  

1. **Combined Inhibition of Notch Signaling and Bcl-2/Bcl-xL Results in Synergistic Antimyeloma Effect**  
   - Ming Li, Feng Chen, Nicholas Clifton, Daniel M. Sullivan, William S. Dalton, Dmitry I. Gabrilovich, and Yulia Nefedova

1. **The Histone Deacetylase Inhibitor, Vorinostat, Reduces Tumor Growth at the Metastatic Bone Site and Associated Osteolysis, but Promotes Normal Bone Loss**  
   - Jitesh Pratap, Jacqueline Akech, John J. Wixted, Gabriela Szabo, Sadiq Hussain, Meghan E. McGee-Lawrence, Xiaodong Li, Krystin Bedard, Robinder J. Dhillon, Andre J. van Wijnen, Janet L. Stein, Gary S. Stein, Jennifer J. Westendorf, and Jane B. Lian

### REVIEWS

1. **Breaking through a Plateau in Renal Cell Carcinoma Therapeutics: Development and Incorporation of Biomarkers**  
   - Sumanta Kumar Pal, Marcin Kortylewski, Hua Yu, and Robert A. Figlin

1. **Resistance May Not Be Futile: microRNA Biomarkers for Chemoresistance and Potential Therapeutics**  
   - Kristi E. Allen and Glen J. Weiss

1. **Proof of Concept: Network and Systems Biology Approaches Aid in the Discovery of Potent Anticancer Drug Combinations**  
   - Asfar S. Azmi, Zhiwei Wang, Philip A. Philip, Ramzi M. Mohammad, and Fazlul H. Sarkar

### THERAPEUTIC DISCOVERY

1. **The Quassinoid Derivative NBT-272 Targets Both the AKT and ERK Signaling Pathways in Embryonal Tumors**  
   - Deborah Castelletti, Giulio Fiaschetti, Valeria Di Dato, Urs Ziegler, Candy Kumps, Kateleen De Preter, Massimo Zollo, Frank Speleman, Tarek Shalaby, Daniela De Martino, Thorsten Berg, Angelika Eggert, Alexandre Arcaro, and Michael A. Grotzer
Peroxisome Proliferator-Activated Receptor-γ Activation Inhibits Tumor Metastasis by Antagonizing Smad3-Mediated Epithelial-Mesenchymal Transition
Ajaya Kumar Reka, Himabindu Kurapati, Venkata R. Narala, Guido Bommer, Jun Chen, Theodore J. Standiford, and Venkateshwar G. Keshamouni

Combined Treatment with Silibinin and Epidermal Growth Factor Receptor Tyrosine Kinase Inhibitors Overcomes Drug Resistance Caused by T790M Mutation
Jin Kyung Rho, Yun Jung Choi, Byung-Suk Jeon, Su Jin Choi, Gi Jeong Cheon, Sang-Keun Woo, Hye-Ryoun Kim, Cheol Hyeon Kim, Chang-Min Choi, and Jae Cheol Lee

Antiangiogenic Activity of a Neutralizing Human Single-Chain Antibody Fragment against Fibroblast Growth Factor Receptor 1
Roberto Ronca, Patrizia Benzoni, Daria Leali, Chiara Urbiniati, Mirella Belleri, Michela Corsini, Patrizia Alessi, Daniela Coltrini, Stefano Calza, Marco Presta, and Patrizia Dell’Era

MS-275 Sensitizes TRAIL-Resistant Breast Cancer Cells, Inhibits Angiogenesis and Metastasis, and Reverses Epithelial-Mesenchymal Transition In vivo
Rakesh K. Srivastava, Razelle Kurzrock, and Sharmila Shankar

Chemoprevention of Chemically Induced Skin Tumorigenesis by Ligand Activation of Peroxisome Proliferator–Activated Receptor-β/δ and Inhibition of Cyclooxygenase 2
Bokai Zhu, Robert Bai, Mary J. Kennett, Boo-Hyon Kang, Frank J. Gonzalez, and Jeffrey M. Peters

PRECLINICAL DEVELOPMENT

Detection of Tumor Response to a Vascular Disrupting Agent by Hyperpolarized 13C Magnetic Resonance Spectroscopy
Sarah E. Bohndiek, Mikko I. Kettunen, De-en Hu, Timothy H. Witney, Brett W.C. Kennedy, Ferdia A. Gallagher, and Kevin M. Brindle

Identification of Predictive Markers of Response to the MEKfs1/2 Inhibitor Selumetinib (AZD6244) in K-ras–Mutated Colorectal Cancer
John J. Tentler, Sujatha Nallapareddy, Aik Choong Tan, Anna Spreenko, Todd M. Pitts, M. Pia Morelli, Heather M. Selby, Maria I. Kachaeva, Sara A. Flanigan, Gillian N. Kulikowski, Stephen Leong, John J. Arcaroli, Wells A. Messersmith, and S. Gail Eckhardt
Contrasting Effects of Nutlin-3 on TRAIL- and Docetaxel-Induced Apoptosis Due to Upregulation of TRAIL-R2 and Mcl-1 in Human Melanoma Cells
Hsin-Yi Tseng, Chen Chen Jiang, Amanda Croft, Kwang Hong Tay, Rick Francis Thorne, Fan Yang, Hao Liu, Peter Hersey, and Xu Dong Zhang

Nakiterpiosin Targets Tubulin and Triggers Mitotic Catastrophe in Human Cancer Cells
Jen-Hsuan Wei and Joachim Seemann

AZ960, a Novel Jak2 Inhibitor, Induces Growth Arrest and Apoptosis in Adult T-Cell Leukemia Cells
Jing Yang, Takayuki Ikezoe, Chie Nishioka, Mutsuo Furihata, and Akihito Yokoyama

Specific Alterations of MicroRNA Transcriptome and Global Network Structure in Colorectal Carcinoma after Cetuximab Treatment
Marco Ragusa, Alessandra Majorana, Luisa Statello, Marco Maugeri, Loredana Salito, Davide Barbagallo, Maria Rosa Guglielmino, Laura R. Duro, Rosario Angelica, Rosario Caltabiano, Antonio Biondi, Maria Di Vita, Giuseppe Privitera, Marina Scalia, Alessandro Cappellani, Enrico Vasquez, Salvatore Lanzafame, Francesco Basile, Cinzia Di Pietro, and Michele Purrello

Phase I Clinical Trial of MPC-6827 (Azixa), a Microtubule Destabilizing Agent, in Patients with Advanced Cancer
Apostolia-Maria Tsimberidou, Wallace Akerley, Matthias C. Schabel, David S. Hong, Cynthia Uehara, Anil Chhabra, Terri Warren, Gary G. Mather, Brent A. Evans, Deane P. Woodland, Edward A. Swabb, and Razelle Kurzrock

ABOUT THE COVER
Aldehyde dehydrogenase-1A1 (ALDH1A1) is heterogeneously expressed in multiple tumors. Cells with ALDH1A1 activity have been shown to have increased tumorigenicity, differentiation capacity, and chemoresistance. To confirm that the spotty heterogeneous expression of ALDH1A1 was not being visualized in tumor-infiltrating macrophages, frozen patient samples were subjected to dual immunohistochemistry against ALDH1A1 (DAB/brown) and CD68 (a pan-macrophage marker, Ferangi Blue), where distinct populations are noted. Landen and colleagues show that increased ALDH1A1 expression was associated with poor survival and is a viable target for therapy in preclinical models of ovarian cancer. For details, see article by Landen and colleagues on page 3186.