## Table of Contents

### Highlights of This Issue 1019

### REVIEW

1021  Picking the Point of Inhibition: A Comparative Review of PI3K/AKT/mTOR Pathway Inhibitors  
Rodrigo Dienstmann, Jordi Rodon, Violeta Serra, and Josep Tabernero

### SMALL MOLECULE THERAPEUTICS

1032  Enhancement of Nab-Paclitaxel Antitumor Activity through Addition of Multitargeting Antiangiogenic Agents in Experimental Pancreatic Cancer  
Niranjan Awasthi, Changhua Zhang, Anna M. Schwarz, Stefan Hinz, Margaret A. Schwarz, and Roderich E. Schwarz

1044  The Phosphoinositide 3-Kinase a Selective Inhibitor BYL719 Enhances the Effect of the Protein Kinase C Inhibitor AEB071 in GNAQ/GNA11-Mutant Uveal Melanoma Cells  
Elgilda Musi, Grazia Ambrosini, Elisa de Stanchina, and Gary K. Schwartz

1054  Centmitor-1, a Novel Acridinyl-Acetohydrazide, Possesses Similar Molecular Interaction Field and Antimitotic Cellular Phenotype as Rigosertib, ON01910Na  

1067  Preclinical Evaluation of the Supercritical Extract of Azadirachta Indica (Neem) Leaves In Vitro and In Vivo on Inhibition of Prostate Cancer Tumor Growth  
Qiang Wu, Manish Kohli, H. Robert. Bergen III, John C. Cheville, R. Jeffrey Karnes, Hong Cao, Charles Y.F. Young, Donald J. Tindall, Mark A. McNiven, and Krishna Vanaja Donkena

1078  Characterization of the Activity of the PI3K/mTOR Inhibitor XL765 (SAR245409) in Tumor Models with Diverse Genetic Alterations Affecting the PI3K Pathway  

1092  UPARANT: A Urokinase Receptor–Derived Peptide Inhibitor of VEGF-Driven Angiogenesis with Enhanced Stability and In Vitro and In Vivo Potency  
Maria Vincenza Carriero, Katia Biifulco, Michele Minopoli, Liliana Lista, Ornella Maglio, Luigi Mele, Gioconda Di Carluccio, Mario De Rosa, and Vincenzo Pavone

1105  Preclinical Pharmacological Evaluation of a Novel Multiple Kinase Inhibitor, ON123300, in Brain Tumor Models  
Xiaoping Zhang, Hua Lv, Qingyu Zhou, Rana Elkholi, Jerry E. Chipuk, M.V. Ramana Reddy, E. Premkumar Reddy, and James M. Gallo

1117  Characterization of the Novel and Specific PI3Kα Inhibitor NVP-BYL719 and Development of the Patient Stratification Strategy for Clinical Trials  

1130  Protein Kinase D as a Potential Chemotherapeutic Target for Colorectal Cancer  
Ning Wei, Edward Chu, Peter Wipf, and John C. Schmitz
1298 Aurora Kinase Inhibition Induces PUMA via NF-κB to Kill Colon Cancer Cells  
Jing Sun, Kyle Knickelbein, Kan He, Dongshi Chen, Crissy Dudgeon, Yongqian Shu, Jian Yu, and Lin Zhang

1309 Nuclear Translocation of Hand-1 Acts as a Molecular Switch to Regulate Vascular Radiosensitivity in Medulloblastoma Tumors: The Protein uPAR Is a Cytoplasmic Sequestration Factor for Hand-1  
Swapna Asuthkar, Venkateswara Rao Gogineni, Jasti S. Rao, and Kiran Kumar Velpula

1323 The G Protein–Coupled Receptor GALR2 Promotes Angiogenesis in Head and Neck Cancer  
Rajat Banerjee, Elizabeth A. Van Tubergen, Christina S. Scanlon, Robert Vander Broek, Joel P. Lints, Min Liu, Nickole Russo, Ronald C. Inglehart, Yugang Wang, Peter J. Polverini, Keith L. Kirkwood, and Nisha J. D’Silva

1334 The Role of Gene Body Cytosine Modifications in MGMT Expression and Sensitivity to Temozolomide  
Erika L. Moen, Amy L. Stark, Wei Zhang, M. Eileen Dolan, and Lucy A. Godley

1345 ERBB3/HER2 Signaling Promotes Resistance to EGFR Blockade in Head and Neck and Colorectal Cancer Models  
Li Zhang, Carla Castanaro, Bo Luan, Katie Yang, Liangfen Fan, Jeanette L. Fairhurst, Ashique Rafique, Terra B. Potocky, Jing Shan, Frank J. Dellino, Ergang Shi, Tammy Huang, Joel H. Martin, Gang Chen, Douglas MacDonald, John S. Rudge, Gavin Thurston, and Christopher Daly

1356 Nuclear Epidermal Growth Factor Receptor Is a Functional Molecular Target in Triple-Negative Breast Cancer  
Toni M. Brand, Mari Iida, Emily F. Dunn, Neha Luthar, Kellie T. Kostopoulos, Kelsey L. Corrigan, Matthew J. Wleklinski, David Yang, Kari B. Wisinski, Ravi Salgia, and Deric L. Wheeler

1369 Metallothionein 1G and Zinc Sensitize Human Colorectal Cancer Cells to Chemotherapy  
Juan M. Arriaga, Angela Greco, José Mordoh, and Michele Bianchini

COMPANION DIAGNOSTICS AND CANCER BIOMARKERS

1382 Concordance of Genomic Alterations between Primary and Recurrent Breast Cancer  
ABOUT THE COVER

Angiogenesis is important for tumor progression. In squamous cell carcinoma of the head and neck (SCCHN), angiogenesis is activated by cytokines including IL-6 and VEGF. Galanin receptor 2 (GALR2) is a G protein-coupled receptor that induces aggressive growth in SCCHN. GALR2 stimulates tumor angiogenesis in SCCHN via p38-mediated inhibition of tristetraprolin (TTP) with resultant enhanced cytokine secretion. Given that p38 inhibitors are in clinical use for inflammatory disorders, GALR2/p38-mediated cytokine secretion may be an excellent target for new adjuvant therapy in SCCHN. For details, see article by Banerjee, Van Tubergen, and colleagues on page 1323.