

# Table of Contents

July 2014 • Volume 13 • Number 7

**Highlights of This Issue 1677****SMALL MOLECULE THERAPEUTICS**

- 1679** Targeting Multiple Key Signaling Pathways in Melanoma Using Leelamine  
Raghavendra Gowda,  
SubbaRao V. Madhunapantula, Omer F. Kuzu,  
Arati Sharma, and Gavin P. Robertson  
*See related article, p. 1690*
- 1690** Leelamine Mediates Cancer Cell Death through Inhibition of Intracellular Cholesterol Transport  
Omer F. Kuzu, Raghavendra Gowda, Arati Sharma,  
and Gavin P. Robertson  
*See related article, p. 1679*
- 1704** EW-7197, a Novel ALK-5 Kinase Inhibitor, Potently Inhibits Breast to Lung Metastasis  
Ji Yeon Son, So-Yeon Park, Sol-Ji Kim, Seon Joo Lee,  
Sang-A. Park, Min-Jin Kim, Seung Won Kim,  
Dae-Kee Kim, Jeong-Seok Nam, and  
Yhun Yhong Sheen
- 1717** Geranylgeranylacetone Blocks Doxorubicin-Induced Cardiac Toxicity and Reduces Cancer Cell Growth and Invasion through RHO Pathway Inhibition  
Polina Sysa-Shah, Yi Xu, Xin Guo, Scott Pin,  
Djahida Bedja, Rachel Bartock, Allison Tsao,  
Angela Hsieh, Michael S. Wolin, An Moens,  
Venu Raman, Hajime Orita, and  
Kathleen L. Gabrielson
- 1729** Anti-*miR182* Reduces Ovarian Cancer Burden, Invasion, and Metastasis: An *In Vivo* Study in Orthotopic Xenografts of Nude Mice  
Xiaofei Xu, Bushra Ayub, Zhaojian Liu,  
Vanida Ann Serna, Wenan Qiang, Yugang Liu,  
Eva Hernando, Sonya Zabludoff, Takeshi Kurita,  
Beihua Kong, and Jian-Jun Wei
- 1740** Combination of Conventional Chemotherapeutics with Redox-Active Cerium Oxide Nanoparticles—A Novel Aspect in Cancer Therapy  
Maren Sack, Lirija Alili, Elif Karaman, Soumen Das,  
Ankur Gupta, Sudipta Seal, and Peter Brenneisen

- 1750** Metronomic Docetaxel in PRINT Nanoparticles and EZH2 Silencing Have Synergistic Antitumor Effect in Ovarian Cancer  
Kshipra M. Gharpure, Kevin S. Chu,  
Charles Bowerman, Takahito Miyake,  
Sunila Pradeep, Selanere L. Mangala, Hee-Dong Han,  
Rajesha Rupaimoole, Guillermo N. Armaiz-Pena,  
Tojan B. Rahhal, Sherry Y. Wu, J. Christopher Luft,  
Mary E. Napier, Gabriel Lopez-Berestein,  
Joseph M. DeSimone, and Anil K. Sood
- 1758** Chloroquine Targets Pancreatic Cancer Stem Cells via Inhibition of CXCR4 and Hedgehog Signaling  
Anamaria Balic, Morten Dræby Sørensen,  
Sara Maria Trabulo, Bruno Sainz Jr, Michele Cioffi,  
Catarina R. Vieira, Irene Miranda-Lorenzo,  
Manuel Hidalgo, Joerg Kleeff, Mert Erkan, and  
Christopher Heeschen

**LARGE MOLECULE THERAPEUTICS**

- 1772** Antibody-Based Delivery of IL2 and Cytotoxics Eradicates Tumors in Immunocompetent Mice  
Katrin L. Gutbrodt, Giulio Casi, and Dario Neri
- 1777** Generation of a Canine Anti-EGFR (ErbB-1) Antibody for Passive Immunotherapy in Dog Cancer Patients  
Josef Singer, Judit Fazekas, Wei Wang,  
Marlene Weichselbaumer, Miroslawa Matz,  
Alexander Mader, Willibald Steinfellner,  
Sarah Meitz, Diana Mechtheriakova, Yuri Sobanov,  
Michael Willmann, Thomas Stockner,  
Edzard Spillner, Renate Kunert, and  
Erika Jensen-Jarolim
- 1791** Ectodomain-Specific E-Cadherin Antibody Suppresses Skin SCC Growth and Reduces Tumor Grade: A Multitargeted Therapy Modulating RTKs and the PTEN-p53-MDM2 Axis  
Sabine M. Broulxhon, Stephanos Kyrikanides,  
Veena Raja, Andrew Silberfeld, Xiaofei Teng,  
Denise Trochesset, Jason Cohen, and Li Ma

# Table of Contents

- 1803 Preclinical Evaluation of Multistep Targeting of Diasialoganglioside GD2 Using an IgG-scFv Bispecific Antibody with High Affinity for GD2 and DOTA Metal Complex**  
Sarah M. Cheal, Hong Xu, Hong-fen Guo, Pat B. Zanzonico, Steven M. Larson, and Nai-Kong Cheung
- 1813 Targeted BikDD Expression Kills Androgen-Dependent and Castration-Resistant Prostate Cancer Cells**  
Xiaoming Xie, Yanan Kong, Hailin Tang, Lu Yang, Jennifer L. Hsu, and Mien-Chie Hung
- 1826 Combination of Anti-HER3 Antibody MM-121/SAR256212 and Cetuximab Inhibits Tumor Growth in Preclinical Models of Head and Neck Squamous Cell Carcinoma**  
Ning Jiang, Dongsheng Wang, Zhongliang Hu, Hyung Ju C. Shin, Guoqing Qian, Mohammad Aminur Rahman, Hongzheng Zhang, A.R.M. Ruhul Amin, Sreenivas Nannapaneni, Xiaojing Wang, Zhengjia Chen, Gabriela Garcia, Gavin MacBeath, Dong M. Shin, Fadlo R. Khuri, Jun Ma, Zhuo G. Chen, and Nabil F. Saba
- CANCER BIOLOGY AND SIGNAL TRANSDUCTION**
- 1837 PIK3R3 Induces Epithelial-to-Mesenchymal Transition and Promotes Metastasis in Colorectal Cancer**  
Guihua Wang, Xi Yang, Chuan Li, Xiaonian Cao, Xuelai Luo, and Junbo Hu
- 1848 Evaluation of Apoptosis Induction by Concomitant Inhibition of MEK, mTOR, and Bcl-2 in Human Acute Myelogenous Leukemia Cells**  
Weiguo Zhang, Vivian R. Ruvolo, Chen Gao, Liran Zhou, William Bornmann, Twee Tsao, Wendy D. Schober, Paul Smith, Sylvie Guichard, Marina Konopleva, and Michael Andreeff
- 1860 Inhibition of SIRT1 Signaling Sensitizes the Antitumor Activity of Silybin against Human Lung Adenocarcinoma Cells *In Vitro* and *In Vivo***  
Zhenxing Liang, Yang Yang, Haibin Wang, Wei Yi, Xiaolong Yan, Juanjuan Yan, Yue Li, Yingtong Feng, Shiqiang Yu, Jian Yang, Zhenxiao Jin, Weixun Duan, and Wensheng Chen
- 1873 Activation of Liver X Receptors Inhibits Hedgehog Signaling, Clonogenic Growth, and Self-Renewal in Multiple Myeloma**  
Jasmin R. Agarwal, Qiuju Wang, Toshihiko Tanno, Zeshaan Rasheed, Akil Merchant, Nilanjan Ghosh, Ivan Borrello, Carol Ann Huff, Farhad Parhami, and William Matsui
- 1882 Preferential Estrogen Receptor  $\beta$  Ligands Reduce Bcl-2 Expression in Hormone-Resistant Breast Cancer Cells to Increase Autophagy**  
Samantha C. Ruddy, Rosanna Lau, Miguel A. Cabrita, Chelsea McGregor, Bruce C. McKay, Leigh C. Murphy, James S. Wright, Tony Durst, and M.A. Christine Pratt
- 1894 Phosphoproteomics of MAPK Inhibition in BRAF-Mutated Cells and a Role for the Lethal Synergism of Dual BRAF and CK2 Inhibition**  
Robert Parker, Roderick Clifton-Bligh, and Mark P. Molloy
- 1907 BET Bromodomain Inhibitors Block Growth of Pancreatic Cancer Cells in Three-Dimensional Collagen**  
Vaibhav Sahai, Krishan Kumar, Lawrence M. Knab, Christina R. Chow, Sania S. Raza, David J. Bentrem, Kazumi Ebine, and Hidayatullah G. Munshi
- 1918 A Meta-analysis of Somatic Mutations from Next Generation Sequencing of 241 Melanomas: A Road Map for the Study of Genes with Potential Clinical Relevance**  
Junfeng Xia, Peilin Jia, Katherine E. Hutchinson, Kimberly B. Dahlman, Douglas Johnson, Jeffrey Sosman, William Pao, and Zhongming Zhao
- 1929 Computational Repositioning and Preclinical Validation of Pentamidine for Renal Cell Cancer**  
Luiz Fernando Zerbini, Manoj K. Bhasin, Jaira F. de Vasconcellos, Juliano D. Paccez, Xuesong Gu, Andrew L. Kung, and Towia A. Libermann
- 1942 MicroRNA-26b Represses Colon Cancer Cell Proliferation by Inhibiting Lymphoid Enhancer Factor 1 Expression**  
Zichao Zhang, KyoungHyun Kim, Xiao Li, Myriam Moreno, Thad Sharp, Micheal J. Goodheart, Stephen Safe, Adam J. Dupuy, and Brad A. Amendt



# Table of Contents

## COMPANION DIAGNOSTICS AND CANCER BIOMARKERS

- 1952** Regulation of SRC Kinases by microRNA-3607 Located in a Frequently Deleted Locus in Prostate Cancer  
Sharanjot Saini, Shahana Majid,  
Varahram Shahryari, Z. Laura Tabatabai,  
Sumit Arora, Soichiro Yamamura, Yuichiro Tanaka,  
Rajvir Dahiya, and Guoren Deng

## MODELS AND TECHNOLOGIES

- 1964** A Pragmatic Definition of Therapeutic Synergy Suitable for Clinically Relevant *In Vitro* Multicompound Analyses  
Muhammad Kashif, Claes Andersson,  
Magnus Åberg, Peter Nygren, Tobias Sjöblom,  
Ulf Hammerling, Rolf Larsson, and  
Mats G. Gustafsson

 AC icon indicates Author Choice

For more information please visit [www.aacrjournals.org](http://www.aacrjournals.org)

## ABOUT THE COVER

Particle replication in nonwetting templates (PRINT) is a novel soft lithography process developed to fabricate nanotherapeutics. PRINT nanoparticles improve plasma exposure and increase tumor accumulation of the encapsulated therapeutic. Metronomic delivery of PLGA-PRINT-docetaxel nanoparticles combined with systemic EZH2 siRNA delivery using chitosan nanoparticles resulted in robust antitumor effects in ovarian cancer mouse models. For details, see the article by Gharpure and colleagues on page 1750.

