SMALL MOLECULE THERAPEUTICS

1979 Selective Activity of the Histone Deacetylase Inhibitor AR-42 against Leukemia Stem Cells: A Novel Potential Strategy in Acute Myelogenous Leukemia
Monica L. Guzman, Neng Yang, Krishan K. Sharma, Marlene Balys, Cheryl A. Corbett, Craig T. Jordan, Michael W. Becker, Ulrich Steidl, Omar Abdel-Wahab, Ross L. Levine, Guido Marcucci, Gail J. Roboz, and Duane C. Hassane

1991 A Novel Small Molecule Aurora Kinase Inhibitor Attenuates Breast Tumor–Initiating Cells and Overcomes Drug Resistance

2004 NEO212, Temozolomide Conjugated to Perillyl Alcohol, Is a Novel Drug for Effective Treatment of a Broad Range of Temozolomide-Resistant Gliomas

LARGE MOLECULE THERAPEUTICS

2030 A Bispecific HER2-Targeting FynomAb with Superior Antitumor Activity and Novel Mode of Action
Simon Brack, Isabella Attinger-Toller, Babette Schade, Frédéric Mourlane, Kristina Klupsch, Richard Woods, Helen Hachemi, Ulrike von der Bey, Susann Koenig-Friedrich, Julian Bertschinger, and Dragan Grabulovski

CANCER BIOLOGY AND SIGNAL TRANSDUCTION

2050 FAK Inhibition Disrupts a 65 Integrin Signaling Axis Controlling Anchorage-Independent Ovarian Carcinoma Growth
Isabelle Tancioni, Sean Uryu, Florian J. Sulzmaier, Nina R. Shah, Christine Lawson, Nichol L.G. Miller, Christine Jean, Xiao Lei Chen, Kristy K. Ward, and David D. Schlaepfer

2062 Inhibition of Protein Phosphatase 2A Enhances Cytotoxicity and Accessibility of Chemotherapeutic Drugs to Hepatocellular Carcinomas
Xue-Li Bai, Qi Zhang, Long-Yun Ye, Qi-Da Hu, Qi-Han Fu, Xiao Zhi, Wei Su, Ri-Ga Su, Tao Ma, Wei Chen, Shang-Zhi Xie, Cong-Lin Chen, and Ting-Bo Liang

2073 Overexpression of DDX43 Mediates MEK Inhibitor Resistance through RAS Upregulation in Uveal Melanoma Cells
Grazia Ambrosini, Raya Khanin, Richard D. Carvajal, and Gary K. Schwartz

2081 Expression of the miR200 Family of microRNAs in Mesothelial Cells Suppresses the Dissemination of Ovarian Cancer Cells
Kazuya Sugiyama, Hinoaki Kajiyama, Kiyosumi Shibata, Hong Yuan, Fumitaka Kikkawa, and Takeshi Senga

2092 Antiproliferative Mechanism of Action of the Novel Taxane Cabazitaxel as Compared with the Parent Compound Docetaxel in MCF7 Breast Cancer Cells
Olga Azarenko, Gregoriy Smiyun, Jeffrey Mah, Leslie Wilson, and Mary Ann Jordan
COMPANION DIAGNOSTICS AND CANCER BIOMARKERS

Chemogenetic Evaluation of the Mitotic Kinesin CENP-E Reveals a Critical Role in Triple-Negative Breast Cancer
Pei-Pei Kung, Ricardo Martinez, Zhou Zhu, Michael Zager, Alessandra Blasina, Isha Rymer, Jill Hallin, Meirong Xu, Christopher Carroll, John Chionis, Peter Wells, Kirk Kozminski, Jeffery Fan, Olvin Guicherit, Buwen Huang, Mei Cui, Chaoting Liu, Zhongdong Huang, Anand Sistla, Jennifer Yang, and Brion W. Murray

MODELS AND TECHNOLOGIES

Biochemical Assays for the Discovery of TDP1 Inhibitors

Human Umbilical Cord Blood-Derived Mesenchymal Stem Cells Producing IL15 Eradicate Established Pancreatic Tumor in Syngeneic Mice
Wei Jing, Ying Chen, Lei Lu, Xiangui Hu, Chenghao Shao, Yijie Zhang, Xuyu Zhou, Yingqi Zhou, Lang Wu, Rui Liu, Kexing Fan, and Gang Jin

ABOUT THE COVER

Upregulation of HER2 is a hallmark of 20% to 30% of invasive breast cancers, rendering this receptor an attractive target for cancer therapy. Based on the FDA-approved antibody pertuzumab, we have created a panel of bispecific FynomAbs that target two epitopes on HER2. Confocal laser scanning microscopy performed with HER2-positive NCI-N87 cells showed that bispecific FynomAb COVA208 was able—in contrast to pertuzumab and trastuzumab—to relocalize to the intracellular area after five hours of incubation, appearing in a punctate pattern typically seen for internalized drugs. For details, see article by Brack and colleagues on page 2030.