## Contents

### Perspectives

**The Molecular, the Bad, and the Ugly: Preventing Bladder Cancer via mTOR Inhibition.**
David J. McConkey and Colin P. Dinney ................................................................. 1001
*Perspective on Seager et al., p. 1008*

**Is It Time to Advance the Chemoprevention of Environmental Carcinogenesis with Microdosing Trials?**
Thomas W. Kensler and John D. Groopman ........................................................... 1003
*Perspective on Jubert et al., p. 1015*

### Research Articles

**Intravesical Delivery of Rapamycin Suppresses Tumorigenesis in a Mouse Model of Progressive Bladder Cancer.**
Catherine M. Seager, Anna M. Puzio-Kuter, Trushar Patel, Shalini Jain, Carlos Cordon-Cardo, James Mc Kiernan, and Cory Abate-Shen .......................... 1008

**Effects of Chlorophyll and Chlorophyllin on Low-Dose Aflatoxin B1 Pharmacokinetics in Human Volunteers.**
Carole Jubert, John Mata, Graham Bench, Roderick Dashwood, Cliff Pereira, William Tracewell, Kenneth Turteltaub, David Williams, and George Bailey ........................ 1015

**Gender Modifies the Effect of Ursodeoxycholic Acid in a Randomized Controlled Trial in Colorectal Adenoma Patients.**
Patricia A. Thompson, Betsy C. Wertheim, Denise J. Roe, Erin L. Ashbeck, Elizabeth T. Jacobs, Peter Lance, María Elena Martínez, and David S. Alberts ............ 1023

**Dietary Tricin Suppresses Inflammation-Related Colon Carcinogenesis in Male Crj:CD-1 Mice.**
Takeru Oyama, Yumiko Yasui, Shigeyuki Sugie, Mamoru Koketsu, Kunitomo Watanabe, and Takuji Tanaka ................................................................. 1031

**EphA2 in the Early Pathogenesis and Progression of Non-Small Cell Lung Cancer.**
Jennifer M. Brannan, Banibrata Sen, Babita Saigal, Ludmila Prudkin, Carmen Behrens, Luisa Solis, Wenli Dong, B. Nebiyou Bekele, Ignacio Wistuba, and Faye M. Johnson ........................................... 1039

**Triterpenoids CDDO-Methyl Ester or CDDO-Ethyl Amide and Rexinoids LG100268 or NRX104204 for Prevention and Treatment of Lung Cancer in Mice.**
Karen Liby, Renee Risingsong, Darlene B. Royce, Charlotte R. Williams, Tian Ma, Mark M. Yore, and Michael B. Sporn ................................................................. 1050

**Preventive Effects of Bexarotene and Budesonide in a Genetically Engineered Mouse Model of Small Cell Lung Cancer.**
Yian Wang, Weidong Wen, Yijun Yi, Zhongqiu Zhang, Ronald A. Lubet, and Ming You ................................................................. 1059

**Lack of Evidence for Green Tea Polyphenols as DNA Methylation Inhibitors in Murine Prostate.**

**Distinct Effects of Calorie Restriction and Exercise on Mammary Gland Gene Expression in C57Bl/6 Mice.**
Michelle Padovani, Jackie A. Lavigne, Gadiestt V.R. Chandramouli, Susan N. Perkins, J. Carl Barrett, Stephen D. Hursting, L. Michelle Bennett, and David Berrigan .................................................................................. 1076

**The Cyclooxygenase Inhibitor Sulindac Sulfide Inhibits EP4 Expression and Suppresses the Growth of Glioblastoma Cells.**
Atsushi Kambe, Hiroki Yoshioka, Hideki Kamitani, Takashi Watanabe, Seung Joon Baek, and Thomas E. Eling ................................................................. 1088

**A DNA Methyltransferase Inhibitor and All-trans Retinoic Acid Reduce Oral Cavity Carcinogenesis Induced by the Carcinogen 4-Nitroquinoiline 1-Oxide.**
Xiao-Han Tang, Martin Albert, Theresa Scognamiglio, and Lorraine J. Gudas ................................................................. 1100

### Reviewers

**Acknowledgement to Reviewers.** ........................................................................ 1111
About the Cover

The cover photographs illustrate the dramatic suppression of muscle-invasive bladder cancer by intravesically administered rapamycin, which inhibits the mammalian target of rapamycin (mTOR), in a genetically engineered mouse model of progression from pre-invasive to invasive bladder cancer. The larger, muscle-invasive tumor (top) developed in a mouse treated with control vehicle; the smaller, non-muscle–invasive tumor (bottom) developed in a mouse treated with rapamycin. The measures numbered along the x and y axes are centimeters. These findings are the first to demonstrate the chemopreventive effectiveness of a molecular-targeted agent given intravesically in a relevant murine bladder model; they support broadening the study of intravesical therapeutic agents in high-risk non-muscle–invasive bladder cancer patients and provide a preclinical mouse model for testing novel such agents. Showing that intravesical delivery of an mTOR inhibitor blocks progression to invasive disease provides new hope for patients at a high risk for developing muscle-invasive bladder cancer, for whom few treatment options exist. See articles by Seager et al. (beginning on page 1008) and McConkey and Dinney (beginning on page 1001) for more information.