

## PERSPECTIVES


- 617 **Grape Seeds: Ripe for Cancer Chemoprevention**  
Santosh K. Katiyar and Mohammad Athar  
*See article, p. 625*
- 622 **Targeting Epigenetics for Cancer Prevention By Dietary Cancer Preventive Compounds—The Case of miRNA**  
Ah-Ng Tony Kong, Chengyue Zhang, and Zheng-Yuan Su  
*See article, p. 625*

## RESEARCH ARTICLES

- 625 **Grape Seed Extract Efficacy against Azoxymethane-Induced Colon Tumorigenesis in A/J Mice: Interlinking miRNA with Cytokine Signaling and Inflammation**  
Molly M. Derry, Komal Raina, Velmurugan Balaiya, Anil K. Jain, Sangeeta Shrotriya, Kendra M. Huber, Natalie J. Serkova, Rajesh Agarwal, and Chapla Agarwal  
*See commentaries, pp. 617 and 622*
- 634 **Chronic Social Isolation Is Associated with Metabolic Gene Expression Changes Specific to Mammary Adipose Tissue**  
Paul A. Volden, Erin L. Wonder, Maxwell N. Skor, Christopher M. Carmean, Feenalie N. Patel, Honggang Ye, Masha Kocherginsky, Martha K. McClintock, Matthew J. Brady, and Suzanne D. Conzen
- 646 **Effect of Zileuton and Celecoxib on Urinary LTE<sub>4</sub> and PGE-M Levels in Smokers**  
Arash Mohebbati, Ginger L. Milne, Xi Kathy Zhou, Anna J. Duffield-Lillico, Jay O. Boyle, Allison Knutson, Brian P. Bosworth, Philip J. Kingsley, Lawrence J. Marnett, Powel H. Brown, Esther G. Akpa, Eva Szabo, and Andrew J. Dannenberg

- 656 **DNA Methylation Biomarkers for Noninvasive Diagnosis of Colorectal Cancer**  
 F. Javier Carmona, Daniel Azuara, Antonio Berenguer-Llargo, Agustin F. Fernández, Sebastiano Biondo, Javier de Oca, Francisco Rodriguez-Moranta, Ramón Salazar, Alberto Villanueva, Mario F. Fraga, Jordi Guardiola, Gabriel Capellá, Manel Esteller, and Victor Moreno
- 666 **Identification of Putative Immunologic Targets for Colon Cancer Prevention Based on Conserved Gene Upregulation from Preinvasive to Malignant Lesions**  
Elizabeth K. Broussard, Rachel Kim, Jesse C. Wiley, Juan Pablo Marquez, James E. Annis, David Pritchard, and Mary L. Disis
- 675 **The Chemopreventive Efficacies of Nonsteroidal Anti-inflammatory Drugs: The Relationship of Short-term Biomarkers to Long-term Skin Tumor Outcome**  
Carol D. Mikulec, Joyce E. Rundhaug, Melissa S. Simper, Ronald A. Lubet, and Susan M. Fischer
- 686 ***Lactobacillus Salivarius* REN Inhibits Rat Oral Cancer Induced by 4-Nitroquinoline 1-Oxide**  
Ming Zhang, Fang Wang, Lu Jiang, Ruihai Liu, Lian Zhang, Xingen Lei, Jiyou Li, Jingli Jiang, Huiyuan Guo, Bing Fang, Liang Zhao, and Fazheng Ren
- 695 **How Long Will It Take to Reduce Gastric Cancer Incidence by Eradicating *Helicobacter Pylori* Infection?**  
John F. Osborn, Maria S. Cattaruzza, Anna M. Ferri, Flora De Angelis, Davide Renzi, Alessandra Marani, and Dino Vaira
- 701 **Metabolic Syndrome and Mammographic Density in Mexican Women**  
Megan S. Rice, Carine Biessy, Martin Lajous, Kimberly A. Bertrand, Rulla M. Tamimi, Gabriela Torres-Mejía, Ruy López-Ridaura, and Isabelle Romieu

- 711 **Raw Garlic Consumption as a Protective Factor for Lung Cancer, a Population-Based Case–Control Study in a Chinese Population**  
Zi-Yi Jin, Ming Wu, Ren-Qiang Han, Xiao-Feng Zhang, Xu-Shan Wang, Ai-Ming Liu, Jin-Yi Zhou, Qing-Yi Lu, Zuo-Feng Zhang, and Jin-Kou Zhao
- 719 **Characterization of Raloxifene Glucuronidation: Potential Role of UGT1A8 Genotype on Raloxifene Metabolism *In Vivo***  
Dongxiao Sun, Nathan R Jones, Andrea Manni, and Philip Lazarus
- 731 **Progesterone Enhances Calcitriol Antitumor Activity by Upregulating Vitamin D Receptor Expression and Promoting Apoptosis in Endometrial Cancer Cells**  
Laura R. Lee, Pang-Ning Teng, Huyen Nguyen, Brian L. Hood, Leyla Kavandi, Guisong Wang, Jane M. Turbov, Larry G. Thaeete, Chad A. Hamilton, George L. Maxwell, Gustavo C. Rodriguez, Thomas P. Conrads, and Viqar Syed

- 744 **Folic Acid Prevents the Initial Occurrence of Sporadic Colorectal Adenoma in Chinese Older than 50 Years of Age: A Randomized Clinical Trial**  
 Qin-Yan Gao, Hui-Min Chen, Ying-Xuan Chen, Ying-Chao Wang, Zheng-Hua Wang, Jie-Ting Tang, Zhi-Zheng Ge, Xiao-Yu Chen, Jian-Qiu Sheng, Dian-Chun Fang, Cheng-Gong Yu, Ping Zheng, and Jing-Yuan Fang

## LETTERS TO THE EDITOR

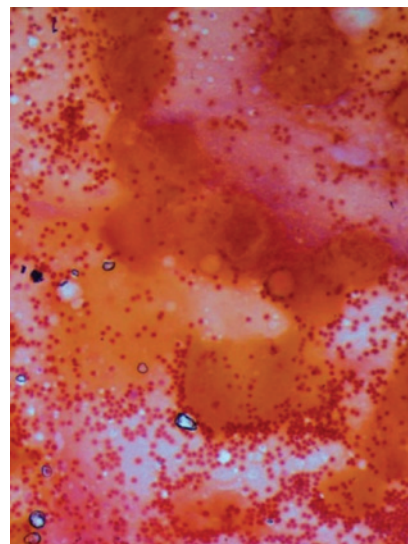
- 753 **Genome-Wide Hypomethylation and Cancer Risk—Letter**  
Adam R. Karpf
- 754 **Genome-Wide Hypomethylation and Cancer Risk—Response**  
Kevin Brennan and James M. Flanagan

AC icon indicates Author Choice

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

## ABOUT THE COVER

Chronic social isolation is linked to increased mammary tumor growth in rodent models of breast cancer. In the SV40-T antigen mouse model of “triple-negative” breast cancer, the heightened stress response elicited by social isolation has been associated with increased expression of metabolic genes in the mammary gland before invasive tumors develop (i.e., during the carcinoma *in situ* stage). To further understand the mechanisms underlying how accelerated mammary tumor growth is associated with social isolation, mammary gland adipose tissue was separated from adjacent ductal epithelial cells and individual cell types were analyzed for changes in metabolic gene expression. The cover micrograph depicts representative nonadipocytes (epithelial/stromal cells) and mammary adipocytes (not shown) following collagenase treatment/centrifugation. Increased metabolic gene expression specific to the mammary adipocytes of socially isolated mice coincided with increased adipocyte glucose metabolism, lipid synthesis, and leptin secretion. Results from this study suggest that exposure to a chronic stressor (social isolation) results in specific metabolic reprogramming in mammary gland adipocytes that, in turn, contributes to increased proliferation of adjacent preinvasive malignant epithelial cells. Metabolites and/or tumor growth-promoting proteins secreted from adipose tissue could identify biomarkers and/or targets for breast cancer prevention. See article by Volden and colleagues (beginning on page 634) for more information.



# Cancer Prevention Research

6 (7)

*Cancer Prev Res* 2013;6:617-754.

**Updated version** Access the most recent version of this article at:  
<http://cancerpreventionresearch.aacrjournals.org/content/6/7>

**E-mail alerts** [Sign up to receive free email-alerts](#) related to this article or journal.

**Reprints and Subscriptions** To order reprints of this article or to subscribe to the journal, contact the AACR Publications Department at [pubs@aacr.org](mailto:pubs@aacr.org).

**Permissions** To request permission to re-use all or part of this article, use this link <http://cancerpreventionresearch.aacrjournals.org/content/6/7>. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.