COMMENTARIES

1007 Big Punches Come in Nanosizes for Chemoprevention
Dipali Sharma and Saraswati Sukumar
See article, p. 1015

1011 Combination of Chemopreventive Agents in Nanoparticles for Cancer Prevention
Chung S. Yang, Hong Wang, and Bing Hu
See article, p. 1015

RESEARCH ARTICLES

1015 A Novel Combinatorial Nanotechnology-Based Oral Chemopreventive Regimen Demonstrates Significant Suppression of Pancreatic Cancer Neoplastic Lesions
B. Karthik Grandhi, Arvind Thakkar, Jeffrey Wang, and Sunil Prabhu
See commentaries, pp. 1007 and 1011

1026 Liver Fatty Acid-Binding Protein (L-Fabp) Modifies Intestinal Fatty Acid Composition and Adenoma Formation in ApcMin/+ Mice
Sekhar Dharmarajan, Elizabeth P. Newberry, Grace Montenegro, ILKe Nalbantoglu, Victoria R. Davis, Michael J. Clanahan, Valerie Blanc, Yan Xie, Jianyang Luo, James W. Fleshman Jr., Susan Kennedy, and Nicholas O. Davidson

1038 Reduced Aflatoxin Exposure Presages Decline in Liver Cancer Mortality in an Endemic Region of China
Jian-Guo Chen, Patricia A. Egner, Derek Ng, Lisa P. Jacobson, Alvaro Munoz, Yuan-Rong Zhu, Geng-Sun Qian, Felicia Wu, Jian-Min Yuan, John D. Groopman, and Thomas W. Kensler

1046 Dietary Energy Balance Modulation of Kras- and Ink4a/Arf+/--Driven Pancreatic Cancer: The Role of Insulin-like Growth Factor-I
Laura M. Lashinger, Lauren M. Harrison, Audrey J. Rasmussen, Craig D. Logsdon, Susan M. Fischer, Mark J. McArthur, and Stephen D. Hursting
Nano-Architectural Alterations in Mucus Layer Fecal Colonocytes in Field Carcinogenesis: Potential for Screening


A Double-Blind, Randomized, Neoadjuvant Study of the Tissue Effects of POMx Pills in Men with Prostate Cancer Before Radical Prostatectomy

Stephen J. Freedland, Michael Carducci, Nils Kroeger, Alan Partin, Jian-yu Rao, Yusheng Jin, Susan Kerkoutian, Hong Wu, Yuting Li, Patricia Creel, Kelly Mundy, Robin Gurganus, Helen Fedor, Serina A. King, Yanjun Zhang, David Heber, and Allan J. Pantuck

Acacetin Inhibits In Vitro and In Vivo Angiogenesis and Downregulates Stat Signaling and VEGF Expression

Tariq A. Bhat, Dhanya Nambiar, Dhanir Tailor, Arttatrana Pal, Rajesh Agarwal, and Rana P. Singh

β-Escin Inhibits NNK-Induced Lung Adenocarcinoma and ALDH1A1 and RhoA/Rock Expression in A/J Mice and Growth of H460 Human Lung Cancer Cells

Jagan M.R. Patlolla, Li Qian, Laura Biddick, Yuting Zhang, Dhimant Desai, Shantu Amin, Stan Lightfoot, and Chinthalapally V. Rao

ABOUT THE COVER

Current fecal tests (occult blood, methylation, DNA mutations) target minute amounts of tumor products among a large amount of fecal material and thus have suboptimal performance. By exploiting field carcinogenesis as a modality to amplify the neoplastic signal, the present study demonstrates that endoscopically normal rectal brushings have striking nano-architectural alterations which are detectable utilizing a novel optical technique, partial wave spectroscopic microscopy (PWS). Mucus layer fecal colonocytes (MLFCs) at preneoplastic and neoplastic time-points in azoxymethane (AOM)-treated rat models were examined using PWS analysis to derive the nano-architectural parameter, disorder strength (Ld). MLFCs from both control and AOM-treated animals appeared microscopically normal and identical under bright field microscopy. However, superimposing Ld pseudocolor maps on the images (cover micrograph; saline-treatment; AOM treatment not shown) revealed marked differences (elevation) in Ld in the AOM-treated rats in the areas of nucleus and cytoplasm when compared to control animals. Thus, by utilizing a biophotonics proof of principle approach to fecal assay, the present study demonstrates that targeting the nano-architectural changes of field carcinogenesis rather than the detection of tumor products may provide a novel paradigm for colorectal cancer screening. See article by Roy and colleagues (beginning on page 1111) for more information.