

## 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  
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## 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 *Apc<sup>Min/+</sup>* 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 Muñoz, Yuan-Rong Zhu, Geng-Sun Qian, Felicia Wu, Jian-Min Yuan, John D. Groopman, and Thomas W. Kensler

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Laura M. Lashinger, Lauren M. Harrison, Audrey J. Rasmussen, Craig D. Logsdon, Susan M. Fischer, Mark J. McArthur, and Stephen D. Hursting

1056 | **Anti-Genotoxic Potential of Bilirubin *In Vivo*: Damage to DNA in Hyperbilirubinemic Human and Animal Models**

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David W. Dawson, Kathleen Hertzler, Aune Moro, Graham Donald, Hui-Hua Chang, Vay Liang Go, Steven J. Pandol, Aurelia Lugea, Anna S. Gukovskaya, Gang Li, Oscar J. Hines, Enrique Rozengurt, and Guido Eibl

1074 | **Vitamin E  $\delta$ -Tocotrienol Prolongs Survival in the *LSL-Kras<sup>G12D/+</sup>;LSL-Trp53<sup>R172H/+</sup>;Pdx-1-Cre (KPC)* Transgenic Mouse Model of Pancreatic Cancer**

Kazim Husain, Barbara A. Centeno, Dung-Tsa Chen, Sunil R. Hingorani, Said M. Sebti, and Mokenge P. Malafa

1084 | **Assessing the Breast Cancer Risk Distribution for Women Undergoing Screening in British Columbia**

Christina R. Weisstock, Rasika Rajapakshe, Christabelle Bitgood, Steven McAvoy, Paula B. Gordon, Andrew J. Coldman, Brent A. Parker, and Christine Wilson

1093 | **Examination of Whole Blood DNA Methylation as a Potential Risk Marker for Gastric Cancer**

Tomomitsu Tahara, Shinji Maegawa, Woonbok Chung, Judith Garriga, Jaroslav Jelinek, Marcos R.H. Estécio, Tomoyuki Shibata, Ichiro Hirata, Tomiyasu Arisawa, and Jean-Pierre J. Issa

1101 | **Risk Factors for Non-initiation of the Human Papillomavirus Vaccine among Adolescent Survivors of Childhood Cancer**

James L. Klosky, Kathryn M. Russell, Kristin E. Canavera, Heather L. Gammel, Jason R. Hodges, Rebecca H. Foster, Gilbert R. Parra, Jessica L. Simmons, Daniel M. Green, and Melissa M. Hudson

1111 **Nano-Architectural Alterations in Mucus Layer Fecal Colonocytes in Field Carcinogenesis: Potential for Screening**



Hemant K. Roy, Dhwanil P. Damania, Mart Delacruz, Dhananjay P. Kunte, Hariharan Subramanian, Susan E. Crawford, Ashish K. Tiwari, Ramesh K. Wali, and Vadim Backman

1120 **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, Yunfeng Li, Patricia Creel, Kelly Mundy, Robin Gurganus, Helen Fedor, Serina A. King, Yanjun Zhang, David Heber, and Allan J. Pantuck

1128 **Acacetin Inhibits *In Vitro* and *In Vivo* Angiogenesis and Downregulates Stat Signaling and VEGF Expression**

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

1140  **$\beta$ -Escin Inhibits NNK-Induced Lung Adenocarcinoma and ALDH1A1 and RhoA/Rock Expression in A/J Mice and Growth of H460 Human Lung Cancer Cells**

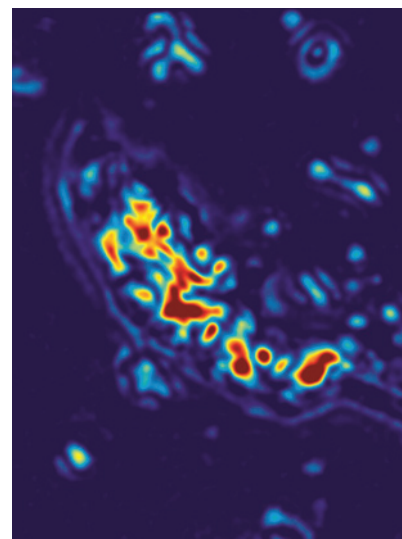
Jagan M.R. Patlolla, Li Qian, Laura Biddick, Yuting Zhang, Dhimant Desai, Shantu Amin, Stan Lightfoot, and Chinthalapally V. Rao

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## 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.



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