


## REVIEW

- 371** Specificity Protein Transcription Factors and Cancer: Opportunities for Drug Development  
Stephen Safe, James Abbruzzese, Maen Abdelrahim, and Erik Hedrick

## RESEARCH ARTICLES

- 383** Ultraviolet Radiation Inhibits Mammary Carcinogenesis in an ER-Negative Murine Model by a Mechanism Independent of Vitamin D<sub>3</sub>  
Anastasia M. Makarova, Flora Frascari, Parastoo Davari, Farzam Gorouhi, Philip Dutt, Lynn Wang, Akash Dhawan, Grace Wang, Jeffrey E. Green, and Ervin H. Epstein Jr
- 393** Spatial Variation of the Native Colon Microbiota in Healthy Adults  
Kaitlin J. Flynn, Mack T. Ruffin IV, D. Kim Turgeon, and Patrick D. Schloss
- 403** Evaluation of Cancer-Associated DNA Copy Number Events in Colorectal (Advanced) Adenomas  
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- 413** Calcium-Induced Differentiation of Human Colon Adenomas in Colonoid Culture: Calcium Alone versus Calcium with Additional Trace Elements  
Shannon D. McClintock, Justin A. Colacino, Durga Attili, Michael K. Dame, Aliah Richter, Anusha R. Reddy, Venkatesha Basrur, Areeba H. Rizvi, D. Kim Turgeon, James Varani, and Muhammad N. Aslam

- 429** Evaluation of Biodistribution of Sulforaphane after Administration of Oral Broccoli Sprout Extract in Melanoma Patients with Multiple Atypical Nevi  
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## LETTER TO THE EDITOR

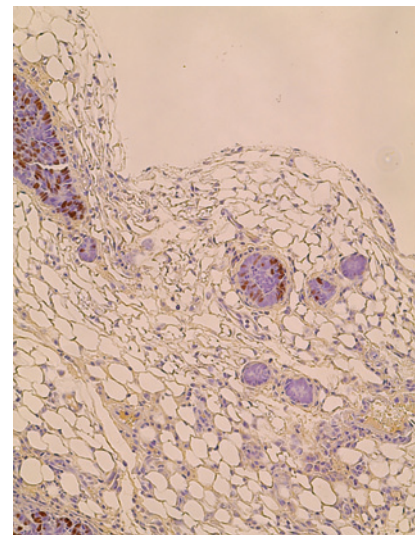
- 439** Mutations of the PDE5A Gene Confer a Survival Advantage in Patients with Colon Cancer  
Steven Lehrer, Peter H. Rheinstein, and Kenneth E. Rosenzweig

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## ABOUT THE COVER

The latitudinal gradient of cancer morbidity, in particular for breast cancer, has been known for ¾ century to correspond inversely with ambient sunlight and its mechanism has been attributed for the past nearly 4 decades to sunlight's production of cancer-inhibiting vitamin D<sub>3</sub> in the skin. Makarova et al (page 383) have tested the anti-cancer effects of ultraviolet irradiation and D<sub>3</sub> in a murine cancer model in which large T antigen expressed in the mammary gland drives fatal mammary gland carcinogenesis. They have found that in this model UVR does delay and reduce tumor progression, that vitamin D<sub>3</sub> administration, whether given systemically or applied topically to the skin, has no such effect, and that the effects of UVR persist in mice unable to produce D<sub>3</sub> on exposure to UVR. The authors suggest that identification of the non-D<sub>3</sub>, UV-induced molecule that transmits the anti-cancer effect from the skin to the mammary gland might uncover novel approaches for prevention of extra-cutaneous human cancer. On the cover is an image of a murine mammary gland with DCIS, treated with UV, and stained to display (black) expression of the large T antigen.



# Cancer Prevention Research

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