PERSPECTIVES

125 Cancer Chemoprevention Locks onto a New Polyamine Metabolic Target
Eugene W. Gerner

See article p. 140

128 Assessing Efficacy in Early-Phase Cancer Prevention Clinical Trials: The Case of ICI-67 in the Lung
Eva Szabo

See article p. 148

132 The Promise of Natural Products for Blocking Early Events in Skin Carcinogenesis
John L. Clifford and John DiGiovanni

See articles p. 160, 170 and 179

COMMENTARY

136 The Effectiveness of Chemoprevention Agents Is Underestimated When Lesion Sizes Are Rounded
Thomas H. Taylor, William B. Armstrong, and Frank L. Meyskens

170 Synergistic Effects of Combined Phytochemicals and Skin Cancer Prevention in SENCAR Mice
Magdalena C. Kowalczyk, Piotr Kowalczyk, Olga Tolstykh, Margaret Hanousek, Zbigniew Walaszek, and Thomas J. Slaga

179 Green Tea Polyphenols Prevent UV-Induced Immunosuppression by Rapid Repair of DNA Damage and Enhancement of Nucleotide Excision Repair Genes
Santosh K. Katiyar, Mudit Vaid, Harry van Steeg, and Syed M. Meeran

RESEARCH ARTICLES

140 Chemoprevention of B-Cell Lymphomas by Inhibition of the Myc Target Spermidine Synthase
TachaZi Plym, Forshell, Sara Rimpi, and Jonas A. Nilsson

148 Biological Activity of Celecoxib in the Bronchial Epithelium of Current and Former Smokers

160 A Phase 2a Study of Topical Perillyl Alcohol Cream for Chemoprevention of Skin Cancer

170 DNA Damage Drives an Activin A-Dependent Induction of Cyclooxygenase-2 in Premalignant Cells and Lesions
Colleen Fordyce, Tim Fessenden, Curtis Pickering, Jason Jung, Veena Singla, Hal Berman, and Thea Tlsty

202 Cyclooxygenase-2 Inhibition for the Prophylaxis and Treatment of Preinvasive Breast Cancer in a Her-2/Neu Mouse Model
Danh Tran-Thanh, Stephen Butters, Yanxia Wen, Christine Wilson, and Susan J. Done

212 A Proposed Unified Mechanism for the Reduction of Human Breast Cancer Risk by the Hormones of Pregnancy
Herbert I. Jacobson, Nicole Lemanski, Anu Agarwal, Amithi Narendran, Kelvin E. Turner, II, James A. Bennett, and Thomas A. Andersen
ABOUT THE COVER

Double-strand DNA damage stimulates an activin-A–dependent response in human mammary epithelial cells with a compromised p16/Rb pathway, as depicted in the cover illustration (courtesy of Colleen Fordyce). DNA damage and telomere malfunction result in the p53-dependent induction of activin A (top left, light tan, mammary epithelial cell), a member of the transforming growth factor β (TGF-β) superfamily. Secreted activin A binds to its receptor, resulting in the p38-dependent expression of cyclooxygenase 2 (COX-2) in an autocrine and paracrine fashion (top right, light tan, mammary epithelial cell). COX-2 catalyzes the rate-limiting step in the synthesis of prostaglandins by converting arachidonic acid (AA) into several prostaglandins, including prostaglandin E2 (PGE2). Secreted prostaglandins induce a number of tumor-promoting phenotypes, including resistance to apoptosis and enhanced cell motility, in adjacent cells. Two mammary fibroblasts (beige) appear at the very top of the cover illustration. The consequences of DNA damage extend beyond the cell where the damage occurs, inducing effects that may promote tumorigenesis in the human mammary gland. See article by Fordyce et al. (beginning on page 190) for more information.