

REVIEW

181 Garlic and Onions: Their Cancer Prevention Properties

Holly L. Nicastro, Sharon A. Ross, and John A. Milner

RESEARCH ARTICLES

190 Long-term Persistence of Oral Human Papillomavirus Type 16: The HPV Infection in Men (HIM) Study

Christine M. Pierce Campbell, Aimée R. Kreimer, Hui-Yi Lin, William Fulp, Michael T. O'Keefe, Donna J. Ingles, Martha Abrahamsen, Luisa L. Villa, Eduardo Lazcano-Ponce, and Anna R. Giuliano

197 Prevention of Tumor Growth Driven by *PIK3CA* and HPV Oncogenes by Targeting mTOR Signaling with Metformin in Oral Squamous Carcinomas Expressing OCT3

Dmitri Madera, Lynn Vitale-Cross, Daniel Martin, Abraham Schneider, Alfredo A. Molinolo, Nitin Gangane, Thomas E. Carey, Jonathan B. McHugh, Christine M. Komarck, Heather M. Walline, William N. William Jr, Raja R. Seethala, Robert L. Ferris, and J. Silvio Gutkind

208 Involvement of Epigenetics and EMT-Related miRNA in Arsenic-Induced Neoplastic Transformation and Their Potential Clinical Use

Christina Michailidi, Masamichi Hayashi, Sayantan Datta, Tanusree Sen, Kaitlyn Zenner, Oluwadamilola Oladeru, Mariana Brait, Evgeny Izumchenko, Alexander Baras, Christopher VandenBussche, Maria Argos, Trinity J. Bivalacqua, Habibul Ahsan, Noah M. Hahn, George J. Netto, David Sidransky, and Mohammad Obaidul Hoque

222 A Phase IIa Randomized, Double-Blind Trial of Erlotinib in Inhibiting Epidermal Growth Factor Receptor Signaling in Aberrant Crypt Foci of the Colorectum

Daniel L. Gillen, Frank L. Meyskens, Timothy R. Morgan, Jason A. Zell, Robert Carroll, Richard Benya, Wen-Pin Chen, Allen Mo, Chris Tucker, Asmita Bhattacharya, Zhiliang Huang, Myra Arcilla, Vanessa Wong, Jinah Chung, Rachel Gonzalez, Luz Maria Rodriguez, Eva Szabo, Daniel W. Rosenberg, and Steven M. Lipkin

231 Lack of Effect of Metformin on Mammary Carcinogenesis in Nondiabetic Rat and Mouse Models

Matthew D. Thompson, Clinton J. Grubbs, Ann M. Bode, Joel M. Reid, Renee McGovern, Philip S. Bernard, Inge J. Stijleman, Jeffrey E. Green, Christina Bennett, M. Margaret Juliana, Fariba Moeinpour, Vernon E. Steele, and Ronald A. Lubet

240 Urinary ADAM12 and MMP-9/NGAL Complex Detect the Presence of Gastric Cancer

Takaya Shimura, Adelle Dagher, Monisha Sachdev, Masahide Ebi, Tamaki Yamada, Tomonori Yamada, Takashi Joh, and Marsha A. Moses

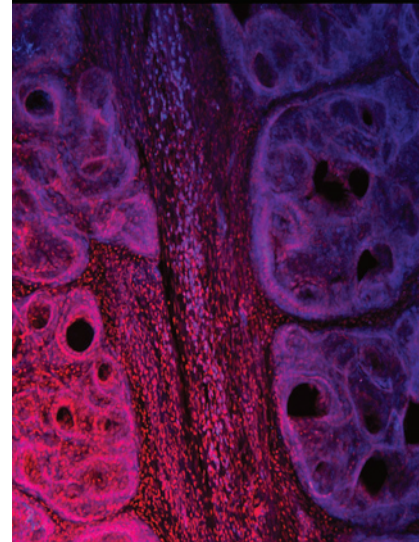
249 The Heat Shock Protein 90 Inhibitor, (–)-Epigallocatechin Gallate, Has Anticancer Activity in a Novel Human Prostate Cancer Progression Model

Michael A. Moses, Ellen C. Henry, William A. Ricke, and Thomas A. Gasiewicz

Table of Contents

ABOUT THE COVER

Interest in the use of metformin as a potential chemopreventive/therapeutic agent has increased over the last few years based on epidemiologic studies suggesting that diabetics taking this drug compared with those taking sulfonylurea or insulin have a lower incidence of cancer. Metformin acts by increasing levels of activated AMP-activated protein kinase (AMPK) and decreasing circulating insulin growth factor-1, which suggests efficacy in cancer prevention and therapy. In this study, two different animal models were used to evaluate the effects of metformin administration on mammary cancer growth. Metformin was ineffective in decreasing mammary cancer multiplicity, latency, or weight in either ER⁺ or ER⁻ animal models. Metformin induced increases in phosphorylated AMPK and p53 but had little effect on any other biomarker, including phosphorylated Akt (cover image) and failed to reduce the proliferation index or expression of proliferation-related genes. This lack of efficacy in commonly used mammary cancer models is somewhat disconcerting. Overall, metformin did not prevent mammary cancer development in these two models, which raises questions about metformin efficacy in breast cancer in nondiabetic populations. See the article by Thompson et al. (beginning on page 231) for more information. (Staining was performed by Alyssa Langfald, The Hormel Institute, University of Minnesota.)



Cancer Prevention Research

8 (3)

Cancer Prev Res 2015;8:181-257.

Updated version Access the most recent version of this article at:
<http://cancerpreventionresearch.aacrjournals.org/content/8/3>

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.

Permissions To request permission to re-use all or part of this article, use this link <http://cancerpreventionresearch.aacrjournals.org/content/8/3>. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.