

REVIEW

- 713** Rationale for Developing a Specimen Bank to Study the Pathogenesis of High-Grade Serous Carcinoma: A Review of the Evidence
Mark E. Sherman, Ronny I. Drapkin, Neil S. Horowitz, Christopher P. Crum, Sue Friedman, Janice S. Kwon, Douglas A. Levine, Ie-Ming Shih, Donna Shoupe, Elizabeth M. Swisher, Joan Walker, Britton Trabert, Mark H. Greene, Goli Samimi, Sarah M. Temkin, and Lori M. Minasian

RESEARCH ARTICLES

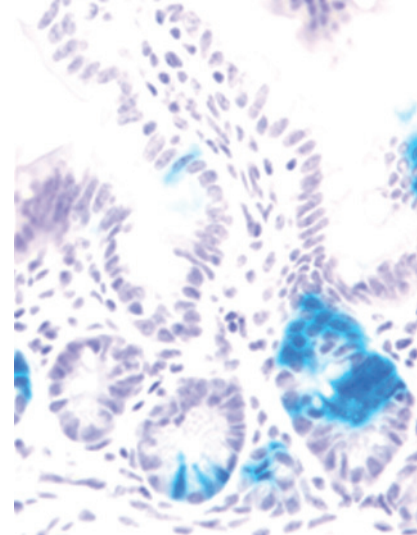
- 721** Celecoxib Alters the Intestinal Microbiota and Metabolome in Association with Reducing Polyp Burden
David C. Montrose, Xi Kathy Zhou, Erin M. McNally, Erika Sue, Rhonda K. Yantiss, Steven S. Gross, Nitai D. Leve, Edward D. Karoly, Chen S. Suen, Lilan Ling, Robert Benezra, Eric G. Pamer, and Andrew J. Dannenberg
- 732** Height and Body Size in Childhood, Adolescence, and Young Adulthood and Breast Cancer Risk According to Molecular Subtype in the Nurses' Health Studies
Erica T. Warner, Rong Hu, Laura C. Collins, Andrew H. Beck, Stuart Schnitt, Bernard Rosner, A. Heather Eliassen, Karin B. Michels, Walter C. Willett, and Rulla M. Tamimi
- 739** Transcriptome Analysis of WHV/c-myc Transgenic Mice Implicates Cytochrome P450 Enzyme 17A1 as a Promising Biomarker for Hepatocellular Carcinoma
Feng Wang, Jian Huang, Zhu Zhu, Xiao Ma, Li Cao, Yongzhi Zhang, Wei Chen, and Yang Dong

- 750** A New Model to Study the Role of Arachidonic Acid in Colon Cancer Pathophysiology
Yang-Yi Fan, Evelyn Callaway, Jennifer M. Monk, Jennifer S. Goldsby, Peiyang Yang, Logan Vincent, and Robert S. Chapkin
- 758** Circulating Osteopontin and Prediction of Hepatocellular Carcinoma Development in a Large European Population
Talita Duarte-Salles, Sandeep Misra, Magdalena Stepien, Amelie Plymoth, David Muller, Kim Overvad, Anja Olsen, Anne Tjønneland, Laura Baglietto, Gianluca Severi, Marie-Christine Boutron-Ruault, Renee Turzanski-Fortner, Rudolf Kaaks, Heiner Boeing, Krasimira Aleksandrova, Antonia Trichopoulou, Pagona Lagiou, Christina Bamia, Valeria Pala, Domenico Palli, Amalia Mattiello, Rosario Tumino, Alessio Naccarati, H.B(as). Bueno-de-Mesquita, Petra H. Peeters, Elisabete Weiderpass, J. Ramón Quirós, Antonio Agudo, Emilio Sánchez-Cantalejo, Eva Ardanaz, Diana Gavrilá, Miren Dorronsoro, Márten Werner, Oskar Hemmingsson, Bodil Ohlsson, Klas Sjöberg, Nicholas J. Wareham, Kay-Tee Khaw, Kathryn E. Bradbury, Marc J. Gunter, Amanda J. Cross, Elio Riboli, Mazda Jenab, Pierre Hainaut, and Laura Beretta
- 766** Comparison between Urine and Cervical Samples for HPV DNA Detection and Typing in Young Women in Colombia
Alba Lucá Cómbita, Tarik Gheit, Paula González, Devi Puerto, Raúl Hernando Murillo, Luisa Montoya, Alex Vorsters, Severien Van Keer, Pierre Van Damme, Massimo Tommasino, Gustavo Hernández-Suárez, Laura Sánchez, Rolando Herrero, and Carolina Wiesner

Table of Contents

ABOUT THE COVER

Celecoxib, a selective inhibitor of cyclooxygenase-2 (COX-2), has chemopreventive effects in the gastrointestinal (GI) tract. Although celecoxib is believed to possess anti-tumor activity primarily by suppressing COX-2-derived prostaglandin biosynthesis, it may also act by COX-2-independent mechanisms. The GI tract contains trillions of bacteria which can secrete metabolites known to impact GI tumor development. This study demonstrates that celecoxib treatment shifts the luminal bacterial and metabolite profiles in association with reducing stem cell proliferation and polyp burden in *APC^{Min/+}* mice. The cover image shows results of lineage tracing of Lgr5-positive stem cells in the ileal crypt of an *Lgr5-EGFP-ires-CreERT2/Rosa26-lacZ* mouse given celecoxib. Mice were given either celecoxib-containing diet or control diet for five weeks then tamoxifen was administered and tissues were examined by LacZ staining. The ability of Lgr5-positive cells to give rise to the differentiated cells in the crypt was impaired by celecoxib treatment. Taken together, this study suggests that celecoxib has a previously unrecognized mechanism of action that may contribute to its chemopreventive effects. Namely, altering the microbiota and reducing the growth-promoting metabolites they produce results in decreased stem cell proliferation and reduced polyp burden. See the article by Montrose and colleagues (beginning on page 721) for more information.



Cancer Prevention Research

9 (9)

Cancer Prev Res 2016;9:713-771.

Updated version Access the most recent version of this article at:
<http://cancerpreventionresearch.aacrjournals.org/content/9/9>

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/9/9>. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.