REVIEW

713 Rationale for Developing a Specimen Bank to Study the Pathogenesis of High-Grade Serous Carcinoma: A Review of the Evidence

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. Yaniss, 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

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, Peiyi Yang, Logan Vincent, and Robert S. Chapkin

758 Circulating Osteopontin and Prediction of Hepatocellular Carcinoma Development in a Large European Population

766 Comparison between Urine and Cervical Samples for HPV DNA Detection and Typing in Young Women in Colombia
Alba Lucía Cómbita, Tarik Gheit, Paula González, Devi Puerto, Raúl Hernandez Murillo, Luisa Montoya, Alex Vorsters, Severien Van Keer, Pierre Van Damme, Massimo Tommasino, Gustavo Hernández-Suárez, Laura Sánchez, Rolando Herrero, and Carolina Wiesner
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 APCMin/+ mice. The cover image shows results of lineage tracing of Lgr5-positive stem cells in the ileal crypt of an Lgr5-EGFP-Ire-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.