

CANCER PREVENTION RESEARCH

TABLE OF CONTENTS

COMMENTARY

- 423** **TRPV6 as a Putative Genomic Susceptibility Locus Influencing Racial Disparities in Cancer**
Patricia A. Francis-Lyon, Fahreen Malik, Xiaoyun Cheng, Alireza Ghezavati, Feihan Xin, and Rafiki Cai

REVIEW

- 429** **A Systematic Review on Cost-effectiveness Studies Evaluating Ovarian Cancer Early Detection and Prevention Strategies**
Gaby Sroczynski, Artemisa Gogollari, Felicitas Kuehne, Lára R. Hallsson, Martin Widschwendter, Nora Pashayan, and Uwe Siebert

RESEARCH BRIEF

- 443** **Estimating the Screening-Eligible Population Size, Ages 45–74, at Average Risk to Develop Colorectal Cancer in the United States**
AC Andrew Piscitello and David K. Edwards V

RESEARCH ARTICLES

- 449** **Maternal Epigenetic Regulation Contributes to Prevention of Estrogen Receptor-negative Mammary Cancer with Broccoli Sprout Consumption**
Shizhao Li, Min Chen, Huixin Wu, Yuanyuan Li, and Trygve O. Tollefsbol

- 463** **Oral Microbiome Profiling in Smokers with and without Head and Neck Cancer Reveals Variations Between Health and Disease**
Ashok Kumar Sharma, William T. DeBusk, Irina Stepanov, Andres Gomez, and Samir S. Khariwala

- 475** **Adiposity Change Over the Life Course and Mammographic Breast Density in Postmenopausal Women**
Yunan Han, Catherine S. Berkey, Cheryl R. Herman, Catherine M. Appleton, Aliya Alimujiang, Graham A. Colditz, and Adetunji T. Toriola

- 483** **The Impact of One-week Dietary Supplementation with Kava on Biomarkers of Tobacco Use and Nitrosamine-based Carcinogenesis Risk among Active Smokers**
Yi Wang, Sreekanth C. Narayanapillai, Katelyn M. Tessier, Lori G. Strayer, Pramod Upadhyaya, Qi Hu, Rick Kingston, Ramzi G. Salloum, Junxuan Lu, Stephen S. Hecht, Dorothy K. Hatsukami, Naomi Fujioka, and Chengguo Xing

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TABLE OF CONTENTS

ABOUT THE COVER

Tobacco smoke is the primary risk factor for lung cancer. Both smoking cessation and detoxification of tobacco-associated carcinogens effectively reduce cancer risk. According to epidemiology studies in the South Pacific Islands, traditional kava beverage consumption to reduce stress and improve sleep quality is associated with a lower incidence of lung cancer. Based on these observations and extensive *in vivo* research, Wang and colleagues performed a pilot clinical trial (starting on page 483) to evaluate the effects of a 7-day course of kava capsules on the metabolism of 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK) and usage of tobacco among active smokers. Mechanism-based biomarker quantitative analyses showed that kava increased urinary excretion of NNK metabolites and decreased urinary 3-methyladenine, suggesting that kava could detoxify NNK. Participants taking kava capsules also had a lower level of urinary total nicotine equivalents, indicating less smoking. Plasma cortisol and urinary total cortisol equivalents were also decreased, which may contribute to reductions in nicotine craving and tobacco use. These data suggest that kava may facilitate smoking cessation and lower toxicity of carcinogens found in tobacco. The cover depicts a kava plant and the major kava-specific lactones responsible for its dual benefits among smokers.

