

Bacteria as a predictor of colorectal cancer

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Recent findings suggest that bacteria residing in the the human intestinal tract may be associated with an individual's risk of developing colon cancer. Scientists from the University of Florida present their research today at the 110th General Meeting of the American Society for Microbiology in San Diego, CA.

"Our findings suggest that some bacterial signatures are more frequently detected in subjects with polyps, early [lesions](#) that can develop into cancer, while other bacterial signatures are less frequently observed in such individuals" says Tyler Culpepper, a researcher on the study.

Culpepper and his colleagues collected data on [dietary habits](#) and medical history, a fecal sample as well as multiple colon biopsy samples from 91 subjects. They analyzed microbiota composition in 30 individuals presenting with at least one polyp and 30 age- and gender-matched controls.

Several bacterial signatures were detected only in subjects with polyps, others only in subjects without polyps. *Eubacterium ramulus* was increased in the stools of subjects with polyps while *Ruminococcus sp* and a human intestine firmicute were increased in subjects without polyps. In tissue samples, *Acidovorax sp.* was found more frequently in subjects with [polyps](#). Other bacterial signatures that differed between cases and controls were observed but did not match any know bacteria, suggesting unidentified and uncharacterized bacteria are also present.

[Colorectal cancer](#) is the third most common cancer in the United States,

where it is estimated to have caused nearly 50,000 deaths in 2009.

"The results of this work suggest the feasibility of developing non-invasive screening tests based on detecting distortions in microbiota composition and a potential for the development of diet-based prevention regimen aimed at improving gut microbiota composition and reducing CRC risk" says Culpepper.

Provided by American Society for Microbiology

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