

### Probiotics Boost Anti-Tumor Immunity and Protect Against Colon Cancer

#### QUOTE BOARD

“The study showed that bacterium *Helicobacter hepaticus* boosted adaptive immune response and prompted selective activation of Helper T cells and antibody-producing B cells, causing colon tumors to shrink and lengthening survival in mice. The pioneering research provides strong evidence in favor of leveraging gut microbiota to treat advanced colon cancer tumors resistant to conventional drug and immune therapies.”

“Colorectal cancer is a common and deadly disease that doesn't readily respond to immunotherapies because of the tumor's ability to modify its microenvironment and escape recognition by the immune system. To help these patients, oncologists have to rely on treatments that are more crude, such as surgery, chemotherapy and radiation therapy, all of which have a range of debilitating side effects. Finding a way to make non-responsive cancers sensitive to immune therapies could be game-changing.”

“To test whether anti-tumor immunity could be enhanced by modulating the composition of bacterial populations in the colon, Pitt researchers colonized the guts of mice with colon cancer with *H. hepaticus* -- a bacterium that inhabits thick mucus in the gut lining and induces a strong immune response.”

“Addition of *H. hepaticus* [probiotic bacteria or normal flora for mice] significantly reduced the number and size of tumors and extended animals' lifespans. Scientists observed increased infiltration of Helper T cells, B cells and natural killer (NK) cells to the tumor site and formation of highly organized structures that create a favorable environment for immune cell maturation and indicate cancer treatments are more likely to be successful.”

#### WHAT YOU NEED TO KNOW

"Ignoring the influence of gut bacteria on the success of cancer therapies seems like a massive oversight," said lead author Abigail Overacre-Delgoffe, Ph.D., a postdoctoral fellow in Pitt's Department of Pediatrics and Damon Runyon Fellow. "We need to think about all the things that patients go through day to day that can cause treatments to succeed or fail. We can't ignore the bacteria anymore -- they influence everything."

#### WHAT YOU NEED TO DO

More importantly, ignoring the influence of gut bacteria or probiotics on the importance of proper immune function, proper ability to prevent cancer, and proper ability to fight cancer is a massive oversight.

Please do not wait to become sick before taking steps to improve your health, improve your immune function, and significantly reduce your risk of illness.

Supplement with Innate Choice® Probiotic Sufficiency™ and improve your gut flora, gut health, immune system function, and overall health, reduce your risk of developing illness, and improve your chances of healing from illness.

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**University of Pittsburgh. "Adding single type of bacteria to gut microbiome boosted anti-tumor immunity in mice." ScienceDaily, 2 December 2021**