



Gastritis and diarrhea could be relieved with good bacteria

The EU-funded PROPATH project has demonstrated that some lactobacilli can have a beneficial effect on gastritis and diarrhea in mouse studies. Twelve weeks consumption of probiotics resulted in a marked attenuation of chronic gastritis caused by *Helicobacter pylori*. One week consumption of probiotics decreased the levels of *Salmonella* Typhimurium in the gastrointestinal tract of mice.

Helicobacter pylori can cause gastritis, gastric ulcers, and eventually gastric cancer (about 1 % of the infected people) in humans. It infects the stomach of 50 % of the human population. *S. Typhimurium* is probably implicated in the cause of diarrheal illnesses. *H. pylori* and *S. Typhimurium* are difficult to eliminate from the stomach and/or the intestine as these bacteria have become increasingly resistant to currently administered antibiotics. Therefore it would be important to develop other methods to treat them.

The healing effect in mice showed to be strain-specific meaning that not all lactobacilli have this capability. In this study different lactobacilli strains were tested, of which a strain called *Lactobacillus johnsonii* had the most prominent effect towards gastritis. The observed beneficial effect was also associated with reduced levels of antibodies for *H. pylori* in blood. However, these results need to be ascertained in further studies, as no significant reduction in the number of the *H. pylori* population in the gut was observed. Moreover, certain lactobacilli colonized the gastrointestinal tract of mice and significantly reduced the levels of *S. Typhimurium*.

Based on these results it could be possible to protect ourselves against pathogenic bacteria in the future in new ways. In further studies potential lactobacilli strains are tested in clinical trials in humans.

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