UCO-979C

L. fermentum UCO-979C

H. pylori, a rescue from within

Helicobacter pylori **infection poses a pressing global health challenge, affecting a substantial portion of the world's population. This pathogenic bacterium silently infiltrates the human gastric mucosa, often leading to asymptomatic infections. Alarming statistics indicate that approximately 50% of individuals worldwide are afflicted, with this rate soaring to 70% in developing nations (1). Even if it may remain unnoticed, *H. pylori* stands as a major driver of chronic gastritis and is intricately linked to severe gastrointestinal disorders.**

Despite its widespread impact, the treatment for *H. pylori* infections is currently limited. Conventional antibiotic therapies are increasingly encountering hurdles due to escalating antimicrobial resistance and unwanted side effects. The urgency to address this void in effective treatments is clear, as recurring episodes and complications continue to emerge, underscoring the critical need for innovative strategies and alternative approaches.

Probiotics offer a promising avenue for preventing *H. pylori* infections by potentially modulating the gut environment, bolstering the innate immune response, and hindering pathogen colonization. *L. fermentum* UCO-979C, with two patents and over twelve publications, it has demonstrated its potential as a prophylactic probiotic against *Helicobacter pylori* infection.

L. fermentum UCO-979C reduces the incidence of *H. pylori* new infection and recurrent episodes

- Hypoallergenic
- Vegetarian
- Gluten free
- Kosher
- Halal
- GMO free
- Genome Sequenced
- Gastric resistant

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How does L. fermentum UCO-979C prevent H. pylori infection?

Scientific research focused on the effectiveness of UCO-979C probiotic to thwart the onset of H. pylori infections through a dual-pronged approach. Both direct and indirect actions against harmful agents, it underlines its potential in promoting gastric well-being (2). The first defense mechanism lies in its ability to form biofilms. By these protective layers, the probiotic engages in direct competition with pathogens, hindering the proliferation of harmful agents and inhibiting their ability to adhere to sites within the gastric mucosa. This preemptive strategy obstructs the pathogen's ability to establish a foothold and initiate infection.

Furthermore, UCO-979C demonstrates immunomodulatory ability, enhancing the body's anti-inflammatory response. It boosts the production of anti-inflammatory cytokines like IL-10 and IFN, while effectively reducing the presence of inflammatory markers such as TNF-α, IL-8, and IL-1β. Additionally, the probiotic strain significantly interferes with H. pylori's growth and its urease activity. Urease activity is vital for the pathogen's survival within the acidic gastric environment, making this a critical mechanism to counter (3).

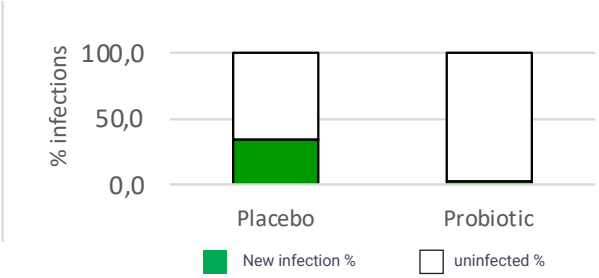
Animal model study on mice further support the probiotic's prowess: with a reduction up to 87% pathogen's colonization within the gut, this study confirmed UCO-979C's anti-H. pylori activity and its protection against consequential inflammatory damage that often ensues.

This collective evidence underscores the potential of UCO-979C as a potent ally in the battle against H. pylori infections, promising enhanced gastric resilience and supporting overall well-being (4).

L. fermentum UCO-979C key effect:

Preserve healthy population from new infections

H.pylori - group post treatment

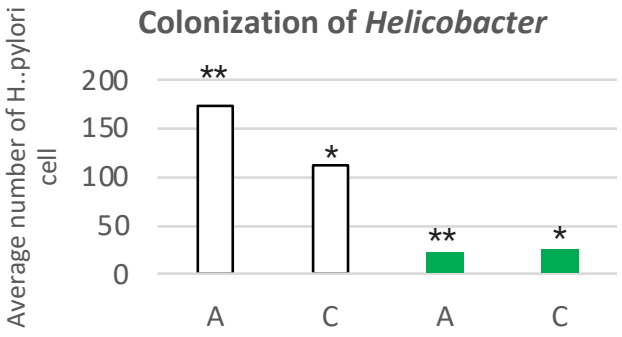


131 18 - 30 Y subjects	0,3 Bn CFU/day	Three-Month Randomized, double blinded, placbo-controlled

-31,5%
Risk of pathogen contracting

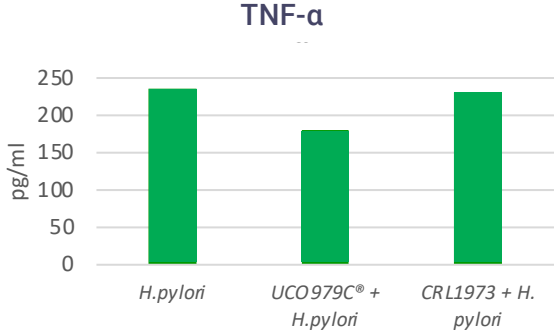
91%
Preventive efficacy against infection

Inhibition effect on pathogen colonization



A= gastric antrum B=gastric corpus

Immunomodulatory activity modulating inflammatory markers



* significantly different (P<0.05)
** highly significant differences (P=0.0040)

L. fermentum UCO-979C facts

- Is a natural ingredient covered by 2 patents
- Improves resistance against *H. pylori* infection, modulating the gastric innate immune response
- UCO-979C showed in human clinical trial to be effective at a very low efficacy dose
- Acts against recurrence episodes

[1] Brown, Epidemiol Rev. 2000;22(2):283-97. |[2] Apolinaria et al. Electronic Journal of Biotechnology, 25: 75-83. [3] Garcia-Castillo et al., Microorganisms 2020, 8, 479.
[4] Merino, J. S, Beneficial Microbes, 9(4), 625-627.(2018). [5] Cristian Parra-Sepúlveda et al, Foods 2022, 11, 1668

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