

Comparison of covalent delivery methods and their effects for immune-mediated killing of Helicobacter pylori

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Helicobacter pylori is a gram-negative, microaerophilic, spiral-shaped bacterium that is responsible for causing duodenal ulcers, gastritis, and even gastric cancer. Current treatment of H. pylori infection involves triple therapy, which includes a combination of two antibiotics, clarithromycin and either amoxicillin or metronidazole, and a proton pump inhibitor omeprazole. However, due to the rise in antibiotic resistance in H. pylori strains, this treatment is not effective in some individuals. In addition, even if the triple therapy is effective against H. pylori, there is convincing evidence that one week of triple therapy causes a shift in microbiota composition in the human gastrointestinal system for up to four years without further antibiotic treatment. The ineffectiveness of antibiotics as well as nonselective killing of pathogenic bacterial cells suggests that a new therapeutic methodology that would more effectively and selectively kill H. pylori needs to be developed.

H. pylori

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References

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