

Vaccines under development: *Helicobacter pylori*

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Abstract

Helicobacter pylori causes gastrointestinal disease including peptic ulcer and gastric cancer. An *H. pylori* vaccine is relevant because of the high prevalence of the infection and its associated complications. Extensive use of traditional antimicrobial therapies to eradicate *H. pylori* is not feasible, specially in developing countries, in part because of their high cost, associated adverse effects, the risk of reinfection, and the emergence of antimicrobial drug resistance. Numerous animal studies have been performed to determine infection outcomes and to explore the feasibility of a vaccine eradication or prevention of infection. These animal models with the possible exception of monkeys, have not been sufficient to address fundamental issues due to controversial results. A human model of *H. pylori* infection needs to be developed aimed to select an optimum vaccine candidate. The ultimate scientific goal will be to develop field studies using advanced vaccine candidates, but the current state of knowledge does is insufficient and has provided such candidates. These studies need to be designed in order to provide relevant information on immunity and pathogenesis associated to *H. pylori*.