

Second Stage – LAB.11***Helicobacter***

Members of the genus *Helicobacter* are curved or spiral organisms . They have a rapid, corkscrew motility resulting from multiple polar flagella. *H. pylori*, the species of human significance, is microaerophilic, and produces urease. It causes acute gastritis and duodenal and gastric ulcers. *H. pylori* (and several other *Helicobacter* species) are unusual in their ability to colonize the stomach, where low pH normally protects against bacterial infection. *H. pylori* infections are relatively common and worldwide in distribution.

Pathogenesis

Transmission of *H. pylori* is thought to be from person to person; the organism has not been isolated from food or water. Untreated, infections tend to be chronic, even lifelong. Although the organism is non-invasive, it recruits and activates inflammatory cells. Urease released by *H. pylori* produces ammonia ions that neutralize stomach acid in the vicinity of the organism, favoring bacterial multiplication. Ammonia may also both cause injury and potentiate the effects of a cytotoxin produced by *H. pylori*.

Diagnostic Laboratory Tests**Typical Organisms**

H.pylori has many characteristics in common with Campylobacters. It has multiple flagella at one pole and is actively motile.