

The histone-like protein HU has a role in gene expression during the acid adaptation response in *Helicobacter pylori*

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© 2017 John Wiley & Sons Ltd Background: Gastritis, ulcers, and gastric malignancy have been linked to human gastric epithelial colonization by *Helicobacter pylori*. Characterization of the mechanisms by which *H. pylori* adapts to the human stomach environment is of crucial importance to understand *H. pylori* pathogenesis. Material and Methods: In an effort to extend our knowledge of these mechanisms, we used proteomic analysis and qRT-PCR to characterize the role of the histone-like protein HU in the response of *H. pylori* to low pH. Results: Proteomic analysis revealed that genes involved in chemotaxis, oxidative stress, or metabolism are under control of the HU protein. Also, expression of the virulence factors Ggt and NapA is affected by the null mutation of *hup* gene both at neutral and acid pH, as evidenced by qRT-PCR analysis. Conclusions: Those results showed that *H. pylori* gene expression is altered by shift to low pH, thus confirming that acid exposure leads to profound changes in