

Taking sharper aim at stomach ulcer bacteria

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Scientists are reporting discovery of a much sought after crack in the armor of a common microbe that infects the stomachs of one-sixth of the world's population, causing stomach ulcers and other diseases. They identified a group of substances that block a key chemical pathway that the bacteria need for survival. Their study, which could lead to new, more effective antibiotics to fight these hard-to-treat microbes, is scheduled for the October 16 issue of *ACS Chemical Biology*.

Javier Sancho and colleagues note in the new study that [Helicobacter pylori](#) (*H. pylori*) bacteria infect the stomach lining and can cause gastritis and ulcers. Treatment with broad-spectrum antibiotics can cure *H. pylori* infections. However, an estimated one billion people remain infected worldwide because of the cost of existing antibiotics and the emergence of antibiotic resistant strains of the bacteria, the researchers say.

The scientists knew from past research that blocking flavodoxin, a key protein that *H. pylori* needs for survival, could be the key to developing narrow-spectrum antibiotics that specifically target *H. pylori*. Sancho's team screened 10,000 chemicals for their ability to block flavodoxin and identified four that showed promise. They then showed that three of the four substances killed *H. pylori* in cell cultures and did not have any apparent toxic effects in lab animals. "These new inhibitors constitute promising candidates to develop new specific [antibiotics](#) against *H. pylori*," the study states.

More information: "[Discovery of specific flavodoxin inhibitors as](#)

[potential therapeutic agents against Helicobacter pylori infection](#)", ACS *Chemical Biology*.

Source: American Chemical Society ([news](#) : [web](#))

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