

# Important defense against stomach ulcer bacterium identified

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A special protein in the lining of the stomach has been shown to be an important part of the body's defense against the stomach ulcer bacterium *Helicobacter pylori* in a new study from the Sahlgrenska Academy at the University of Gothenburg. The discovery may explain why the bacterium makes some people more ill than others.

The study was conducted in collaboration with researchers at universities in Brisbane and Melbourne and has been published in the scientific journal *PLoS Pathogens*.

"Half of all people carry [Helicobacter pylori](#) in their bodies," says Sara Lindén from the Sahlgrenska Academy, one of the researchers behind the study. "Many don't even notice that they have the bacterium, but some develop stomach ulcers, and in some cases the inflammation leads to stomach cancer. Our discovery may partially explain why the bacterium affects people so differently."

The research team has shown that a [protein](#) called MUC1 found in the lining of the stomach is important for the body's defence against the bacterium. Greatly magnified, MUC1 looks like a tree growing out of low bushes on the surface of the [stomach](#). As MUC1 is taller than the other structures on the cell surface, *Helicobacter pylori* readily becomes attached to the protein and then rarely gets to infect the cell.

"You could say that MUC1 acts as a decoy which prevents the [bacterium](#) from coming into close contact with the cell surface," says Lindén.

"Genetic variations between people mean that our MUC1 molecules vary in length, and this may be part of the reason why *Helicobacter pylori* makes some people more ill than others."

The Research team of Sara Lindén is located at the Sahlgrenska Academy's strategic research centre MIVAC (Mucosal Immunobiology and Vaccine Center). Researchers at the centre are developing new ways of treating diseases that affect the mucus membranes.

Source: University of Gothenburg ([news](#) : [web](#))

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