

In the news

MEET THE NEIGHBOURS

Although *Helicobacter pylori* and its role in various gastric diseases has been well studied since its discovery in the stomach just over 20 years ago, there has been little available data regarding the existence of distinct gastric microbial communities — until now.

The discovery of a previously unknown community of bacteria living in the human stomach has been in the news recently (BBC News, 9 January 2006), following a report published in the *Proceedings of the National Academy of Sciences*. A group of researchers, led by Elisabeth Bik at Stanford University, Massachusetts, USA, characterized the bacterial diversity within the human gastric mucosa, and found that 10% of the phylotypes had never been reported in humans.

Bik and colleagues analysed 1,833 sequences that were obtained from 23 gastric endoscopic biopsy samples, and identified 128 different types of bacteria. Although most could be assigned to one of five known bacterial phyla, 10% were previously uncharacterized. One of these new phylotypes was shown to be related to *Deinococcus* sp., which has been isolated from extreme environments such as radioactive-waste-disposal sites, hot springs and animal faecal samples. The authors add, “To our knowledge, this *Deinococcus*-related sequence is the first identified from a human.”

Further studies are needed to verify whether the stomach is indeed home to a complex gastric-mucosal biota, and what effect the presence of *H. pylori* might have on the community structure. The authors note, “A better understanding of the resident microbial communities at healthy and diseased sites should shed light on the pathogenesis, diagnosis, and treatment of gastrointestinal illness.”

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