

Understanding how the stomach responds to injury could help target therapy against gastric damage

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A better understanding of the stomach's immune response to *Helicobacter pylori* (*H. pylori*) infection could lead to new therapies targeting damage in the stomach, report researchers in the March issue of *Cellular and Molecular Gastroenterology and Hepatology*, the basic science journal of the American Gastroenterological Association.

When *H. pylori* infection is present, the alarmin Interleukin (IL)-33 is a critical messenger that triggers changes necessary for coping with the injuries caused by the infection. Specifically, it activates an inflammatory [immune response](#) that begins the process of cell loss that can lead to the onset of metaplasia.

"These (IL-33) immune cell drivers of proliferation and expansion of metaplasia may be a critical target for intervention and further research," said lead study author Jon N. Buzzelli, PhD, Murdoch Children's Research Institute, Department of Pediatrics, Royal Children's Hospital.

Researchers found that IL-3 is elevated during acute response to infection. It declines in chronic infection. This may account for alterations observed in patients with chronic [infection](#).

This investigation used a number of mouse models to define patterns of [immune regulation](#) of gastric pathology.

"Since other studies have noted that IL-33 may be elevated in association with metastatic gastric cancer, further investigations will be necessary to determine the changing influences of IL-33 at different stages of cancer development," notes James R. Goldenring, MD, PhD, AGAF, associate editor, *Cellular and Molecular Gastroenterology and Hepatology*.

More information: Buzzelli, Jon N., et al., IL33 Is a Stomach Alarmin That Initiates a Skewed Th2 Response to Injury and Infection, *Cellular and Molecular Gastroenterology and Hepatology* 2015; 1(2): 203-221.e3, [www.cmghjournal.org/article/S2... \(14\)00013-7/abstract](http://www.cmghjournal.org/article/S2... (14)00013-7/abstract)

Provided by American Gastroenterological Association

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