

Breakthrough for a better stomach

IIT-Gn Team Researches Drug Against H Pylori Bacteria

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Ahmedabad: Helicobacter pylori (H pylori) which builds long-term colonies in stomach linings of people has been identified as a major menace in the last 40 years. It can lead to gastric cancer in extreme cases and abdominal pain, diarrhoea, gas and bloating in less virulent stages. But there has been no sure-shot cure.

A researcher's team from IIT-Gandhinagar, which has raised hopes for a breakthrough, claims roughly 80% of India's rural population suffer from H pylori infestations. A study by a doctor's team done in 2012 found 2 crore Indians suffering from H pylori at the time.

Currently, H pylori is treated with quadruple therapy — where four drugs are taken four times a day for 10 days to contain the symptoms, but that may change with the new research for a targeted drug conducted by the team at IIT-Gn. The drug has been suc-



cessful in animal trials on rats, and there are hopes it may prove successful in human trials.

Dr Sivapriya Kirubakaran, assistant professor at IIT-Gn, said they have developed an indole-based scaffold that specifically targets Inosine-5 — monophosphate dehydrogenase (IMPDH)—an enzyme present in H pylori that helps the pathogen's reproduction. "The drug developed by us targets the enzyme directly and prevents its further growth by stopping the new DNA formation — in process stopping cell division," she said.

The small molecules developed at IIT-Gn thus binds with specific protein, she said, adding that they are in the pro-

cess of creating a model for the protein. "The field of biology and chemistry has a lot of potential for targeted therapy where other cells are not damaged. Validating IMPDH as a drug target for H pylori is our ultimate goal, and it would help make affordable medicine," she added.

Collaboration with other institutions is also in the pipeline for furthering the project, said team members. Collaborators for the project include Prof Vijay Thiruvengatam, P Gayathri, Dr Kapil Juvale, Althaf Shaik and Srimadhavi Ravi.

The bacteria is more prevalent in Asian and African countries and builds colonies on the lining of the stomach.

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