

IIT-INDORE STUDY

Oncogenic bacteria, tumour virus could trigger gastric carcinoma

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Indore

Oncogenic bacteria and tumour virus may trigger aggressive gastric carcinoma through Gankyrin, according to a study by the Indian Institute of Technology, Indore. The institute has conducted the study to understand the aggressive and drug-resistant gastric carcinoma due to the co-infection of *Helicobacter pylori* (H pylori) and Epstein Barr virus.

The study was conducted by the group leader of Infection Bioengineering at IIT, Indore, Dr Hem Chandra Jha, along with his research scholars, Dharmendra Kashyap, Budhadev Baral and Shweta Jakhmola, in collaboration with Dr Anil Kumar Singh of CSIR-North East Institute of Science and Technology, India.

"For the first time, the study demonstrated the involvement of Gankyrin protein in stomach bacte-



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ria (*Helicobacter pylori*) and tumor virus (Epstein Barr virus) in gastric cancer (GC) progression," Jha said.

"Importantly, the co-infection of dual pathogens rapidly accelerate the GC and shorten the time span of its progression by 2.5 years compared to normal GC (7-10 years)," he explained. He added, "Experimentally, ectopically expressed Gankyrin elevated the cancer properties, such as cell migration, cell proliferation, colony forma-

tion and cancer cell-signalling (cell cycle regulator genes, proapoptotic genes, antiapoptotic genes and cell migratory genes). Furthermore, knockdown of Gankyrin delayed the cancer progression properties in an in vitro experimental set-up."

This study, funded by the Department of Science and Technology, Government of India, has been accepted by the American Society of Microbiology in the journal, mSphere.