

New study offers novel treatment strategy for patients with colon cancer

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Colorectal cancer is the fourth leading cause of cancer-related deaths worldwide.

In a new study, researchers demonstrate for the first time that a previously uncharacterized protein is increased in [colon cancer](#). The protein is immunoglobulin containing proline rich receptor-1 (IGPR-1) which was recently identified in the same laboratory as a [cell adhesion molecule](#).

The new findings, reported online in *Oncogenesis*, shed light on how IGPR-1 contribute to colon [tumor growth](#) and [drug resistance](#).

To grow and survive, normal cells needs to attach to extracellular matrix (ECM). However, cancerous cells, often bypass this requirement and instead they rely on cell-cell adhesion for survival and growth. By manipulating IGPR-1 expression in colon cancer tumor, the scientists revealed that IGPR-1 by promoting tumor cell-cell adhesion plays a critical role in colon cancer. The researchers hope to propose a new treatment strategy for patients with colon cancer.

"We demonstrate that IGPR-1 by promoting tumor cell-cell adhesion stimulates tumor growth in cell culture and in an experimental model. Blocking IGPR-1 by a specific blocking antibody and shRNA inhibited tumor growth, suggesting a significant therapeutic potential for targeting IGPR-1 in [colorectal cancer](#) " explained corresponding author Nader Rahimi, PhD, associate professor of pathology & laboratory Medicine at

Boston University School of Medicine.

The researchers also demonstrated that IGPR-1 determines the sensitivity of tumor cells to chemotherapeutic agent, doxorubicin/Adriamycin and identified the mechanism by which IGPR-1 contributes to drug resistance in colon cancer, a major challenge associated with the treatment of this cancer.

Provided by Boston University School of Medicine

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