

Researchers set new bases to develop therapies against colorectal cancer

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Dr. David G. Molleví and Dr. Natalia Guillén Díaz-Maroto, the group leader and first author of the study, respectively. Credit: Gemma Fornons

Researchers from the Bellvitge Biomedical Research Institute (IDIBELL) and the Catalan Institute of Oncology (ProCURE program) have published the bases for new therapies against colorectal cancer in *Clinical Cancer Research*.

"We have found that if we inactivate two proteins, called TAK1 and TGFBR1, which are involved in cellular signaling in [normal tissue](#) surrounding tumors, tumoral cells are more sensitive to chemotherapy and their metastatic capacity is reduced," says Dr. David G. Molleví.

In a developed tumor, there are different cell types. On the one hand, there are the [cancerous cells](#), and on the other hand, there are "normal" cells, which are generically called stroma. Amongst these cells, the most common type are the fibroblasts, which comprise a supporting scaffold. Fibroblasts supply molecules and factors that nourish the tumor and make it "invisible" to

chemotherapy treatments.

One of the many existing research approaches against cancer is attempting to alter the interaction between the stroma and tumor, so that the tumor's development is impaired, rendering it vulnerable. This way, tumors can be treated with chemotherapy with a lesser probability of resurgence. "This finding provides the rationale to create new therapies against [colorectal cancer](#), especially in the most abundant tumor subgroup in fibroblasts," says Molleví. These results could lead to new therapies.

More information: NG Díaz-Maroto et al, Non-canonical TGFb pathway relieves the blockade of IL-1b/TGFb-mediated crosstalk between tumour and stroma: TGFBR1TAK1 inhibition in colorectal cancer., *Clinical Cancer Research* (2019). [DOI: 10.1158/1078-0432.CCR-18-3957](https://doi.org/10.1158/1078-0432.CCR-18-3957)

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