Promising gene therapy could help kill tumors

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Cancer scientists toiling in one of the world's largest research clusters are setting their sights on what could become a game-changing approach to battling hard-to-treat tumors.

Experiments at Novartis Institutes for BioMedical Research and the Broad Institute of MIT and Harvard, described in a pair of papers published in the medical journal Science, identified the gene PRMT5 as a promising target that drug developers can use in knocking out cancer cells.

While the full impact of their findings isn't yet clear, Novartis has deployed between 30 and 40 researchers here to screen drug compounds aimed at PRMT5, which they have linked directly to some of the most intractable blood, brain, and pancreatic cancers.

Two research teams across town at the Broad, meanwhile, are engaged in follow-up studies to better understand the mechanisms of PRMT5 and determine if there might be other drug targets that function in similar ways.

Researchers caution they are a long way from fielding effective cancer medicines based on discoveries from their experiments, code-named Project Drive at Novartis and Project Achilles at the Broad. But if their initial hypotheses pan out, the work could open a new cancer research field and give industry and academic drug discovery teams an important new tool.

"This is an exciting new research target," said Bill Sellers, global head of oncology at Novartis Institutes. "If we can make the right therapy, it would selectively kill tumors."

Read full, original post: Targeting the 'gene next door' to fight hard-to-treat tumors