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# Researchers discover protein complex that promotes cancer growth

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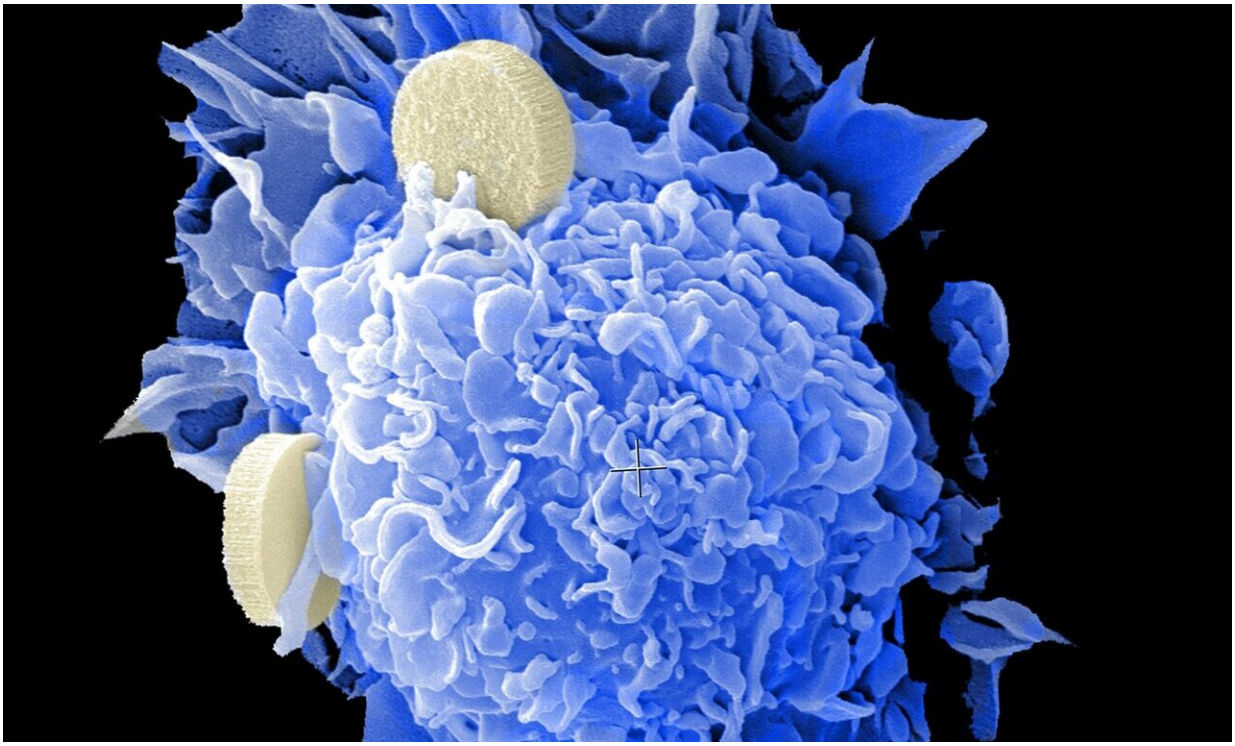

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A discovery by a team of researchers, led by a Geisinger professor, could yield a potential new treatment for breast cancer.

In a study published this month in *Cell Reports*, the team used small molecules known as peptides to disrupt a complex of two proteins,

RBM39 and MLL1, that is found in breast cancer cells but not in normal cells.

The research team discovered that the abnormal interaction between RBM39 and MLL1 is required for breast cancer cells to multiply and survive. The team developed non-toxic peptides that prevent these proteins from interacting in breast cancer cells, disrupting their growth and survival.

"Because these proteins do not interact in normal cells, the peptides we developed are not harmful to them," said Anne M. Moon, M.D., Ph.D., professor at Geisinger's Department of Molecular and Functional Genomics and senior author of the study. "This offers promise for future non-toxic cancer treatment."

Further laboratory tests are needed before the treatment could be trialed in humans, Moon said.

**More information:** Pavan Kumar Puvvula et al, Inhibiting an RBM39/MLL1 epigenomic regulatory complex with dominant-negative peptides disrupts cancer cell transcription and proliferation, *Cell Reports* (2021). DOI: 10.1016/j.celrep.2021.109156

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