

# An unexpected role for epigenetic enzymes in cancer

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To better understand how cancer initiates and spreads, Yale associate professor of pathology Qin Yan turned to the field of epigenetics, which examines changes in the expression of genes and proteins that do not affect the underlying genetic codes.

In a Yale-led study, Yan and his co-authors focused on a family of enzymes—known as KDM5—that had been shown in previous studies to be involved in [cancer cell growth](#) and spreading.

First author Lauren Blair, an associate research scientist, conducted biochemical studies with Baker's yeast as the model system, and identified an unexpected role of these enzymes in the process by which genetic messages are interpreted by [yeast cells](#). Further studies showed that the enzymes' role as regulators of this process is also important for human tumor cells to grow and spread. The finding could lead to a therapy that inhibits the enzyme, and [tumor growth](#), in cancer patients.

The study is published in *Science Advances*.

**More information:** L. P. Blair et al. KDM5 lysine demethylases are involved in maintenance of 3'UTR length, *Science Advances* (2016).  
[DOI: 10.1126/sciadv.1501662](https://doi.org/10.1126/sciadv.1501662)

Provided by Yale University

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