Role of melanoma-promoting protein revealed

December 6 2017, by Ziba Kashef

Credit: stock.adobe.com

In a new study, Yale researchers describe the role of a protein that promotes growth of melanoma, the deadliest form of skin cancer.

The gene, MELK, encodes a protein kinase—an enzyme that modifies other proteins—and is over-expressed in melanoma patient samples

compared to normal skin. The research team, led by associate professor of pathology Narendra Wajapayee, analyzed human melanoma cells to determine how MELK stimulates cancer growth, and whether they could block its activity to prevent melanoma growth and enhance the efficacy of existing therapies that target the BRAF cancer gene.

The researchers found that MELK is regulated by key melanoma-promoting cancer genes, including BRAF. Additionally, they revealed that MELK regulates the modification of several cellular proteins that were previously described as either BRAF or MEK targets. Additional experiments using drugs or through genetic techniques revealed that MELK targeting might be a promising therapeutic option for treating melanoma.

The study is published in *Cell Reports*.

More information: Radoslav Janostiak et al. MELK Promotes Melanoma Growth by Stimulating the NF-κB Pathway, *Cell Reports* (2017). DOI: 10.1016/j.celrep.2017.11.033

Provided by Yale University