Cancer Prevention Research

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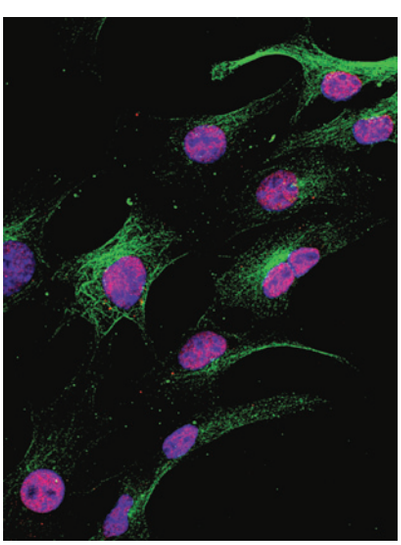
ABOUT THE COVER

Epidemiological evidence implicates obesity and the deposition of excess visceral adipose tissue (VAT) in increasing the risk of different cancers, including breast cancer, and cancers of prostate, colon, and esophagus. Cancer is the second foremost cause of death globally, and obesity may contribute to 20% of all cancer-related deaths in the United States. As previously demonstrated by this group, fibroblast growth factor-2 (FGF2) released from VAT induced malignant transformation of non-tumorigenic epithelial cells. At present, there is no preventive measure available in the clinic to prevent VAT/obesity-induced malignant transformation and early-stage cancers.

However, Chakraborty and colleagues describe a possible therapeutic approach by administering a bromodomain inhibitor, I-BET 762 (beginning on page 129). The study demonstrated that VAT and FGF2 upregulate c-Myc protein expression and inhibition of c-Myc at the transcriptional level attenuates malignant transformation. I-BET 762 is currently in clinical trials for the treatment of cancers. Therefore, understanding the critical molecular mechanisms associated with I-BET 762-induced attenuation of transformation may offer a new therapeutic approach to prevent obesity-associated cancers. The cover immunofluorescent image shows overexpressed nuclear c-Myc (in red) in JB6 P+ mouse epidermal cells treated with VAT.



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