New therapeutic target for prostate cancer identified

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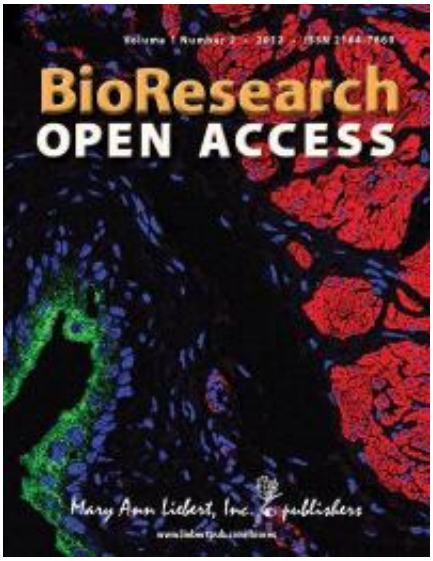

A small, naturally occurring nucleic acid sequence, called a microRNA, known to regulate a number of different cancers, appears to alter the activity of the androgen receptor, which plays a critical role in prostate cancer. Directly targeting microRNA-125b to block androgen receptor activity represents a novel approach for treating castrate-resistant prostate cancer. This promising new strategy for improving the effectiveness of anti-androgenic and other hormonal therapies is described in an article in *BioResearch Open Access*.

Prostate cancer is the most common non-skin cancer affecting men and the second most common cause of cancer death among men. In the article "miR-125b Regulation of Androgen Receptor Signaling Via Modulation of the Receptor Complex Co-Repressor NCOR2," Xiaoping Yang, Lynne Bernis, Lih-Jen Su, Dexiang Gao, and Thomas Flaig, University of Colorado Denver (Aurora) and University of Minnesota (Duluth), looked for targets of microRNA-125b that might shed light on its role in regulating prostate cancer and found that it directly inhibits NCOR2, which acts to repress the androgen receptor. The authors point out that "the androgen receptor is a critical therapeutic target in prostate cancer" and that alterations in the receptor are essential for the development of castrate-resistant prostate cancer, in which the disease no longer responds to hormonal therapies.

"This research provides new insight into the mechanism of miR-125b regulation of castrate-resistance prostate cancer through the identification of a novel target for miR-125b," says Editor-in-Chief Jane Taylor, PhD, MRC Centre for Regenerative Medicine, University of Edinburgh, Scotland. "The clinical implications of this study are that targeted regulation of this miRNA may lead to more effective anticancer therapies."

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