

Researchers identify target for shutting down growth of prostate cancer cells

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Scientists at UT Southwestern Medical Center have identified an important step toward potentially shutting down the growth of prostate cancer cells.

Dr. Ralf Kittler, Assistant Professor of Pharmacology, studies ERG, a protein that facilitates the transformation of normal prostate cells into [cancer cells](#). His lab found that an enzyme called USP9X protects ERG from degradation and subsequently found that a molecule called WP1130 can block USP9X and lead to the destruction of ERG.

"We now have a target that we could potentially exploit to develop a drug for treatment," said Dr. Kittler, UT Southwestern's first Cancer Prevention and Research Institute of Texas (CPRIT) Scholar in Cancer Research.

The findings are published in the *Proceedings of the National Academy of Sciences*. Dr. Kittler's team tested the molecule successfully in mice, but the process needs to be improved to be effective in humans, he said. Toxicity and side effects also will be tested, so much work lies ahead, and it could take many years before knowing whether the molecule can be developed into a drug that is effective in humans.

"It's a good start, and now we are in a position to develop the finding further in an effort to move into the clinic," said Dr. Kittler, the John L. Roach Scholar in Biomedical Research of UT Southwestern's Endowed Scholars Program.

The observation may represent an important advance against one of the major cancer killers. Prostate cancer is the most common type of cancer in men and the second most common cause of male cancer death in the United States. The disease caused nearly 30,000 deaths in 2013, according to the American Cancer Society.

Metastatic prostate cancer currently is treated with drugs that inhibit a protein called Androgen Receptor. This treatment initially halts cancer growth, but eventually the [cancer](#) becomes resistant to the drugs. Dr. Kittler's findings offer a new avenue of research.

Provided by UT Southwestern Medical Center

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