

Proepithelin encourages cell growth and migration in prostate cancer

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Researchers from Thomas Jefferson University have identified a protein that appears to play a significant role in the growth and migration of prostate cancer cells, especially androgen-independent prostate cancer cells. The study was published in the *American Journal of Pathology*.

They also found that prostate cancer cells express more of the protein when compared to normal prostate cells, according to Andrea Morrione, Ph.D., an associate professor and director of Urology Research for the Kimmel Cancer Center at Jefferson.

Dr. Morrione conducted the study with Leonard Gomella, M.D., chairman of the department of Urology, Raffaele Baffa, M.D., an associate professor in the department of Urology, and Renato V. Iozzo, M.D., Ph.D., professor in the department of Pathology, Anatomy and Cell Biology.

Proepithelin is a growth factor that promotes cell cycle progression and cell growth in many cellular systems. According to Dr. Morrione, the overexpression of proepithelin by prostate cancer cells may prove to be a useful clinical marker to diagnose prostate cancer.

The presence of proepithelin also encourages cell migration, which is necessary for tumor metastasis. Thus, it may serve as a marker for metastasis.

Proepithelin has previously been shown to play a role in the formation of

bladder cancer, and its overexpression is related to an aggressive form of breast cancer according to Dr. Morrione. It also has been shown to play a role in many other cancers, including glioblastomas, multiple myeloma, renal cell carcinoma, gastric cancer and ovarian cancer.

"There are two possible implications of our findings," Dr. Morrione said. "First, proepithelin could be a therapeutic target since it is overexpressed in prostate cancers.

Second, the overexpression of proepithelin could serve as a biomarker and be a diagnostic tool for prostate cancer."

Although localized prostate cancers are potentially curable by surgery and/or radiation therapy, there is no uniform effective treatment for hormone-refractory prostate cancer. There are no reliable prognostic markers to identify which of patients are likely to progress to metastatic disease.

Source: Thomas Jefferson University

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