"Diagnostic Biomarkers for the Identification and Staging of Prostate Cancer"

VCU # 15-61

Applications

- Detection of prostate cancer
- Staging of prostate cancer
- Aggressiveness assessment

Advantages

- Early detection
- Reduce occurrence of false positive diagnoses
- Reduce the use of unnecessary treatments (i.e. chemotherapy)

Inventors

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Technology Summary

Prostate cancer is the second leading cause of death in men. The American Cancer Society reports 1 in 6 men will develop prostate cancer by age 70, and 1 in 3 men will eventually be diagnosed with prostate cancer. Dr. Zehner and colleagues at VCU have identified a novel application of a laboratory assay to detect diagnostic biomarkers that are linked to prostate cancer. These biomarkers are known to be dysregulated in cases of prostate cancer, and may promote prostate cancer progression, tumorigenesis and metastasis. Both blood and urine can be used to detect the biomarkers, which improve the diagnostic capabilities by analyzing multiple body fluids. In addition, the use of urinary-specific biomarkers would be a less invasive and thus less painful process for identifying prostate cancer. When more experimental evidence is amassed, and correlated with disease outcome, it is anticipated this information could be used to stage the severity of prostate cancer, and distinguish indolent from aggressive forms of prostate cancer. This new information may provide the best treatment options, if higher success rates in treating prostate cancer are to be obtained. Unfortunately, current detection methods can lead to a high rate of false positives, resulting in unnecessary treatments (i.e. radiation or radical prostatectomy) often time generating negative side effects. Thus, better assay methods are required. Early detection and early staging of prostate cancer may solve some of the problems associated with prostate cancer therapy.

Technology Status

In vitro data available
Patent pending: U.S. and foreign rights available
This technology is available for licensing to industry for further development and commercialization.