



## **Novel Method for Early Cancer Diagnosis**

*The University of Louisville is seeking a company interested in commercializing a novel method for the early diagnosis of a wide range of cancers. The method involves the detection of autoantibodies specific to procathepsin D (pCD; a protein secreted by cancer cells). Unlike other antigen-based cancer screening methods currently used, this method provides the distinct advantage of early diagnosis since anti-pCD autoantibodies can be detected early in the establishment of the disease. This difference can have a profound effect on improving patient prognosis. For example, Stage I ovarian cancer patients can expect a 90% cure rate, while five-year survival rates for Stage III and IV cases are less than 20%.*

### **Applications**

- Early cancer diagnosis and prognosis achieved via processing serum samples
- Screening for many, if not all types of cancer

### **Advantages**

- Improved patient prognosis resulting from earlier detection and subsequent treatment
- Inexpensive and minimally invasive test requires only a serum sample processed via common medical laboratory techniques (ELISA)
- Broad market application due to the wide range of testable cancers and ease of test administration and evaluation

### **Technology**

Procathepsin D (pCD) is a protein normally found only inside of the cell. However, pCD is actively secreted by cancerous cells, serving as an autocrine growth factor and stimulating their proliferation. Interestingly, the body produces antibodies against pCD, and these autoantibodies can be easily measured to provide information about the presence and stage of the cancer. Furthermore, Anti-pCD autoantibodies are detectable in the patient's serum in the early stages of disease, making them an attractive marker for the early diagnosis of a wide range of cancers.

### **Intellectual Property**

U.S. Provisional Patent Application filed June 16, 2008.

### **Contact**

For more information, or to discuss sponsored or collaborative research and development opportunities, please contact:

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