



## DIAGNOSTIC ASSAYS FOR THE DETECTION OF THYROID CANCER

### SUMMARY

The Eunice Kennedy Shriver National Institute of Child and Human Development's Pediatric Growth and Nutrition Branch seek partners to co-develop a diagnostic assay to detect thyroid cancer.

### REFERENCE NUMBER

E-016-2013

### PRODUCT TYPE

- Diagnostics

### KEYWORDS

- Thyroid cancer
- Thyroid
- Midkine
- Pleiotrophin
- Commercial diagnostic kit

### COLLABORATION OPPORTUNITY

This invention is available for licensing.

### CONTACT

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### DESCRIPTION OF TECHNOLOGY

Thyroid cancer represents a disease particularly amenable to improved methods of diagnosis. Current methods of diagnosis determining the malignancy of thyroid nodules involve needle biopsies and microscopic inspections which are subjective, often leading to inconclusive results and the need for surgery. Therefore, there is a need for improved methods of diagnostic accuracy.

NIH scientists have developed two ELISA assays for distinguishing malignant versus benign thyroid biopsy samples. The ELISA assays quantify the amount of midkine and pleiotrophin present in thyroid tissue samples collected from fine needle aspirates. Midkine and pleiotrophin are both low molecular weight growth factors that are over-expressed in many cancerous tissues. Application of this technique for the identification of thyroid cancer represents a first-in-class diagnostic for this disease.



## POTENTIAL COMMERCIAL APPLICATIONS

- A diagnostic kit for the detection of thyroid cancer.

## COMPETITIVE ADVANTAGES

- High assay sensitivity permits the use of small tissue samples (e.g., fine needle aspirates of nodules)
- Assay can incorporate commercially-available midkine or pleiotrophin antibodies.
- Assay relies on proven ELISA detection technology.

## INVENTOR(S)

[Jeffrey Baron](#), Youn Hee Jee

## DEVELOPMENT STAGE

- Discovery (Lead Identification)

## PATENT STATUS

- Not Patented

## THERAPEUTIC AREA

- Cancer/Neoplasm
- Hormonal Systems, Endocrine, and Metabolic Diseases