Estrogen-Related Receptor Gamma, a Breast Cancer Biomarker and Target for Treatment

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing methods for using ERR-gamma as a breast cancer biomarker and treatment target.

OVERVIEW

Estrogen receptor-alpha (ER-alpha) has become the single most important biomarker and target for breast cancer therapy. The human estrogen-related receptor gamma (ERR-gamma) is an orphan receptor that shares significant amino acid sequence identity with ER-alpha.

THE INVENTION

UW-Madison researchers have developed methods for using ERR-gamma as both a breast cancer biomarker and a target for treatment. As a biomarker, it provides a method of determining a patient’s breast cancer prognosis. Expression levels of ERR-gamma are analyzed along with the status of other genes related to breast cancer to help breast cancer patients and their doctors make treatment choices. A high level of ERR-gamma in breast cancer cells indicates good prognosis and a high likelihood of being sensitive to hormonal blockade therapy such as tamoxifen therapy. The receptor also provides a target for treating breast cancer, which involves decreasing the activity of ERR-gamma in breast cancer cells.

APPLICATIONS

• Determining breast cancer prognosis
• Provides a breast cancer treatment target

KEY BENEFITS

• May help breast cancer patients make more informed treatment choices
• Provides a method of categorizing breast cancer patients for treatment purposes
• Screening for mutations in the ERR-gamma gene could provide a means to rapidly
identify patients needing further examination for breast cancer.

- Measuring the expression of ERR-gamma in breast tissue suspected of being cancerous may help diagnose breast cancer.

**ADDITIONAL INFORMATION**

**Tech Fields**
Diagnostic Assays - Cancer
Drug Discovery - Targets

**CONTACT INFORMATION**

For current licensing status, please contact Jennifer Gottwald at jennifer@warf.org or 608-960-9854.