

# Diagnostic Panel of Modified Proteins for Breast Cancer Subtypes

**A liquid biopsy technology isolates and analyzes extracellular vesicles to accurately identify breast cancer subtypes, enabling precise, tailored treatment strategies.**

Researchers at Purdue University have developed a method that can differentiate cancer subtypes and aid in early detection for breast cancer. Early diagnosis and identification of the disease may permit earlier intervention and treatment and more successful outcomes for patients. Blood testing aka "liquid biopsy" for early diagnosis and monitoring of cancer is highly attractive; however, the number and complexity of various proteins in the blood makes the identification of appropriate diagnostic markers a serious challenge. This innovation reduces the complexity of the liquid biopsy samples. Extracellular vesicles, membrane encapsulated particles whose contents are protected from enzymes in the blood, are isolated from the blood and used as a source of biomarkers. This technology isolates extracellular vesicles from a patient sample and analyzes their contents to differentiate breast cancer subtypes. With knowledge of the specific breast cancer subtype, doctors can better tailor treatment for the patient.

## Advantages:

- Differentiate cancer subtypes
- Allows for tailored treatment

## Potential Applications:

- Breast cancer diagnosis
- Subtype identification

**TRL: 2**

## Intellectual Property:

**Technology ID**  
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## Category

Biotechnology & Life  
Sciences/Biomarker Discovery &  
Diagnostics

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