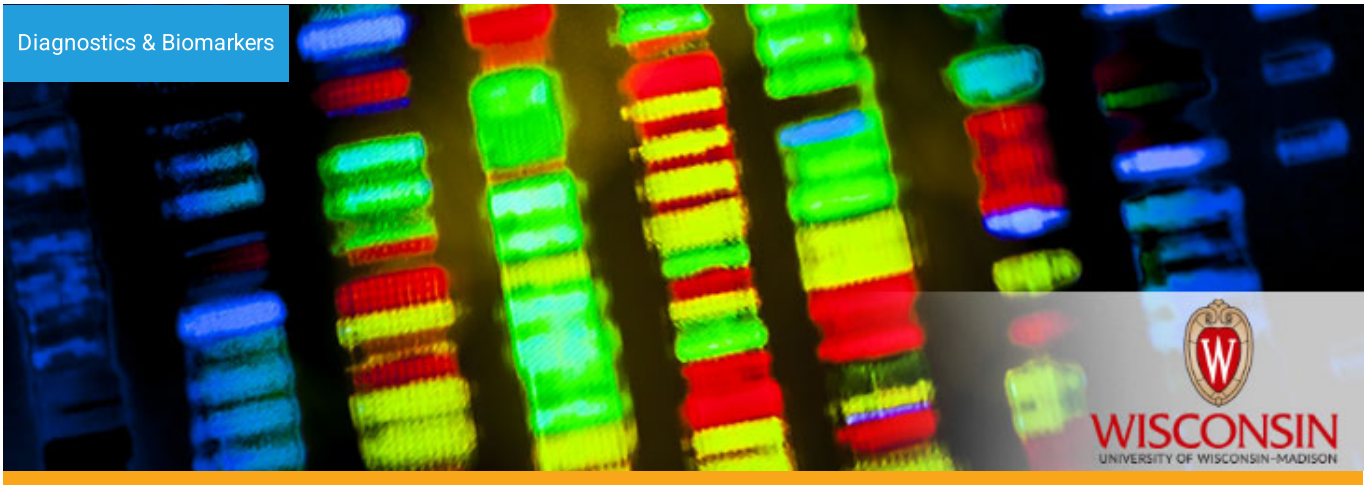

AN ACCURATE AND COMPREHENSIVE CARDIAC TROPONIN I ASSAY ENABLED BY NANOTECHNOLOGY AND PROTEOMICS

View U.S. Patent Application Publication No. US-2023-0035606 in PDF format.

WARF: P190235US02

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The Invention

UW-Madison researchers have developed mass spectrometry (MS) compatible nanoparticles for the selective capture and enrichment of low abundance proteins. The surface of superparamagnetic nanoparticles are functionalized with probe molecules that specifically bind to the desired protein. In addition, the researchers have developed methods for MS analysis of the captured proteins, including identification of different proteoforms, particularly cardiac proteins (e.g., cardiac troponin I (cTnI)) arising from post-translational modifications and sequence variations. Together, these materials and associated methods enable MS-analysis and characterization of cTnI proteoforms from human heart tissue lysates and human blood or serum samples. Such assays are useful for accurate diagnosis of acute coronary syndrome and chronic diseases, including acute myocardial infarction and other cardiac injuries, as well as risk stratification and outcome assessment for patients.

Additional Information

For More Information About the Inventors

- Song Jin

Tech Fields

- Diagnostics & Biomarkers : Diagnostics

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

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