

Non-Confidential Description - PSU No. 3488
“A Plasma Protein Diagnostic of Alcohol Consumption and Alcohol Abuse”

Keywords:

Clinical Disease Biomarkers

Links:

[Inventor Website – 1](#)

[Inventor Website – 2](#)

[US Patent 8,647, 825](#)

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Background

Alcohol abuse and alcoholism exact a tremendous cost on our society. In economic terms alone, over \$170 billion is lost each year to the effects of excess drinking. Unfortunately, the clinical treatment community lacks a reliable test to monitor at-risk populations such as the recovering alcoholic, pregnant women, and critical members of the community (public transportation, active duty military, and healthcare providers). Self-reported use, though informative, is known to be inconsistent. Indeed, there is a motivation for patients to deny drinking. There is a large existing market in clinical testing for drugs of abuse. A test that could accurately classify individuals as alcohol abusers would have the clear commercial potential to fill the unmet clinical and public safety need for identifying, monitoring, and treating alcohol abuse and alcoholism.

Invention Description

We have developed a highly sensitive and specific biomarker assay panel which can differentiate between non-drinking, appropriate alcohol use, and alcohol abuse. Our panel of plasma protein biomarkers has a number of potential applications in clinical and public safety settings. The specific proteins in the biomarker panel reflect changes in multiple organ systems and suggest rapid and robust changes in the plasma proteome with excessive drinking.

Advantages/Applications

- Sensitive
- Accurate
- Adaptable; little optimization required – Solution phase analytical tools already exist
- Multiplexing technologies would permit ready assessment in a single assay format

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