

# "Non-Invasive Test for NASH:

# **Blood Not a Liver Biopsy**"

VCU #13-074

## **Applications**

- Non-invasive diagnosis of non-alcoholic steatohepatitis (NASH)
- Differentiation of NASH from non-alcoholic fatty liver disease (NAFL)
- Method to stage NASH to determine treatment/need for liver biopsy

### **Advantages**

- Improved accuracy
- Easy to use point of care test
- Potential for companion diagnostic
- Reduced patient mortality/morbidity
- Early diagnosis = I improved outcome

#### **Inventors**

Arun Sanyal, M.D.

Puneet Puri, M.D.

Faridodin Mirshahi, Ph.D.

#### Contact

T. Allen Morris, PhD, MBA, Associate Director, amorris5@vcu.edu Direct 804-827-2211

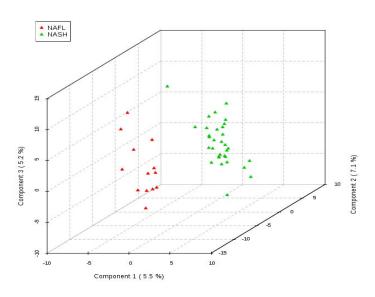
#### **Market Need**

Non-alcoholic steatohepatitis (NASH), a more severe form of non-alcoholic fatty liver disease (NAFL) is one of the leading causes of cirrhosis in adults in the United States. Up to 25% of adults with NASH may have cirrhosis. The current diagnostic method to differentiate NASH from NAFL, is suboptimal, requiring a liver

biopsy, an invasive diagnostic procedure that has associated direct and indirect costs, morbidity and mortality as well as patient inconvenience. Healthcare providers, third party payers and most of all patients view the development of a non-invasive test imperative to the diagnosis and management of NASH.



Dr. Sanyal, a world's leading expert in NASH, and colleagues have developed a panel of biomarkers that can be used to identify people with NAFL and/or NASH and clearly distinguish between these two conditions. This diagnostic assay allows for identification of patients with NASH in a non-invasive, simple point of care test using blood samples.



## **Technology Status**

Metabolites in plasma from patients with NAFL and NASH

Strong patient data demonstrating reliability of test is available.

Patent pending: U.S. and foreign right available.

This technology is available for licensing to industry for further development and commercialization.