A COMPLEX DISEASE WITH MANY OPEN QUESTIONS AND DEVELOPMENT HURDLES

NAFLD encompasses a spectrum of diseases that range from simple steatosis to NASH, cirrhosis and hepatocellular carcinoma. As the disease progresses, hepatic lipid accumulation is accompanied by excessive inflammation and oxidative stress. Eventually, fibrosis, the primary clinical predictor of risk, can be detected and used to stage NASH. Diagnostic and therapeutic options are starkly limited.

A diverse set of disease drivers; including genetics, environmental cues, microbiota metabolism and lifestyle influences, come together resulting in an uncertain natural history of NAFLD/NASH. The constellation of risk factors for NASH has spawned a remarkable array of targets. Metabolic pathways underlie the biology of NAFLD/NASH, risk factors and the targets being pursued. By simultaneously surveying diverse metabolic pathways in a single sample, Precision Metabolomics provides a holistic assessment of NAFLD/NASH complexity.

Notable insights assessed by Precision Metabolomics are:

- **Lipid metabolism** (de novo synthesis and oxidation)
- **Inflammatory pathways**
- **Redox balance** (antioxidant defenses such as glutathione and markers of oxidative stress)
- **Microbiota metabolism** (bacterial and host metabolites at the intersection of this relationship)
Metabolon is a leader in Precision Metabolomics in the NAFLD/NASH space with publications including:

**Clinical**

**Pre-Clinical**

**In Vitro**
- Brown M.V. et al. *Obesity*, **000**, 1-10 (2013)

**GLOBAL METABOLOMICS**
Cast a wide research net with our global metabolomics technology (1,000+ metabolites/sample)

**COMPLEX LIPID PANEL™**
Our insightful lipidomics approach comprehensively quantitates up to 1,100 lipids/sample

**TARGETED ASSAYS**
Narrow your focus to specific pathways, themes or metabolites with custom or pre-developed assays

**FOR MORE INFORMATION, PLEASE VISIT** [www.metabolon.com](http://www.metabolon.com)

**OR CALL US AT** 1.919.572.1711.