



## Alamar Biosciences Unveils Novel Proteomics Platform with Best-in-Class Sensitivity and High Multiplexing Capability

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- *Multiplex analysis of 204 serum proteins with attomolar sensitivity and 10 logs dynamic range enables accurate measurement of expression changes across the biological spectrum.*
- *NULISAseq™ Inflammation Panel demonstrated superior sensitivity to existing platforms in real-world applications*

**Fremont, CA, US – April 12, 2023** – Alamar Biosciences, a company powering precision proteomics to enable the earliest detection of disease, announced today the unveiling of its technology platform NULISA™, a novel automated ultrasensitive and highly multiplexed proteomics technology for liquid biopsy. The *bioRxiv* publication, titled [NULISA: a novel proteomic liquid biopsy platform with attomolar sensitivity and high multiplexing](#), provides detailed information on the development and validation of NULISA and showcases its superior sensitivity to existing platforms in real-world applications. Using a unique 200-plex inflammation panel targeting a broad selection of important mediators of inflammation and immune response, the authors demonstrated that NULISA's superior sensitivity and dynamic range allowed for more accurate measurement of protein changes compared to existing methods, which could lead to new biological insights.

"The NULISA platform reinvents the immunoassay by leveraging our proprietary signal-to-noise ratio enhancement technology, along with the latest advancements in Next-Generation Sequencing (NGS), to bring both ultra-high sensitivity and high multiplexing to proteomic analysis," said Dr. Yuling Luo, Founder, Chairman & CEO of Alamar. "Technological advances such as this will make protein-based liquid biopsies routine across pharmaceutical and academic labs and eventually standard of care."

"Highly sensitive and robust assays are critical to measuring changes in the low-abundance portion of the proteome, which is enriched with important biomarkers such as interferons", said Eicke Latz, MD, PhD, Professor of Medicine, Founder and Director of the Institute of Innate Immunity, University of Bonn, Germany. "NULISA assays will now provide researchers with the ability to profile multiple proteins at once with high sensitivity and reproducibility."

Plasma based biomarkers have the potential to revolutionize medicine by providing a non-invasive method for early detection of disease, monitoring disease progression and therapeutic response. Proteins are the targets for most therapeutics and accurate measurement of changes in protein levels can provide valuable information in guiding clinical decisions. Many clinically relevant protein biomarkers exist at very low levels in blood, but current methods lack the sensitivity and dynamic range to accurately measure them.

Alamar's NULISA technology utilizes a novel sequential capture and release method to purify the immune complex, improving signal-to-noise by more than 10,000-fold. It also provides corresponding increases in sensitivity and dynamic range in comparison with traditional immunoassay approaches. With both qPCR and NGS readouts, NULISA enables both focused analysis of validated biomarkers and highly multiplexed profiling of hundreds to ultimately thousands of proteins. Alamar's instrument, the ARGO™ System, enables a fully automated workflow, with less than 30 minutes of hands-on time from sample to data, enabling highly reproducible results with less than 10% coefficient of variation (CV).

### About NULISAseq™ Inflammation Panel

The NULISAseq Inflammation Panel contains more than 200 important markers of immune response including over 120 cytokines and chemokines, the most in any single immunoassay panel to date. This robust panel supports comprehensive protein profiling of the inflammation and immune landscape in diverse diseases. In a head-to-head comparison with other commercially available inflammation panels, NULISAseq demonstrated superior sensitivity when detecting many rare proteins, such as interferons, IL4, IL5, IL20, IL17A, IL17F, IL33, and IL2RB, etc. These proteins are important modulators of immune response and disease progression but have previously been challenging to quantify by other methods due to their low levels of baseline expression. The published study also demonstrated the dynamic range of NULISAseq as ~10 logs, which is important for accurate quantification of both low and high expressing proteins in the same sample. This was achieved without dilution of the sample, providing a significant workflow advantage to other methods. In addition, results of the beta version of the NULISAseq Inflammation Panel found that this assay had >99% specificity for >90% of the targets.

For more details on the NULISA technology and performance dataset you can access the publication and comprehensive data set [here](#).

**About Alamar Biosciences, Inc.**

Alamar Biosciences is a privately held life sciences company with a mission to power precision proteomics to enable the earliest detection of disease. The company's two proprietary technology platforms, NULISA™ and Attobody™, along with the ARGO™ System, work seamlessly with the latest advances in genomics to achieve single digit attomolar detection sensitivity, greatly surpassing the most sensitive protein detection technology on the market today. For more information, please visit <https://www.alamarbio.com>.

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