

A Novel Approach to Fibromyalgia Diagnosis: Developing a Cutting-Edge Diagnostic Tool



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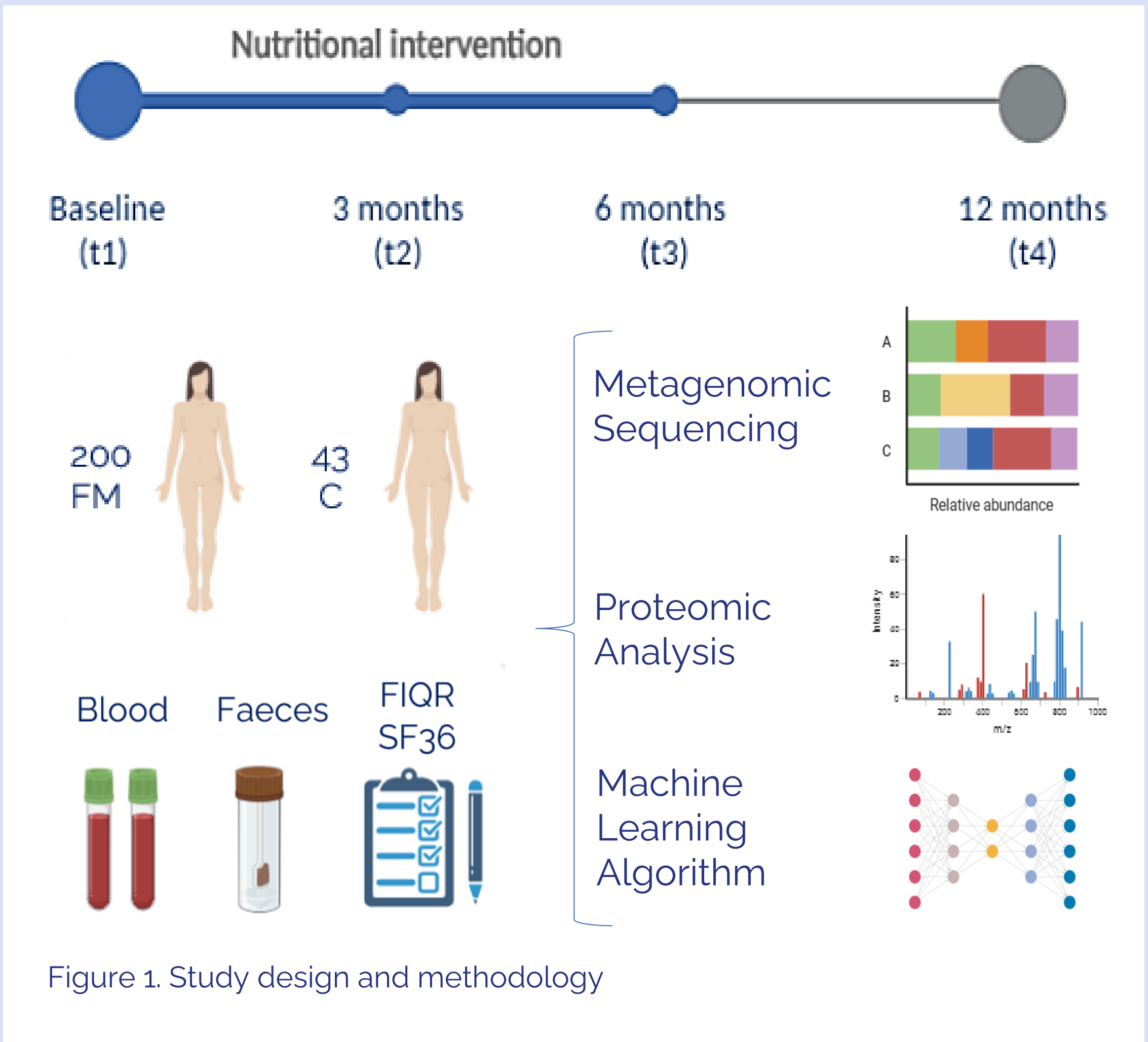
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Introduction

Fibromyalgia is a chronic pain disease that has no molecular diagnostic method. Among all the biomarkers proposed, those related to oxidative stress and the intestinal microbiome stand out during the last decade. Despite the advances achieved thanks to omics techniques, the results published to date have been obtained from small cohorts. The objective of this study was **to design a diagnostic panel of specific biomarkers in plasma and faeces** in a large cohort of FM patients

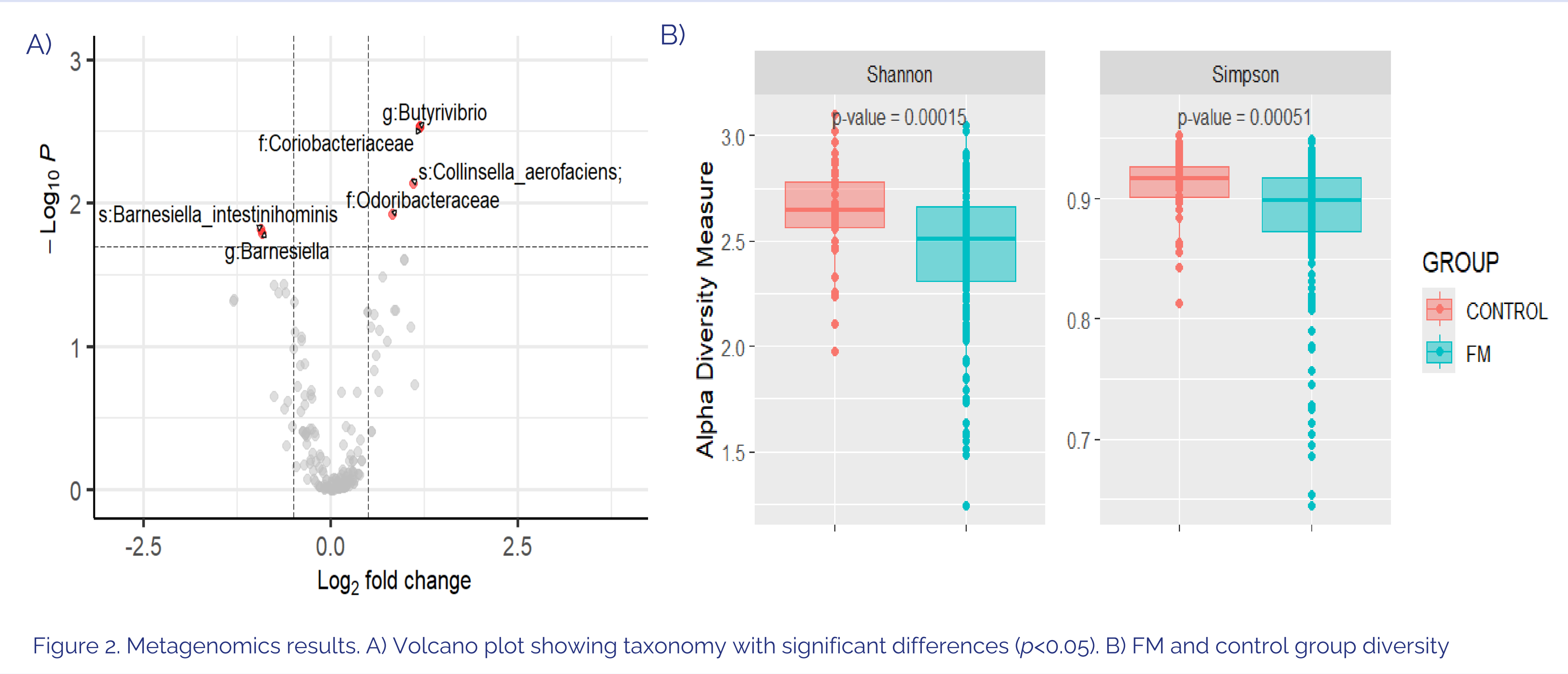
Methods

Twelve month randomized, prospective, double-blind and placebo-controlled nutritional intervention

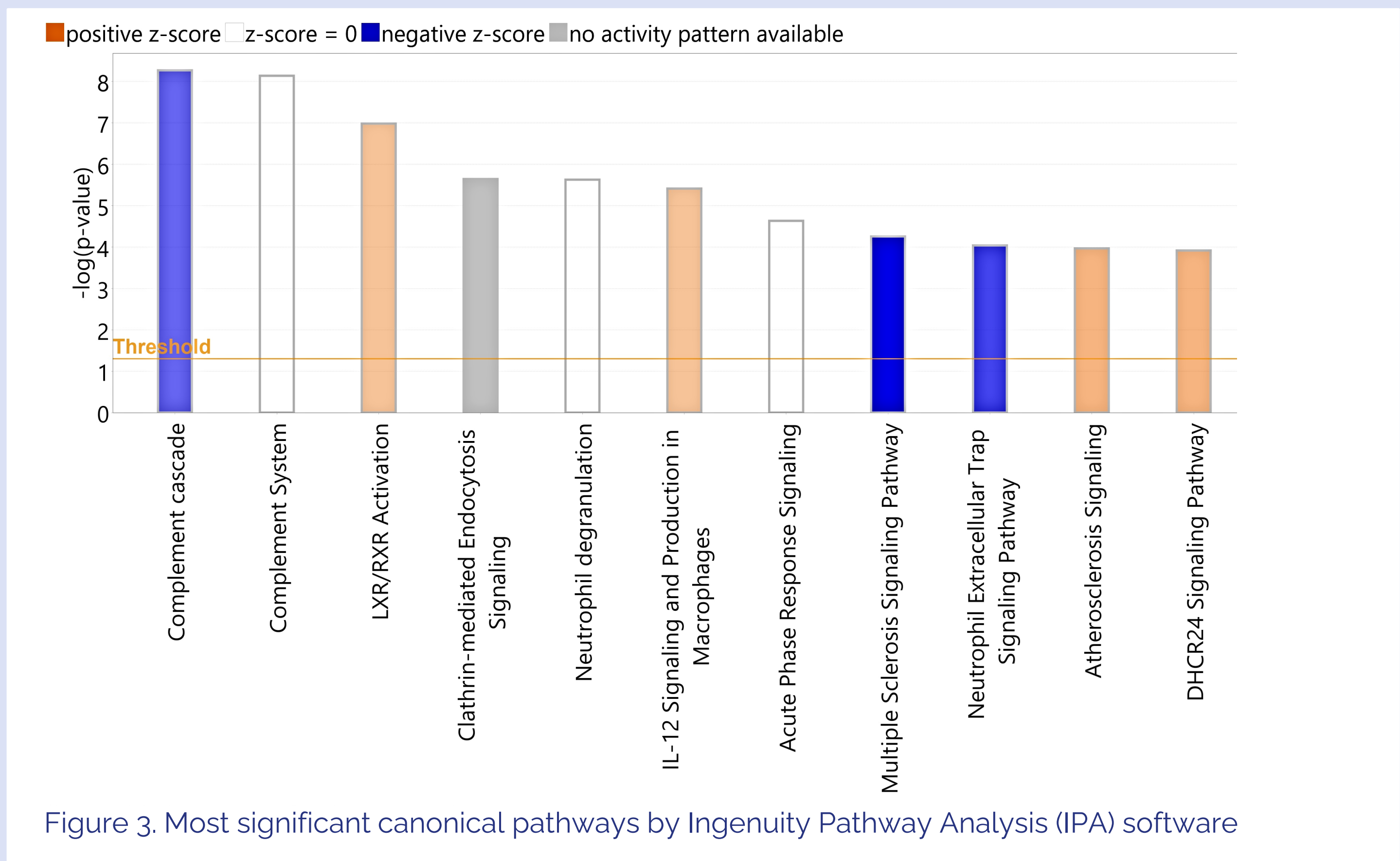


Results

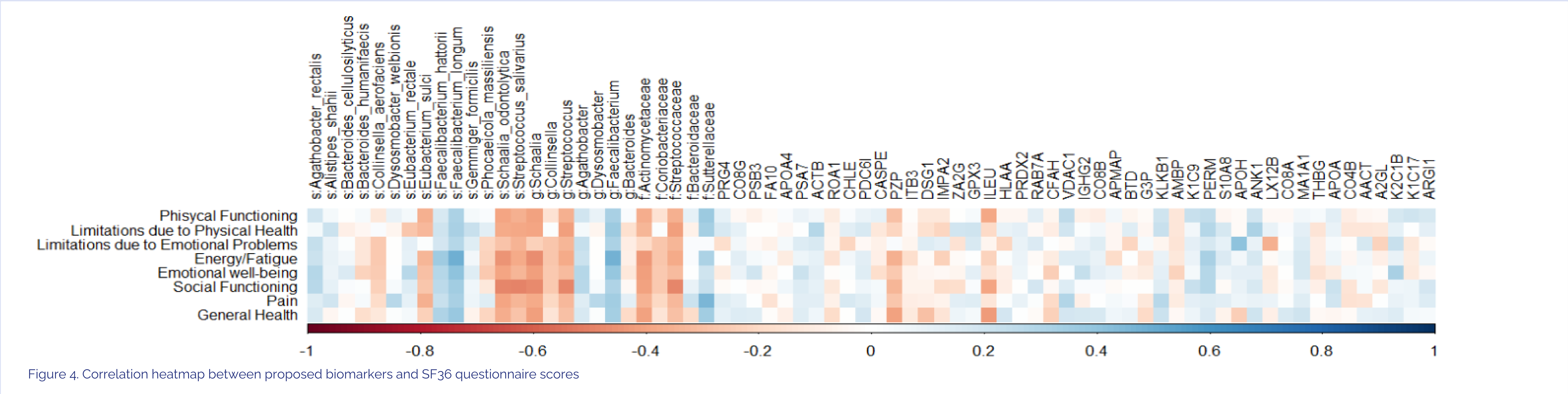
20 microbial taxa showed statistically significant differences at baseline



40 circulating proteins differed significantly initially



Integration with clinical data obtained from the SF36 questionnaire **uncovering intriguing correlations** between the identified biomarkers and the patients' health status



Conclusion

Reduced microbial diversity and significant differences in several taxonomic groups were observed. Proteomic analysis revealed that most of the 40 altered proteins are linked to **inflammation**. These findings, supported by robust statistics, offer a strong basis for biomarker discovery, potentially improving FM diagnosis, disease monitoring and the development of targeted therapies