

Metabiose project: an endometriosis predictive signature through metabolomics

Endometriosis is a common chronic disease characterized by growth and proliferation of endometrial tissue outside the uterus. It affects 10% of woman in their reproductive years and its pathophysiology is still not completely known. The non-specific symptoms and the lack of non-invasive diagnostic contribute to diagnostic delays of an average of 7.5 years. In fact, the actual gold-standard represented by laparoscopy, is an invasive procedure that results inappropriate for periodic restaging of endometriosis after treatment.

In this context, through the use of an NMR-based metabolomics approach, we aim to identify a panel of biomarkers that could be linked to the pathology. In this study, the urine metabolome obtained from samples of 122 women affected by endometriosis was compared to the one of healthy woman; a combination of biomarkers and clinical measures linked to the disease was identified and validated on a new small cohort. The encouraging results show how metabolomics represents a powerful and promising tool for personalized medicine approach in disease like endometriosis.

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