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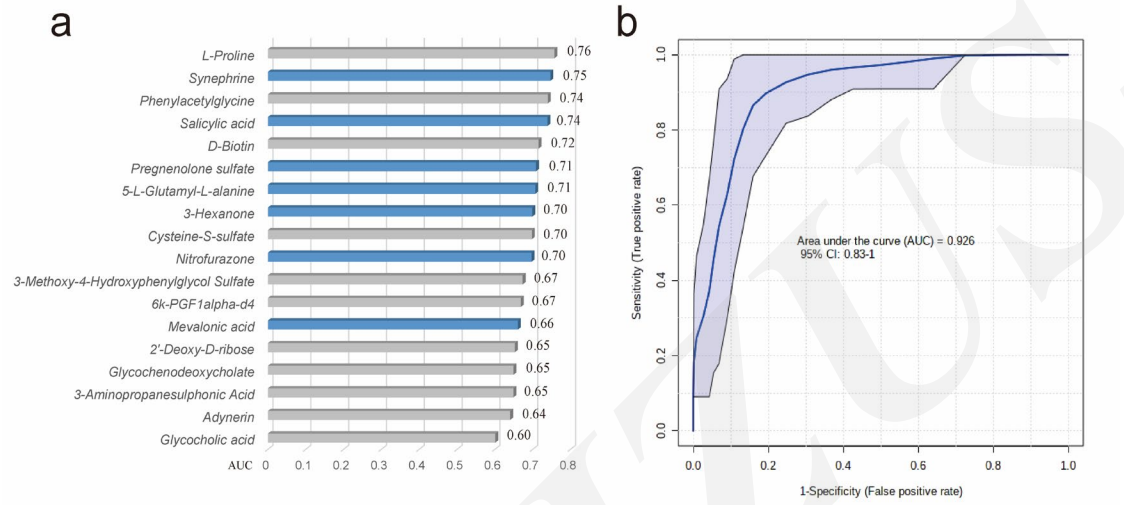
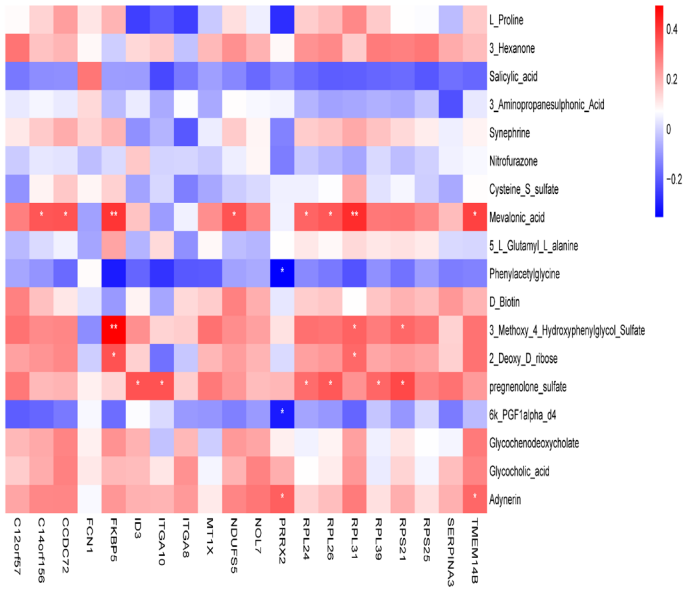
Discovery of potential biomarkers for human atherosclerotic abdominal aortic aneurysm through untargeted metabolomics and transcriptomics

Keywords: Abdominal aortic aneurysm; Atherosclerosis; Untargeted metabolomics; Transcriptomics

Research Summary

This study investigated the differences between AAA and AS from the perspective of metabolomics, and explored the potential mechanisms of differential metabolites via integration analysis with transcriptomics





- **18 remarkably different metabolites were identified**
- **7 metabolites were combined to distinguish AAA and AS**
- **Metabolites, especially 2'-deoxy-d-ribose, were significantly correlated with differentially expressed genes**

Figure 5 & Figure 7

Innovation points

- **Investigation** the differences between AAA and AS from the perspective of metabolomics

- **Integration** of the metabolome and transcriptome

- **Provision** of the potential metabolite (2-DDR) for further research.

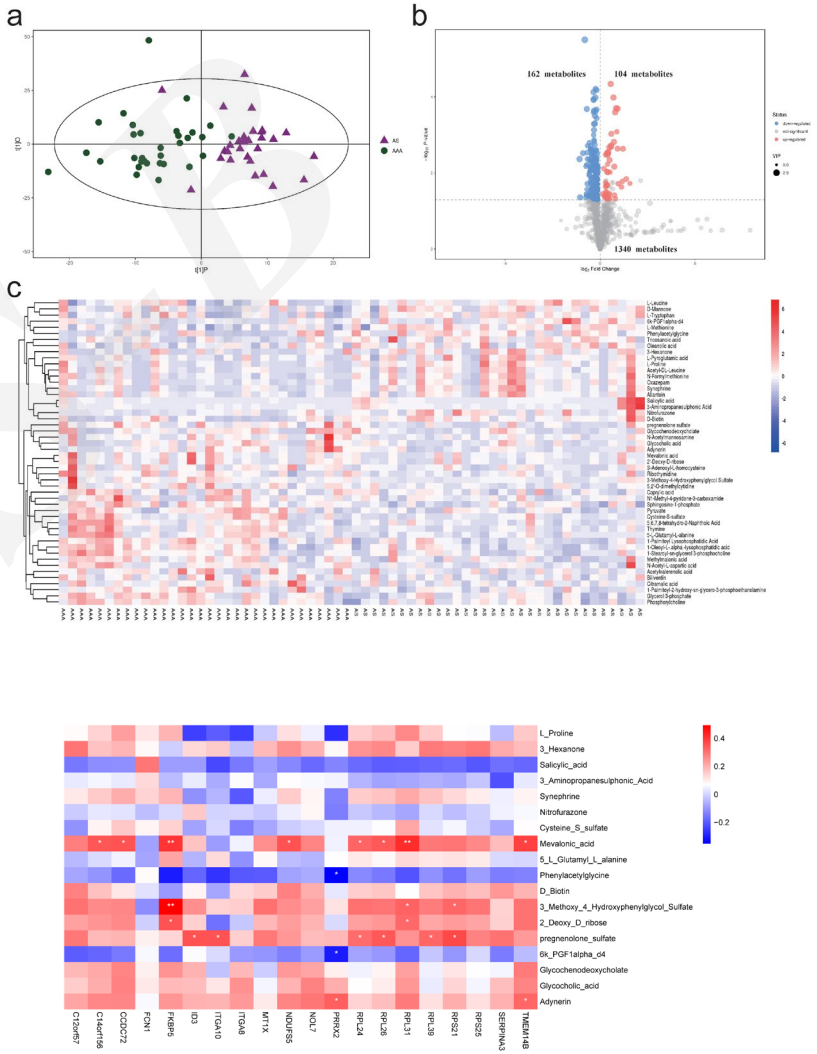


Figure 1 & Figure 7

Innovation points

A series of comprehensive tables were generated to summarize the latest knowledge about Potential Biomarkers for Human Atherosclerotic Abdominal Aortic Aneurysm .

Table 1 | Clinical characteristics of the two groups.

Table 2 | Differential metabolites between AAA and AS group.

Table 3 | DEGs with top-20 $\log_2$(fold-change).