

Detection of polyphenolic compound metabolites in human serum following consumption of herbal infusions: Analytical approach for mountain tea

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Mediterranean Diet & Health

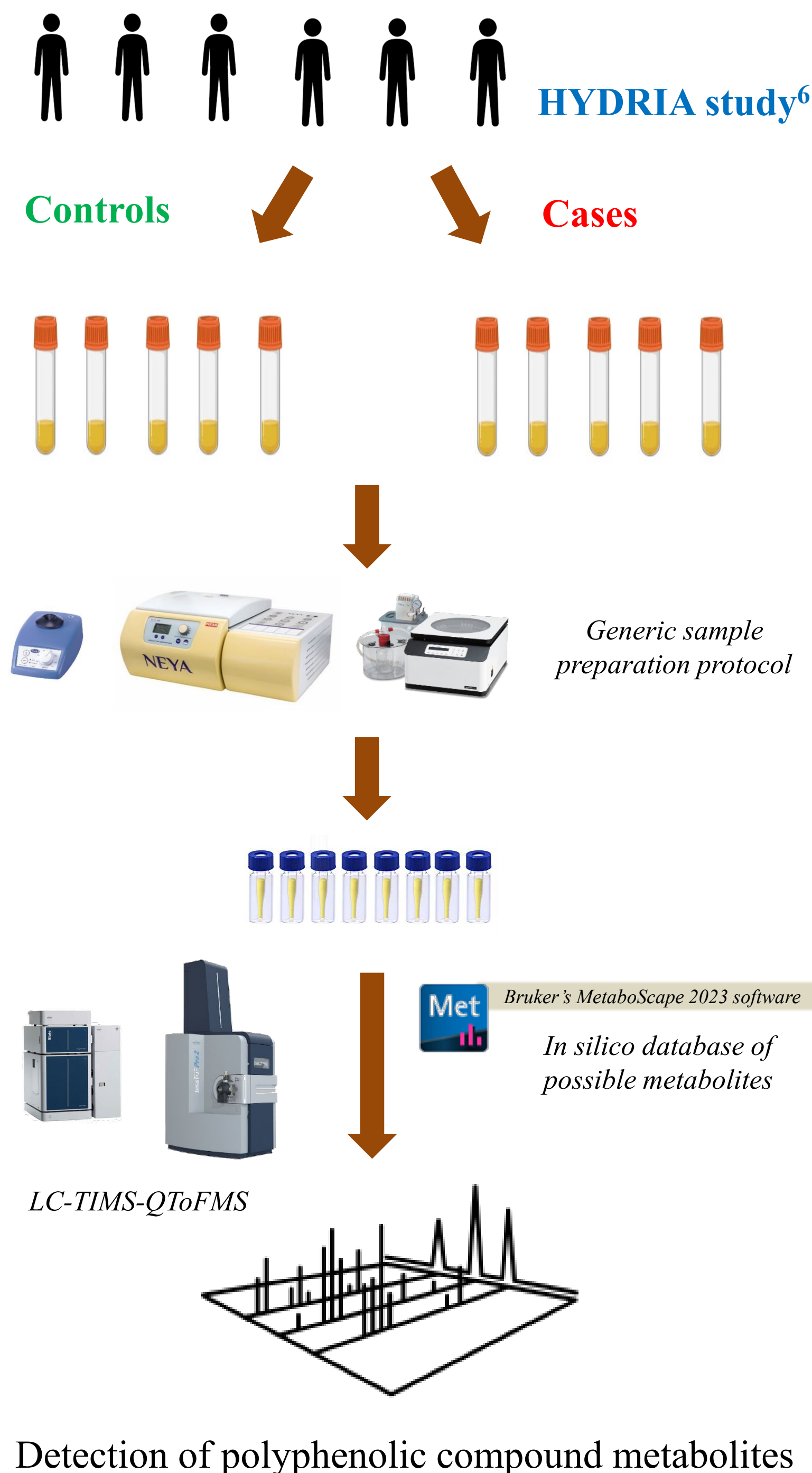
Background

- Herbal infusions are very common in the Mediterranean diet¹. For instance, dittany, and mountain tea (or “malotira”) are widely consumed in Crete. Herein, we focus on mountain tea (*Sideritis* spp.) which is considered a traditional herbal medicinal product for the relief of mild gastrointestinal disorders and against the common cold².
- Previous studies related its health benefits mainly to the rich content of polyphenols (flavonoids, phenylethanoid glycosides, and phenolic acids)^{3,4}.
- The presence of polyphenolic metabolites in urine samples after ingestion of mountain tea was previously reported⁵. Different metabolites of hypolaetin and isoscutellarein derivatives, as well as of apigenin and phenolic acids were identified.
- Isoscutellarein and hypolaetin 7-O-allosylglucosides (acetylated or non-acetylated), as well as apigenin 7-O-glucoside (or/and its acylated derivatives) are main flavones of mountain tea. In addition, phenylethanoid glycosides such as acteoside are principal compounds of this herbal infusion.
- However, there is no report about their existence in human serum after mountain tea consumption.

References

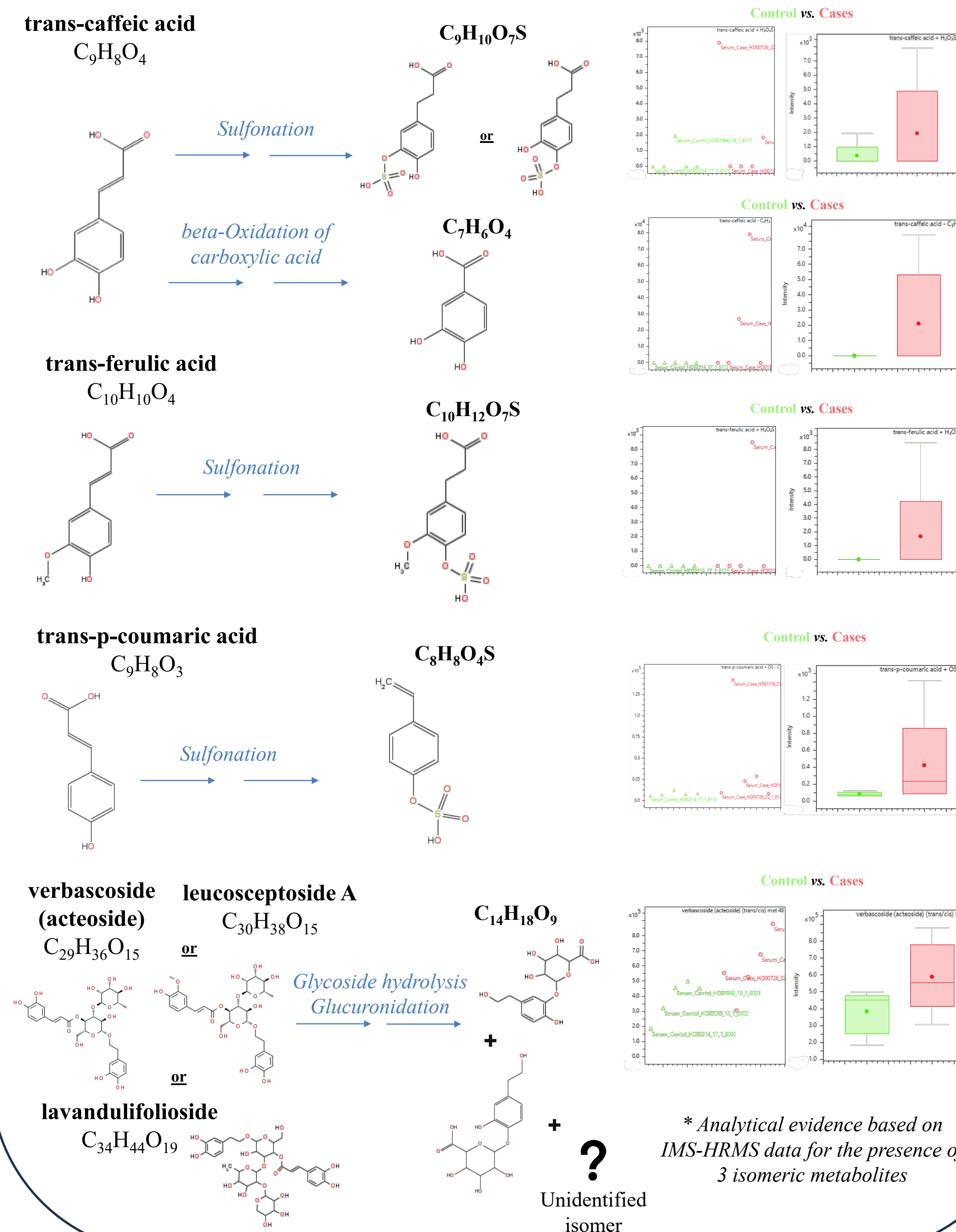
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Experimental



Results

Precursors and Suggested metabolites:

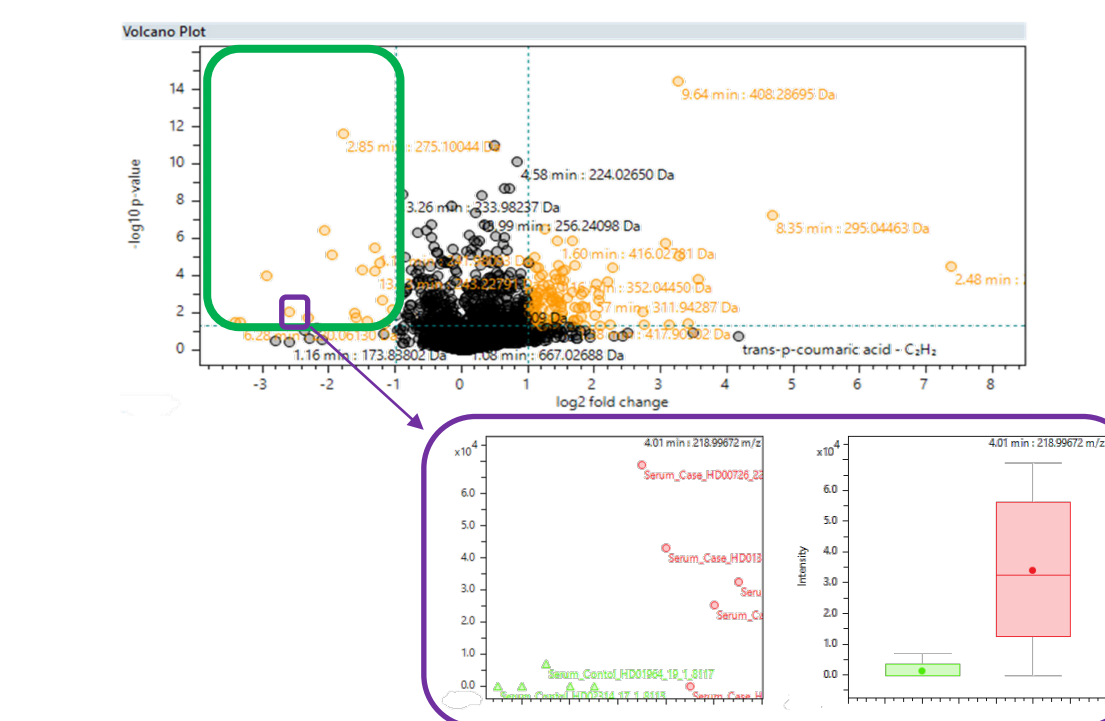


Limitations

- Small number of samples
- Preliminary focus on specific *Sideritis* common compounds

Next steps

- Structure elucidation of unknown features that differentiate the two groups



- Study on a larger number of samples

Ethics approval and consent to participate

The authors ensure that the HYDRIA survey has been carried out in accordance with the guidelines in the Helsinki declaration and national legislation on the protection of individual data. All participants signed and informed consent form before they participated in the study.

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* Analytical evidence based on IMS-HRMS data for the presence of 3 isomeric metabolites