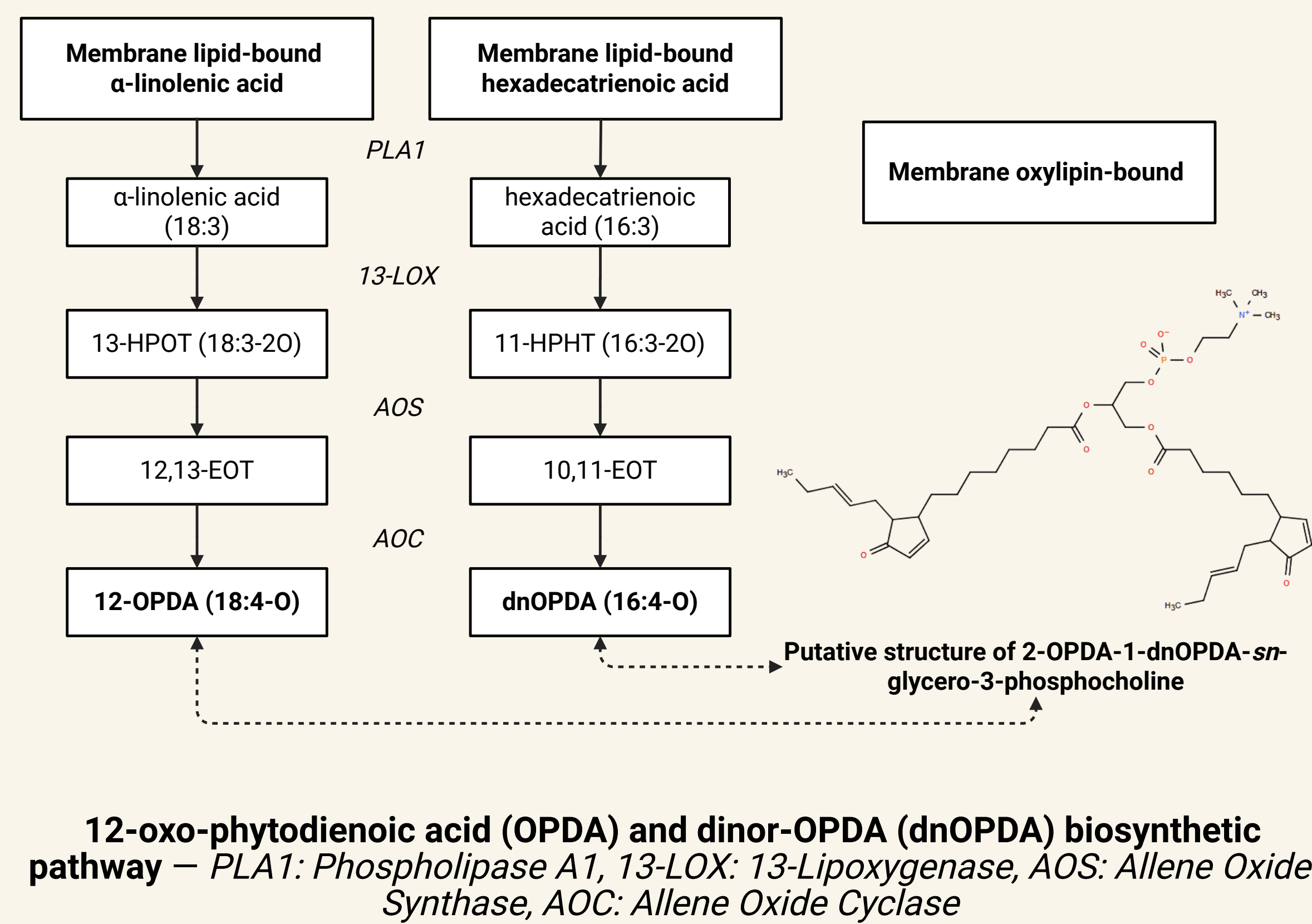


## INTRODUCTION

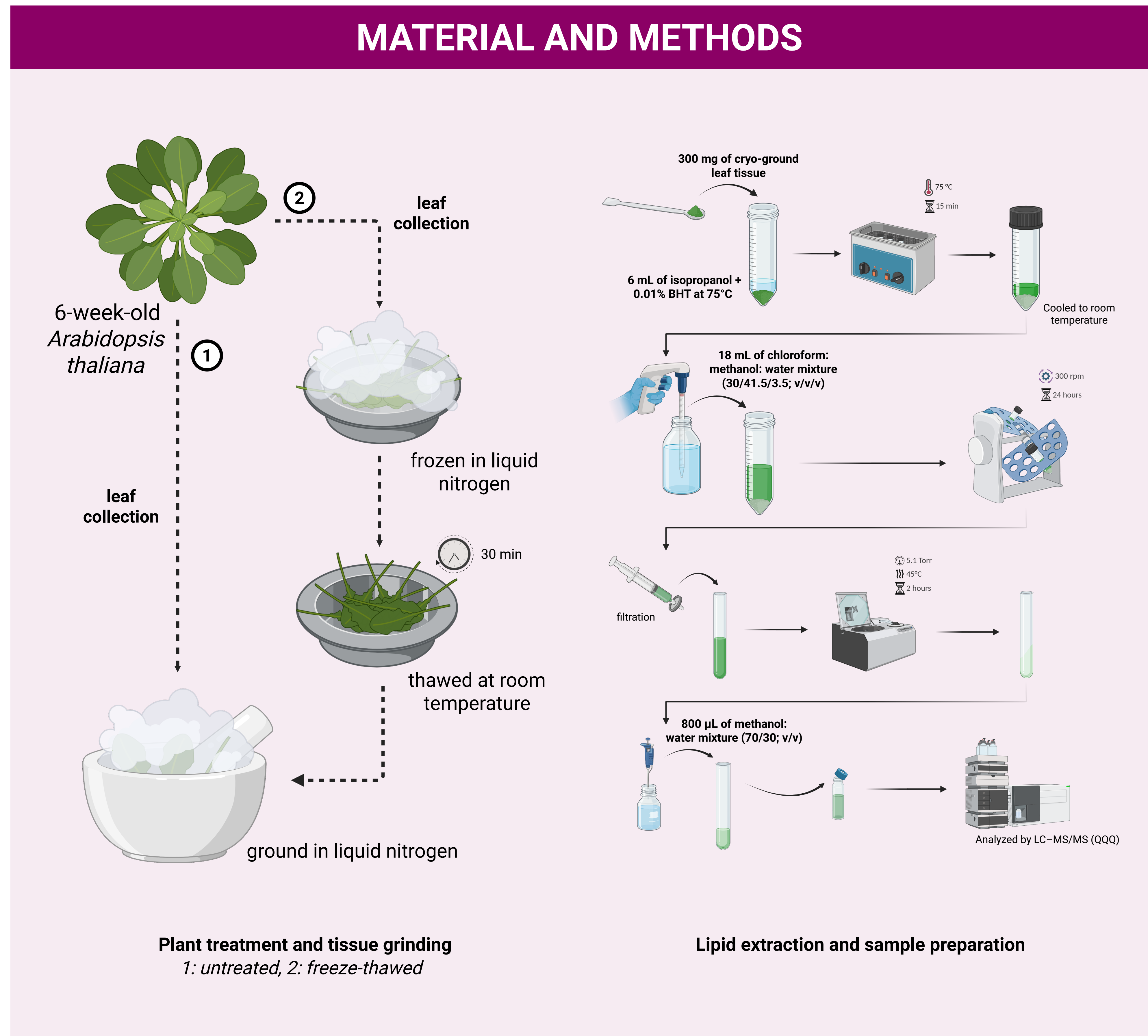
Oxylipins are oxidized lipids derived from polyunsaturated fatty acids. They accumulate during stress and can be stored in esterified forms in membrane lipids. Jasmonates—including OPDA, dn-OPDA and jasmonic acid (JA)—are key oxylipin signals regulating plant defence responses.



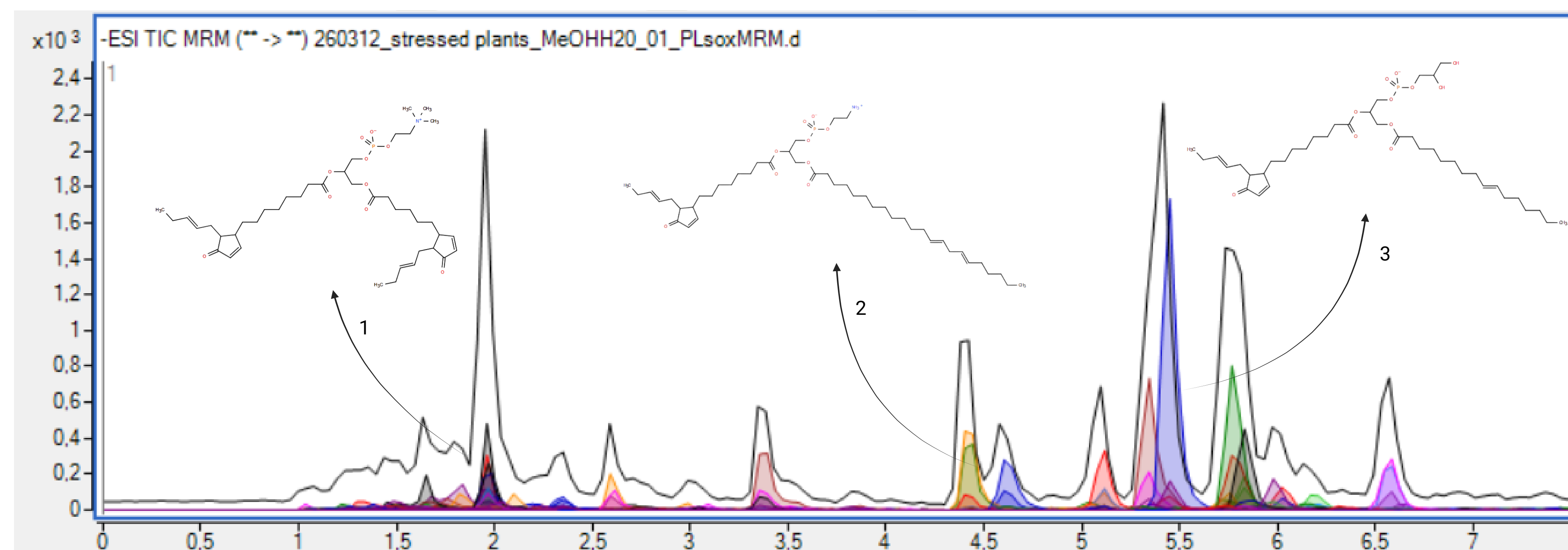
## OBJECTIVES

The first part of this work focuses on developing a method to detect and separate **phosphoxylipins** (POLs) in *Arabidopsis thaliana* under stress.

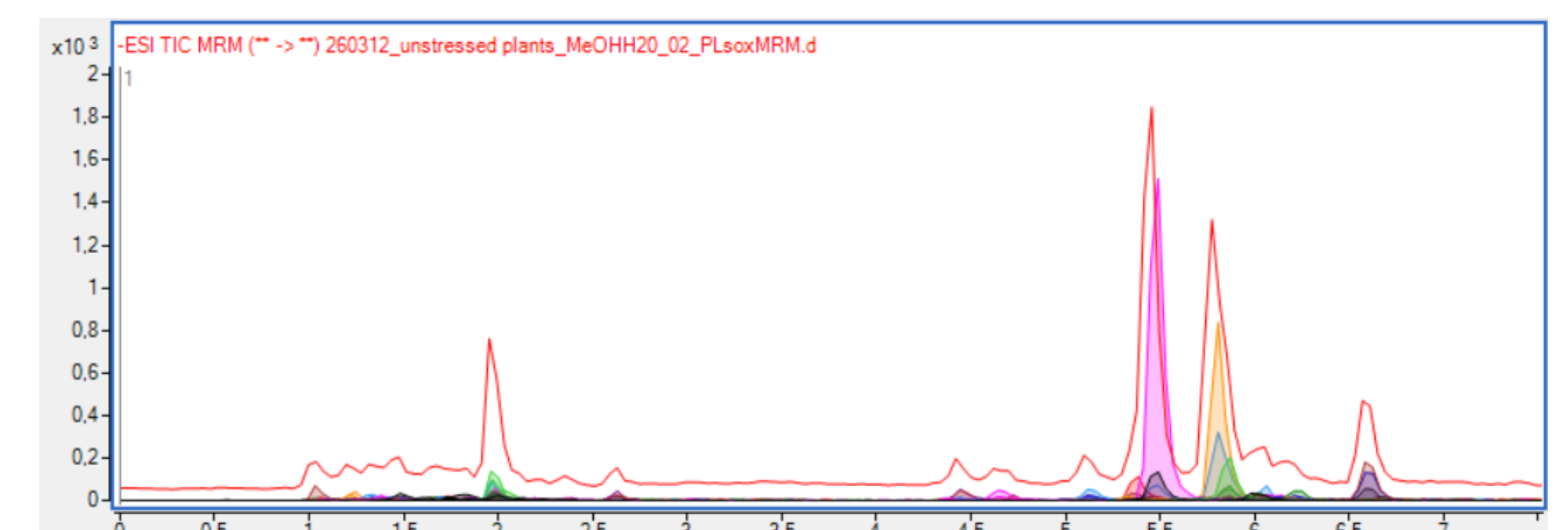
## MATERIAL AND METHODS



## RESULTS



Treated plants show higher numbers and levels of POLs compared to untreated controls.



## CONCLUSION

POLs were detected in our samples, with both their number and abundance higher in treated plants. Future work will focus on optimizing parameters for better visualization and extending the approach to other jasmonates in the pathway, such as hydroperoxides.

## PERSPECTIVES

- **Stress-induced POL production:** extend analysis of POLs synthesis in *Arabidopsis thaliana* under diverse biotic stresses (*Pseudomonas syringae*, *Myzus persicae*).
- **Biosynthesis pathways:** characterize enzymatic routes leading to esterified jasmonic acid precursors in POLs (POL-JAPs) under stress.
- **Subcellular localisation & systemic signalling:** determine sites of POL-JAP production and their presence in distal leaves to assess long-distance signalling.
- **Protective role:** investigate how POL-JAPs contribute to plant resistance against pathogens and herbivores.

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