

# Aromatic profile of Chardonnay – clone 809: from berry to sparkling wine in an altitude vineyard (Brazil)

Naíssa Prévide BERNARDO<sup>1,2\*</sup>, Aline DE OLIVEIRA<sup>1,2</sup>, Renata Vieira DA MOTA<sup>3</sup>,

Francisco Mickael de Medeiros CÂMARA<sup>3</sup>, Isabela PEREGRINO<sup>3</sup>, Murillo de Albuquerque REGINA<sup>3</sup>, Eduardo PURGATTO<sup>1,2</sup>

<sup>1</sup>Food Science and Experimental Nutrition Department, School of Pharmaceutical Sciences/<sup>2</sup>Food Research Center, University of São Paulo, SP, Brazil

<sup>3</sup>Agricultural Research Company of Minas Gerais, Grape and Wine Technological Center, Caldas, MG, Brazil

\* Presenting Author: [bpnaissa@usp.br](mailto:bpnaissa@usp.br)

## Introduction & Objective

Wine consumption is linked to consumer preference and expectations. The aromatic profile is an important sensory attribute and reflects the viticultural and oenological practices applied. Studies related to clones seek to assess adaptation, production, and differences in sensory characteristics. Thus, the aromatic profile of Chardonnay cultivar clone 809 was evaluated, due to its moscato character, in order to verify its potential for sparkling wine production in the southeast region of Minas Gerais (Brazil) in comparison to clone 76 the predominant material cultivated in the region.

## Materials & Methods



HS-SPME/GC-MS:

free volatiles compounds

grapes, musts, base wines and sparkling wines

Analysis Matrices

Multivariate analysis

Vinification: Sparkling wine

(Champenoise Method *sur lie*

18 months) –

*Saccharomyces bayanus*

Summer

Vintages:

2017 and 2018

Vineyards

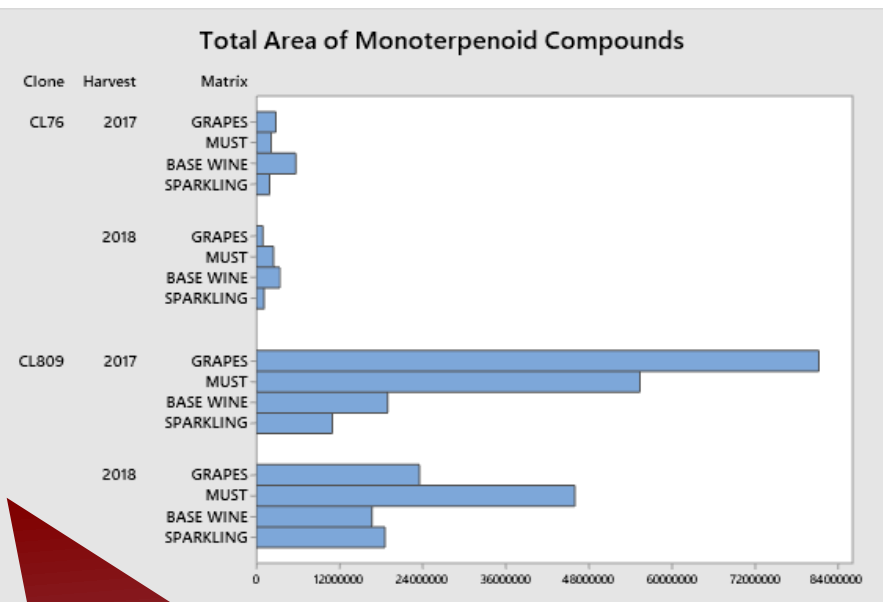
Chardonnay clones: 76 and 809 grafted onto Paulsen 1103, vertical trellis system, 1 m



## Analysis of all Matrices: Grapes, Musts, Base and Sparkling wines

### Number of terpenoid compounds

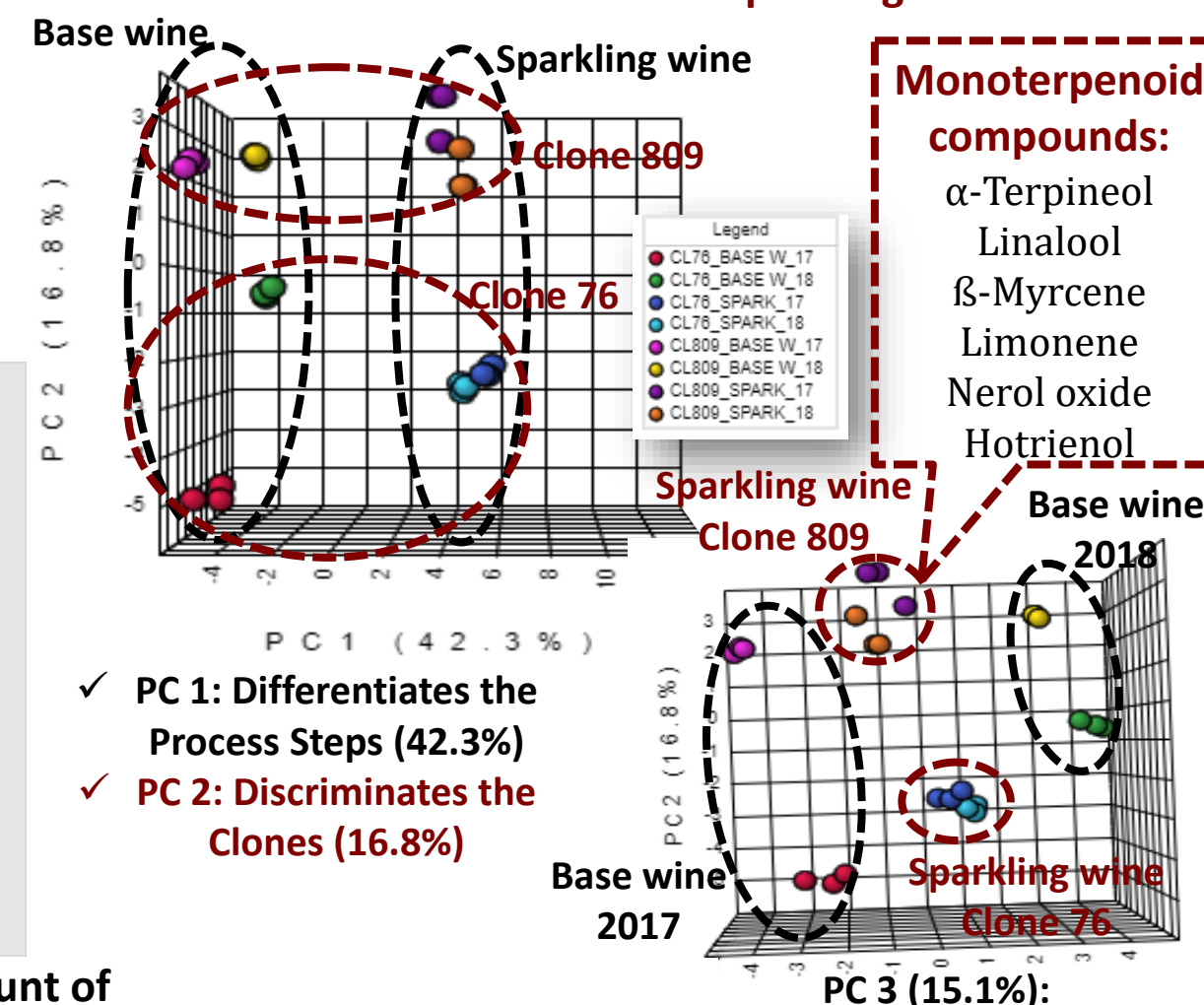
	Clone 809	Clone 76
Monoterpenoids	31	14
Sesquiterpenoid	1	1
C13-norisoprenoid	1	1



✓ The number and amount of monoterpenoid compounds are higher for the Clone 809 in all matrices

## Results

### Multivariate Analysis: Base wines and Sparkling wines



- ✓ PC 1: Differentiates the Process Steps (42.3%)
- ✓ PC 2: Discriminates the Clones (16.8%)

- ✓ Differentiates the base wines - Vintage
- ✓ Discriminates the sparkling wines - Clones

**Monoterpenoid compounds:**

- α-Terpineol
- Linalool
- β-Myrcene
- Limonene
- Nerol oxide
- Hotrienol

## Conclusions

- ❖ Clone 809 biosynthesises a greater number and quantity of monoterpenoid compounds, and they keep to the sparkling wines;
- ❖ Sparkling wines were grouped according to their clones: significant influence derived from the variability of the clones;
- ❖ Clone 809 compounds: confers floral, fruity and sweet aromas to sparkling wines;
- ❖ Sensory analysis would be an additional tool to confirm the Moscato character and to guide further experiments.

## References

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## Acknowledgments

