

# Vzájomný vzťah medzi biogénnymi amínmi a prítomnosťou *Metschnikowia pulcherrima* počas procesu fermentácie vína

## Interrelationship between biogenic amines and presence of *Metschnikowia pulcherrima* during the wine fermentation process

Kováčová, M., Regecová, I., Výrostková, J., Semjon, B., Marcinčák, S., Očenáš, P.

Katedra hygieny, technológie a zdravotnej bezpečnosti potravín

Univerzita veterinárskeho lekárstva a farmácie v Košiciach



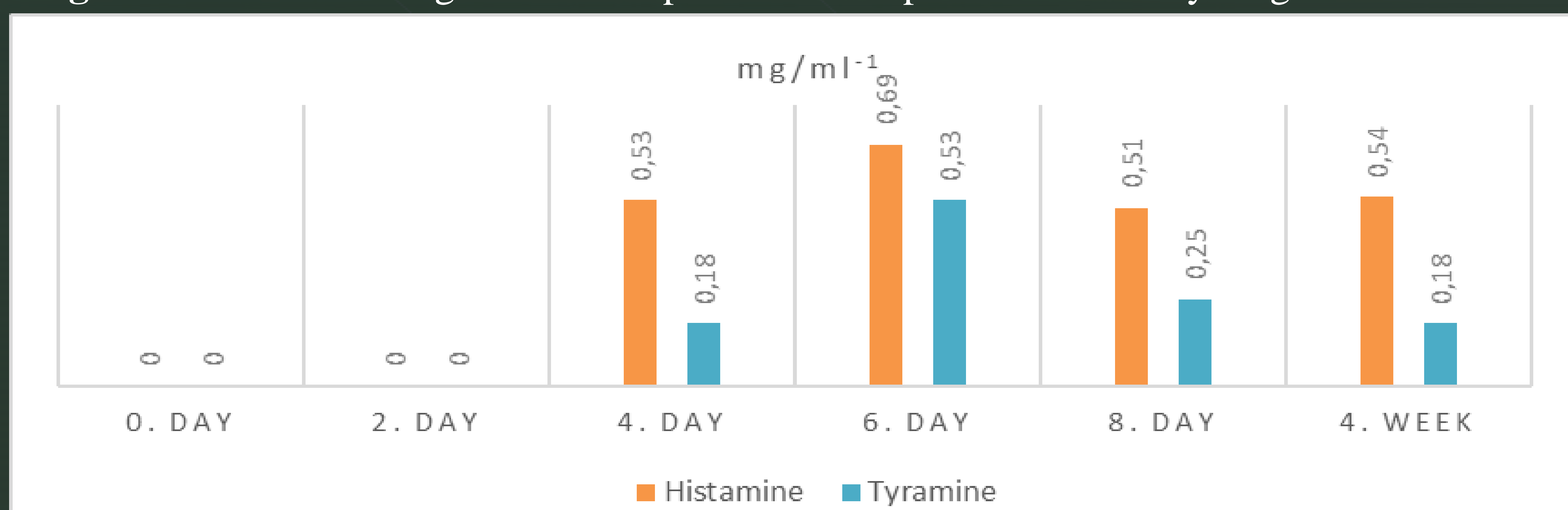
### Abstract

Content of biogenic amines as histamine and tyramine is affected by presence of microorganisms involved in fermentation processes. *Metschnikowia pulcherrima* frequently appears in spontaneous fermentations of wines, thus causing a distinctive aromatic profile of the wines. This study focuses on the detection of interrelationship between *Metschnikowia pulcherrima* in relation to concentration of biogenic amine histamine and tyramine during the fermentation process. The presence of *Metschnikowia pulcherrima* was affected by fermentation process. The highest presence of *Metschnikowia pulcherrima* was detected on day 0. and day 2. of fermentation. Quantity of biogenic amines histamine and tyramine varied during the fermentation process. Samples of must during the fermentation reached its peak on the day 6.

**Table 1:** Representation of *Metschnikowia pulcherrima* in the investigated samples

Species	Samples								
	Must and young wine [%]						Solid [%]	Leaf [%]	Berries [%]
	0. day	2. day	4. day	6. day	8. day	4. week			
<i>Metschnikowia pulcherrima</i>	27	26	15	9	-	-	7	4	17

**Figure 1:** content of biogenic amines present in samples of must and young wine



### Conclusion

This work confirmed the mutual relationship between biogenic amines and yeasts present in wine during the fermentation process. The reduction in the presence of *Metschnikowia pulcherrima* yeast, which represents a significant part of the wine microbiota, was influenced by the fermentation process. The change in the microbiota of the wine and must samples have resulted in a decrease in the content of the biogenic amines histamine and tyramine in the later stages of the fermentation process.

The work was supported by the VEGA 1/0156/21 project.