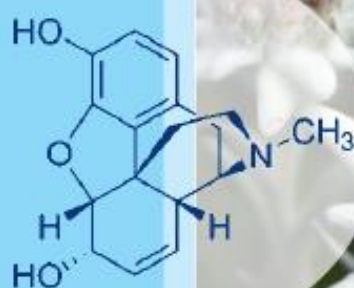


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P-112 Polyphenol composition of disease-resistant grapevine hybrids

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In modern grapevine production, sustainability and a minimal use of fungicides are desired goals. However, most of the commonly used *Vitis vinifera* varieties are susceptible to fungal pathogens. One approach is the use of disease-resistant grapevine hybrids, which result from the cross of *Vitis vinifera* species with disease-resistant American or Asian species.

For breeding purposes, it is of great importance to assess the grape quality of resulting hybrids. Polyphenols are secondary metabolites and play an important role for wine quality as well as human health and nutrition [1]. In the present study, the polyphenol composition of 74 fungus-resistant grapevine hybrids was analyzed by LC-MS-MS. Multiple Reaction Monitoring (MRM) allowed accurate quantification of 41 phe-

nolic metabolites, such as benzoates, phenylpropanoids, stilbenes, dihydrochalcones and flavonoids [2]. Flavan-3-ols were found to be the most abundant class with values ranging from 171 mg/kg FW to 1687 mg/kg FW (fresh weight). Stilbene levels varied from 0.3 mg/kg FW to 75 mg/kg FW, the well-studied trans-resveratrol was present at 7 mg/kg FW in one accession only. Total polyphenol content ranged from 249 mg/kg FW to 2022 mg/kg FW. The obtained data were further evaluated by multivariate statistical methods, i.e. Principal Component Analysis (PCA). In conclusion, this study gives a comprehensive insight in the polyphenolic profile of disease-resistant grapevine hybrids and will assist in the selection of promising hybrids for future breeding strategies.

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