

1. Record Nr.	UNINA9910220040803321
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Titolo	Microbiota of Grapes: Positive and Negative Role on Wine Quality
Pubbl/distr/stampa	Frontiers Media SA, 2017
Descrizione fisica	1 electronic resource (231 p.)
Collana	Frontiers Research Topics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>During spontaneous food/beverage fermentations, the microbiota associated with the raw material has a considerable importance: this microbial consortium evolves in reason of the nutrient content and of the physical, chemical, and biological determinants present in the food matrix, shaping fermentation dynamics with significant impacts on the 'qualities' of final productions. The selection from the indigenous micro-biodiversity of 'virtuous' ecotypes that coupled pro-technological and biotechnological aptitudes provide the basis for the formulation of 'tailored' starter cultures. In the fermenting food and beverage arena, the wine sector is generally characterized by the generation of a high added value. Together with a pronounced seasonality, this feature strongly contributes to the selection of a large group of starter cultures. In the last years, several studies contributed to describe the complexity of grapevine-associated microbiota using both culture-dependent and culture-independent approaches. The grape-associated microbial communities continuously change during the wine-making process, with different dominances that correspond to the main biotechnological steps that take place in wine. In order to simplify, following a time trend, four major dominances can be mainly considered: non-Saccharomyces, Saccharomyces, lactic acid bacteria (LAB), and spoilage microbes. The first two dominances come in succession during the alcoholic fermentation: the impact of Saccharomyces (that are responsible of key enological step of ethanol</p>

production) can be complemented/integrated by the contributions of compatible non-Saccharomyces strains. Lactic acid bacteria constitute the malolactic consortium responsible of malolactic fermentation, a microbial bioconversion often desired in wine (especially in red wine production). Finally, the fourth dominance, the undesired microbiota, represents a panel of microorganisms that, coupling spoilage potential to the resistance to the harsh conditions typical of wine environment, can cause important economic losses. In each of these four dominances a complex microbial biodiversity has been described. The studies on the enological significance of the micro-biodiversity connected with each of the four dominances highlighted the presence of a dichotomy: in each consortia there are species/strains that, in reason of their metabolisms, are able to improve wine 'qualities' (resource of interest in starter cultures design), and species/strains that with their metabolism are responsible of depreciation of wine. Articles describing new oenological impacts of yeasts and bacteria belonging to the four main categories above mentioned (non-Saccharomyces, Saccharomycetes, lactic acid bacteria, and spoilage microbes) are welcome. Moreover, in this Research Topic, we encourage mini-review submissions on topics of immediate interest in wine microbiology that link microbial biodiversity with positive/negative effects in wine.

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