



UNIVERSITÀ DEGLI STUDI DI TORINO

I@UNITO – Visiting Scientists

Scientific area	Scientific responsible	Host Department	Type of activity	Start of mobility	Language
AREA 4	ROLLE Luca Giorgio Carlo	DISAFA	Research Laboratory and statistical elaboration	February 2017	English
Type of fellowship	Senior (equal or more than 40 years old) 1 month				
Title of the research project	Study of correlation between chemical and sensory wine quality in basis to use of ozone in the viticultural and enology sector.				
Description of the research project	<p>The fungicides used in viticulture are numerous, and some of them based on copper and sulphur are also used in the organic farming. However, many compounds can be dangerous for human health. This is the reason which the European Commission has already expressed its recommendation to reduce the use of several products. Our research group has open lines heading to use of substances activator of the natural mechanisms of plant defence in greenhouse, vineyards and during withering process of grapes.</p> <p>The use of ozone in the vineyard and in postharvest are practices yet started only at experimental level and still lack reliable data about its effects on fungal pathogens, grape mycobiota and quality. Preliminary data reported in the literature are very recently and concern the positive effects of ozone on physical and chemical characteristics of grape at harvest. In this sense we intend to advance the knowledge of how this new strategy affects the quality and the grape and wine. Therefore we would like to verify the effectiveness and applicability in field of ozone against fungal pathogens, together with its possible positive effects on the grape and wine quality (increase of secondary metabolites such as aromas, and polyphenols).</p> <p>Therefore chemical and sensory methodologies are necessary to evaluate the wine quality. The integration of different disciplines will be very useful to very useful for the development of this research.</p>				
Profile Description	<p>Expert on Grape and wine quality:</p> <ul style="list-style-type: none"> -Biochemical and sensory characterization of musts and wines -Sensory Analysis by Quantitative Descriptive Analysis (QDA) -Grape and wine volatile characterization by GC-MS -Extraction techniques of volatile compounds (SPE) -Correlation between sensory and instrumental analysis 				
Research objectives	The main objective will be to evaluate the effect of the use of ozone in the vineyard on grape and wine quality (aromas and polyphenols). Application of sensory methodologies as quantitative descriptive analysis (QDA) could be used to established correlations between chemical compounds and sensory descriptors in wines				
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