Proceedings of the XLIX Italian Society of Agricultural Genetics Annual Congress
Potenza, Italy – 12/15 September, 2005
ISBN **88-900622-6-6**

Poster Abstract - B.30

TRANSCRIPTIONAL ANALYSIS OF THE GRAPE-WITHERING PROCESS

L. MINOIA*, M. POLESANI*, E. ZAGO*, A. FERRARINI*, G.B. TORNIELLI**,
M. DELLEDONNE*, M. PEZZOTTI*

*) Scientific and Technological Department - University of Verona, Strada Le Grazie 15, 37134 Verona, Italy
**) Interuniversity Centre of Viticulture and Enology, Strada Le Grazie 15, 37134 Verona, Italy

grape-withering, AFLP-TP, differential expression

The most appreciated wines of the Valpolicella region - Amarone and Recioto - are obtained from grapes which after picking, undergo a period of withering in rooms known as “fruttai”. This production technique, used for these red wines, constitutes a rare case in the panorama of wine production. During withering, the grape endures a series of physical, physiological, molecular and biochemical changes; amongst these, the most striking are the berry dehydration and the increase of sugar concentration, allowing the wines to obtain higher alcoholic content and particular flavour properties. Knowledge of numerous grape transformations is of great interest in order to supply useful tools in good management of this technological production phase.

The aim of this work was to analyze, by means of AFLP-TP technique, the transcriptional profile of the grape berry (cv Corvina), taking into consideration five different stages of withering. We wanted, moreover, to isolate and study the fragments pertaining to those genes that showed differential expression, both in temporal terms and between the two tissues of importance (skin and flesh), during withering. In contrast to what was expected, the amplification profiles observed for skin and flesh seem to be very similar. The isolation of the fragments from the gel, their sequencing and the search for sequence homology in the data bank constitute a starting point for a deepened analysis of the complex molecular and biochemical interactions that take part in the grape-withering process.