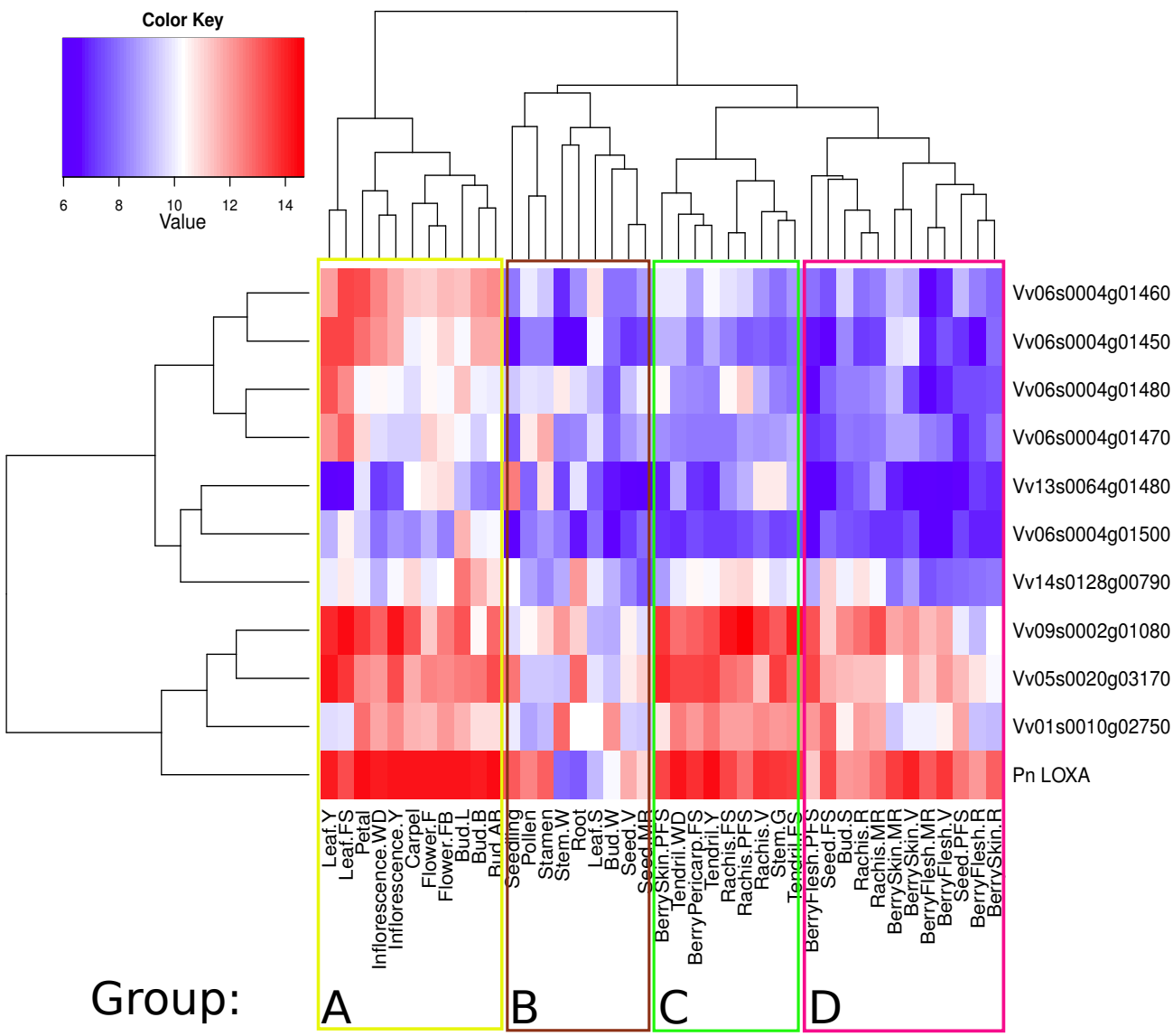
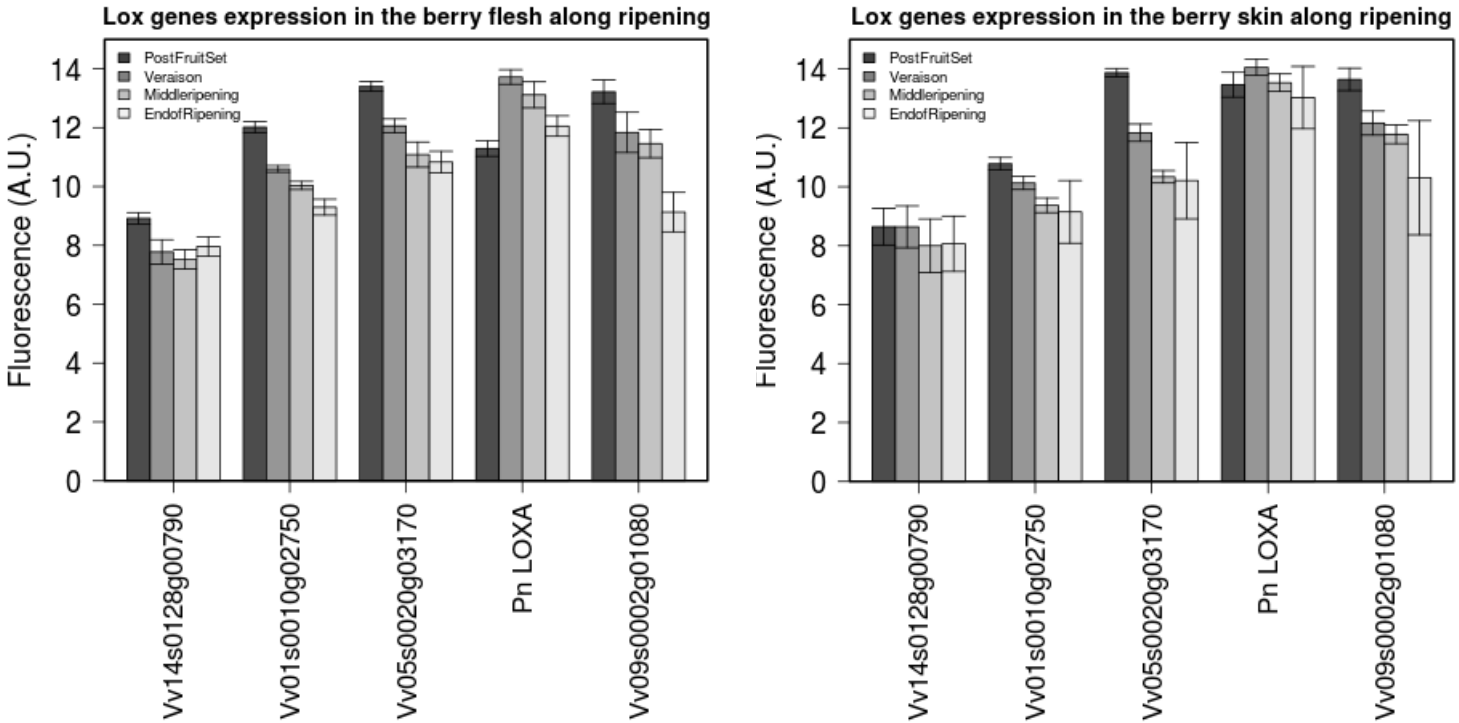
Update of the LOX family described in Podolyan et al, 2011 to the new genome annotation (12X, V1)

ID (Podolyan et al., 2011)	Gene name (12X, V1 annotation)	Chromosome (strand)	Predicted protein length	Predicted functionality
VvLOXA	Vv06s0004g01510	Chr 6(-)	901	chlor 13-LOX
VvLOXB	Vv14s0128g00790	Chr 14(+)	869	9-LOX
VvLOXC	Vv14s0128g00780	Chr 14(+)	859	9-LOX
VvLOXE	Vv06s0004g01450	Chr 6(+)	859	13-LOX
VvLOXF	Vv06s0004g01460	Chr 6(+)	598	13-LOX
VvLOXG	Vv06s0004g01470	Chr 6(+)	903	13-LOX
VvLOXH	Vv06s0004g01480	Chr 6(+)	793	13-LOX
VvLOXI	Vv06s0004g01500	Chr 6(+)	791	13-LOX
VvLOXJ	Vv13s0064g01480	Chr 13(+)	903	13-LOX
VvLOXK	Vv13s0064g01490+Vv13s0064g01500	Chr 13(+)	399+ 250	Pseudogene?
VvLOXL	Vv05s0020g03170	Chr 5(+)	876	9-LOX
VvLOXM	Vv06s0004g01580	Chr 6(-)	335	Pseudogene?
VvLOXO	Vv09s0002g01080	Chr 9(+)	927	13-LOX
VvLOXP	Vv01s0010g02750	Chr 1(-)	920	13-LOX
VvLOXS	Vv00s0265g00170	Chr Un (-)	505	13-LOX



Additional file 3A: Updated description of the *Vitis vinifera* LOX gene family described by Podolyan et al. (2012) and heatmap of the LOX gene family expression in the *V. vinifera* cv Corvina atlas (Fasoli et al., 2012). The lox sequences identified by Podolyan et al. (2012) have been updated with the gene ID of the V. vinifera genome 12Xv1 (Grimplet J et al., 2012 BMC Res Notes 5:213). In the heatmap, colors correspond to expression values as indicated in the scheme at top left. The most interesting organs/tissues were selected and reported on the columns. Predicted LOX genes (and PnLOXA) are shown on the right. VvLOXB and VvLOXC, on Chr 14, are 96% identical and the probes on the Nimblegene array are not specific enough to distinguish them. VvLOXS was not expressed in any sample and was therefore excluded from the heatmap analysis.
Y: young; WD: well developed; Bud-L: latent bud; Bud-W: winter bud; Bud-S: bud swell; Bud-B: bud burst; Bud-AB: bud after burst; Flower-FB: flowering begins; Flower-F: flowering; S: senescent; FS: fruit set; PFS: post-fruit set; V: véraison; MR: mid-ripening; R: ripening; Stem-G: green stem; Stem-W: woody stem (Fasoli et al., 2012).
Group A: samples in which nearly all the LOX genes are expressed (leaf, bud and inflorescence). Group B: samples in which there is a very LOX isoform-specific expression (non-photosynthetic tissues). Groups C and D: samples in which five LOX isoforms are significantly expressed and modulated (fruit, rachis and tendril).



Additional file 3B: Expression profiles of the 5 LOX isoforms expressed in the berry along ripening reported for *V. vinifera* cv Corvina in the atlas by Fasoli et al., 2012. The fluorescence average value calculated on the probesets of each gene in the microarray experiments is reported on the y-axis. Bars represent the standard error. PnLOXA is the only isoform showing a specific induction at véraison stage.