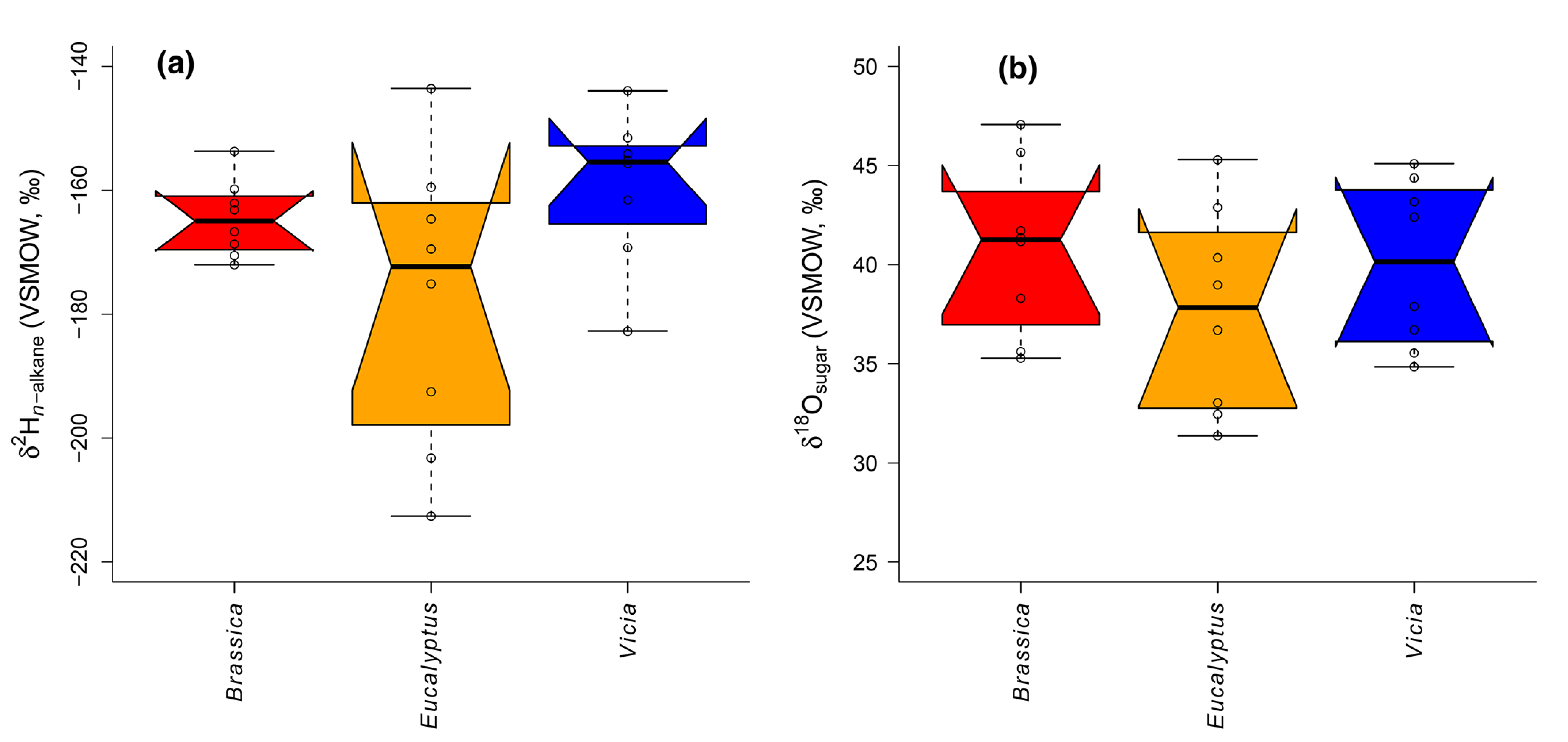
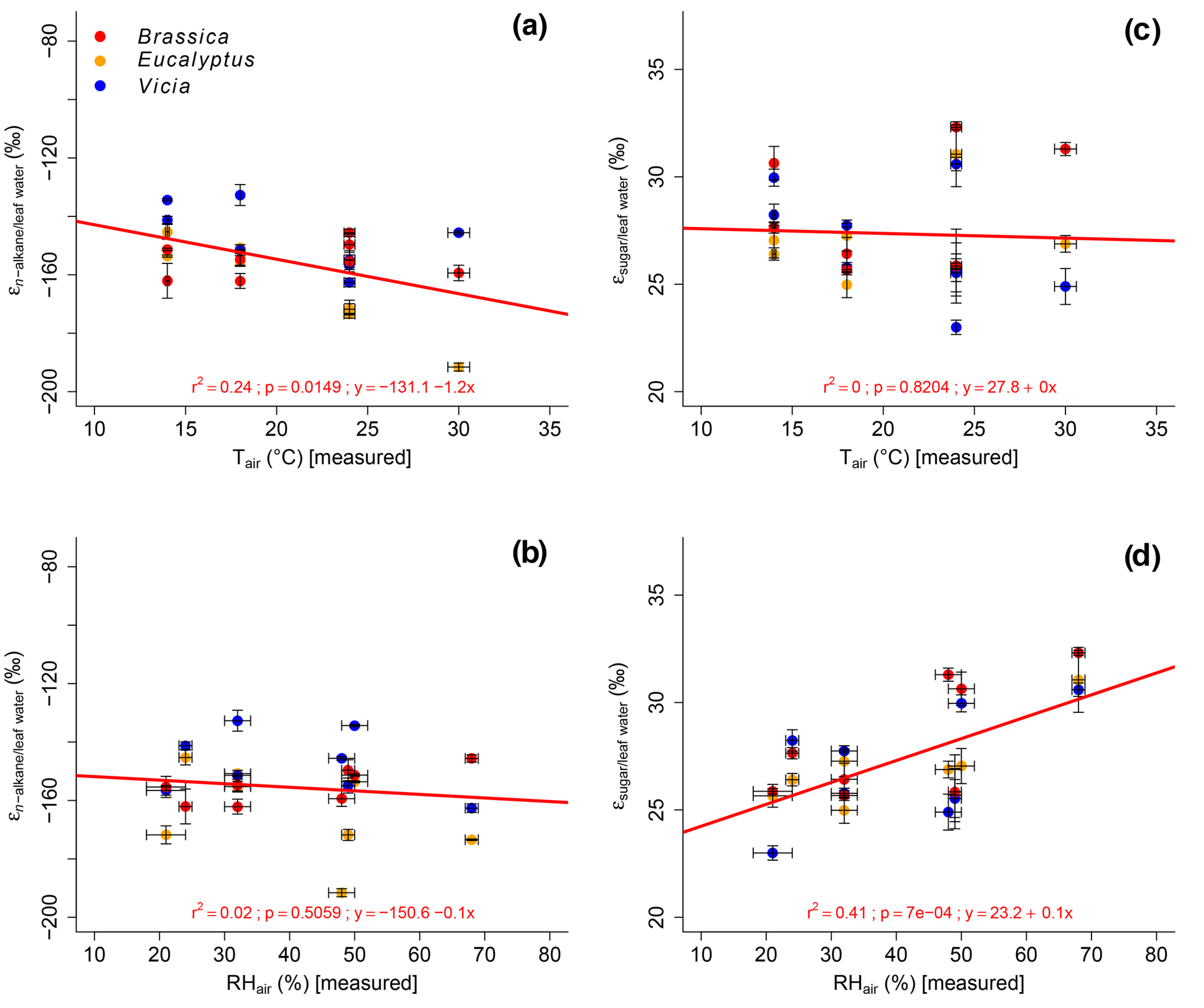
**Supplement**



**Figure S1.** Boxplots comprising the plant-speciﬁc δ2H*n*-alkane **(a)** and δ18Osugar values **(b)**. *Brassica oleracea*, *Eucalyptus globulus* and *Vicia faba* samples are shown in red, orange and blue, respectively. Boxplots show median (thick black line) and interquartile range (IQR) with upper (75 %) and lower (25 %) quartiles and lower and upper whiskers, which are restricted to 1.5 · IQR. Outside the 1.5 · IQR space, the data points are marked with a dot. The notches are extended to ±1.58 · IQR/√n by convention and give a 95 % conﬁdence interval for the difference of two medians (McGill et al., 1978).



**Figure S2.** Scatterplots of the fractionation between the biomarkers and leaf water vs. air temperature and air relative humidity (**a** and **b**: ε*n*-alkane/leaf water according to Eq. 10; **c** and **d**: εsugar/leaf water according to Eq. 11). *Brassica oleracea*, *Eucalyptus globulus* and *Vicia faba* samples are shown in red, orange and blue, respectively. Error bars for the measured values represent analytical standard deviations of repeated measurements (see section 2.2 and Mayr, 2002). For uncertainty calculation of the ε values, see section 2.4.

**References**

Mayr, C.: Möglichkeiten der Klimarekonstruktion im Holozän mit δ13C- und δ2H-Werten von Baum-Jahrringen auf der Basis von Klimakammerversuchen und Rezentstudien, PhD thesis, Ludwig-Maximilians-Universität München. GSF-Bericht 14/02, 152 pp., ISSN 0721-1694, 2002.

McGill, R., Tukey, J. W. and Larsen, W. A.: Variations of Box Plots, The American Statisticans, 32(1), 12–16, 1978.