

***Supplement figure S1 Effects of Ole glucoside administration on A375, WM266-4 and M21 melanoma cells***

**a)** Dose response of cell viability assessed by MTT assay after 72 h administration of Ole; **b)** Detection of the presence of Ole glucoside and its metabolites in A375 melanoma cells after 15 minutes of treatment with Ole, revealed by Mass Spectrometry. Significance is indicated with \* and refers to the untreated control



***Supplement figure S2 Level of A375 melanoma cells sensitivity to Ole treatment***

**a)** Dose time response evaluated by MTT assay; **b)** Western blot analysis of PARP1 and cleaved PARP1 in cells treated 24 or 48 with Ole 250 or 500 µM (⁓125-250 µg/ml). Levels of cleaved PARP1 were quantified by densitometric analysis and a corresponding histogram was constructed as relative to β-Tubulin. Representative Western blot panels below; **c)** Cellular apoptosis of melanoma cells after the treatment with Ole 250 or 500 µM for 24 or 48h, analyzed by FACS through cellular incorporation of PI and Annexin V-FITC; (right) a typical flow cytometry dot-plot picture on the left and cumulative results from 3 experiments; **d)** Increment of cell number after 24, 48 and 72h of treatment with Ole at 250 µM; **e)** Western blot analysis of pAKT, AKT, pS6, S6, pERK and ERK in cells treated with 250 µM Ole for 48h. Levels of pERK and pAKT were quantified by densitometric analysis and a corresponding histogram was constructed as relative to AKT, S6 or ERK and β-Tubulin. Representative Western blot panels on the right. Significance is indicated with \* and refers to the untreated control.



**Supplement figure S3 Quali-quantitative data of dry extract powder obtained by Olea green leaves extract Data expressed in mg/g dry extract powder**

Data are the mean of three determinations (standard deviation < 3%)



***Supplement figure S4 Quali-quantitative data of solution used for the test in vitro. Data expressed in mg/g dry extract powder***

Data are the mean of three determinations (standard deviation < 3%)