strain exposed to vanadium can be interpreted as an adaptive response to V (+5).

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Different microsomal lipids contents of three *Saccharomyces cerevisiae* strains in response to vanadium pentoxide

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The environmental levels of vanadium, a heavy metal widely used in industry of steel, pesticides and paints has increase in the last years. Several authors has described this metal as genotoxic and mutagenic, although at low levels of exposition it can present beneficial effects for some organisms as antitumoral agent that activates detoxification mechanisms or signaling pathway of apoptosis. Consequently, the aim of this study was to evaluate the response of three *Saccharomyces cerevisiae* strains to vanadium pentoxide presence in the culture medium. Cells of UE-ME3, a wine wild-type strain from Alentejo, Portugal that exhibit great resistance to adverse conditions of wine-maker; Red fruit, a commercial strain used in Alentejo for wine-make and BY4741 EUROCAST strain, grown at mid-exponential phase were inoculated in YEPD medium 2% glucose and incubated during 72 h at 28 °C, in the absence or presence of 2 mM V_2O_5. These cultures were then used for dry weight determination, to obtain cytosolic fraction for malonaldehyde (MDA) quantification and microsomes for quantification of ergosterol, triacylglycerols and phospholipids. The results showed that 2 mM V_2O_5 has caused cell growth inhibition of all strains, UE-ME3 being the strain where the effect was less pronounced, without occurrence of an increase of malonaldehyde content. At the level of lipid composition of microsomes it was also observed that 2 mM V_2O_5 caused an increase of phospholipids and ergosterol contents in the UE-ME3 strain, without affecting triacylglycerol levels, presenting the Red fruit and BY4741 strains to significantly decrease in phospholipids, ergosterol and triacylglycerols contents, a response which reflects serious disturbances in microsome membrane composition, probably due to lipid peroxidation, deduced from an increase of MDA levels in these last strains. The absence of oxidative damages in the UE-ME3