Determination of antioxidant activity of some Brazilian plant species assayed by *Saccharomyces cerevisiae,* a eukaryotic cell model

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Currently there is a great deal of interest in newer bioactive molecules from natural resources with health-promoting potential. Natural products containing antioxidants are believed to modulate oxidative stress and prevent or delay degenerative disorders. In this work, extracts of Brazilian plants and a flavonoid isolated from *Hyptis fasciculata* (HF) called isoquercetin (IQ) were evaluated as to their capacity to protect *Saccharomyces cerevisiae* cells against the oxidative stress caused by hydrogen peroxide and menadione, a known superoxide radical source. Only the extracts of *Polygala paniculata* (PP) and seeds of *Orbigynia speciosa* (OS) were not able to increase tolerance to peroxide, however these extracts produced an increase in survival rates after menadione stress. The protective effect of HF and IQ against oxidative damage produced by both peroxide and menadione and even the protection of OS against menadione were correlated with a decrease in lipid peroxidation, intracellular oxidation and carbonyl protein levels. PP reduced only the carbonyl protein levels. Interestingly, the protective effect showed by the Brazilian plant extracts was higher than that obtained with a *Ginkgo biloba* extract, a reference plant with well documented antioxidant activity, reinforcing the antioxidant potential of the tested extracts.