Data presentation and statistical analysis

Unless otherwise specified, results shown in the text, table and figure are expressed as means ± S.E.M. for five experiments. Significant differences between two means ($P < 0.05$) were determined by one-way analysis of variance (ANOVA) followed by the Dunnett's *post hoc* test. Catalase-like activity was expressed as nanomoles of H_2O_2 transformed per min in the reaction mixture. For comparative purposes, a Relative Catalase Activity (RCA) was calculated for each compound as the concentration that causes equal H_2O_2 transformation to 0.5 U/mL of commercial catalase from bovine liver (see drugs and chemicals) under the same assay conditions. This RCA value was estimated from the linear plot of "*tested compound concentration (X axis) versus catalase activity (Y axis)*".

In addition, the corresponding values of K_m and V_{max} (maximum reaction velocity) were estimated by least-squares linear regression, using the program Origin™ 5.0 (Microcal Software, Inc., Northampton, MA, USA), of the corresponding Lineweaver–Burk plots with X = $1/H_2O_2$ molar concentration and Y = 1/reaction velocity (V). The Y-intercept and the slope of this regression have a value of $1/V_{max}$ and K_m/V_{max}, respectively.

On the other hand, the K_{cat} values [i.e., the number of molecules of substrate (H_2O_2) transformed to the reaction product per unit of time in the presence of one molecule of the compounds tested or catalase and when they are saturated with high concentrations of H_2O_2] were estimated from the formula: $K_{cat} = V_{max}$/catalyst or catalase total concentration.