

Effects of t-butyl-4-hydroxyanisole and other phenolic antioxidants on tumoral cells and Trypanosoma parasites

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The antioxidant food additives 2(3)-tert-butyl-4-hydroxyanisole (BHA), 2,6-di(tert-butyl)-p-cresol (BHT) and the methyl and propyl esters of gallic acid inhibited *Trypanosoma cruzi* culture growth and oxygen consumption. The I_{50} values for growth and oxygen uptake with BHA were 0.284 and 0.400 and for BHT 0.083 and 0.235 mM, respectively. Moreover, BHA inhibited the respiration of several tumor cells, as well as of the procyclic and bloodstream trypomastigote forms of *T. brucei brucei*, with I_{50} in the range 0.29-0.52 mM. Inhibition of the parasites' oxygen uptake by BHA was not of the pure Michaelis-Menten type, but may be of a mixed form. It is postulated that these compounds are inhibitors because they resemble ubiquinone. © 1988.