INFLUENCE OF COPAIBA OILS AND ANDIROBA IN ACTIVITY GLUTATHIONE-S-TRANSFERASE RAT LIVER

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INTRODUCTION The use of medicinal plants has been growing in recent years. People know that that plant compounds are much safer than synthetic drugs. Among various types of "natural medicines", Copaiba (Copaifera sp) and andiroba (Carapa sp) oils are most popular. Both had their pharmacological properties scientifically tested. Any foreign chemical substance found within an organism that is not normally naturally produced by organism is called xenobiotics. The body removes xenobiotics by xenobiotic metabolism. This consists of the deactivation and the excretion of xenobiotics, and happens mostly in the liver. Glutathione-S-transferase (GST), a family of xenobiotics metabolism enzymes, catalyzes glutathione conjugation with different types of xenobiotics, resulting in soluble compounds that can be more easily removed from the body. The increased of this enzyme expression has been reported in several types of cancer, and thus a connection between GST activity and resistance to anticancer drugs has been established. OBJECTIVE Analyze andiroba and copaiba oils effects toward rat liver GST activity. MATERIAL AND METHODS Cytosolic GST activity from rat liver was determined according to Habig et al. (1974) used 1-chloro-2,4-dinitrobenzene (CDNB) as a substrate. In experimental tests were added different concentrations of copaiba or andiroba oils from commercial sources. Controls did not receive the oils. RESULTOS AND DISCURSSÃO using andiroba oil (5 µL), GST activity was inhibited by 95% while copaiba oil (5 µL) activated GST activity by 45%. CONCLUSION Used vegetable oils have been shown as potential modulators of enzyme activity of GST, with possible pharmacological applications.

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