Investigating the Effect of Benzamides on the Activity of Rat Erythrocyte GST

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Glutathione-S-transferases (GST; EC 2.5.1.18) are commonly found in microorganisms, insects, plants, fish, birds and mammals involving in various types of enzymatic reaction. Most of the isoenzymes of GST catalyze the conjugation reaction of reduced glutathione (GSH) with compounds having an electrophilic center through the formation of a thioether bond between the sulphur atom of GSH and electrophilic substrate. In this work the conjugation reaction happened between GSH and 1-chloro-2,4-dinitrobenzene (CDNB). The aim of the work was to purify the GST from rat erythrocytes in a single chromatographic step and asses the effectiveness of benzamides on the activity of the enzyme. The results suggested that among eight derivatives, five of them had no significant effect on the in vitro activity of GST while two of them increased the activity and one of them inhibited the activity of the enzyme.

**Keywords:** Glutathione, GST, CDNB, rat erythrocyte, benzamides.

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