**In Vitro Effects of Some Chemotherapy Drugs on Glutathione Reductase Enzyme Activity Purified from Sheep Spleen Tissue**

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**Abstract**

In this study, the in vitro effects of some drugs used in chemotherapy on glutathione reductase (GR; EC 1.8.1.7) enzyme activity purified from sheep spleen tissue were investigated. Purification was carried out using homogenate preparation, 20-70% ammonium sulfate precipitation and 2', 5' ADP-Sepharose 4B gel affinity chromatography steps. In the second stage of the study, the effects of some chemotherapy drugs such as ibandronic acid, oxaliplatin, carboplatin and cisplatin on the activity of the pure enzyme were investigated. As a result of the in vitro studies, the Activity%-[I] graph was drawn for the drug oxaliplatin, which has an inhibitory effect on the enzyme, and the IC50 value was calculated as 4.53 mM. In addition, it was detected that the drugs ibandronic acid, carboplatin and cisplatin did not have a significant effect on the enzyme.

**Key Words:** Glutathione reductase, Ibandronic acid, Oxaliplatin, Carboplatin