THE BIOLOGICAL ACTIVITY OF NOVEL COMPLEXES GOLD(I) AND TIN (IV) WITH PHENOLIC FRAGMENT

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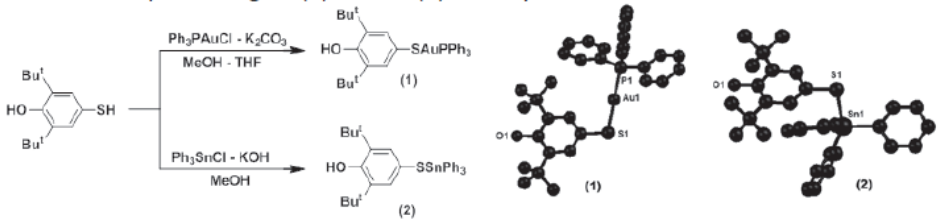
Gold and tin complexes are good candidates for drug design due to a broad spectrum of their biological activity. The aim of present work is the study of the metal nature influence in the complexes containing a 2,6-di-*tert*-butylphenol fragment on their biological activity. The novel complexes of gold (**1**) and tin (**2**) were synthesized.



The biological activity of complexes **1**, **2** was evaluated in mitochondria lipid peroxidation in the polymerization of tubulin and inhibition of glutathione reductase. The complexes **1** and **2** inhibited the lipid peroxidation in isolated rat brain mitochondria effectively. It was shown that the Sn compound induced inhibition of the tubulin polymerization significantly, however Au complex didn't have any impact on this process.

A high inhibitory activity of the enzyme glutathione reductase was detected for Au complex, IC_{50} value is in the nanomolar range. The cytotoxicity of the compounds was determined *in vitro* by MTT-test. It is shown that the introduction of Sn atom dramatically increases the cytotoxicity of complex **2**, whereas Au compound **1** possess a low cytotoxity.

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