

## 2. Streszczenie w języku angielskim

The introduction of a metallocene moiety into an organic compound molecule may result in the appearance or significant increase in biological activities. Many scientific works confirm that organometallic compounds, often having a different mode of action than organic compounds, can be used to design potential chemotherapeutic agents with higher selectivity, bioavailability and low toxicity.<sup>1, 2, 3-4</sup>

The subject of this thesis covers the synthesis and research on the influence of the metallocene group on the biological properties of selected inhibitors of tubulin polymerization as well as folic acid and methotrexate derivatives. The synthesis and results of the biological activity of ferrocenyl and rutenocenyl *1H*-1,2,3-triazole and amine analogs of etoposide, ferrocenyl analogs of tryprostatin A and ferrocenyl analogs of folic acid and methotrexate are presented.