

## **Abstract**

This diploma thesis deals with the synthesis of conjugates of cyclodextrin with the anticancer drug 5-fluorouracil and folic acid, which works as a targeting group. 5-Fluorouracil is connected to cyclodextrin via an acid-labile linker, which is expected to be cleaved in decreased pH in the proximity of malignant tissue or in the endosome. Malignant tissue also overexpresses receptor for folic acid, and this phenomenon is used for targeted delivery of therapeutic agents. Cyclodextrins are cyclic oligosaccharides, which are known for their ability to complex various compounds into their hydrophobic cavity and increase solubility, stability and bioavailability of these compounds.

A synthetic approach for the preparation of conjugate of cyclodextrin with 5-fluorouracil and folic acid was designed and the conjugate was subsequently synthesized.

Key words: cyclodextrin, fluorouracil, targeting group, folic acid, drug delivery