

## **ABSTRACT OF DIPLOMA THESIS**

### **Synthesis of Precursors for Biologically Active Lactones III.**

**Zuzana Šipulová**

**Charles University in Prague, Faculty of Pharmacy in**

**Hradec Králové, Department of Pharmaceutical Chemistry and**

**Drug Control**

In the theoretical part of the diploma thesis, diseases caused by fungi (mycoses), their treatment and also antifungal and other effects of furan-2(5*H*)-one-containing agents are summarized.

Methyl-(*E*)-2-brom-5-(2-nitrophenyl)pent-2-en-4-ynoate has been synthesized within the scope of the experimental work.

Methyl-(*E*)-2-brom-5-phenylpent-2-en-4-ynoate has been also synthesized in the experimental work as a starting ester for methyl-(*E*)-2-(arylethynyl)-5-phenylpent-2-en-4-ynoates which have been obtained via coupling with different alkynes. Syntheses of some derivatives have been optimized by modification of reaction conditions. Methyl-(*E*)-2-(arylethynyl)-5-phenylpent-2-en-4-ynoates can be used as starting compounds for synthesis of potential biological active lactones.