Abstract

Charles University in Prague
Faculty of Pharmacy in Hradec Králové
Department of Pharmaceutical Chemistry and Drug Analysis

Alma Mater Studiorum - University of Bologna
Department of Pharmacy and Biotechnology

Author: Martina Přečechtělová
Supervisors: Prof. Carlo Bertucci
RNDr. Milan Mokrý, CSc.
Consultant: Daniele Tedesco, Ph.D.

Title of Diploma thesis:

Analysis of chiral resorcin[4]arenes by enantioselective HPLC and circular dichroism

Enantioselective HPLC methods are among the most widespread methods for the enantioseparation of racemic drugs. Enantioselective HPLC is useful not only for the ability to perform quantitative and qualitative evaluations of separated enantiomers, but also for allowing the coupling of other analytical techniques able to expand its utilization. In this thesis I will study the enantiomeric separation of resorcin[4]arenes by enantioselective HPLC hyphenated to electronic circular dichroism (ECD), with the aim of a complete stereochemical characterization of samples. Resorcin[4]arenes 7e and 5a are new synthesized molecules, which have potential to be appropriate building blocks for the construction of a large variety of supramolecular hosts, such as self-assembled capsules, cavitands and carcerands. Enantiomeric separation and subsequent stereochemical characterization of these resorcin[4]arenes will contribute to the understanding and further utilization of their advantageous chemical properties.