ABSTRACT

An important topic in the drug discovery and development process is the role of drug binding to plasma proteins. In this diploma thesis the characterization of the interaction between benzodiazepines and barbiturates towards human serum albumin and α-1-acid glycoprotein under physiological conditions by capillary electrophoresis-frontal analysis is presented. Furthermore, the binding of these drugs to all plasma proteins is evaluated by using ultrafiltration and capillary electrophoresis. The results indicate that the hydrophobic character of compounds seems to be the key factor on the interaction between these drugs towards proteins. In fact, hydrophobic basic drugs (benzodiazepines) bind in great extension to HSA, while less hydrophobic acid drugs (barbiturates) present lower interactions with proteins and bind especially to AGP.