Summary:

Distribution of many drugs in an organism is significantly influenced by their binding to plasma proteins. Determination of the extent of plasma binding for a concrete drug is necessary for prediction of its pharmacokinetics after administration to the organism. The aim of this thesis was to determine binding of a new bifunctional chelating agent DTPA-oxn labelled by ^{111}In to the plasma proteins of human and tree animal species and to compare these results with the plasma protein binding of routinely used radiopharmaceutical ^{111}In-DTPA. For measurement, a method of equilibrium dialysis at 37°C was used. The results show, that binding of ^{111}In-DTPA-oxn to the proteins of human, bovine, rabbit and rat plasma is similarly very low as at the compared chelate ^{111}In-DTPA and impossible to determine by equilibrium dialysis and pharmacokinetically unimportant. Radiochemical purity was also determined for both complexes by the method of thin layer chromatography ITLC-SG. Measured value was higher than 98% for each compound.