



Molecular Biotechnology Programme
Uppsala University School of Engineering

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Title (English)	Methods to study drug candidate interaction with human serum albumin	
Title (Swedish)		
Abstract	Human serum albumin, HSA, was crystallised in complex with a number of different ligands, including the fatty acid myristate. The crystallisation conditions were optimised to obtain crystals in a shorter time than has previously been reported, using potassium salts or formate salts, obtaining almost 100% reproducibility. The co-crystal structure of HSA complexed with myristate was determined by molecular replacement to a resolution of 2.7 Å. The structures of HSA/myristate crystals soaked with three different ligands, including ibuprofen, were also determined and studied. These results will aid in the development of a high throughput method to study ligand interaction with HSA. Attempts were also made to produce ¹⁵ N-labelled HSA domain III to study HSA-ligand interaction with NMR spectroscopy.	
Keywords	human serum albumin, structure-based design, X-ray crystallography, NMR spectroscopy	
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