



## Applications of circular dichroism spectroscopy to the investigation of drug-albumin interactions

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Circular dichroism (CD) spectroscopy is typically employed to assess the absolute configuration of chiral molecules and evaluate the secondary structure of biological macromolecules. In addition, CD spectroscopy is a powerful tool for the structural and dynamic characterization of biomolecular interactions, e.g. the binding of small molecules to proteins, thanks to the phenomenon of induced circular dichroism (ICD), which can be detected even for non-chiral compounds. Within this framework, human serum albumin (HSA) is arguably one of the best suited targets for CD binding assays, thanks to the peculiar stereoselectivity displayed by its main drug binding sites. Some examples of the ICD approach applied to HSA will be reported, such as the combination with quantum chemical (QC) calculations to identify the bound conformation of drugs, as well as the determination of the binding properties of HSA in biopharmaceutical formulations for human use.

**Tuesday 11 February 2020, 14:30**

**ISOF 12 – Meeting Room (1<sup>st</sup> floor)**

**CNR Research Area**

**Via Gobetti 101, Bologna**