

Abstract

HSA is the major protein carrier in the human bloodstream and accounts for up to 60% of proteins present in the blood, transporting many endogenous biomolecules. It comprises of 3 domains (I,II,III), each with 2 subdomains (A,B); Sudlow I site (IIA) and Sudlow II site (IIIA) are important drug binding sites¹. Drugs, which are chemicals used to treat diseases and illnesses or relieve symptoms when present in the blood, can bind to Human Serum Albumin (HSA)². The extent to which the drug binds to HSA depends on the compound's chemical properties. Plants have been an important part of human diets since ancient ages. When plants are digested, phytochemicals, chemical compounds in plants, are metabolized and absorbed into the human body. Some of the bioactive molecules in plants were proven to possess some antioxidant, anti-cancerous, and neuroprotective effects, improving wellness overall³. The goal of this research is to explore the interaction between HSA and phytochemicals and check the presence of binding and binding sites using spectroscopic techniques.