

Abstract Submitted
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Binding and Irradiation Study of the Porphyrin-Protein Complex TSPP-HSA JORGE PALOS-CHAVEZ, University of Texas at San Antonio — Porphyrins are a class of organic molecules that have found numerous applications in biological physics, such as, for example, photodynamic therapy in the treatment of malignant tumors and serving as fluorescent tags for proteins. In this study, we focus on the porphyrin TSPP and its role as a photoactive ligand to the protein HSA (Human Serum Albumin), capable of mediating conformational changes to the structure of HSA via irradiation. The effect of irradiation on the conformation and binding behavior of HSA in buffer solution at physiological pH will be deduced from a combination of spectroscopy tools including absorption, fluorescence, circular dichroism, and fluorescence lifetime decay spectroscopy. Additionally, computational modeling will be employed to complement experimental data. This work was supported through the grant TWD MARC GM07717.

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