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Titrated fluorescent binding of Thioflavin-T with bovine serum albumin JACOB FRIDAY, JEREMIAH BABCOCK, LORENZO BRANCALEON, University of Texas at San Antonio — Thioflavin-T (ThT) can be used as a biomarker to detect protein aggregation. ThT can be applied towards detecting protein structural changes, and possibly, protein structure. Spectroscopic analysis was used to investigate the interaction of bovine serum albumin (BSA), a globular α-helix structured protein, with Thioflavin-T in titrated phosphate buffer solutions from pH 2 – 10. The objective for this study was to analyze the binding characteristics of BSA, with the fluorescent marker, ThT. Under constant concentrations of 40 μM ThT and 10 μM BSA, absorbance spectra and florescence spectroscopy was used to determine the binding characteristics of Thioflavin-T to BSA. Evidence is not certain on whether binding occurred or not, and future plans are to investigate the protein folding dynamics of partial β-sheet proteins such as lactoglobulin.

Lorenzo Brancaleon
University of Texas at San Antonio

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