Pioneering Application of Click Chemistry for Protein Modification in Iran: HSA -Biopolymer Scaffold Fabrication via Bioorthogonal Reaction

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Abstract

This research demonstrates the potential of click chemistry for protein modification and the development of a new protein-based material. For the first time in IRAN, we utilized a copper-catalyzed azide-alkyne cycloaddition (CuAAC) click reaction to fabricate a new protein-biopolymer scaffold based on a covalent bioconjugation strategy. Combining protein engineering, click chemistry and polymer science, we designed to manufacture a new protein-biopolymer scaffold that holds promise in various applications, including biotechnology and medicine. This research opens up new avenues for exploring click-mediated proteins with promising applications.

Keywords: Human serum Albumin (HSA), Biopolymer, Click Chemistry, copper-catalyzed azide-alkyne cycloaddition (CuAAC)