

제출초록보기

발표분야

콜로이드 및 분자조립 부문위원회

발표구분

포스터발표Poster presentation

발표장치

Poster

제목

GHK Tripeptide functionalized with self-assembled peptide-gold nanoparticles for therapeutic applications

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키워드

Self-assembly, GHK tripeptide, Gold nanoparticle hybrids, wound healing, photothermal therapy

우수논문발표상

우수논문발표상에 응모합니다.

발표자료 준비 관련 안내

발표자료 준비 관련 안내문을 모두 읽고 확인하였습니다.

GHK Tripeptide functionalized with self-assembled peptide-gold nanoparticles for therapeutic applications

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Glycyl-L-histidyl-L-lysine(GHK) tripeptides are known for therapeutic potential like wound-healing, anti-inflammatory activity, and cellular regeneration. However, there has a problem about poor biological stability and limited efficacy in a physiological medium. Supramolecular peptide nanofiber-gold nanoparticle nanohybrids functionalized with GHK tripeptides overcome these limitations and enhances therapeutic efficacy and material ability. 9-fluorenylmethoxycarbonyl-diphenylalanine scaffolds with GHK and KHG tripeptides form self-assembled fibrillar structures. Amino acid sequence influences surface exposure of lysine can impact wound-healing capabilities. Au NPs are spatially confined within the peptide nanofibers. It shows superior near-infrared(NIR) light absorption and photothermal conversion efficiency. We overcome cytotoxicity and biodegradability concerns of conventional photothermal agents, offering a strategy for post-operative cancer therapy and tissue regeneration.

