

Multifunctionalized gold nanoparticles with peptides targeted to gastrin-releasing peptide receptor of a tumor cell line

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Functionalization of gold nanoparticles (AuNPs) with both a targeting peptide (an analogue of the peptide Bombesin) and a drug peptide ligand (an analogue of the RAF peptide) with the aim of improving selectivity in the delivery of the conjugates as well as the antitumor activity is described. Studies on the internalization mechanism of peptide-AuNP conjugates and viability of cells were carried out. An enhancement of the activity and selectivity of the peptide multifunctionalized conjugates was observed. © 2010 American Chemical Society.