

Gold nanoparticles for photothermally controlled drug release

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© 2014 Future Medicine Ltd. In this article, we describe how nanoparticles work in photothermally triggered drug delivery, starting with a description of the plasmon resonance and the photothermal effect, and how this is used to release a drug. Then, we describe the four major functionalization strategies and each of their different applications. Finally, we discuss the biodistribution and toxicity of these systems and the necessary requirements for the use of gold nanoparticles for spatially and temporally controlling drug release through the photothermal effect.