

Gold nanocages for imaging and therapy of prostate cancer cells

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abstract

Gold nanocages (AuNCs) have been shown to be a useful tool both for imaging and hyperthermia therapy of cancer, thanks to their outstanding optical properties, low toxicity and facile functionalization with targeting molecules, including peptides and antibodies. In particular, hyperthermia is a minimally invasive therapy which takes advantage of the peculiar properties of gold nanoparticles to efficiently convert the absorbed light into heat. Here, we use AuNCs for the selective targeting and imaging of prostate cancer cells. Moreover, we report the hyperthermic effect characterization of the AuNCs both in solution and internalized in cells. Prostate cancer cells were irradiated at different exposure times, with a pulsed near infrared laser, and the cellular viability was evaluated by confocal microscopy. © (2016) COPYRIGHT Society of Photo-Optical Instrumentation Engineers (SPIE). Downloading of the abstract is permitted for personal use only.

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