Nanoparticles for imaging and tumor gene delivery

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ABSTRACT

Molecular imaging of receptors expressed on the surface of tumor cells is becoming a major field of investigation in clinical oncology, especially for the detection of cancer at its earliest stages. Nowadays, MRI, microcomputed tomography (microCT), ultrasound, positron emission tomography (PET), optical coherence tomography (OCT), and other major imaging systems are available to scientists and clinicians. Each technique has advantages and limitations, thus making them complementary. We report herein our investigations on the synthesis and use of new probes for small animal imaging as well as on the preparation and use of targeting complexes to deliver specific gene in tumors cells.

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