

MOLECULAR AND CELLULAR IMAGING WITH QUANTUM DOTS

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Abstract: *Quantum dots (QDs), tiny light-emitting particles on the nanometer scale, are emerging as a new class of fluorescent probe for in vivo biomolecular and cellular imaging. Recent advancement has led to the development of multifunctional nanoparticle probes that are very bright and stable under complex in vivo conditions. A new structural design involves encapsulating luminescent QDs with amphiphilic block copolymers and linking the polymer coating to tumor-targeting ligands and drug delivery functionalities. Bioconjugated QDs have raised new possibilities for ultrasensitive and multiplexed imaging of molecular targets in living cells, animal models and possibly in humans.*

Keywords: *PEG polyethylene glycol, QD quantum dot, TOPO tri-n-octylphosphine oxide*

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