

## Drug delivery Systems: benefits and challenges

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Drug delivery systems are formulations or devices that enable the introduction of a therapeutic substance in the body, improving its efficacy and safety by controlling the rate, time and place of release of drugs in the body. Nanotechnology represents a powerful tool for providing important breakthroughs in this field. However, a literature survey from the past 10 years, demonstrate that only 0.7% of the administered nanoparticle dose is delivered to the tumour. This has negative consequences on the translation of nanotechnology for human use with respect to manufacturing, cost, toxicity, and imaging and therapeutic efficacy. A critical evaluation of the state-of-the art on nanoparticles in cancer treatment will be presented, as well as an example of our recent contribution in the field.

**Tuesday 8 November 2016, 14:30**

ISOF 12 – Meeting Room (1<sup>st</sup> floor)

CNR Research Area

Via Gobetti 101, Bologna