



CoffeeTalk@ISOF

Strategies for Efficient Delivery and Effective Intracellular Release by Polymeric Micelles

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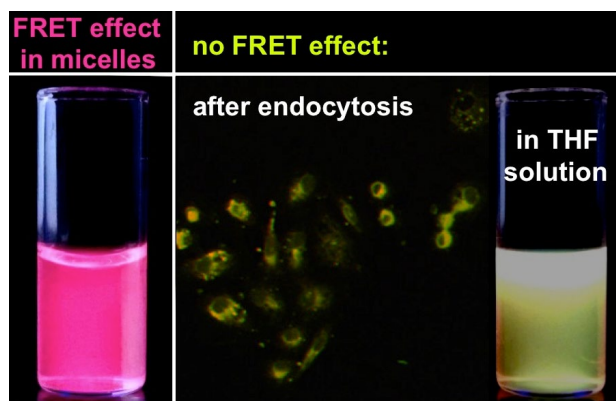
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The efficient delivery to cancer tissues of nanocarriers depends by their dimension, stability and stealth properties. Once reached the neoplasm, the nanoparticles have to be incorporated into the cells by endocytosis forming endocytic vesicles. The loaded drug have to be released by the polymeric micelles to the cytosol before the endosomes are converted into the highly degrading lysosomes. This implies the destabilization of the micelles and the disruption of the endosomes. The therapeutic agents can exert their action mechanisms only if they are released unmodified to the cytosol.

Biocompatible polymeric micelles were loaded with thiophene based fluorophores and were administered to cultured cells and a rapid uptake was observed. Also FRET coupled fluorophores were loaded, the disappearing of the FRET effect, upon internalization, demonstrated the release of the carried agents from the micelles.

[1] M. Benaglia et. al.; "New biocompatible polymeric micelles designed for efficient intracellular uptake and delivery" *J. Mater. Chem. B*, 2015, 3, 8963-8972.



Tuesday 9 February 2016, 14:30

ISOF 12 – Meeting Room (1st floor)

CNR Research Area

Via Gobetti 101, Bologna



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