

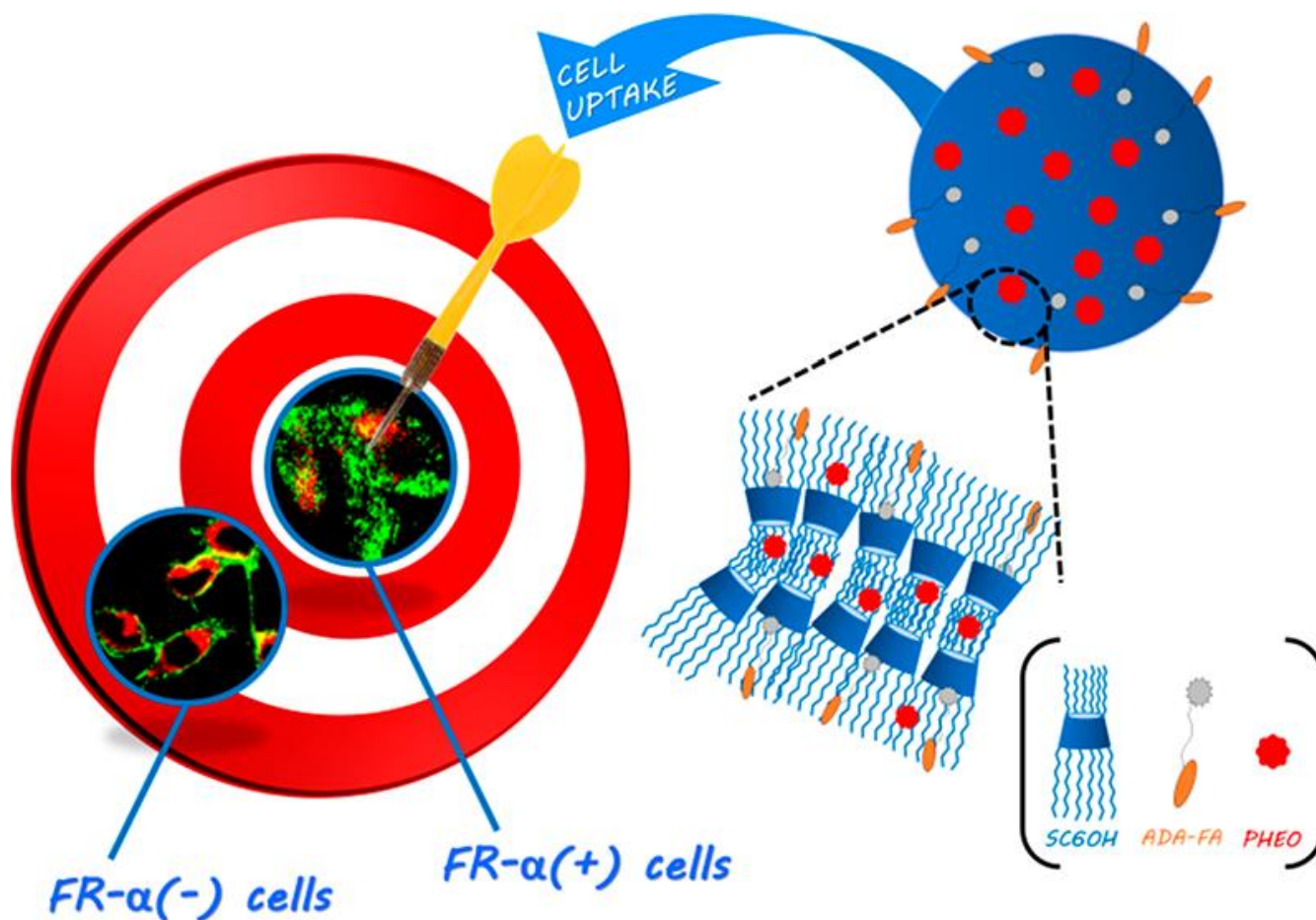


Cyclodextrins nanoengineered with photosensitisers as efficient PDT tools

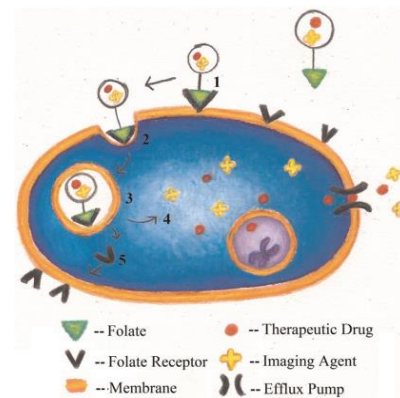
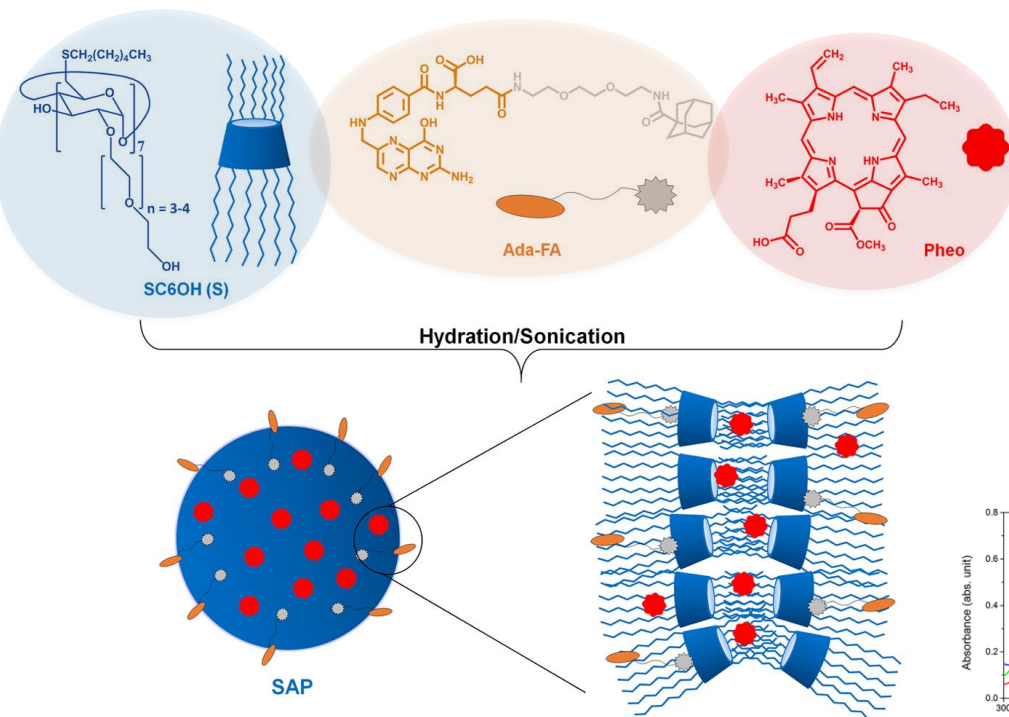
Roberto Zagami

R. Zagami, V. Rapozzi, A. Piperno, A. Scala, C. Triolo, M. Trapani, L. E. Xodo, L. Monsù Scolaro, A. Mazzaglia

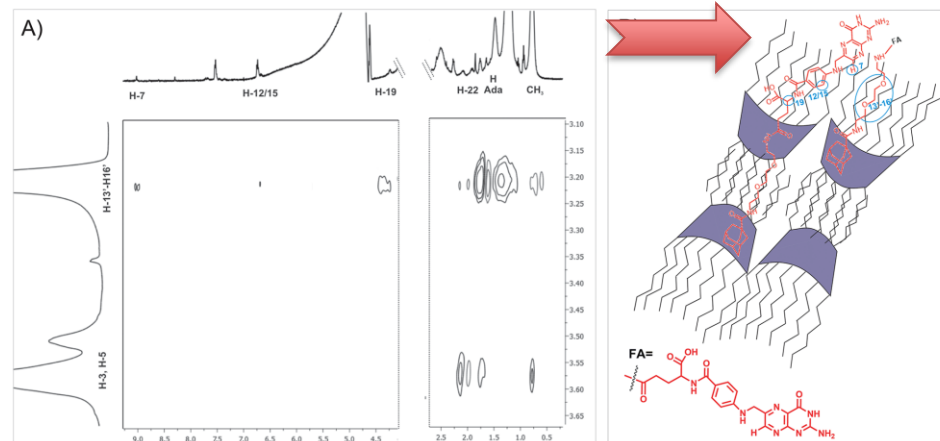
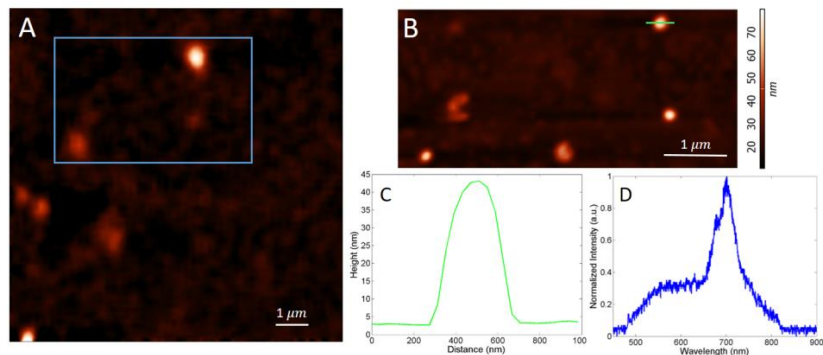
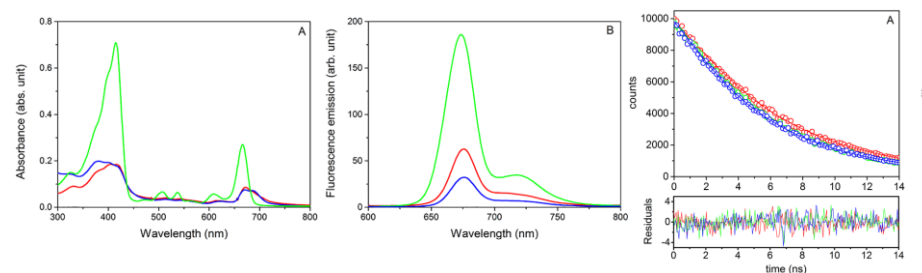
Biomacromolecules 2019, 20, 2530–2544

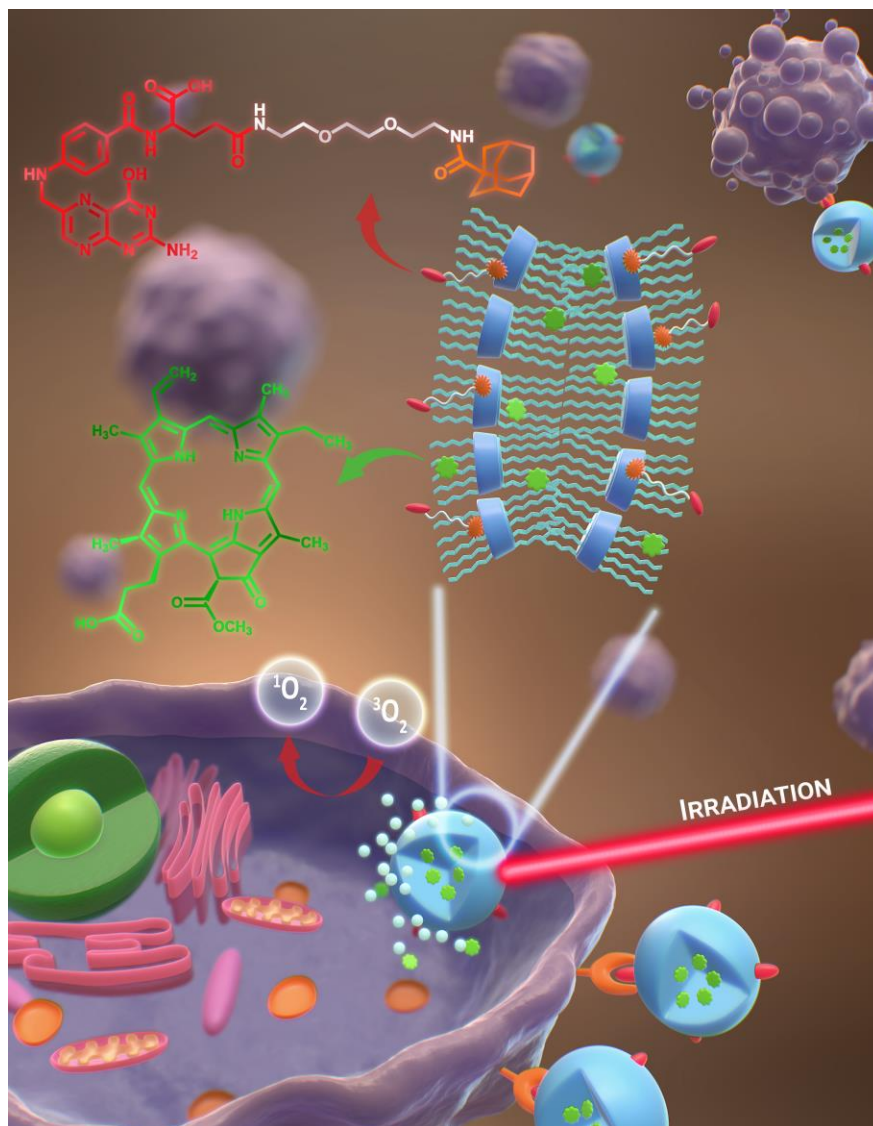


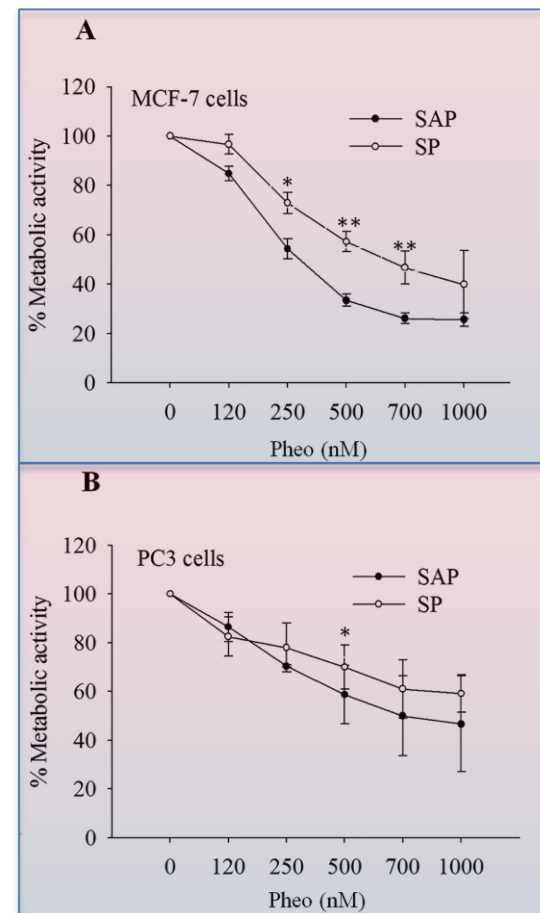
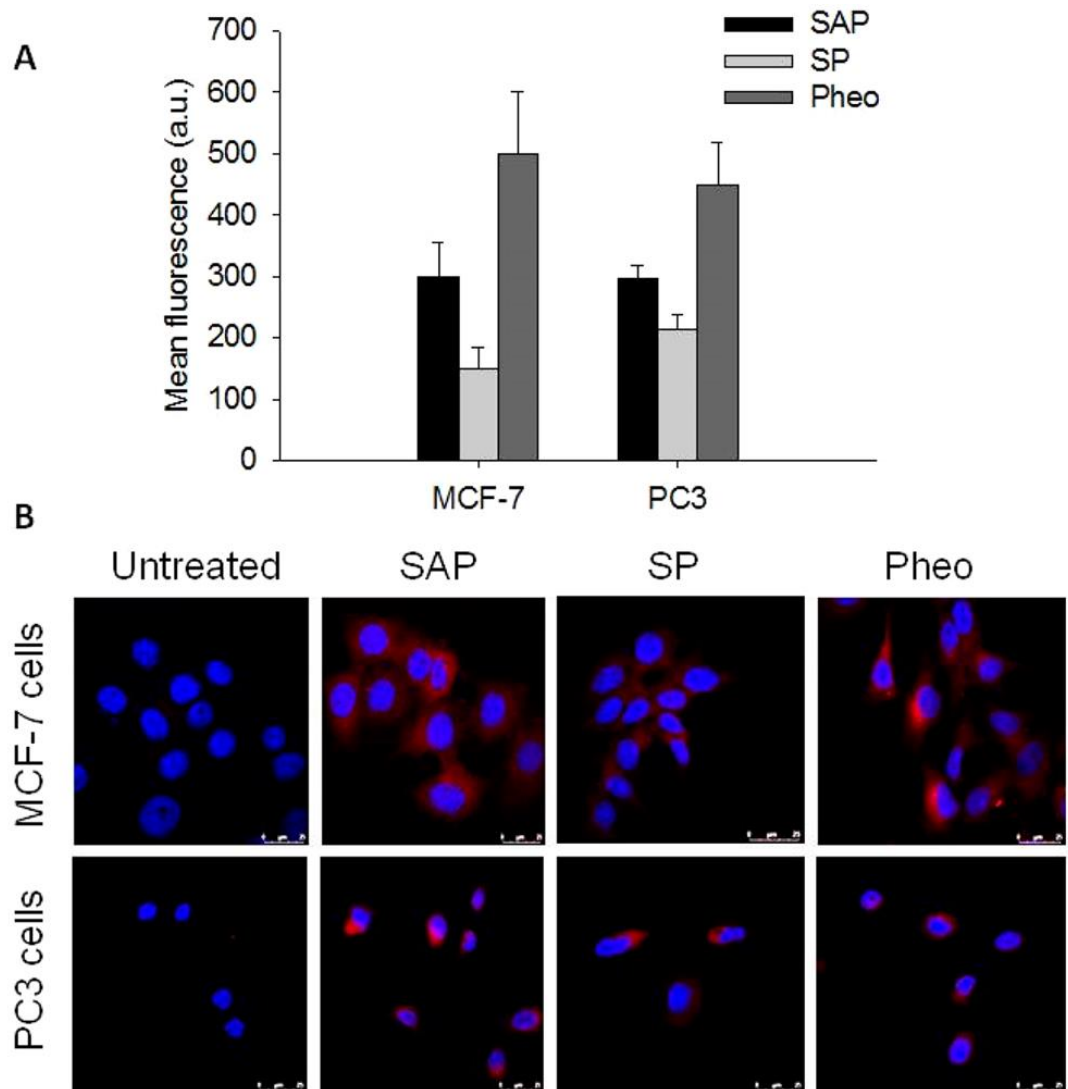
FOLATE-DECORATED AMPHIPHILIC CYCLODEXTRINS AS CELL-TARGETED NANOPHOTOTHERAPEUTICS



- PEG dilemma:
- PEG density on NPs surface
- interaction with serum protein
- interaction of PEG with FA in the same NP;
- Folate dilemma:
- cancer cells w/o FA- α receptor
- treatment times with cancer cells





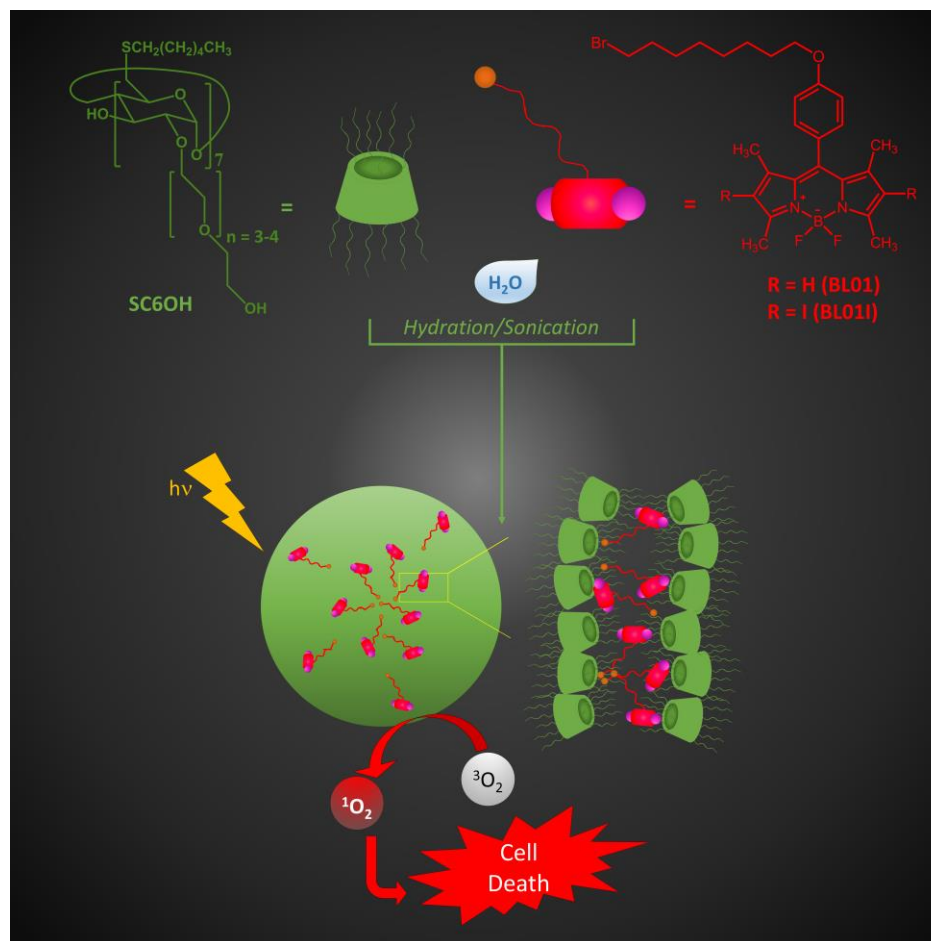


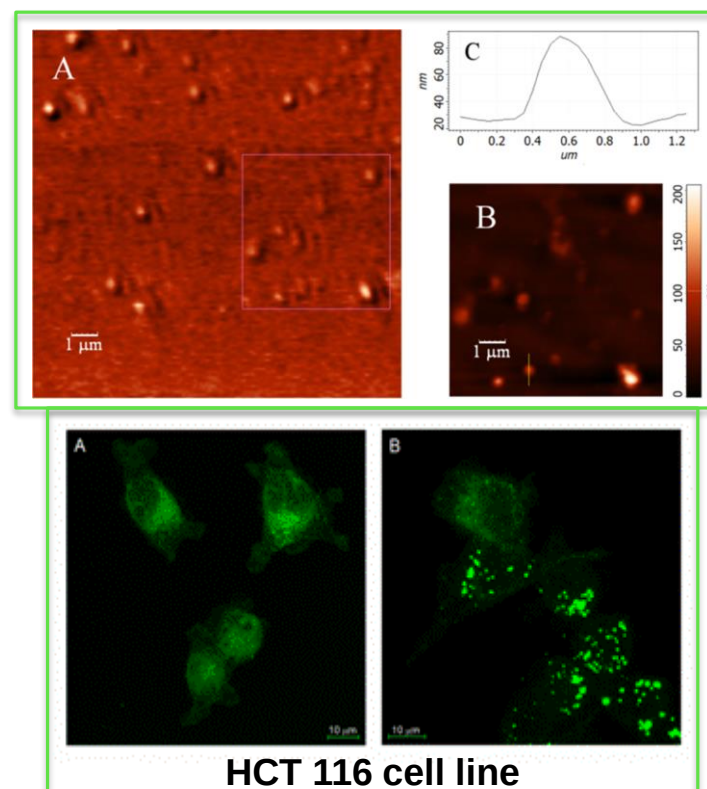
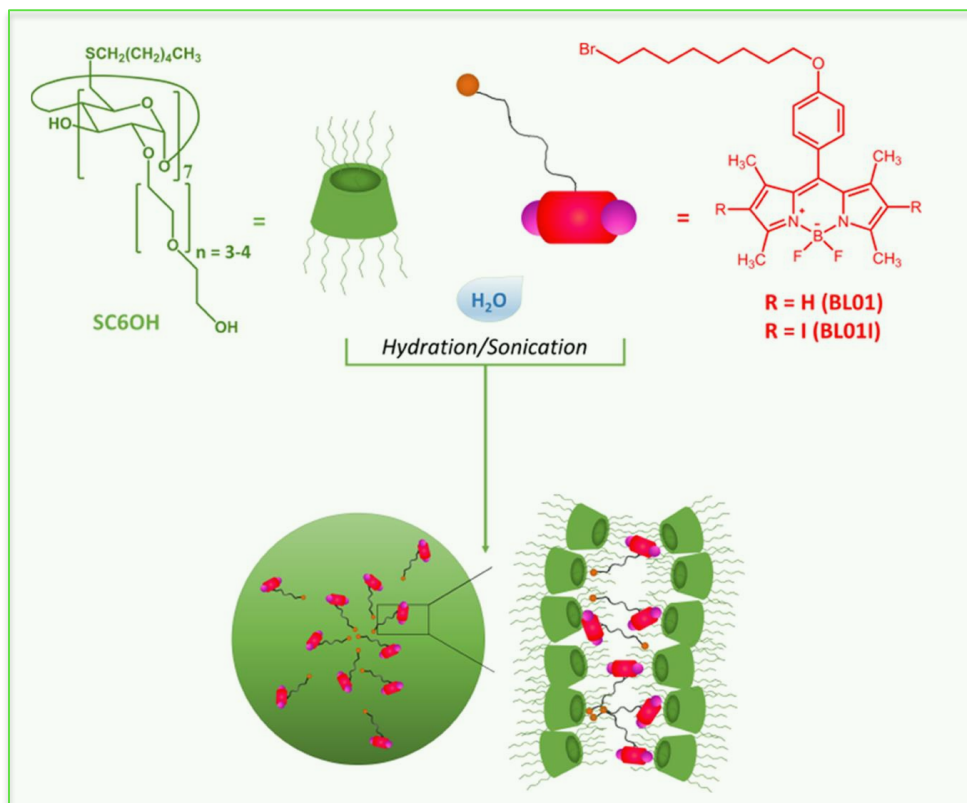
IC₅₀ values

	MCF-7 cells	PC3 cells
SAP	270 nM	700 nM
SP	600 nM	>1000 nM

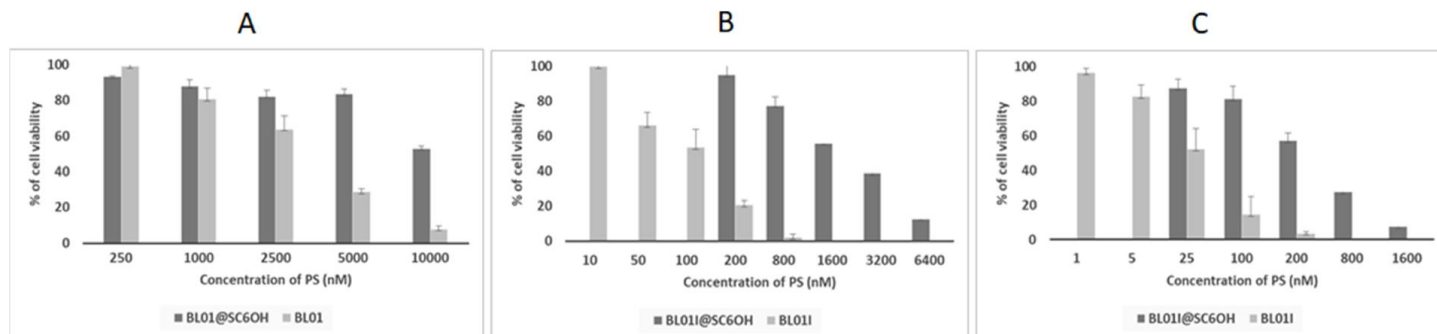
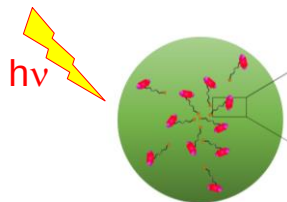
R. Zagami, G. Sortino, E. Caruso, M. C. Malacarne, S. Banfi, S. Patanè, L. Monsù Scolaro, A. Mazzaglia

Langmuir 2018, 34, 8639–8651





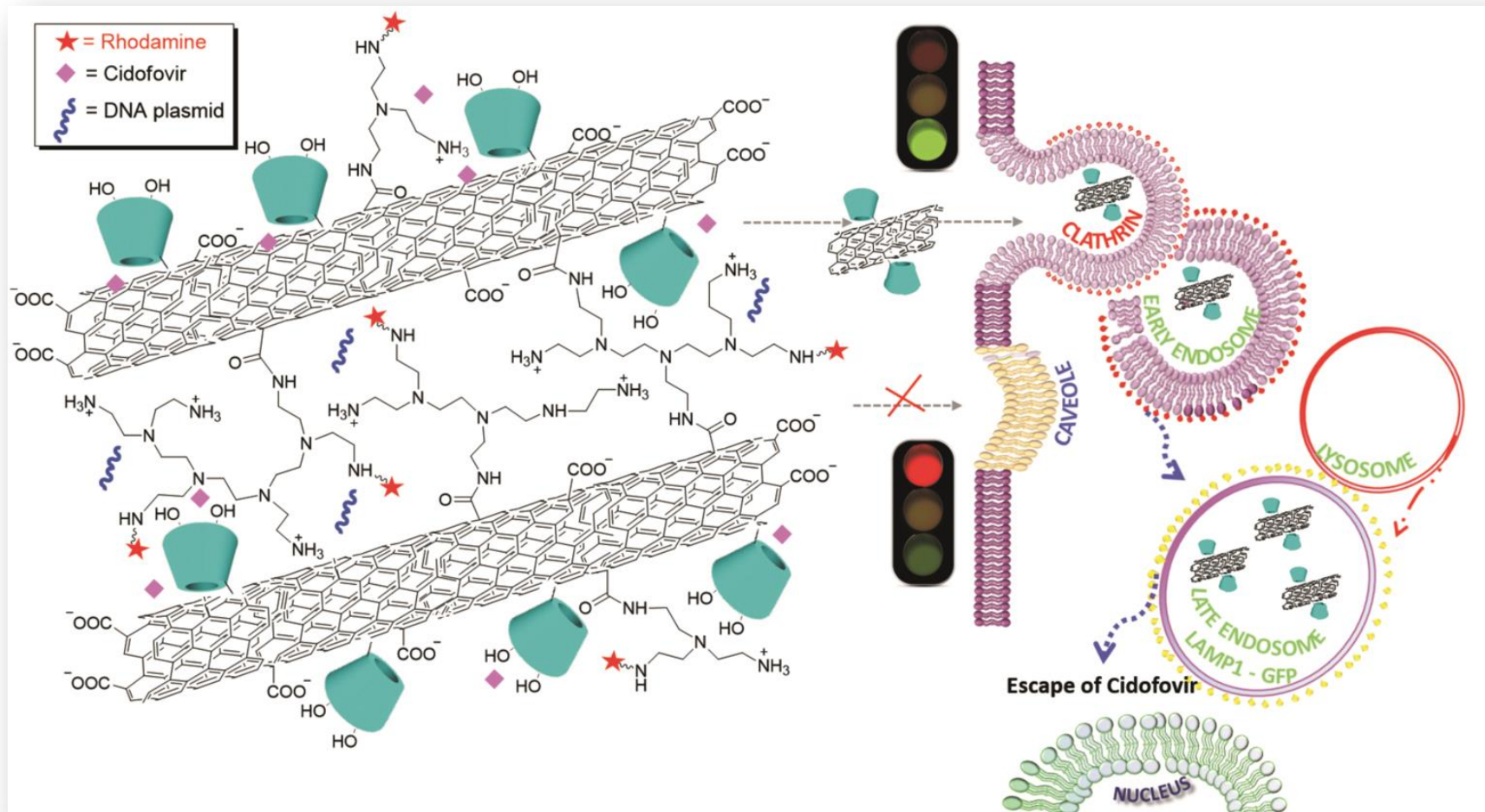
PDT activity



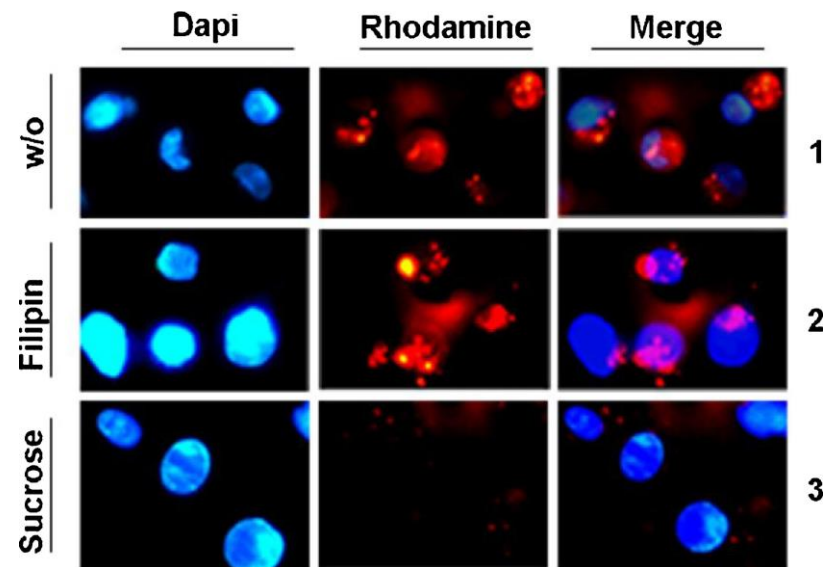
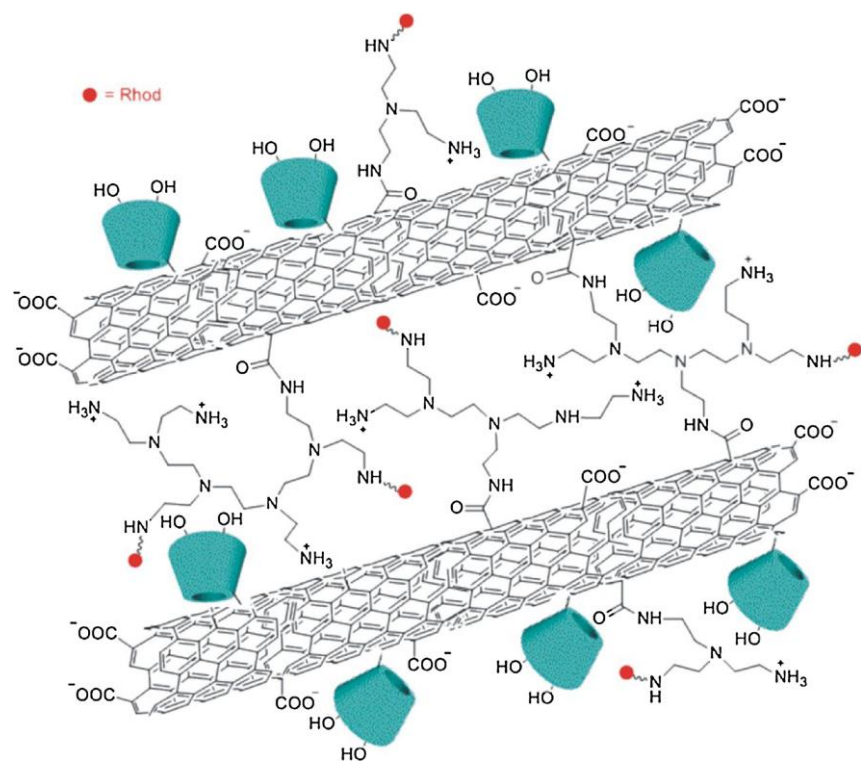
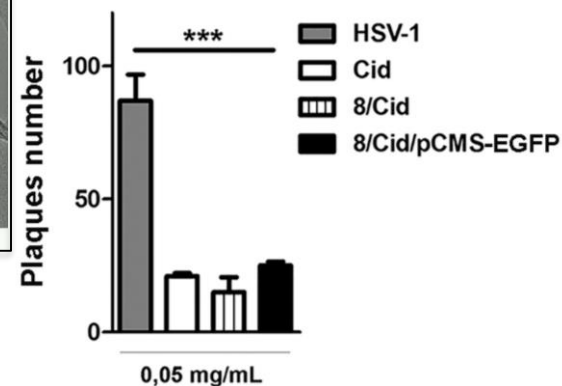
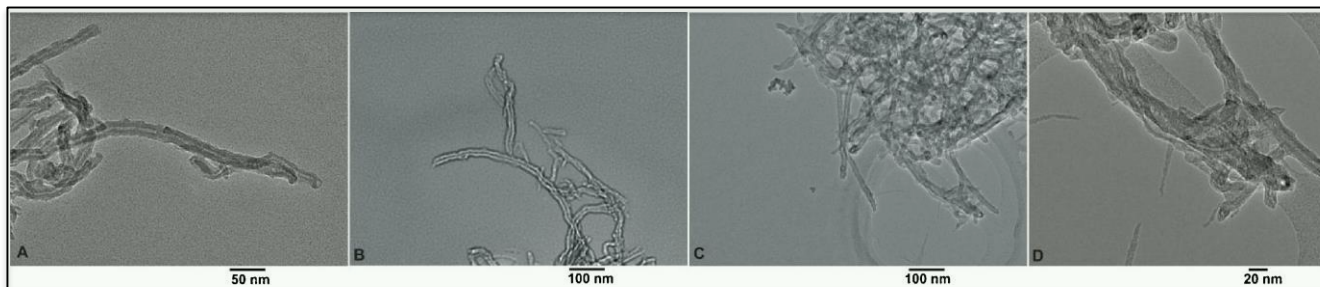
INTRACELLULAR TRAFFICKING AND THERAPEUTIC OUTCOME OF MULTIWALLED CARBON NANOTUBES MODIFIED WITH CYCLODEXTRINS AND POLYETHYLENIMINE

A. Mazzaglia, A. Scala, G. Sortino, R. Zagami, Y. Zhu, M. T. Sciortino, R. Pennisi, M. Musarra Pizzo, G. Neri, G. Grassi, A. Piperno

Colloids and Surfaces B: Biointerfaces 2018, 163, 55–63



INTRACELLULAR TRAFFICKING AND THERAPEUTIC OUTCOME OF MULTIWALLED CARBON NANOTUBES MODIFIED WITH CYCLODEXTRINS AND POLYETHYLENIMINE



THANK YOU FOR YOUR ATTENTION

PhD Roberto Zagami
