

The effect of the shape of gold core-mesoporous silica shell nanoparticles on the cellular behavior and tumor spheroids penetration

Supporting Information

Diana R. Dias ^a, André F. Moreira ^a and Ilídio J. Correia ^{a*}

^a CICS-UBI – Health Sciences Research Centre, Universidade da Beira Interior, Av. Infante D. Henrique, 6200-506 Covilhã, Portugal.

* Corresponding author: Tel.: +351 275 329 002; Fax: +351 275 329 099; e-mail: icorreia@ubi.pt.

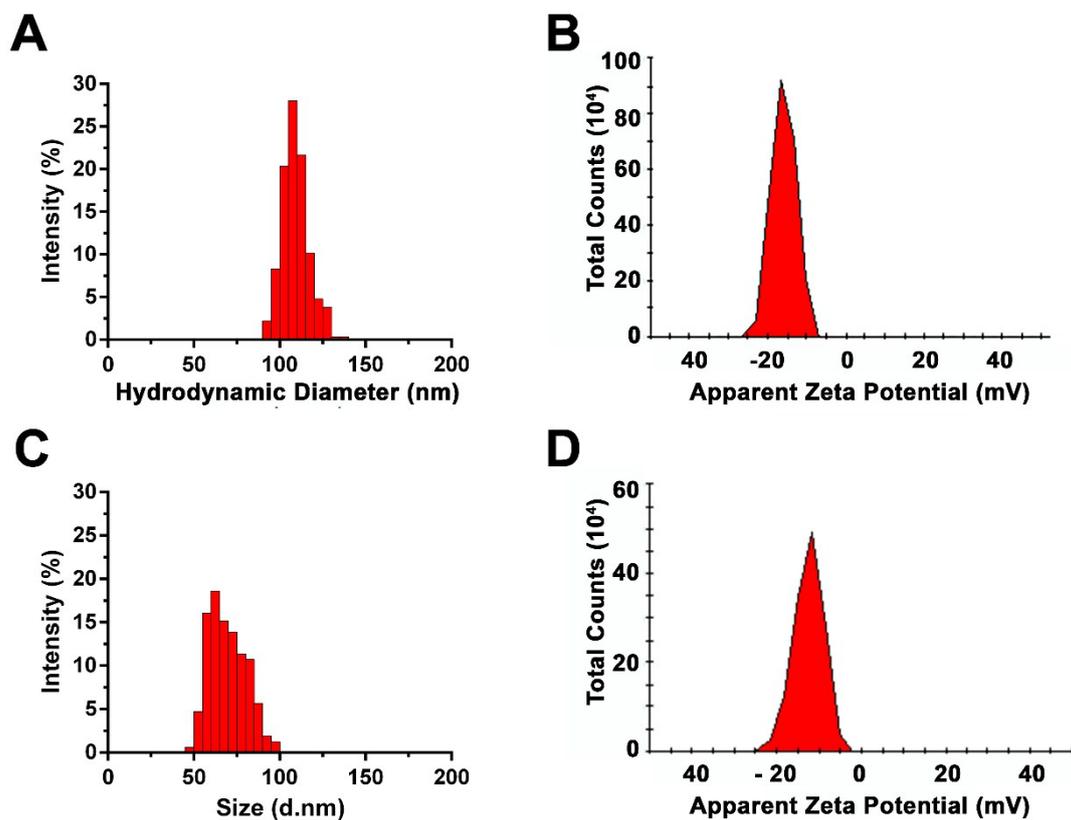


Figure S1 – Size and charge characterizations of Au-MSSs. (A) Au-MSS spheres hydrodynamic diameter distribution by intensity, determined by DLS measurements and (C) Au-MSS rods size distribution by intensity, determined by statistical analysis of TEM images. (B) Au-MSS spheres and (D) Au-MSS rods zeta potential measurements.

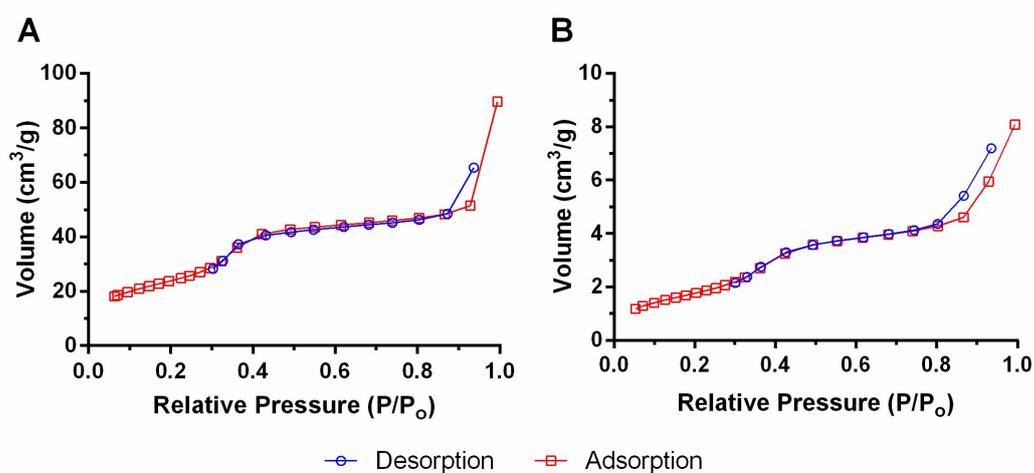


Figure S2 - Representation of adsorption isotherms of both adsorption and desorption pathways of Au-MSS (A) spheres and (B) rods.

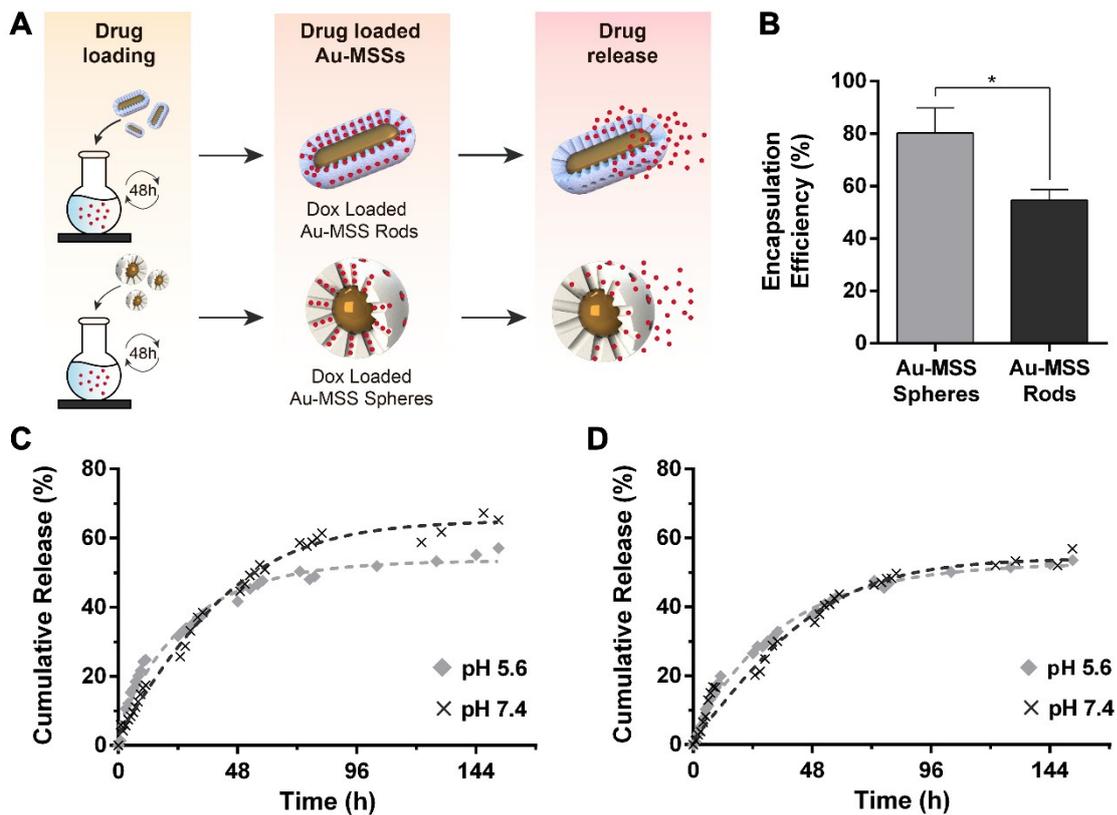


Figure S3 - Characterization of Dox encapsulation efficiency and release profile in Au-MSSs. (A) Schematics of the drug loading and release procedures. (B) Dox encapsulation efficiency on Au-MSSs. Au-MSS rods (C) and spheres (D) Dox cumulative release at pH 5.6 and 7.4. Data are presented as mean \pm s.d., * $p < 0.05$, $n = 3$.

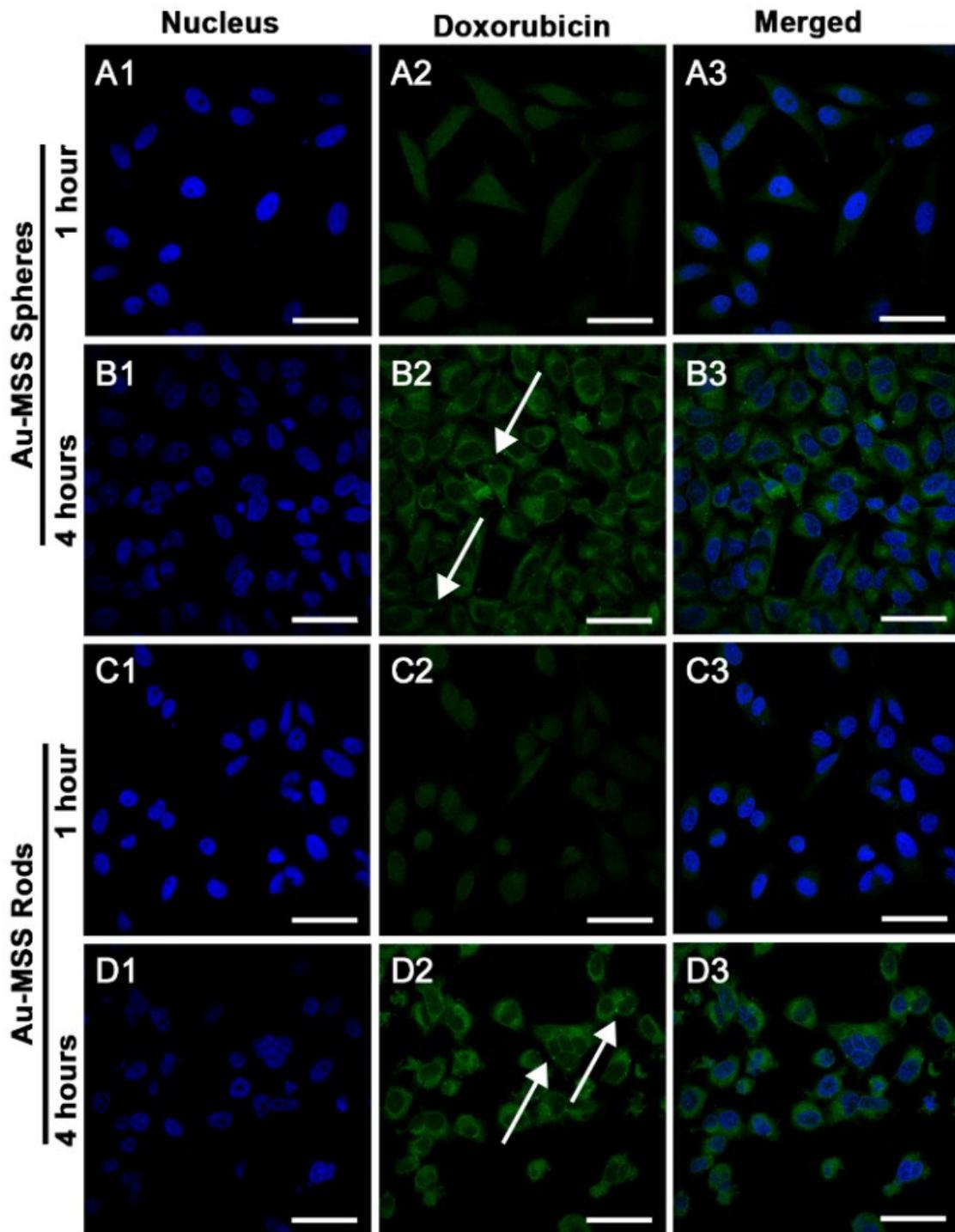


Figure S4 - Confocal laser microscopic images of Au-MSS nanoparticles uptake by HeLa cells after 1 and 4 h of incubation. Blue channel: Hoechst 33342® stained cell nucleus; green channel: Dox fluorescence. Scale bar corresponds to 50 μm .