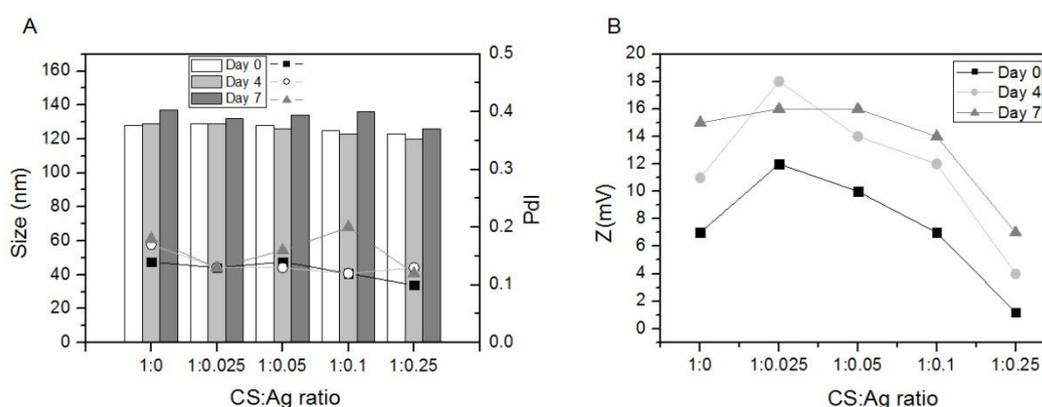
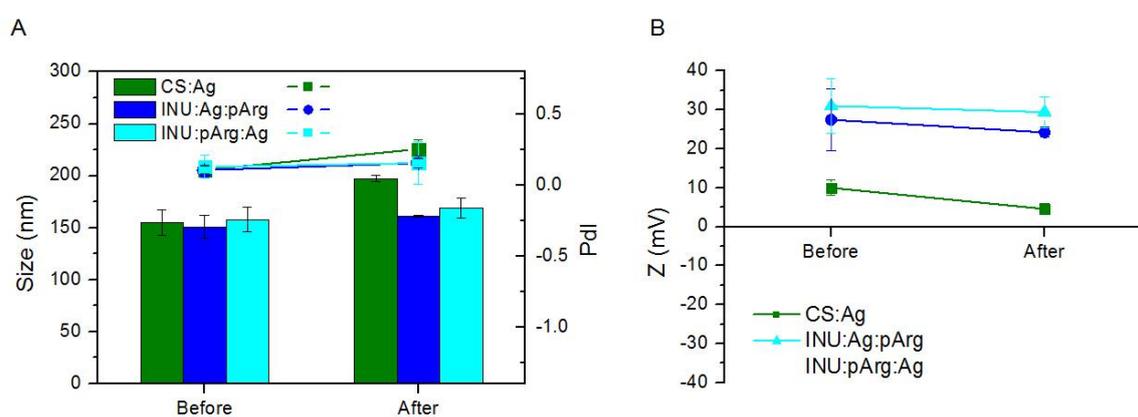


# Supplementary Materials: Design of Polymeric Nanocapsules for Intranasal Vaccination against Mycobacterium Tuberculosis: Influence of the Polymeric Shell and Antigen Positioning

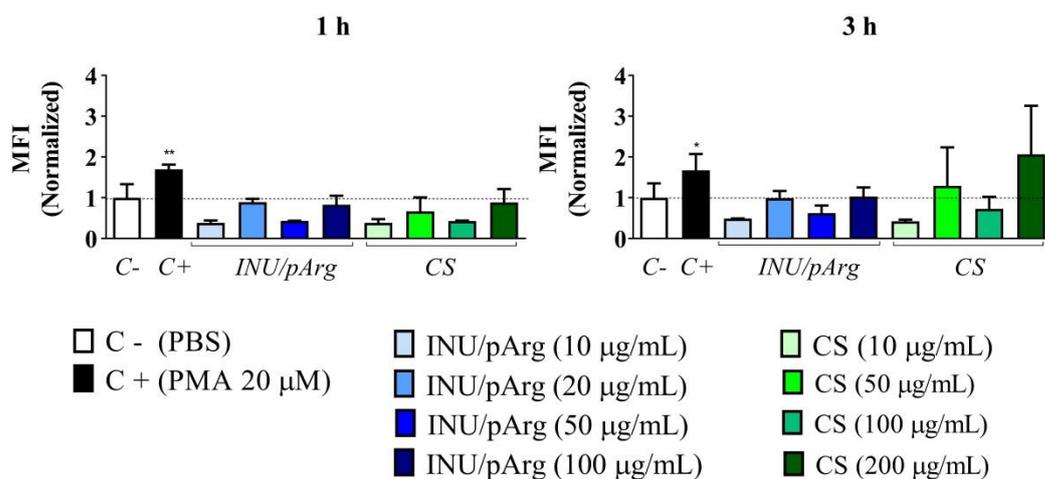
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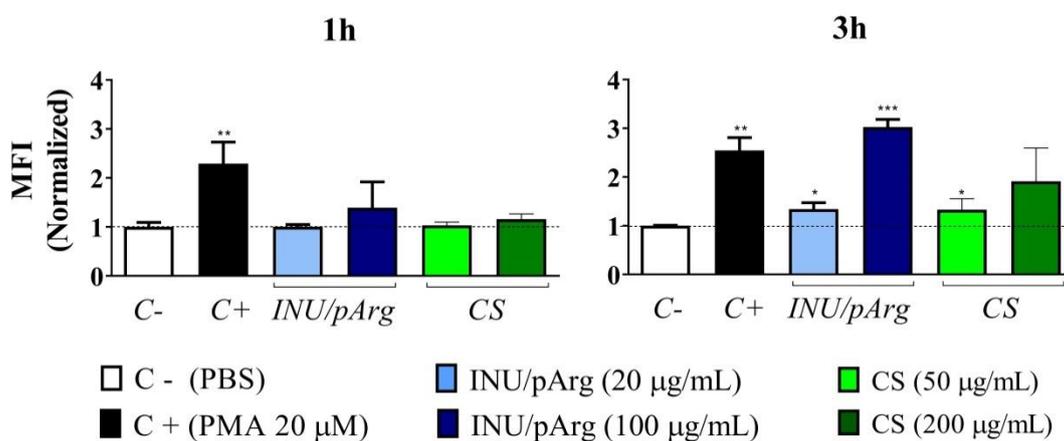
**Figure S1.** Size (Bars), polydispersity index (PDI) (lines and symbols) (A) and Z-potential (B) of the chitosan (CS) nanocapsules with different ratios of antigen (Ag) adsorbed on the surface at three different time points (0, 4 and 7 days). Size and PDI were measured in ultrapure water and Z-potential in 1 mM KCl.



**Figure S2.** Size (Bars), PDI (lines and symbols) (A) and Z-potential (B) of the CS:Ag, INU:Ag:pArg and INU:pArg:Ag nanocapsules before and after lyophilisation with 10% sucrose as cryoprotectant. Size and PDI were measured in ultrapure water and Z-potential in 1 mM KCl. Ag: antigen, CS: chitosan, INU: inulin, pArg: polyarginine.



**Figure S3.** Absence of reactive oxygen species (ROS) release in HL-60 cells incubated with the CS or the INU/pArg nanocapsules at four different concentrations for 1 h (left panel) and 3 h (right panel). Cells incubated with RPMI medium alone (C-) or with zymosan (C+) were used as negative and positive controls, respectively. \*  $P \leq 0.05$ , \*\*  $P \leq 0.01$ .



**Figure S4.** ROS release in A549 cells incubated with the CS or the INU/pArg nanocapsules at two different concentrations for 1 h (left panel) and 3 h (right panel). Cells incubated with RPMI medium alone (C-) or with zymosan (C+) were used as negative and positive controls, respectively. \*  $P \leq 0.05$ , \*\*  $P \leq 0.01$ , \*\*\*  $P \leq 0.001$ .