# Supporting information

## Concanavalin A-targeted mesoporous silica nanoparticles for infection treatment

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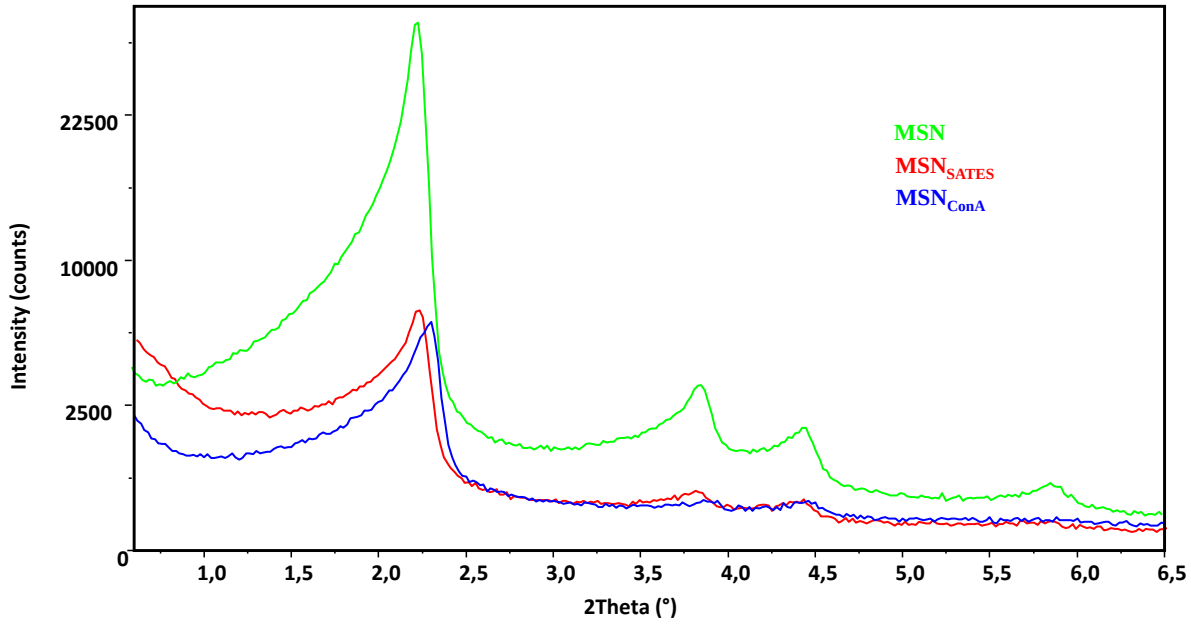
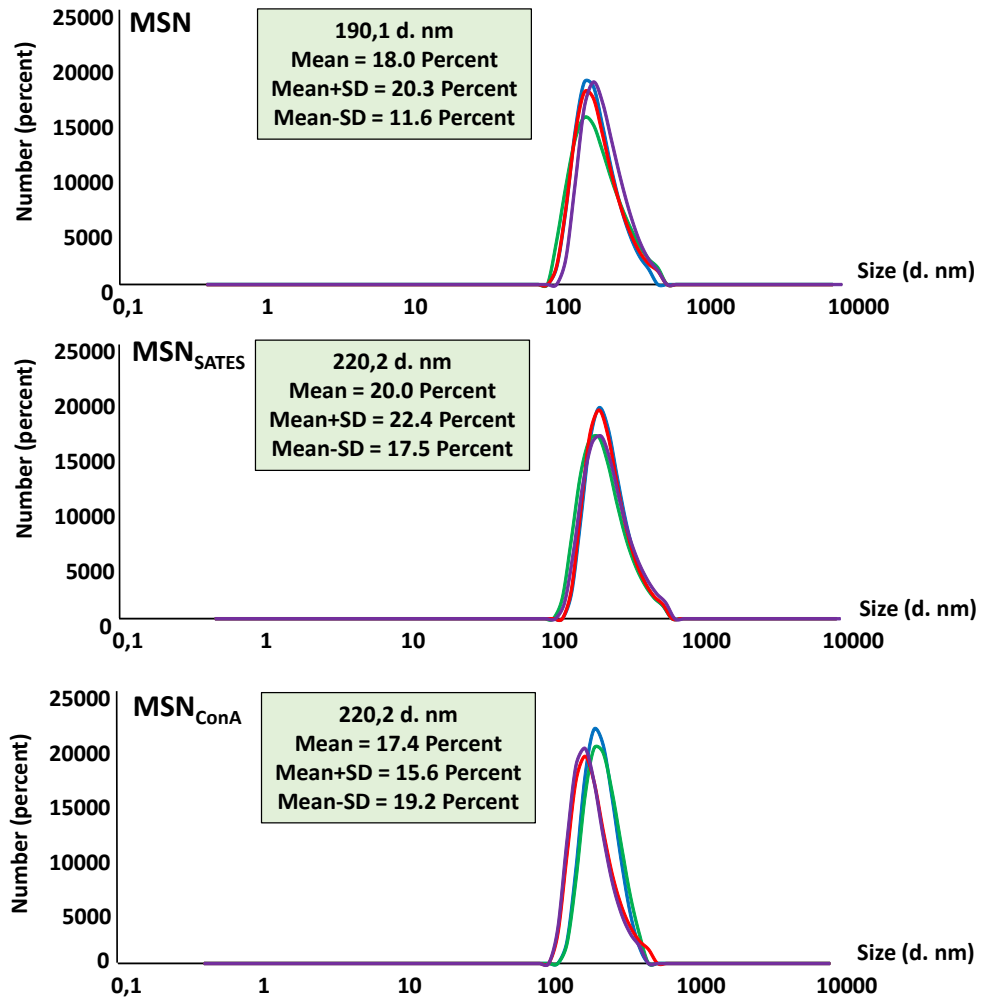



**Fig. S1.** Low-angle XRD patters of MSN, $MSN_{SATES}$ and $MSN_{ConA}$




**Figm. S2.** DLS measurements of MSN, $MSN_{SATES}$ and $MSN_{ConA}$

To determine the effectiveness of the LEVO dosages released from the different MSNs against bacteria growth, 100 µL of each dosage was inoculated in 900 µL of $10^8$ bacteria per mL in PBS and incubated overnight. The presence or not of bacteria, as well as their quantification, was determined by counting the colony forming units (CFUs) in agar. In this sense, 10 µL of this solution was seeded onto tryptic soy agar (TSA) and incubated at 37 ºC overnight and subsequent counting. Controls containing bacteria was also performed and the experiments were performed in triplicate. Figure S3 summarized the results, showing that MSNConA@LEVO maintains the antibiotic activity for one week while sample MSN@LEVO only avoids the stabilization of bacteria for 48 h. These results are in agreement with the release kinetics of levofloxacin for both samples (Fig. 5).

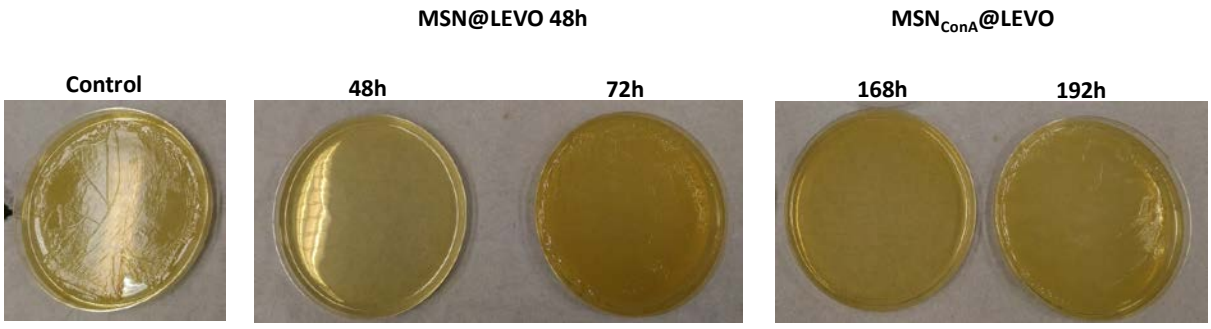



**Fig. S3** Representative images shown the antimicrobial efficacy onto planktonic bacteria for LEVO released from MSN@LEVO and MSN$_{ConA}$@LEVO after different times. The results shows no bacteria growth after 7 days for MSNConA@LEVO while sample MSN@LEVO only avoids the stabilization of bacteria for 48-72 h.

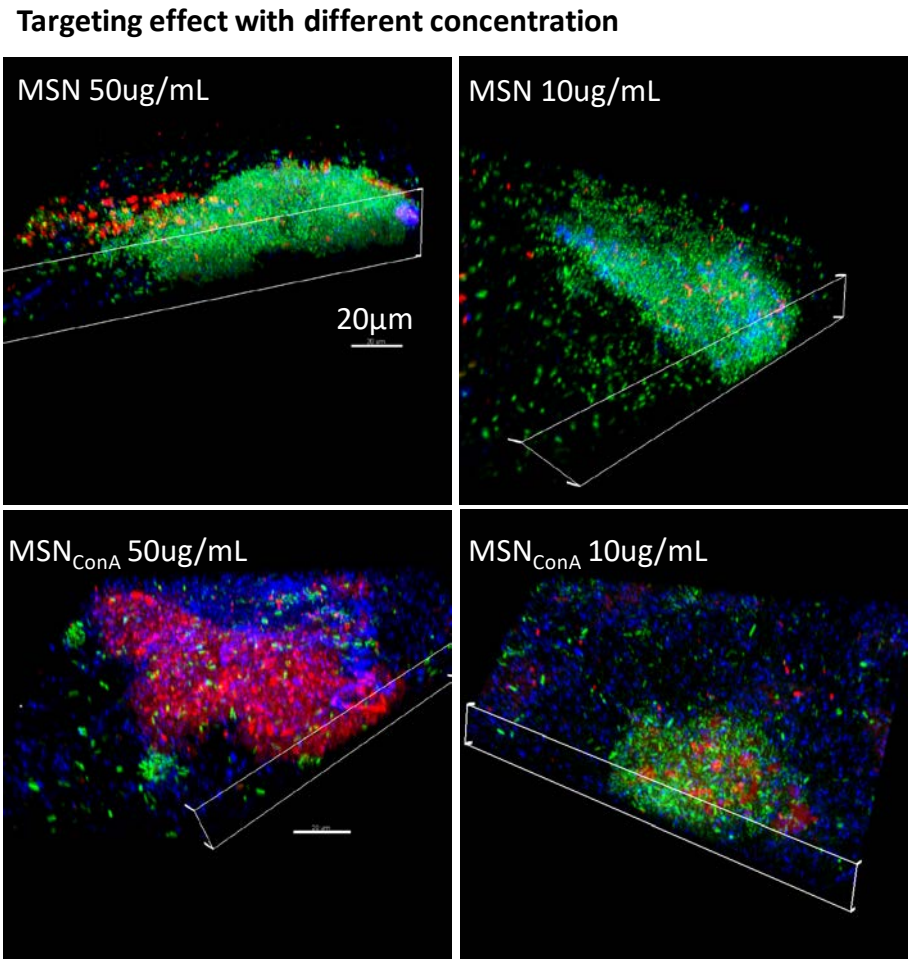



**Fig. S4.** Confocal microscopy study of the penetration capacity of MSNs onto Gram-negative E. coli biofilm. The confocal images show the biofilm preformed onto covered glass-disk after 90 min of incubation with MSN and MSN$_{ConA}$ at 10 and 50 µg/mL. Live bacteria are

stained in green, MSNs in red and the protective biolayer, i.e., the extracellular polysaccharide matrix biofilm in blue. Scale bars, 20 μm.