

Electronic Supplementary Information

for

**Surface Modification of Resorcinarene based Self-Assembled
Solid Lipid Nanoparticles (SLNs) for Drug Targeting**

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SLN preparation

To 3 mL of a solution of L-RA-Pro in tetrahydrofuran (5mg/mL) (Fluka, switzerland), under magnetic stirring, was added 100 mL of water at a flow rate of 600 mL/min. The milky suspension spontaneously formed was kept under stirring for an additional minute. The organic solvent was evaporated under reduced pressure.

Atomic Force Microscopy

L-RA-Pro SLNs

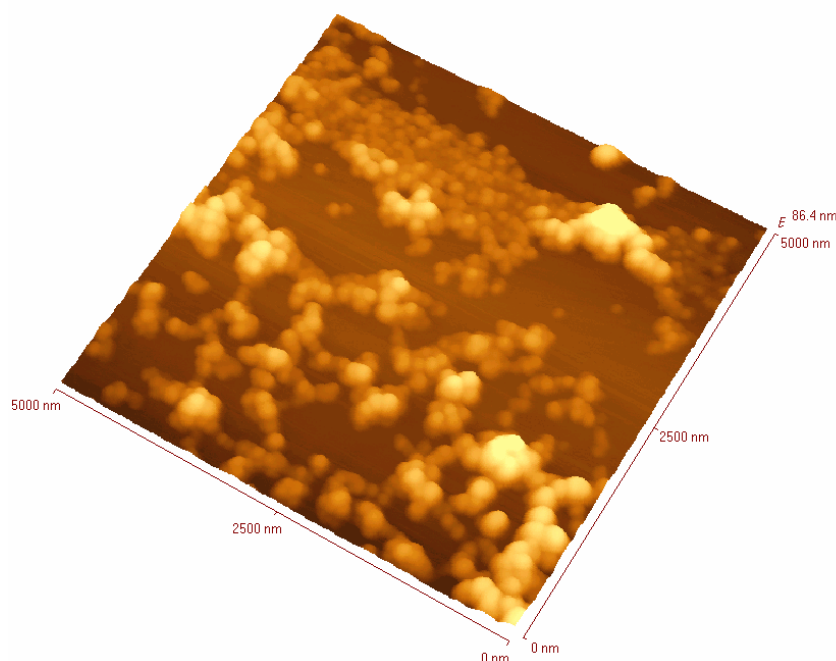


Fig. 1: non-contact mode AFM image of L-RA-Pro-based SLNs spread on a freshly cleaned glass slide.

Proteo- SLNs

A gold coated microscopy glass slides was submitted to a UV/O₃ treatment (30 min) and then immersed in a solution of DTSP (3,3'-Dithiodipropionic acid di(N-hydroxysuccinimide) ester) in 2-propanol (HPLC grade, Fluka, Switzerland) at a concentration of 1 mg/mL (cf. fig. 2) during 1 hour. After rinsing with 2-propanol and water, they were incubated in a solution of anti-BSA antibodies (affinity purified, Bethyl Lab) at a concentration of 0.1 mg/mL in PBS (10 mM, pH 7, NaCl 100 mM) during one hour. Un-reacted succinimidyl esters were inactivated by incubating the chip 10 min in a solution of ethanolamine-HCl (pH 7) 0.1 M in water. The sample was then washed with PBS and immersed in a proteo-SLNs suspension (PBS) during 4 hours, thoroughly washed with PBS, water and dried overnight at RT prior to imaging. References were prepared skipping the antibody incubation.

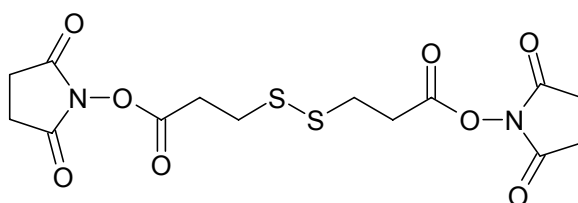


Fig. 2: molecular formula of 3,3'-Dithiodipropionic acid di(N-hydroxysuccinimide) ester (DTSP)

Scanning electron microscopy of L-RA-Pro based SLNs

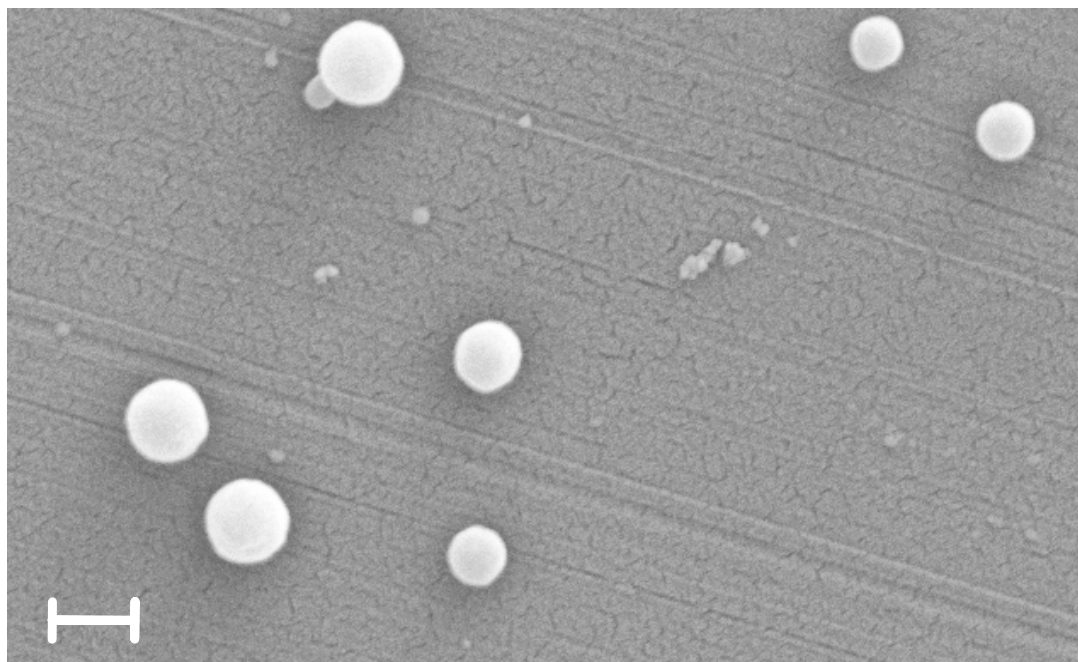


Fig. 2: scanning electron microscopy image of L-RA Pro-based SLNs spread on a glass surface (scale bar 200 nm)