

Preparation Of Nanosized Coacervates Of Positive And Negative Starch Derivatives Intended For Pulmonary Delivery Of Proteins

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Table S1: Characteristics of starch NPs prepared with different amounts of labeled PosStF in a molar ratio of 1:1 (PosSt(F):NegSt) and a concentration of 0.25 mg/mL; bold: Formulation, used for uptake studies.

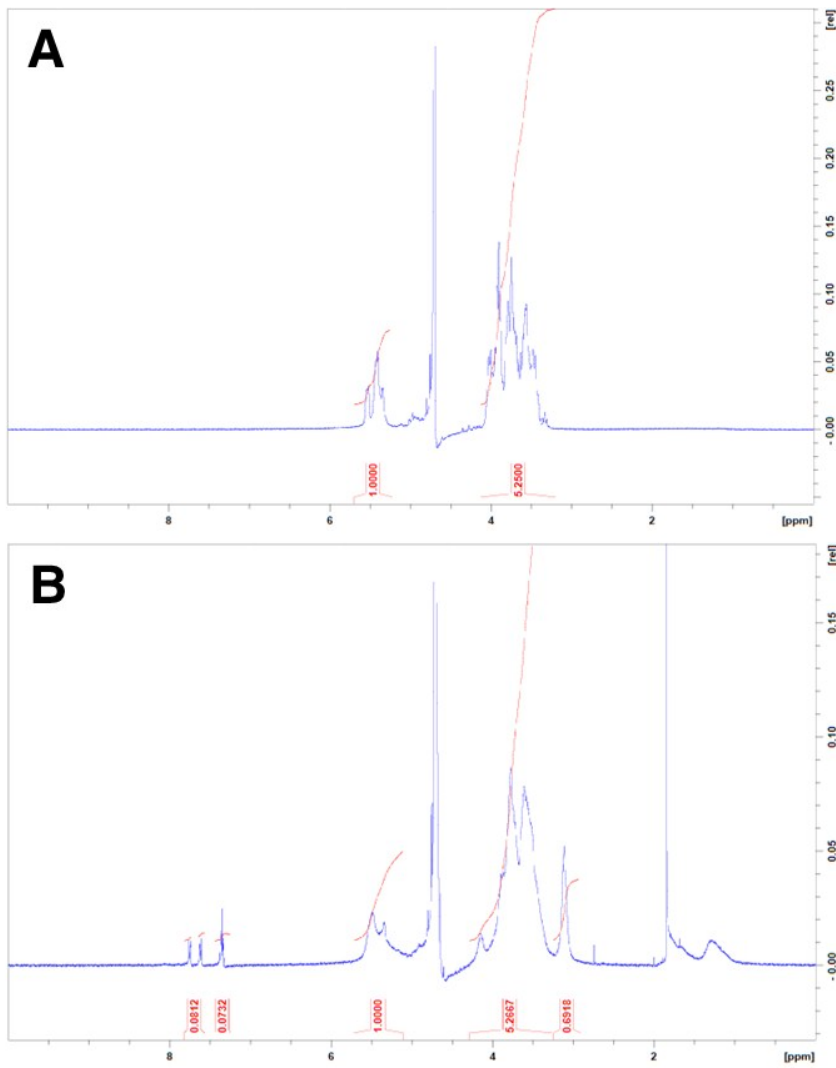


Figure S1: $^1\text{H-NMR}$ of starch derivatives in D_2O ; (A) NegSt; (B) PosSt.

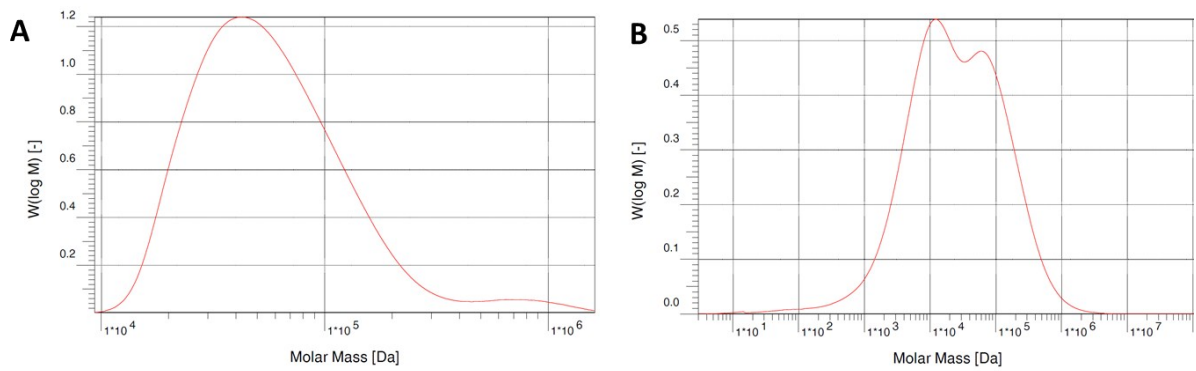


Figure S2: GPC analysis of starch derivatives; (A) NegSt; (B) PosSt.

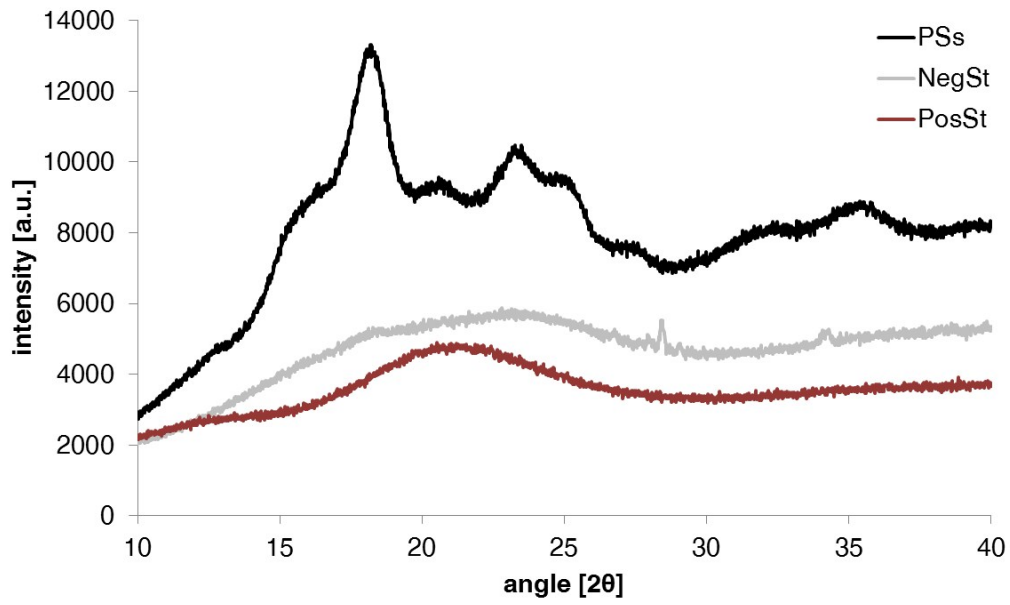


Figure S3: XRPD pattern of starch derivatives.

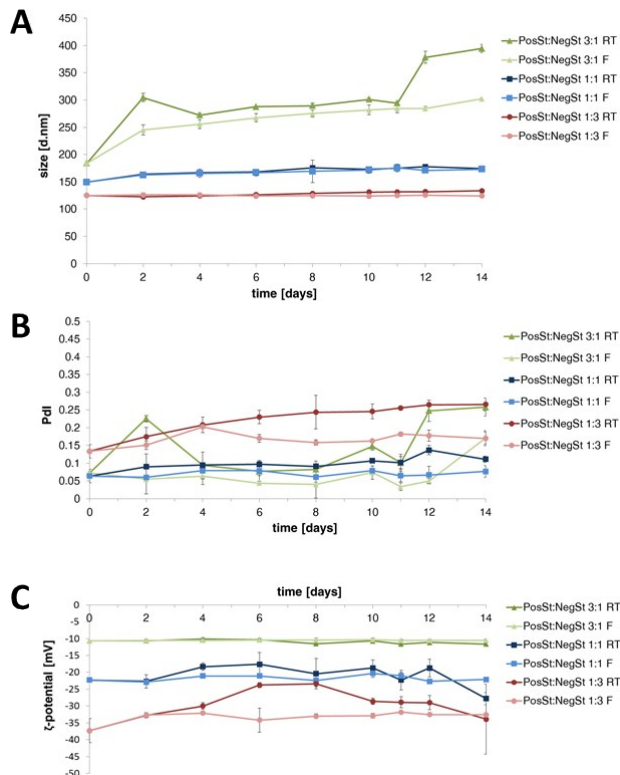


Figure S4: Stability study of starch NPs at RT or at 4°C (F); (A) size; (B) Pdl; (C) ζ-potential.

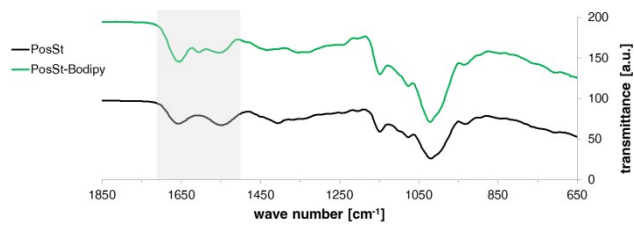


Figure S5: FT-IR of unlabeled PosSt (black) and labeled PosSt_F with Bodipy FL-C5 NHS Ester (green).

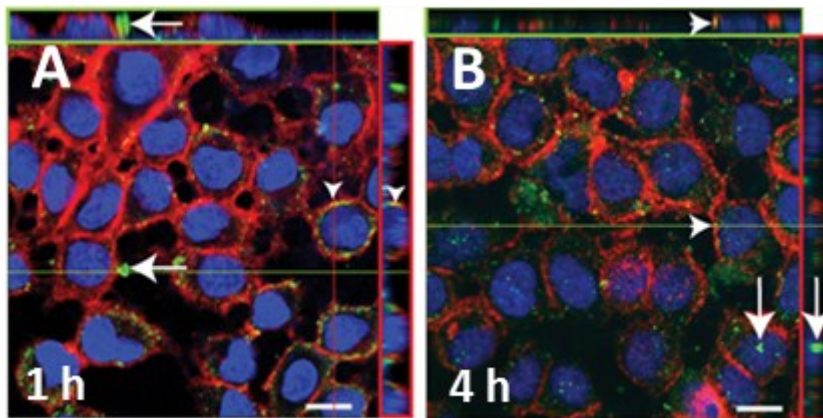


Figure S6: Confocal laser scanning microscopy (CLSM) images of 250 µl nebulized starch NP onto A549 cultivated under ALI. Incubation was at 4 °C for 1 h (A) or 4 h (B). Cells were washed with PBS, fixed with 3% PFA and stained. Blue: DAPI; red: actin; green: starch NP; scale bar: 10 µm; arrow: extracellular NPs; arrow head: intracellular NPs.

Table S1: Characteristics of starch NPs prepared with different amounts of labeled PosSt_F in a ratio of 1:1 (PosSt_F):NegSt) and a concentration of 0.25 mg/mL; bold: Formulation, used for uptake studies.

PosSt _F [%]	PosSt [%]	size [d.nm]	Pdl	ζ-potential [mV]
100	0	132.5 ± 1.17	0.088	-26.4 ± 2.80
50	50	145.2 ± 0.7	0.1	-26.4 ± 2.8
10	90	147.1 ± 0.75	0.051	-22.7 ± 0.95
5	95	146.4 ± 0.72	0.064	-18.3 ± 0.12