

## Supporting information

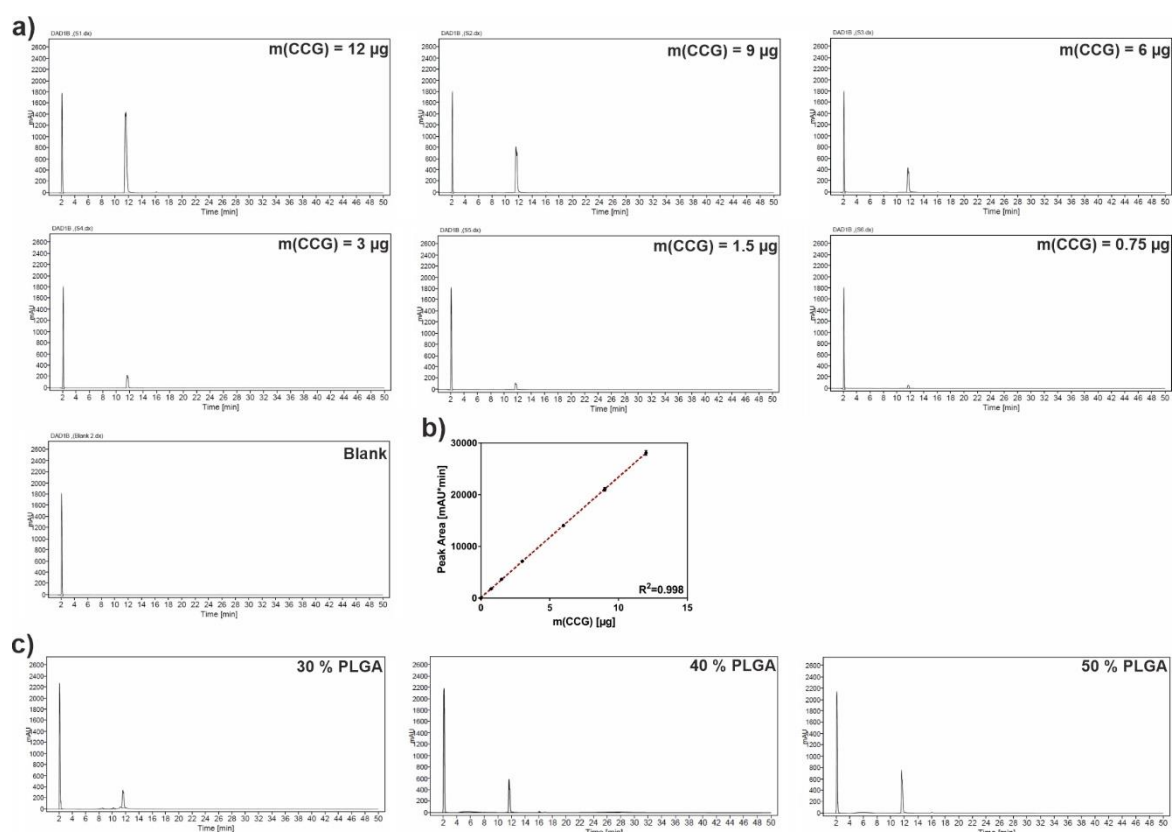
### **Targeted Delivery of Soluble Guanylate Cyclase (sGC) Activator Cinaciguat to Renal Mesangial Cells via Virus-Mimetic Nanoparticles Potentiates Anti-Fibrotic Effects by cGMP-Mediated Suppression of the TGF- $\beta$ Pathway**

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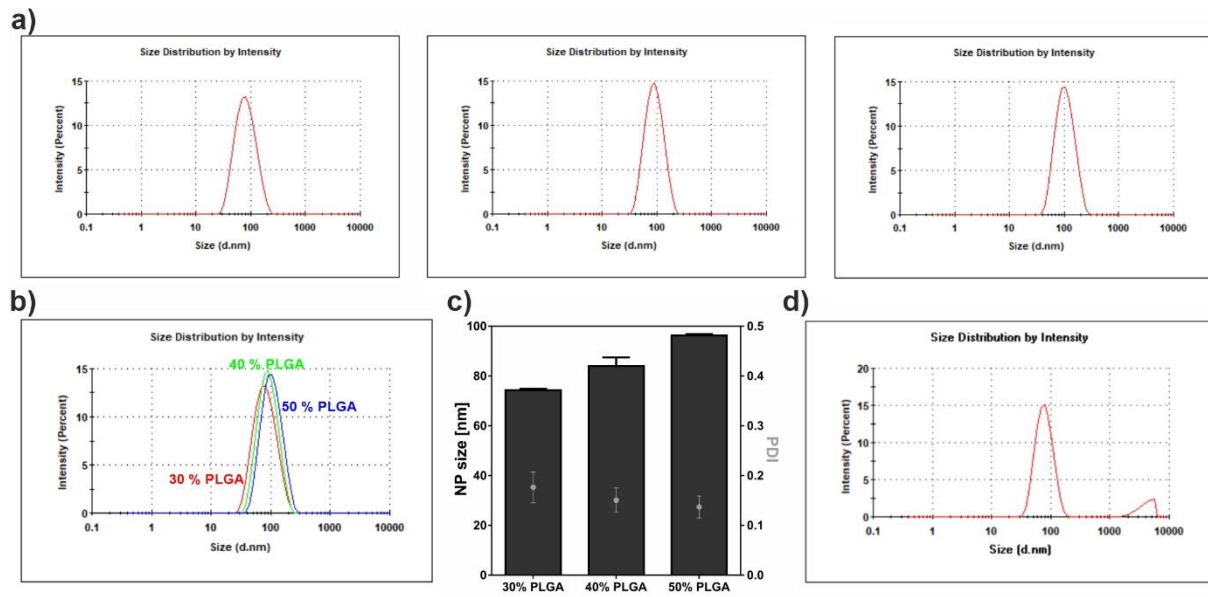
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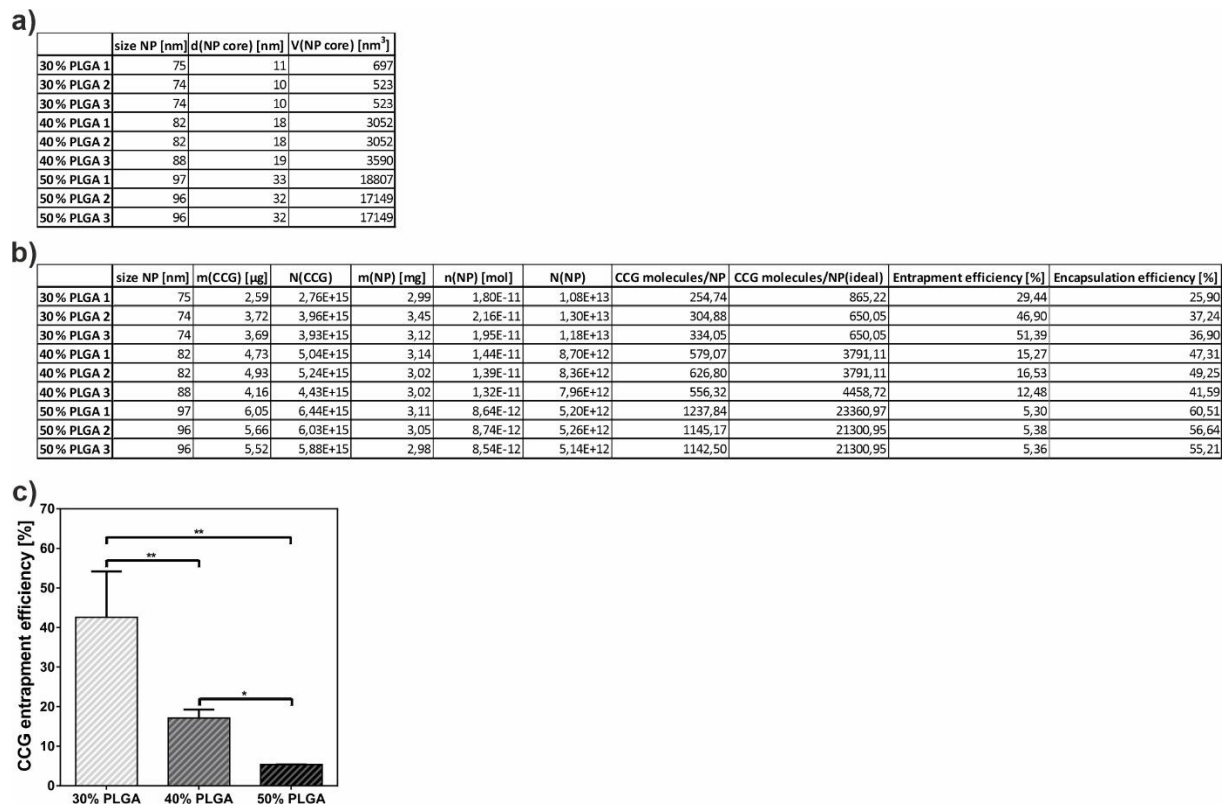
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**Figure S1.** HPLC chromatograms. **a)** Representative HPLC chromatograms for the calibration of free Cinaciguat. **b)** HPLC calibration. Results represent mean  $\pm$  SD ( $n = 3$ ). **c)** Representative chromatograms for NP species carrying 30-50% PLGA and an initial CCG addition of 10 µg per 4 mg NP batch.

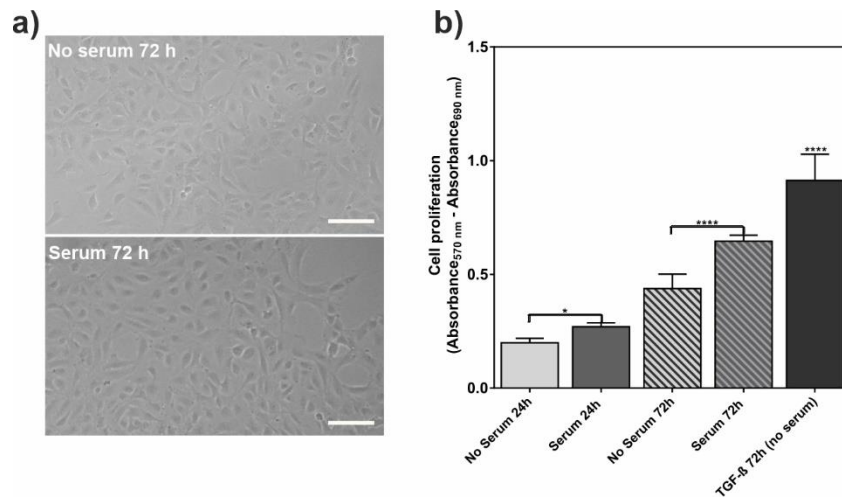


**Figure S2.** a) DLS size distribution of NP species containing 30/40/50% PLGA (from left to right). b) Merged DLS graphs. c) Size and polydispersity index (PDI) data for different NP species. d) Representative DLS graph of 40% PLGA NPs and an addition of 17.5  $\mu\text{g}$  per 4 mg NP batch, showing a strong tendency for larger aggregates (see right peak).



**Figure S3.** a) Results for calculation of NP core volume for each sample. b) Results for calculation of CCG encapsulation as well as entrapment efficiency. c) CCG entrapment efficiency per NP type.

Results represent mean  $\pm$  SD (n = 3). \*P<0.05 \*\*P<0.01.



**Figure S4. a)** Brightfield images of rMCs cultured for 72 h during the cell proliferation assay either without (top) or with (bottom) addition of 10 % FBS. (Scale bar 100  $\mu$ m). **b)** MTT assay results of rMC proliferation after 24 h and 72 h with and without addition of 10 % FBS. (Note: The results for samples “No serum 72 h” and “TGF- $\beta$  72 h (no serum)” represent the blank-normalized samples “Blank cells” and “TGF- $\beta$ ” in Figure 7a of the main manuscript.) Results represent mean  $\pm$  SD (n = 3). \*P<0.05 \*\*\*\*P<0.0001.