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Article

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Induction of T-helper-17-cell-mediated anti-tumour immunity by pathogen-mimicking polymer nanoparticles

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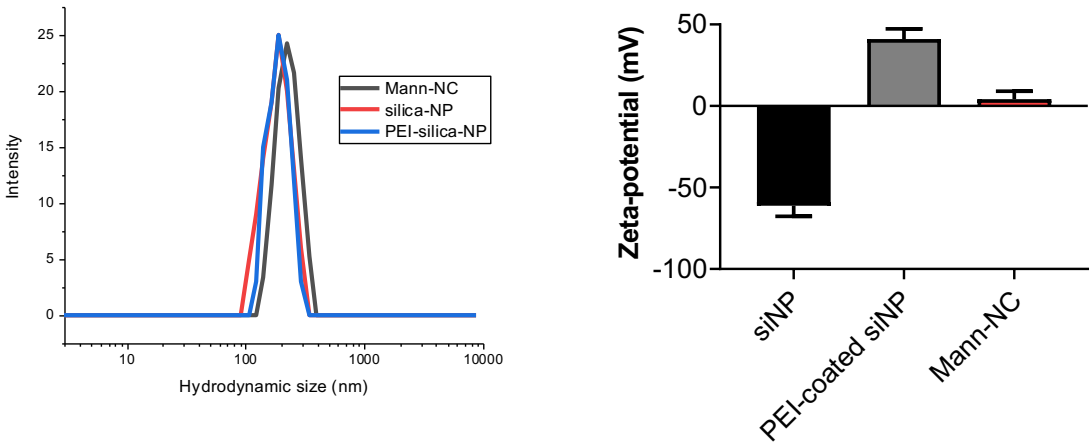
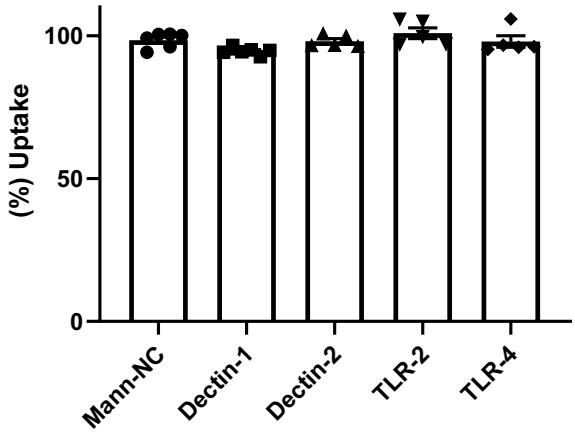
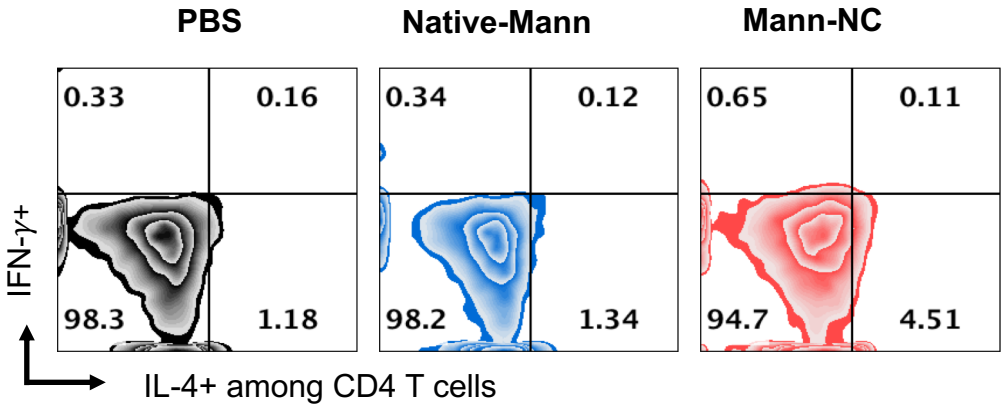
Supplementary figures



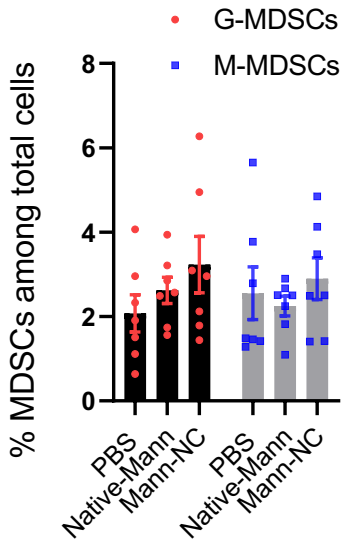
Supplementary Fig. 1 l The hydrodynamic size (left) and surface charge (right) of Mann-NC, silica-NP, and PEG-silica-NP.



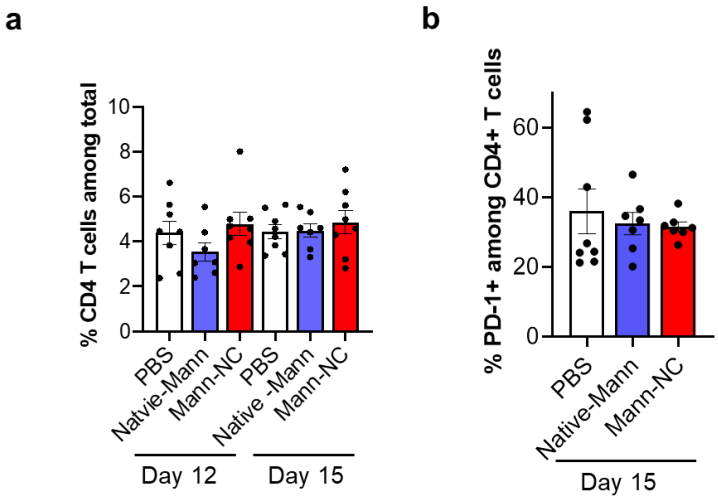
Supplementary Fig. 2 l Cellular uptake of Mann-NC by BMDCs was measured after 1 hr of co-incubation with antibodies against Dectin-1, Dectin-2, TLR-2, or TLR-4.



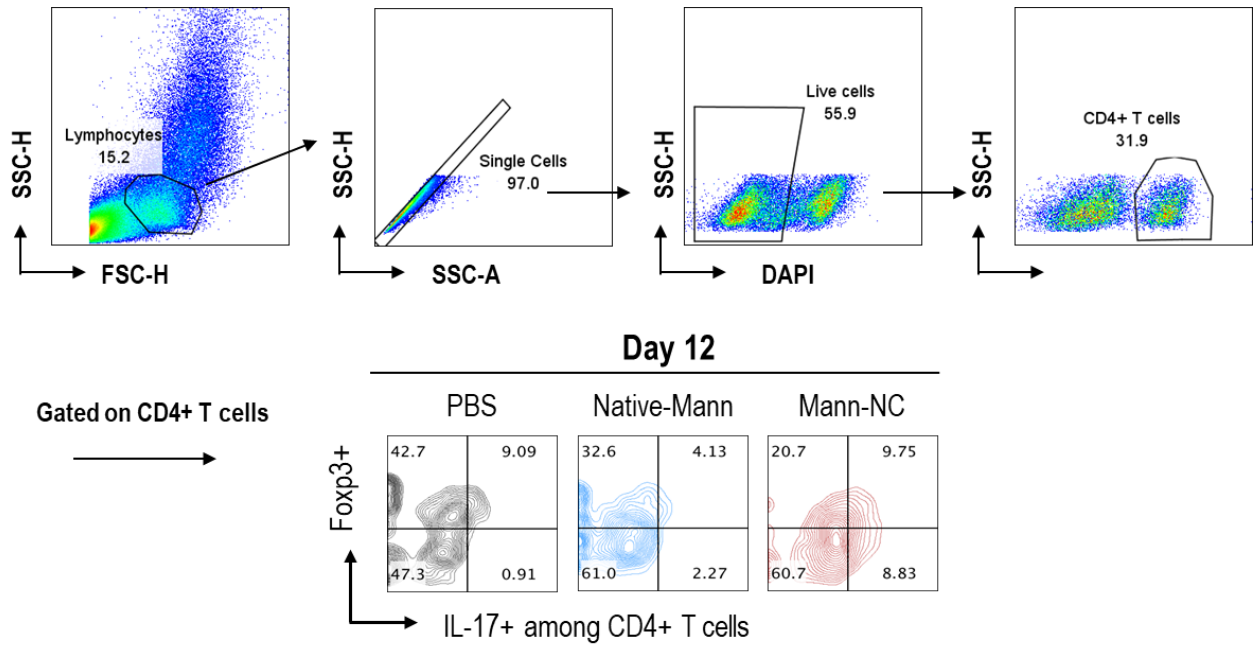
Supplementary Fig. 3 l Intracellular cytokine levels of CD4 T cells. Shown are the representative scatter plots of IFN-γ+ and IL4+ CD4+ T cells. Conditioned media from BMDCs incubated with Mann-NC or Native-Mann for 12 hr were added to naïve CD4+ T cells from LNs and spleen. After 5 days of culture, intracellular cytokine analysis was performed by incubating CD4+ T cells with PMA, ionomycin, and brefeldin A for 4 hr.



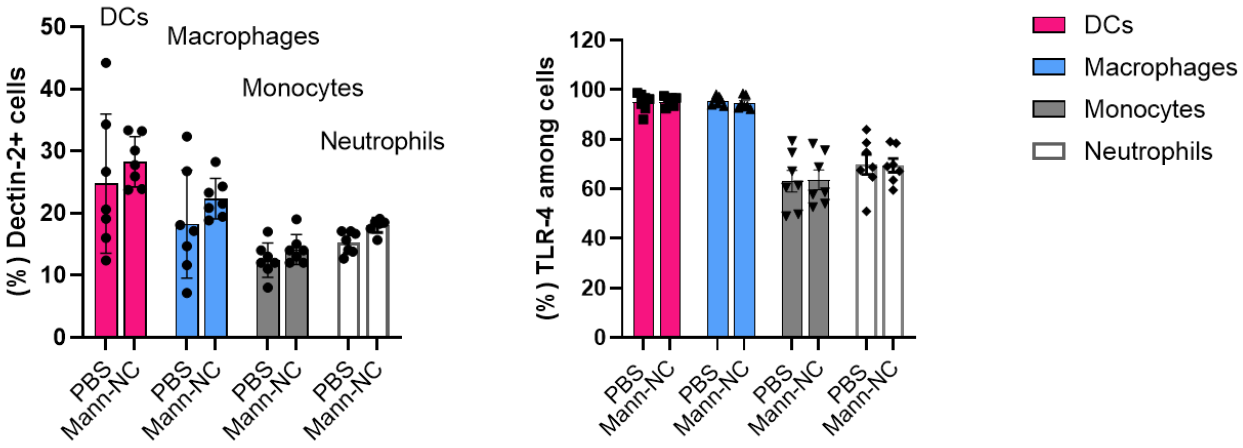
Supplementary Fig. 4 l CT26 tumour-bearing mice were treated as in **Fig. 3a**, and the frequencies of G-MDSCs and M-MDSCs in TME were measured on day 15.



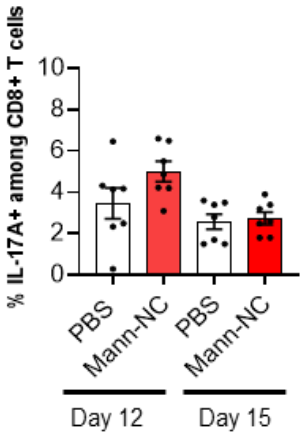
Supplementary Fig. 5 l CD4 T cells frequency and their PD-1 expression levels in TME. BALB/c mice were inoculated subcutaneously with 1.5 × 10^5 CT26 cells on day 0 and treated by intratumoural administration of Mann-NC on days 9, 12, and 15. (**a**) CD4 T-cells frequency and (**b**) PD-1 expression level among CD4 T cells.



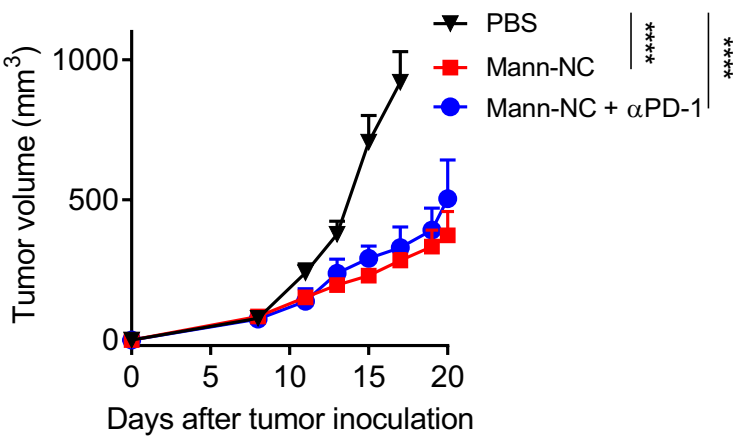
Supplementary Fig. 6 l Gating strategy of Representative scatter plots for the frequencies of IL17+CD4+ Th17 cells and Foxp3+CD4+ Tregs within TME in **Fig. 3i-k.**



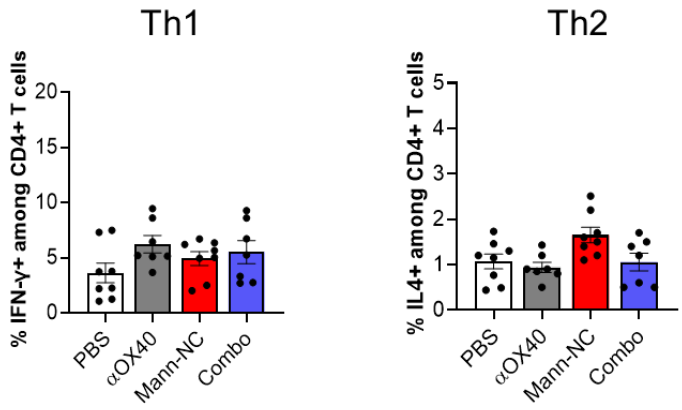
Supplementary Fig. 7 l Mann-NC was administered intratumourally as in **Fig. 4a**, and after 24 hr, intratumoural DCs, macrophages, and monocytes were assessed for the expression of Dectin-2 and TLR-4.



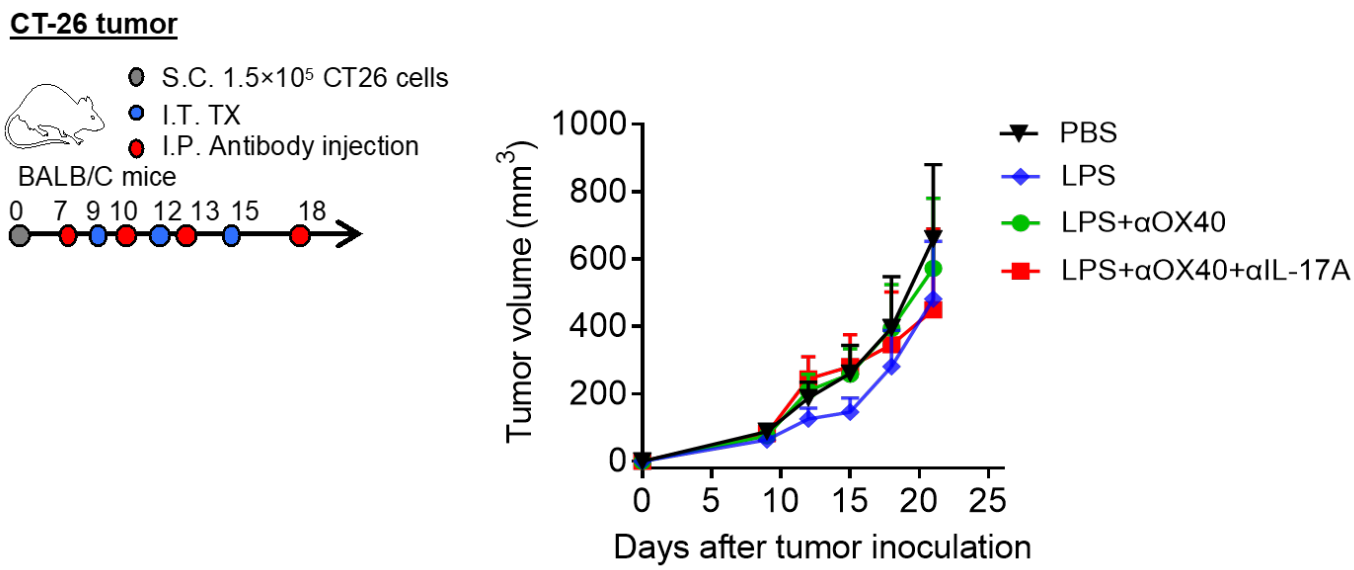
Supplementary Fig. 8 l CT26 tumour-bearing mice were treated with Mann-NC as in **Fig. 4a**, and CD8+ T-cells in the TME on days 12 and 15 were analysed for the expression of IL-17A.



Supplementary Fig. 9 l CT26 tumour-bearing BALB/c mice were treated with Mann-NC or Mann-NC + aPD-1 as in **Fig. 8a**, followed by tumour monitoring.



Supplementary Fig. 10 l CT26 tumour-bearing mice were treated as in **Fig. 8a**, and the frequency of IFN-γ +CD4+ T-cells and IL-4+ CD4+ T-cells were measured in the TME on day 15.



Supplementary Fig. 11 l Schematic of therapeutic regimen and average tumour growth curve. BALB/c mice were inoculated SC with 1.5 × 10^5 CT26 cells on day 0. On days 9, 12, and 15, tumour-bearing mice were treated intratumourally with LPS, αOX40, and/or αIL-17A (200 ng, 100 □g, and 100 □g doses, respectively).