

Figure S1. The typical ¹H-NMR signals from PAA.



Figure S2. Loading capacity of CpG for MIL-BC@PAA was measured by agarose gel electrophoresis.

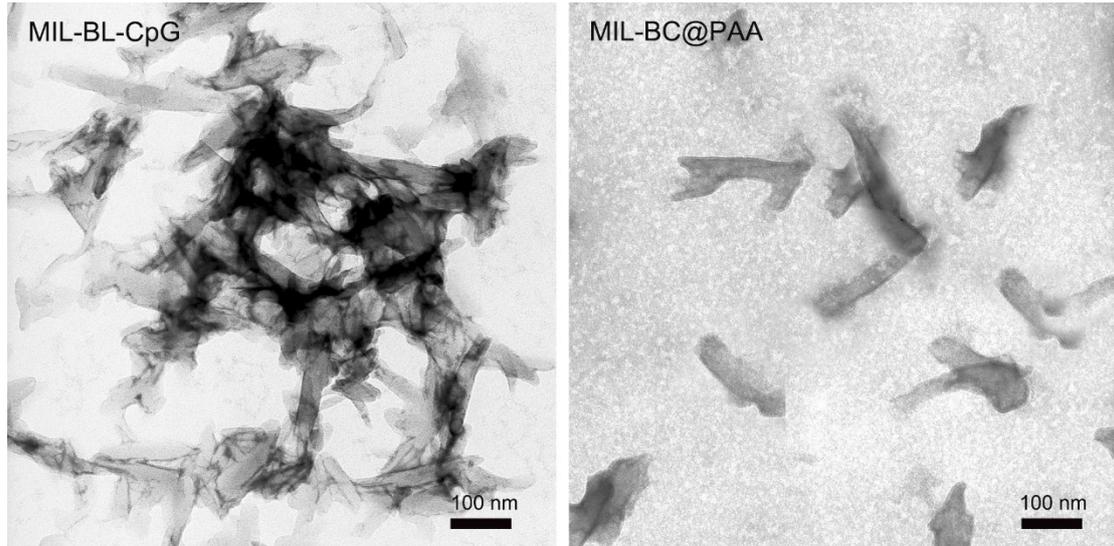


Figure S3. The TEM images of MIL-BL-CpG and MIL-BC@PAA after stored in PBS (pH 7.4) for 30 days.

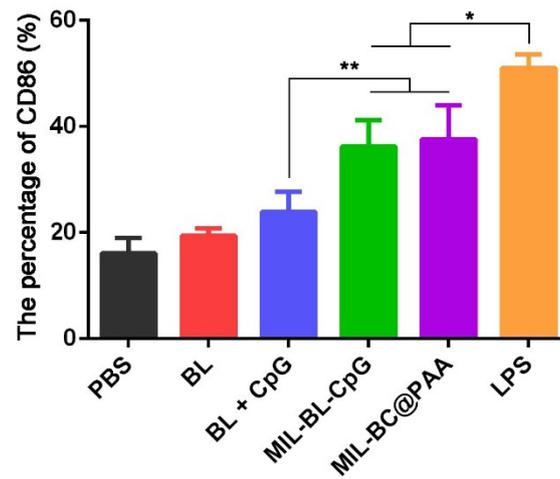


Figure S4. The expression of CD86 on nanovaccines stimulated BMDCs. Data are presented as mean \pm SD (n = 4). *p < 0.05 and **p < 0.01.

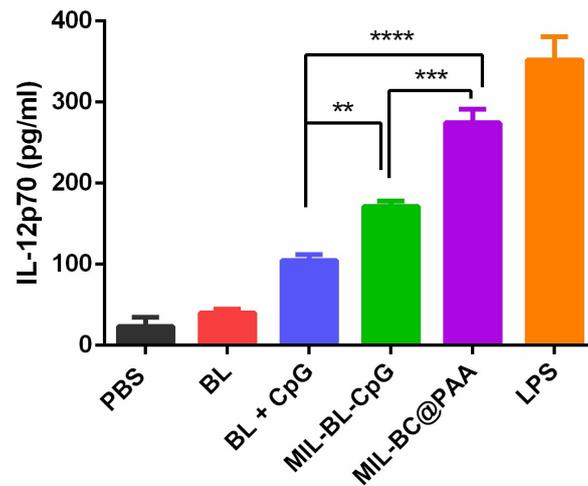


Figure S5. The production of IL-12p70 from supernatants of nanovaccines stimulated BMDC detected by ELISA. Data are presented as mean \pm SD (n = 4). **P < 0.01, ***P < 0.001.

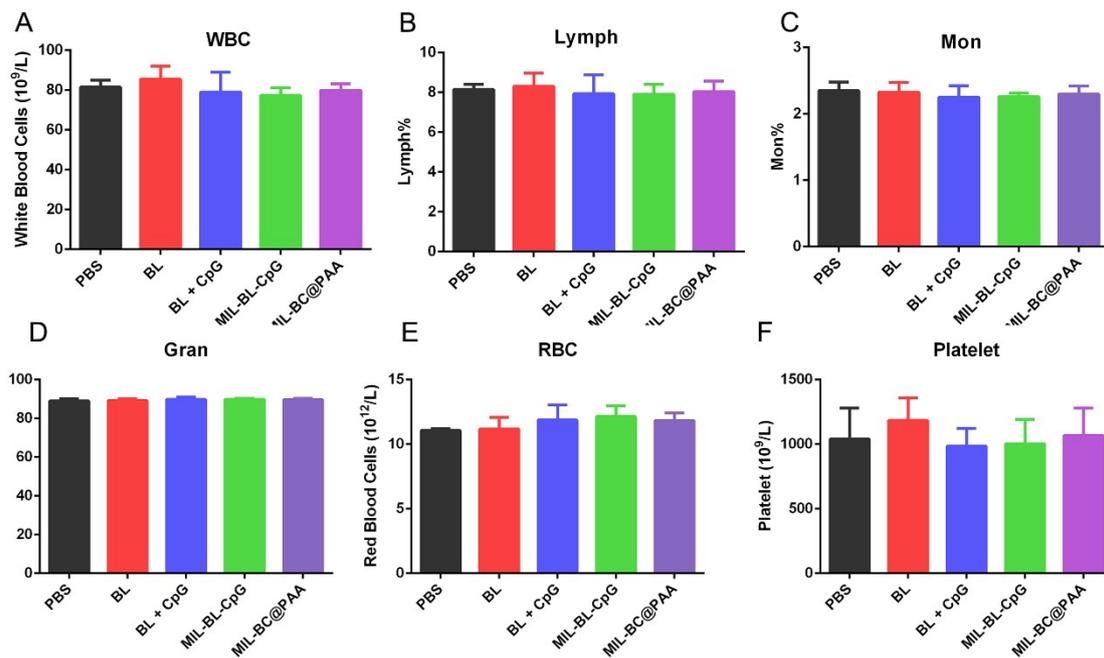


Figure S6. Routine analysis of blood. The level of WBC, Lymph, Mon, Gran, RBC, and Platelet in whole blood were tested by blood routine analyzer. (n=4).

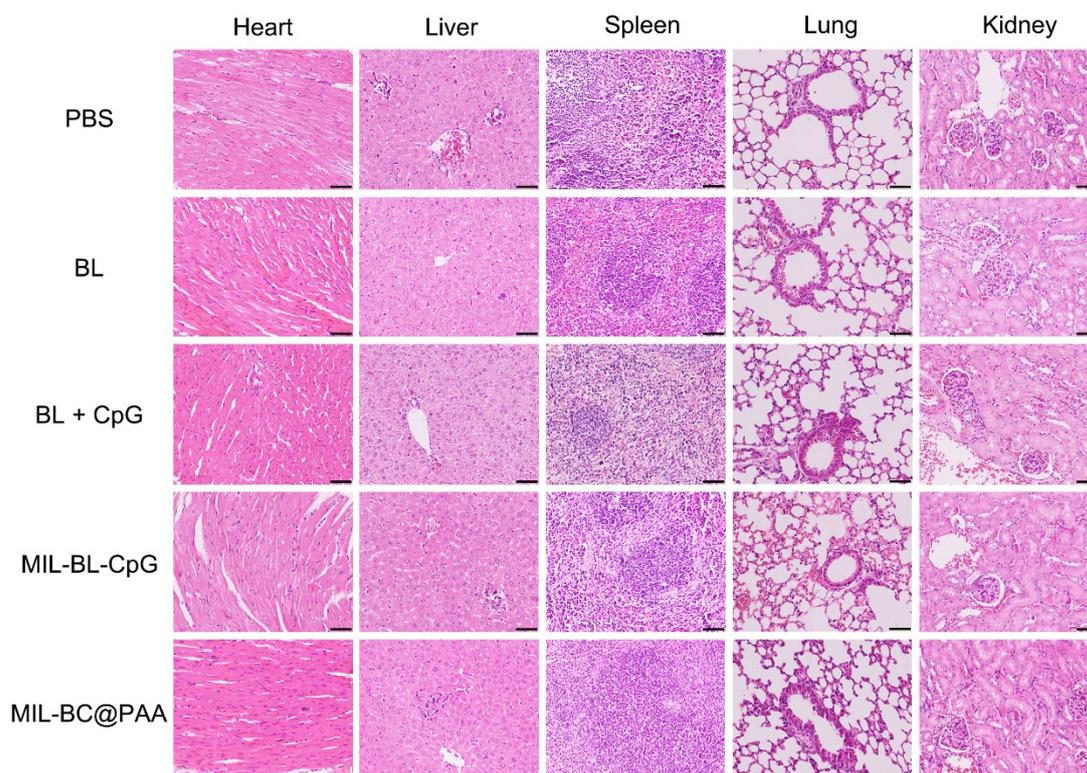


Figure S7. H&E staining of hearts, livers, spleens, lungs and kidneys. 40 × magnification. Scale bar, 50 μm.

Table 1. Size, PDI and zeta potential of MIL, MIL-BL-CpG and MIL-BC@PAA.

Group	Size (nm)	PDI	Zeta (mV)
MIL	103.5 ± 20.7	0.65	+20.25 ± 4.5
MIL-BL-CpG	117.4 ± 15.3	0.58	+ 12.05 ± 3.1
MIL-BC@PAA	119.2 ± 3.7	0.31	-5.9 ± 5.4