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Supplementary information to:

Letter to the editor:

ANTI-INFLAMMATORY AND ANTI-FIBROTIC EFFECTS OF BERBERINE-LOADED LIQUID CRYSTALLINE NANOPARTICLES

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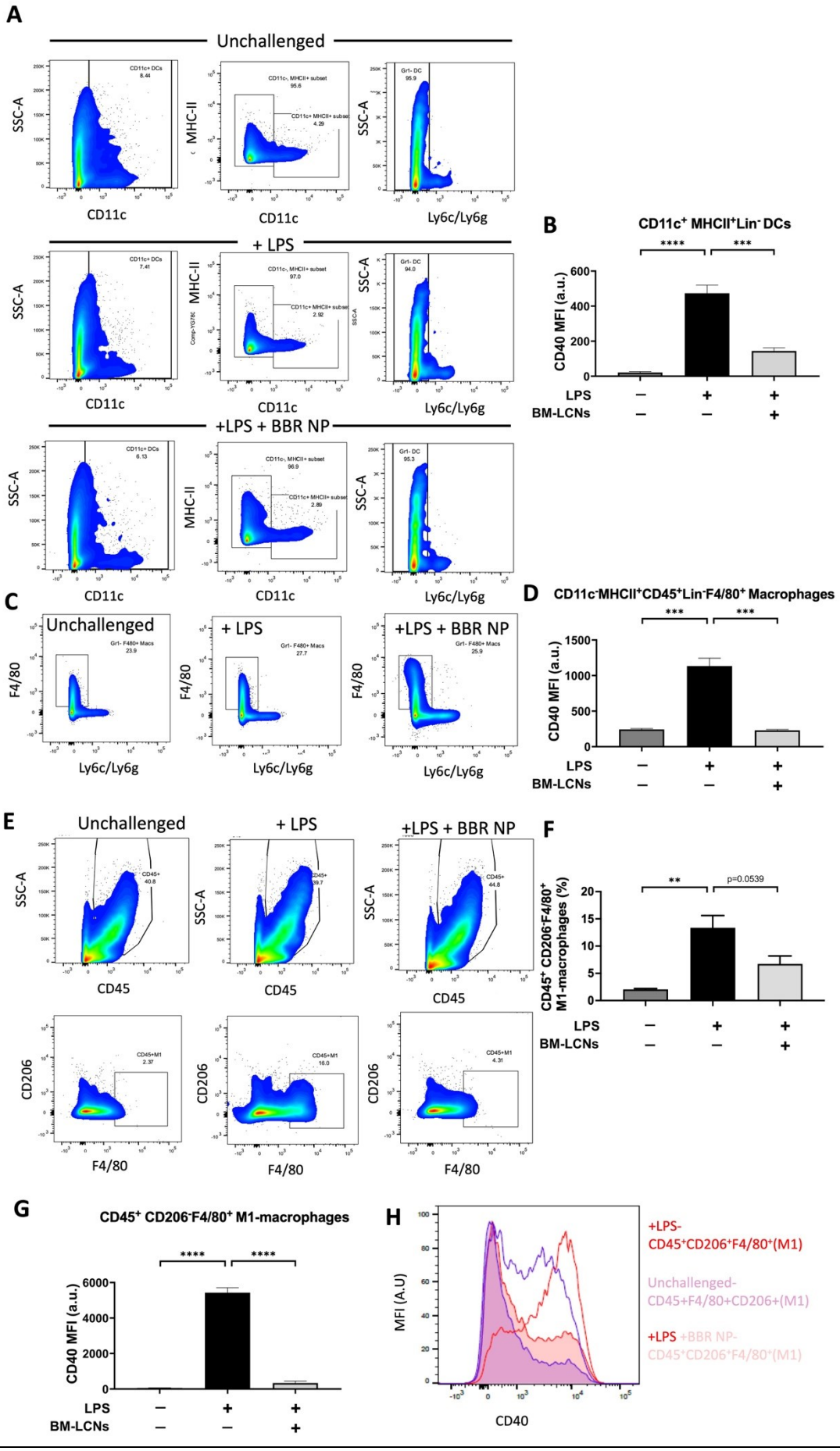

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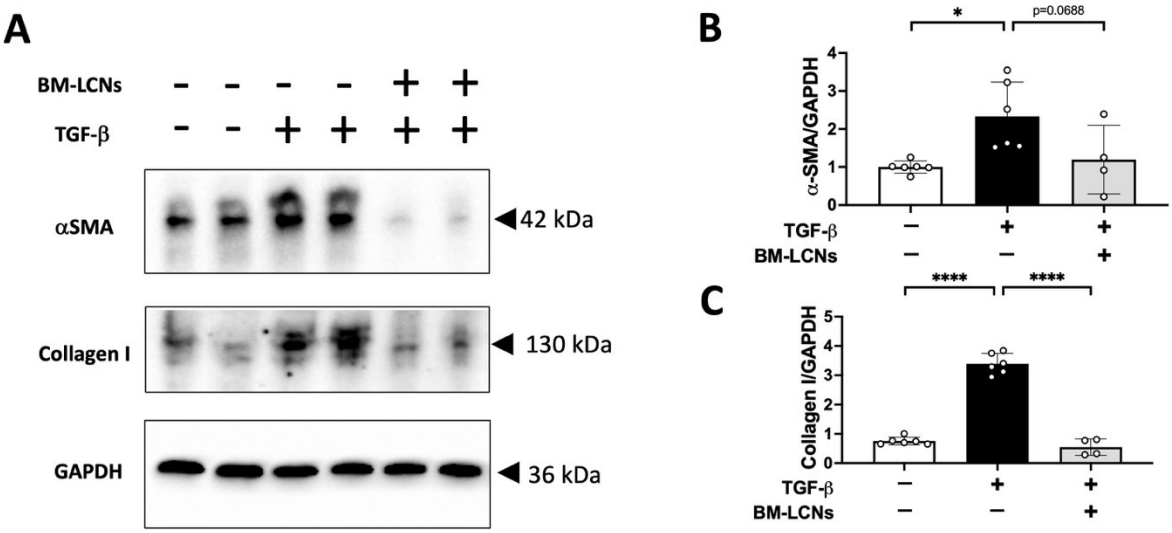
Figure 1: BM-LCNs counteract LPS-induced Dendritic cell activation and macrophage. (A, B): BMDCs were treated with 100 ng/ml LPS for 24 hours and then exposed to BM-LCNs (100 ml formulating with 1 ml formulation containing 0.20 g Monoolein, 0.02 g Poloxamer 407, 5.00 mg Berberine Hydrochloride in sterile water) for 24 h. **(A):** representative dot plots showing the gating strategy employed for the analysis of CD40 expression on $CD11c^{+}MHCII^{+}Lin^{-}$ BDMCs; **(B):** analysis of CD40 MFI on $CD11c^{+}MHCII^{+}Lin^{-}$ BDMCs. **(C, D):** BMDMs were treated with 100 ng/ml LPS for 24 hours and then exposed to BM-LCNs (same concentration as stated before) for 24 hours. **(C):** representative dot plots showing the gating strategy employed for the analysis of CD40 expression on $CD11c^{-}MHCII^{+}CD45^{+}Lin^{-}F4/80^{+}$ BMDMs; **(D):** analysis of CD40 MFI on $CD11c^{-}MHCII^{+}CD45^{+}Lin^{-}F4/80^{+}$ BMDMs. **(E-H):** BMDMs were treated with 100 ng/ml LPS for 24 hours and then exposed to BM-LCNs for 24 hours. **(E):** representative dot plots showing the gating strategy employed for the analysis of the percentage of M1-skewed macrophages, defined as the $CD45^{+}CD206^{-}F4/80^{+}$ subset of BMDMs; **(F):** analysis of the percentage of $CD45^{+}CD206^{-}F4/80^{+}$ M1-skewed macrophages; **(G):** analysis of CD40 MFI on $CD45^{+}CD206^{-}F4/80^{+}$ M1-skewed macrophages; **(H):** representative histogram showing the relative CD40 MFI in $CD45^{+}CD206^{-}F4/80^{+}$ M1-skewed macrophages. Statistics: One-Way ANOVA (n = 3). **: p<0.01; ***: p<0.001; ****p<0.0001.



Supplementary Figure 2: BM-LCNs counteract TGF-β-induced expression of α-SMA and Collagen I in BJ3 Human Dermal Fibroblasts. BJ3 HDFs were treated with 5 ng/ml TGF-β1 for 72 hours and exposed to BM-LCNs (100 ml formulating with 1 ml formulation containing 0.20 g Monoolein, 0.02 g Poloxamer 407, 5.00 mg Berberine Hydrochloride in sterile water). (**A**): representative western blots showing the effect of treatments on the expression of α-SMA, Collagen I, and GAPDH. (**B**): analysis of the relative expression of α-SMA; (**C**): analysis of the relative expression of Collagen I. Values in (**B**) and (**C**) are normalized by GAPDH expression. Statistics: One-Way ANOVA (n = 4-6). **: p<0.01; ***: p<0.001; ****p<0.0001.