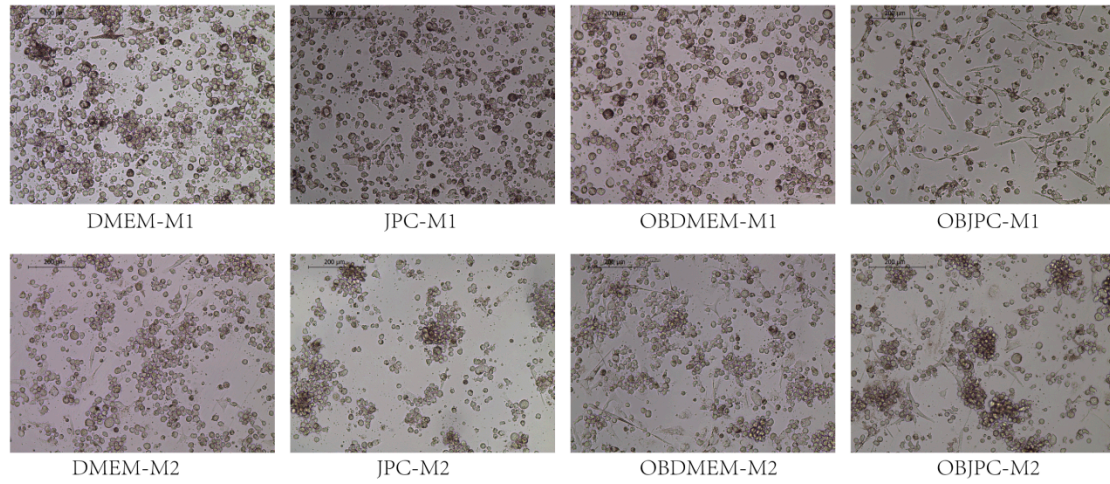


Figure S1. Analysis of the osteogenic differentiation capacity of used jaw periosteal cells derived from 3 donors, as detected by the Alizarin staining of calcium phosphate precipitates (red); scale bar: 200 μm .

A



B

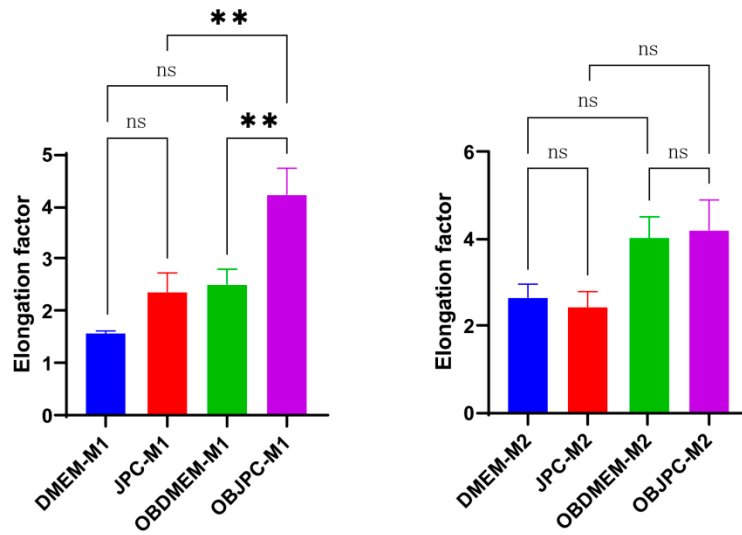


Figure S2. Cell morphology and quantification of the elongation factor of mono- and cocultured M1/M2 macrophages. A: Representative phase contrast microscopic pictures of mono- (DMEM, OBDMEM groups) and cocultured (JPC, OBJPC groups) M1 and M2 macrophages cultivated within the coculture system; scale bar: 200 μ m. B: Analysis of the elongation factor of mono- and cocultured M1 and M2 macrophages (n=30 cells per group. ** $p<0.01$)

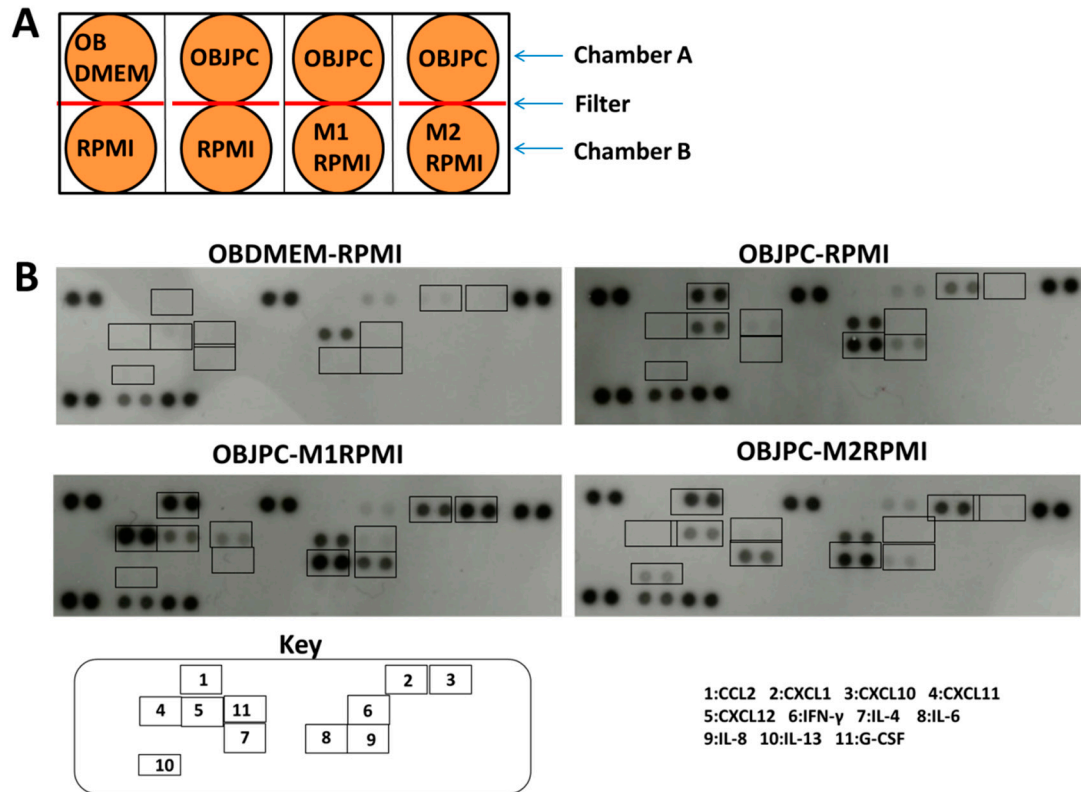


Figure S3. Protein expression analyses in supernatants from monocultured osteogenically induced JPCs (OBJPC). A: Layout of the OBJPC monoculture experiments (OBDMEM: cell-free OBDMEM medium; OBJPC: osteogenically induced JPCs; RPMI: cell-free RPMI medium; M1RPMI: cell-free RPMI medium + LPS + IFN- γ ; M2RPMI: cell-free RPMI medium + IL-4 + IL-13). B: Images of proteome membranes incubated with supernatants collected from chamber B (the rectangle marked the spots which were differentially expressed proteins between groups).

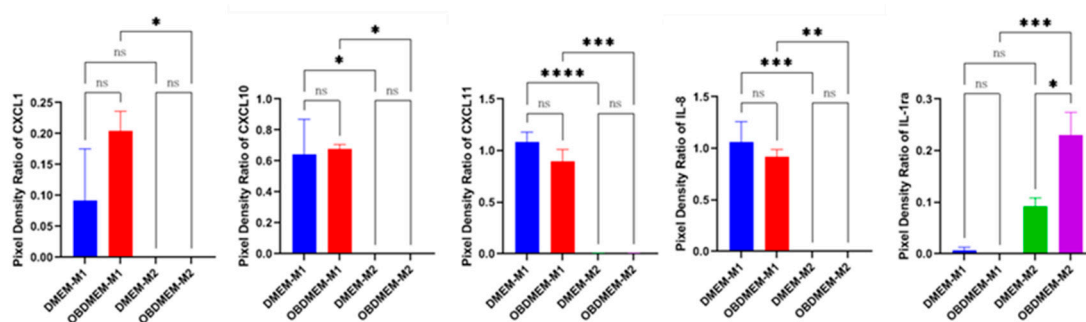


Figure S4. Comparison of cytokines/chemokines secretion in the supernatants of monocultured M1 and M2 macrophages under normal (DMEM) or osteogenic (OBDMEM) conditions (n=3, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, **** $p < 0.0001$).

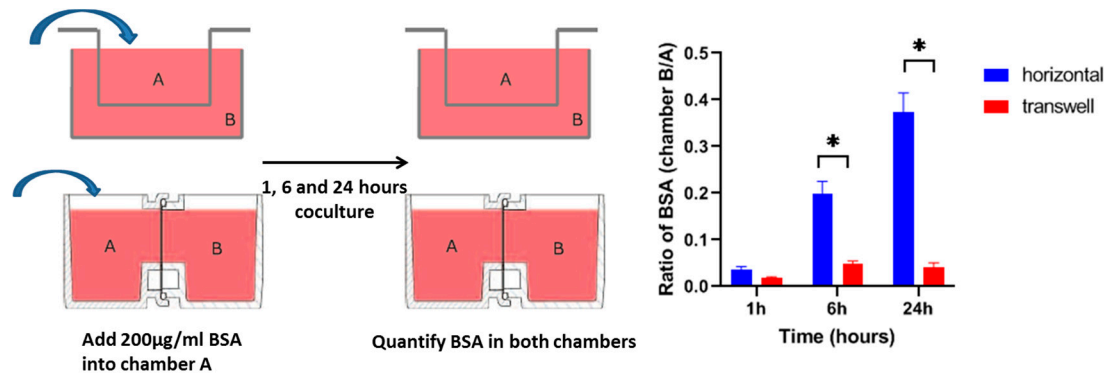


Figure S5. Comparison of the BSA diffusion capacity within the conventional transwell and the horizontal coculture system after 1, 6 and 24 hours of incubation. The ratio of quantified BSA (chamber B/chamber A) in the horizontal coculture plate was significantly higher than that detected in the transwell plate.

Table S1: Secretion of OBJPCs in mono-cultures. Secretion of OBJPCs cultivated as monocultures in the horizontal coculture system. OBJPCs were cocultured under M1 (LPS/IFN- γ) or M2 (IL-4/IL-13) conditions and cytokines/chemokines expression patterns were analyzed by human cytokine proteome arrays.

Groups	M1 culture conditions (LPS/IFN- γ)	M2 culture conditions (IL-4/IL-13)
Cytokines/ Chemokines	CCL2/MCP-1	
	CXCL1/GRO α	
	CXCL10/IP-10	
	CXCL11/I-TAC	
	CXCL12/SDF-1	
	G-CSF	
	IL-6	
	IL-8 ^{high}	IL-8 ^{low}