

Vascularized Co-Culture Clusteroids of Primary Endothelial and Hep-G2 Cells Based on Aqueous Two-Phase Pickering Emulsions

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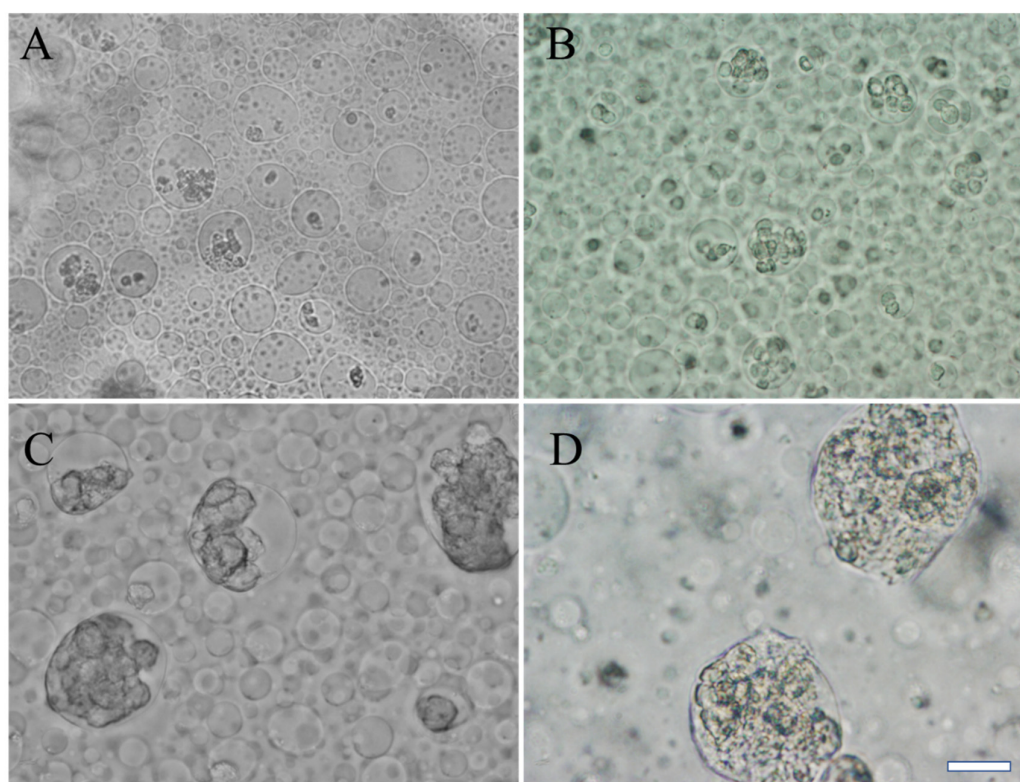


Figure S1. Different cell concentration of mixed HUVEC and Hep-G2 cells in 5.5 wt% DEX/5.5 wt% PEO w/w Pickering emulsion with different cell cocentration before shrinking: (A) $1 \times 10^3 \text{ mL}^{-1}$; (B) $1 \times 10^4 \text{ mL}^{-1}$; (C) $1 \times 10^5 \text{ mL}^{-1}$; and (D) $1 \times 10^6 \text{ mL}^{-1}$. The bar is 100 μm for A,B and 50 μm for C,D.

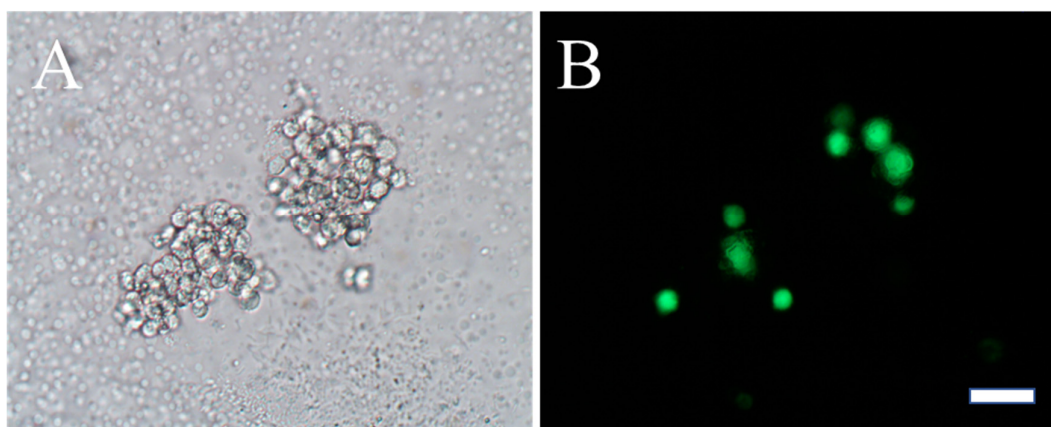


Figure S2. Bright-field observation (A) and fluorescence microscopy observation (B) of the freshly collected Hep-g2 and HUVEC co-culture clusteroids at a cell ratio of 5:1. The bar is 100 μ m.

MIXED	HUVEC	HEP
1 Angiogenin	1 Angiogenin	1 IGFBP-1
2 Angiopoietin-2	2 Angiopoietin-2	2 MMP-9
3 HB-EGF	3 HB-EGF	3 Serpin E1
4 IGFBP-1	4 IGFBP-1	4 Serpin F1
5 IGFBP-3	5 MMP-9	5 TIMP-1
6 MMP-9	6 Pentraxin 3 (PTX3)	6 uPA
7 Pentraxin 3 (PTX3)	7 Serpin E1	7 VEGF
8 Serpin E1	8 TIMP-1	
9 Serpin F1	9 Thrombospondin-1	
10 TIMP-1	10 uPA	
11 TIMP-4		
12 Thrombospondin-1		
13 uPA		
14 VEGF		

Figure S3. Angiogenesis-related protein production in the three types of clusteroids (HUVEC, Hep-G2, and mixed Hep-G2 and HUVEC) corresponding to Figure 4A.

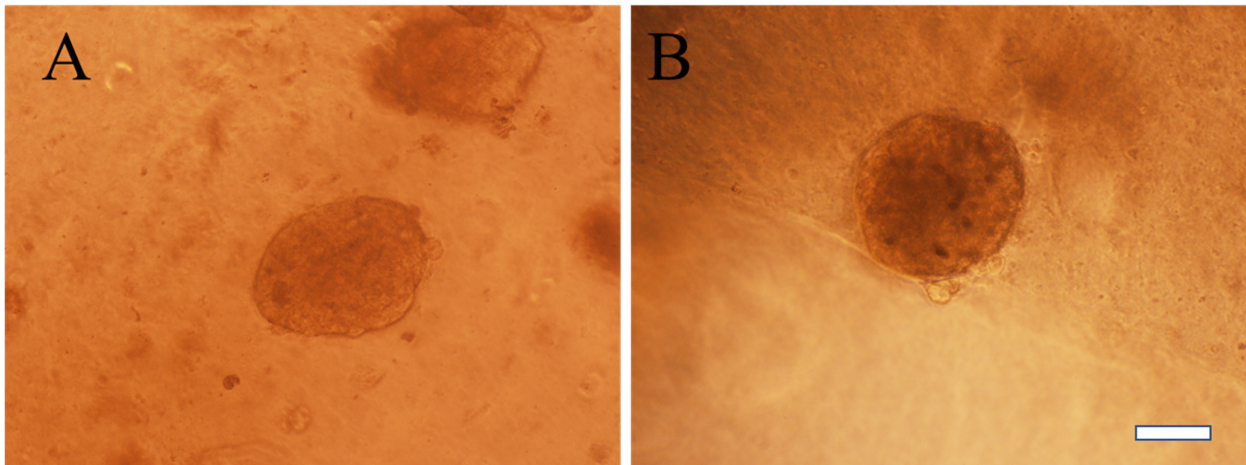


Figure S4. Bright-field observation of the individual Hep-G2: HUVEC clusteroids in 5 mg mL⁻¹ Matrigel after 21 days of culture in low-serum medium. The bar is 50 μ m.

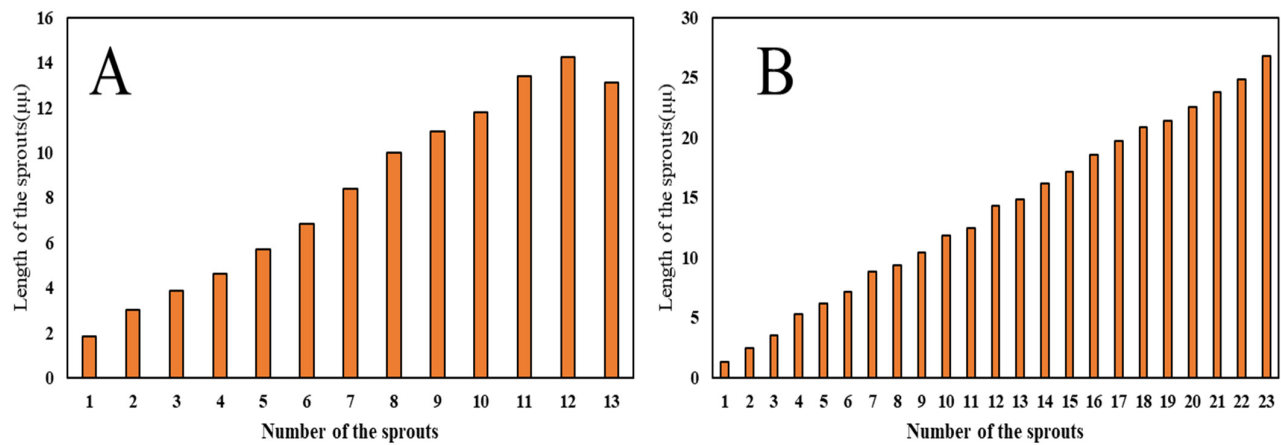


Figure S5. The length of the sprouts in Table S1.

Table S1. The effect of the angiogenesis-related genes on the vascularization process. (+) represents that they are pro-angiogenesis.

(+)	Angiogenin
(+)	angiopoietin-2
(+)	HB-EGF
(+)	IGFBP-1
(+)	IGFBP-3
(+)	MMP-9
(+)	Pentraxin 3 (PTX3)
(-)	Serpin E1
(-)	Serpin F1
(-)	TIMP-1
(-)	TIMP-4
(+)	Thrombospondin-1
(+)	uPA
(+)	VEGF