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## **Supplementary Information**

## Cell-free scaffold functionalized with bionic cartilage acellular matrix microspheres to enhance microfracture treatment of articular cartilage defects

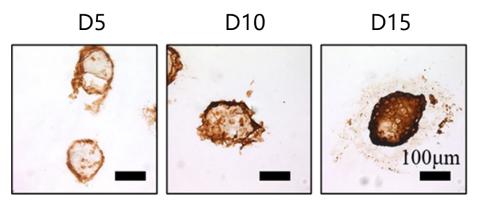
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**Figure S1.** Immunohistochemistry staining for Col II of CHMs/MSCs constructs after cultured in vitro for 5,10 and 15 days.

Table S1. International Cartilage Repair Society (ICRS) cartilage repair assessment tool

	Criteria	Points
Degree of defect repair	Level with surrounding cartilage	4
	75% repairof defect depth	3
	50% repair of defect depth	2
	25% repair of defect depth	1
	0% repair of defect depth	0
Integration to border zone	Complete integration with surounding	4
	cartilage	
	Demarcating border <1mm	3
	3/4 of graft integrated,1/4 with a notable	2
	border >1mm width	
	1/2 of graft integrated with surrounding	1
	cartilage ,1/2 with a notable border >1 mm	
	From no contact to 1/4 of graft integrated with	0
	surrounding cartilage	
Macroscopic appearance	Intact smooth surface	4
	Fibrillated surface	3
	Small,scattered fissure or cracks	2
	Several, smallor few but large fissures	1
	Total degeneration of grafted area	0
Overall score	Grade I normal	12
	Grade II nearly normal	11-8
	Grade <b>Ⅲ</b> abnormal	7-4
	Grade IV severely abnormal	3-1