Supporting Information

Injectable microfluidic hydrogel microspheres based on chitosan and

poly(ethylene glycol) diacrylate (PEGDA) as chondrocyte carrier

Lin Lin^{a,c#}, Yanfang Wang^{a#}, Ling Wang^d, Jianying Pan^c, Yichao Xu^a, Shiyu Li ^a, Da Huang ^a, Jiali Chen^a, Zilu Liang^c, Panjing Yin^c, Yanbin Li^a, Hongwu Zhang^a, Yaobin Wu ^{a*}, Chun Zeng ^{c*}, Wenhua Huang^{a,b,c*}

^aGuangdong Engineering Research Center for Translation of Medical 3D Printing Application, Guangdong Provincial Key Laboratory of Medical Biomechanics, Department of Human Anatomy, School of Basic Medical Sciences, Southern Medical University, Guangzhou

^bGuangdong Medical Innovation Platform for Translation of 3D Printing Application, Southern Medical University, The third Affiliated Hospital of Southern Medical University, Southern Medical University, Guangzhou

^cDepartment of Joint Surgery, The Third Affiliated Hospital, Southern Medical University, Guangzhou 510630, PR China

^dBiomaterials Research Center, School of Biomedical Engineering, Southern Medical University, Guangzhou 510515, PR China

To whom correspondence should be addressed. Tel.: +86-020-61648086. Fax: +86-020-61648524. E-mail: <u>huangwenhua2009@139.com</u>, <u>zengdavid@126.com</u>, <u>wuyaobin2018@smu.edu.cn</u>.



Fig. S1. The cellular morphological properties of chondrocytes cultured on CP-MSs. The nucleus (a, b) and cytoskeleton (c, d) of the confocal fluorescent images of chondrocytes on CP-MS-1 (a, c) and CP-MS-4 (b, d) stained with F-actin (green) and DAPI (blue) after culturing for 3 days.



Fig. S2. The histograms of diameter distribution of microspheres of CP-MS-1(a), CP-

MS-2 (b), CP-MS-3 (c), CP-MS-4 (d), CP-MS-5 (e), and CP-MS-6 (f).