Supporting Information

Catechol-Functionalized Hyaluronic Acid Hydrogels Enhance Angiogenesis and Osteogenesis of Human Adipose-Derived Stem Cells in Critical Tissue Defects

Hyun-Ji Park,<sup>1‡</sup> Yoonhee Jin,<sup>1‡</sup> Jisoo Shin,<sup>1‡</sup> Kisuk Yang,<sup>1</sup> Changhyun Lee,<sup>1</sup> Hee Seok Yang,<sup>2</sup> Seung-Woo Cho<sup>1,3</sup>\*

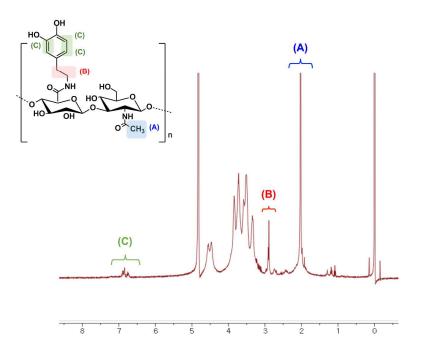
<sup>1</sup>Department of Biotechnology, Yonsei University, Seoul 120-749, Republic of Korea <sup>2</sup>Department of Nanobiomedical Science & BK21 PLUS NBM Global Research Center for Regenerative Medicine, Dankook University, Cheonan 330-714, Republic of Korea

<sup>3</sup>Department of Neurosurgery, Yonsei University College of Medicine, Seoul 120-752, Republic of Korea

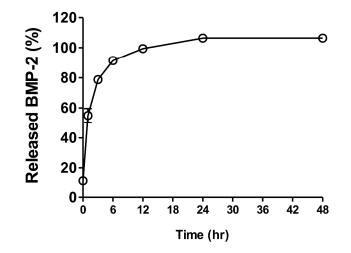
\*Corresponding author:

Prof. Seung-Woo Cho, Ph.D.

Department of Biotechnology, College of Life Science and Biotechnology, Yonsei University, 50 Yonsei-ro, Seodaemun-gu, Seoul 120-749, Republic of Korea. Tel: +82-2-2123-5662; Fax: +82-2-362-7265; E-mail: <u>seungwoocho@yonsei.ac.kr</u>



**Figure S1.** <sup>1</sup>H NMR spectrum of HA-CA conjugate. The synthesis of HA-CA conjugate was confirmed by <sup>1</sup>H NMR showing the peak specific to the catechol group of HA-CA at around 7 ppm.



**Figure S2.** Release profile of BMP-2 peptides from HA-ME hydrogel. Fluorescamine assay was used to quantify the amount of BMP-2 peptides released from the HA-ME hydrogel during incubation in PBS solution at  $37^{\circ}$ C (n = 4). Most of BMP-2 peptides were released out within 12 hours.