SUPPORTING INFORMATION

Extracellular matrices derived from different cell sources and their effect on macrophages behavior and wound healing

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Running title: Cell-derived ECM and their effect on macrophage behavior

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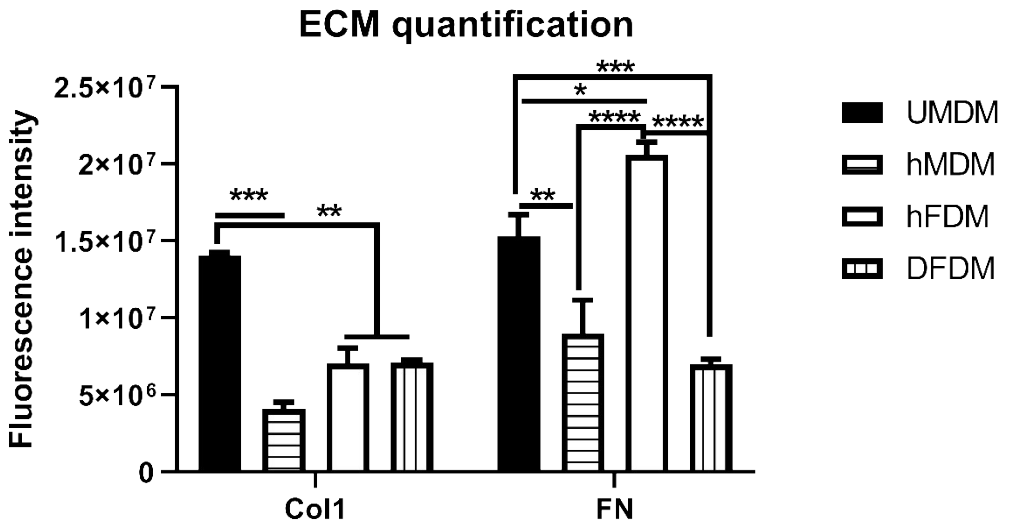

Figure S1. Immunofluoresence quantification of collagen 1 and fibronectin from four different types of ECM. UMDM showed the highest expression of Col1, while hFDM showed the highest expression of FN.

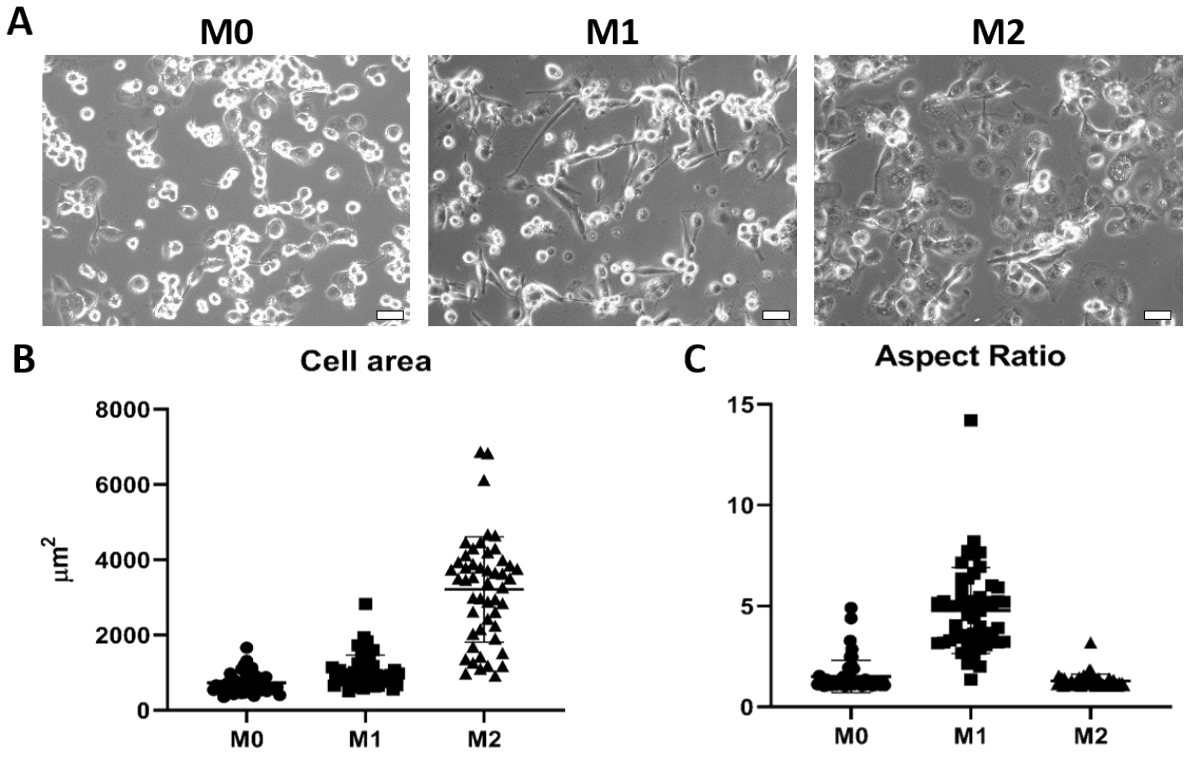

Figure S2. Morphological observation of macrophage phenotypes. (A) Representative images of macrophage phenotypes that are chemically induced by known protocols. Scale bar is 50μm; (B) Comparison of cell area of each macrophage phenotype. Cell area of M2 phenotype is much larger than the others; (C) Comparison of cell aspect ratio of each macrophage phenotype.

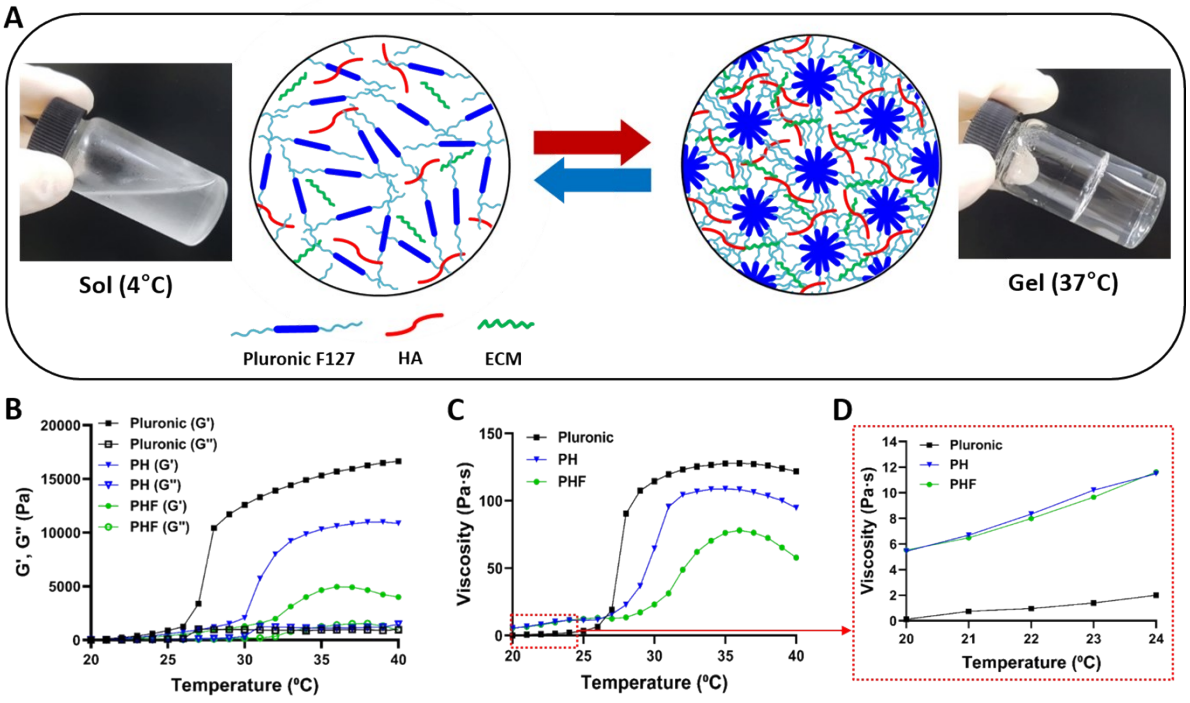

Figure S3. Characterization of the ECM hydrogels. (A) The appearance and schematic images of the ECM hydrogel in the solution (4°C) or gelation (37°C) state, respectively. (B) Rheological measurement for G'&G" and (C) Viscosity measurement of Pluronic, PH, and PHF. (D) Viscosity results enlarged in narrow temperature range (20~24°C).

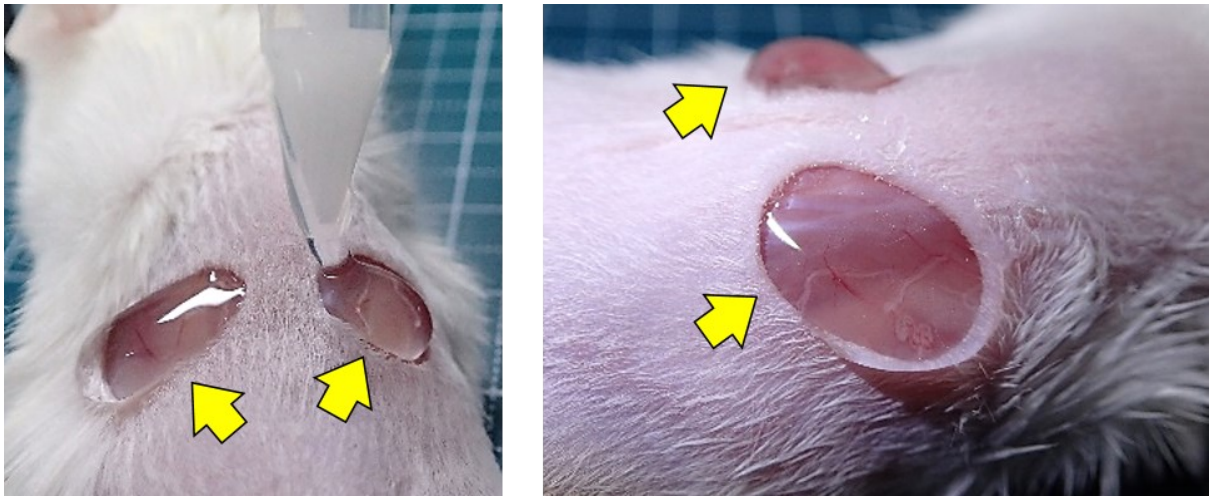

Figure S4. Transplantation of the ECM hydrogel to the wound site *in vivo*. Yellow arrows indicate the ECM hydrogels.

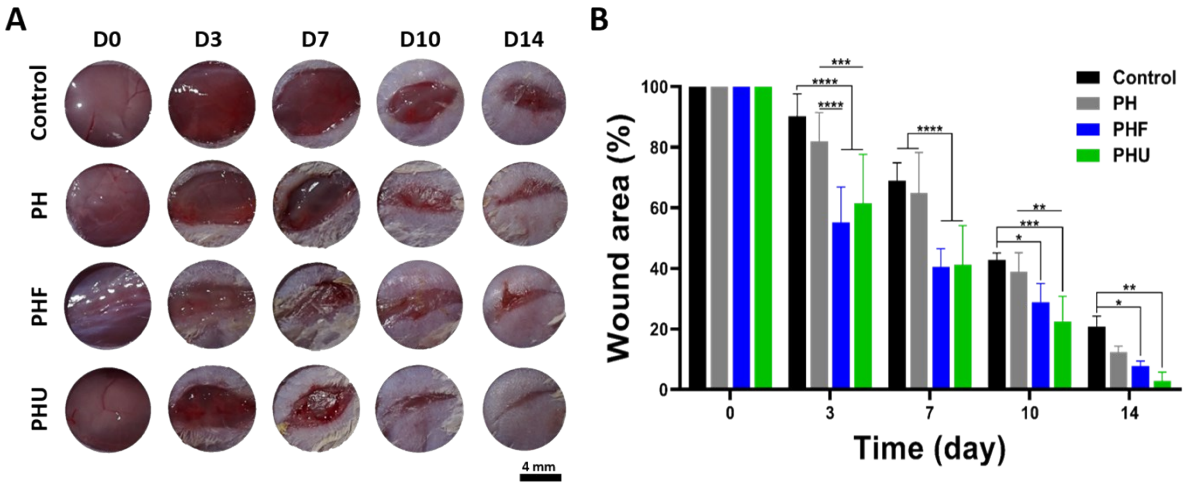

Figure S5. Observation of full-thickness skin wound closure with time. (A) Representative images of wound closure with four test groups (control, PH, PHF, PHU) on day 3, 7, 10, and 14 post-surgery. (B) Measurement of wound area size (%) at specific time points for up to 14 days. Statistically significant difference (*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, ****$p < 0.0001$).