



Supplementary Materials: Collagen-Based Medical Device as a Stem Cell Carrier for Regenerative Medicine

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Table S1. FTIR vibration bands of HEMOCOLLAGENE® foam.

| Wavenumbers (cm ⁻¹) | Assignment |
|---------------------------------|--|
| 1630 | v(C=O) |
| 1544 | v(C–N), (N–H) |
| 1454 | δ(CH ₂), δ(CH ₃) |
| 1403 | δ(CH ₂), δ(CH ₃) |
| 1340 | δ(CH ₂), δ(CH ₃) |
| 1282 | v(C–N), δ(N–H) |
| 1237 | v(C–N), δ(N–H) |
| 1203 | v(C–N), δ(N–H) |
| 1160 | v(C–O) |
| 1079 | v(C–O), v(C–O–C) |
| 1035 | v (C–O), v(C–O–C) |

Table S2. Table summarizing antibodies features used in cytometry flow experiments (BD, France).

| Anti-Body | Clone | Host | Catalog Number | Fluorochrom | Isotype |
|-----------|--------|-------|----------------|-------------|----------------|
| CD14 | M5E2 | Mouse | 555397 | | IgG2a, κ |
| CD34 | 581 | Mouse | 555821 | FITC | IgG1, κ |
| CD44 | G44-26 | Mouse | 555478 | FITC | IgG2b, κ |
| CD73 | AD2 | Mouse | 550257 | PE | IgG1, κ |
| CD90 | 5E10 | Mouse | 555596 | PE | BALB/c IgG1, κ |
| CD105 | 266 | Mouse | 560839 | PE | BALB/c IgG1 |
| HLA-DR | G46-6 | Mouse | 555811 | FITC | IgG2a, κ |

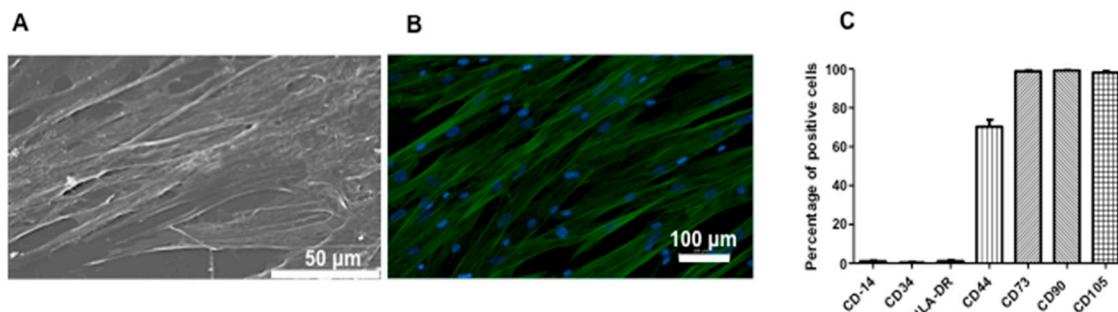


Figure S1. Characterization of human Wharton's jelly derived mesenchymal stem cells. (A) scanning electron microscopy and (B) cytoskeleton labelled cells showing elongated cells (scale bars indicate 50 and 100 μm, respectively); (C) Flow cytometry results indicating CD 14, CD 34 and HLA-DR negative cells and CD 44, CD 73, CD 90 and CD 105 positive cells ($n = 6$).

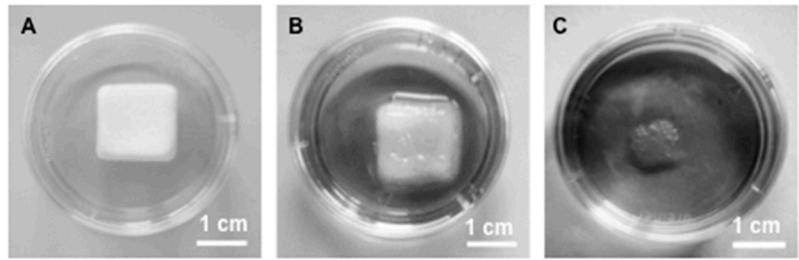


Figure S2. Evolution of WJ-MSCs-loaded HEMOCOLLAGENE® foam in culture. Photographs of HEMOCOLLAGENE® foam before (**A**) and after 4 (**B**) and 10 (**C**) days of immersion in culture media (scale bars indicate 1 cm).

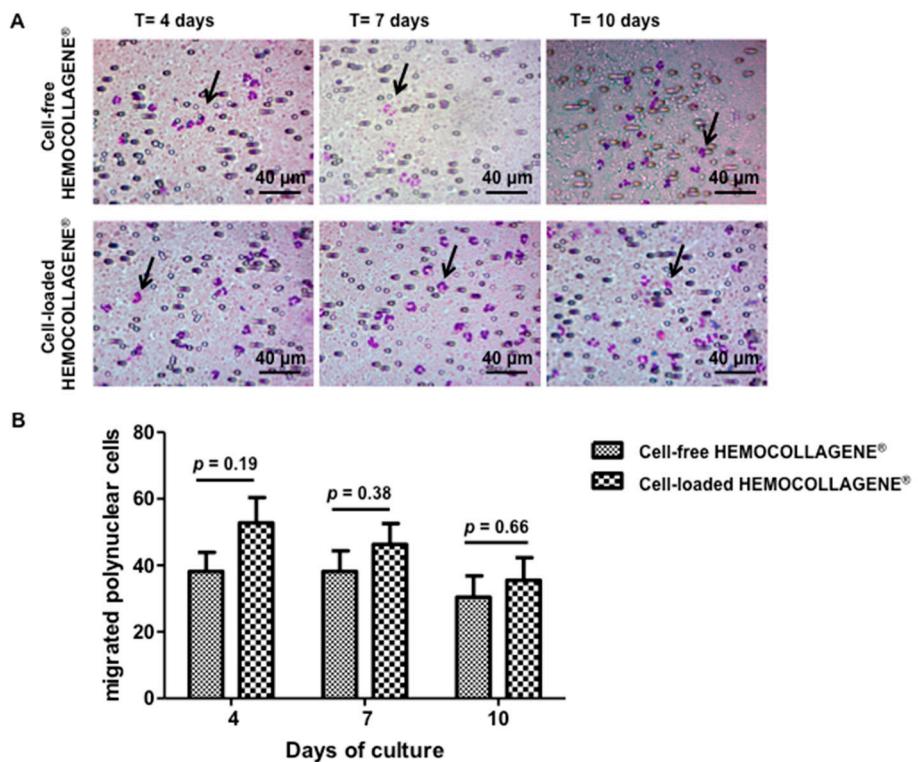


Figure S3. Neutrophils migration. (**A**) Representative pictures of insert membrane stained with May-Grünwald Giemsa showing migrated neutrophils attracted by WJ-MSCs-free HEMOCOLLAGENE® conditioned media (**upper row**) and by WJ-MSCs loaded-HEMOCOLLAGENE® conditioned media (**lower row**); black arrows, objective $\times 40$, scale bars indicate 40 μm ; (**B**) Histograms of quantified neutrophils, showing non-significant migration of neutrophils, whatever the tested condition ($n = 6$, Mann & Whitney statistical test).