Size and Dielectric Properties of Skeletal Stem Cells Change Critically After Enrichment and Expansion from Human Bone Marrow: Consequences for Microfluidic Cell Sorting

Miguel Xavier [a,b], María C. de Andrés [b], Daniel Spencer [a], Richard OC Oreffo [b*] and Hywel Morgan [a*]

[a] Faculty of Physical Sciences and Engineering, Institute for Life Sciences, University of Southampton, SO17 1BJ, United Kingdom.
[b] Centre for Human Development, Stem Cells and Regeneration, Institute of Developmental Sciences, Southampton General Hospital, Tremona Road, SO16 6YD Southampton, United Kingdom.
[*] Joint corresponding authors

This dataset contains all the experimental data used to generate the figures included in the main text and electronic supplementary material of the manuscript "Size and Dielectric Properties of Skeletal Stem Cells Change Critically After Enrichment and Expansion from Human Bone Marrow: Consequences for Microfluidic Cell Sorting" published in the Journal of the Royal Society Interface. The four folders of the dataset include the data used for the following figures:

1. Folder "Impedance Data JRSI": Matlab generated files including the impedance (and fluorescence when applicable) measurements for every individual cell used to create Figures 4 and 5 of the main manuscript and Figures S2 and S4 of the electronic supplementary material.

2. Folder "Flow Cytometry JRSI": includes all the FCS files obtained by flow cytometry used to generate Figures 2 and 3 of the main manuscript and Figure S1 of the electronic supplementary material.

3. Folder "qPCR JRSI": includes all the EDS files obtained from quantitative reverse transcription polymerase chain reaction. Sub-folder "Basal *vs* Osteo" includes the data used to generate Figure 10 of the main manuscript and the sub-folder "Passage variation" included the data used to generate Figure 8 of the main manuscript

4. Folder "ALP and DNA JRSI": includes all the data combined in an xlsx file of the alkaline phosphatase activity and DNA content quantification for all analysed patient samples from Passages 0 to 3. This data was used to generate Figure 7 of the main manuscript.

For any questions regarding this dataset please contact j.xavier@soton.ac.uk