

Supplemental material to: “Evaluation of scaffold microstructure and comparison of cell seeding methods using micro-CT based tools”

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Supplementary data file 2: Adipose stem cell characterisation

The mesenchymal origin of isolated human adipose-derived stem cells (hASCs) was confirmed by determining the cell surface marker profile at passage 1 by a fluorescent-activated cell sorter (FACSAria; BD Biosciences, Belgium). Monoclonal antibodies against CD3-PE, CD14-PE-Cy7, CD19-PE-Cy7, CD45R0-APC, CD54-FITC, CD73-PE, CD90-APC (BD Biosciences, USA); CD11a-APC, CD80-PE, CD86-PE, CD105-PE (R&D systems, USA); CD34-APC and HLA-DR-PE (Immunotools GmbH, Germany) were used. The analysis was performed on 10 000 cells per sample. Unstained hASC samples were used to compensate for the background autofluorescence levels. The surface marker expression of isolated hASCs was in accordance with literature confirming the mesenchymal origin of the cells [1]. The moderate expression of CD34 in hASCs (Table 1) has been shown to depend on culture conditions and the expression is typical at low passages with the expression declining with cell doublings [2,3].

Table 1. *The surface protein expression of the donor lines used in the study.*

Surface protein	Donor 1	Donor 2	Donor 3
CD14	0.8 %	0.3 %	0.7 %
CD19	0.6 %	0.3 %	0.6 %
CD34	48.5 %	35.4 %	9.7 %
CD45	0.7 %	1.4 %	1.1 %
CD73	97.0 %	96.7 %	98.4 %
CD90	99.7 %	99.7 %	99.6 %
CD105	99.3 %	97.5 %	99.4 %
HLA-DR	1.2 %	0.6 %	0.7 %

References

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