

Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: de Lima M, McNiece I, Robinson SN, et al. Cord-blood engraftment with ex vivo mesenchymal-cell coculture. *N Engl J Med* 2012;367:2305-15. DOI: [10.1056/NEJMoa1207285](https://doi.org/10.1056/NEJMoa1207285)

Supplementary Appendix

Supplement to: Marcos de Lima, Ian McNiece, Simon N Robinson. et al. Ex-vivo Co-culture with Mesenchymal Cells Improves Engraftment of Cord Blood.

Contents:

- | | |
|--------------|--------|
| 1. Figure S1 | Page 2 |
| 2. Figure S2 | Page 3 |
| 3. Table S1 | Page 4 |

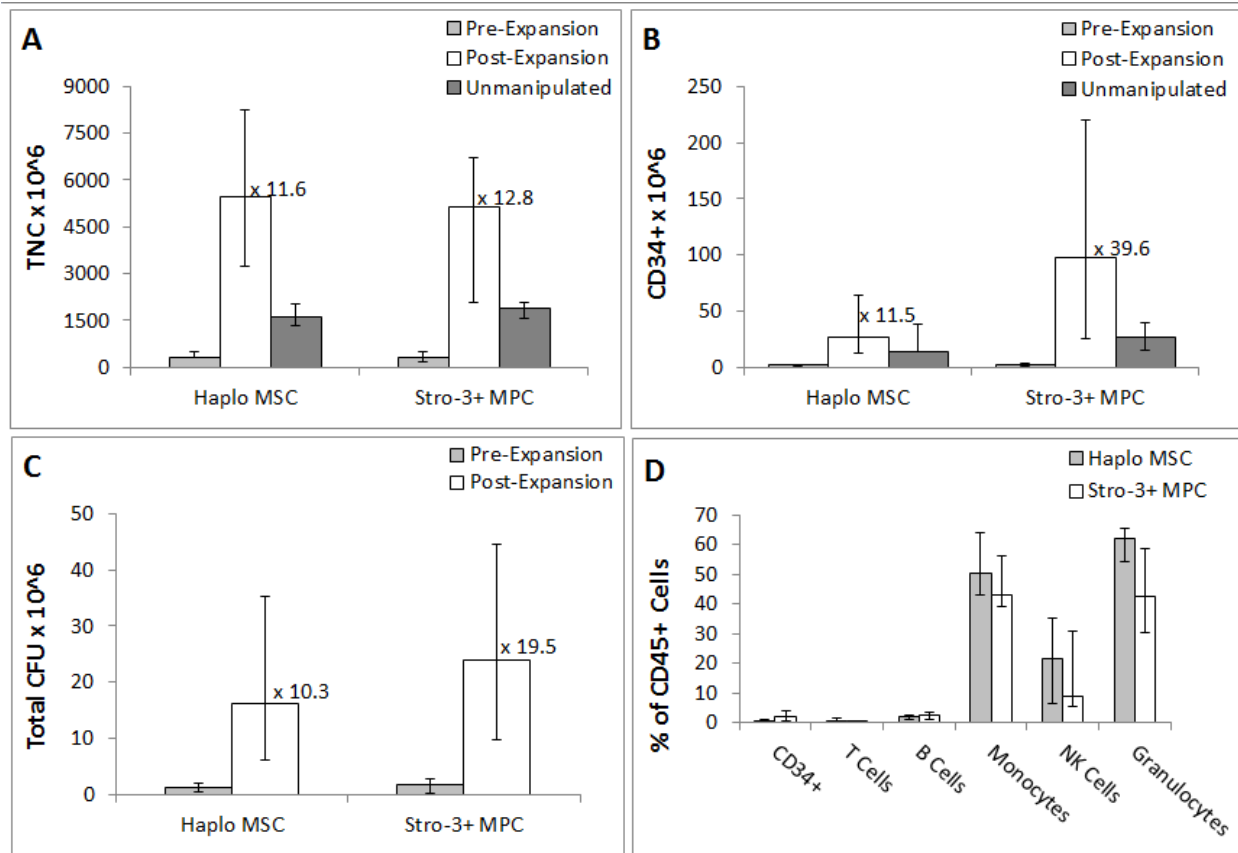
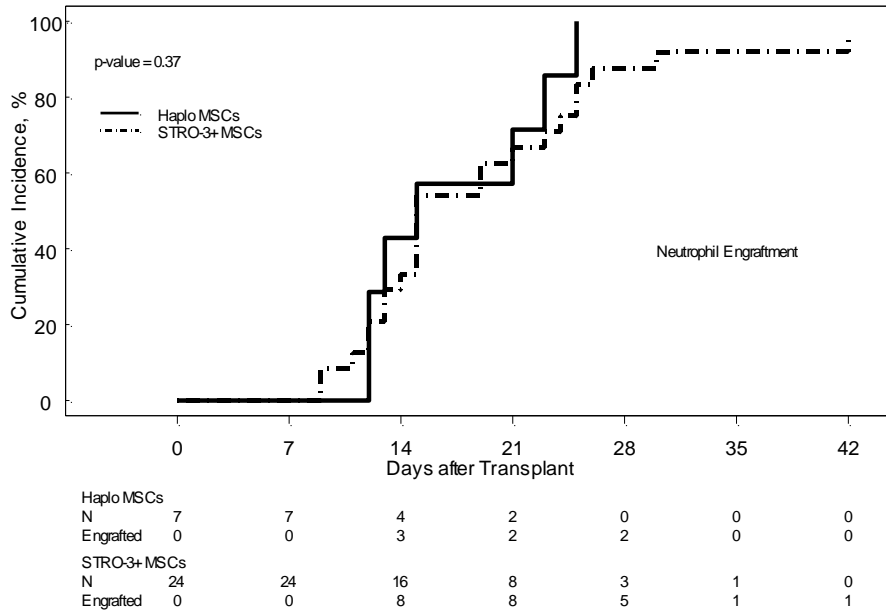


Figure S1. TNC (A), CD34⁺ cells (B), CFU-C (C) when the haploidentical family- derived MSCs were used versus the off-the-shelf STRO-3⁺ MPCs for CB expansion. Leukocyte populations in the expanded cord unit are shown in 1D. Values are expressed as the median \pm 1st and 3rd quartile range. For all the parameters measured, there was no statistically significant difference between the family-derived MSCs and off-the-shelf STRO-3⁺ MPCs $p=0.59$ for TNC; 0.13 for CD34⁺ cells; and 0.47 for CFU-C. Similarly there was no statistical difference in the various leukocyte populations (D) present in the expanded cords cultured over either the family-derived MSCs and STRO-3⁺ MPCs ($p=0.06$ for %CD34⁺; 0.33 for T cells; 0.55 for B Cells; 0.56 for monocytes; 0.81 for NK Cells and 0.09 for granulocytes)
 Abbreviations: haplo, haploidentical; TNC, total nucleated cells; MSC, mesenchymal stromal cells; MPC, mesenchymal progenitor cells; CIBMTR, Center for International Bone Marrow Transplant Research; T cells, T lymphocytes; B cells, B lymphocytes.



Abbreviations: MSC, mesenchymal stromal cells; MPC, mesenchymal progenitor cells.

Figure S2. Cumulative incidence of neutrophil engraftment of patients whose CB unit was expanded in co-culture with family-derived haploidentical MSCs (solid line) or off-the-shelf STRO-3⁺ MSCs (dashed line).

Table S1. Engraftment by MSC Source

| Engrafting Patients | Days to ANC > 500 | | Days to Platelets > 20K | |
|--------------------------|-------------------|----------------|-------------------------|----------------|
| | N | median (range) | N | median (range) |
| Haplo MSCs | 7 | 15 (12-25) | 6 ^a | 43 (27-52) |
| STRO-3 ⁺ MPCs | 23 ^b | 15 (9-42) | 18 ^c | 42(15-62) |

a. One haplo MSC recipient died on day 40 before engrafting platelets.

b. One STRO-3⁺ patient died on day 31 before engrafting neutrophils.

c. Six STRO-3⁺ patients died on days 31, 54, 65, 119, 121, and 217 before engrafting platelets.

Abbreviations: haplo, haploidentical; MSC, mesenchymal stromal cells; MPC, mesenchymal progenitor cells.