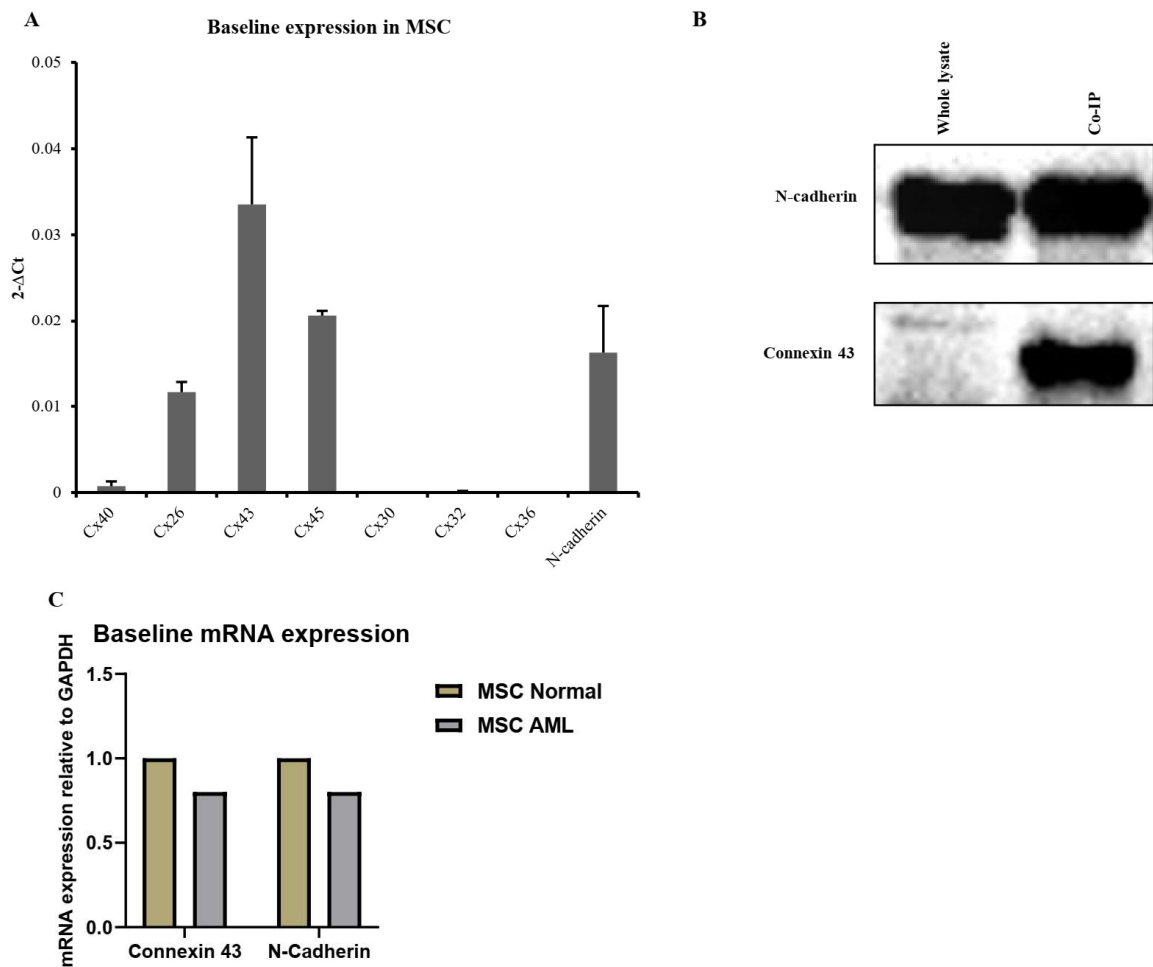


Supplementary Figure 1: **A.** Flow cytometry graphs showing the percentage of CD34⁺ cells in mobilized peripheral blood from a Multiple Myeloma patient. **B.** Light microscopy images of different colonies formed by the adherent fraction of HSCs. Scale bar, 100μm. Clonogenic potential of HSCs represented by the number of colonies obtained from CD34⁺ cells isolated by cell sorting from mobilized peripheral blood. This experiment was repeated independently three times. **C.** Flow cytometry graphs showing the separation of MSCs and HSCs after co-culture, according to the size and the expression of CD73 marker.



Supplementary Figure 2: **A.** Histograms representing the baseline expression of connexins and N-cadherin in MSC. **B.** Co-immunoprecipitation of free Cx-43 with N-cadherin in MSC cells. Western blot analysis of MSC whole-cell lysate (left) and immunoprecipitates by Cx-43 antibody (right). **C.** Baseline mRNA expression of Cx-43 and N-cadherin in MSCs from healthy and AML subjects.

Supplementary Table 1: Source of CD34⁺ cells.

Type of leukemia	%CD34 ⁺	%CD34 ⁺ /CD38 ⁻ /CD45 ⁻
T-cell Lymphoma	1.1	0.8
	1.3	0.7
Hodgkin Lymphoma	0.5	0.2
	0.4	0.3

	2.7	2.5
Non-Hodgkin Lymphoma	0.2	0.1
	0.4	0.3
Lymphoma	1.6	1.4
Multiple Myeloma	4	2.2
	2	1.2
Ewing Sarcoma	0.4	0.2
Neuroblastoma	0.2	0.1

Supplementary Table 2: Primary AML cells used in the study.

<i>Patient number</i>	<i>Age</i>	<i>Sex</i>	<i>Diagnostic/relapse</i>	<i>Source</i>	<i>Molecular/ Cytogenetics</i>
<i>AML 1</i>	76	Female	Relapse	Peripheral blood	FLT3 mutation/46,XX
<i>AML 2</i>	95	Female	Diagnostic	Peripheral blood	ND
<i>AML 3</i>	67	Female	Diagnostic	Peripheral blood	NPM1 mutation/46,XX

ND: not determined.