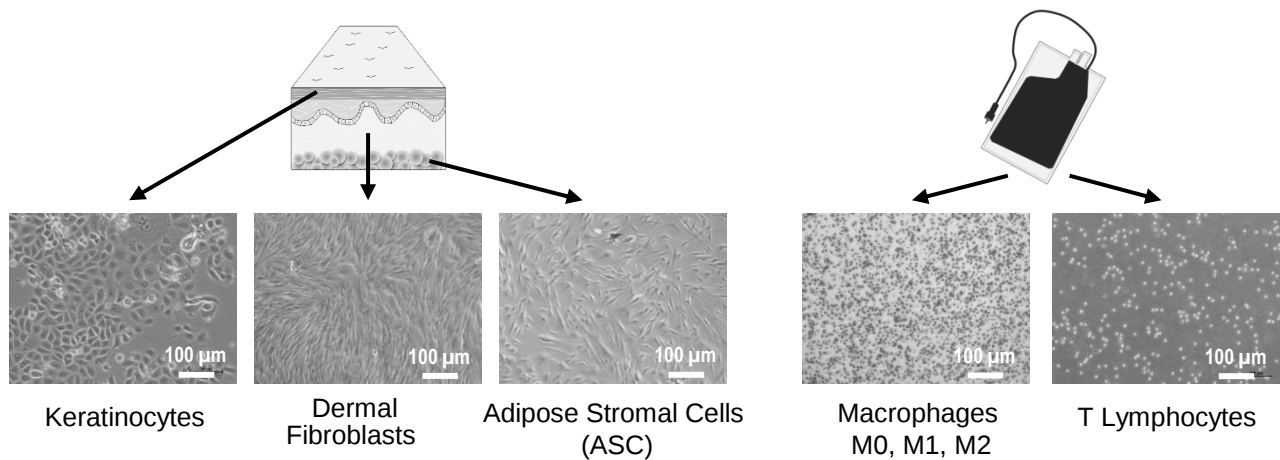


Short exposure to cold atmospheric plasma induces senescence in human skin fibroblasts and adipose mesenchymal stromal cells

Marion Bourdens, Yannick Jeanson, Marion Taurand, Noémie Juin, Audrey Carrière, Franck Clément, Louis Casteilla, Anne-Laure Bulteau and Valérie Planat-Bénard

Supplementary information

A.



B.

	Keratinocytes		Dermal fibroblasts		ASC		Macrophages						T Lymphocytes	
	NT	CAP	NT	CAP	NT	CAP	M0		M1		M2		NT	CAP
							NT	CAP	NT	CAP	NT	CAP		
Alive	91.3 ± 1.5	90 ± 1.3	95.5 ± 0.7	88.8 ± 0.8***	93.7 ± 1.1	85.6 ± 1.4**	81.7 ± 2.2	82.5 ± 3.3	85.5 ± 0.8	68.6 ± 9.5	78 ± 2.5	86.5 ± 3.7	86.2 ± 6.8	6.8 ± 3.8***
Apoptotic	1.0 ± 0.2	0.9 ± 0.1	2.2 ± 0.4	5.1 ± 0.4*	2.1 ± 0.8	5.1 ± 1.3	3.6 ± 1.0	3.7 ± 1.5	1.2 ± 0.4	18.7 ± 7.3	3.0 ± 0.5	3.8 ± 1.3	3.2 ± 3.2	2.0 ± 1.9
Dead	7.7 ± 1.4	9.1 ± 1.2	2.3 ± 0.3	6.1 ± 0.6**	4.2 ± 0.2	9.4 ± 2.1*	14.7 ± 1.5	13.9 ± 1.8	13.2 ± 0.7	12.7 ± 2.9	19 ± 2.0	9.7 ± 2.4*	10.5 ± 4.1	91.3 ± 2.5***

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ NT vs. CAP

Supplementary Figure 1. Selective sensitivity of various human cells 24 hours after CAP treatment. (A) Freshly prepared human cells from skin sample and blood were treated by CAP He for 3 min in PBS, immediately incubated 1 hour at 37°C before PBS was replaced by fresh culture medium. **(B)** Percentage at 24 hours of alive, apoptotic and dead human cells was obtained as described in Figure 1A for naïve M0, inflammatory M1 and reparative M2 macrophages, T lymphocytes, keratinocytes in addition to dermal fibroblasts and ASC.

Gene	Forward primer sequence	Reverse primer sequence
p21	GACCTGTCACTGTCTTGTA	CCTCTTGGAGAAGATCAGCCG
p53	GTGAGCGCTTCGAGATGTTT	ATGGCGGGAGGTAGACTGAC
PPARγ2	GATACACTGTCTGCAAACATATCC	CCACGGAGCTGATCCAA
LPL	GGTCGAAGCATTGGAATCCAG	TAGGGCATCTGAGAACGAGTC
Adiponectin	TGCCCCAGCAAGTGTAACC	TCAGAAACAGGCACACAACCTCA
C/EBPα	GCCGGGAGAACTCTAACTCC	CTGCAGGTGGCTGCTCAT
αSMA	GAAGAAGAGGACAGCACT	TCCCATTCCCACCATCAC
CTGF	TGCCCCGGGAAATGCTGCGAG	CAGTCGGTAAGCCGCGAGGG
COL1A	GCTAACCCCTCCCCAGCCA	GAGCAGGAGCCGGAGGTCCA
Vimentine	CCTTGAACGCAAAGTGGAATC	GACATGCTGTTCTGAATCTGAG
MMP1	ACAGCTTCCCAGCGACTCTA	CAGGGTTTCAGCATCTGGTT
Fibronectin	CAGTCCCCGGTGGCTGTCAGT	CAGCCCCAACTTTGGTCGGCT
COL3A1	CCAGGAGCTAACGGTCTCAG	CAGGGTTTCCATCTCTTCCA
Caldesmon	AGATTGAAAGGCGAAGAGCA	TTCAAGCCAGCAGTTTCCTT
GLUT1	ATACTCATGACCATCGCGCTAG	AAAGAAGGCCACAAAGCCAAAG
HK2	GCGGCTCAAGACAAGGGGCA	GGCCACCACAGTGCACACCT
LDHA	TGGCAGATGAACTTGCTCTTGT	CTTTCTCCCTCTTGCTGACG
MCT4	ACCCACAAGTTCTCCAGTGC	ATGTAGACGTGGGTGCGATC
MT-ND1	CCCTAAAACCCGCCACATCT	GAGCGATGGTGAGAGCTAAGGT
β-actine	AGAGCTACGAGCTGCCTGAC	AGAGCTACGAGCTGCCTGAC
PUM	AGTGGGGGACTAGGCGTTAG	GTTTTTCATCACTGTCTGCATCC

Supplementary Table. List of primer sequences