Oleate prevents palmitate-induced mitochondrial dysfunction in chondrocytes

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Table S1. UPL primers and probes of the analyzed genes grouped by their function

FUNCTION	GENE	PROTEIN	P. SENSE (5´-3´) P.ANTISENSE (5´-3´)	UPL PROBE
Metabolism	**SLC2A3**	Solute carrier family 2 member 3	gggtgtggttaatactatcttcactg cccagtctctccacgttcac	# 31
	HK2	Hexokinase 2	agaagctcccactgggtttt catgagaccaggaaactctcg tcagatgtgtctgaggatttctct	# 87
Reference gene	**RPL13A**	Ribosomal protein L13a	caagcggatgaacaccaac tgtggggcagcatacctc	# 28

Table S2. Parameters calculated to assess mitochondrial function from the oxygen consumption rate (OCR) **(a)** and glycolytic function from the extracellular acidification rate (ECAR) **(b)**

(a)

Parameter	Description
Basal respiration	Baseline respiration before addition of compounds
ATP synthesis	**Oligomycin**-sensitive respiration: basal respiration portion used for ATP production
Proton leak	**Oligomycin**-insensitive respiration: represents remaining basal respiration not coupled to ATP production
Coupling efficiency	Ratio of ATP turnover-linked respiration and basal respiration: an indicator of OXPHOS and electron transport chain coupling quality
Maximal respiration	After the addition of an uncoupler (**FCCP**): reflects the maximal capacity of the electron transport chain
Spare respiratory capacity	Difference between the maximum respiration obtained after the addition of FCCP and basal respiration: indicates the ability of the cell to respond to an energy demand
Non-mitochondrial respiration	Rate is also necessary to obtain an accurate measurement of the above parameters. This is represented by the final OCR after the addition of **Rot/AntA**

(b)

Parameter	Description
Glycolysis rate	Represents the process of converting glucose into pyruvate: It is measured as the rate of ECAR reached by the cells after **Glucose** addition
Glycolytic capacity	Maximum rate of ECAR reached after the addition of **Olygomicin** that inhibits OXPHOS, forcing the cells to use glycolysis at maximum capacity
Glycolytic reserve	Difference between the maximum glycolytic capacity and glycolysis: indicates the cells' ability to respond to an energy demand

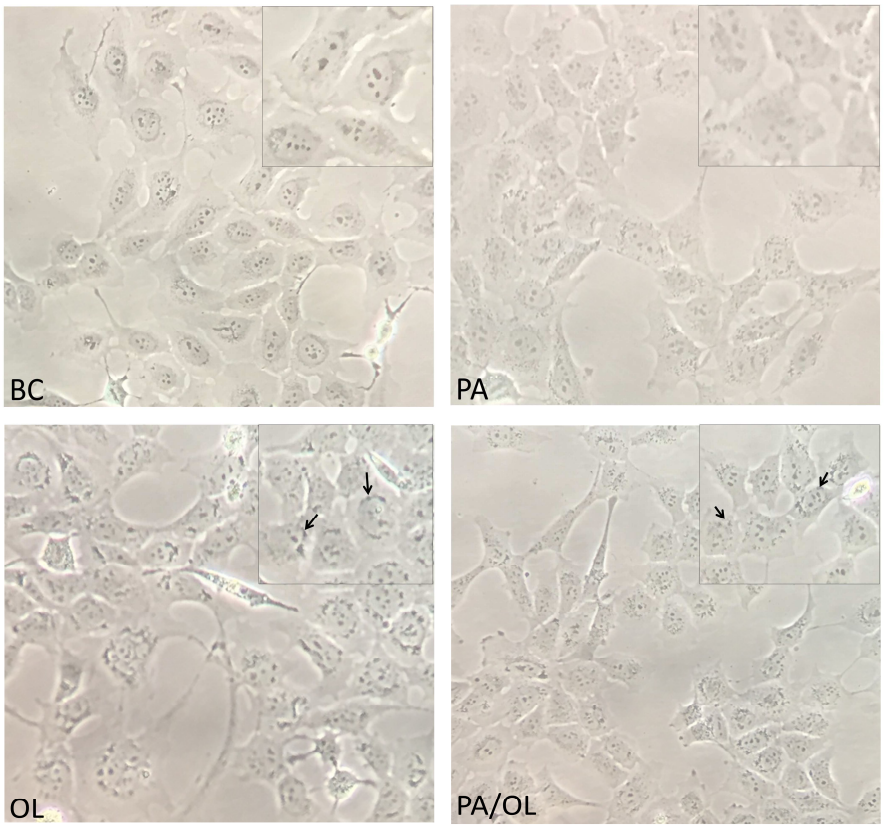

Figure S1. Representative images of the structural changes detected in chondrocytes by phase contrast optical microscopy (200x). BC:basal condition; PA: palmitic acid; OL:oleic acid.