Effect of lipid fraction of digested milk from different sources in mature 3T3-L1 adipocyte

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SUPPLEMENTARY FILE

Supplementary Abbreviations

CLA, conjugated linoleic acid; DHA, docosohexaenoic acid; EPA, eicosapentaenoic acid; FAS, fatty acids syntase; HMGB1, high mobility group box 1; LC-FFA, long chain free fatty acid; MC-FFA, medium chain free fatty acid; MUFA, mono unsaturated fatty acid; NF-kB p65, nuclear factor-kB p65; PPARγ, peroxisome-proliferator-activated receptor γ; PUFA, poly unsaturated fatty acid; ROS, reactive oxygen species; SC-FFA, short chain free fatty acid; SFA, saturated fatty acid; SREBP-1c, sterol regulatory element-binding protein-1c.

Parameter, %	Milk source[1]					
	HM	**FM**	**DM**	**BM**	**OM**	**CM**
Fat	2.29 ± 0.12	3.6 ± 0.01	0.53 ± 0.01	3.63 ± 0.12	8.16 ± 0.32	4.14 ± 0.15
Protein	1.21 ± 0.13	1.4 ± 0.01	1.46 ± 0.04	3.53 ± 0.56	6.01 ± 0.48	3.22 ± 0.35
Lactose	7.49 ± 0.13	6.03 ± 0.02	6.78 ± 0.15	4.69 ± 0.10	4.37 ± 0.11	4.18 ± 0.12

Supplementary File Table S1 legend.

Table 1. Gross composition of milk source (adapted from Santillo *et al*., 2018).

[1] HM = human milk; FM = formula milk; DM = donkey milk; BM = bovine milk; OM = ovine milk; CM = caprine milk.

	Digested milk source[1]													
Free Fatty Acids[2]	**FM**		**HM**		**DM**		**BM**		**OM**		**CM**		**SEM**	**Effect, P[3]**
C8:0	4.85		3.50		4.93		6.69		12.22		5.17		0.91	NS
C16:0	73.47	c	111.74	b	131.46	a	117.14	ab	99.93	b	108.96	b	3.07	***
C18:1c9	6.90	b	20.97	a	2.60	b	3.94	b	3.74	b	3.18	b	1.40	***
C18:2c9c12	0.43	b	1.04	a	0.16	c	0.14	c	0.29	bc	0.14	c	0.08	***
C20:5n3	0.00		0.89		n.d.		n.d.		0.55		n.d.		0.17	NS
C22:6n3	0.08		0.36		n.d.		n.d.		0.12		0.30		0.09	NS
SC-FFA	31.90	a	36.33	a	14.28	b	32.74	a	43.42	a	24.45	b	4.67	*
MC-FFA	78.40	c	125.88	ab	136.68	a	127.46	ab	108.82	b	121.04	ab	3.75	***
LC-FFA	84.23	b	120.47	a	98.18	b	84.35	b	97.84	b	91.04	b	6.28	*
Total FFA	194.53	c	282.68	a	249.14	b	244.54	b	250.08	b	236.52	b	13.97	**
S-FFA	163.83		231.67		240.50		229.88		218.79		202.90		10.48	NS
MU-FFA	12.32	b	35.00	a	2.60	c	4.64	c	11.73	b	10.43	b	2.51	***
PU-FFA	18.39		16.00		6.03		9.98		19.56		22.92		5.75	NS

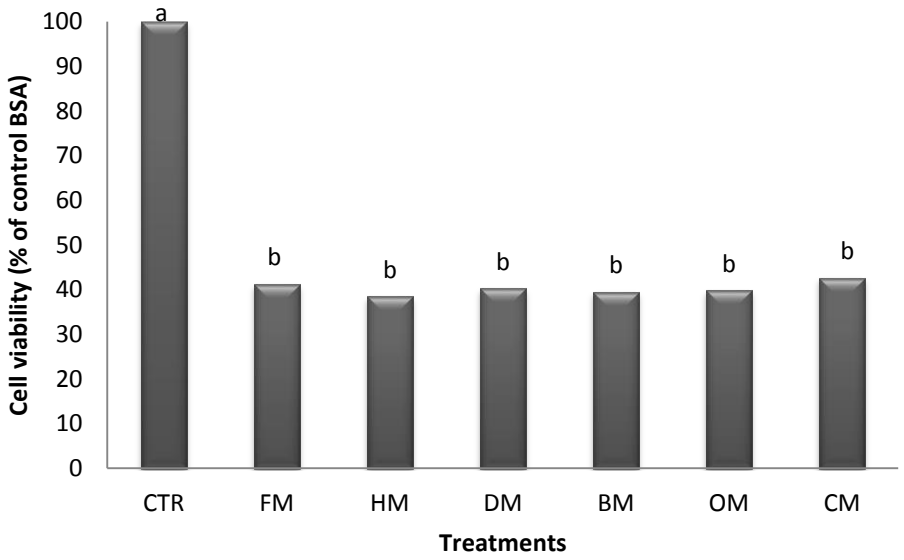
Supplementary File Table S2 legend.

Table 2. The effect of milk source in free fatty acids of digested milks (µg/mL of extract) (adapted from Santillo *et al*., 2018).

[1]FM = formula milk; HM = human milk; DM = donkey milk; BM = bovine milk; OM = ovine milk; CM = caprine milk.

[2] SC-FFA = short chain free fatty acids; MC-FFA = medium chain free fatty acids; LC-FFA = long chain free fatty acids; S-FFA = saturated free fatty acids; MU-FFA = monounsaturated free fatty acids; PU-FFA = polyunsaturated free fatty acids; Total FFA = total free fatty acids.

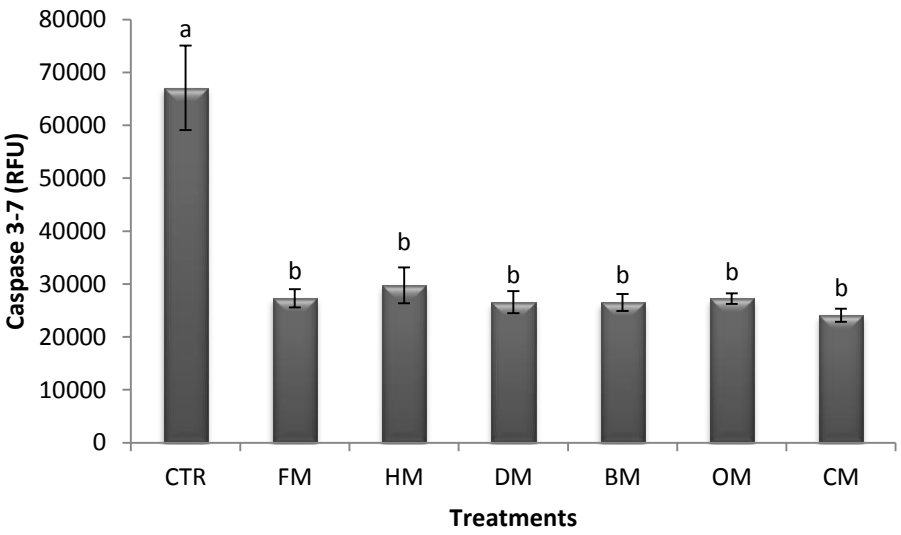
[3] NS, * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$



Supplementary File Figure S2 legend.

Effect of digested milk treatments on viability of 3T3-L1 mature adipocytes.

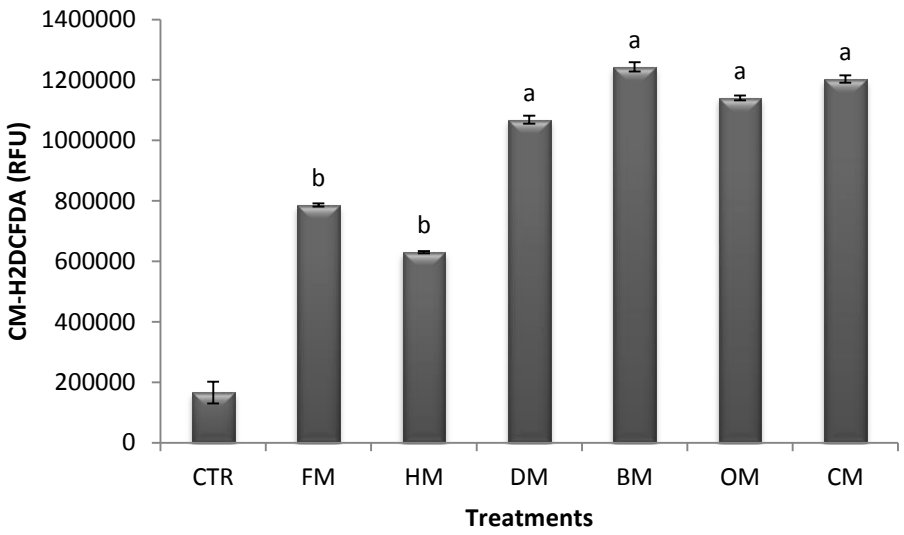
CTR=control treatment, FM= digested formula milk, HM= digested human milk, DM= digested donkey milk, BM= digested bovine milk, OM= digested ovine milk, CM= digested caprine milk. Treatments not sharing a common letter differ significantly from one another ($P < 0.05$).



Supplementary File Figure S3 legend.

Effect of digested milk treatments on caspase 3-7 activity in 3T3-L1 mature adipocytes.

CTR=control treatment, FM= digested formula milk, HM= digested human milk, DM= digested donkey milk, BM= digested bovine milk, OM= digested ovine milk, CM= digested caprine milk. Treatments not sharing a common letter differ significantly from one another ($P < 0.05$).



Supplementary File Figure S4 legend.

Effect of digested milk treatments on ROS concentration in 3T3-L1 mature adipocytes.

CTR=control treatment, FM= digested formula milk, HM= digested human milk, DM= digested donkey milk, BM= digested bovine milk, OM= digested ovine milk, CM= digested caprine milk. Treatments not sharing a common letter differ significantly from one another ($P < 0.05$).