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Correction: Free fatty acid release from vegetable and bovine milk fat-based infant formulas and human milk during two-phase *in vitro* digestion

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Correction for 'Free fatty acid release from vegetable and bovine milk fat-based infant formulas and human milk during two-phase *in vitro* digestion' by Jeske H. J. Hageman *et al.*, *Food Funct.*, 2019, **10**, 2102–2113.

The authors regret that the lipid composition of IF1 was reported incorrectly. The percentage of C18:1n-9 should be 42.3%. Since the incorrect value was also used for some calculations, this also affects some of the results: it increases the total amount of fatty acids in the sample, and consequently the percentage of released FFA is lower. The FFA release (as a percentage of initial composition), both of total FFA and C18:1, is similar for both IFs. One small difference between IF1 and IF2 that was seen when using the incorrect value, *i.e.* a faster early duodenal digestion for IF1, was found to be no longer statistically significant. This has no consequences for the conclusions of the manuscript.

Page 2106 should read "The human milk samples showed less release of FFA during the gastric phase compared to IF1 and IF2 ($2.0 \pm 0.2\%$ vs. $4.3 \pm 0.2\%$ and $4.7 \pm 0.1\%$ respectively, $p < 0.01$). Compared to the amount of FFA released after the digestion, during the gastric phase 4% of FFA were released from human milk, about 10% from IF1, and about 11% from IF2. Except for 45 minutes ($p = 0.04$), *i.e.* 15 minutes after the start of the duodenal phase, no differences were found in FFA release between the IFs compared to the human milk samples during this phase. The total release of FAs at the end of the digestion, as percentage of initial composition, was found to be similar for the different samples ($43.9 \pm 2.0\%$, $42.2 \pm 1.4\%$, and $52.3 \pm 4.5\%$ for IF1, IF2 and human milk respectively, $p = 0.14$).

The correspondingly updated Fig. 2B, Fig. 5K, Table 2 and Table 3 are as presented below.

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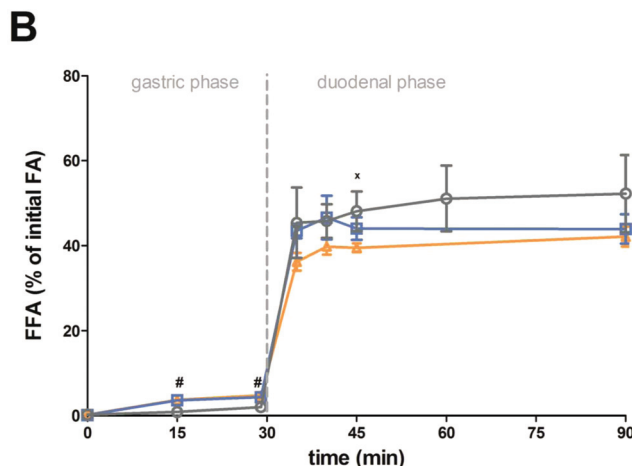


Fig. 2 B: The lipolysis of infant formulas and human milk (mean \pm SD). B: Percentage of free fatty acids (FFA) in percentage of total esterified fatty acids (FA) in initial TAGs, during *in vitro* digestion (mean \pm SD). At time point 0 the FFA percentages were 0.15%, 0.20%, and 0.22% for IF-1, IF-2 and human milk respectively. The vertical striped line indicates the start of the duodenal phase following the gastric phase. The grey line (○) represents the average of the human milk samples, the blue line (□) represents IF1, and the orange line (Δ) represents IF2. # Significant difference between both IFs and human milk, x significant difference between IF2 and human milk ($p < 0.05$), separate time points were compared with one-way ANOVA, followed by Bonferroni *post hoc* test.

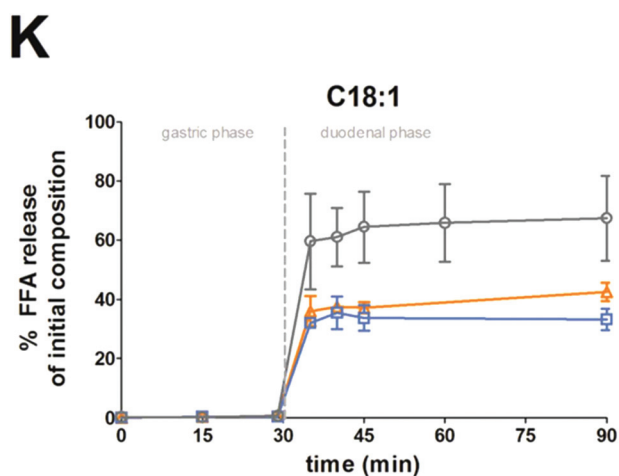


Fig. 5 K: Release of individual fatty acids during *in vitro* digestion, expressed as percentage of their initial FA content present in IFs and human milk (mean \pm SD) (K) C18:1. The vertical striped line indicates the start of the duodenal phase following the gastric phase. The grey line (○) represents human milk, the blue line (□) represents IF1, and the orange line (Δ) represents IF2.



Table 2 Initial fatty acid composition of the infant formula products and human milk samples (in % of total FAMES)

Fatty acid	IF1	IF2	Human milk-1	Human milk-2	Human milk-3	Human milk-4
C4:0	<0.1	2.6	<0.1	ND	<0.1	<0.1
C6:0	<0.1	1.6	<0.1	ND	<0.1	<0.1
C8:0	0.6	1.2	<0.1	<0.1	0.2	0.3
C10:0	0.5	2.1	0.9	0.7	1.6	1.6
C11:0	<0.1	0.3	<0.1	<0.1	<0.1	<0.1
C12:0	7.0	4.3	3.8	3.1	7.8	5.6
C14:0	3.0	8.2	6.1	6.7	10.0	5.9
C15:0	<0.1	0.7	0.5	0.6	0.4	0.3
C16:0	24.7	22.8	30.0	28.3	21.0	18.4
C18:0	3.1	7.1	8.1	9.4	6.6	4.7
C18:1 n-9cis	42.3	25.9	30.3	29.8	32.2	30.8
C18:2 n-6	12.9	12.0	10.5	10.0	10.3	20.6
C18:3 n-3	1.8	1.4	0.8	0.8	0.8	1.6
Total SC/MCFA	1.4	7.8	1.3	0.9	2.1	2.2
Total LCFA	94.9	82.4	90.1	88.7	89.1	87.9
Total SFA	39.3	50.9	49.8	49.0	47.9	37.1
Total MUFA	42.3	25.9	30.3	29.8	32.2	30.8
Total PUFA	14.7	13.4	11.3	10.8	11.1	22.2

Table 3 Release of the individual fatty acids, as percentage of their initial FA content present in IFs and human milk (mean \pm SEM) upon digestion of IF1, IF2 and human milk. *P*-Values represent the results of one-way ANOVA, or in case of C4:0, C11:0 and C15:0 the results of a Student's *t*-test, difference between products is indicated with letters (Bonferroni *post hoc* test). nd, not detected

Fatty acid (%)	Gastric phase				Duodenal phase				Total digestion			
	IF1	IF2	Human milk	<i>p</i> -Value	IF1	IF-2	Human milk	<i>p</i> -Value	IF1	IF2	Human milk	<i>p</i> -Value
C4:0	nd	13.7 \pm 1.8 ^a	0.0 \pm 0.0 ^b	<0.01	nd	41.1 \pm 7.6	22.7 \pm 3.7	0.10	nd	54.7 \pm 5.8 ^a	22.7 \pm 3.7 ^b	0.01
C6:0	33.5 \pm 0.7 ^b	24.9 \pm 2.4 ^a	20.1 \pm 3.7 ^a	0.07	3.9 \pm 0.9 ^a	20.7 \pm 1.5 ^b	40.9 \pm 3.1 ^c	<0.01	37.4 \pm 1.1 ^a	46.6 \pm 3.6 ^{a,b}	60.5 \pm 1.8 ^b	0.02
C8:0	55.5 \pm 0.8	34.1 \pm 0.4	52.4 \pm 14.8	0.38	1.8 \pm 0.8 ^a	11.3 \pm 0.7 ^a	53.8 \pm 15.8 ^b	<0.01	57.3 \pm 1.1	45.4 \pm 0.0	106.2 \pm 22.0	0.06
C10:0	46.8 \pm 0.6	26.5 \pm 1.0	33.4 \pm 8.2	0.13	14.1 \pm 4.5 ^a	13.5 \pm 2.7 ^a	51.6 \pm 19.6 ^b	<0.01	60.9 \pm 3.0	40.0 \pm 0.9	85.0 \pm 18.0	0.11
C11:0	nd	3.0 \pm 0.1 ^a	8.5 \pm 1.4 ^b	0.02	nd	3.6 \pm 0.3 ^a	10.4 \pm 2.1 ^b	<0.01	nd	6.6 \pm 0.2 ^a	19.0 \pm 1.8 ^b	<0.01
C12:0	24.9 \pm 1.2 ^a	10.9 \pm 0.2 ^b	11.6 \pm 2.2 ^b	<0.01	26.0 \pm 3.9 ^a	25.1 \pm 1.5 ^a	55.5 \pm 12.9 ^b	<0.01	50.9 \pm 2.3	36.1 \pm 0.9	67.1 \pm 8.7	0.33
C14:0	3.1 \pm 0.3 ^a	1.7 \pm 0.0 ^b	0.4 \pm 0.1 ^c	<0.01	40.2 \pm 2.0 ^a	26.9 \pm 1.4 ^b	33.5 \pm 5.7 ^{a,b}	0.01	43.3 \pm 1.3 ^a	28.6 \pm 0.8 ^b	33.9 \pm 2.9 ^{a,b}	<0.01
C15:0	nd	2.1 \pm 0.2	3.3 \pm 0.9	0.35	nd	23.1 \pm 1.0	18.7 \pm 4.5	0.16	nd	25.2 \pm 0.6	24.6 \pm 2.6	0.83
C16:0	1.8 \pm 0.1 ^a	1.5 \pm 0.1 ^a	0.2 \pm 0.1 ^b	<0.01	55.4 \pm 6.7 ^a	44.5 \pm 5.7 ^{a,b}	31.7 \pm 6.0 ^b	<0.01	57.2 \pm 4.0 ^a	46.0 \pm 3.2 ^{a,b}	31.8 \pm 3.0 ^b	<0.01
C18:0	0.5 \pm 0.3	0.7 \pm 0.4	0.2 \pm 0.2	0.51	76.9 \pm 7.7	54.1 \pm 2.7	63.5 \pm 13.6	0.07	77.4 \pm 4.2	54.8 \pm 1.6	63.7 \pm 6.9	0.07
C18:1	0.5 \pm 0.1	0.6 \pm 0.1	0.7 \pm 0.1	0.41	32.7 \pm 3.5 ^a	41.9 \pm 3.2 ^a	66.6 \pm 14.0 ^b	<0.01	33.2 \pm 2.1 ^a	42.5 \pm 1.8 ^a	67.4 \pm 7.1 ^b	<0.01
C18:2	0.4 \pm 0.1 ^a	0.4 \pm 0.1 ^a	1.0 \pm 0.2 ^b	0.02	33.0 \pm 4.6 ^a	32.6 \pm 3.0 ^a	61.1 \pm 12.4 ^b	<0.01	33.4 \pm 2.6 ^a	32.9 \pm 1.7 ^a	62.3 \pm 6.3 ^b	<0.01
C18:3	1.0 \pm 0.2 ^a	1.2 \pm 0.2 ^a	2.9 \pm 0.5 ^b	0.02	35.2 \pm 4.1 ^a	36.1 \pm 3.1 ^a	68.2 \pm 12.6 ^b	<0.01	36.2 \pm 2.5 ^a	37.4 \pm 1.9 ^a	71.1 \pm 6.7 ^b	<0.01

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

