



Correction to: Comparative testis structure and function in three representative mice strains

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Erratum to: Cell and Tissue Research
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The authors regret that in our published paper entitled “Comparative testis structure and function in three representative mice strains.” Cell and Tissue Research, 2020 Jul 14; the Tables 1, 3 and 4 as well as Fig. 2 are presenting some inaccurate information.

Specifically, the data referring to seminiferous tubules diameter and cell counts need to be corrected. However, as detailed in the “Material and Methods” section, these data are used for calculating quantitative testicular parameters, such as the total length of seminiferous tubule per testis and per testis gram; cell ratios; Sertoli cell efficiency and numbers; and daily sperm production per testis and per gram of testis. Although imperative, the replacement of the absolute values of each of these cited parameters, in overall, did not change the comparative observations and the biological context of our results. Therefore, the error does not affect the interpretation of the results or the scientific conclusions of the article in any way.

The authors would like to apologize for any inconvenience made by this mistake.

Therefore, in our article we make the following corrigendum in the text:

1. Replacement of Tables 1, 3 and 4 showing the correct values for tubular diameter, total length of seminiferous tubule per testis and per testis gram and cell counts and ratios.
2. Replacement of Fig. 2 with the correct values for Sertoli cell efficiency and numbers and daily sperm production per testis and per gram of testis. Consequently, the subtitle must be corrected as follows (for the changes, see underlined text):

As a consequence of the tables and figure alterations, the text has the following changes (for the changes, see underlined text).

3. Page 6, Results, Biometric data and testis morphometry, Line 18:
4. Page 6, Results, Cell counts and daily sperm production, Line 2:
5. Page 6, Results, Cell counts and daily sperm production, Line 6:
6. Page 6, Results, Cell counts and daily sperm production, Line 10:
7. Page 10, Discussion, paragraph 3, Line 5:
8. Page 10, Discussion, paragraph 3, Line 10:
9. Page 10, Discussion, paragraph 4, Line 1:
10. Page 10, Discussion, paragraph 4, Line 6:

The original article can be found online at <https://doi.org/10.1007/s00441-020-03239-0>.

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Table 1 Biometric and morphometric data in three different mice strains (mean \pm SEM)

	C57BL/6	Swiss	BALB/c
Body weight (g)	25 \pm 0.6 ^a	39 \pm 0.5 ^b	27 \pm 0.4 ^a
Testis weight (mg)	91.5 \pm 1.8 ^a	111.3 \pm 3.2 ^b	105 \pm 1.6 ^b
Gonadosomatic index (%)	0.73 \pm 0.01 ^a	0.57 \pm 0.02 ^b	0.79 \pm 0.01 ^c
Epididymis weight (mg)	41.8 \pm 2 ^a	54.2 \pm 2.2 ^b	41.2 \pm 2.6 ^a
Seminal vesicle weight (mg)	217 \pm 13 ^a	430 \pm 20 ^b	292 \pm 19 ^c
Anogenital index	4.5 \pm 0.07 ^a	3.6 \pm 0.14 ^b	4.2 \pm 0.13 ^a
Volumetric density (%)			
Seminiferous tubules	93.3 \pm 0.5 ^a	91.1 \pm 0.7 ^b	92.1 \pm 0.4 ^{ab}
Tunica propria	2.77 \pm 0.1 ^a	3.15 \pm 0.1 ^b	2.97 \pm 0.1 ^{ab}
Seminiferous epithelium	81.5 \pm 0.6 ^a	77.5 \pm 0.5 ^b	79.7 \pm 0.7 ^{ab}
Lumen	9.0 \pm 0.5	10.4 \pm 0.5	9.4 \pm 0.7
Intertubular compartment	6.5 \pm 0.4 ^a	8.9 \pm 0.7 ^b	7.9 \pm 0.4 ^{ab}
Leydig cell	3.7 \pm 0.2 ^a	5.3 \pm 0.4 ^b	3.95 \pm 0.4 ^{ab}
Blood vessels	2.1 \pm 0.2	2.4 \pm 0.1	2.6 \pm 0.3
Lymphatic space	0.5 \pm 0.1 ^a	1.1 \pm 0.3 ^{ab}	0.9 \pm 0.1 ^b
Macrophages	0.96 \pm 0.03 ^a	1.10 \pm 0.09 ^{ab}	1.17 \pm 0.05 ^b
Tubular diameter (μ m)	216 \pm 2 ^a	228 \pm 2 ^b	210 \pm 3 ^a
Seminiferous epithelium height (μ m)	78.9 \pm 0.9	77.3 \pm 1.2	75.8 \pm 0.5
Total length of seminiferous tubule per testis (m)	2.4 \pm 0.1	2.4 \pm 0.1	2.6 \pm 0.1
Length of seminiferous tubule per testis gram (m)	26.5 \pm 0.8 ^a	22.5 \pm 1.0 ^b	26.6 \pm 0.8 ^a

Different letters indicate significant differences ($p < 0.05$) among groups

Table 3 Cell counts and ratios per seminiferous tubule cross sections at stage VII of the seminiferous epithelium cycle, in three different mice strains (mean \pm SEM)

	C57BL/6	Swiss	BALB/c
Sertoli cell nucleoli	6.5 \pm 0.2 ^{ab}	6.9 \pm 0.2 ^a	6.0 \pm 0.2 ^b
Spermatogonia	0.9 \pm 0.1 ^a	1.7 \pm 0.1 ^b	1.5 \pm 0.1 ^b
Pre-leptotene spermatocytes	25.5 \pm 0.8 ^a	28.2 \pm 0.7 ^b	30.1 \pm 0.6 ^b
Pachytene spermatocytes	25.3 \pm 0.7 ^a	28 \pm 0.8 ^b	26.7 \pm 0.7 ^{ab}
Round spermatids	68 \pm 2.9 ^a	78 \pm 2.4 ^b	63 \pm 1.8 ^a
Meiotic index	2.7 \pm 0.1 ^a	2.8 \pm 0.1 ^a	2.3 \pm 0.1 ^b

Different letters indicate significant differences ($p < 0.05$) among groups

Table 4 Comparative data related to biometry, testis stereology and spermatogenesis in mice strains already investigated

Parameters	C57BL/6 ^a	Swiss ^b	BALB/c ^c	C3H ^d	ICR ^e	NMRI ^f	Parkes ^g	CF-1 ^h
Body weight (g)	25	39	27	25	37	25–31	33	35
Testis weight (mg)	92	111	105	78	125	140	100	120
Gonadosomatic Index (%)	0.73	0.57	0.79	0.61	0.68	1.04	0.60	0.69
Seminiferous tubules (%)	93.3	91.1	92.1		92.5			
Leydig cell (%)	3.7	5.3	3.9		3.9			
Tubular diameter (µm)	216	228	210		202	211–217	200	199
Sertoli cells per gram of testis (× 10 ⁶)	43	39	40					
Sertoli cells per testis (× 10 ⁶)	3.9	4.2	3.9	4.1				
Sertoli cell efficiency	10.5	11.5	10.5					
Pre-meiotic phase ^h (%)	23.8	24	23.1	28.5–33	24.8			
Meiotic phase ⁱ (%)	9.1	11.3	11.2	10–10.5	10.1			
Post-meiotic phase ^j (%)	67.1	64.7	65.7	57–61	65.1			
Meiotic index ^k	2.7	2.8	2.3			2.1		
Spermatogenic cycle length (days)	8.7	8.8	8.9	8.6				
Spermatogenesis total duration (days)	39.2	39.6	40.1	38.7				
DSP ^l per gram of testis (× 10 ⁶)	52	50	47					29
DSP ^l per testis (× 10 ⁶)	4.7	5.4	4.6					

^aPresent paper^bPresent paper^cPresent paper^dOakberg, 1956; Clermont & Trott, 1969; Allan et al., 2004^eAvelar et al., 2000; Korejo et al., 2016^fJafari et al., 2017; Khorsandi & Oroojan et al., 2018, Fisher et al., 2019^gJoshi & Singh, 201^hCagen et al., 1999; Obregon et al., 2007ⁱCombined stages frequencies after spermiation and prior to methaphase^jMeiotic division I through meiosis I^kCombined stages frequencies after completion of meiosis until spermiation^lMeasured as the number of round spermatids produced per pachytene primary spermatocyte (presumptive germ cell loss in parenthesis)^lDSP=daily sperm production

Fig. 2 Sertoli cell and sperm production parameters in the three mice strains investigated (a–e). As it can be noted, the only statistical difference observed was on daily sperm production per testis (e), which was significantly increased in Swiss mice (*) in comparison to the C57BL/6. T test was performed to compare differences between C57BL/6 and Swiss strains ($p < 0.05$) due to Gaussian distribution in these groups”

