

CORRECTION

# Correction: Mitochondrial Morphology and Fundamental Parameters of the Mitochondrial Respiratory Chain Are Altered in *Caenorhabditis elegans* Strains Deficient in Mitochondrial Dynamics and Homeostasis Processes

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In Figs 2, 3, 4 and 5, and S1, S4, S5, S7, S9, S10, S11, S12, S13, S14, S16, S17, S18, S19 and S20 Figs, the y-axes are incorrectly labeled “pmol/min/mg protein”, when they should be labeled “nmol/min/mg protein”. Please see the corrected files here.

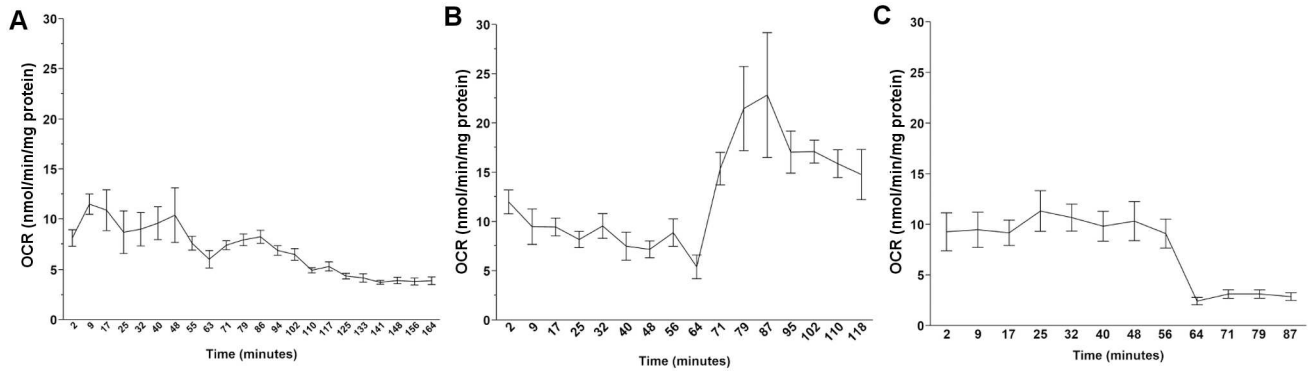


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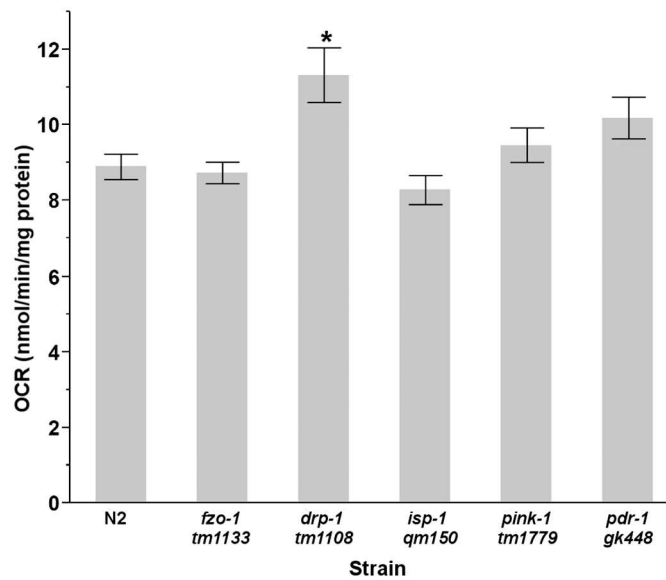
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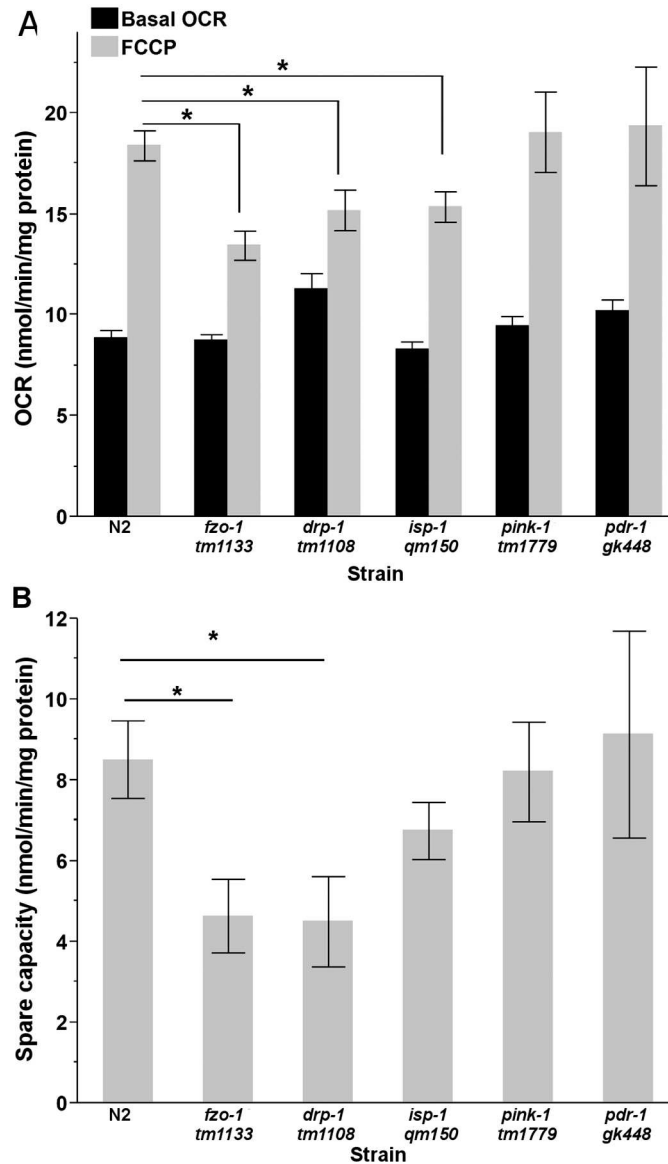
**Fig 2. Representative Seahorse XFe24 output data for L4 N2 nematodes dosed with (A) DCCD, (B) FCCP, and (C) sodium azide.**

doi:10.1371/journal.pone.0168738.g001



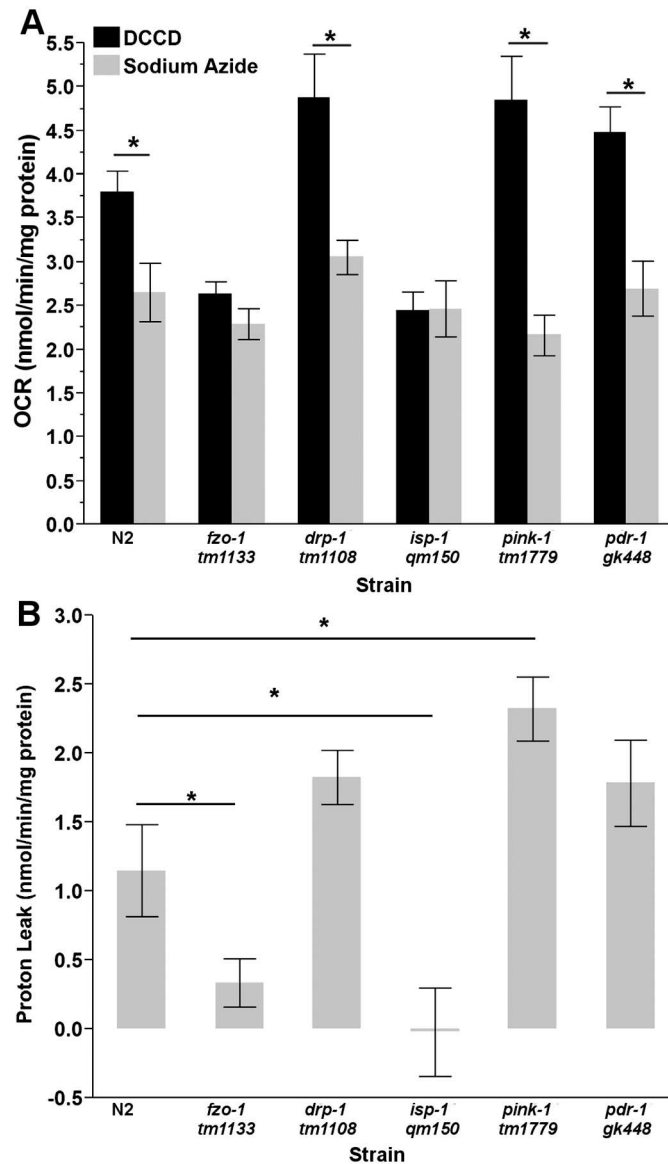
**Fig 3. Basal OCR is elevated in L4 *drp-1* nematodes.** Statistical significance was analyzed via a one way ANOVA (main effect of strain,  $P < 0.0001$ ) ( $n = 31-45$ ). Asterisks (\*) denote statistical significance. Bars  $\pm$  SEM.

doi:10.1371/journal.pone.0168738.g002



**Fig 4. Maximal and spare respiratory capacity in L4 nematodes.** (A) Treatment with FCCP caused a significant increase in OCR in all strains (two way ANOVA, main effects of strain, treatment and their interaction,  $P < 0.0001$  for all); however, L4 *fzo-1*, *drp-1* and *isp-1* had reduced maximal respiratory capacity compared to N2 nematodes (Student's t-test,  $p = 0.03$ ,  $p < 0.0001$ ,  $p = 0.01$ , respectively). (B) Spare respiratory capacity was reduced in *fzo-1* and *drp-1*, compared to wild-type nematodes (one way ANOVA,  $P = 0.022$ ). ( $n = 12-20$ ). Asterisks (\*) denote statistical significance. Bars  $\pm$  SEM.

doi:10.1371/journal.pone.0168738.g003



**Fig 5. Proton leak in L4 nematodes.** (A) Sodium azide and DCCD caused significantly different reductions in OCR in N2, *drp-1*, *pink-1*, and *pdr-1* nematodes (two way ANOVA, main effects of strain ( $P < 0.0001$ ), treatment ( $P < 0.0001$ ) and their interaction ( $p = 0.0002$ )), while *fzo-1* and *isp-1* responses were not significantly different. (B) L4 *fzo-1* and *isp-1* nematodes have reduce proton leak, while *pink-1* *C. elegans* have increased leak (one way ANOVA,  $P < 0.0001$ ). ( $n = 8-12$ ). Asterisks (\*) denote statistical significance. Bars  $\pm$  SEM.

doi:10.1371/journal.pone.0168738.g004

## Supporting Information

**S1 Fig. Response of L4 N2 nematodes to sodium azide alone and post-FCCP.** Response to sodium azide was assessed statistically with a one way ANOVA ( $P = 0.0005$ ). Asterisks (\*) denote statistical significance. Bars  $\pm$  SEM.

(TIFF)

**S4 Fig. Titration of Dicyclohexylcarbodiimide in L4 N2 nematodes.** Significance assessed with a one way ANOVA ( $P < 0.0001$ ), followed by student's T-tests for pairwise comparisons. Asterisks (\*) denote statistical significance. Bars  $\pm$  SEM.

(TIFF)

**S5 Fig. Effect of DMSO concentration of efficacy of 20 $\mu$ M DCCD.** Significance assessed with a one way ANOVA ( $P < 0.0001$ ), followed by student's T-tests for pairwise comparisons. Asterisks (\*) denote statistical significance. Bars  $\pm$  SEM.

(TIFF)

**S7 Fig. Titration of FCCP in L4 N2 nematodes.** Significance assessed with a one way ANOVA (main effect of treatment,  $P < 0.0001$ ). Asterisks (\*) denote statistical significance. Bars  $\pm$  SEM.

(TIFF)

**S9 Fig. Titration of sodium azide in L4 N2 nematodes.** Significance assessed with a one way ANOVA (main effect of treatment,  $P < 0.0001$ ). Asterisks (\*) denote statistical significance.

Bars  $\pm$  SEM.

(TIFF)

**S10 Fig. Basal OCR is elevated in *drp-1* and reduced in *isp-1* L4 *C. elegans* on a per nematode basis.** Asterisks (\*) denote statistical significance. Bars  $\pm$  SEM.

(TIFF)

**S11 Fig. ATP coupled respiration.** (A) 20 $\mu$ M DCCD caused a significant reduction in OCR in all strains (two way ANOVA, main effects of strain and treatment,  $P < 0.0001$  for both, but not their interaction). (B) A trend in increased ATP coupled respiration was observed in *fzo-1* nematodes (one way ANOVA,  $P = 0.07$ ). ( $n = 12-16$ ). Asterisks (\*) denote statistical significance. Bars  $\pm$  SEM.

(TIFF)

**S12 Fig. ATP coupled respiration per nematode.** (A) 20 $\mu$ M DCCD caused a significant reduction in OCR in all strains (two way ANOVA, main effects of strain and treatment,  $P < 0.0001$  for both, but not their interaction), (B) but no significant effect on ATP-linked respiration was observed. Asterisks (\*) denote statistical significance. Bars  $\pm$  SEM.

(TIFF)

**S13 Fig. Maximal and spare respiratory capacity in L4 *C. elegans* on a per nematode basis.**

(A) *fzo-1*, *isp-1*, and *drp-1* nematodes have a significantly reduced FCCP response (two way ANOVA, main effects of strain, treatment, and their interaction,  $P = 0.0001$  for all) (A) and (B) spare respiratory capacity. Asterisks (\*) denote statistical significance. Bars  $\pm$  SEM.

(TIFF)

**S14 Fig. Proton leak per L4 nematode.** (A) Effect of sodium azide and DCCD on OCR (two way ANOVA,  $P > 0.05$ ) and (B) proton leak per nematode measured (two way ANOVA,  $P > 0.05$ ).

(TIFF)

**S16 Fig. Proton leak per L4 nematode.** DMSO had no effect on OCR in any of the strains tested (two way ANOVA,  $P > 0.05$ ). Bars  $\pm$  SEM.

(TIFF)

**S17 Fig. Basal OCR and sodium azide response.** Sodium azide caused a significant reduction in OCR in all strains tested (one way ANOVA,  $P < 0.0001$ ). Bars  $\pm$  SEM.  
(TIFF)

**S18 Fig. Oligomycin pre-incubation with *bus-8*-deficient nematodes.** A 12 hour pre-incubation with oligomycin caused a significant reduction in OCR (one way ANOVA,  $P < 0.0001$ ). Bars  $\pm$  SEM.  
(TIFF)

**S19 Fig. Oligomycin titration with *bus-8*-deficient nematodes.** Treatment with oligomycin caused a significant reduction in OCR (one way ANOVA,  $P = 0.0007$ ). Bars  $\pm$  SEM.  
(TIFF)

**S20 Fig. DCCD titration with *bus-8*-deficient nematodes.** Treatment with DCCD caused a significant reduction in OCR (one way ANOVA,  $P < 0.0001$ ). Bars  $\pm$  SEM.  
(TIFF)

## Reference

1. Luz AL, Rooney JP, Kubik LL, Gonzalez CP, Song DH, Meyer JN (2015) Mitochondrial Morphology and Fundamental Parameters of the Mitochondrial Respiratory Chain Are Altered in *Caenorhabditis elegans* Strains Deficient in Mitochondrial Dynamics and Homeostasis Processes. PLoS ONE 10(6): e0130940. doi: [10.1371/journal.pone.0130940](https://doi.org/10.1371/journal.pone.0130940) PMID: [26106885](https://pubmed.ncbi.nlm.nih.gov/26106885/)