



steady-state ATP levels, and NAD⁺/NADH [↗](#)

PLOS Genetics

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Cage Studies

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EXTERNAL LINK

<https://doi.org/10.1371/journal.pgen.1007735>

THIS PROTOCOL ACCOMPANIES THE FOLLOWING PUBLICATION

Aw WC, Towarnicki SG, Melvin RG, Youngson NA, Garvin MR, Hu Y, Nielsen S, Thomas T, Pickford R, Bustamante S, Vila-Sanjurjo A, Smyth GK, Ballard JWO (2018) Genotype to phenotype: Diet-by-mitochondrial DNA haplotype interactions drive metabolic flexibility and organismal fitness. PLoS Genet 14(11): e1007735. doi: [10.1371/journal.pgen.1007735](https://doi.org/10.1371/journal.pgen.1007735)

PROTOCOL STATUS

Working

- 1 ATP and NAD⁺ and NADH metabolites were extracted from female third instar wandering larvae harbouring Alstonville and Dahomey mtDNA raised on 1:2 P:C and 1:16 P:C diets (7 replicates per mitotype-diet combination)
- 2 The extracted metabolites were analysed using liquid chromatography (LC) electrospray ionisation tandem mass spectrometry (ESI-MS/MS)
- 3 ATP levels were determined by quantifying the area under the curve.
- 4 The NAD⁺/NADH ratio was calculated as relative differences in peak areas between NAD⁺ and NADH metabolites.



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