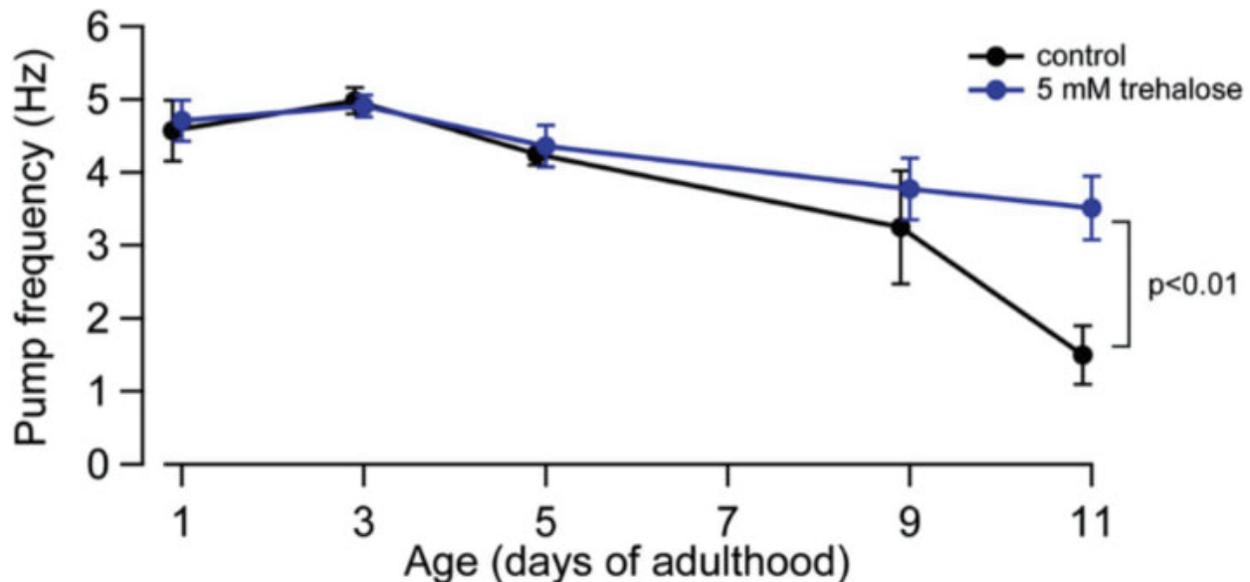


Trehalose extends healthspan in *C. elegans*

Kristin J. Robinson¹ and Kathryn McCormick^{1§}

¹NemaMetrix, Inc., 44 W 7th Ave., Eugene, OR 97401 USA.

[§]To whom correspondence should be addressed: kathryn.mccormick@nemametrix.com



Description

Adult worms were reared and tested in M9 medium plus 5 mM [trehalose](#), which has previously been shown to extend lifespan and increase pump frequency late in life in *C. elegans* ([Honda et al., 2010](#)). Using an alternate electrophysiological readout of pumping, electropharyngeograms (EPGs), we examined pump frequency at earlier timepoints than previously reported. Pumps were stimulated with 10mM [5HT](#) in M9, recorded as EPGs in a microfluidic device, and analyzed using NemaAnalysis software (NemaMetrix). Pump frequency in [trehalose](#)-treated animals was significantly higher in 11-day adults than in controls of the same age that were reared in parallel and tested on the same day ($p < 0.01$; 1-tailed Mann-Whitney U-test; $n = 5-8$ worms at each age in each condition). This finding confirms, by an independent method, previously reported data ([Honda et al., 2010](#)).

Reagents

Molecule: [trehalose](#)

Strain: [N2](#)

References

Honda Y, Tonaka M, Honda S. 2010. Trehalose extends longevity in the nematode *Caenorhabditis elegans*. *Aging Cell* Aug;9(4):558-69. DOI: 10.1111/j.1474-9726.2010.00582.x. | PMID: 20477758.

Funding: National Institute of Aging SBIR 1R43AG047020 to NemaMetrix Inc.

Reviewed By: [Cheryl Van Buskirk](#)

History: Received October 10, 2016 Accepted October 24, 2016 Published October 28, 2016

10/28/2016 - Open Access

Copyright: © 2016 by the authors. This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International (CC BY 4.0) License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Citation: Robinson, KJ; McCormick, K (2016). Trehalose extends healthspan in *C. elegans*. microPublication Biology. <https://doi.org/10.17912/W2RP4B>