

Peer Review of “Roles of Progranulin and FRamides in Neural Versus Nonneural Tissues on Dietary Restriction–Related Longevity and Proteostasis in *C. elegans* (Preprint)”

Anonymous

Related Article:

Preprint (BioRxiv) <https://www.biorxiv.org/content/10.1101/2024.02.06.579250v1>

(*JMIRx Bio* 2024;2:e60571) doi: [10.2196/60571](https://doi.org/10.2196/60571)

KEYWORDS

C. elegans; dietary restriction; lifespan; heat shock; proteostasis; neurodegeneration; motility

This is a peer-review report submitted for the preprint “Roles of Progranulin and FRamides in Neural Versus Nonneural Tissues on Dietary Restriction–Related Longevity and Proteostasis in C. elegans.”

Round 1 Review

General Comments

Mir et al [1] is a study designed to understand the role of progranulin and FRamides in neural and nonneural tissues through a dietary restriction approach.

The idea of using multiple mutants to understand the effect of *flp-5*, *flp-14*, *flp-15*, and *pgrn-1* is interesting. While I like the overall idea and the experimental setup, I have a few questions regarding the study.

Specific Comments

1. I would have liked to see another control where wild-type worms were taken and heat treated at 35 °C alongside an

unheated control group. This way I could have seen a more direct and indirect comparison between the groups.

2. I would have liked to understand the reason behind carrying out motility assays at 25 °C when the worms were maintained at 20 °C. Is it because it is ideal?

3. It could be that I might have read it wrong, but to me, the labels in [Figures 1, 2, and S2](#) seem to be off. They don't match the alphabetical order, or I might be missing something here.

4. For the motility assay, where they compared the GRU102 strain against GRU102 crossed with TU3335, I see that all the results were compared to one universal control. I would have liked to see mutant controls alongside the GRU102 and GRU102 crossed with TU3335. Again, by doing this, I would have had a direct comparison of the control, mutant controls, and mutants under conditions. Here, I cannot see how the mutants were performing on day 1 as the authors show the mutant data started from day 4.

Conflicts of Interest

None declared.

Editorial Notice

The authors of the preprint under review declined the opportunity to revise the preprint in response to the feedback in the peer reviews and publish it in the journal JMIRx Bio. The editors thank the peer reviewers for providing their feedback on this preprint.

Reference

1. Mir DA, Cox M, Horrocks J, Ma Z, Rogers A. Roles of progranulin and FRamides in neural versus non-neural tissues on dietary restriction-related longevity and proteostasis in *C. elegans*. bioRxiv. Preprint posted online on February 8, 2024. 2024. [[FREE Full text](#)]
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