Dear Kris,

Thank you very much for your positive response on this manuscript. We read the reviewer comments carefully and have amended the text to reflect the suggested corrections. We have added a section briefly comparing our results with *Drosophila* behavioral changes induced by seminal fluid and amended our discussion of experiments that could have been included. We have also tried to make changes to terminology to make the text clearer by changing the term ‘female state’ to ‘female-like state’ throughout the text, with the except of the title. We have removed the term ‘phenocopy’ from the abstract, and we have expanded our explanations about how generalized epistasis can be applied to transcriptome-wide measurements for two genetic or environmental perturbations such as aging.

We hope this manuscript is now acceptable.

Thank you for handling it!

Best Wishes,

Paul