Reviewer’s report

Title: Using genetic variation in Aedes aegypti to identify candidate anti-dengue virus genes

Version: 0 Date: 29 Jan 2019

Reviewer: Sassan Asgari

Reviewer's report:

Terradas and McGraw investigated variations in expression of a number of Aedes aegypti genes, that have previously been shown to be differentially expressed upon dengue virus infection, in wildtype mosquito families that show extreme differences in dengue virus load (low and high). The purpose of the study was to determine if differences in gene expression can explain differences in virus load. The selected genes were from three functional categories of immunity, adhesion, and intracellular transport and metabolism. Results showed significant differential expression of a number of genes from each category between the low and high load dengue virus mosquitoes. The outcomes provide a useful list of genes that play roles in refractoriness of Ae. aegypti mosquitoes.

Minor comments:

Line 195: Family should be family

Line 199 and other places in the manuscript: upregulation or up-regulation rather than up regulation.

Line 218: the same with down regulation.

Line 297: expand EIP as it has been used for the first time here.

Line 401: I believe "who" is used for people. Should use "that" instead.

Lines 402-406 (optional): I am not sure of the relevance of this argument because both family groups have received injection and they are compared with each other, therefore, changes due to trauma would not be seen even looking at earlier times, if both groups have been injected.

Line 532: delete one of the "described".

Line 549: …role in DENV control;
Figures: the colours pink and green mentioned in the figure legends are shown as green and blue in all the figures in my pdf version. Please check matching of figure colours with the legends.

Fig. 2a: the numbering of samples on the X-axis doesn't match of those in b, c and d. Is that a typo or different samples were tested for this particular gene?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.
I am able to assess the statistics

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Please indicate the quality of language in the manuscript:
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