Reviewer's report

Title: Natural killer cell function is depressed in Gulf War Illness.

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Reviewer: Shamgar Ben-Eliyahu

Reviewer's report:

This is an interesting and important study, comparing several immune indices between GWI veteran and matched controls, before and after physical exercise. The design and the methodologies are adequate. My understanding of the genetic profiling techniques and statistical assessment are insufficient to provide a critical assessment of these sections.

The authors report several significant and several marginally significant differences between the two groups, as well as interesting and important interactions between the groups and the effects of physical exercise. GWI veteran indeed exhibit different responses to physical exercise than controls. The authors seem to generalize their findings of the effects of physical exercise to other types of stressor, which is not indicated by the study. Other than that, I have no significant concerns regarding the study. I do wonder to what degree it is justified to name this syndrome GWI. Do we expect similar pattern of differences with respect to rape victims, various types of PTSD, or CFS (as suggested by the authors)? The authors may want to discuss this issue.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests