Reviewer's report

Title: Combined immunization using DNA-Sm14 and DNA-Hsp65 increases CD8+ memory T cells, reduces chronic pathology and decreases egg viability during Schistosoma mansoni infection

Version: 2 Date: 1 April 2014

Reviewer: Alexandre P de Paula Rogerio

Reviewer's report:

Major Compulsory Revisions:

In this study carried out by Espindola et al the combination of DNA-Sm14/DNA-Hsp65 increased the numbers of CD8+ memory T cells and decreased the Schistosoma mansoni eggs viability in experimental schistosomiasis. In addition, DNA-Sm14/DNA-Hsp65 demonstrated antifibrotic property. Although this paper is valuable, there are some aspects should be improved and answered.

GENERAL COMMENTS:
I suggest the inclusion of a group only with DNA-Hsp65 to evaluate all parameters, but mainly the antifibrotic effects, in comparison with DNA-Sm14/DNA-Hsp65 group.

The simultaneous vaccination with DNA-Sm14/DNA-Hsp65 is effective to control the schistomiasis after infection? The therapeutic treatment could be carried out.

How is the inflammatory response in the liver? Histological analysis of hepatic tissues could be provided.

How are Th1/Th2 cytokines profiles of vaccinated animals?

Abstract
The information about statistical analyses should be removed.
More details about DNA-Hsp65 should be given.

Material and methods
References in the topic "Immunization Procedures" should be added.

I suggest to exchange "control group" to other such as "non-immunized and infected group" in all text.

Results
The combined vaccination induced the differentiation of CD8+ memory T cells. Is it different from DNAsm14? More clarification about this in the text is needed.

Discussion
In the fifth paragraph is written “However, we observed that DNA-Hsp65 enhanced the number of dead eggs compared to DNA-Sm14 alone.” I believe that should be “However, we observed that DNA-Sm14/DNA-Hsp65 enhanced the number of dead eggs compared to DNA-Sm14 alone.”

References
More current references should be added

**Level of interest:** An exceptional article

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

No competing interests