Reviewer's report

Title: Micro-geographical variation in exposure to Schistosoma mansoni and malaria, and exacerbation of splenomegaly in Kenyan school-aged children

Version: 1 Date: 12 December 2003

Reviewer: Janette Bradley

Reviewer's report:

General
This study describes the interaction between infections with schistosomes and malaria on splenomegaly in school aged children in Kenya. Both of these infections are known to cause such pathology. This is the first study to my knowledge that has attempted to define the relative contributions of each infection and merits publication, subject to revision.

Discretionary Revisions (which the author can choose to ignore)
None

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

P1 I don't believe David Dunne has moved to DBL

Abstract results, line 4 significantly what?

Methods paragraph 3, why were IgG3 responses measured a year after praziquantel treatment?

Discussion paragraph 6, ref 26 refers to a study in Gabon not the Gambia. Should it be VSA response not VSG?

References: A lot of the species names are not in italics

Figure legends and figures: Fig 2 a and b is this not malaria? Legend refers to schistosomiasis. More details should be provided in the legends. a) The key to shading should be in the text of the legend. 2b What do the boxes represent? are they median lines? standard errors? What are A,B C and D? Surely it is not the IgG3 titre if the assay was as described in ref 14 it was a mean OD of two samples. The axes should be re-labelled to refer to exactly what is being measured. OD at X nm?

Fig 3 a and b is this not schistosomiasis….? Further information is required in the legend as for fig 2.

Fig 4 Again I don’t think this is titre but OD value. Axis should be relabelled.

Fig 5. Explain in legend what the boxes represent as requested in Fig 2.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

My major concern in this study is the validity of measurement of IgG3 to schizont antigen as an indication of the level of exposure to malaria. The use of this tool as an indicator of exposure has not
been well justified. From this study it would certainly appear that high IgG3 responses were associated with a geographical area where transmission of malaria is likely to be the highest, but actual transmission in this area had not been measured as far as I am aware. There is a large literature on IgG3 levels to a variety of antigens in malaria infections. Is there evidence from this to justify this test as a measure of exposure? I feel that this test requires better justification before acceptance.

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No

**Declaration of competing interests:**

None