Reviewer's report

Title: Human T-lymphotropic virus type 1 (HTLV-1) prevalence and quantitative detection of DNA proviral load in a group of individuals originating from endemic areas and living in Italy.

Version: 1 Date: 6 November 2005

Reviewer: Oliviero E Varnier

Reviewer's report:

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

1. page 1: Modify the title to accurately convey the results: "..quantitative detection of DNA proviral load" was not tested "in a group of individuals..."
2. page 2, line 2: The aim of this study was "..to define the prevalence of HTLV-1 infection in patients...". Make the abstract to be concordant with the title.
3. page 2, line 16: make the conclusions to be concordant with the aim of the study: “Conclusions: The assay is rapid and inexpensive...”
4. page 7, line 23: the paragraph “SYBR Green-based real time PCR analysis of HTLV-I indeterminate and reactive Western blot patients,” contains one page and table 2 dedicated to the set up of the assay, which was used to test PBMC samples collected from 11 subjects with indeterminate or positive western blot. This abundant information is acceptable if the title will be modified to include the development of a molecular assay to confirm HTLV seroreactivity.
5. Page 10, lines 6: "..HTLV-1 infections ...is confined to immigrants from endemic areas." and line 12 " ... no positive cases were found in the Italy-born patient group. These data are in concordance with several studies...". Several studies documented HTLV-1 infection in Italian subjects:
   • Mozzi et al. HIV and HTLV infections in 1,305 thalassemics chronically transfused in Italy. AIDS 6:505-508, 1992.

Modify the test.

6. page 11, line 6: “Our study also shows a novel SYBR Green based real time PCR...” Authors cited at page 12, line 2 the article of Lee et al. on “Quantitation of HTLV-I and II proviral load using real time quantitative PCR with SYBR Green chemistry”. Authors should remove “novel” and maintain the numerous results on the HTLV-1 Real Time PCR according to the commitment of this manuscript, as requested above.
7. page 12, line 6: the statement that “Our method may also be useful for screening blood donors.” Do Authors intend that the SYBR Green real time PCR can be used to confirm HTLV seroreactive blood samples? Obviously HTLV screening of blood cannot be done using PCR-based assays.
8. page 12, line 13: “...suggests a possible application and screening...” as above.
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Discretionary Revisions (which the author can choose to ignore)

1. page 1, line 5: “Methods: all the sera were firstly analysed by ELISA and Western Blotting". While
in the Results section at page 7, line 7: “..we assayed the reactive serum of these 11 individuals…”
2. page 3, line 15: revise reference “..infection [Re, 12,13,14].”
3. page 9: the oncologic clinical investigation of the 2 HTLV-1 infected subjects might be a separate paragraph.

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests’ below. If your reply is yes to any, please give details below.