Reviewer’s report

**Title:** The Lipid Profile of HIV-infected patients receiving Antiretroviral Therapy in Rural Cameroon

**Version:** 4  **Date:** 14 January 2014

**Reviewer:** Tazoacha Assongani

Reviewer’s report:

These are my comments on the article you sent for review:

**Introduction:**

1) (Major compulsory) Highlight reasons why rural and urban changes may be different by including differences in diet, etc.

2) (Major compulsory) The several studies in Cameroon in the literature on the same subject are omitted. The following articles (plus any others that may be got through literature search) should be consulted and included:
   a) Danwe C et al. (2005), J. Med. Sci. 5: 78-82

**Methodology:**

1) (Major compulsory) The general set-up of the experiments does not allow the conclusions drawn from the results on “those reported using alcohol”, smokers, and existing metabolic conditions. Proper case-control studies are needed for such conclusions to be drawn. Amount of alcohol consumed by subjects, and number of cigarettes smoked a day, length of consumption, etc are not indicated. Therefore discussion of results related to these should be nuanced.

2) (Major compulsory) Methodology does not indicate that subjects were interviewed/questioned

3) (Major compulsory) There were “only” 6 smokers; as compared to 9% (10) that “reported being on diet”, 4.5% (5) that interrupted treatment, and “<10%” (<11) who had metabolic/cardiovascular problems. This is to say that if the study bases analyses on 6 smokers, these other parameters are important enough to have affected the results. The normal approach is to exclude subjects with conditions that might affect changes in lipid metabolism like infections with Hepatitis B/C, Diabetes, abnormal thyroid hormones, use of hormonal contraceptives, obesity, hypertension, family history of dyslipidemia, smoker, consumption of alcohol, etc. Therefore discussion of outcomes should be nuanced.

4) (Major compulsory) The “enzymatic-linked colorimetric methods” have to be
briefly described. Are they ELISA based or the usual colorimetric enzyme assays?

5) (Major compulsory) Nkongsamba, the site of the study is not a “rural” area. It is one of the big cities with Yaounde, Douala, Limbe, Kumba, Bafoussam, and others that are managed by Government Delegates. The authors should justify why they considered it a “rural” area, beyond just stating that most of them engage in subsistence farming.

Results:
1) (Discretionary) Report “3000 cycles per minute” as g/min
2) (Major compulsory) It is not clear whether the “yes” and “no” in Table 1 for “heart condition” and “metabolic condition” are based on interview responses or clinical examinations.

Discussion:
1) (Major compulsory) Inclusion of the articles cited above, that the authors seem not to know about would greatly modify the discussion.
2) (Major compulsory) Comparison of results to those of subjects from South Ethiopia and Tanzania should indicate whether they were from rural or urban areas of these countries.
3) Discussion should be nuanced, considering the general comments above.

If the authors justify their choice of Nkongsamba as a “rural” area, their results, in spite of some weaknesses, will be a contribution that can throw some light on differences between rural and urban areas in Cameroon for lipid metabolism in HIV patients on ARVs. So far, all the work available on the subject has been done on subjects in Yaounde (see articles cited above).

Overall, the article is written in clear and easy-to-understand language. They adhere to relevant standards for reporting and data disposition.

I will recommend acceptance of article for publication following appropriate addressing of issues raised above.