Reviewer's report

Title: Tuberculosis in Sudan: a study of Mycobacterium tuberculosis strain genotype and susceptibility to anti-tuberculosis drugs.

Version: 1 Date: 8 April 2011

Reviewer: Timothy McHugh

Reviewer's report:

This is a useful study establishing baseline data that will be critical in understanding tuberculosis in the Sudan and informing control programmes as the country begins to stabilise. However, this is preliminary data and here is a tendency to overstate the significance of the analyses (egs with respect to ethnicity and demographic data). It does provide an indication of the extent of DR-TB, key spoligotype and stability of the bacterial population.

Specific comments:

ABSTRACT

The abstract should be redrafted to increase the precision of the language used.

Background - 'Sudan is a large country....' There is no doubt that these statements are true but it would be helpful to offer some solid data on the degree of poverty and TB burden here as well as in the intro.

Methods - insert 'media' after Lowenstein Jensen
- 'examined and risk ratios computed' please clarify this point

Results - 'drug resistance was associated...' what is the size of this association?

Conclusions - I would suggest that these conclusions are speculation on the data presented. The conclusion is that DR IS a potential problem and that the MTB population is evolutionary stable.

BACKGROUND

Para 1 Line 1: ' The Republic of Sudan....' where is this onformation from and how recent is it?
Para 1 Line 7: 'live in an urbanised...' is this all Khartoum? How is the populaution distributed across other towns?
Para 1 line 16: 'The Sudan.....' please provide a source for this information
Para 2 line 9: 'using more expensive drugs' are they necessarily more expensive? What is the source for this assertion?
Para 2 Line 10: 'heighted' should be 'heightened'
Para 2 Line 16: 'Examination of isolates....' rearrange to read 'Examination of
isolates collected..... ago by molecular methods'
Para 2 Line 20 ff: 'Spoligotyping is a PCR.....' these sentences are not necessary.

METHODS
Para 1 line 3: it is necessary to provide an indication of the relationship between the recruitment centres. Are they linked by geography or administration?

RESULTS
Line 1-6: should be methods
Line 12: why is there a bias to males?
Line 13: the authors list all occupations not the most frequent
Line 20: 'relapsed' how were these defined as relapsed rather than reinfection?
Drug susceptibility
Para 2: the authors provide details of the tribal groups of the patients but they also need to demonstrate if they are evenly spread over all recruitment centres or not.

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, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests