Reviewer’s report

Title: Risk Factors and Clinical Phenotypes of Beijing Genotype strains in Tuberculosis Patients in China

Version: 2 Date: 11 March 2012

Reviewer: Igor Mokrousov

Reviewer’s report:

Major Compulsory Revisions.

Background section (page 3). The information dates back to 1990 – 2000. It is important to provide at least some estimation on the current or recent situation with TB in China.

When providing estimation, it is correct to show confidence limits.

Discussion. P. 10 (first lines):

Please note that references to the Beijing genotype prevalence in China are needed:

In Beijing are: the first paper of van Soolingen et al. J Clin Microbiol 1995 (NOT in your list) and a more recent paper Mokrousov et al. 2006, Antimicrob Agents Chemother. (reference 7 in your list).

Besides the prevalence of Beijing genotype is variable across China (Dong et al. J Clin Microbiol 2010; 48(11):4102-6.) – not in your list.

General comment. The article should be seen by a statistician: the authors how different comparisons for single variables such as age, occupation, retreatment but I wonder if it would make sense to test combinations of these variables.

Minor Essential Revisions

Methods (P. 5). “… in addition, all provinces should have at least one cluster, excluding Taiwan, Hong Kong and Makao.”

This sentences seems politically ambiguous: in any case Taiwan is not covered by the National TB Control program of the People’s Republic of China.

Methods (P. 6). A long description of spoligotyping should deleted, only reference to Kamerbeek et al., 1997 is enough.

This text should be deleted: “Primer pairs, DRa ......................

..........................was detected with a chemiluminescence system”

General comment: please carefully re-check all references. I noticed that reference [8] in page 10, line 6 from below is NOT relevant.
General concern. Table 1 shows very small sample size of the ethnic minorities.

Table 1. Last rows about income are in RMB. Since this is international journal I would suggest to add rows in USD or EUR.

Discretionary Revisions

Terminology. I wonder if it is more correct to use urban and rural population instead of farmers and non-farmers.

P. 11. Lines 1-2. The lower prevalence of Beijing genotype among Uygur and Zhuang ethnicities may be an apparent reason their being ‘lower risk factor’ to be infected with Beijing strain.

I am not sure if it is correct to speak about ethnicity be a ‘risk factor’. Beijing genotype is historically endemic and highly prevalent in North China hence its higher rate among Han.

P. 11, lines 12-13. If I am not mistaken by my memories of my travel to Xian, Hui ethnicity is related to the contacts with Moslem world, nonetheless they are ethnically Han Chinese so this may explain that they also have a high rate of Beijing genotype. I mean that (unlike all other large and small minorities in China) the Hui ethnicity is defined rather based on cultural/religious reasons but not genetic one.

You can check in http://en.wikipedia.org/wiki/Hui_people Below is an extract citation:

“The Hui people (Chinese: ##; pinyin: Huízú, Xiao’erjing: #### ### ) are a predominantly Muslim ethnic group in China. Hui people are found throughout the country, though they are concentrated mainly in the provinces of Ningxia, Qinghai, and Gansu. According to a 2000 census, China is home to approximately 9.8 million Hui people, the majority of whom are Chinese-speaking practitioners of Islam, though some practice other religions. Although many Hui people are ethnically similar to Han Chinese, the group has retained some Persian and Central Asian features, their and ethnicity and culture having been shaped profoundly by their position along the Silk Road trading route.

In the People's Republic of China, the Hui people are one of 56 officially recognized ethnic groups. Under this definition, the Hui people are defined to include all historically Muslim communities in People's Republic of China that are not included in China's other ethnic groups.[2] Since China's Muslims speaking various Turkic, Mongolic, or Iranian languages are all included into those other groups (e.g., Uyghurs, Dongxiang, or Tajiks) the "officially recognized" Hui ethnic group consists predominantly of Chinese speakers.[3] In fact, the "Hui nationality" is unique among China's officially recognized ethnic minorities in that it does not have any particular non-Chinese language associated with it.[4]”

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

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

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