Reviewer's report

Title: Associations of Prostate Cancer Risk with the RNASEL R462Q Polymorphism and Viral Infection.

Version: 2 Date: 8 December 2009

Reviewer: Nicole Fischer

Reviewer's report:

The manuscript of Martinez-Fierro et al. describes a study conducted in Mexican men to analyze the occurrence of certain viral infections (previously described in other studies) in prostate tissue (cancerous or benign) in concordance with the RNaseL mutation R462Q.

The study does not differ from already published studies addressing the occurrence of viral infection in prostatic malignancies. The study is rather small and encompasses only a certain repertoire of viruses (polyomaviruses (BK, JC, and SV40); CMV; XMRV and Papillomaviruses). It is not an unbiased approach to examine the question of increased viral susceptibility in RNaseL deficient prostate cancer patients.

However, it is the first study examining the association of RNaseL mutation R462Q and viral infections (only some) that goes beyond XMRV.

- Major Compulsory Revisions:
  1. The title of the manuscript is misleading and should be changed: The current study does not provide information about the Prostate cancer risk and RNaseL SNP R462Q.
  2. The assortment of viruses included is not clear to me; why was there only CMV as a human herpesvirus analyzed, HHV8, HSV and most of all EBV should have been included as well especially with regard to Table 5 (which was mislabelled as Table 6) where the authors compare the results of their study to studies published earlier.
  3. The authors should provide more detailed information about the cylinder biopsies used for the study. Those used for DNA extraction were not identical cylinder biopsies that underwent pathological examination, how can the authors be sure that the biopsy that was included in DNA extraction contained tumour material?
  4. The control group should be defined more precisely: were multiple biopsies taken and considered as tumor free? Were those patients monitored over time (watch and wait)?
  5. Detection limits (range of PCR) for polyomaviruses is not defined.
  6. Discussion should include the possibility that other mutations (than R462Q) within the RNaseL gene (which have been described to be associated with
increased PC risk) could be present in the samples.

7. Genotype frequency difference of the current study QQ: 0\% (versus expected values of 10-15\% in other studies) should be discussed.

8. The paper by Hohn et al., 2009 Retrovirology should be included by the authors

9. - Minor Essential Revisions:

1. Abstract: last sentence should be rephrased

2. Figure 2 does not provide any useful information. The information is already given within the text of the manuscript.

3. Table6 should be Table 5 (also in the manuscript text)

4. Table 5, abbreviations of viruses: E.B.? Epstein Bar? Epstein Barr Virus or EBV

5. Description of the positive control plasmids pHCMV and pXMRVm is missing in Table 2, supplementary data.

6. **Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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