Reviewer's report

**Title:** Allelic variants of the transient receptor potential channel TRPV6 and risk of prostate cancer

**Version:** 2  **Date:** 1 September 2009

**Reviewer:** Greg Barritt

**Reviewer's report:**

This is a very clearly written paper describing a careful study which adds to knowledge of TRPV6 genes and TRPV6 expression in normal cells and in prostate cancer cells. While the central results are essentially negative they help in understanding the role of mutations and altered expression of transient receptor potential (TRP) non-selective cation channels in the initiation and progression of prostate cancer. The authors can be commended for a clear description of their study.

**Minor Essential Revisions**

1. Results, allele frequencies of prostate cancer patients, paragraph 2. Part of this paragraph repeats material presented earlier in the Results. This could be condensed. Overall the Results are reasonably long and could be a little more concise.

2. Supplementary Table 1. In this table it would be desirable to define T(NM).

3. Sections of the Discussion substantially repeat the results. This applies to paragraphs 2, 3, 4 and 5 where paragraphs 3, 4 and 5 could probably be omitted.

4. As indicated in the Results under “Allele frequencies of prostate cancer patients”, 17 tissue samples belong to the early onset prostate cancer group. This is a relatively small number. It is concluded that allele frequencies between the young and aged groups are similar as indicated in Fig. 2, Results. Some comment in the Discussion about the low number might be included. Overall the Discussion does not add a great deal. The first paragraph is a good summary of the key results, the next paragraphs basically repeats results as suggested above and the last paragraph discusses other polymorphisms. Possibly some more critical evaluation of limitations of the results and conclusions could be included in one or two lines.

5. Expression of TRPV6 transcripts in prostate cancer patients, last paragraph of the Results. It is indicated that these experiments were performed by RT-PCR and the primer pairs employed are indicated. There seems to be no specific reference to the RT-PCR procedure used in the Methods. Further, it is not completely clear whether this is an all or none observation and there seems to be no mention of expression of transcripts of TRPV6 in the control tissue in the last paragraph of the Results. Did control tissue from prostate in patients or
appropriate controls show any expression of TRPV6 transcripts? Was this an all or none conventional RT-PCR assay? (Presumably not quantitative PCR otherwise this would have been indicated.)

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

**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.