Reviewer's report

Title: Expression and Significance of HMGB1, TLR4 and NF-kappaB p65 in Human Epidermal Tumors

Version: 1 Date: 14 December 2012

Reviewer: Erina Vlashi

Reviewer's report:

In this manuscript Weng et al. attempt to elucidate the role inflammation plays in the malignant progression of epidermal tumors by using tumor specimens from the different stages of epidermal tumor evolution. They specifically focus on inflammatory mediators, HMGB1, TLR4, and NK-kB and through a series of tumor sections scoring they draw conclusions at the potential role that these proteins play in epidermal tumor pathogenesis.

The manuscript is written very clearly, and is very well organized. The results are clear, and the conclusions drawn in the discussion, even though they are all based on scoring of tumor slides from pathology, are reasonable.

There are a few minor modifications, listed below, from which the ease of reading and understanding of the manuscript would benefit.

Minor revisions:

The authors state that they counted 10 fields per slide. Were 10 fields also counted for endothelial and inflammatory cells as well, in order to get a total score for these tumor areas?

It is not very clear from the slides chosen in fig. 1, why these slides have the scoring that the authors describe in the text. For example, nuclear staining of Fig. 1g (SCC) appears stronger than in Fig. 1i, but the authors state in the text the opposite, as well as in Fig. 1k. This may just be a result of not choosing a good representative slide for this particular SCC. It would help if there was a panel of slides representing scoring 1-6, in order for the reader to have a better idea of what intensity of the staining corresponds to what score.

Fig. 1:

Bar graphs: please include lines connecting the bars that differ significantly from each other, with an asterisks above showing the level of significance. I.e. one asterisks (*) for p<0.05, two asterisks (**) for p<0.01 etc.

Arrows: there is no brown-red arrow, I think the authors are referring to the purple arrow for epithelial cell cytoplasmic staining.

Fig. 2:

The authors state in the text that TLR4 expression is seen in basal cell and acanthocyte membranes. Please use different color arrows to distinguish
between the two.

Fig. 2c: seems out of focus. Please replace.

Bar graphs: make the same changes regarding significance levels as suggested for Fig. 1.

Fig. 3:
Arrows: there is no brown-red arrow, I think the authors are referring to the purple arrow for epithelial cell cytoplasmic staining.

Bar graphs: make the same changes regarding significance levels as suggested for Fig. 1.

Fig. 4

Fig. 4e (normal skin): does not seem to be the same magnification as the others (400x)

Bar graphs: make the same changes regarding significance levels as suggested for Fig. 1.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.