Reviewer's report

**Title:** Tumour-Specific HMG-CoAR is an Independent Predictor of Recurrence Free Survival in Epithelial Ovarian Cancer

**Version:** 1  **Date:** 29 October 2009

**Reviewer:** Véronique MACHELON

**Reviewer's report:**

**Major revisions**

Title and abstract (methods and results) accurately convey what the authors found. In contrast the abstract background and conclusion should be rewritten omitting statin reference.

The question posed by the authors is: which is the pronostic value of HMG-CoAR expression in ovarian tumors? A variety of previous works including those done in breast cancers have showed that statins defined as HMG-CoAR inhibitors and at the opposite isoprenoid defined as non-sterol side products of the mevalonate pathway exert direct anti-cancer activity. It is commonly believed that HMG-CoAR inhibitors diminish the production of isoprenoids as by-products of mevalonate pathway. My question is: which is the link between statins and isoprenoid action? Both have been reported to have anti-tumor action but there is evidence for cholesterol-independent effects of statins in humans including breast cancer (reviewed by J. K. Liao JCI, 2002). Background of this study should be clarified, and probably more fitted on HMG-CoAR.

A very recent paper published in J Cell Mol Med in 2009 by Kato et al that authors should include in their references, may help the authors provide link between statins and HMG-CoAR.

Unfortunately, data on normal ovarian surface epithelium or benign tumors are lacking to assess that HMG-CoAR expression is linked to tumorigenesis process. In addition, the authors have no data to assess the biological significance of such a correlation.

**Minor revisions**

Page 4, line 4: the authors should note the reference of their study and not only the reference of the cohort they worked with. In the next sentence, the authors cited the work of Karin Jirstrom group in Sweden as a study of their group. Is it a collaboration or does D.J. Brennan belong to K. Jirstrom group? It is not clear in the text.

Page 5: It is not clear whether patients were treated with chemotherapy before surgical treatment and tumor specimen recovering or not?

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

Statistical review: Yes, and I have assessed the statistics in my report.

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