Reviewer's report

Title: The 3-hydroxy-3-methylglutaryl-coenzyme A reductase inhibitors, simvastatin, lovastatin and mevastatin inhibit proliferation and invasion of melanoma cells.

Version: 1 Date: 21 August 2007

Reviewer: Jozef Dulak

Reviewer's report:

General

In their study Glynn et al. addressed the well known and widely investigated effect of statins on the proliferation of cells. As it is claimed that statins may be used as anti-tumor drugs they have investigated the influence of statins on the proliferation and migration of lung carcinoma, breast carcinomas and melanoma cells. They observed that statins at pharmacologically relevant concentrations can inhibit the proliferation and migration of melanoma cells, while the similar effects on other cancer cell lines investigated was observed at higher concentrations.

This study adds some information to the known effect of statins on cancer cells. Importantly, the authors are aware and correctly addressed the necessity of using the pharmacologically relevant concentrations of statins. The study confirms other data obtained also on melanoma cells, which the authors cite in their study.

The authors correctly noted that the statins (alone) are unlikely to be beneficial for chemoprevention of melanoma. However, they may potentially enhance the effectiveness of some chemotherapeutics.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

It is not clear if the statins had to be activated before use or did the authors purchased the active form?

The effects observed should be reversed by treatment with mevalonic acid. Such experiments are missing.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Fig. 4 is not cited in the text.
Discretionary Revisions (which the author can choose to ignore)

It would be useful to investigate the effect of low doses of statins in combination with some chemotherapeutics used in treatment of melanoma or other type of cancer investigated in this study.

What next?: Accept after minor essential revisions

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.

Declaration of competing interests:

'I declare that I have no competing interests' below