Reviewer's report

Title: Clone-specific Expression, Transcriptional Regulation, and Action of Interleukin-6 in Human Colon Carcinoma Cells

Version: 1 Date: 23 October 2007

Reviewer: maria E Street

Reviewer's report:

General
This is an interesting study, overall well designed, which provides potentially useful information to address future research in terms of development of new drugs which could be used to block cancer metastasis. Other studies besides those cited in the introduction have suggest an indirect effect of IL-6 on proliferation and differentiation of colon cancer cell lines in vitro (Street M.E. et al. Interleukin-1b (IL-1b) and IL-6 modulate insulin-like growth factor binding protein (IGFBP) secretion in colon cancer epithelial (caco-2) cells. J Endocrinol 2003; 179 (3): 405-415). The comparison of three cell lines is useful and correct, and the cells were previously well characterised. The study shows that in undifferentiated tumour cells, massive release of IL-6 could accelerate progression towards malignancy, and that classical regulators of IL-6 release as PGE2, 1,25-dihydroxyvitamin D3 and 17 beta –estradiol have little effect.

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

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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)

Minor remarks:

Methods, 1st para and Table 1: it is unclear how alkaline phosphatase activity was measured. Reference 5 refers to another paper by Stierum R et al (2003; Biochem Biophys Acta-pages 73-91) which does not really clarify this point and is not cited. The Authors must explain clearly how they performed this measurement and how they normalised the data, in particular, considering that they have chosen to use just one marker of cell differentiation and no other marker to confirm their findings.

Results-last para third line: make clear in brackets that IL-6 concentrations ranged from 0 to 100 ng/ml).

Figure Legends: Fig 5 “meaning” and not significance and make clear that these are anyway hypotheses. Be careful to stick to the findings of the study in
discussion as well

Figure 2 A and C: make clear on the y axis that one is looking at proliferation and what one is looking at in C. Figures must be self-explanatory.

Figure 3: X-axis : add IL-6 concentration (100 ng/ml). This is important and should be commented on as one is looking at supraphysiological doses which might be even higher than those observed within tumours.

Figure 4: it must be made clear how alkaline phosphatase activity was measured and normalised.

Viz. throughout the text is i.e.
“collated” stands for “reported”
Rather than “augmented” use “increased”
Discussion-1st line: “regulation” instead of “regulability”.

Discretionary Revisions (which the author can choose to ignore)

**What next?:** Accept after minor essential revisions

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

**Quality of written English:** Needs some language corrections before being published

**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