Reviewer's report

Title: Expression pattern of matrix metalloproteinases in human gynaecological cancer cell lines

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Reviewer: Gregg B. Fields

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The manuscript of Schroepfer et al. examines the expression of all human matrix metalloproteinases (MMPs) in human gynecological cancer cell lines. The gynecological cancers studies could be broken down as endometrial, cervical, choriocarcinoma, and ovarian and teratocarcinoma. The most prominent MMPs produced were MMP-2, MMP-11, MMP-15, MMP-23, and MMP-24. Significant quantities of MMP-28 were found in endometrial cancer cell lines. It was suggested that Caski and PA-1 cell lines would be the best choice for future experiments on the role of MMPs in gynecological cancer progression, as Caski cells produced a wide variety of MMPs while PA-1 cells produced a fairly narrow range of MMPs.

This is a very interesting, ambitious, and thorough study, examining all human MMPs on the mRNA level and implicated MMPs on the protein level. Overall, the results indicate no real pattern for MMP expression and either cancer type or metastatic potential. If anything, this study points out problems with expression profiling for correlation of MMPs with cancer type or stage. This is not necessary bad, but simply warns against overinterpretation of expression data. The authors should probably discuss this point. Also, is there any correlation between specific MMPs and the lack of protein production? In other words, are some MMP mRNAs less stable (more susceptible to degradation) than others? Finally, why are there so many forms of MMP-28 protein (Table 3 and Figure 2)?

Level of interest: An article of outstanding merit and interest 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