Reviewer's report

Title: Human MMP28 expression is unresponsive to inflammatory stimuli and does not correlate to the grade of intervertebral disc degeneration

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Reviewer number: 1

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The authors present novel insight into the response of MMP28 expression in the case of intervertebral disc (IVD) trauma and IVD degeneration. MMP28 has only been recently been confirmed to be expressed in the disc tissue. The authors tested the hypothesis whether the regulation of this recently identified metalloproteinase 28 is correlated to the general bacteria-related lipopolysaccharide (LPS) or the increased level of pro-inflammatory cytokines such as interleukin (IL)-1#, tumor necrosis factor (TNF)-# or the histondeacetylase inhibitor trichostatin.

I think, this is an excellent contribution to the journal of negative results in Biomedical Science. The gene expression data of the disc cells are indeed almost "flatlined", thus, non-responsive to any of the tested agents. However, not all of the experiments were negative. The results in figure 1 show a significant decrease in MMP28 with increasing Thompson Grading between grade 2 and grade 4.

The hypothesis to be tested has been well formalized and the results are reported in a very clear manner.

Specific Comments:

Abstract: negatively linked the grade of degeneration --> correct to negatively linked to the grade

Introduction: page 4 last paragraph: A was investigated, as it was shown to be an up-regulator of MMP28 expression in HeLa cell

Change to ..., as it has been shown to be

The references are fine.

I do not have any further comments for improvement since this is a carefully prepared manuscript.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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