Reviewer's report

Title: Trauma-Induced Apoptosis of Thoracolumbar Intervertebral Discs: An In Vitro Analysis in Humans

Version: 1 Date: 28 March 2006

Reviewer: Judith, Alison Hoyland

Reviewer's report:

General This paper describes a detailed study of apoptosis in traumatic (fractured) thoracolumbar intervertebral discs and proposes a mechanism based on experimental evidence by which apoptosis may occur. Although apoptosis has been observed in intervertebral discs the mechanism by which this may occur has not been studied. Thus the study is novel and the questions are well defined. The paper is well written and the methods used are appropriate. There are however some minor revisions needed.

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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)

Methods - pg 6 - further details of the quantitative PCR are required. Was the the Cyber green method used. Sequences of primers used are required. There is no description regarding the analysis of real timedat. This needs adding in detail as to the exact method of analysis.

Results - When the authors describe the real time data results the differences in gene expression need to be described in more detail. When the authors state P values they only need to be stated as P<0.05.

Figures: Photomicrographs in Figure 1 are poor and the nuclei are not clearly visible. There is no indication as to the magnification used. Scale bars need to be added.

Figures 5, 6, and 7 - the graphs should be on log scales and the Y axis label needs to state that relative levels were normalised to b-actin. Again the authors need to state their method of gene expression analysis.

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Discretionary Revisions (which the author can choose to ignore)

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

Declaration of competing interests:

I declare that I have no competing interests.