Reviewer's report

Title: Extracorporeal shock waves down-regulate the expression of interleukin-10 and tumor necrosis factor-alfa in osteoarthritic chondrocytes

Version: 2 Date: 13 October 2007

Reviewer: Ronald Dorotka

Reviewer's report:

General

The question of the study is new and well defined.
Concerning the application of the ESW there are some questions: Were the vials completely filled with medium? How was it guaranteed to avoid air between the generator and the cells? Were the vials tested to be permeable for the shock waves? Were the control vials also kept outside the incubator for the same time as the treated cells or did they undergo only the same laboratory processing?

The results are interesting and of importance. If the results represent the theoretical rationale for using ESW as therapy of OA, as stated in the conclusions section and the abstract, is questionable. To avoid the immediate uncritical treatment of OA by ESWT further studies, in vitro and in vivo, are needed.

Furthermore, title and abstract accurately convey what has been found.

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

Questions concerning the application as well as the question of the clinical relevance (see above) should be responded.

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

It should be stated if the ESW device is a focused or radial one and how location is provided (fluoroscopy-guided, ...)

Discretionary Revisions (which the author can choose to ignore)

none
What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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.

Declaration of competing interests:

'I declare that I have no competing interests'