Reviewer's report

**Title:** Gene Therapy for Cardiovascular Disease Mediated by Ultrasound and Microbubbles

**Version:** 1  **Date:** 3 April 2013

**Reviewer:** Serena Del Turco

**Reviewer's report:**

The paper presents a review of gene therapy mediated by ultrasound based techniques. The review cover all the relevant topics is a coherent way. The presentation is well organised. Nevertheless there are some major issues to address in order to be suitable for publication on Cardiovascular Ultrasound.

Major compulsory revision

1. Author should better discuss the biophysical effects of US that are crucial in US enhanced gene transfer (cavitation, microstreaming...).
2. There is a lot of confusion in all the text in using due to the misuse of the abbreviations versus the full names. The authors should use the abbreviations/acronyms from the beginning.

Minor essential revision

1. Chapter 2 line 19: “occur” should be “occurs”
2. Chapter 2 lines 27-29: the sentence is not clear. Please write this again
3. Chapter 3 line 9 “in the lesions” should be “at the site of interest”
4. Chapter 3 14-15: “Thereby, UTMD...”. It’s better link the two sentences
5. Chapter 4 line 2 : please correct “microvessle” should be “microvessel”
6. Section 4.1 line14-17: this sentence is not clear. It needs explain better results. What’s WT-1?
7. Section 4.2 line5: The advantages of UTMD have already been mentioned several times. Eliminate this sentence.
8. Section 4.2: line 24: Please define USWF.
9. Section 4.2: “Cell regulatory or transcription factors....”. please explain better this sentence.
10. Section 4.3: “Definity microbubble” should be “commercially available Definity MB”

**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