Reviewer's report

Title: Myocardial Contractility in the echo lab: molecular, cellular and pathophysiological basis.

Version: 1 Date: 4 August 2005

Reviewer: Eustachio Agricola

Reviewer's report:

General
This paper is a review regarding the cellular and molecular basis of myocardial contractility and in particular the “Force-Frequency relationship phenomenon”, and possibility of its non-invasive measurement in the echo lab. The paper is well written and organized, and therefore easy to read also for the echocardiographers. Thus, I have only few suggestions to improve it.

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

1. The frequency-dependent regulation of contractility is mediated by HFIUR Ca2+ channels. Thus the role of these channels should be more extensively discussed.

2. Even though the paper is focused on pathophysiological basis of myocardial contractility, a brief paragraph about the clinical application of FFR could be useful and inserted before the conclusions.

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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)

1. The paragraph “Fetal gene program: back from the future” should be inserted before the chapter CONTRACTILITY (page 6).

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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 of importance in its field

Quality of written English: Acceptable

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