Reviewer’s report

Title: Effects of inosine on reperfusion injury after cardiopulmonary bypass

Version: 1 Date: 21 August 2010

Reviewer: C Szabo

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This is a study that uses a standard large animal model of cardiopulmonary bypass injury. Authors have already investigated several compounds in this model (PARP inhibitors, PDE inhibitors etc), and so the current study, among other things, provides comparative value.

The only part of the manuscript that needs improvement is the Discussion section. How, then, is inosine exerting its beneficial effects? While PARP inhibition may be one of the possibilities, others may also be plausible. For instance, as discussed in Hasko et al, TIPS 25: 152, and references therein, anti-inflammatory effects of insulin have been reported. Is it possible that inosine may work, in part, as an anti-inflammatory agent. It has also been reported (most recently by Modis et al, Br J Pharmacol, 158: 1565, and previous references therein, that under hypoxia and ischemia, inosine may be converted back to ATP and may serve as a source of energy generation and survival. These possibilities and articles, as well as several other relevant ones, should be mentioned in a revised 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.

Declaration of competing interests:

I declare that I have no competing interest.