Reviewer's report

Title: Accelerated intimal hyperplasia in aortocoronary internal mammary vein grafts in minipigs

Version: 1 Date: 29 January 2008

Reviewer: Bruno PD Podesser

Reviewer's report:

The present study by Popov et al. demonstrates a pig model of aortocoronary vein graft intimal hyperplasia which is characterized by an accelerated progression within internal mammary veins. According to the authors the model is suitable to investigate the pathophysiology of aortocoronary vein graft intimal hyperplasia as well as therapeutic approaches.

Major Comments:

I have to congratulate the authors- intima hyperplasia is an important question not only in cardiology but also in cardiac surgery and therefore should be addressed by cardiac surgeons. The proposed model has potential in performing experiments that can not be addressed with mice and rats.

The introduction is precise and clearly written.

The experiments are well performed- however I have several questions:

The authors state they used perfusion fixation- how high was the perfusion pressure?

This is important as the pressure determines the diameter of the vessels and consequently could interfer with the vessel wall thickness, which is the target! Please comment!

When you analyzed the vein grafts 4 weeks later, what specific sites along the vein did you assess histologically- did you look in particular areas such as the distal or proximal anastomosis? One would expect at the proximal anastomosis there might be a higher degree of hyperplasia than further down- please comment.

The discussion and conclusion are well written and focused.

Minor Comments:

1. page: Â“Vein graft failure and intimal hyperplasia has already been shown in large animals, like dogs and pigs [4-8]Â”. Please insert Â“beenÂ”.

All of the pigs in this approach survived the coronary artery bypass grafting or died
prematurely. How many died prematurely?

**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.