Reviewer’s report

Title: The effect of Lipoxin A4 on the interaction between macrophage and osteoblast: possible role of inflammation resolution in the treatment of aseptic loosening

Version: 1 Date: 12 March 2009

Reviewer: Vanessa Pinho

Reviewer’s report:

- Major Compulsory Revisions:

1- Looking at the results of figure 5, what the authors think about of the levels of cytokine do not have reduced in macrophage co-cultured with OB and treated with PMMA when compared with macrophages stimulated only with PMMA? In this system there was lipoxin production. The authors think that LXA4 added exogenously has the synergistic effect with that produced endogenously?

2- What explain the increase of levels of GM-CSF when the 15-LO is inhibited compared with culture of macrophage and PMMA only?

3- What explain the fact of do not to have diminution of bone resorption in system contained macrophage + OB + PMMA-figure 6? In this system there is lipoxin production?

4- In the last paragraph of discussion the authors cite that they used PMMA particle to mimic the inflammation in AL patients. This affirmation is not correct.

5- Why the authors conclude that LXA4 has a favorable inhibitory effect on PMMA-induced inflammation in co-culture system? What means favorable in this in vitro system?

6- In figure 1, is better to use “time after PMMA stimulation” and not “PMMA administration”. The word “administration” gives idea of in vivo studies.

7- The Figure 7 should be advanced to Figure 4, because its results proves that the use of siRNA for 15-lypoxigenase works.

- Minor Essential Revisions:

1- The correct way to synthesize the name lipoxina A4 is LXA4 and not LAX4. Please change all those mistakes: page 7, 1º line, 9º line, 17º line.

2- page 8 line 9: to cite number of figure

3- In Figure 2, the dose of LXA4 used is represented by nm. What is it means? If it represents nanomolar, the correct way to write it is nM.
4- In Figure 5, I’d suggested the authors to plot the graphs at different way. Or put all the parameters analyzed in the same graph, or divide in four panels, each one for each parameter

5- In page 10, 3º paragraph, 4th line of the discussion, please change the word excrete to secrete.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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