Reviewer’s report

Title: Oxidative stress mediated arterial dysfunction in patients with obstructive sleep apnoea. Effect of continuous positive airway pressure treatment

Version: 2 Date: 4 October 2011

Reviewer: Konstantinos Kostikas

Reviewer’s report:

The study de Ben Maria and colleagues deals with the always interesting topic of oxidative stress and endothelial dysfunction in patients with obstructive sleep apnea (OSA) syndrome. However, the study is not original and several of the findings of this manuscript have been previously reported. My specific comments are the following:

Major Comments

• The study does not have a clear aim and several parameters and correlations have been evaluated. The presentation of the results is not clear also. I would suggest the use of subtitles to help the reader identify the different parts of the study analyses.

• The use of unattended polysomnography and unattended home CPAP titration are, at least to my point of view, unacceptable in research studies that evaluate biomarkers for OSA and the effects of CPAP treatment.

• The fact that only 10 patients received acceptable CPAP treatment does allow for proper conclusions regarding the effect of CPAP on FMD and oxidative stress biomarkers.

• The authors have found significant associations of FMD only with the presence of metabolic syndrome and urine 8-isoprostane, but not with AHI. This is not supportive of their title.

Minor Comment

• In Tables 1 & 2 the second columns probably refer to mild/moderate OSA.

Level of interest: An article of limited interest

Quality of written English: Acceptable

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