Reviewer's report

**Title:** No risk for negative effects on cholesterol levels with a commercially available glucosamine product in patients treated with simvastatin or atorvastatin.

**Version:** 3  **Date:** 23 May 2012

**Reviewer:** Angel-Luis García-Otín

**Reviewer's report:**

This article deals with the potential interaction between HMGCoA inhibitors (Atorvastatin, Simvastatin) and glucosamine, a common natural product used to alleviate osteoarthritis sympthoms, which could decrease the hypocholesterolemic effect of these drugs. In order to address this question the authors carried out a controlled, randomised, open, crossover pharmadynamic study in a group of primary care patients who were already being treated with HMGCoA inhibitors. The results they show suggest that glucosamine has no effect on atorvastatin nor simvastatin efficacy.

**Major Compulsory Revisions**

1. Statistical power estimation details should be provided: what is the type II error probability allowed to determine that 20 subjects are enough to
2. Table 2 presentation seems confusing to me: the headings for each column of data perhaps should be Simvastatin/Vitamineral, Simvastatin/Glucosamine, Atorvastatin/Vitamineral, Atorvastatin/Glucosamine, comparisons are established between Vitamineral and Glucosamine treatments for each statin group.
3. It would be interesting to present data as differences in lipid and glucose values between the two compared treatments and to perform statistical comparison on these data.

**Minor Essential Revisions**

**Abstract:**

1. Revise spelling: “T-testS for paired samples WAS used”

**Background:**

1. Sentence “Some case reports have found increased values of cholesterol and other lipids in patients treated with simvastatin [6]…” seems to be incomplete, maybe it would be “Some case reports have found increased values of cholesterol and other lipids in patients treated with simvastatin and glucosamine [6]…”
2. Sentence “We have found effects on patients treated with simvastatin and atorvastatin of St John’s Wort as a consequence of interaction of the CYP3A4, and in one trial on healthy subjects, glucosaminewas tested together with noskapin where no such effects could be demonstrated for glucosamine [9]” is
too long and confusing. Maybe splitting it could contribute to a better understanding.

Methods:

1. Maybe headings could be added. In fact there is a “Statistics” heading. Headings for “Subjects”, and “Study Design” would help to better arrange this section.

2. At the beginning of the section it is stated that there were 15 patients with atorvastatin treatment. However a few lines below the atorvastatin group is described as composed by nine men and four women (9+4=13) in accordance with previous information in the abstract.

Results:

1. Split “Simvastatingroup”

References:

1. Split “HallingA” in 3rd reference

Discretionary Revisions

1. A graphic representation showing lipid and glucose values on Vitamineral and Glucosamine treatment for each patient would probably help to detect cases where an effect could exist, although it could be masked by a whole group analysis.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests