Reviewer's report

**Title:** Association of circulating irisin and cardiopulmonary exercise capacity in healthy volunteers: Results of the Study of Health in Pomerania

**Version:** 2  **Date:** 25 November 2014

**Reviewer:** Julian Rex

**Reviewer's report:**

No major compulsory revisions needed.

Minor Essential Revisions

1. Language: several minor grammatical and spelling errors throughout the paper. Listed below are the first few. The paper needs to be proof-read and corrected, either by the authors or preferably by a native English speaker, for clarification and ease of reading.

   Introduction, 1st paragraph, “Irisin is supposed to effect…”; should be “affect”?

   Introduction, 2nd paragraph, “Furthermore the long-term training…”; sentence needs correction with regard to grammatical tense.

2. Since there seems to be an annual rhythm in Irisin levels according to the data, information on when Irisin levels were measured in relation to when cardiopulmonary exercise testing was performed should be included to enable better interpretation of the correlation between the two.

3. Clarification is needed considering Irisin blood samples. As far as I understand, Irisin levels were controlled only once, during baseline testing of each subject, but it does not say so explicitly in the paper. This information should be included. If samples were only taken once per individual, there is a possibility that the annual variation of Irisin levels is in fact based only on individual variation, even if this may be less likely. This issue should in such a case be addressed in the discussion.

4. According to the paper, previous studies seem to indicate a possible short-term increase of Irisin levels following exercise, but over time exercise seems to lead to lower Irisin levels. Have the data in the present study been adjusted for self-reported level of physical activity? If so, such data should be presented, if not, the lack of such analysis should be addressed in the discussion, since exercise capacity could be regarded as a surrogate measure for physical activity.

5. Data on how self-reported physical activity levels correlate to measured exercise capacity would be of interest to help in evaluating how well the measured parameters (peak VO2 etc.) in fact seem to indicate the training status of the study population. The likely association between self-reported physical
activity and the tested exercise capacity could possibly make it easier to interpret
the differences in correlation between men and women.

6. Descriptive legends are missing for all figures.

**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.