Author’s response to reviews

Title: Modern extraction techniques and their impact on the pharmacological profile of Serenoa repens extracts for the treatment of lower urinary tract symptoms

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Version: 3
Date: 1 June 2014

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Title:
Modern extraction techniques and their impact on the pharmacological profile of *Serenoa repens* extracts for the treatment of lower urinary tract symptoms

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Replies to referees

Reviewer 2's report:
The authors describe a current problem: variability of different S. repens extracts obtained using various extraction techniques.

Minor Essential Revisions
1. Spelling should be checked
*The English spelling of the entire manuscript has been revised.*

Major Compulsory Revisions
1. In the case of saw palmetto, two reference materials have been reported, SRM 3250 Serenoa repens fruit and SRM 3251 Serenoa repens extract. For SRM 3251, the used extraction method was supercritical carbon dioxide. It is not very clear, this is the only method which can be used for this particular reference material? Please detail.
*SRM 3250 has been analyzed by three different extraction techniques (pressurized fluid extraction, Soxhlet extraction, and sonication) and compared to SRM 3251 SFE extract as regards their chemical composition. The latter Standard Reference Material is directly obtained by supercritical CO2 fluid.*

2. How were the described products choosed? There are some others commercially available products with strong studies behind. Why not describe them also? Please explain and, if possible, include other products.
*The database search has been enriched with six new recent articles and other commercial products by exploring carefully Pubmed and Scifinder databases.*
Reviewer 3's report:
The paper presents a very interesting subject: extraction techniques and their impact on the pharmacological profile of Serenoa repens extracts. This product is one of the most used phytotherapeutic agent in the treatment of BPH. However, one of the reasons data regarding its efficacy are still under debate is the great heterogeneity of chemical products contained in the extract, one of the causes being the mechanism of extraction. This is a very important issue, as generating meta-analysis is impossible unless the compared data are similar. The authors did an excellent job in describing those extraction mechanisms and also some effects related to each of them. From this point of view the paper is valuable and has an important scientific and educational value. There are some problems that should be addressed.

Minor issues not for publication:
1. References to different paragraphs (“see paragraph….”) should be removed from the Discussion section as they are not customary.
References to different paragraphs (“see paragraph….”) have been removed.

2. Text should be revised for inadequate words: e.g. line 300 – “it” should be removed
The English spelling of the entire manuscript has been revised.

Major compulsory revisions:
1. The exact nature of National Institute of Health’s Office of Dietary Supplements and the Food and Drug Administration’s Center for Drug Evaluation and Research and the National Institute of Standards and Technology (NIST) should be explained for the readers.
A brief paragraph explaining the role and the importance of this federal Agency has been added.

2. How were selected the products described in the section “3 Serenoa repens extracts: therapeutic properties and implication for the treatment of BPH”? Why those are the only products mentioned?
The methodology of article search and selection for this paper should be described.
The database (Pubmed, Scifinder) search has been detailed and enriched with six new recent articles and other commercial products.