

Response to reviews

Manuscript ID: **metabolites-2862707**

Title: "Matrix- and surface-assisted laser desorption/ionization mass spectrometry methods in urological cancers biomarkers discovery – metabolomics and lipidomic approach"

Dear Reviewer, below please find response to your suggestions. The text in italics is a commented part of review and is followed by answers and/or description of changes in bold text. I hope that you will find this revised version acceptable for publication,

With best regards,
Corresponding author

Reviewer comments:

Reviewer #3

Adrian Arendowski submitted an interesting review upon metabolomics and lipidomic. The topic was recently trending, and might arouse a certain impact in its field. The manuscript fell within the scope of Metabolites. However, there were some issues pending addressed. Most importantly, it seemed that this review was not scientifically sound. The reviewer suggested a Resubmission for this submission. Please refer to the detailed comments following.

Re: I would like to thank the reviewer for her/his opinion and also for work on the manuscript.

1. *The Abstract contained about < 170 words. Please consider to expand it to ~200 words to showcase more valuable information.*

Re: Agree, the abstract has been expanded to 195 words.

2. *It was not advisable to list abbreviations as Keywords. Please consider to replace those abbreviations with full names or other important keywords.*

Re: Agree, it was changed in the new version of the manuscript.

3. *In the Introduction, it was recommended to provide a list of common biomarkers of urinary tract cancers.*

Re: Thank you for your suggestion. However, as I have repeatedly mentioned in the text of the chapters concerning individual cancers, to date, there are no biomarkers with

confirmed effectiveness, and these cancers are most commonly detected during imaging studies such as ultrasound, computed tomography, or magnetic resonance imaging. Only in the case of prostate cancer does a protein biomarker function, which has been described in Chapter 4.

4. *Important issue: The reviewer wondered that in addition to bladder, kidney and prostate cancer, were there other types of urinary tract cancers? For example, ureter and urethra cancers? Perhaps the relevant sections should be supplemented.*

Re: Thank you for your insightful comment. The Reviewer's observation is entirely valid. In addition to the most common urinary tract cancers described in the paper, there are also rarer types such as the urethral and ureteral cancers mentioned by the Reviewer. A search of scientific publication databases such as Scopus and Web of Science conducted by myself revealed a lack of literature utilizing MALDI or SALDI MS techniques for the exploration of potential biomarkers for these tumors. However, I thought it would be appropriate to mention this fact in the Introduction and Future Directions sections in the new version of the manuscript.

5. *Following question 4, a self-prepared illustration about metabolomics and lipidomic detection of different urinary tract cancers should be added. Please notice that Metabolites is a flagship journal in the field, which has a high standard on artworks.*

Re: Agree. A completely new, self-prepared Figure 2 was added to the manuscript.

6. *It was inappropriate to place the Future Directions Section after Conclusions Section.*

Re: Thank you for your comment. The order of the "Conclusions" and "Future Directions" sections has been swapped in the new version of the manuscript.

7. *The authors' personal opinion regarding the topic should be briefly discussed in the Conclusions Section.*

Re: Information on this topic was added in the Conclusions.

8. *The format of References should be double-checked.*

Re: Agree, references have been checked and adapted to the style of Metabolites journal.