

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Gastroenterology

**Manuscript NO:** 54453

**Title:** Metabolomics profile in gastrointestinal cancers: Update and future perspectives

**Reviewer's code:** 02860506

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** Italy

**Manuscript submission date:** 2020-01-30

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-01-31 03:23

**Reviewer performed review:** 2020-02-02 13:35

**Review time:** 2 Days and 10 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

In the article entitled "Metabolomics profile in gastrointestinal cancers: update and future perspectives", Nannini G and colleagues critically reviewed the issue of metabolomic as a potential biomarker for gastrointestinal (GI) cancers diagnosis. They proposed the application of nuclear magnetic resonance (NMR) based metabolomics in bio-fluids to identify biomarkers on facts observed in studies for GI cancers, such as pancreatic cancer, gastric cancer and colorectal cancer. Considering the NMR-based metabolomics in GI cancers is still at its unfolding, authors made objective evaluations of related studies' objectivity and scientificity, and recommend that future related studies should design multicentric researches involving a high number of patients and multiple GI cancers. However, some points in this review need to be further considered. 1. In my opinion, it will be better that introduce in the INTRODUCTION PART the pros and cons of NMR in metabolomics compared with GC and current hotspots in NMR metabolomics appliance in medicine. 2. Authors suggested that urinary metabolomics represents a good non-invasive alternative to determine tumor-associated perturbations; moreover, urine metabolomic analysis could be easily implemented to be used as wide scale population screening. However, all of studies mentioned in the URINE SAMPLES part seemed like retrospective studies, in my opinion, the conclusions draw by these might not be applied in population screening. And considering the heterogeneity among study objects, most objects in researches with valid conclusions were diagnosed cancer patients, non-invasive methods did little good to these patients since they probably had undergone surgeries already. Do author agree with this? 3. Some studies only included small sample size using metabolomics, what is the opinion of authors about their repeatability? 4. The authors can properly discuss the mechanism of metabolites in GI, rather than just focusing on the studies about differential of metabolites in GI cancers. Also, the mechanism of which how metabolites in urine are effected by gastrointestinal tumors. Furthermore, authors not

just illustrate the results of the study, but also have to intersperse the meaning of the study and their own perspective. 5. There are redundant tables listing the altered metabolite levels identified in blood samples, urine samples and fecal water samples, it would better to use the figure and legends to simplify the presentation. After all, a picture is worth a thousand words. 6. Since the authors regard fecal water sample as a priority in all bio-fluids for the metabolic NMR analysis, a summary table can be elaborated to clearly present this strength through comparing the advantages and disadvantages of various bio-fluids. 7. In the abstract, the abbreviation “NMR” should be clearly presented as full name. 8. “Warburg effect is a shift from ATP synthesis by oxidative phosphorylation to ATP generation through glycolysis, also in aerobic condition.” This sentence should indicate the source: Warburg effect was firstly reported in the 1920s. (Warburg O, 1924, Biochemische Zeitschrift) 9. Page 11. liver metastasis (LC). What does this abbreviation, LC means? liquid chromatography or liver cancer? 10. There were no conclusions summarized from Dykstra M.A. et al. (2017) study. Please check the completeness.

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**Name of journal:** World Journal of Gastroenterology

**Manuscript NO:** 54453

**Title:** Metabolomics profile in gastrointestinal cancers: Update and future perspectives

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**Reviewer's Country/Territory:** Japan

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<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input type="checkbox"/> Anonymous <input checked="" type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS



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Nannini G et al attempted to review metabolomics profile in gastrointestinal cancers and found that NMR metabolomics has demonstrated to be an optimal approach for diseases' diagnosis. English writing is fair (no grammatical error) and this work is worth enough for possible publication in WJG. Major comments. None. Minor comments. 1. Provide page number in the manuscript. 2. Page 6, line 1. ... from Gln to -ketoglutarate ... is ... from Gln to □-ketoglutarate...