

PEER-REVIEW REPORT

Name of journal: World Journal of Gastrointestinal Pathophysiology

Manuscript NO: 39764

Title: Human gut microbiome profiling and colorectal cancer in African American and Caucasian Americans

Reviewer's code: 03713770

Reviewer's country: Croatia

Science editor: Fang-Fang Ji

Date sent for review: 2018-05-11

Date reviewed: 2018-05-17

Review time: 6 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input checked="" type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

ESPS Manuscript NO: 39764 Title: Human gut microbiome profiling and colorectal cancer in African American and Caucasian Americans General comments This manuscript reveals the microbiome profiling of human gut in African and Caucasian



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7901 Stoneridge Drive, Suite 501,
Pleasanton, CA 94588, USA
Telephone: +1-925-223-8242
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Americans. The study design, methods and outcomes are well described. The results are presented clearly and concisely accompanied by appropriate table and figures. In the literature review, recent researches are listed to this topic. Minor points: Title: Correct the title (American/Americans) Abstract: meliorate the abstract to improve the scientific strength Material & Methods: Include the primer sequences in separate table not in the text. In paragraph of statistical analysis the author stated that data were presented as standard error of mean but the data were presented as mean \pm standard deviation in the figure legends. Overall, this is a very interesting study provides an insight in the diversity of human gut microbiota.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

BPG Search:

- ☐ The same title
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- ☐ Plagiarism
- ☐ No

PEER-REVIEW REPORT

Name of journal: World Journal of Gastrointestinal Pathophysiology

Manuscript NO: 39764

Title: Human gut microbiome profiling and colorectal cancer in African American and Caucasian Americans

Reviewer's code: 00253974

Reviewer's country: Germany

Science editor: Fang-Fang Ji

Date sent for review: 2018-06-06

Date reviewed: 2018-06-13

Review time: 7 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input checked="" type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input checked="" type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The study aims to highlight the difference in microbiome profiles between african americans and caucasian americans which can correlate to the higher incidence of CRC in african americans. The title and the abstract are simple and summeraize the idea of

the study. The fair background doesn't explain a lot about the complexity of the role of the microbiome especially in the development of CRC. Nevertheless, the study design, methods and results are clear. Comments: - Novelty of the study: Differences in microbiome in different human races have been investigated in numerous studies.(1) Moreover, the correlation between dysbiosis and the development of CRC has been established recently. (2-5) - Exclusion of dietary effects on the microbiome: the dietary habits of the study population were ignored. Diet has been proven to have a massive effect on the gut microbiome.(6) - Small sample size: a total of 98 patients is quite few for profiling the highly complexed human gut microbiome in different races. Microbiome profiling is actually an interesting tool in modern research. However, this study needs some work to get its results validated. References: 1. Sachin Goyal, Pratima Nangia-Makker, Lulu Farhana, Yingjie Yu, and Adhip PN Majumdar. Racial disparity in colorectal cancer: Gut microbiome and cancer stem cells. World J Stem Cells. 2016 Sep 26; 8(9): 279-287. 2. Gao Z, Guo B, Gao R, Zhu Q, Qin H. Microbiota dysbiosis is associated with colorectal cancer. Front Microbiol. 2015;6:20. 3. Sobhani I, Tap J, Roudot-Thoraval F, Roperch JP, Letulle S, Langella P, Corthier G, Tran Van Nhieu J, Furet JP. Microbial dysbiosis in colorectal cancer (CRC) patients. PLoS One. 2011;6:e16393. 4. Wu N, Yang X, Zhang R, Li J, Xiao X, Hu Y, Chen Y, Yang F, Lu N, Wang Z, et al. Dysbiosis signature of fecal microbiota in colorectal cancer patients. Microb Ecol. 2013;66:462-470. 5. Zackular JP, Baxter NT, Iverson KD, Sadler WD, Petrosino JF, Chen GY, Schloss PD. The gut microbiome modulates colon tumorigenesis. MBio. 2013;4:e00692-e00613. 6. Zhenjiang Xu and Rob Knight. Dietary effects on human gut microbiome diversity. Br J Nutr. 2015 Jan; 113(Suppl 0): S1-S5.

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PEER-REVIEW REPORT

Name of journal: World Journal of Gastrointestinal Pathophysiology

Manuscript NO: 39764

Title: Human gut microbiome profiling and colorectal cancer in African American and Caucasian Americans

Reviewer's code: 03567380

Reviewer's country: United States

Science editor: Fang-Fang Ji

Date sent for review: 2018-06-06

Date reviewed: 2018-06-14

Review time: 7 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
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			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The manuscript submitted by Farhana et al. describes how the differences in racial disparity for colorectal cancer between African Americans and Caucasian Americans may be a direct result of differences in the gut microbiome. The authors demonstrate

that there are significant differences between AA and CA groups using 16sRNA profiling and RTPCR. Overall, the authors found that the AA group had increased proinflammatory bacteria and decreased microbial diversity compared to the CA cohort. While this study was well performed and the data is sound, there are areas the authors should address to improve their study, which are outlined below: 1) The authors state that the general characteristics of the study participants are described in reference 15. However, that study used a different number of patients per group than the current study. Please provide all important patient parameters in a table or expand the methods to include these details. 2) Were any of these patients on probiotics or taking supplements that could influence the gut microbiome? If this was not an exclusion criteria, this should be listed as a weakness in this study. 3) Figure 5 should be expanded to investigate these measures between AA and CAs rather than combining both AA and CA into a single group. 4) The data with 7alpha dehydroxylase is very interesting but would be strengthened by assessing specific bile acid concentrations in the stool. 5) There have been differences identified in the microbiome and metabolism between AA and CA in other studies (PMID: 25759547). The authors need to expand their discussion to detail this study and how this may relate to their findings. 6) The sentence, "In contrast, Unclassified-Bacteria and Unclassified-Unclassified micro-organisms were only present in CAs." is repeated in the discussion twice.

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PEER-REVIEW REPORT

Name of journal: World Journal of Gastrointestinal Pathophysiology

Manuscript NO: 39764

Title: Human gut microbiome profiling and colorectal cancer in African American and Caucasian Americans

Reviewer's code: 02441737

Reviewer's country: Mexico

Science editor: Fang-Fang Ji

Date sent for review: 2018-06-06

Date reviewed: 2018-06-15

Review time: 9 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
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<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
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			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Comments to the manuscript: Human gut microbiome profiling and colorectal cancer in African American and Caucasian Americans Abstract: It would be recommendable for the authors to present some general characteristics of the patients such as age, sex,

and data of the socioeconomic level of the CAs and AAs patients. Background. The introduction is adequate and allows a proper understanding of the problem of study. It would be of interest for the authors to present more studies on the characteristics of the microbiota in different ethnic and racial groups; in addition to commenting more data on the general characteristics of the populations studies such as: the age, the sex, and the characteristics of the socioeconomic level. Methods. Although the authors have already published an article describing the general characteristics of patients CAs and AAs, it is important that they mention more details of the characteristics of these patients; especially the external variables that are known to influence the characteristics of the microbiota. Results. It is an article of interest and novel in presenting the comparison of the microbiota in terms of: phylum, family, genus and species, between two racial groups (AAs and CAs). Discussion. It is important that the authors make an effort to explain the internal and external reasons to the host, for which there are differences in the distribution of the different species of bacteria in the microbiota of the CAs and AAs groups. Illustrations and tables. It is recommended to place a more descriptive title in all the figures. Biostatistics. It is recommended that the statistical procedure followed for the analysis of the data be described in more detail, for example in Table 1. It would be recommended to present the results of the statistical test carried out. References. If possible, it is recommendable to reduce the number of references.

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