

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 64365

Title: Impact of Fusobacterium nucleatum in Gastrointestinal Tract on Natural Killer cells

Reviewer's code: 03724397

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Chairman, Chief Doctor, Director, Professor

Reviewer's Country/Territory: China

Author's Country/Territory: South Korea

Manuscript submission date: 2021-02-19

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-02-21 09:10

Reviewer performed review: 2021-03-02 12:46

Review time: 9 Days and 3 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<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
Conclusion	<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
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

The overall quality of this study is well. The experimental methods and results are described clearly. But the possible signaling pathways involved should be discussed.

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 64365

Title: Impact of Fusobacterium nucleatum in Gastrointestinal Tract on Natural Killer cells

Reviewer's code: 05201806

Position: Peer Reviewer

Academic degree: MBBS, MD

Professional title: Research Fellow

Reviewer's Country/Territory: United States

Author's Country/Territory: South Korea

Manuscript submission date: 2021-02-19

Reviewer chosen by: Jin-Lei Wang

Reviewer accepted review: 2021-04-02 18:56

Reviewer performed review: 2021-04-02 19:14

Review time: 1 Hour

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 Grade E: Do not publish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



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SPECIFIC COMMENTS TO AUTHORS

Comments In this article, the authors report the impact of *Fusobacterium nucleatum* in GI tract on NK cells. **Abstract:** Written well. **Introduction and methods** written well. The authors target the role of *Fusobacterium* excess and change in NK cell activity. Description about the role of *Fusobacterium* in CRC given. It is highly suggested to the role of NK cell activity in IBD, NASH with autoimmunity. As authors noted, the NK cells play a major role in tumor microenvironment with constant interactions with tumor progression. Reshaping the gut microenvironment is an area of intense interest to provide potential therapeutics in the future cancer prevention. The figures and graphs are appropriately noted. Please provide limitations of this study.

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 64365

Title: Impact of Fusobacterium nucleatum in Gastrointestinal Tract on Natural Killer cells

Reviewer's code: 05232375

Position: Peer Reviewer

Academic degree: BSc, MSc

Professional title: Research Fellow

Reviewer's Country/Territory: United Kingdom

Author's Country/Territory: South Korea

Manuscript submission date: 2021-02-19

Reviewer chosen by: Jin-Lei Wang

Reviewer accepted review: 2021-04-02 23:45

Reviewer performed review: 2021-04-03 16:13

Review time: 16 Hours

Scientific quality	<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
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input checked="" type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	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

In this study, Kim et al. demonstrated that high abundance of *Fusobacterium nucleatum* (fn) plays a critical role in gastrointestinal tract which reduces the host NK cells activity, and affects the pro-inflammatory cytokines in circulating levels, including IL-1b and TNF-A. These outcomes suggesting that Fn in colon could be a factor disrupting the immune system in the experimental mice. The authors also provided all the essential documents in terms of ethics approval and biostatistics reviews. Here are the comments/questions for the authors, (1) Many studies confirmed that Fn can be found in colonic tissues. Could the authors also give a try in the detection of Fn colonic tissue by using qPCR approach? (2) Do IFN, IL-1b, and TNFa also higher in NK92 cells treated with Fn and the colonic tissues from the experimental mice, either mRNA or protein expression level? (3) In Figure 3A, the authors should also provide the error bar of each point of the measurement groups. If can't, please mention it in the figure legend. The length of the colon from each measurement could also provide as a bar chart in Figure 3. (4) Could the author propose a mechanism in a combination of your finding and the existing literature in your discussion? Giving a graph could be better for the explanation, if possible. (5) The authors could consider redrawing the graphs in color instead of black and white.

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 64365

Title: Impact of Fusobacterium nucleatum in Gastrointestinal Tract on Natural Killer cells

Reviewer's code: 05222067

Position: Peer Reviewer

Academic degree: MD

Professional title: Associate Chief Physician, Surgeon

Reviewer's Country/Territory: China

Author's Country/Territory: South Korea

Manuscript submission date: 2021-02-19

Reviewer chosen by: Jin-Lei Wang

Reviewer accepted review: 2021-04-02 10:02

Reviewer performed review: 2021-04-08 07:57

Review time: 5 Days and 21 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<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
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	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

1 Title. Does the title reflect the main subject/hypothesis of the manuscript? Yes. 2 Abstract. Does the abstract summarize and reflect the work described in the manuscript? Yes. 3 Key words. Do the key words reflect the focus of the manuscript? Yes. 4 Background. Does the manuscript adequately describe the background, present status and significance of the study? Yes. 5 Methods. Does the manuscript describe methods (e.g., experiments, data analysis, surveys, and clinical trials, etc.) in adequate detail? NO. The suggestion is that the clinical significance of *Fusobacterium nucleatum* should be verified using patients' samples. 6 Results. Are the research objectives achieved by the experiments used in this study? What are the contributions that the study has made for research progress in this field? Yes. The authors provided a novel hypothesis that "a high abundance of *F. nucleatum* in the gastrointestinal tract could cause reduced NK cell activity". It is interesting to explore the underlying mechanism of *Fusobacterium nucleatum* in gastrointestinal tract and their potential relationship with the occurrence and development of colorectal cancers. 7 Discussion. Does the manuscript interpret the findings adequately and appropriately, highlighting the key points concisely, clearly and logically? Are the findings and their applicability/relevance to the literature stated in a clear and definite manner? Is the discussion accurate and does it discuss the paper's scientific significance and/or relevance to clinical practice sufficiently? Yes. Yes. Yes. 8 Illustrations and tables. Are the figures, diagrams and tables sufficient, good quality and appropriately illustrative of the paper contents? Do figures require labeling with arrows, asterisks etc., better legends? Yes. 9 Biostatistics. Does the manuscript meet the requirements of biostatistics? Yes. 10 Units. Does the manuscript meet the requirements of use of SI units? Yes. 11 References. Does the manuscript cite appropriately the latest, important and authoritative references in the introduction and



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discussion sections? Does the author self-cite, omit, incorrectly cite and/or over-cite references? Yes. 12 Quality of manuscript organization and presentation. Is the manuscript well, concisely and coherently organized and presented? Is the style, language and grammar accurate and appropriate? 13 Research methods and reporting. Authors should have prepared their manuscripts according to manuscript type and the appropriate categories, as follows: (1) CARE Checklist (2013) - Case report; (2) CONSORT 2010 Statement - Clinical Trials study, Prospective study, Randomized Controlled trial, Randomized Clinical trial; (3) PRISMA 2009 Checklist - Evidence-Based Medicine, Systematic review, Meta-Analysis; (4) STROBE Statement - Case Control study, Observational study, Retrospective Cohort study; and (5) The ARRIVE Guidelines - Basic study. Did the author prepare the manuscript according to the appropriate research methods and reporting? Yes. 14 Ethics statements. For all manuscripts involving human studies and/or animal experiments, author(s) must submit the related formal ethics documents that were reviewed and approved by their local ethical review committee. Did the manuscript meet the requirements of ethics? Yes.