University of Minnesota

Duluth Campus

Department of Biomedical Sciences Medical School Duluth 252 Med 1035 University Drive Duluth, MN 55812-3031

Office: 218-726-7922 *Fax:* 218-726-8014

www.med.umn.edu/duluthcampus Email: biomed@d.umn.edu

June 27, 2019

Dr. Subrata Ghosh Editor-in-Chief, World Journal of Gastroenterology Baishideng Publishing Group 7041 Koll Center Parkway, Suite 160 Pleasanton, CA 94566 USA

Dear Dr. Ghosh,

On behalf of the co-authors I am pleased to submit for publication in *World Journal of Gastroenterology* a revised version of our manuscript #48781 entitled "The Role of Ion Channels in Gastrointestinal Cancer". We thank the reviewers for their helpful comments. Our point-by-point responses are below.

Response to reviewers

Reviewer #1.

Comment: As the paper was entitled "ion channels in GI cancers", more kinds of ion channels should be discussed here. For example, zinc transporters.

Response: A new section on zinc transporters has been added along with a new Table 5 listing all of the GI cancers in which various Zn transporters are dysregulated.

Reviewer #2

Comment: In general, the authors should addressed more detiaed about the diagnostic and prognostic implications of ion channels in CONCLUSION or PROPECT, especially targeted therapy should be streamlined and updated.

Response: A revised, updated and more detailed CONCLUSION section has been prepared that focuses on the diagnostic and prognostic implications of ion channels, especially targeted therapy.

Reviewer #3

Comment: Major comment: 1. The authors should prepare 2-3 figures showing the potential molecular mechanisms of the association of ion channels and cancer. Only as a suggestion, it may be a figure with oncogenic ion channels and the other one with channels as tumor suppressors. Another figure may focus either on CFTR or drug repurposing. Minor comments: 1.

It makes more sense to place the section "additional mechanisms of tumor suppression" immediately after the Wnt/beta catenin signaling paragraph. 2. Page 29, last paragraph "it's upregulation is" should be "its up-regulation is".

Response: We have prepared three new figures, following the suggestions of the reviewer The first two figures describe potential mechanisms and pathways of tumor suppression mediated by CFTR (Fig. 1 and 2). The third figure depicts potential oncogenic and tumor suppression mechanisms of ion channels (Fig.3).

Sincerely,

Patricia Scott, PhD Assistant Professor

Dept. of Biomedical Sciences

University of Minnesota Medical School Duluth

Tel# 218-726-8361

Email: pscott@d.umn.edu