

Dear Editor of **World Journal of Gastroenterology**,

Thank you for your letter concerning our manuscript, titled „**Differential expression of mucin 1 (MUC1) and MUC2 in colorectal cancer**”, submitted to *World Journal of Gastroenterology*, and for the reviews we received. As per suggestions, we have been tried our best to address the reviewers concerns, in order to meet every standard necessary for the work’s publication in your journal.

Reviewer 1 (03656600) answers:

We would like to thank you for your review. As per suggestion, the limitations concerning results of our work were added and/or completed in the section of “Discussion”. The manuscript was also thoroughly revised, with extensive language and stylistic corrections applied. The publication was English writing and corrected by a qualified, native speaker, familiar with the manuscript topics.

Reviewer 2 (00225294) answers:

The authors wish to thank for a favourable review, all critical remarks and time spent on reviewing the manuscript.

1. The images corresponding to the immunohistochemical detection and localization of MUC1, MUC2, Ki-67 and p53 in the current version of our work has been prepared on consecutive sections. In the two collective tables with photographs (currently Fig. 1 and Fig. 5), the order of colored illustrations has also been changed, to show the expression of each marker in the CRC and adequate control. I would like to explain that the color microphotographs were selected as representative in order to show the cellular location of the proper marker (mucins, Ki-67, p53) from more than two thousands of the microphotographs taken for morphometric analysis (detailed description we included in the Material and Method section and cited works).
2. As per suggestion, Figure 3 (currently Figure 2) has been changed and presented in a different graphic form. Nevertheless, in the current version of the Figure 2, the mean and SD values are still present in line with the results of the statistical analysis and for a better illustration of the results obtained.
3. As per suggestion, the results in Tables 3-6 have been made clearer. Namely, two tables were omitted (no 4 and 5), these results are presented in two Figures (current Figure 2 and 3) and in text. Some our results, briefly or not very clearly presented in the text, have been supplemented and corrected.

4. Thank you very much for the last suggestion. We agree with your opinion that it would be useful to research on colorectal cell lines to increase the value of the work, however, the purpose of our study was not to study the mechanisms of cellular action of mucins, but to determine the potential role of these markers as diagnostic and prognostic factors in patients with CRC especially from Greater Poland Region, with the use of modern, a reliable morphometric method (HSV filter program). Application of this method has allowed us to more precisely determine the severity of IHC reactions, which may be useful in everyday clinical practice. Microscopic examinations allow for the comparison of the cellular location of these proteins in CRC and the healthy large intestine. So it also has a cognitive aspect, especially with existing disagreements. In addition, it was interesting for us to determine the differences in tissue expression of typical membrane mucin (MUC1) and secretory mucin (MUC2) in different CRC subtypes (mucinous vs. nonmucinous).

Certainly, studies on cell lines are very important to clarify the molecular mechanisms of CRC pathogenesis and can support the *in vivo* studies. There are some new findings indicate that MUC1-C is a potential target for the treatment of colorectal cancer.

Reviewer 3 (00070509) answers:

The authors wish to thank for the insightful review, comments and suggestions and time spent on reviewing the manuscript.

Answering the question, we selected patients with CRC only from the Greater Poland Region, not treated before (radio- or chemotherapy), without significant additional systemic diseases, from whom consent was obtained, the perioperative tissue material met the requirements for scientific research and also with available clinicopathological data.

As suggested, these data have been supplemented in the current version of the publication.