Dear reviewers and editors:

Thank you very much for your positive comments on our manuscript entitled" Role of mast cell-miR-490-5p in irritable bowel syndrome"

We have carefully evaluated the reviewers' critical comments and thoughtful suggestions and revised the manuscript accordingly. All changes made to the text are in red so that they may be easily identified. some other questions which can not reflected in the manuscript,I will make a short explanation here. I hope you are satisfied with my reply.

1.It did not provided detailed information about the selection of miRNA

In the sub-section of entiled "Screening for target miRNA"，we have provided the information why we choose miR-490-5p as our target. Firstly, we screening out the abnormal expression of miRNA in IBS-D using high-throughput microarray. secondly, predict the target gene of the abnormal miRNA and analyse the biological functions of the target genes .Third, select the miRNA which was most likely related to IBS as our target. Because of the funding problem, we have just chosen only one miRNA.

2.Although inhibition of miR-490-5p could increase the level of mRNA of tryptase and PAR-2. However, the protein expression had no obvious difference. It did not address any problem and could not provide methods to improve IBS.

It was the first time to detect the role of miR-490-5p in IBS,and the information about the biological role of miRNA in the IBS which could be used for reference was not much .why the elevation of PAR-2 and tryptase mRNA did not lead to a significant elevation of PAR-protein and tryptase-protein, we speculated that

miR-490-5p may also involved in the regulation of post transcriptional translation, because, one miRNA could participate in the regulation of one signaling pathways through different target genes, and the same signaling pathway may also be regulated by multiple miRNAs. So further research was needed to explore this issue, but we believed that miR-490-5p was definitely involved in the pathogenesis of IBS.

3.The author listed three selection criteria, however, why did miRNA must exist both in human and mouse mast cells? And whether the miR-490-5p was the only eligible subjects?

because We can't get people's mast cells from ATCC, we need mouse mast cell as a cell modle.miR-490-5p was not the only eligible subject,but according to our preliminary analysis, miR-490-5p was the most likely to be involved in the pathophysiological process of IBS.

4.what is the GFP?

The full name of GFP was green fluorescent protein, used as a reporter gene in the recombinant lentivirus vector. GFP positive cells were successfully transfected cells.

5.Please re-write the discussion, it is poorly written with a lot of speculation and no direct link to the results of their experiments. Make a story from start to finish!

We have been trying to make some changes, but how to make our articles become more perfect, we still need your more detailed guidance, such as which part of the content was not needed, what aspects need to be added, we are looking foeward your valuable comments.

Thank you again for your valuable comments and suggestions.we would be glad to respond to any further questions and comments that you may have. We need more advice and suggestions for our growth.