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Flat C, 23/F., Lucky Plaza,  
315-321 Lockhart Road,  
Wan Chai, Hong Kong, China

## ESPS Peer-review Report

**Name of Journal:** World Journal of Gastroenterology

**ESPS Manuscript NO:** 3893

**Title:** microRNA-143 suppresses gastric cancer cell growth and induces apoptosis by targeting COX-2

**Reviewer code:** 00928913

**Science editor:** Song, Xiu-Xia

**Date sent for review:** 2013-05-31 11:45

**Date reviewed:** 2013-06-04 13:31

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input checked="" type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input checked="" type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

## COMMENTS TO AUTHORS

Authors analyzed the role of miR-143 in gastric cancer and the underlying mechanism. They found that the identified both miR-143-5p and miR-143-3p were significantly down-regulated in multiple gastric cancer cell lines, and the transfection with miR-143-5p in gastric cancer resulted in a greater growth inhibitory effect and a higher apoptosis rate than that with miR-143-3p. The activity of a luciferase reporter construct containing the 3'-untranslated region (UTR) of COX-2 was down-regulated by miR-143-5p. They concluded that these findings showed that both miR-143-5p and miR-143-3p function as anti-oncomirs in gastric cancer, however, only miR-143-5p directly targets COX-2 and showed a stronger tumor suppressive effect than miR-143-3p. This is a relatively interesting study; however, there are a lot of criticisms that authors should address before the consideration of acceptance by World Journal of Gasgastroenterology.

- In the abstract section, the transfection with miR-145-5p (?) in gastric cancer resulted in a greater growth inhibitory effect and a higher apoptosis rate than that with miR-143-3p; Mutation in the binding site of miR-145-5p (?) completely ablated the regulatory effect. Please reconfirm the word with underline.
- In vivo study was lack. For miRNA functional study, in vivo study would provide more powerful evidences of miR-143-5p in gastric carcinogenesis.
- In the Materials and Methods section, microRNA target prediction paragraph, authors mentioned that they used RNA22 (<http://cbcsrv.watson.ibm.com/rna22.html>) to identify microRNA-target sites in 3'-UTR of COX-2 mRNA and their corresponding RNA/RNA complexes and folding energy. Why authors did not search miR-143-5p target genes by using miR target prediction programs? Consequently, target gene identification was not fully understood.
- Figure 1 showed that by Western blot the expression of COX-2 protein was increased in the five human gastric cancer cell lines, which was inversely



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correlated with miR-143 level. Which one was compared to the five human gastric cancer cell lines regarding the increased COX-2 protein? 5. Hsa-miR-143-3p (Applied Biosystems) or miRNA mimic control (Applied Biosystems) were transfected using Lipofectamine. Is it a stable transfection of transient tranfection? A stable transfection would be preferred in the functional study. 6. In the Results section, a paragraph of “This is consistent with reports from other research groups [22, 23]”, of which should be moved to the Discussion section. 7. Figure Legends must be separate and in another paragraph. 8. Some typos and grammar error should be improved by English-writing expert.



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## ESPS Peer-review Report

**Name of Journal:** World Journal of Gastroenterology

**ESPS Manuscript NO:** 3893

**Title:** microRNA-143 suppresses gastric cancer cell growth and induces apoptosis by targeting COX-2

**Reviewer code:** 01213174

**Science editor:** Song, Xiu-Xia

**Date sent for review:** 2013-05-31 11:45

**Date reviewed:** 2013-06-20 12:40

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input checked="" type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	BPG Search:	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input checked="" type="checkbox"/> Minor revision
		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

## COMMENTS TO AUTHORS

**GENERAL** This is an in vitro study to explore the role of microRNA-143 (miR-143) in gastric cancer. Using gastric cancer cell lines, the authors revealed that miR-143 expression was down-regulated and the low expression induced reduction of cell apoptosis. As low expression of miR-143 in gastric cancer is already known by earlier studies, novelty of the present study is relatively low. However, the authors authentically conducted the required experiments, and in addition, they showed the evidence that anti-oncomir effect of R-143 was partially mediated by suppression of COX-2 expression in the transcriptional level. Thus, the present study is somehow valuable and potentially worth publishing in World J Gastroenterology although minor revision is needed. **SPECIFIC** The authors showed 50% reduction of miR-143 expression in gastric cancer cells, compared with the expression in GES-1 cells, a normal gastric epithelial cell line (Figure 1). This reviewer raised a question whether or not the GES-1 cells could really be the standard cells for evaluating miR-143 expression level. The reviewer requests to add the data of other cell lines that are widely accepted as having normal cell characters in Figure 1.



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## ESPS Peer-review Report

**Name of Journal:** World Journal of Gastroenterology

**ESPS Manuscript NO:** 3893

**Title:** microRNA-143 suppresses gastric cancer cell growth and induces apoptosis by targeting COX-2

**Reviewer code:** 00008369

**Science editor:** Song, Xiu-Xia

**Date sent for review:** 2013-05-31 11:45

**Date reviewed:** 2013-06-23 19:04

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input checked="" type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input checked="" type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

## COMMENTS TO AUTHORS

Currently OK for publication, but validation in clinical samples between non-cancerous tissues and cancer tissues is prerequisite.



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## ESPS Peer-review Report

**Name of Journal:** World Journal of Gastroenterology

**ESPS Manuscript NO:** 3893

**Title:** microRNA-143 suppresses gastric cancer cell growth and induces apoptosis by targeting COX-2

**Reviewer code:** 01438231

**Science editor:** Song, Xiu-Xia

**Date sent for review:** 2013-05-31 11:45

**Date reviewed:** 2013-07-02 22:22

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

## COMMENTS TO AUTHORS

microRNA-143 suppresses gastric cancer cell growth and induces apoptosis by targeting COX-2 The authors examine the effects and mechanisms of miRNA 143 subtypes on gastric cancer cell lines. They examined the effects of these oncomirs on growth, apoptosis and cox-2 activity. For the most part, the paper is straightforward and well written. The experiments are well described and the results are clearly presented. The authors do not over interpret their results, rather they objectively present and discuss their findings. Some minor points: Why did the authors focus on cox-2 and not other potential targets? This should be clarified in the intro. In the last paragraph of the intro-The sentence beginning with “reduction of cox-2 expression...” Should be reorganized as it is not clear what is being stated. How was cox-2 expression reduced in the study they are describing? In the next sentence (same paragraph)-“All of the above evidence indicated...” ‘Indicated’ should be ‘indicates.’ Figure 1C -Why not quantitate and present the cox-2 increase in the cell lines? Discussion-next to last paragraph-“This could be an explanation why...” could be changed to “this may explain why.” The authors should also state more clearly what is novel about this study since these miRNAs were previously studied in GC. This could be added to the end of the abstract and discussion.