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PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 40219

Title: Adiponectin affects the mechanical responses in strips from the mouse gastric fundus

Reviewer's code: 01115220

Reviewer's country: United Kingdom

Science editor: Ze-Mao Gong

Date sent for review: 2018-06-08

Date reviewed: 2018-06-11

Review time: 3 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
[ ] Grade A: Excellent	[Y] Grade A: Priority publishing	[ ] Accept (High priority)	Peer-Review:
[ ] Grade B: Very good	[ ] Grade B: Minor language polishing	[ ] Accept (General priority)	[ ] Anonymous
[Y] Grade C: Good	[ ] Grade C: A great deal of language polishing	[Y] Minor revision	[Y] Onymous
[ ] Grade D: Fair	[ ] Grade D: Rejection	[ ] Major revision	Peer-reviewer's expertise on the topic of the manuscript:
[ ] Grade E: Do not publish		[ ] Rejection	[ ] Advanced
			[Y] General
			[ ] No expertise
			Conflicts-of-Interest:
			[ ] Yes
			[Y] No

SPECIFIC COMMENTS TO AUTHORS

The authors have examined some effects of adiponectin in vitro on strips of gastric fundus and report relaxant effects of adiponectin which seem to have both nitric oxided-dependent and dependent actions. This follows from previous studies reporting

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the established effect of adiponectin on appetite and the presence of adipoecti8n receptors in the upper gastrointestinal tract. The authors have formed a reasonable hypothesis that adiponectin may alter gastric motility in a way that influences post-prandial satiety. Although these early studies can in no way be used to support or refute the hypothesis, but these studies do suggest further work is indicated. The results of this study propose that adiponectin may have a variety of effects on gastric smooth muscle. At least some of these effects, in relaxing smooth muscle are dependent on non-adrenergic non-cholingergic nitric-oxide dependant transmission. The authors propose a direct effect of adiponectin on the muscle, although this is speculative. The experiments are soundly designed and performed using established methods. The results are concisely and clearly presented and the conclusions accurate and the authors have importantly not strayed too far from their own results and have avoided excessive speculation and clinical correlations. The is obviously an early stage, basic-science study and further studies to more clearly define the local effects of adiponectin will be required. It will be interesting to know the cellular distribution of adiponectin receptors in the mouse gastric fundus and also to explore the more integrated effects on gastric motility, such as post-prandial relaxation and emptying (although these will require different experimental models). There are a few areas that could do with some amendments. 1. The authors should describe exactly which form of adiponectin they have used? I presume it is recombinant mouse but is this full length, globular-truncated or a specific polymer? These all have different receptor binding effects and the authors need to clarify this. 2. Although this may be typical in these type of electrophysiological studies, I am unclear why some experiments used methacholine and some used carbachol? These seem to have very similar receptor-mediated actions, could the authors please elucidate why some experiments used one compound rather than the other? 3. The methods section should include a statement of how statistical analysis was planned

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and used, rather than leaving this to the figure legends. 4. In figure 1B, it would be helpful if the labelling showed clearly that the 3rd column is L-NNA + adiponectin. This is implied from the figure legend, but it would be best to make this clearer. 5. I am surprised that the conclusions section of the abstract does not explicitly comment on the nitric-oxide dependent and -independent actions. Perhaps the authors wish to amend in the light of this important and apparently novel finding.

INITIAL REVIEW OF THE MANUSCRIPT

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