We thank the Reviewer for the very helpful suggestions and constructive criticism of the manuscript.

Reviewer #1: 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 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.
   The Reviewer is right. We have indeed forgotten to specify in the drugs section that recombinant full-length mouse adiponectin was used. Thank you for the observation.
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?
   As the Referee stated, either methacholine or carbachol are generally accepted to be used in this kind of study. Although these drugs have similar receptor-mediated actions, methacholine is commonly used to discriminate whether a drug influences the neurally-induced contractile responses acting at the nervous or at the muscular level. Once we observed that the effects of adiponectin occurred at the nervous level and that they appeared to be mediated by nitric oxide, we performed the experiments in NANC conditions (i.e. in the presence of carbachol and guanethidine).
3. The methods section should include a statement of how statistical analysis was planned and used, rather than leaving this to the figure legends.
   The Data Analysis and Statistical Tests paragraph is present in the methods section.
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.
   The Figure 1B has been modified following your indication. Thank you for your suggestion.

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.
   We greatly appreciate the observation of the Referee. Actually, in the present study we wished to highlight the novel finding that adiponectin is able to have an action on gastric mechanical responses. This is why we have not explicitly commented, in the conclusions section of the abstract, the mechanism of action through which the hormone exerts its effects which, in addition, certainly deserves to be better investigated.