**Response to reviewers**

We thank both reviewers and Dr. Wu for careful reading and thoughtful critiques of our manuscript. We agree with all suggestions and have made modified our revised manuscript accordingly. In addition to the editorial reviews, which we hope to have fully addressed, we provide a point-by-point response to both reviewers below.

**Reviewer #1:**

Manuscript Summary:  
Authors described a video monitoring system to investigate sleep and locomotor activity in A. mexicanus cave and surface fish. The system can be applied to fish aged four days post fertilization through adulthood in almost any fish species to measure different behaviors as sleep and locomotor activity in different lighting conditions.

I found the paper well-written and I haven't major concerns. Only some minor concerns:

1) I suggest to report all measures also in centimeters and not only in inches. It will avoid to convert every times the measures.

Thank you for this suggestion. We have made these changes.

2) in the abstract and in the introduction authors wrote "This system can be applied to measure sleep, circadian behavior, and locomotor activity in almost any fish species including zebrafish and sticklebacks." I suggest to change this sentence to "..in almost any marine and freshwater fish species." to cover all possibilities.

We have now added that it can be used in any fish species. However, we chose to leave in discussion of specific species like sticklebacks (and other fish models of evolution) because we think the study of sleep in this system is a wide-open area, and we hope to gain the attention of these fields.

3) Are zebrafish and A.mexicanus the only two fish species in which sleep has been investigated? If not I suggest to report this(these) reference(s) in the introduction.

Surprisingly, to our knowledge this is the case. ‘Rest’ has been studied in other species, but a full characterization of sleep processes has yet to be completed. We are very eager to see sleep studied in additional sleep models, and hope this protocol contributes to this.

4) In the discussion I suggest to mention that this system can be used also for pharmacological and ecotoxicological tests.

Thank you for this suggestion. We have rewritted the discussion (based on editorial suggestions) and incorporated this commentary.

**Reviewer #2:**

Manuscript Summary:  
This is an important manuscript that will enable many researchers to conduct such experiments on many species because the commercial apparatuses are very expensive and not every lab can afford them.

Major Concerns:  
1. I might have missed it, but how is sleep defined? Usually it is the duration of immobility and threshold to a stimuli. If so, does each strain of cavefish has its own criteria? This information has to be added.

We now include discussion defining sleep as 60-seconds of immobility in larval and adult fish, in accordance with our previously published work.

2. For a biologist to build the apparatus according to the textual description would be impossible. The video is really required and I would be willing to review again with the video.

We agree and will do everything we can to clearly demonstrate the system by video. We have received many requests about our system, and we think video (and this JOVE article) provides the perfect format to share this protocol.

Minor Concerns:  
1. dimensions should be given in metric measures. inch and feet and also be given in parenthesis. 2. the last 3 pages of the pdf file should be, i guess, one table?

Thank you for this suggestion. We have made the changes accordingly.