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(no subject)

Mohamed Helmy <helmy.m@gmail.com> 5 May 2023 at 22:52
Draft To: bmcbiologyeditorial@biomedcentral.com

Dear BMC,

Regarding the article:

Cheng, Ruey-Kuang, Seetha Krishnan, Qian Lin, Caroline Kibat, and Suresh Jesuthasan. 2017. "Characterization of a Thalamic Nucleus Mediating Habenula Responses to Changes in Ambient Illumination." *BMC Biology* **15** (1): 104. https://doi.org/10.1186/s12915-017-0431-1

[1] No ethical permission was obtained for these experiments
Under "Methods...Experiments were performed in accordance with guidelines issued by the Institutional Animal Care and Use Committee of the Biological Resource Centre at Biopolis, Singapore."
The BRC does not do experiments, merely supplies animals. Since the experiments were done in one or more of the following locations, permission must have been obtained from those, even if they do not exist as institutions as such:
Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore, 636921, Singapore
Neural Circuitry and Behavior Laboratory, Institute of Molecular and Cell Biology, Singapore, 138673, Singapore
Neuroscience and Behavioral Disorders Program, Duke-NUS Graduate Medical School, 8 College Road, Singapore, 169857, Singapore
Department of Physiology, National University of Singapore, Singapore, 117597, Singapore

[2] The fish were tortured
Under "Imaging...Zebrafish larvae were anaesthetized in mivacurium"
Mivacurium is not an anaesthetic. In other words, they just paralyzed the fish before torturing it.

[3] The signal analyzed if any must be bunk
Under "Initial data processing":
- if one cross-correlates the images before analyzing any putative signal of interest, does not one putatively lose the signal of interest?
- if the stage was fixed and the fish paralyzed, why were there any problematic horizontal or vertical movement artifacts requiring cleansing of the signal?
- to remove 'noise' with spatial filtering of median size 3, a 'darker region located beyond the fish was selected' while imaging brain neurons including neuropils?

[4] Under "Pixel-based analysis in a single fish", "K-means", and "Cell segmentation"
- The clustering was done after normalization in the Z-score? That 'accounted for both mean and standard deviation'?
- "…The number of clusters were chosen to reveal as many stimulus-related clusters as possible, until there was little change in the number and types of stimulus-related clusters and an increase in independent clusters. In normal fish, clusters related to evoked activity were easy to obtain. Clusters that are stimulus-independent were removed from the spatial and temporal plots for clarity…"
Is this a controlled experiment? By choice? Were abnormal fish measured?

[5] Faulty data on BMC?
I could not watch any of the videos. And what is a thalamic neuropil, habenula neuropil, so on? Is neuropil a region specific to fish brain obtained from BRC Singapore? Is it found in both normal and abnormal fish?

[6] The fish swims towards the light sometimes because of cells in the brain
I asked an AI (not Irelynn) what this article was about, here is the reply:

A nucleus located in the anterior thalamus of zebrafish is responsible for controlling habenula responses to changes in ambient illumination. The nucleus receives input from the retina and pineal organ, suggesting it may play a role in light-triggered vertical migration. This discovery sheds light on the neural circuits underlying phototaxis in zebrafish and offers insight into similar mechanisms in other vertebrates. The study highlights the importance of understanding the neural basis of behavior and could contribute to the development of new treatments for neurological disorders.

Replacing 'swim up' with 'vertical migration' does not make it sophisticated, just stupid. The whole thing is extremely unethical and so absurd it beggars belief.

I have come across a lot of academic gibberish, distance over time equals distance, and so on. But this article in your journal here has got to win the most pretentious ridiculous abuse of language, apparatus, mathematics, so-called ethical policies, and so much more, honestly, I am impressed. How did it pass? Why? Were you as impressed and thought it must be shared with the world through BMC Central Biology?

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P.S. Shengtao Zhou is a professor where?