From: editorial@elifesciences.org
Subject: eLife review invitation (article from Hyeon - 09-02-2022-RA-eLife-77748 - confidential)
Date: 28 February 2022 at 15:44
To: alexander.shakeel.bates@gmail.com
Cc: ab2248@cam.ac.uk

Dear Alexander,

I'm writing in the hope that you'll be willing to review this article, "Olfactory responses of *Drosophila* are encoded in the organization of projection neurons", for eLife, a selective journal that publishes promising research in all areas of biology and medicine. eLife is now creating public reviews for research that is reviewed by the journal - regardless of the final decision.

What changes for you as a reviewer?
We ask you to structure your review into three parts: (1) a short statement on significance and audience for this paper, (2) the public review with guidance for readers around how to interpret the work, highlighting important findings but also mentioning caveats where they exist, and (3) specific feedback to the authors stating what needs to be changed to make the manuscript acceptable for publication in eLife, or why it falls short as an eLife paper.

The intention is to post the public reviews from each reviewer alongside the preprint (on bioRxiv or medRxiv). At present, authors can postpone the posting of the public reviews until the paper has been published elsewhere. For papers accepted for publication in eLife, the feedback for authors will be published as part of the decision letter, as before. The "recommendations for the authors" (part 3) will not be posted alongside the preprint.

eLife is taking these steps to help change how publishing works: we believe that clear public reviews should be the central mechanism by which research is evaluated.

Even if you decide to reveal your name to the authors, your name will not appear on the public review. All public reviews are signed by eLife, putting the onus on us as an organization and community to ensure that our reviews are of the highest quality and ethics.

We continue our policy of consultation between the reviewers. If you agree to review this paper, once all the reviews have been received, you will be invited to discuss your comments with the other reviewers in an online consultation session, in which the reviewers will be identified to one another, and you can recommend whether the paper should be revised for publication by eLife or rejected. Additional experiments, analyses, or data collection should only be requested if they are essential.

The abstract and information about the review process are below, and you can read what we have published so far at https://elifesciences.org.

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If you have competing interests that preclude an objective review, or you cannot otherwise provide a review of the work in the timeframe, please DECLINE using the link below. Suggestions for alternatives are very welcome. (Where it's appropriate to do so, it would be helpful if you could offer a brief opinion about the work, even if you're declining to review.)

By taking on this assignment, you agree to conduct your review according to the terms in the eLife Reviewer Guide - https://submit.elifesciences.org/html/elife_reviewer_instructions.html - and you agree to our confidentiality notices below*, which help us to protect the personal data of authors, editors, and reviewers.

To respond, please use the link below and select either AGREE or DECLINE:

[https://submit.elifesciences.org/cgi-bin/main.plex?el=A5Hz1mhD1A4BeJj3F4A9ftdFmeLIaHKuSQXxZhyQElQDAZ]

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Please note that we work with Publons.com to give you the opportunity to be recognised for your review, so if you agree to provide a review we will let you know how to add the details to a Publons account in the email we send at the conclusion of the review process.

We ask for comments to be returned within 14 days (although we will understand if you will need longer than usual). I'll look forward to hearing from you.

Best wishes,

Sonia Sen
Reviewing Editor
eLife

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Title: Olfactory responses of *Drosophila* are encoded in the organization of projection neurons

Authors: Changbong Hyeon, Kiri Choi, and Won Kyu Kim

Abstract:
The projection neurons (PNs), reconstructed from electron microscope (EM) images of the *Drosophila* olfactory system, offer a detailed view of neuronal anatomy, providing glimpses into information flow in the brain. About 150 PNs constituting 51 glomeruli in the antennal lobe (AL) are bundled together in the axonal extension, routing the olfactory signal received at the AL to the mushroom body (MB) calyx and the lateral horn (LH). Here we quantify the neuronal organization by inter-PN distances and examine its relationship with the odor types sensed by *Drosophila*. The homotypic PNs that constitute glomeruli in AL are tightly bundled and stereotyped in position; however, such a glomerular-like PN organization in AL is no longer sustained in the higher brain center. Instead, odor-type dependent clusters consisting of multiple different homotypes become more prevalent in MB calyx and LH. We find that there are statistically significant associations between the spatial organization among a group of homotypic PNs and certain stereotyped behavioral responses. In particular, pheromone-encoding homotypes are segregated from other neurons not only in LH but also in MB calyx. Our findings suggest that before neural computation in the inner brain, some of the olfactory responses are already encoded either by the homotype or in the spatial organization of PNs, illuminating that the labeled-line strategy is at work in the *Drosophila* olfactory system.

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* Confidentiality and Personal Data
We do not release the identities of the reviewers to the authors (unless requested by the reviewers themselves) but in the course of the discussion that forms part of the review process, each reviewer will know the identity of the other reviewer(s).

the discussion that forms part of the review process, each reviewer will know the identity of the other reviewer(s).

The review process is strictly confidential and must be treated as such by reviewers during the review process and subsequently:

1. If you agree to provide a review, we will send you the following data: author, editor and reviewer contact information, copies of submitted manuscripts and review comments and discussions arising from the review of those manuscripts, which you will handle only for the duration of the peer-review process.

2. You will only act on our written instructions when handling this personal data, you will keep the personal data secure, and not use the personal data for any other purpose than a review for eLife.

3. You will not ask anyone else to carry out this peer review for you, without our prior agreement.

4. You will assist us in allowing data subjects to exercise their rights under data protection laws, if you hold personal data relevant to them. You will also assist us in meeting our data protection obligations in relation to audits, security, notification of data breaches, and data protection impact assessments.

5. You will delete or return (at our choice) the personal data you hold on our behalf once the decision has been completed.

6. You will report any relevant personal data breaches to us immediately, as well as whether you believe our instructions in connection with the personal data infringes applicable laws.

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Information about Competing Interests:
Editors, reviewers, and potential reviewers are required to fully declare all potential competing interests that could lead them to be positively or negatively disposed towards an article before they agree to edit or review it. Reviewers must recuse themselves if they feel that they are unable to offer an impartial review. Common reasons for editors and reviewers to recuse themselves from the peer-review process include but are not limited to: Working at the same institution or organization as one or more of the authors, currently or recently; Having collaborated with, or served as a mentor to, one or more of the authors during the past 5 years; Having held grants with one or more of the authors, currently or recently; Having a personal relationship with an author that does not allow you to evaluate the manuscript objectively.

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