

Editorial Note: This manuscript has been previously reviewed at another journal that is not operating a transparent peer review scheme. This document only contains reviewer comments and rebuttal letters for versions considered at *Nature Communications*. Mentions of the other journal have been redacted.

REVIEWERS' COMMENTS:

Reviewer #1 (Remarks to the Author):

Guo et al have carefully addressed comments from their previous round of review with **[REDACTED]** Although I am personally still not convinced by their super-resolution images of actin, overall the manuscript is suitable for Nature Communications, and I recommend publication.

However, I do notice that the authors have changed the title of the manuscript to “Quantitative neuronal phenotyping using multiplexed fluorescence imaging with diffusible probes”. I don't feel this title is suitable –the results in here do not really address “quantitative neuronal phenotyping”, but instead is mostly just about labeling and imaging. I thus urge the authors to go back to their previous title “Multiplexed, high-throughput neuronal fluorescence imaging with diffusible probes”.

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We appreciate the positive assessment of our revision by the Reviewer, and we have changed the title back to its original form, in line with their request.