***eLife’s* transparent reporting form**

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**Sample-size estimation**

* You should state whether an appropriate sample size was computed when the study was being designed
* You should state the statistical method of sample size computation and any required assumptions
* If no explicit power analysis was used, you should describe how you decided what sample (replicate) size (number) to use

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Sample sizes were not computed before carrying out experiments. Numbers of biological replicates (minimum two, usually three or more) were chosen as the reproducibility between samples was found to be similar to reproducibility between images within the same sample (for example, see Fig3-Supp2).

**Replicates**

* You should report how often each experiment was performed
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* The data obtained should be provided and sufficient information should be provided to indicate the number of independent biological and/or technical replicates
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Numbers of samples, images, and analyzed tracks are given in figure legends and in Table 1.

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* Statistical analysis methods should be described and justified
* Raw data should be presented in figures whenever informative to do so (typically when N per group is less than 10)
* For each experiment, you should identify the statistical tests used, exact values of N, definitions of center, methods of multiple test correction, and dispersion and precision measures (e.g., mean, median, SD, SEM, confidence intervals; and, for the major substantive results, a measure of effect size (e.g., Pearson's r, Cohen's d)
* Report exact p-values wherever possible alongside the summary statistics and 95% confidence intervals. These should be reported for all key questions and not only when the p-value is less than 0.05.

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Statistical analyses, precision measures, and confidence intervals are presented in Figures and in Table 1. The major conclusions of our study do not depend on pairwise comparisons and we do not emphasize p-values, though some are illustrated in Fig3-Supp2.

(For large datasets, or papers with a very large number of statistical tests, you may upload a single table file with tests, Ns, etc., with reference to sections in the manuscript.)

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* Indicate how samples were allocated into experimental groups (in the case of clinical studies, please specify allocation to treatment method); if randomization was used, please also state if restricted randomization was applied
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* Where provided, these should be in the most useful format, and they can be uploaded as “Source data” files linked to a main figure or table
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Code and data files are provided as supplemental files. All data presented in the paper have been generated from these files. Analyses have been described in the Methods section of the text, and the code has been documented for readability and use.