***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

The meta-analysis (**Fig. 3F**) does not require explicit sample size calculation or justification as all relevant studies were assessed for inclusion (i.e. the sample spans the entire population).

The electrophysiological sample sizes are stated. No explicit power analysis was used. At least 6 data points were collected for each experiment. Sample size information is available in the **Results** section of the manuscript.

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* You should report how often each experiment was performed
* You should include a definition of biological versus technical replication
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* Criteria for exclusion/inclusion of data should be clearly stated
* High-throughput sequence data should be uploaded before submission, with a private link for reviewers provided (these are available from both GEO and ArrayExpress)

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Data exclusion and inclusion criteria and their application for the meta-analysis is described (**Materials and Methods; Supplementary file 2**).

For the experimental data (**Fig. 3C-E and Fig. 5D-F**) each sample was individually collected in a serial fashion. The experiments in **Fig. 3** and **Fig 5** were performed once. All relevant information is available in the **Results** and **Materials and Methods** section of the manuscript.

**Statistical reporting**

* 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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The statistical reporting for the meta-analysis as well as the details about weighting and data extraction from the individual studies employed is included (**Materials and Methods; Supplementary file 2**).

Similarly, for the electrophysiological experiments (**Fig. 3 and 5; Materials and Methods**) we display raw data for sample sizes less than 11 (**Fig. 3E and 5F**) and give the statistical tests in-text. Information about sample size, tendency measures, including means +- SEM, and exact p-values are reported.

(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.)

**Group allocation**

* 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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No group allocation was used in this paper.

**Additional data files (“source data”)**

* We encourage you to upload relevant additional data files, such as numerical data that are represented as a graph in a figure, or as a summary table
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* Include model definition files including the full list of parameters used
* Include code used for data analysis (e.g., R, MatLab)
* Avoid stating that data files are “available upon request”

Please indicate the figures or tables for which source data files have been provided:

Code will be made available on GitHub at the time of publication.

Experimental source data for Fig. 3 and Fig 5 will be made available and downloadable at the time of publication.