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

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* You should state whether an appropriate sample size was computed when the study was being designed
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The work that lead to this paper does not include any experiments so there is no issue with sample size.

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No experiments were performed.

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* Statistical analysis methods should be described and justified
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* 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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* 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 experiments were performed for this paper.

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* 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
* 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
* Include model definition files including the full list of parameters used
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Please indicate the figures or tables for which source data files have been provided:

Details of analytical and computational methods are provided in the supplementary information file. We added the code for the search for fastest architectures with Hill coefficient 5 (search\_architectures\_hill\_5\_k\_6.m) and activation rule k=6 and the code for computing the mean first-passage time for a given architecture with the rule k=6 (time\_six.m).