***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
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Sample size estimation is not applicable to our submission as all analyses use simulated data

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* You should report how often each experiment was performed
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All simulations were repeated at least 105 ­as described in figure legends

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* Include model definition files including the full list of parameters used
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All numerical data represented in figures 1,2, and 3 are available at https://github.com/yraynes/Mutator-Frequency together with the Julia 1.0 simulation code