

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

We encourage authors to provide detailed information *within their submission* to facilitate the interpretation and replication of experiments. Authors can upload supporting documentation to indicate the use of appropriate reporting guidelines for health-related research (see [EQUATOR Network)](http://www.equator-network.org/), life science research (see the [BioSharing Information Resource)](https://biosharing.org/), or the [ARRIVE guidelines](http://www.plosbiology.org/article/info%3Adoi/10.1371/journal.pbio.1000412) for reporting work involving animal research. Where applicable, authors should refer to any relevant reporting standards documents in this form.

If you have any questions, please consult our Journal Policies and/or contact us: editorial@elifesciences.org.

# 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

Please outline where this information can be found within the submission (e.g., sections or figure legends), or explain why this information doesn’t apply to your submission:

|  |
| --- |
| This study is a systematic review of the literature that did not necessitate sample size calculations. Our systematic review used pre-specified inclusion and quality criteria to include all relevant studies. |



# Replicates

* You should report how often each experiment was performed
* You should include a definition of biological versus technical replication
* The data obtained should be provided and sufficient information should be provided to indicate the number of independent biological and/or technical replicates
* If you encountered any outliers, you should describe how these were handled
* 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)

Please outline where this information can be found within the submission (e.g., sections or figure legends), or explain why this information doesn’t apply to your submission:

|  |
| --- |
|  Our study was a systematic review of published literature and therefore did not include any biological experiments/replicates. A detailed methodology of the study protocol can be found in the Methods and Appendix 1 |

# 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.

Please outline where this information can be found within the submission (e.g., sections or figure legends), or explain why this information doesn’t apply to your submission:

|  |
| --- |
| See Table 1 below |

( 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
* Indicate if masking was used during group allocation, data collection and/or data analysis

Please outline where this information can be found within the submission (e.g., sections or figure legends), or explain why this information doesn’t apply to your submission:

|  |
| --- |
|  There was no group allocation involved in our systematic review protocol |

**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
* 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
* 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:

|  |
| --- |
|  Data and code used to create Figures 2-5, Table 2, Figure 2-4 Supplements, and Appendices 4-10 can be found at https://github.com/ellenakearney/Anopheles\_salivary\_biomarker\_systematic\_review.git |

**Table 1: Description of analyses**

|  |  |  |  |
| --- | --- | --- | --- |
| **Analysis** | **N** | **Method** | **Location of description** |
| Association between gSG6 IgG seropositivity and HBR | 132 meta-observations, 12 studies | Generalised multi-level modelling | Methods, Results page 14-16, Figures 2&3, Appendix 4, Figure 2 – Supplement 1 |
| Association between gSG6 IgG seropositivity and HBR, moderated by DVS | 132 meta-observations, 12 studies | Generalised multi-level modelling | Methods, Results page 13 +16, Figure 3, Appendix 5, Figure 3 – Supplement 1 |
| Association between gSG6 IgG seropositivity and EIR | 38 meta-observations, 8 studies | Generalised multi-level modelling | Methods, Results page 17-18, Figure 4, Appendix 6, Figure 4 – Supplement 1 |
| Association between gSG6 IgG seropositivity and *Plasmodium* spp. prevalence | 212 meta-observations, 14 studies | Generalised multi-level modelling | Methods, Results page 19-20, Figure 5, Appendix 7 |
| Association between gSG6 IgG seropositivity and anti-malarial antibody seroprevalence | See Table S6 for number of meta-observations and studies | Generalised multi-level modelling | Methods, Results page 21, Appendix 8 |
| Association between gSG6 IgG seropositivity and malarial endemicity class | 297 meta-observations, 22 studies | Generalised multi-level modelling | Methods, Results page 21, Table 2 |
| Predicted gSG6 IgG seroprevalence by country and study | 301 meta-observations, 22 studies | Generalised multi-level modelling | Methods, Results page 21, Appendix 9 |
| Association between fSG6 IgG seropositivity and HBR | 6 meta-observations, 2 studies | Generalised multi-level modelling | Methods, Appendix 10 |
| Association between gSG6-P2 IgG seropositivity and anti-malarial antibody seroprevalence | 115-116 meta-observations, 2 studies | Generalised multi-level modelling | Methods, Appendix 10 |