Habig, B and Archie, EA. 2015 Social status, immune response, and parasitism in males: a meta-analysis. Phil. Trans. R. Soc. B. 370 doi: 10.1098/rstb.2014.0109

**Supplementary materials**

**Table S1.** Methods used to measure male dominance in the 77 studies included in our meta-analyses; note that some studies used multiple methods to assess dominance.

| tests of dominance                  |       |
|-------------------------------------|-------|
| **behavioral tests**                | 75    |
| food competition                    | 6     |
| outcomes of agonistic interactions  | 56    |
| territoriality                      | 3     |
| mating behavior                     | 5     |
| investigatory behavior              | 3     |
| vocalizations                       | 1     |
| sensory contact                     | 1     |
| **morphological tests**             | 10    |
| body mass                           | 1     |
| coloration                          | 7     |
| comb size                           | 2     |
| **physiological tests**             | 2     |
| testosterone levels                 | 1     |
| weight loss                         | 1     |
| **tests of condition**              | 5     |
| coat condition                      | 1     |
| scars/marks                         | 3     |
| wounding index                      | 1     |
| **resources as a proxy for dominance** | 1   |
| employment grade                    | 1     |
Table S2. Immune assays used to assess the effects of social status on immune function (page 1 of 8)

| test of immune function | description of test | what the test measures | immune system components (see Table 1) | predicted direction (tradeoffs model) | predicted direction (stress-response model) | references |
|-------------------------|--------------------|------------------------|----------------------------------------|---------------------------------------|--------------------------------------------|------------|
| baseline immunoglobulins (IgA, IgG, IgE)\(^A\) | use ELISA to measure the concentration of immunoglobulins in plasma in healthy animals. | measures the immune system's state of readiness to deploy antibody-mediated defenses | adaptive constitutive Th-2 | conflicting predictions | conflicting predictions | (1, 2) |
| broad (e.g., total IgG or IgA) or specific antibody response to antigen challenge (e.g. sheep red blood cells, tetanus) | use ELISA to measure the concentration of immunoglobulins in plasma after the animal has been exposed to an antigen | measures adaptive humoral response from B-cells and Th2 cells | adaptive inducible Th-2 | D>S | D>S | (1, 2) |
| in vitro lymphocyte proliferation to a mitogen | collect whole blood or remove lymphoid tissue (e.g. spleen) and grind between slides; expose blood/tissue to an antigen and use radioactively labeled thymidine (or other methods) to measure the rate of lymphocyte cell division (i.e. proliferation) in response to the antigen | measures the ability of T and/or B-cells to proliferate in response to an antigen/mitogen; ConA and PHA serve as T-cell mitogens, LPS stimulates B cells predominately, and pokeweed mitogen is a mixed B- and T-cell mitogen | adaptive inducible | D>S | conflicting predictions | (2, 3) |

\(^A\) Note, this is relatively non-specific if only broad categories of immunoglobulins (e.g., total IgA or IgG) are measured.
| test of immune function | description of test                                                                                                                                                                                                 | what the test measures                                                                                                                                                                                                 | immune system components (see Table 1) | predicted direction (tradeoffs model) | predicted direction (stress-response model) | references |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------|-----------------------------------------|------------|
| skin swelling test after initial exposure. Also called delayed-type hypersensitivity (DTH). Measured in response to antigens/mitogens like PHA, ConA, KLH and DNFB. | inject skin with an antigen to which the animal has previously been exposed. Measure the size of the resulting skin swelling.                                                                                       | predominantly T-cell-mediated responses resulting in the recruitment/activation of cytokines, macrophages, NK cells and T cells; Initial response followed by proliferation of T cells; secondary exposure elicits more robust response than the primary response | adaptive inducible Th-1                  | conflicting predictions               | D>S                                                   | (1, 2)     |
| haemagglutination assayB | expose serially diluted plasma to dilute red blood cells from a different animal (e.g., sheep, rabbit or trout). Record agglutination on a top-lit, flat-bed scanner                                      | measures constitutive humoral responses, including complement, NAbs/IgM. More agglutination is a stronger response.                                                                                         | innate constitutive Th-2               | conflicting predictions               | D<S                                                   | (2-5)      |
| haemolysis/haemolytic complement assay (CH_{50}) using serum/plasma | expose serially diluted plasma to dilute red blood cells from a different animal (e.g., sheep, rabbit or trout); record lysis (happens after agglutination) on a top-lit, flat-bed scanner | measures complement-mediated innate immunity                                                                                                                                                                    | innate constitutive                   |                                         | D<S                                                   | D>S (2)    |

* Note: O'Neal and Ketterson (6) describe this as an adaptive response. This is because antibodies are produced by B cells. In some ways, this test is not that different from measuring baseline immunoglobulin levels. However, Demas (2) lists this test under hemolysis (which is innate), but says it involves natural antibodies, which are adaptive.
| test of immune function | description of test | what the test measures | immune system components (see Table 1) | predicted direction (tradeoffs model) | predicted direction (stress-response model) | references |
|-------------------------|--------------------|------------------------|-----------------------------------------|---------------------------------------|-------------------------------------------|------------|
| macrophage phagocytic ability performed on isolated cells or whole blood | isolate macrophages from blood or fluids/tissues; combine with an antigen-labeled stained yeast or SRBC; microscope is used to count the number of macrophages engulfing particles and/or the number of particles being engulfed. | measures innate immune function important for the immediate killing of numerous pathogens, from whole bacteria to virally infected and injured host cells | innate constitutive | D<S | D>S | (2, 7) |
| natural killer (NK) cell cytotoxicity | collect whole blood or isolate mononuclear cells from blood. Incubate with radionuclide labeled target (e.g., pathogen) cells; as target cells are destroyed by NK cells, they release Cr, which is quantified using a gamma counter | measures the cytotoxic strength of NK cell responses; NK cells are important in the initial innate response and do not require specific antigen presentation; they are important in virus resistance | innate constitutive | D<S | D>S | (2) |
| baseline IFN-γ levels | use ELISA to measure the concentration of IFN-γ in plasma. | measures allocation towards Th1 immunity | Th-1 | D<S | D<S | (2) |
| baseline TNF-α levels | use ELISA to measure the concentration of TNF-α in plasma. | measures allocation towards Th1 immunity | Th-1 | D<S | D<S | (2) |
| experimental infection with a pathogen or parasite | expose animals to a parasite/pathogen; record the success of infection (i.e., prevalence) and recovery rate and/or perform other tests of immune function | measure multiple aspects of immune function after experimental infection | integrative inducible | conflicting predictions | conflicting predictions | (2) |
Table S2. Immune assays used to assess the effects of social status on immune function (page 4 of 8)

| test of immune function | description of test                                                                 | what the test measures                                                                 | immune system components (see Table 1) | predicted direction (tradeoffs model) | predicted direction (stress-response model) | references |
|-------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------|---------------------------------------------|------------|
| IFN-γ response to immune stimulants | use ELISA to measure the concentration of cytokines in plasma after blood has been exposed to an antigen | a general inflammatory response mediated by cytokines from innate and Th-1 immunity   | inducible Th-1                         | conflicting predictions               | D>S                                         | (3)        |
| IL-1/IL-1β response to immune stimulants | use ELISA to measure the concentration of cytokines in plasma after blood has been exposed to an antigen | high cytokine levels indicate ability to up-regulate immune signaling components, to mediate leukocyte differentiation, inflammation, and cytotoxic reactions | inducible D>S                         | D>S                                   | (3)                                         |            |
| IL-2 response to immune stimulants | use ELISA to measure the concentration of cytokines in plasma after blood has been exposed to an antigen | high cytokine levels indicate ability to up-regulate immune signaling components, to mediate leukocyte differentiation, inflammation, and cytotoxic reactions | inducible D>S                         | D>S                                   | (3)                                         |            |
| IL-4 response to immune stimulants | use ELISA to measure the concentration of cytokines in plasma after blood has been exposed to an antigen | inducible response mediated by Th-2 immunity                                          | inducible Th-2                         | D>S                                   | conflicting predictions                    | (3)        |
| IL-6 response to immune stimulants | use ELISA to measure the concentration of cytokines in plasma after blood has been exposed to an antigen | a general inflammatory response mediated by cytokines via Th-2 immunity                | inducible Th-2                         | conflicting predictions               | conflicting predictions                    | (3)        |
Table S2. Immune assays used to assess the effects of social status on immune function (page 5 of 8)

| test of immune function                                      | description of test                                                                 | what the test measures                                                                 | immune system components (see Table 1) | predicted direction (tradeoffs model) | predicted direction (stress-response model) | references |
|-------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------|-------------------------------------------|------------|
| IL-10 response to immune stimulants                         | use ELISA to measure the concentration of cytokines in plasma after blood has been exposed to an antigen | inducible anti-inflammatory response mediated by Th-2 immunity                          | inducible Th-2                         | D>S                                    | conflicting predictions                   | (3)        |
| TNF-α response to immune stimulants                         | use ELISA to measure the concentration of cytokines in plasma after blood has been exposed to an antigen | a general inflammatory response mediated by cytokines from innate and Th-1 immunity     | inducible Th-1                         | conflicting predictions                | D>S                                       | (3)        |
| sickness behaviors and/or fever in response to an antigen such as LPS | expose animal to an antigen such as LPS and measure sickness behaviors (lethargy, anorexia) and fever | measures generalized inflammatory responses to antigens; sickness responses generally include, but are not limited to fever, lethargy and mild anorexia, cytokine production and elevated glucocorticoid levels | integrative inducible                  | conflicting predictions                | conflicting predictions                   | (2)        |
| skin swelling response to injection with mitogens/antigens such as PHA, ConA, KLH and DNFB | inject skin with a novel antigen (i.e., one that the animal has NOT previously been exposed to); size of skin swelling measured with calipers. | inflammatory mediators produced by basophils; an index of basophil-mediated inflammation; perhaps some T cells, but this is less likely during the initial exposure (Martin, 2006) | inducible                              | D<S                                    | conflicting predictions                   | (2, 3, 5)  |
**Table S2.** Immune assays used to assess the effects of social status on immune function (page 6 of 8)

| test of immune function | description of test | what the test measures | immune system components (see Table 1) | predicted direction (tradeoffs model) | predicted direction (stress-response model) | references |
|-------------------------|---------------------|------------------------|----------------------------------------|---------------------------------------|--------------------------------------------|------------|
| B cell counts           | count B cells via blood smears or by flow cytometry | a coarse index of constitutive, standing levels of adaptive cellular immunity; note that WBC counts can reflect current infection | not applicable | conflicting predictions | D>S | (1, 3, 8) |
| cell counts (cytotoxic T cells) | count cytotoxic T cells via blood smears or by flow cytometry | a coarse index of constitutive, standing levels of adaptive cellular immunity; note that WBC counts can reflect current infection | not applicable | conflicting predictions | D>S | (1, 3, 8) |
| cell counts (granulocytes) | count granulocytes via blood smears or by flow cytometry | a coarse index of constitutive, standing levels of cellular immunity; note that WBC counts can reflect current infection | not applicable | conflicting predictions | D>S | (1, 3, 8) |
| cell counts (helper T cells) | count helper T cells via blood smears or by flow cytometry | a coarse index of constitutive, standing levels of adaptive cellular immunity; note that WBC counts can reflect current infection | not applicable | conflicting predictions | D>S | (1, 3, 8) |
Table S2. Immune assays used to assess the effects of social status on immune function (page 7 of 8)

| test of immune function | description of test | what the test measures | immune system components (see Table 1) | predicted direction (tradeoffs model) | predicted direction (stress-response model) | references |
|-------------------------|---------------------|------------------------|----------------------------------------|--------------------------------------|-------------------------------------------|------------|
| cell counts (leukocytes) | count leukocytes via blood smears or by flow cytometry. | a coarse index of constitutive, standing levels of adaptive cellular immunity; note that WBC counts can reflect current infection | not applicable | conflicting predictions | D>S | (1, 3, 8) |
| cell counts (lymphocytes) | Count lymphocytes via blood smears or by flow cytometry. | a coarse index of constitutive, standing levels of adaptive cellular immunity; note that WBC counts can reflect current infection | not applicable | conflicting predictions | D>S | (1, 3, 8) |
| cell counts (neutrophils) | Count neutrophils via blood smears or by flow cytometry. | a coarse index of constitutive, standing levels of cellular immunity; note that WBC counts can reflect current infection | not applicable | conflicting predictions | D>S | (1, 3, 8) |
| neutrophil (heterophil): lymphocyte ratios | Create blood smears and count the number of neutrophils and lymphocytes to calculate the ratio observed in a standard number of leukocytes (e.g., 100 leukocytes). | a coarse index of energetic allocation towards innate, cell-mediated responses (neutrophils) vs. more inducible, adaptive cell-mediated responses (lymphocytes) | not applicable | D<S | D>S | (3, 9, 10) |

<sup>C</sup>From Lee (8): Considering lymphocytes as part of constitutive immune defense is problematic; the defensive role of individual B-cells and T-cells relies upon recognition of a pathogen and a subsequent induced, adaptive response. Circulating lymphocyte concentration might be better considered a measure of investment in induced adaptive responses.

<sup>D</sup>The N:L ratio is a common assay of chronic stress. Stress leads to a reduction in lymphocytes and an increase in neutrophils (see (10) p. 763).
| test of immune function | description of test | what the test measures | immune system components (see Table 1) | predicted direction (tradeoffs model) | predicted direction (stress-response model) | references |
|-------------------------|---------------------|------------------------|----------------------------------------|---------------------------------------|---------------------------------------------|------------|
| adrenal mass            | measure the mass of surgically removed organs | not strongly diagnostic of immune function; heavier organs often interpreted as better immune function/higher investment in immune function, but these tissues are often enlarged during infection. | not applicable | conflicting predictions | conflicting predictions | (2, 9) |
| spleen mass             | measure the length of surgically removed organs | not strongly diagnostic of immune function; larger organs often interpreted as better immune function/higher investment in immune function, but these tissues are often enlarged during infection. | not applicable | D<S | D>S | (11) |
| thymus mass             | measure the mass of surgically removed organs | not strongly diagnostic of immune function; heavier organs often interpreted as better immune function/higher investment in immune function, but these tissues are often enlarged during infection. | not applicable | conflicting predictions | conflicting predictions | (2, 9) |
| size of lymph organs (spleen, thymus, or bursa of fabricius in birds) | measure the length of surgically removed organs | not strongly diagnostic of immune function; larger organs often interpreted as better immune function/higher investment in immune function, but these tissues are often enlarged during infection. | not applicable | D>S | D>S | (11) |
| test of parasite burden / condition | description of test                                                                 | what the test measures                                                                                     | references |
|-----------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------|
| blood parasites                   | use PCR or microscopy methods to quantify viral loads                                | higher parasite burdens may be indicative of severe infections and worse immune responses                   | (12)       |
| ectoparasites                     | use parasitological techniques to measure the diversity of ectoparasite species or number of larvae on the skin/external body parts. | can reflect differences in exposure to parasitism as well as differences in the strength of immune responses | (13-15)   |
| gastrointestinal parasites        | Use parasitological techniques to measure the diversity of parasite species or number of eggs in fecal samples | can reflect differences in exposure to parasitism as well as differences in the strength of immune responses | (16)       |
| hematocrit (packed cell volume) and leukocrit (height of buffy layer) | collect blood in capillary tubes and centrifuge to compact cells; hematocrit reader used to measure the packed cell volume. | a measure of physical condition; higher volumes are better; buffy coat layer might indicate WBC abundance; difficult to interpret | (1, 3, 9)  |
Table S4. Types of tests of immune response and sample sizes used in meta-analyses of each immune component (see Table S2 for definitions of each test).

| tests of adaptive immunity                                      | sample size (number of analyses) |
|----------------------------------------------------------------|----------------------------------|
| baseline immunoglobulins                                      | 3                                |
| broad immunoglobulin response to challenge with an antigen    | 7                                |
| delayed type hypersensitivity test                            | 7                                |
| in vitro lymphocyte proliferation to a mitogen                | 26                               |
| specific antibody response to challenge with an antigen        | 14                               |

| tests of innate immunity                                       |                                  |
|----------------------------------------------------------------|----------------------------------|
| haemolysis/ haemolytic complement assay (CH50) using serum/plasma | 3                                |
| haemagglutination assay                                       | 2                                |
| macrophage phagocytic ability                                | 3                                |
| natural killer (NK) cell cytotoxicity                        | 9                                |

| tests of induced immunity                                      |                                  |
|----------------------------------------------------------------|----------------------------------|
| broad immunoglobulin response to challenge with an antigen    | 7                                |
| cytokine response to LPS or other immune stimulants           | 55                               |
| delayed type hypersensitivity test                            | 7                                |
| experimental infection with a pathogen or parasite            | 33                               |
| in vitro lymphocyte proliferation to a mitogen                | 26                               |
| sickness behaviors and/or fever in response to an antigen     | 2                                |
| specific antibody response to challenge with an antigen       | 14                               |

| tests of constitutive immunity                                |                                  |
|----------------------------------------------------------------|----------------------------------|
| baseline immunoglobulins                                      | 3                                |
| haemagglutination assay                                       | 2                                |
| haemolysis/haemolytic complement assay (CH50) using serum/plasma| 3                                |
| hematocrit (packed cell volume) and leukocrit (height of buffy layer) | 3                                |
| macrophage phagocytic ability                                | 3                                |
| natural killer (NK) cell cytotoxicity                        | 9                                |

| tests of Th-1-mediated immunity                               |                                  |
|----------------------------------------------------------------|----------------------------------|
| baseline Th-1 cytokines                                       | 9                                |
| Th-1 cytokine response to LPS or other immune stimulants     | 13                               |
| delayed type hypersensitivity test                            | 7                                |

| tests of Th-2-mediated immunity                               |                                  |
|----------------------------------------------------------------|----------------------------------|
| baseline Th-2 cytokines                                       | 5                                |
| baseline immunoglobulins                                      | 3                                |
| broad immunoglobulin response to challenge with an antigen    | 7                                |
| Th-2 cytokine response to LPS or other immune stimulants     | 24                               |
| specific antibody response to challenge with an antigen       | 14                               |
| haemagglutination assay                                       | 2                                |
Table S5. List of Th-1, Th-2 and pro-inflammatory cytokines and sample sizes used in meta-analyses

| Th-1 cytokines                        | sample size (number of analyses) |
|---------------------------------------|----------------------------------|
| interferon-1 (IFN-1)                  | 2                                |
| interferon-gamma (IFN-γ)              | 10                               |
| tumor necrosis factor-alpha (TNF-α)  | 10                               |

| Th-2 cytokines                        | sample size |
|---------------------------------------|-------------|
| interleukin-4 (IL-4)                  | 5           |
| interleukin-6 (IL-6)                  | 14          |
| interleukin-10 (IL-10)                | 10          |

| pro-inflammatory cytokines            | sample size |
|---------------------------------------|-------------|
| interferon-1 (IFN-1)                  | 2           |
| interferon-gamma (IFN-γ)              | 10          |
| interleukin-6 (IL-6)                  | 14          |
| tumor necrosis factor-alpha (TNF-α)  | 10          |
**Table S6.** Measures of parasitism and sample sizes included in meta-analyses.

| parasite load                                           | sample size (number of analyses) |
|--------------------------------------------------------|----------------------------------|
| blood parasite                                         | 3                                |
| Ectoparasites                                          | 3                                |
| gastrointestinal parasites (including helminths and protozoans) | 13                               |
| gastrointestinal parasites (helminths only)            | 10<sup>a</sup>                   |

<sup>a</sup> subset of all gastrointestinal parasites
| test of immune function | sample size (analyses) | Cohen's d | Egger's test (p-value) | random effects model | higher in dominant or subordinate |
|-------------------------|------------------------|-----------|-----------------------|----------------------|----------------------------------|
| **tests of adaptive immunity** |                        |           |                       |                      |                                  |
| Order Rodentia          | 43                     | 0.037     | 0.051                 | -0.443 -0.368       | neither                         |
| Order Primates          | 4                      | 0.252     | 0.468                 | -0.033 0.538        | neither                         |
| Class Aves              | 6                      | -0.573    | 0.456                 | -0.854 -0.291       | dominant                        |
| **tests of innate immunity** |                        |           |                       |                      |                                  |
| Order Rodentia          | 15                     | -0.031    | 0.506                 | -0.033 0.803        | neither                         |
| Class Aves              | 0                      | NA        | NA                    | NA NA NA NA         | NA                               |
| **tests of induced immunity** |                        |           |                       |                      |                                  |
| Order Rodentia          | 136                    | 0.068     | 0.792                 | -0.225 0.399        | neither                         |
| Order Primates          | 5                      | 0.301     | 0.238                 | -0.012 0.614        | neither                         |
| Class Aves              | 11                     | -0.006    | 0.0016                | -0.017 0.506        | neither                         |
| **tests of constitutive immunity** |                        |           |                       |                      |                                  |
| Order Rodentia          | 21                     | -0.025    | 0.771                 | -0.692 0.642        | neither                         |
| Order Primates          | 1                      | NA        | NA                    | NA NA NA NA         | NA                               |
| Class Aves              | 0                      | NA        | NA                    | NA NA NA NA         | NA                               |
| **tests of Th-1 immunity** |                        |           |                       |                      |                                  |
| Order Rodentia          | 15                     | 0.154     | 0.791                 | -0.288 0.597        | neither                         |
| Order Primates          | 1                      | NA        | NA                    | NA NA NA NA         | NA                               |
| Class Aves              | 9                      | -0.199    | 0.259                 | -0.719 0.320        | neither                         |
| **tests of Th-2 immunity** |                        |           |                       |                      |                                  |
| Order Rodentia          | 49                     | 0.311     | 0.022                 | -0.096 0.718        | neither                         |
| Order Primates          | 3                      | 0.330     | 0.921                 | -0.056 0.716        | neither                         |
| Class Aves              | 2                      | NA        | NA                    | NA NA NA NA         | NA                               |
| **tests of Th-1 cytokines** |                        |           |                       |                      |                                  |
| Order Rodentia          | 15                     | 0.154     | 0.791                 | -0.288 0.597        | neither                         |
| Order Primates          | 1                      | NA        | NA                    | NA NA NA NA         | NA                               |
| Class Aves              | 0                      | NA        | NA                    | NA NA NA NA         | NA                               |
| **tests of Th-2 cytokines** |                        |           |                       |                      |                                  |
| Order Rodentia          | 28                     | 0.139     | 0.005                 | -0.195 0.473        | neither                         |
| Order Primates          | 1                      | NA        | NA                    | NA NA NA NA         | NA                               |
| Class Aves              | 0                      | NA        | NA                    | NA NA NA NA         | NA                               |
| **tests of inflammatory cytokines** |                        |           |                       |                      |                                  |
| Order Rodentia          | 35                     | 0.255     | 0.015                 | -0.158 0.668        | neither                         |
| Order Primates          | 1                      | NA        | NA                    | NA NA NA NA         | NA                               |
| Class Aves              | 0                      | NA        | NA                    | NA NA NA NA         | NA                               |

*The moderator variable (type of immune test) significantly explains between study heterogeneity for tests of Th-1 immunity for Class Aves.*
Fig. S1. Representative journals assessing the effects of male social status on immune responses and parasitism. The representative journals that assessed the effects of male social status on immune responses and parasitism encompassed many disciplines of biology including behavior, ecology, endocrinology, evolution, immunology, neurobiology, parasitology, and virology.
Fig. S2. Number of representative analyses for tests of immune response. This graph only includes tests of immune response where 3 or more analyses were available.
Fig. S3. Representative taxa identified in each of the 77 studies used to assess the effects of social status on immune responses and parasitism.
Fig. S4. Representative mice strains that were used to assess the effects of social status on immune responses. Note: Some studies used more than one mice strain.
Fig. S5. Representative rat strains that were used to assess the effects of social status on immune responses. Note: Some studies used more than one rat strain.
Fig. S6. Representative primate species that were used to assess the effects of social status on immune responses and parasitism.
Funnel Tests (Fig. S7-S16). For each funnel plot, the horizontal axis represents the effect sizes (Cohen’s $d$) for each representative study and the vertical axis represents measures of standard error for each study. Effect sizes from studies with small sample sizes tend to scatter more widely at the bottom of the plot while tests of large sample sizes tend to narrow. In the absence of publication bias, a funnel plot should represent a symmetrical, inverted funnel.

Fig. S7. Funnel plot for tests of status-related differences in inflammatory cytokines. An Egger’s test showed significant publication bias (Egger’s test: $p = 0.018$).
Fig. S8. *Funnel plot for tests of status-related differences in adaptive immunity*. An Egger’s test showed a non-significant trend for publication bias (Egger’s test: $p = 0.063$).
Fig. S9. Funnel plot for tests of status-related differences in induced immunity. An Egger’s test showed no significant publication bias (Egger’s test: p = 0.641).
Fig. S10. Funnel plot for tests of status-related differences in innate immunity. An Egger’s test showed no significant publication bias (Egger’s test: \( p = 0.425 \)).
Fig. S11. Funnel plot for tests of status-related differences in constitutive immunity. An Egger’s test showed no significant publication bias (Egger’s test: p = 0.386).
Fig. S12. *Funnel plot for tests of status-related differences in Th-1 mediated immunity.* An Egger's test showed no significant publication bias (Egger's test: $p = 0.096$).
Fig. S13. Funnel plot for tests of status-related differences in Th-2 mediated immunity. An Egger’s test showed a non-significant trend for publication bias (Egger’s test: p = 0.068).
Fig. S14. *Funnel plot for tests of status-related differences in Th-1 cytokines.* An Egger’s test showed no significant publication bias (Egger’s test: $p = 0.348$).
Fig. S15. Funnel plot for tests of status-related differences in Th-2 cytokines. An Egger’s test showed a non-significant trend for publication bias (Egger’s test: p = 0.063).
Fig. S16. Funnel plot for tests of status-related differences in cumulative parasite burdens. An Egger's test showed a non-significant trend for publication bias (Egger's test: p= 0.058)
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