**Table S5.** Bias analysis (reporting bias) in all studies included in the systematic review.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies           Quality criteria** | **AKPOM & WARREN, 1975a** | **AKPOM & WARREN, 1975b** | **AKPOM, 1981** | **ALENCAR *et al*. 2009** | **BARROS *et al*. 2014** | **BARROS *et al*. 2009** | **BHATTACHARYYA *et al*. 1965** | **COUTINHO-ABATH et al. 1962** | **COUTINHO *et al*. 1997** | **COUTINHO *et al*. 1991** |
| **Title** |  |  |  |  |  |  |  |  |  |  |
| Accurate and concise description of the content of the article | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **Abstract** |  |  |  |  |  |  |  |  |  |  |
| Summary of the background, research objectives, methods, principal findings, and conclusions | Y | N | Y | Y | Y | Y | N | Y | Y | N |
| **Introduction** |  |  |  |  |  |  |  |  |  |  |
| Sufficient scientific background | Y | N | N | Y | Y | Y | N | Y | Y | N |
| Rational explanation of the experimental approach | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **Objectives** |  |  |  |  |  |  |  |  |  |  |
| Clear primary and secondary objectives | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **Materials and Methods** |  |  |  |  |  |  |  |  |  |  |
| ***Ethical statement*** |  |  |  |  |  |  |  |  |  |  |
| Ethical permissions | N | N | N | Y | Y | Y | N | N | N | N |
| ***Study design*** |  |  |  |  |  |  |  |  |  |  |
| Number of animals used in the experiment | Y | Y | Y | Y | N | Y | Y | Y | Y | Y |
| The experiment was performed as a blind controlled study | N | N | N | N | N | N | N | N | N | N |
| ***Experimental procedures*** |  |  |  |  |  |  |  |  |  |  |
| Diet composition | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Duration of dietary strategy | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Rationale for choice of dietary strategy | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Control of dietary availability during the experiment | Y | Y | Y | N | N | N | Y | N | N | N |
| Use of standardized diet guidelines | Y | N | Y | N | N | N | N | N | N | N |

ARRIVE criteria completed (Y) or not completed (N).

**Table S5 *(continuation)*.** Bias analysis (reporting bias) in all studies included in the systematic review.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies           Quality criteria** | **AKPOM & WARREN, 1975a** | **AKPOM & WARREN, 1975b** | **AKPOM, 1981** | **ALENCAR *et al*. 2009** | **BARROS *et al*. 2014** | **BARROS *et al*. 2009** | **BHATTACHARYYA *et al*. 1965** | **COUTINHO-ABATH et al. 1962** | **COUTINHO *et al*. 1997** | **COUTINHO *et al*. 1991** |
| ***Experimental animals*** |  |  |  |  |  |  |  |  |  |  |
| Information regarding animal species | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Strain of the animals | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Sex of the animals | N | Y | Y | Y | N | Y | N | Y | Y | Y |
| Weight range of the animals | Y | Y | N | N | Y | Y | Y | N | N | Y |
| Age of the animals | N | N | N | Y | Y | Y | Y | Y | N | Y |
| ***Housing and husbandry*** |  |  |  |  |  |  |  |  |  |  |
| Housing of experimental animals (type of facility, type of housing) | N | Y | N | Y | Y | N | Y | Y | N | Y |
| Husbandry conditions (breeding program, light/dark cycle, temperature, quality of water) | N | Y | N | Y | Y | Y | Y | Y | N | Y |
| ***Sample size*** |  |  |  |  |  |  |  |  |  |  |
| Number of animals used in each experiment and in each experimental group | N | Y | Y | Y | N | Y | Y | Y | N | N |
| Explanation regarding number of animals and details of sample size calculation | N | N | N | N | N | N | N | N | N | N |
| ***Allocating animals to experimental groups*** | | |  |  |  |  |  |  |  |  |
| Details of animals allocation to experimental groups (randomization or matching) | Y | Y | N | N | N | N | N | N | N | N |
| Treatment strategy: order in which the animals were treated and infected | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| ***Experimental outcomes*** |  |  |  |  |  |  |  |  |  |  |
| Clear experimental outcomes assessed | Y | Y | N | Y | Y | Y | Y | Y | Y | Y |
| ***Statistical methods*** |  |  |  |  |  |  |  |  |  |  |
| Statistical methods used for analysis | N | N | N | Y | Y | Y | N | N | Y | Y |
| Specification of the unit of analysis for each dataset | Y | Y | Y | Y | Y | Y | N | Y | Y | Y |

ARRIVE criteria completed (Y) or not completed (N).

**Table S5 *(continuation)*.** Bias analysis (reporting bias) in all studies included in the systematic review.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies           Quality criteria** | **AKPOM & WARREN, 1975a** | **AKPOM & WARREN, 1975b** | **AKPOM, 1981** | **ALENCAR *et al*. 2009** | **BARROS *et al*. 2014** | **BARROS *et al*. 2009** | **BHATTACHARYYA *et al*. 1965** | **COUTINHO-ABATH et al. 1962** | **COUTINHO *et al*. 1997** | **COUTINHO *et al*. 1991** |
| **Results** |  |  |  |  |  |  |  |  |  |  |
| ***Baseline data*** |  |  |  |  |  |  |  |  |  |  |
| Records of food intake | Y | Y | Y | N | Y | N | N | N | N | Y |
| ***Numbers analyzed*** |  |  |  |  |  |  |  |  |  |  |
| Number of animals in each group included in each analysis | N | N | Y | N | N | N | N | Y | N | N |
| ***Outcomes and estimation*** |  |  |  |  |  |  |  |  |  |  |
| Information of parasite load (mean±SD) | Y | N | N | Y | Y | N | N | N | Y | N |
| Histopathological or immunological findings | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| ***Adverse events*** |  |  |  |  |  |  |  |  |  |  |
| Information regarding mortality | Y | N | N | Y | N | N | Y | Y | N | N |
| **Discussion** |  |  |  |  |  |  |  |  |  |  |
| ***Interpretation / scientific implications*** | |  |  |  |  |  |  |  |  |  |
| Interpretation of the results, taking into account objectives, hypotheses, current theory and relevant studies | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Comments on the study limitations (bias, limitations of model) | N | Y | N | N | N | N | Y | N | N | N |
| ***Generalisability/translation*** |  |  |  |  |  |  |  |  |  |  |
| Comments on how the findings are likely to translate to other species or relevance to human biology | N | N | N | Y | N | N | Y | N | Y | Y |
| ***Funding*** |  |  |  |  |  |  |  |  |  |  |
| List of funding sources | Y | Y | Y | Y | Y | Y | Y | Y | Y | N |
| **Criteria completed (n)** | 24 | 21 | 21 | 27 | 24 | 24 | 23 | 24 | 21 | 22 |
| **Criteria completed (%)** | 66.7 | 58.3 | 58.3 | 75.0 | 66.7 | 66.7 | 63.9 | 66.7 | 58.3 | 61.1 |

ARRIVE criteria completed (Y) or not completed (N).

**Table S5 *(continuation)*.** Bias analysis (reporting bias) in all studies included in the systematic review.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies           Quality criteria** | **COUTINHO, 2004** | **COUTINHO et al. 2003** | **COUTINHO et al. 2007** | **COUTINHO et al. 2002** | **COUTO et al. 2002** | **Da SILVA et al. 2012** | **De BARROS ALENCAR et al. 2012** | **GÓES et al. 2012** | **HELMY et al. 2009** |
| **Title** |  |  |  |  |  |  |  |  |  |
| Accurate and concise description of the article | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **Abstract** |  |  |  |  |  |  |  |  |  |
| Summary of the background, objectives, methods, principal findings, and conclusions | Y | N | Y | Y | N | Y | Y | Y | Y |
| **Introduction** |  |  |  |  |  |  |  |  |  |
| Sufficient scientific background | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Rational basis of the experimental approach | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **Objectives** |  |  |  |  |  |  |  |  |  |
| Clear primary and secondary objectives | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **Materials and Methods** |  |  |  |  |  |  |  |  |  |
| ***Ethical statement*** |  |  |  |  |  |  |  |  |  |
| Ethical permissions | Y | Y | Y | Y | N | Y | Y | Y | Y |
| ***Study design*** |  |  |  |  |  |  |  |  |  |
| Number of animals used in the experiment | N | Y | Y | Y | Y | Y | Y | Y | Y |
| Experiment performed as a blind controlled study | N | N | N | N | N | N | N | N | N |
| ***Experimental procedures*** |  |  |  |  |  |  |  |  |  |
| Diet composition | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Duration of dietary strategy | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Rationale for choice of dietary strategy | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Control of dietary availability during the experiment | N | N | N | N | N | N | N | N | N |
| Use of standardized diet guidelines | N | N | N | N | Y | N | N | N | N |

ARRIVE criteria completed (Y) or not completed (N).

**Table S5 *(continuation)*.** Bias analysis (reporting bias) in all studies included in the systematic review.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies           Quality criteria** | **COUTINHO, 2004** | **COUTINHO et al. 2003** | **COUTINHO et al. 2007** | **COUTINHO et al. 2002** | **COUTO et al. 2002** | **Da SILVA et al. 2012** | **De BARROS ALENCAR et al. 2012** | **GÓES et al. 2012** | **HELMY et al. 2009** |
| ***Experimental animals*** |  |  |  |  |  |  |  |  |  |
| Information regarding animal species | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Strain of the animals | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Sex of the animals | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Weight range of the animals | N | Y | Y | Y | Y | N | N | N | Y |
| Age of the animals | N | Y | Y | Y | Y | N | Y | N | N |
| ***Housing and husbandry*** |  |  |  |  |  |  |  |  |  |
| Housing of experimental animals (type of facility, type of housing) | Y | Y | Y | Y | N | Y | Y | N | Y |
| Husbandry conditions (breeding program, light/dark cycle, temperature, quality of water) | N | N | Y | N | N | Y | Y | N | Y |
| ***Sample size*** |  |  |  |  |  |  |  |  |  |
| Number of animals used in each experiment and in each experimental group | N | Y | Y | Y | N | N | Y | N | Y |
| Explanation regarding number of animals and details of sample size calculation | N | N | N | N | N | N | N | N | N |
| ***Allocating animals to experimental groups*** |  |  |  |  |  |  |  |  |  |
| Details of animals allocation to experimental groups (randomization or matching) | N | N | N | N | N | N | N | N | N |
| Treatment strategy: order in which the animals were treated and infected | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| ***Experimental outcomes*** |  |  |  |  |  |  |  |  |  |
| Clear experimental outcomes assessed | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| ***Statistical methods*** |  |  |  |  |  |  |  |  |  |
| Statistical methods used for analysis | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Describes the unit of analysis for each dataset | Y | Y | Y | Y | Y | Y | Y | Y | Y |

ARRIVE criteria completed (Y) or not completed (N).

**Table S5 *(continuation)*.** Bias analysis (reporting bias) in all studies included in the systematic review.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies           Quality criteria** | **COUTINHO, 2004** | **COUTINHO et al. 2003** | **COUTINHO et al. 2007** | **COUTINHO et al. 2002** | **COUTO et al. 2002** | **Da SILVA et al. 2012** | **De BARROS ALENCAR et al. 2012** | **GÓES et al. 2012** | **HELMY et al. 2009** |
| **Results** |  |  |  |  |  |  |  |  |  |
| ***Baseline data*** |  |  |  |  |  |  |  |  |  |
| Records of food intake | Y | Y | Y | Y | N | N | N | N | N |
| ***Numbers analyzed*** |  |  |  |  |  |  |  |  |  |
| Number of animals in each group included in each analysis | N | Y | Y | Y | N | N | N | N | Y |
| ***Outcomes and estimation*** |  |  |  |  |  |  |  |  |  |
| Information of parasite load (mean±SD) | N | Y | Y | N | N | N | N | N | Y |
| Information regarding histopathological or immunological findings | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| ***Adverse events*** |  |  |  |  |  |  |  |  |  |
| Information regarding mortality | N | N | N | Y | N | N | N | N | Y |
| **Discussion** |  |  |  |  |  |  |  |  |  |
| ***Interpretation / scientific implications*** |  |  |  |  |  |  |  |  |  |
| Interpretation of the results, taking into account objectives, hypotheses, current theory and relevant studies | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Comments on the study limitations (sources of bias, limitations of the animal model, imprecision associated with the results) | Y | N | Y | Y | Y | Y | Y | N | Y |
| ***Generalisability/translation*** |  |  |  |  |  |  |  |  |  |
| Comments on how the findings are likely to translate to other species or relevance to human biology | N | Y | N | Y | N | N | N | Y | N |
| ***Funding*** |  |  |  |  |  |  |  |  |  |
| List of funding sources | N | N | N | Y | Y | Y | Y | Y | N |
| **Criteria completed (n)** | 21 | 26 | 28 | 29 | 22 | 23 | 25 | 21 | 27 |
| **Criteria completed (%)** | 58.3 | 72.2 | 77.8 | 80.6 | 61.1 | 63.9 | 69.4 | 58.3 | 75.0 |

ARRIVE criteria completed (Y) or not completed (N).

**Table S5 *(continuation)*.** Bias analysis (reporting bias) in all studies included in the systematic review.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies          Quality criteria** | **KNAUFT & WARREN, 1969** | **MAGALHÃES et al. 1978** | **MAGHRABY et al. 2005** | **NEVES et al. 2006** | **NEVES et al. 2007** | **OLIVEIRA et al. 2004** | **RAMOS et al. 2006** | **SIMÕES et al. 2002** | **Criteria completed (n)** | **Criteria completed (%)** |
| **Title** |  |  |  |  |  |  |  |  |  |  |
| Accurate and concise description of the content of the article | Y | Y | Y | Y | Y | Y | Y | Y | 27 | 96.4 |
| **Abstract** |  |  |  |  |  |  |  |  |  |  |
| Summary of the background, objectives, methods, main findings and conclusions | Y | N | Y | Y | Y | Y | N | N | 19 | 67.9 |
| **Introduction** |  |  |  |  |  |  |  |  |  |  |
| Sufficient scientific background | Y | N | Y | Y | Y | Y | Y | Y | 22 | 78.6 |
| Rational explanation of the experimental approach | Y | Y | Y | Y | Y | Y | Y | N | 26 | 92.9 |
| **Objectives** |  |  |  |  |  |  |  |  |  |  |
| Clear primary and secondary objectives | Y | Y | Y | Y | Y | Y | Y | Y | 27 | 96.4 |
| **Materials and Methods** |  |  |  |  |  |  |  |  |  |  |
| ***Ethical statement*** |  |  |  |  |  |  |  |  |  |  |
| Ethical permissions | N | N | Y | Y | Y | N | Y | Y | 16 | 57.1 |
| ***Study design*** |  |  |  |  |  |  |  |  |  |  |
| Number of animals used in the experiment | Y | Y | Y | Y | Y | Y | Y | N | 24 | 85.7 |
| Experiment performed as a blind controlled study | N | N | N | N | N | N | N | N | 0 | 0.0 |
| ***Experimental procedures*** |  |  |  |  |  |  |  |  |  |  |
| Diet composition | Y | Y | Y | Y | Y | Y | Y | Y | 27 | 96.4 |
| Duration of dietary strategy | Y | Y | Y | Y | Y | Y | Y | Y | 27 | 96.4 |
| Rationale for choice of dietary strategy | Y | Y | Y | Y | Y | Y | Y | Y | 27 | 96.4 |
| Control of dietary availability during the experiment | Y | N | Y | N | N | N | N | N | 6 | 21.4 |
| Use of standardized diet guidelines | Y | N | N | N | N | N | N | N | 4 | 14.3 |

ARRIVE criteria completed (Y) or not completed (N).

**Table S5 *(continuation)*.** Bias analysis (reporting bias) in all studies included in the systematic review.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies           Quality criteria** | **KNAUFT & WARREN, 1969** | **MAGALHÃES et al. 1978** | **MAGHRABY et al. 2005** | **NEVES et al. 2006** | **NEVES et al. 2007** | **OLIVEIRA et al. 2004** | **RAMOS et al. 2006** | **SIMÕES et al. 2002** | **Criteria completed (n)** | **Criteria completed (%)** |
| ***Experimental animals*** |  |  |  |  |  |  |  |  |  |  |
| Information regarding animal species | Y | Y | Y | Y | Y | Y | Y | Y | 27 | 96.4 |
| Strain of the animals | Y | Y | Y | Y | Y | Y | Y | Y | 27 | 96.4 |
| Sex of the animals | Y | Y | Y | Y | Y | Y | Y | N | 23 | 82.1 |
| Weight range of the animals | Y | Y | Y | N | N | N | N | N | 14 | 50.0 |
| Age of the animals | Y | N | N | Y | Y | N | Y | Y | 16 | 57.1 |
| ***Housing and husbandry*** |  |  |  |  |  |  |  |  |  |  |
| Housing of experimental animals (type of facility, type of housing) | N | N | N | N | Y | N | N | Y | 15 | 53.6 |
| Husbandry conditions (breeding program, light/dark cycle, temperature, quality of water) | N | N | N | Y | Y | N | N | N | 13 | 46.4 |
| ***Sample size*** |  |  |  |  |  |  |  |  |  |  |
| Number of animals used in each experiment and in each experimental group | Y | Y | N | Y | N | N | N | N | 14 | 50.0 |
| Explanation regarding number of animals and details of sample size calculation | N | N | N | N | N | N | N | N | 0 | 0.0 |
| ***Allocating animals to experimental groups*** |  |  |  |  |  |  |  |  |  |  |
| Details of animals allocation to experimental groups (randomization or matching) | N | N | Y | N | N | N | N | N | 3 | 10.7 |
| Treatment strategy: order in which the animals were treated and infected | Y | Y | Y | Y | Y | Y | Y | Y | 27 | 96.4 |
| ***Experimental outcomes*** |  |  |  |  |  |  |  |  |  |  |
| Clear experimental outcomes assessed | Y | Y | Y | Y | Y | Y | Y | Y | 26 | 92.9 |
| ***Statistical methods*** |  |  |  |  |  |  |  |  |  |  |
| Statistical methods used for analysis | Y | Y | Y | Y | Y | Y | Y | Y | 22 | 78.6 |
| Specification of the unit of analysis for each dataset | Y | N | Y | Y | Y | Y | Y | Y | 25 | 89.3 |

ARRIVE criteria completed (Y) or not completed (N).

**Table S5 *(continuation)*.** Bias analysis (reporting bias) in all studies included in the systematic review.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Studies           Quality criteria** | **KNAUFT & WARREN, 1969** | **MAGALHÃES et al. 1978** | **MAGHRABY et al. 2005** | **NEVES et al. 2006** | **NEVES et al. 2007** | **OLIVEIRA et al. 2004** | **RAMOS et al. 2006** | **SIMÕES et al. 2002** | **Criteria completed (n)** | **Criteria completed (%)** |
| **Results** |  |  |  |  |  |  |  |  |  |  |
| ***Baseline data*** |  |  |  |  |  |  |  |  |  |  |
| Records of food intake | Y | N | N | N | N | Y | N | N | 11 | 39.3 |
| ***Numbers analyzed*** |  |  |  |  |  |  |  |  |  |  |
| Number of animals in each group included in each analysis | Y | N | Y | Y | N | N | N | N | 9 | 32.1 |
| ***Outcomes and estimation*** |  |  |  |  |  |  |  |  |  |  |
| Information regarding parasite load (mean±SD) | Y | Y | Y | N | Y | Y | N | Y | 13 | 46.4 |
| Information regarding histopathological or immunological findings | Y | N | Y | Y | Y | Y | Y | N | 25 | 89.3 |
| ***Adverse events*** |  |  |  |  |  |  |  |  |  |  |
| Information regarding mortality | N | N | N | N | N | N | N | N | 6 | 21.4 |
| **Discussion** |  |  |  |  |  |  |  |  |  |  |
| ***Interpretation / scientific implications*** |  |  |  |  |  |  |  |  |  |  |
| Interpretation of the results, taking into account the study objectives and hypotheses, current theory and relevant studies | Y | Y | Y | Y | Y | Y | Y | Y | 27 | 96.4 |
| Comments on the study limitations (bias, limitations of the animal model, imprecision of results) | N | Y | N | Y | N | Y | Y | N | 13 | 46.4 |
| ***Generalisability/translation*** |  |  |  |  |  |  |  |  |  |  |
| Comments on how the findings are likely to translate to other species or relevance to human biology | N | N | Y | N | Y | N | N | N | 9 | 32.1 |
| ***Funding*** |  |  |  |  |  |  |  |  |  |  |
| List of funding sources | Y | Y | N | Y | N | Y | Y | N | 19 | 67.9 |
| **Criteria completed (n)** | 27 | 19 | 25 | 25 | 24 | 22 | 21 | 17 |  |  |
| **Criteria completed (%)** | 75.0 | 52.8 | 69.4 | 69.4 | 66.7 | 61.1 | 58.3 | 47.2 |  |  |

ARRIVE criteria completed (Y) or not completed (N).