THE 'REAPPRAISED' CHECKLIST FOR EVALUATION OF PUBLICATION INTEGRITY

Not all items will be applicable to every publication, and other questions might be relevant for individual categories.

R — Research governance

- ☐ Are the locations where the research took place specified, and is this information plausible?
- ☐ Is a funding source reported?
- ☐ Has the study been registered?
- ☐ Are details such as dates and study methods in the publication consistent with those in the registration documents?

E — Ethics

- ☐ Is there evidence that the work has been approved by a specific, recognized committee?
- ☐ Are there any concerns about unethical practice?

A — Authorship

- ☐ Do all authors meet criteria for authorship?
- ☐ Are contributorship statements present?
- ☐ Are contributorship statements complete?
- ☐ Is authorship of related papers consistent?
- ☐ Can co-authors attest to the reliability of the paper?

P — Productivity

- ☐ Is the volume of work reported by research group plausible, including that indicated by concurrent studies from the same group?
- ☐ Is the reported staffing adequate for the study conduct as reported?

P — Plagiarism

- ☐ Is there evidence of copied work?
- ☐ Is there evidence of text recycling (cutting and pasting text between papers), including text that is inconsistent with the study?

R — Research conduct

- ☐ Is the recruitment of participants plausible within the stated time frame for the research?
- ☐ Is the recruitment of participants plausible considering the epidemiology of the disease in the area of the study location?
- ☐ Do the numbers of animals purchased and housed align with numbers in the publication?
- ☐ Is the number of participant withdrawals compatible with the disease, age and timeline?
- ☐ Is the number of participant deaths compatible with the disease, age and timeline?
- ☐ Is the interval between study completion and manuscript submission plausible?
- ☐ Could the study plausibly be completed as described?

A — Analyses and methods

- ☐ Are the study methods plausible, at the location specified?
- ☐ Have the correct analyses been undertaken and reported?
- ☐ Is there evidence of poor methodology, including:
  - ☐ Missing data
  - ☐ Inappropriate data handling
  - ☐ '*P*-hacking': biased or selective analyses that promote fragile results
  - ☐ Other unacknowledged multiple statistical testing
- ☐ Is there outcome switching — that is, do the analysis and discussion focus on measures other than those specified in registered analysis plans?

I — Image manipulation

- ☐ Is there evidence of manipulation or duplication of images?

S — Statistics and data

- ☐ Are any data impossible?
  - ☐ Are subgroup means incompatible with those for the whole cohort?
  - ☐ Are the reported summary data compatible with the reported range?
  - ☐ Are the summary outcome data identical across study groups?
  - ☐ Are there any discrepancies between data reported in figures, tables and text?
  - ☐ Are statistical test results compatible with reported data?
- ☐ Are any data implausible?
  - ☐ Are any of the baseline data excessively similar or different between randomized groups?
  - ☐ Are any of the outcome data unexpected outliers?
  - ☐ Are the frequencies of the outcomes unusual?
  - ☐ Are any data outside the expected range for sex, age or disease?
  - ☐ Are there any discrepancies between the values for percentage and absolute change?
  - ☐ Are there any discrepancies between reported data and participant inclusion criteria?
  - ☐ Are the variances in biological variables surprisingly consistent over time?

E — Errors

- ☐ Are correct units reported?
- ☐ Are numbers of participants correct and consistent throughout the publication?
- ☐ Are calculations of proportions and percentages correct?
- ☐ Are results internally consistent?
- ☐ Are the results of statistical testing internally consistent and plausible?
- ☐ Are other data errors present?
- ☐ Are there typographical errors?

D — Data duplication and reporting

- ☐ Have the data been published elsewhere?
- ☐ Is any duplicate reporting acknowledged or explained?
- ☐ How many data are duplicate reported?
- ☐ Are duplicate-reported data consistent between publications?
- ☐ Are relevant methods consistent between publications?
- ☐ Is there evidence of duplication of figures?