frontiers | Publishing Partnerships

BJBS
British Journal of Biomedical Science

How to publish your research

IBMS Institute of Biomedical Science

A workshop from the British Journal of Biomedical Science team

Presenters and talk outline

Presenters

Simon Hoggart
Partner Journal Development Manager
British Journal of Biomedical Science

Anthony Rhodes
Editor-in-Chief, British Journal of Biomedical Science
Institute of Biomedical Science

Guy Orchard
Deputy Editor, British Journal of Biomedical Science
Consultant Biomedical Scientist, Synnovis Analytics, London

Talk outline

Simon Hoggart
Introduction to academic publishing and de-mystifying peer review process

+ AI and Publishing

Anthony Rhodes
How to structure your manuscript

BJBS
British Journal of Biomedical Science

1 Introduction to academic publishing - demystifying peer review process

Why publish?

For science

- Pass on new ideas and research findings
- Help others develop methods and hypotheses
- Important for industry or policy
- Protect scientific integrity



For yourself

- Tell people about your research
- Exchange of ideas
- Promote your research area
- Advance your career

BJBS
British Journal of Biomedical Science

What is peer review?

Peer review is the evaluation of scientific articles by other scientists who are experts in the field

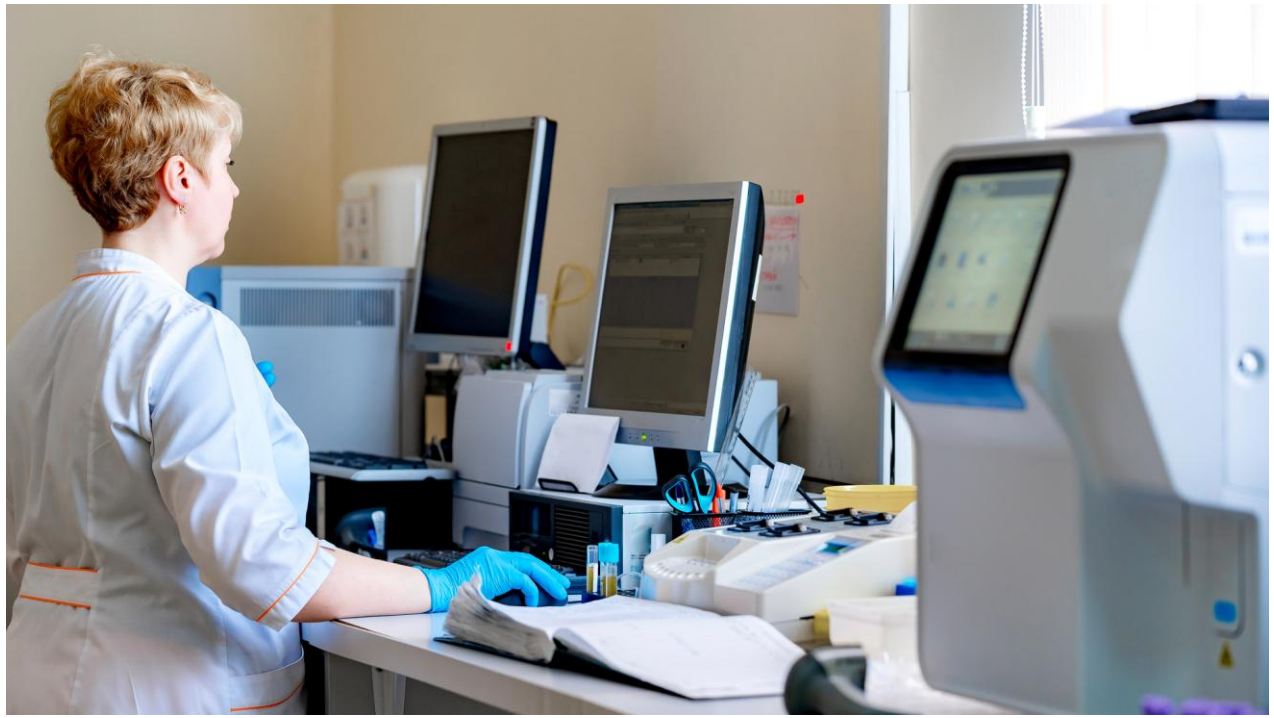
It aims to

- Improve the quality of articles that are published
- Provide an assessment of the science in the literature
- Assist the editorial decision-making process
- Act as a gatekeeper for unethical practice



How does it work?

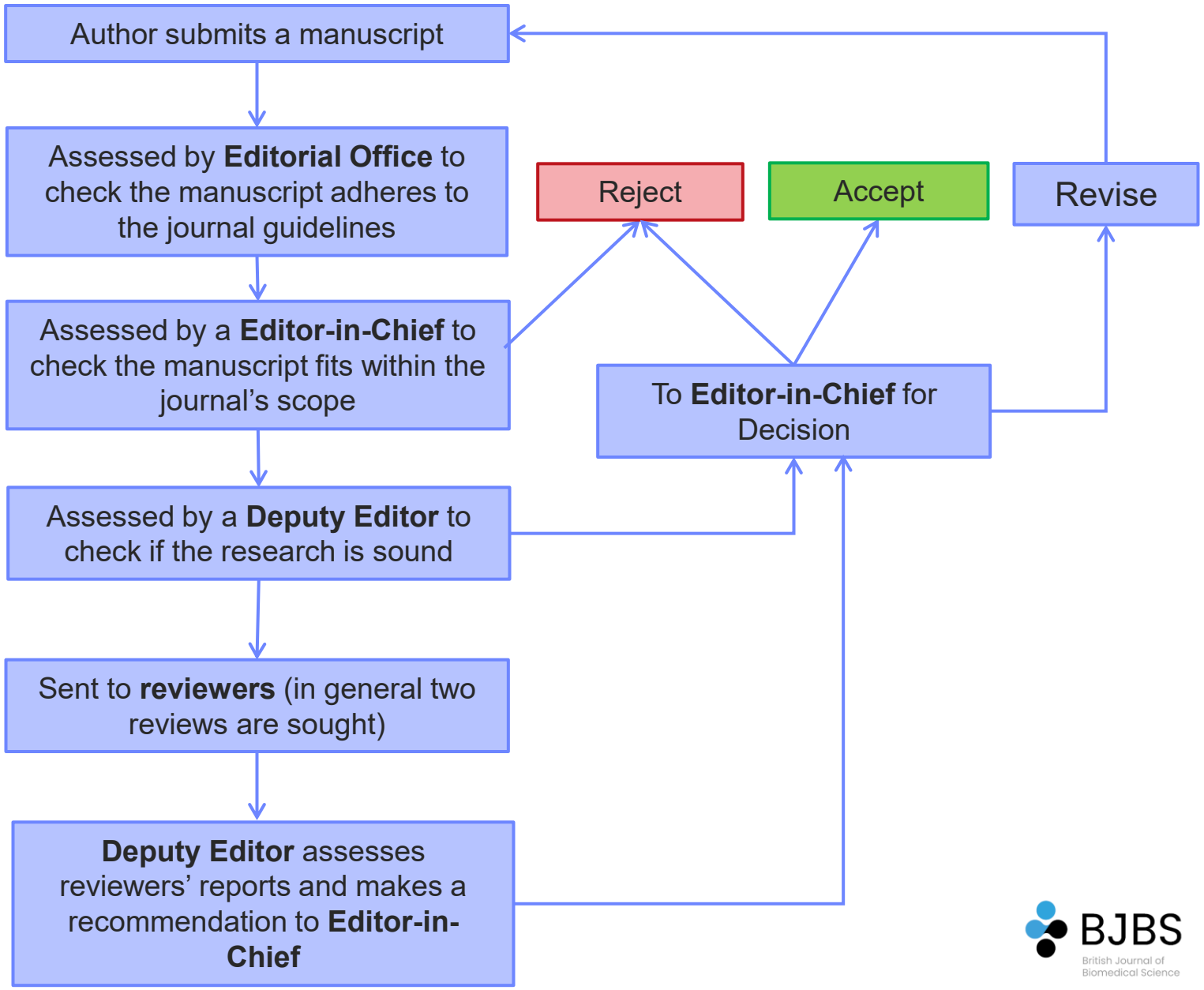
- Experts in the field are contacted by editors to assess submitted manuscripts
- Invited by email
- Usually have 2-3 weeks to review the paper
- Expected to perform an in-depth assessment of the manuscript
    - Think about whether it is suitable for the journal
    - Help the authors improve their work
    - Help the editors make a decision on the manuscript



The Peer review Proccess

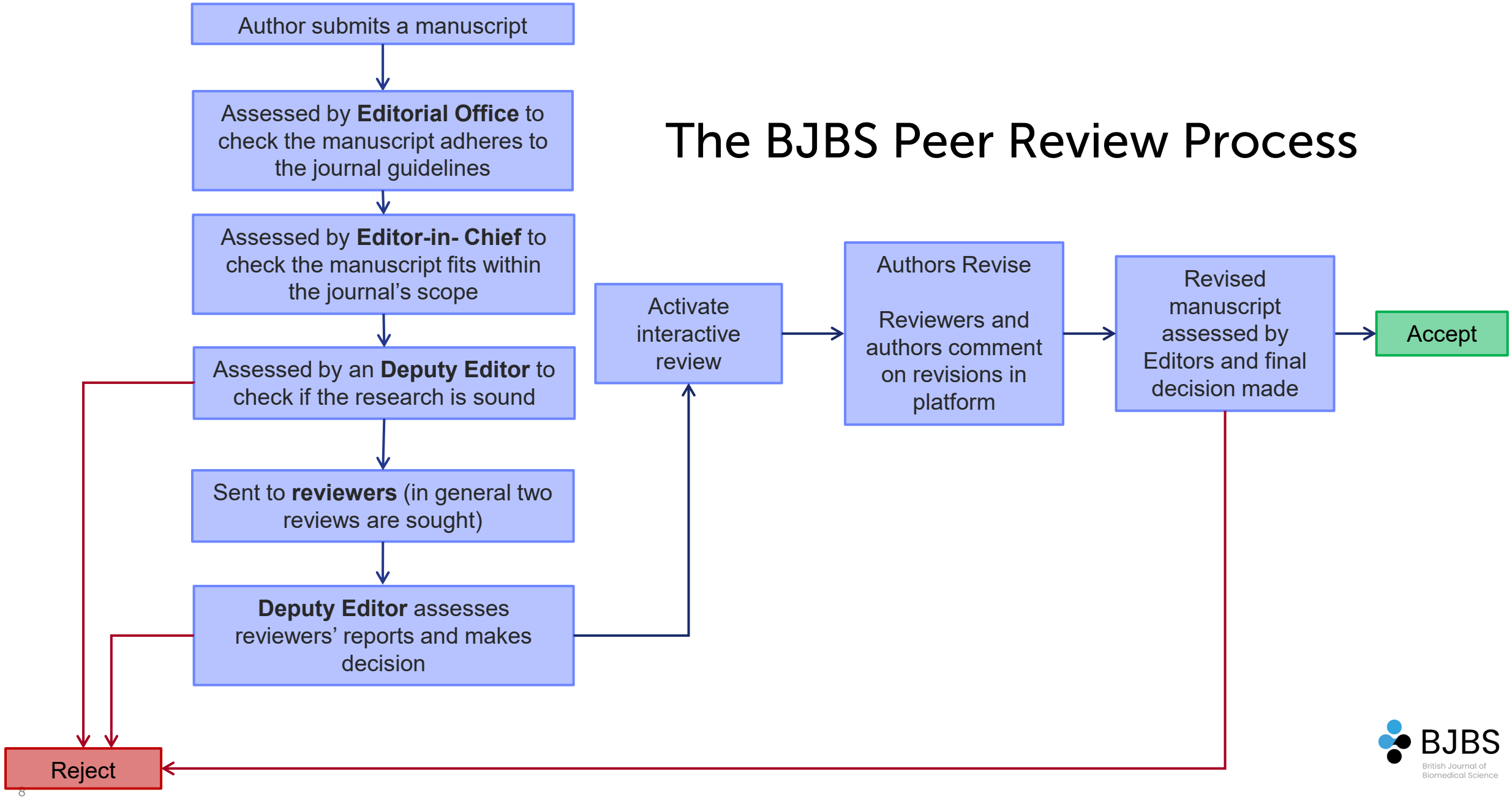
This is a generalized flow chart of the peer review process that the majority of journals will follow.

In the proceeding parts of this presentation, we will take a closer look at the roles of the **Editor-in-Chief** and the **Deputy Editor**



BJBS
British Journal of Biomedical Science

The BJBS Peer Review Process



BJBS British Journal of Biomedical Science

Jargon

Single blind/anonymised = authors can't see reviewer identities (Used by JAWS)

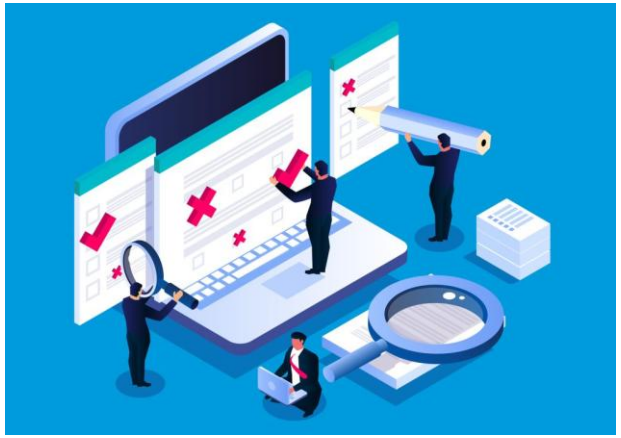
Double = ...and reviewers can't see author identities

Triple = ... and editors can't see author identities

Open = reviewers are identified by name

Transparent peer review = reviewer and editor reports are publicly available with the paper (can be used with any of the above models)

Collaborative review = Supervisor reviews together with a more junior member of the group (more on this later)



Jargon - Open access vs subscription

- **Open access:** The authors pay to publish the paper, if it is accepted.
  - Advantages; the whole world can read your paper and cite it.
- **Subscription Journals :** The authors don't pay a publishing fee but researchers have to pay to view it, 'pay to view'.
  - Only researchers/institutions subscribing to the journal can access your study.
- **Hybrid journals:** Many journals offer both options, with an embargo on 'pay to view' papers (usually 1-year from date of publication) before they also become 'open access' (though some stay forever behind a pay wall.



Journal Metrics

Impact Factor

- Most well known and prestigious
  - Average number of times articles from the journal published in the previous two years were cited during that year.
- Other Metrics
  - Scopus CiteScore
  - Indexation in important data bases including PubMed, Medline, DOAJ (for Open Access Journals)
- Article level metrics
  - Citations, views, downloads, altmetric score
- Most important is to choose a journal that your community reads and regularly publishes in

SJR SCImago Journal & Rank





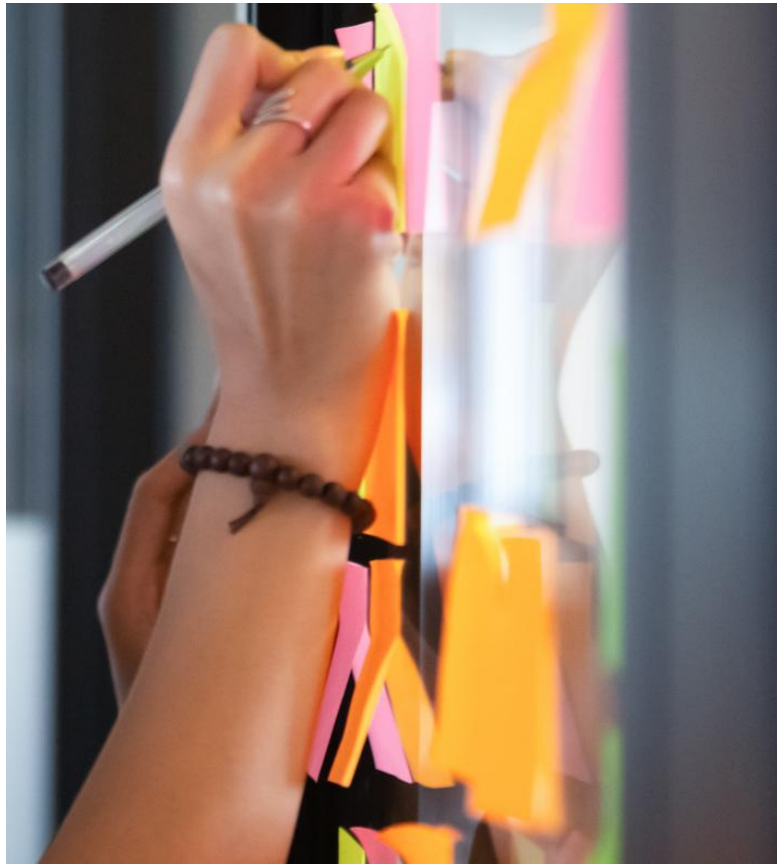
CiteScore™ metrics

Powered by Scopus®

BJBS
British Journal of Biomedical Science

It’s easier than it sounds!

- The written English does not need to be perfect. At BJBS the English is ‘polished’ after acceptance it what is called the copy-editing process
    - The English needs to be good enough for the Editors and reviewers to clearly understand your manuscript
- If you are not sure if your paper is suitable, we are happy to comment on an idea – just email us.
    - Or for Special Issues (more on these later) you can submit a summary of your idea for some feedback
- If your paper is not suitable for BJBS we will refer it to another journal at Frontiers so your effort in submitting is not wasted.



2

Artificial Intelligence and Peer Review

AI use by Authors

- Authors should not list a generative AI technology as a co-author or author of any submitted manuscript
- AI can be used with the following caveats:
  - The author is responsible for checking the factual accuracy of any content created by AI and ensuring the work is free from plagiarism
  - The use of AI must be acknowledged. Listing the name, version, model, and source of the generative AI technology.
  - Authors should upload all input prompts provided to a generative AI technology and outputs received from generative AI technology in the supplementary files for the manuscript.



AI use by peer reviewers

- Peer reviewers play a vital role in scientific publishing.
- Editors select peer reviewers because of their in-depth knowledge of the subject matter
- . Despite rapid progress, generative AI tools have considerable limitations:
  - they can lack up-to-date knowledge
  - may produce nonsensical, biased or false information.
- Further manuscripts may also include sensitive or proprietary information that should not be shared outside the peer review process.
- Therefore reviewers should **not use** AI in the peer review proccess
- **However**, publishers are actively exploring how safe AI tools could be used and these policies could change soon

AI Use by Publishers

Using artificial intelligence to ensure quality publications

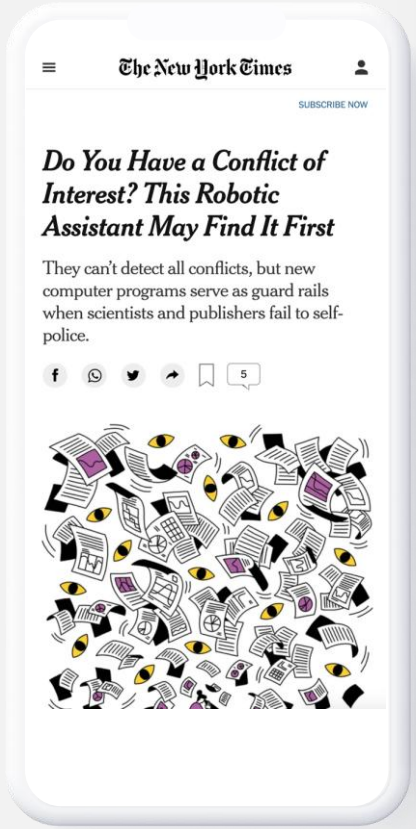
Matching the best experts to review a manuscript

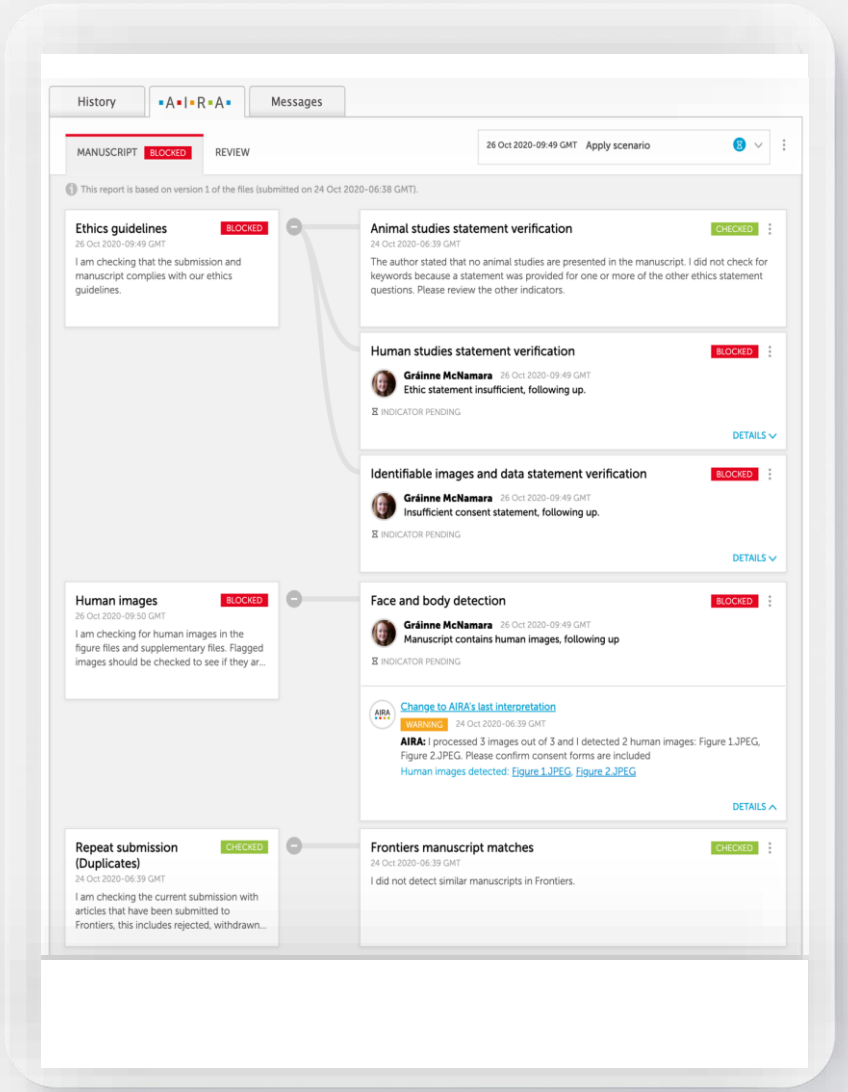
Conducting multiple automated and standardized checks

Identifying manipulated images with repeated pattern detection

Text overlap - iThenticate

FEATURED IN
THE NEW YORK TIMES





3

How to structure your manuscript

TITLE, ABSTRACT AND KEY WORDS

- **Title and key words:** Important as they will influence who will read your paper (if they search for key words)
- **Abstract:** Important as it will influence whether or not a person will read the whole of your paper, or choose to cite it.
- Write the abstract last (after you have written the other sections)
- The ABSTRACT usually has a word limit e.g. 300 words, and with the same structure as the article i.e. INTRODUCTION, METHODS, RESULTS, DISCUSSION sections.
- Very briefly, describe the most important aspects in each section, do not use any abbreviations.

INTRODUCTION

- Briefly present the background information that emphazises the importance of the research, what is known already, and a **specific area** that still requires investigation,
- The last paragraph should clearly describe the hypothesis to be tested or the aim of the study i.e. it should address the **specific area** mentioned that still requires investigation.

METHODS

- Clearly describe ALL materials and methods, to include details of the patients and the samples taken. Remember to include details of ethical approval by the institutional (or national) review board (ethics committee) and its approval number.

ETHICS

- All studies involving human subjects or their samples should comply with the declaration of Helsinki.
- The horrific experiments carried out by doctors on concentration camp victims in Nazi Germany was exposed at the Nuremberg trials of 1947, following World War II. Emerging from the Nuremberg trials was a code of ethics setting out ‘standards to which physicians must conform when carrying out experiments on human subjects’
- This is known as the Declaration of Helsinki, it has been updated several times, and globally all human research is expected to abide by the principles detailed in this declaration.
- Institutional and National Review boards approving ethics will abide by these principles when reviewing research proposals.

DOI:10.1111/j.1365-2125.2004.02103.x

The revision of the Declaration of Helsinki: past, present and future

Robert V. Carlson, Kenneth M. Boyd[1] & David J. Webb

Clinical Pharmacology Unit, University of Edinburgh, Western General Hospital, and [1]Medical Teaching Organization, University of Edinburgh, Teviot Place, Edinburgh, UK

Correspondence
Dr Robert Carlson, Clinical Senior Lecturer in Medical Ethics, Clinical Research Centre, Western General Hospital, Crewe Road, Edinburgh EH4 2XU, UK.
Tel: + 0131 537 1737
Fax: + 0131 343 6017
E-mail: r.carlson@ed.ac.uk

Keywords
justice, Nuremberg Code, placebo-controlled trial, publication bias

The World Medical Association's Declaration of Helsinki was first adopted in 1964. In its 40-year lifetime the Declaration has been revised five times and has risen to a position of prominence as a guiding statement of ethical principles for doctors involved in medical research. The most recent revision, however, has resulted in considerable controversy, particularly in the area of the ethical requirements surrounding placebo-controlled trials and the question of responsibilities to research participants at the end of a study. This review considers the past versions of the Declaration of Helsinki and asks the question: How exactly has the text of the Declaration changed throughout its lifetime? Regarding the present form of the Declaration of Helsinki we ask: What are the major changes in the most recent revision and what are the controversies surrounding them? Finally, building on the detailed review of the past and present versions of the Declaration of Helsinki, we give consideration to some of the possible future trajectories for the Declaration in the light of its history and standing in the world of the ethics of medical research.

METHODS

- Whilst your description of the methods should be as brief as possible, there should be sufficient detail to allow the methods to be repeated by another researcher reading the paper.
- Suppliers of all materials and equipment must be stated in brackets. E.g. Immunohistochemistry was carried out on the Benchmark Ultra platform (Ventana Ltd, Tucson, US).

METHODS (statistics)

- The last paragraph of the methods section should provide a description of the statistical tests carried out to test whether or not the results are significant, along with the probability (p) value employed ($p<0.05$, $p<0.01$)
- Typical examples of simple statistical tests used in pathology are; the T Test (differences in the mean) or Mann Whitney U (difference in the median), Cohen's kappa statistics (measure of agreement between two observers), Spearman's and Pearson's correlation coefficients, Chi squared (comparing proportions, %) in different samples. Most researchers now use statistical software such as SPSS to carry out these statistical tests, though the formulae are available if you wish to to calculate manually.
- PLEASE NOTE: The statistics are to there to test whether or not to accept the hypothesis or the significance of the results. The statistical analyses ARE NOT the Results. You should plan what statistical tests you will use (and whether 1-or2 tailed) before starting the investigation, and not after you get the results.

RESULTS

- The Results section should contain text that DESCRIBES the results, but DOES NOT DISCUSS them,
- The text should refer to tables and figures, with the text emphasising important findings (the tables and figures provide the detailed evidence)
- If there is more than one finding e.g. results of investigations on cell lines and results of investigation on clinical samples, they should be described under different sub-headings.
- The sub-headings can describe the investigation, or the main findings of the investigation e.g.
    - **Disease free survival of breast cancer patients with HER2 over-expression**

OR

- **Patients with HER2 positive breast cancers have poor survival at 5-years!**

DISCUSSION

- The opening sentence/paragraph usually refers to the importance of the research, as detailed in the INTRODUCTION,
- You should then sequentially discuss each of the results (if significant, just state that it was significant, do not refer to p values, which have already been adequately DESCRIBED in the RESULTS).
- Each of the results should be discussed in the context of what other researchers (publications) have reported i.e. do your findings agree with those found by others or disagree.
- DO NOT speculate on the relevance of your results or what might have been. Science reporting is not about speculation.
- The Discussion section should end with a concluding statement, which should summarise the main findings of your research and the impact that these have on the field,
- DO NOT make bold statements such as “This study shows that microRNA xyz is upregulated in aggressive breast cancer, and should be used as a marker of prognosis in the clinical laboratory”

REFERENCES

- For the majority of references try to mainly use papers published in the last 5 years,
- Note the reference style of the journal e.g. Vancouver style, and ensure you use that format.
- Ensure that every statement made when referring to known facts (to include methodology) has a citation in the main text, that is then listed in the reference section at the end.
- If using a citation style that refers to authors in brackets e.g. (Rhodes et al 2001), include the first author only, unless the paper has just 2 authors, then include both (Rhodes & Tran et al 2021). DO NOT include the authors initials in the citation in the main text i.e. it should be (Rhodes et al 2021), NOT (Rhodes A et al 2021), although the authors initials should be provided in the Reference list at the end of the paper.

ACKNOWLEDGEMENTS and DISCLOSURES

Statements, that usually appears after the reference section.

- ACKNOWLEDGEMENTS: Those that helped with the research or its reporting, that are not authors on the paper, to include organisations funding the research, and the name of any specific research grants supporting the research.
- DISCLOSURES: If any of the authors act as consultants for any of the suppliers of items employed in the research e.g. pharmaceutical companies

Do's and Don'ts

- Do write clearly in English, with good grammar and using short sentences
- Do not use the terms; 'I', 'we', 'they/them'.
- Avoid the over use of abbreviations as it will be annoying to the reviewer (and the reader) and ALWAYS write in full in the first instance if you do use e.g. polymerase chain reaction (PCR)
- Do not plagurise background information from published papers or use 'quotation marks' but think about what you want to say and write it in your own words (grammar can always be corrected later).

How do I list the authors on my paper?

- Convention:
  - First author is usually the one that has written the paper and/or carried out the majority of the research,
  - Last author, is traditionally the first authors supervisor/line manager,
  - Corresponding author is usually the first or last author.
  - Usually the first and corresponding author get most credit for the paper
- Some supervisors prefer to be placed as 2nd author, instead of last.
- The rest of the authorship is usually listed according to the amount that they have contributed, or alphabetically based on surname (family name).

What are factors that may result in rejection?

- Poorly written
  - English grammar,
  - Non scientific terms e.g. good, bad, always, never, fantastic etc.
  - Poorly designed
  - Lack of clarity in aim of the research
  - Research that will have little impact i.e. unlikely ever to change anything.
  - Difficult to understand
- Plagiarism
- 'Paper Milling' - research that never took place and has been manufactured by an agent or AI.
- Poor sample size and choice of statistics
- Lack of novelty.

What are the key factors that will influence acceptance of my paper?

- Novelty and impact, usually in a specific field
- Topical e.g. something current or in ‘the news’
  - e.g. COVID 19, toxic effects of vaping, checkpoint inhibition/immunotherapy of cancers, HER2 low, reproducibility of Ki67 staining.
- Why? Because editors and journals are looking for papers that will be highly cited,
- Clear statement as to the hypothesis being tested, or Aims of the Research. The aim should be clear to anyone reading the paper, including non-specialists.
- Previous record of publishing with the journal (and getting high citations)
- Numbers i.e. sample size and appropriate statistics
- Clearly written, accepted format and in good English



About the journal

The British Journal of Biomedical Science is the official journal of the Institute of Biomedical Science (IBMS)

Since January 2022, the journal began publishing under a Gold Open Access model. All articles will be immediately, permanently, and freely available to read, download, and access for people everywhere. Authors will retain copyright on all new articles published and

https://www.frontierspartnerships.org/journals/british-journal-of-biomedical-science

BJBS

Q&A

Contact us

Simon Hoggart
Partner Journal Development Manager
British Journal of Biomedical Science
simon.hoggart@frontiersin.org

Anthony Rhodes
Editor-in-Chief, British Journal of Biomedical Science
Institute of Biomedical Sciences.