

A guide to creating and running a preprint review club

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Rippling Ideas

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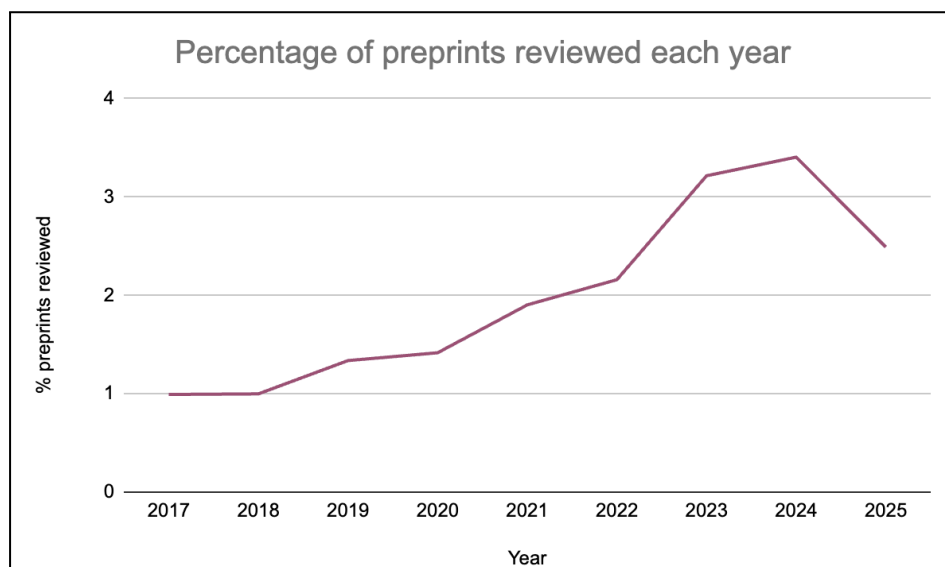
Introduction

Most life science labs and/or departments host a journal club. These may take different formats but generally the concept is the same; a group of researchers discuss a chosen article. This discussion remains within the group. Oftentimes journal clubs are used as a means of training Early Career Researchers (ECRs).

Unfortunately, traditional journal clubs are outdated and of limited benefit to ECRs, often led by the ECRs themselves and lacking a genuine training component. However, by simply changing to a preprint review club, you can transform the journal club concept, bringing it into the 21st century. Discussing and reviewing preprints is beneficial to science as the reviews can be posted and shared with the authors. Moreover, preprint peer review is growing, with around [20 dedicated platforms](#) to reviewing preprints.

This guide is intended to provide advice on setting up a local preprint review club. There will be differences between in-person and online groups in terms of management and administration (See our virtual journal club guide (coming 2026)). However, we strongly recommend that preprint reviews are posted to the [PREreview platform](#), whatever the format used for the review or journal club.

Preprint peer review is growing year on year but still only represents approximately 2% of all preprints. If all journal clubs converted into preprint review clubs this would drastically improve. This not only benefits the club members but also the wider scientific community and society.



Why form a preprint review club?

There are a range of benefits to reviewing preprints rather than already published articles.

1. Stay ahead of the curve

- a. Preprints appear months-years before journal articles. By reviewing preprints, club members are getting the earliest possible insight into the freshest research
2. Improve critical reading and reviewing skills
 - a. Review clubs are structured environments for practicing critical analysis skills. By reviewing work that has not already undergone journal-organised review, members strengthen these skills. If the club revisits subsequently published preprints, then they can get direct insight into the review process which is not possible in traditional journal clubs.
3. Build a habit of thoughtful and collaborative discussion
 - a. Preprints are ideal for open discussions as they are not viewed as “finished” work, authors often welcome feedback and the process is transparent.
4. Strengthen community and collaboration
 - a. Preprints thrive on community engagement, with preprint review clubs becoming part of this. These clubs help to improve publicly visible commentary, trust in research, and scientific quality.
5. The stakes are low but the value high
 - a. These clubs enable you to focus on learning rather than judgement, review what you want to and free from journal pressures. The outcome can also be enormously beneficial to preprint authors and the wider community.
6. Perfect for students and postdocs
 - a. Preprint review clubs help raise the profiles of members who add their names to the reviews. They also build confidence in reviewing, with direct feedback from authors.

Setting up a preprint review club

The first decision is whether you are converting an already existing journal club into a preprint review club or if you are setting up a brand new preprint review club. There are pros and cons to either route, though our ultimate aim is to replace all journal clubs with preprint review clubs.

Converting a journal club

If you are converting a journal club then there are effectively two essential changes you need to make:

1. Stop reviewing journal articles
2. Post the discussion online, linked to the preprint

The biggest hurdle is likely to be convincing the journal club lead to convert the club. Journal club leads may be academic staff members, lab heads or PhD students. There are a range of arguments that can be used to convince the journal club leads to convert to reviewing preprints. Some of the top reasons include:

- Preprint review clubs provide greater training for ECRs
- Reviewing preprints can help authors
- Posting reviews helps to provide context for readers
- Reviewing preprints is more ethical than reviewing for traditional publishers
- Preprint review clubs help ECRs build a profile and record of reviewing
- Reviewing already published work is of limited use

- Reviewing preprints helps to shift the mindset away from poor metrics and proxies such as journal name and back onto the individual article
- The focus on preprints also shifts the gatekeeping and “quality control” aspect of journals and onto providing feedback to help authors

Once you have convinced the journal club lead to convert to reviewing preprints, you need to decide on how you share the discussions (which we cover later in this guide).

Setting up a new preprint review club

When setting up a new preprint review club there are a number of things to consider such as the tools you need, the ideal number of people, the format and the time commitment. However, the first step should be deciding on the field(s) and focus of the club; is this club field specific or more broad? What is the purpose of the club?

Club format

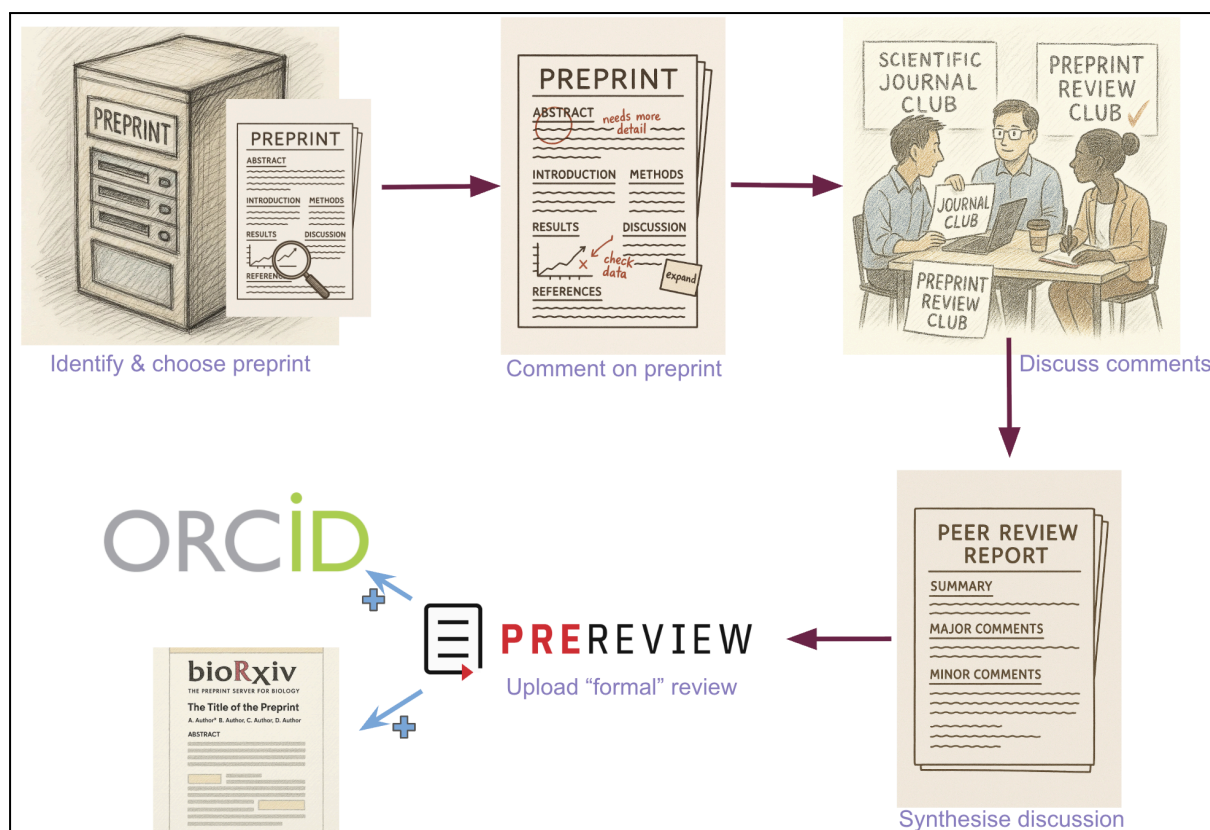
There are multiple formats that your preprint review club can take, from small groups to large, multi-institution clubs. One of the first decisions is to determine the size of your club. This will subsequently dictate if the club is in-person or virtual. Virtual clubs enable greater participation across institutions (for example the [immunology review club](#)), whereas in-person formats are best for lab groups or departmental clubs.

Each club will also need at least one club lead. Club leads will normally be responsible for selecting the preprint to review, synthesising review comments or discussion points and then uploading the review. Due to these responsibilities, we generally recommend multiple or rotating club leads. This also gives club members better training in the fuller peer review process and interacting with authors.

Organisational considerations

A key organisational consideration is how often the club will meet. Most review clubs will likely choose to meet once a month but some may do so weekly or on a different schedule. The other important consideration is *who* can attend the club. You may wish to hold open forums for anyone or restrict review clubs to particular career stages. For example, some journal clubs are only for PhD students and post-docs.

It's also important to determine *how* you will record the discussion. For example, you may want to have a single person who takes notes and then synthesises the review or have everyone comment in-real time using a tool such as [hypothes.is](#) or Google Docs. Alternatively, you could comment asynchronously prior to the meeting and then use the discussion to formulate the final review. With either option, we strongly suggest synthesising comments into a more formal-looking review that is uploaded to PRereview, as a comment or on hypothesis. We will cover these options more in a later section.



Choosing preprints

With over 1 million Life Science preprints hosted across 50 different preprint servers, how do you decide which to review? Preprint servers are utilised in different ways, with some lending themselves to review activities better than others. For example, those servers owned by traditional publishers often host preprints that are already under review and therefore are less suitable for a preprint review club. Alternatively, servers with greater community governance, such as bioRxiv/medRxiv, are better integrated with preprint review services and more likely to be utilised by authors who are not immediately submitting to a journal. Data demonstrates that most authors post their preprints at the time of journal submission or shortly before. For this reason, we suggest selecting preprints less than 1 month old to ensure that your review will still be helpful to the authors.

Our 'rules' for choosing preprints (they're more like guidelines really):

- | # | <u>Rule</u> | # | <u>Rule</u> |
|---|---|---|---|
| 1 | Select preprints posted within 1 month | 2 | Ensure preprints adhere to club members expertise and fields |
| 3 | Select preprints that are topical or those that have had lots of social media attention | 4 | Prioritise non-commercially owned preprint servers (e.g. bioRxiv/medRxiv) |

Selecting interesting preprints is essential to keep club members engaged. You must select preprints that are within the expertise and interests of club members. You may select preprints that describe a useful new technique (for example a club that frequently utilises

RNAseq would be more interested in developments in that technique than general cell biologists may be). Alternatively, you may select a preprint that is broadly interesting to a field, particularly if you have more mixed club members (for example a group consisting of cell and developmental biologists may be more interested in cell biology preprints).

To identify interesting preprints, consider browsing servers such as bioRxiv or even set up an RSS feed to deliver the newest preprints, by keywords, to your inbox. Social media can also be a great place to look for interesting new preprints. If a preprint is getting lots of attention and is relevant to your club, then it is an excellent choice - not only is it interesting and exciting to the club members but the resulting review helps to provide important context for the readers.

Box 1. Our tips for choosing interesting preprints

- Ensure that chosen preprints are timely, aim for those posted within a month of the review club
- Preprints should be relevant to the particular interests of the club members
- Look for preprints that have gained attention across social media
- Negative data or conflicting results can often stimulate good discussions

Another way to choose preprints is to utilise services such as PRereview which have a feature that allows preprint authors to specify that they would like reviews on their recent preprint. The benefit of this is that you are actively providing feedback to authors who are most likely to use that to improve their manuscript. They are also more likely to interact with the review and preprint club, providing feedback to the preprint club members; seeing direct use of the reviews can be a significant motivation booster.

Reviewing and discussing preprints

Review comments

There are a number of options for adding comments to the chosen preprint prior to the review club meeting and discussion. This could be individually or group comments that are added asynchronously.

Some people may prefer printing the preprint out and physically marking it up with comments, which is ideal for approaches where people comment individually prior to a group discussion. Alternatively, tools such as hypotheses.is enable club members to make line-by-line notes directly onto the preprint. This also allows for the group to add comments together, asynchronously. Afterwards, these comments could be made public, if that was desired. An alternative to hypotheses.is that does not require any “extra” knowledge is Google Docs or a collaborative Microsoft Word document. These options are more straightforward as most people will already be using them. However, they make line-by-line commenting more difficult (Appendix 2 provides a template doc, which requires copy-pasting the preprint into it prior to sharing with the review club).

Box 2. Tips for club members when making comments

- Try not to comment on grammar, particularly in a line-by-line manner as these are not often helpful comments
- Have confidence in your comments - you are an expert in your area
- Always ensure comments are constructive. They should not simply be dismissive
- Don't feel the need to comment on everything. Review clubs ensure that as a whole the review is comprehensive whilst allowing individuals to comment only on areas that they are experts in

Discussing the preprint

The following are questions that you should ask when reading the preprint independently and then also as part of a group discussion.

Main findings:

- What is the hypothesis?
- What are the main findings?
- What are the gaps that still need to be filled?
- What is the significance of the paper?
- Do the main findings actually address the hypothesis?

Revisions required:

- Are the results robust?
- Does the data sufficiently support the conclusions?
- What additional work might be needed to strengthen the conclusions?
- What are the flaws (if any) of the experimental and research design?
- Does the language need changing (for example, are the authors being hyperbolic)?

Transparency of reporting:

- Are the methods robust and rigorous?
- Are the statistical tests sufficient or is further analysis needed?
- Is the available data sufficient to evaluate the manuscript?
- Is the literature properly referenced?

Synthesising comments/discussion

Once the club has discussed the preprint, the club lead(s) should collate the discussion comments into a more “formal” looking peer review. There are three primary methods for collating the comments that we recommend (Table 1); Having a single note taker, using a live document, or simultaneous synthesis via a tool such as hypothes.is. For the purposes of a clean formal-looking peer review, one of the first two options is most likely the best.

	<u>Single note taker</u>	<u>Live document</u>	<u>Simultaneously via hypothes.is</u>
Description	One person collates	Everyone adds	Everybody comments

	comments and notes from discussions to synthesise into a “formal” review which is subsequently uploaded to a relevant platform.	comments and notes during a live discussion of the preprint.	via the hypothes.is tool. A synthesised review is publicly added to the top of the preprint.
Advantages	<ul style="list-style-type: none"> • Can be quicker than approaches with multiple “authors” • Better training experience in reviewing for the individual synthesising comments 	<ul style="list-style-type: none"> • All club members can add in-line comments and discussion points to the “formal” review 	<ul style="list-style-type: none"> • Comments are made directly onto the html preprint and can be shared publicly or privately
Disadvantages	<ul style="list-style-type: none"> • If the synthesis task regularly falls onto the same person, this can be a lot of work 	<ul style="list-style-type: none"> • Still requires someone to upload the review • Can be hard to jointly clear comments • Discussion points can get missed with no appointed note taker 	<ul style="list-style-type: none"> • Lots of comments could get very messy and difficult to make sense of • Difficult to collate into a formal-looking peer review as a group • Not useful to most readers without the hypothes.is plugin

The recommended structure for the “formal” peer review consists of 5 major sections; overview of the key findings, strengths, major comments, minor comments, reporting issues.

Example structure (a template is provided in Appendix 1)

Summary

Provide a 1-paragraph summary of the key findings from the preprint. This should cover the key question that the authors were addressing, their key findings and a brief summary of the thoughts of the preprint review club - did the authors succeed and provide convincing evidence?

Strengths

This is an optional element but can be very well received by authors. This is where the review club members can highlight the strengths of the preprint and what they thought the authors did really well.

Major comments

This section covers any major comments or aspects that need to be addressed. If there are any major problems with the preprint or conclusions that are not supported by the data then this is the section for those. These are aspects that the authors really should address.

Minor comments

This section covers any minor comments or aspects that would help improve the preprint. This could include minor communication changes, additional (but not essential) experiments or small issues, not impacting the conclusions.

Reporting issues

This section is for “reporting” issues. For example, data should be included in repositories, adhere to FAIR principles etc.

Synthesising the comments and discussion should involve:

- Removing or collating any duplicate points
- Incorporating in-line comments
- Expand text/comments where necessary
- Check that comments adhere to the FAIR principles and are not offensive

Reviews should be constructive and helpful to the authors. Ensure that you capture any contributor names/ORCiDs as the final uploaded review may require this information for attributing appropriate credit. If any reviewers have a conflict of interest this should also be communicated as part of the review synthesis. Your club can choose to post under a club name, individual member names or pseudonyms.

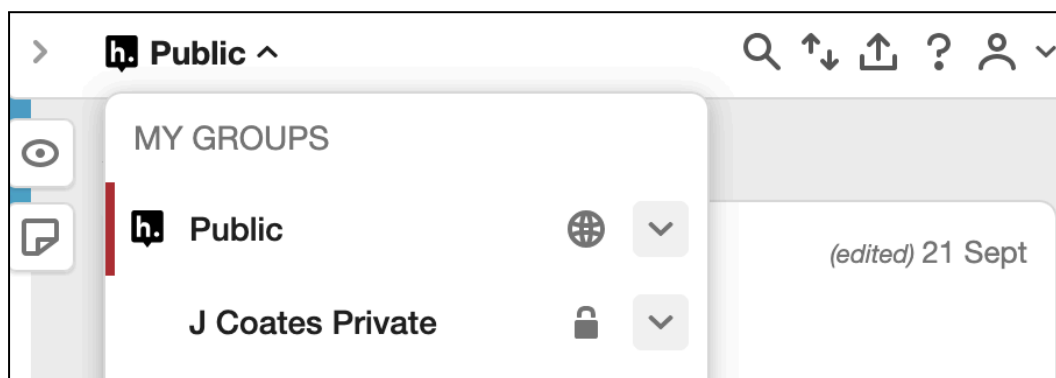
Uploading and sharing your review

There are a [number of options](#) available to share your finalised review. We cover the two we most recommend in this section.

If using Hypothes.is

If you are compiling your review in [Hypothes.is](https://hypothes.is) you effectively have three options. The first is to only include the final “professional” review as a comment on the preprint title. The second is to not include a final review but leave individual, line-by-line, comments on the preprint. The final option is a combination of both. We would always recommend having a final review that summarises all of the in-line comments and club discussion.

When you upload the final review, ensure that it is in the “Public” group so that anyone with a hypothes.is account can see and utilise the review.



If using PREREVIEW

It is suggested to utilise [PREREVIEW](https://prereview.org) to upload the completed preprint peer reviews; this is substantially more robust than simply adding reviews as comments or hosting them on your own website. PREREVIEW is a review hosting platform that enables anyone to upload a peer review of a preprint (and other outputs) as either an individual or a group. These reviews can be added with your name attached or through a pseudonym. PREREVIEW associates the written review with the preprint via the preprint DOI, ensuring that they are linked.

To upload a review, each club member will need:

- ☐ An [ORCID](https://orcid.org) account
- ☐ A [PREREVIEW](https://prereview.org) account

The workflow with PREREVIEW is as follows:

- Club lead uploads the final review, making minimal edits (ensuring that commenters are given credit or kept anonymous, as they prefer)
- During upload, club leads will add all review co-authors who will need to confirm that they authored the review
- A DOI is assigned with the review added to Zenodo and PREREVIEW. The review will also be linked to the preprint if it is on bioRxiv
- Crowd lead emails the PREREVIEW team to add the review to the appropriate club (if you have one on the PREREVIEW platform)

The process of uploading a PREREVIEW is very straightforward. Navigate to [PREREVIEW](https://prereview.org) and then click “Review a preprint”. Enter the DOI of the preprint to be reviewed and proceed. Select “I’ve already written the review” and continue. Copy the synthesised review into the

box and format as necessary. Select if you wish to use your name or pseudonym and continue completing the steps to submit the PRereview.

The screenshot shows the PRereview submission interface. Red arrows point to the following elements:

- Review a preprint** button in the top left.
- Which preprint are you reviewing?** section, specifically the DOI field containing `https://doi.org/10.1101/2020.05.22.111294`.
- How would you like to start your PRereview?** section, specifically the **I've already written the review** radio button.
- Did you review this preprint with anyone else?** section, specifically the **Yes, and some or all want to be listed as authors** radio button.

The interface includes sections for: **Open preprint reviews. For all researchers.**, **Paste your PRereview**, **What name would you like to use?**, and **Enter names and email address of the other authors**.

Reviews uploaded to PRereview will be included on the PRereview website, Zenodo and Siciety. You can also add a comment with the review (or link) to the preprint directly, although for bioRxiv/medRxiv the context toolbar accomplishes this automatically.

Creating your own PRereview club

PRereview enabled the creation of clubs on their platform that allows you to collate all reviews from your club together. To set this up, [contact the PRereview team](#).

Other options

Beyond the recommended options above, you can also share your review as a comment directly to the preprint, if the preprint server supports this function. Alternatively, you can upload the review directly to Zenodo and then share that link (although we would strongly recommend going through PRereview instead). You can also share the reviews on your own website.

Whilst we recommend sharing the reviews in as many places as you wish, we do not recommend deviating from PREview. By posting through this platform, your review gets a DOI and is added next to the preprint (for bioRxiv/medRxiv preprints). You also get recognition through ORCID. This provides maximum visibility and utility to your reviewing efforts.

After uploading your review

Once you have uploaded your review, there are a few things you should do to help maximise the visibility of your group's efforts. The first thing you should do is to contact the preprint authors, including a link to your review. This helps to alert them to the review and can lead to a productive discussion that provides a great training opportunity for club members. If authors do respond, it's important to ensure that you are professional and appropriate in your communications.

You should also share the review on social media to help provide context to the preprint for readers. This helps to not only draw attention to your review but also the preprint - benefitting everyone.

Ensure that you keep all review authors tagged and copied into any social media or email correspondence.

About the author

[Jonny Coates](#) holds a PhD in immune cell biology and is recognised as a leading expert on preprints and academic culture. He has a strong track record in advocating for preprint adoption and improvements to the culture within academia. He created and hosts the [Preprints in Motion podcast](#) and has featured on numerous media outlets including BBC radio, Nature and The Economist. In 2024 he founded [Rippling Ideas](#), an organisation dedicated to advancing preprint adoption, fostering trust in research and improving the culture of academia. This is achieved through advocacy, training and resource creation.

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Appendix 1 - Template review document (shared document)

Preprint details

{Preprint title}

Please provide comments on this preprint by {deadline}. Our club next meets on {date}

A guide to peer reviewing can be found [here](#) (Page 10 onwards).

Public review section

Any comments provided in this section will be part of the public preprint review.

Feel free to react or comment on existing comments, e.g. add +1 if you agree with a comment, or post a response if you disagree with a comment or feel more clarity is needed.

If you wish to be named on the public review please add your name here, otherwise we will keep your identity anonymous. Please also add your ORCID for full recognition in the final review posted on PRereview.

-

Brief summary of the study - a sentence summarizing the study and general comments that apply across the full paper

-

Major comments - Comments on the validity or strength of the methodology, experiments and analyses, strength of the conclusions

-

Minor comments - Clarifications to statements in the text, interpretation of the results, presentation of the data/figures

-

Comments on reporting - information on the statistical analyses or availability of data.

-

Conflicts of interest of reviewers

-

Inline commenting section

Please add comments on the preprint below via comments. You can add comments on the full paper, sections or only individual fragments. Any comments added here will be reviewed for inclusion in the public review section if relevant, but will not be posted publicly in any way that can identify the commenter for individual comments.

Please focus on the scientific content of the preprint rather than grammatical errors or concerns.

We encourage you to react or comment on other reviewers' comments:

- *if you agree with a comment, please add +1*
- *if you think more clarity is needed or feel concerns noted may not be relevant, please indicate so via a reply to the comment. Please do not resolve comments, the crowd leads will do this after commenting is closed.*

Appendix 2 - Template email

Inform author their preprint has been reviewed

Dear Dr xxx,

I am writing from {preprint review club name} in relation to your recent preprint '{Preprint title}'.

We are a local preprint review club that chooses interesting preprints to discuss ever {week/month}. I am writing to let you know that we have selected your preprint as part of our club and we have completed a collaborative review on the preprint. We wanted to share the synthesized review with you. This summary has been publicly posted on PREreview {LINK} and it will also be included next to your preprint on {preprint platform}.

Thank you for sharing your work as a preprint. We hope our comments are helpful to you.

Kind regards,