



Journal Club

How to lead a journal club

Darrell N. Kotton

<http://www.bumc.bu.edu/kottonlab/>

Boston University

February 23, 2021

Journal Club tips

From NIH's "Tips for journal club first timers."

<https://irp.nih.gov/blog/post/2015/03/5-tips-for-journal-club-first-timers>

1. Know the background material.

Prepare beforehand for your journal club presentation by knowing the research that has preceded and is related to the paper you will be presenting. This will make your discussion more informed and effective. Of course, it is likely impossible to know everything that would relate to your journal club presentation, but even a little bit of background information is helpful.

2. Make your presentation concise.

Every paper has many details about methods, results, discussion, future directions, etc. It is very helpful to give your audience the general flow of the entire paper and research before adding in all the details.

3. Simplify unfamiliar concepts.

Journal clubs often have members of varying backgrounds. Hence, not all concepts will be familiar to everyone in the group. It can be helpful to give a short summary of techniques and results. Detailed explanations can be provided later on, because the primary focus of presenting the paper should be giving an overview of the research.

4. Ask yourself questions about the paper before you present.

As the presenter, you may be the semi-"expert" on the paper, but as you get to know the research, you may discover some questions you have about the methods. Share with the group the questions you came across yourself and any answers you may have found to address them.

5. Ask specific questions to the members of the journal club.

When entering into discussion time, ask the group for their thoughts on specific topics found in the paper to create a starting point for conversation about the paper. Questions can be about methods, results, general ideas, and much more!

Preparing your journal club: reading the paper thoughtfully

Papers can have different formats (e.g. long papers vs short papers)

Most papers have the following headings, even if they are not labeled

- Title, authors, and abstract
- Introduction
- Results (refers to figures in order)
- Discussion/Summary
- Methods
- References
- Supplemental figures (supporting data: more detailed)
- Acknowledgements/statements of relevant conflicts of interest

The most important section is.... all of the above, but you don't have time to present it all in detail at a journal club

Preparing your journal club presentation by sections

Focus on a few introduction points and the key figures (not every panel from every figure has to be shown)

- Share with audience why you chose the paper
- From the introduction: Establish the question, goal, or authors' hypothesis
- Find the relevant and most important references in the introduction and look them up if needed
- Is the rationale sound, interesting, important?
- A summary sentence or paragraph of the key findings/conclusions ends the introduction – will the results section and data/figures actually convince you of these conclusions? Good writing is not enough; the actual data/figures need to be well controlled and convincing to you

Results (and methods that produced the results): the substance of your journal club

- Show key figures in order (don't have to show every panel of every figure):

The figures tell the same story that you tell in your presentations:

e.g question/hypothesis, method, results/interpretation

Discussion: present the authors main conclusions (include a cartoon of their model if they have this as a figure)

End with your critique – did you like it? Did you agree with the main conclusions (and title)?

what was good,

what was unconvincing,

what could be better?

Reading, writing, or critiquing papers go hand in hand.
It takes practice and is not an innate skill
Here are some resources:

A good resource online
from the Hogan Lab:

WRITING A RESEARCH PAPER:

*Some general guidelines
for students and postdocs*

Brigid Hogan

- **Hogan Lab free download:**

https://static1.squarespace.com/static/5541274ee4b00505f0712f77/555250d8e4b0194c69e5fba8/555250d8e4b0194c69e5fbac/1396116084857/writing_a_research_paper.pdf

- **Stem Cell Technologies journal club preparation checklist:**

<https://www.stemcell.com/forms/journal-club-toolkit.html>

- From NIH's "Tips for journal club first timers."

<https://irp.nih.gov/blog/post/2015/03/5-tips-for-journal-club-first-timers>

Journal Club Presentation Checklist

Introduction

- Title slide containing the paper's title, journal, publication year, and authors
- Reasons you chose the paper
- Background information necessary to understand the study

Paper Summary

- Author's hypothesis
- Summary of methods
- Key results and figures
- Author's main discussion points
- Author's conclusion and future directions

Paper Assessment

- Significance or relevance of the findings
- Strengths of the paper
- Weaknesses of the paper
- Overall critique

Discussion Points

- Related papers with similar or opposing conclusions
- Personal thoughts, opinions, or lessons learned
- Discussion questions for the audience
- Invitation for questions

Stem Cell Technologies journal club preparation checklist:
<https://www.stemcell.com/forms/journal-club-toolkit.html>