
Writing (and revising) papers

Why is it important?

- No publication, no project
 - Make information available for others
- No publication, no promotion
 - Yardstick of productivity
- No publication, no funding
 - What have you done for me lately?

Publishing your work is vital for success

Writing (and revising) papers

Authorship

- Decide on authors, and their order, as early as possible
 - Preferably before starting the project
 - Authors should only include those who have made a substantive *intellectual* contribution to the project reported, and can defend the data and conclusions publicly
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Criteria for authorship

- Generate at least part of the *intellectual* content
 - Conception or design of the work
 - Data analysis and interpretation
- Draft, critically review or revise the *intellectual* content
- Approve the final version to be submitted

All three criteria should be satisfied

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Choosing the right journal

- Target audience
 - “Who would be interested in reading this paper?”
 - Import and significance of the findings
 - Seek input from colleagues
 - Decide on the journal before beginning to write
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Structure – the title

- Key element that advertises the paper's contents
 - Be as specific as possible
 - Include main aspects of study including model used
 - Can be used to indicate an ongoing series
 - Often helpful to choose the title when the paper is almost complete
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Structure – the abstract

- Should be complete, and intelligible without reference to the text
 - Ordinarily, should not include actual data values
 - Compare with a meeting abstract
 - Avoid abbreviations and citations
 - Write it at the end!
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Structure – the introduction

- Prominently state the hypothesis that prompted your investigation
 - Briefly review the pertinent literature that led to this work
 - Conclude at the starting point for the current investigation rather than including a summary of the data obtained
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Structure – the methods section

- A good place to start for beginning authors
 - Should be the easiest section of the paper to write
 - Should permit another to repeat your work, but need not be exhaustive
 - OK to cite previous methods of your lab or others
 - Identify sources of key reagents
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Structure – the results section

- The heart of the paper
 - No need to follow chronology of study
 - Rather, provide a logical progression and tell a story
 - Provide only enough interpretation to lead reader from one experiment to the next
 - Avoid lengthy analysis and comparisons to the work of others here
 - Avoid duplication of information between text, figures, legends and tables
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Structure – the discussion section

- Length proportional to amount of new information presented
 - Avoid redundancy with results section
 - Parallel structure of results section plus introductory and concluding paragraphs
 - Avoid undue speculation and claims of primacy
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Structure - references

- Finalize at the end using a software package
 - Ensure correct formatting for journal of submission
 - Most papers can be adequately referenced with less than 50 citations
 - Check that introduction and discussion are not out of proportion to new information presented
 - Avoid excessive self-citation, and check all citations for accuracy
 - Remember who your reviewers might be!
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Stylistic issues

- First or third person?
 - Latter is more formal, but former often makes for a livelier read
 - Back to basics
 - Use an outline – know where you're going
 - Carefully consider issues of sentence and paragraph construction, run-on sentences
 - Don't use five words when one will do
 - Allow trainees to develop their own style, while maintaining quality control
 - Read, write and review to learn what works
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The submission process

- Read the instructions
 - Provide all requested items
 - Don't make enemies in the editorial office
 - Ensure appropriate file format for on-line submission, including figures
 - Is the on-line version the one you want reviewers to see?
 - Confirm receipt; enquire if a decision has not be received after six-eight weeks
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The revision process

- If your paper is returned for revision, you are in good company
 - It's OK to get mad, but don't act on it
 - Try to understand what the reviewers are really saying
 - If the reviewers did not understand your work, is it because you did not present it clearly in the first place?
 - Look for clues from the editor as to the extent of revision needed
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Responding to reviews

- Complete additional experiments if needed
 - Resist temptation to prepare an impassioned response to points with which you disagree
 - Stand firm if that is truly the right thing to do
 - But do so diplomatically, backed up with citations
 - Sincerely thank the editor and reviewers for helping you to improve your work
 - They have invested a lot of time, mostly on a voluntary basis
 - Ask a neutral colleague to review your response
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Handling rejections

- If a very major revision is called for, or if your paper is rejected, consider another journal
 - Was your initial selection of journal part of the problem?
 - Avoid LPU's
 - Consider doing more work to make your study more substantive
 - More papers are rejected on the basis of priority than because of scientific flaws
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Closing thoughts

- Do the study with the paper in mind
 - Seek as much input from colleagues as possible
 - Need to see the wood as well as the trees
 - Remember who the reviewers might be
 - If unsure about ethics, ask!
 - Practice, practice, practice!
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