Writing to get published

The Dos and Don’ts of manuscript preparation

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The Scribe, Arthur Szyk

What can I tell you about manuscripts?

Key concepts that you need for writing a good manuscript

Common stumbling blocks that hinder manuscript prep

Things that get missed in the rush to submit

Writing a good manuscript

3C’s of manuscript craft

Centralize your ideas, data, protocols

Contextualize: interpret, hypothesize, sell

Criticize your claims, relevance, wording

CENTRALIZE

Crafting a story: strategy

Define your central messages

Think it out by figures; Supplementary materials correspond to this

‘Organization points’ document:

1. ‘Forum’ for ideas and issues about the paper

2. Reference point/sanity check for when paper gets hacked to bits

3. Flags for missing information/background/data

Centralizing data and text: Google Docs, Dropbox

CONTEXTUALIZE
Crafting a story: Define your selling points

- **Motivation**: Why is your study worth doing? Which areas of study could it potentially benefit?

- **Novelty**: What makes your study new and distinct from others in the field?

- **Implications**: What has your study contributed to the field, and what does that mean for others in related areas of study?

- **Scope**: What makes your study appropriate for the journal you're targeting? Why would their readers be interested?

ALL of these need to be in cover letter, abstract

CONTEXTUALIZE
Why should anyone care about your work?

- **Nobody is going to care about what you did if they don't care about why you did it**

- **A proper introduction** is MUCH more important and less obvious than you think

- **Goal: Convince audience problem is interesting**
  Requires sufficient understanding of problem
  Provide adequate background!

- **Context is key:** What's going on in the field? Where does your work fit in?

- **Define your questions** to provoke interest

- **Each element of manuscript should be clear on motivation for addressing problem**

CRITICIZE

Manuscript quality control: how to revise like a pro

Clarity is king and accuracy is queen
Make sure your (few) key messages come across clearly and correctly, verbally and visually

Consistently re-evaluate your claims and how you support them
Includes providing data accordingly

External ‘reviewers’ (outside of your project/area)
Use lab meetings, department seminars, thesis advisors, friends,…

Don’t be sloppy!
Reasons for rapid rejection include bad grammar
Referees are people too: extra effort to make things look nice helps!
Streamline your fonts, figures, formatting

Common stumbling blocks in manuscript prep

People issues
Collaborations, authorship, communication

Data handling
Reproducibility, access, statistics

Rushing to submit
Lots of perfectly obvious steps can be forgotten

People issues: **managing your collaborations**

Authorship
Decide your criteria, pick big spots early as possible, be open to negotiations (and conflict)

Check what words are being put in your mouth
How is your data used? Matter of ethics, reputation, good scientific practice

Communication
Loop in first/senior authors, communal decisions and updates

Rigour issues: **handling your data**

Raw data
Centralize, make accessible pre- and post-publication, only publish once!

Transparency on analysis
Sweave / README

Statistical rigour and clarity required by more journals
Save yourself the trouble by justifying everything

Things that get missed in the rush to submit

Proper acknowledgements of contributors
People, funders, core facility support, affiliations (where the work was done), previous work that made the study possible (note your potential referees)

Proper finalization and authors' approval
Circulate WELL BEFORE submission, do NOT wait until proofs

Proper methods sections
Eliminating copy-paste, citing, clarity on what was actually done

Proper citation review
Make sure credit is given to those who deserve it - including potential reviewers!

Things that get missed in the rush to submit

Anticipation of the time required to submit
Familiarize yourself with submission system; double-check clarity, accuracy, formatting

Conforming to journal's formatting guidelines
Read the IFA as soon as you choose a journal!

Backup plan for rejections
Line up a few options to save time

Resources on preparing manuscripts

Guidelines and practices in manuscript writing
International Committee of Medical Journal Editors:
http://www.icmje.org/recommendations/
Committee of Publication Ethics: http://publicationethics.org

Plagiarism
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3558294/
Viper for checking plagiarism: http://www.scanmyessay.com/
*Note: some checkers want to keep your text, so watch out!

Reproducibility and transparency
NPG Checklist: http://www.nature.com/authors/policies/checklist.pdf
Nature editorial: http://www.nature.com/news/announcement-reducing-our-irreproducibility-1.12852
PLoS Policy: http://blogs.plos.org/everyone/2014/03/08/plos-new-data-policy-public-access-data/

Resources on good scientific writing

Good writing style:
The Elements of Style, William Strunk, Jr. (1918) http://www.bartleby.com/141/
On Writing Well, William Zinsser

Online writing courses: www.training.nih.gov/writing_courses

San Francisco Edit: http://www.sfedit.net/newsletters.htm

The Guardian: http://www.theguardian.com/higher-education-network/blog/2013/sep/06/academic-journal-writing-top-tips

Internet resources (lists):
http://pubs.acs.org/subscribe/archive/ci/31/i02/html/02inet.html
http://nihlibrary.campusguides.com/content.php?pid=380811&sid=3131386

Thank you!

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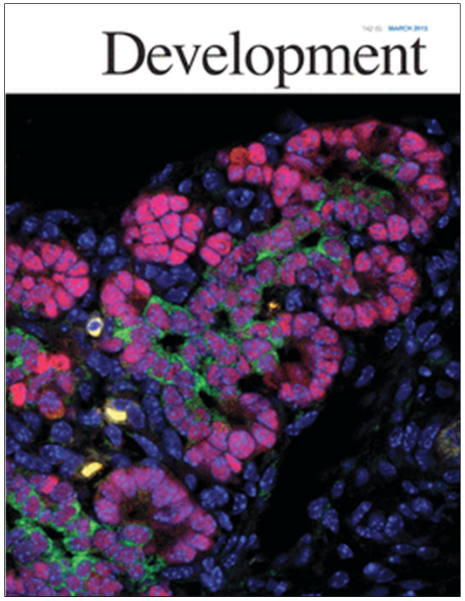
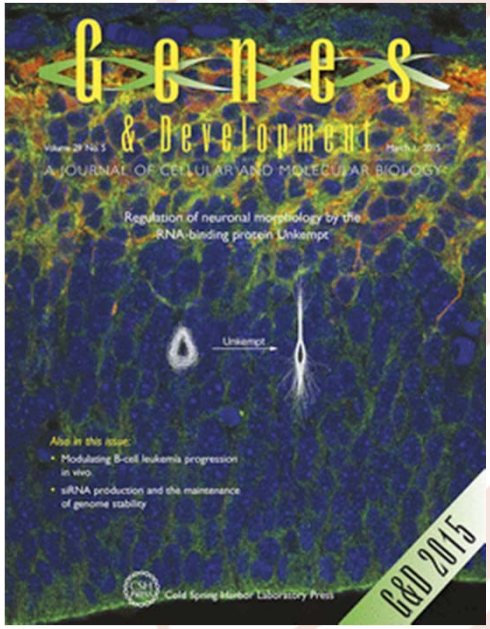
PNAS
Intestinal epithelial cell inflammation


Development


GENETICS
GSA


Genes & Development
A JOURNAL OF CELLULAR AND MOLECULAR BIOLOGY
Regulation of neuronal morphology by the RNA-binding protein Unkempt
Unkempt
Also in this issue:
• Modulating B-cell leukemia progression in vivo
• siRNA production and the maintenance of genome stability
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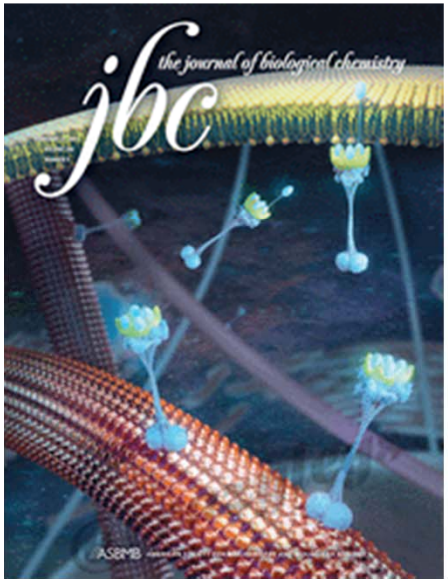
the journal of biological chemistry
jbc
ASBMB


G3
Genes | Genomes | Genetics
GSA

Authors say they consider TWO primary factors in deciding where to submit:

1. **Fit** – Where does the paper best fit/find the right audience
2. **Impact factor** – If coauthor is seeking promotion/tenure, this jumps to #1

A few considerations

Editorial Board, including Editor-in-Chief

- are they my colleagues and peers?
- what kinds of interactions do I (and have my peers) have with editors at a particular journal?
- does the editor offer guidance on what we need to do in a revision, or reasons why the ms was not suitable?
- how are the editors chosen?

- where are the articles in my **Bibliography** published?
- what are my peers/PI reading?
- where do my peers/PI/**competitors** publish?
- what do I see in **PubMed/related publications**?
- what **journals are publishing papers** related to this topic?
- speed – how long to first decision? to final decision? to publication? Early Online?
- quality of peer-review – are the reviews useful in improving my paper and its impact? Are the comments constructive?

Stats like article metrics (downloads) and alt+metrics (social media activity, facebook, twitter, news stories)

Abstract

Many scientists complain that the current funding situation is dire. Indeed, there has been an overall decline in support in funding for research from the National Institutes of Health and the National Science Foundation. Within the *Drosophila* field, some of us question how long this funding crunch will last as it demotivates principal investigators and perhaps more importantly affects the long-term career choice of many young scientists. Yet numerous very interesting biological processes and avenues remain to be investigated in *Drosophila*, and probing questions can be answered fast and efficiently in flies to reveal new biological phenomena. Moreover, *Drosophila* is an excellent model organism for studies that have translational impact for genetic disease and for other medical implications such as vector-borne illnesses. We would like to promote a better collaboration between *Drosophila* geneticists/biologists and human geneticists/bioinformaticians/clinicians, as it would benefit both fields and significantly impact the research on human diseases.

functional genomics | *Drosophila* | human | genetic disease | whole-exome sequencing | GWAS | public health | funding | collaboration

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choosing.... (cont'd)

- Visibility – Opportunity for highlights, promotion on FaceBook, Twitter, social media, notice to your institutions, scientific press, cover art

- Cost of publishing – how important is this to me and my lab?

- Short- and Long-lasting impact – is my paper going to be read and cited soon? for years to come?

choosing.... (cont'd)

Imprimateur – who publishes the journal? Society, non-profit, for-profit, specialized v. general, how long in existence, business model? Who owns the publisher?

Process – submission, review, appeals – is it clearly explained on the IFA, or will the editorial office or editor fill you in?

Does journal comply with funder access policies (e.g. open access option or freely available after 12 months, etc.) and deposit your article into PubMedCentral on your behalf?

How can I make the process easier?

- Read the Instructions for Authors! Saves time, decreases the chance of rapid rejection, informs you of process.
- Does the journal offer presubmission inquiries?
- Don't be afraid to contact the editorial office if you need guidance
- Data – is it all there? Is it submitted in machine-readable formats (not as a figure or PDF)?
- Apps or software: most journals want to have access to that, including simulation data. Test your software!
- Cite, cite, cite! Ensure that the literature is fully covered in your references section

How can I help my paper to stand out, and make the editor's job easier?

Tell the story of your research and findings

Write a compelling cover letter and author summary – tell the editors why your paper is interesting and important, and how it stacks up against the journal's scope and criteria for acceptance

Write the abstract (and the paper) concisely, in plain language – make it understandable, clear, accessible; don't overstate your conclusions

Sticky wickets....

Should I recommend or exclude reviewers?

What's going on with my paper? I **really** need a decision for my (fill-in-blank: tenure committee, promotion committee, PhD, last month at this Univ., competitive situation)!

What defines a conflict of interest (with choosing an editor or recommending or even acting as a reviewer)?

Can I deposit my manuscript in a preprint server (bioRxiV, arXiv)?

What if I'm worrying about getting scooped? Can I ask for the journal to rush?

What if I do get scooped while my paper is in review?

It is ethical to……

check COPE http://publicationethics.org/

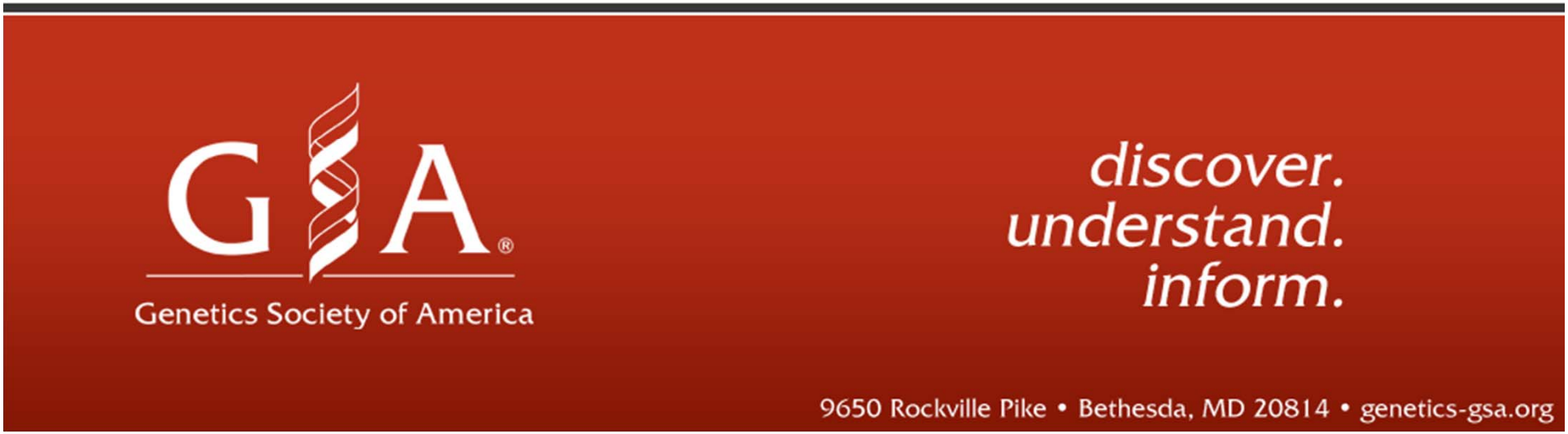
offers International Author Standards/Guidelines:

- ✓ authorship and acknowledgment
- ✓ honesty, balance, originality
- ✓ transparency
- ✓ accountability and responsibility
- ✓ adherence to peer review and publication conventions

Peer Review

Mariana Wolfner

some slides borrowed from Mark Johnston



The Peer Review Process

- Aims to ensure that the paper is high-quality, correct, results are reproducible, literature is fully covered, data are made available.
- Mechanism varies among journals (double-blind, single-blind, open)
- Authors receive detailed feedback from experts in the field.
- Process can identify errors or gaps that authors may have overlooked.
- Editors and reviewers help improve accessibility.

The Peer Review Process (cont'd)

- Gatekeeper may rapidly-reject (scope mismatch, poor grammar, lack of data, significance, novelty).

↓

- If manuscript passes muster, it is assigned to Senior, Editor (SE), then Associate Editor (AE*).

↓

- SE and and then AE determine whether manuscript merits peer-review.

↓

- Two (or more) reviewers are invited**, 14-day turnaround requested.

*you can give your preference

**you can help! Suggest reviewers (knowledgeable, fair, no COI); if necessary you can exclude reviewers also, within reason.

The Peer Review Process (cont'd)

- AE evaluates reviews.
  - can consult with SE and/or others if needed.

↓

- AE synthesizes reviews into decision letter, detailing what authors need to do to make paper acceptable, or rejects paper (explaining why).
  - GENETICS editors may determine that paper would be more appropriate for G3 (referring it there after consultation with G3).

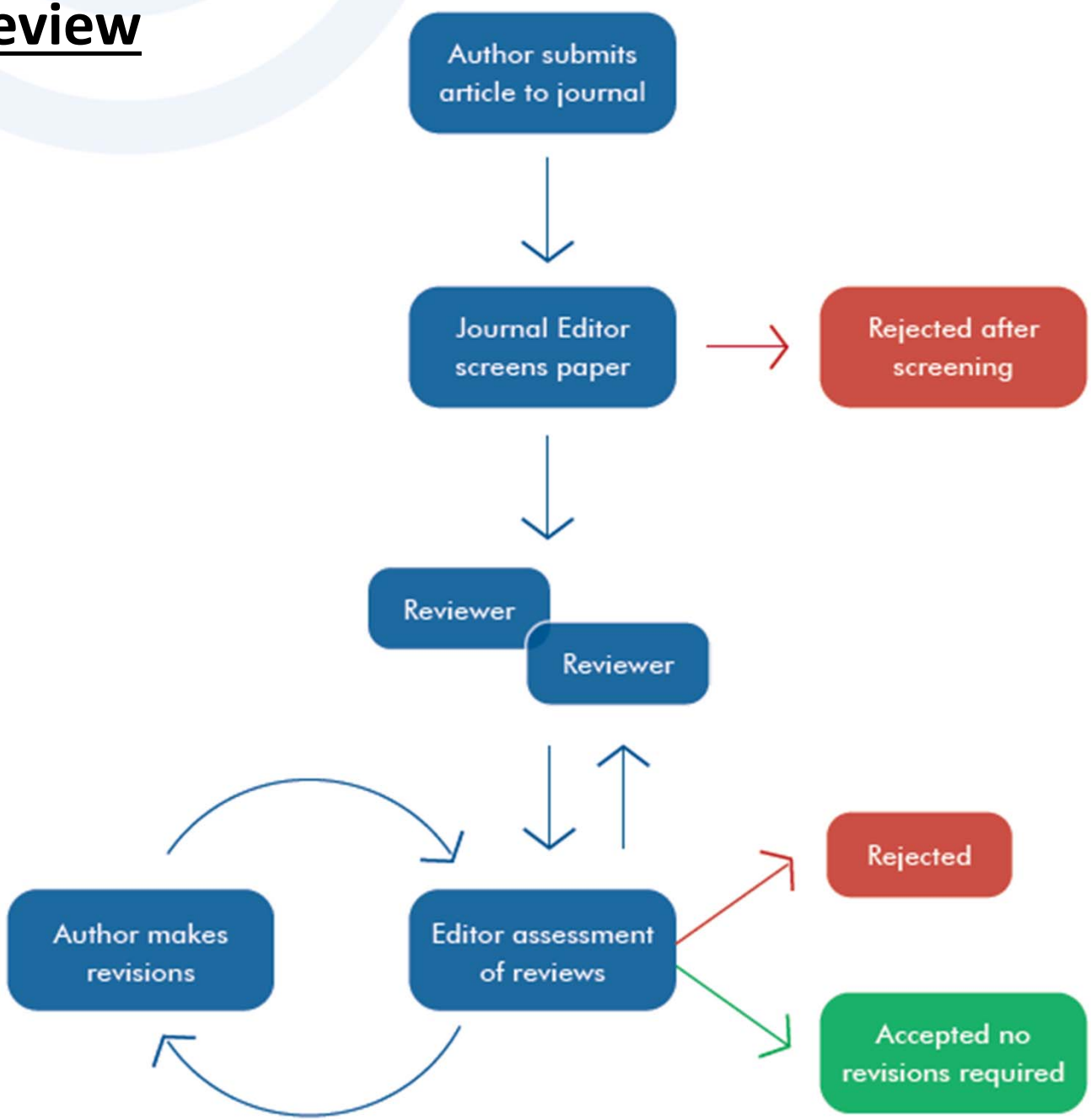
↓

- SE reviews and approves AE's decision, or discusses the options with AE and/or others.

↓

- Decision is finalized, and author notified.

The Peer-review Process



From senseaboutscience.org

The reviewer's charge

'a reviewer should judge the work by ***whether the experiments were properly designed, competently performed, and the conclusions supported by the data****, and not by whether the authors carried out the experiments the reviewer would have performed had the reviewer done the work'*

--Jim Crow, paraphrased by Dan Hartl in "**James F. Crow and the Art of Teaching and Mentoring" GENETICS December 2011 189:1129-1133**

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GUIDELINES FOR REVIEWERS

Please assess how well the manuscript meets our criteria for publication. We'd like your opinion of:

- the importance of the questions the manuscript addresses;
- how significant you judge the advance in the field the authors are reporting.

If you think the manuscript has major deficiencies, please provide a clear description of the ***specific*** problem(s) in a way that will benefit the authors. If you identify "make-or-break" issues for publication please make them clear in your review.

In your comments for the authors, please ***do not indicate whether you think the manuscript should be accepted or rejected;*** please provide that recommendation only in your confidential comments to the Associate Editor.

Please also include in your review any suggestions on the manuscript's writing, structure, exposition, scientific accuracy, scholarship, length, and suggestions for ways to improve the paper. (If the exposition is poor there is no need to edit the entire manuscript, but please cite one or two specific examples.)

Most manuscripts are revised before being accepted for publication. To shorten the review process and decrease the burden on reviewers, many revised manuscripts will not be sent back to reviewers. If you feel it's important that you see a revised version, please indicate that in your comments to the Associate Editor.

It's decision letter day!!
(but first, Mariana Wolfner)

- Why did my article get rapidly rejected or rejected?
- Should I start calling and emailing the editor right away
- How do I appeal or rebut a decision?
- Can I resubmit a paper that was rejected?
- What should we do to satisfy the editor and the reviewers
- How do I write a good response to the reviewers?
- Will this editor EVER be satisfied?

Possible Outcomes

Editorial Rejection (without sending out for reviews)

Rejection (based on reviews)

Major Revisions

Minor Revisions

Immediate Acceptance

Anatomy of a Review

Decision Letter from the Editor

- summarizes their decision and (briefly) the reasons for that decision & sometimes gives guidance on the parts of the reviewers comments that the editor thinks are important
- states the next steps
- boiler plate details about file formats for figures & copyright

Section 2: Comments from each reviewer

- a paragraph summarizing what they thought the paper was about
- will not explicitly recommend acceptance or rejection
- major comments (points that weren't clear, requests for new analysis or experiments, significant issues that they disagree with or want to see addressed)
- minor comments (things that should be easily fixed like typos or suggestions that they are not going to hold you to)

Interpreting the Decision Letter

1. Quickly get to the main point (clearly accepted? clearly rejected? or asking for revisions?)
2. Forward the letter to your co-authors.
3. Now, take a deep breath & carefully re-read the letter:

   What are the reviewers really asking for?

   Is there a small, targeted experiment that will address the concern?

   Are some of the reviewers asking for or confused by the same thing? (If so, correcting it will really improve the paper)

   If a request is unreasonable or unfeasible (at least for you), what are they really getting at and can you offer some other solution?

Accepted or Rejected?

Dear Dr. Dudley,

Your Article, “Title", has now been seen by 2 referees. As you will see from their comments (below), although the referees find your work of considerable potential interest, they have requested [an experiment]. We agree with the reviewers that the method shows potential but this potential is not shown in an application.

We would therefore like to invite you to revise your manuscript to address these concerns, and include data from new experiments.

Crafting a Response to Reviewers

1. Start out positive and upbeat.
2. Remind the editor what the main concerns were and summarize (briefly) how you've addressed them.

Dear Dr. Rusk,

Attached you will find the revised version of our manuscript "Title" (Reference ##). We were pleased that reviewers appreciated the work and also provided some helpful suggestions, which we have incorporated.

The only significant change suggested (by reviewer 2 and yourself) was that we pilot the method on a scale beyond what can be done easily by the conventional method. We agreed that this would significantly strengthen the paper. In response, we have…

Make it Easy to Find Your Changes

In the response letter, repeat the reviewers comments and respond directly to each point.

1. (Reviewer 1) *I think that Figure 1 could be improved by the addition of a panel (or two) that diagrams the way colonies are arrayed into microtiter plates for genotyping.*
We have added an additional panel (E) to Figure 1 to underscore this fact.

- Some journal request/ allow a marked up copy where you can highlight or underline changes.
- Make sure that you have actually made the changes discussed in the letter to the manuscript itself!

Crafting a Response Letter

3. You do not need to do everything that the reviewers suggest, but you do need to respond to each comment.

4. Keep in mind that the editor is going to send your rebuttal and the revised manuscript back to the same reviewers.

5. Be polite and appreciative, but don't gush.

> We appreciate the reviewer's suggestion…
>
> We agree with the reviewer that this section of Methods was not clearly written, and we have revised it accordingly.

6. It is okay to disagree with a comment, but try to keep to a minimum.

> We respectfully disagree with the reviewer on this point
>
> We apologize if this figure legend was unclear, what we meant to communicate was that…

Take the High Ground

Don't let a flip comment bother you – your goal is to publish this paper!

5. (Reviewer 2) *The numbers of events shown in Table 1 are not impressive.*
A new pilot cross was performed in which 3,725 tetrads were processed by one person in 3 hours (discussed above).
6. (Reviewer 2) *Claims of "first" as in Discussion are best left to historians.*
The words "first" and "exciting" have been removed from the first and last sentences of the discussion, respectively.
7. (Reviewer 2) *The statements about Neurospora and Chlamydomonas are at best debatable and at worst contentious.* Our mention of these organisms was in fact an attempt to draw the attention of non-yeast researchers. However, we have instead followed the reviewer's suggestion. Specific references to application of BEST in *Neurospora* and *Chlamydomonas* (originally sentence 2 of the Introduction and sentence 4 of the Discussion) have been removed.

Responding to Reviewers, Editors

"Thank you again for your expeditious and scholarly handling of our paper…….We feel strongly that the suggested edits have strengthened the paper and truly appreciate your efforts."

"The reviewer clearly chose to misunderstand the point of the work."

Responding to Reviewers, Editors

"Reviewer could have been kind enough to point out that the speculation was offered as an explanation for otherwise Mysterious observations."

"The quantitative sections, which this reviewer blew off, are an important part of the proposal by demonstrating that the assumption, though unconventional, is efficient."

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Resources

- COPE (Committee on Publication Ethics)
  http://publicationethics.org/
- ICMJE (Int'l Committee of Med. Journal Editors)
  http://www.icmje.org/
- NIH Public Access Policy
  http://publicaccess.nih.gov/
- Wellcome Trust Public Access Policy
  http://www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Open-access/index.htm
- Writing instruction
  https://www.training.nih.gov/writing_courses

Thank you for attending!

And thanks to
Aimee Dudley
Pac-NW Diabetes Institute, *G3* Editor

Tracey DePellegrin Connelly
Executive Editor,
GENETICS & G3

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www.genetics.org
www.g3journal.org
genestogenomes.org (blog)

Becoming a Reviewer:
Tips and Best Practices

Lynn Cooley

Genetics Society of America

discover.
understand.
inform.

9650 Rockville Pike • Bethesda, MD 20814 • genetics-gsa.org

How to review a manuscript

- Several things need to be evaluated:
  - Rigor of the science
  - Clarity of the presentation – figures and writing
  - Strength of the conclusions – are they justified by the results?
  - Impact of the results on the field
- Journal clubs are good practice
- Ask if you can review a paper alongside your advisor, and discuss the evaluation

Provide your expert opinion

- The editor needs guidance on which to base a decision about accepting or rejecting the paper
- Your comments will be most helpful if they are clear
- Point out the strengths, the advance, the level of interest to the field
- Also point out the shortcomings – there always are some!
- The editor's decision will be influenced by the balance of strengths and weaknesses you point out

Develop you own way to review

- Manuscripts still come double spaced with the figures at the end
- Awkward for reading
- My method is to use annotation tools on my computer rather than printing the pages
- Helpful to duplicate the file so you can view figures in one file and text in the other

For example:

stage 7-8 egg chambers. After 15 hours of starvation (t0 in Fig. 3), the proportion of MES stage relative to live stage 7-8 egg chambers increased compared to control fed flies (Figure 3B,C), reflecting both the pausing of MES stage and degeneration of stage 7-8 egg chambers. Strikingly, after only one hour of re-feeding, we already observed full Cut downregulation in a significant proportion of GFP positive egg chambers indicating that they were no longer paused and had entered the endocycle (Figure 3 B and D). Increasing the re-feeding period to 9 hours allowed most MES egg chambers to develop into stage 8 egg chambers (Figure 3B, E). After 24 hours of rich food up-take, the ratio of MES /stage

Ratio goes from 1 to 2. Does this mean an MES egg chamber is followed by a degenerating one?

The "GFP-positive" egg chamber has only a couple of green cells.

Be critical, but not unreasonable

- Every paper is part of a larger story
- There are ALWAYS more experiments that could be done
- Focus on whether the experiments presented support the conclusions and constitute an interesting advance in the field
- You can point out things that can be done to improve the paper

Comments to the editor

- Give a recommendation about whether to publish the paper
- If you recommend publication, say why it is exciting
- If you recommend rejecting, explain the flaws
- If you recommend revision, be clear about why they are needed

Comments to the author

- Short summary of the paper in your own words, including where it fits in the field
- Paragraph stating your evaluation – strengths and weaknesses
- List any major things you think need to be addressed before publication
- List of minor comments – typos, unclear sentences, inconsistencies, etc.
- Be fair, be respectful