

Veřejný chat

Chat:
Do you have a
question?

POZNÁMKY

Sdílené poznámky

UŽIVATELÉ (2)

BV (Vy)

 Ba
Barbora Vobrubová

Režim celé obrazovky

Snímek aktuální stránky prezentace

Full-screen

National Centre
for Information Support of Research,
Development, and Innovation

My First Scientific Article

Tips on writing an article for early career researchers

Alena Dvořáková, Barbora Vobrubová



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My First Scientific Article

Tips on writing an article for early career researchers

Alena Dvořáková, Barbora Vobrubová

19 March 2025



Learning goals

- Understand the role and importance of scientific communication in academia
- Introduce the publishing and peer review process and its significance in maintaining academic standards
- Understand my place in the publication process – where I am in the process, what is the expected/required timeline, what needs to be done

Alena Dvořáková

- Ing. Biochemistry, UCT Prague
- Ph.D. English Literature, Charles University
- Experience in academic teaching and publishing in Czech and English
- NTK Information Specialist

Barbora Vobrubová

- Ph.D. in Zoology, Faculty of Science, Charles University
- Experience in scientific publishing
- NTK Information Specialist

What's your academic affiliation?

- A. Czech Technical University in Prague (CVUT)
- B. University of Chemistry and Technology, Prague (VSCHT)
- C. Czech University of Life Sciences Prague (CZU)
- D. Charles University (UK)
- E. Other

What is your research field?

- A. Natural, medical, and health sciences
- B. Engineering and technology
- C. Social sciences, business or law
- D. Arts and humanities
- E. Other

Have you ever published a scientific article?

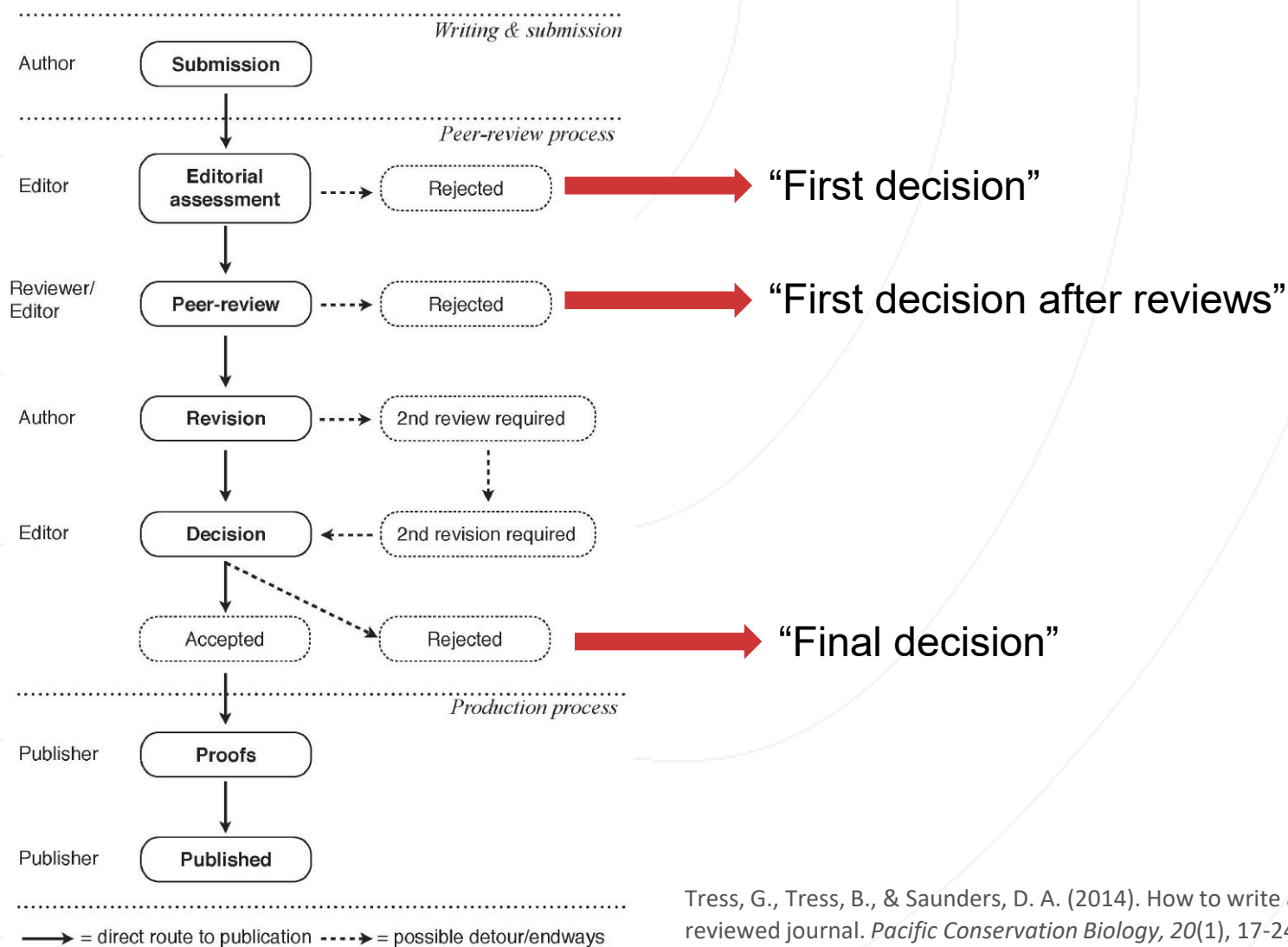
- A. Yes, as the corresponding (lead) author
- B. Yes, as a co-author
- C. Currently working on it
- D. Not at all

Part I: Publication process

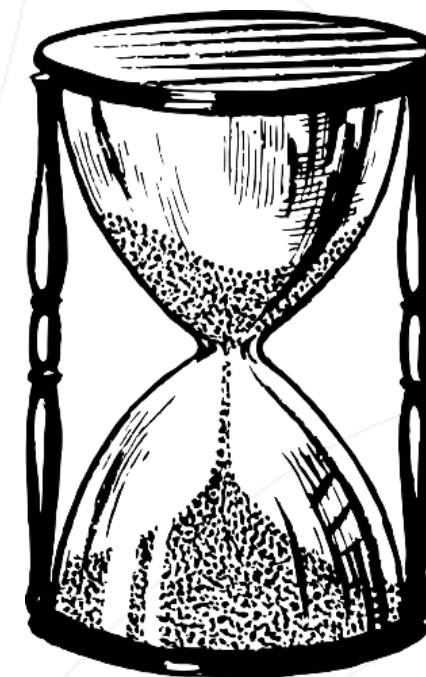
Learning goals

- Get familiar with the publication process for a scientific article
- Learn how to choose a journal
- Learn how to navigate the peer review process

Publication process overview



It takes time!

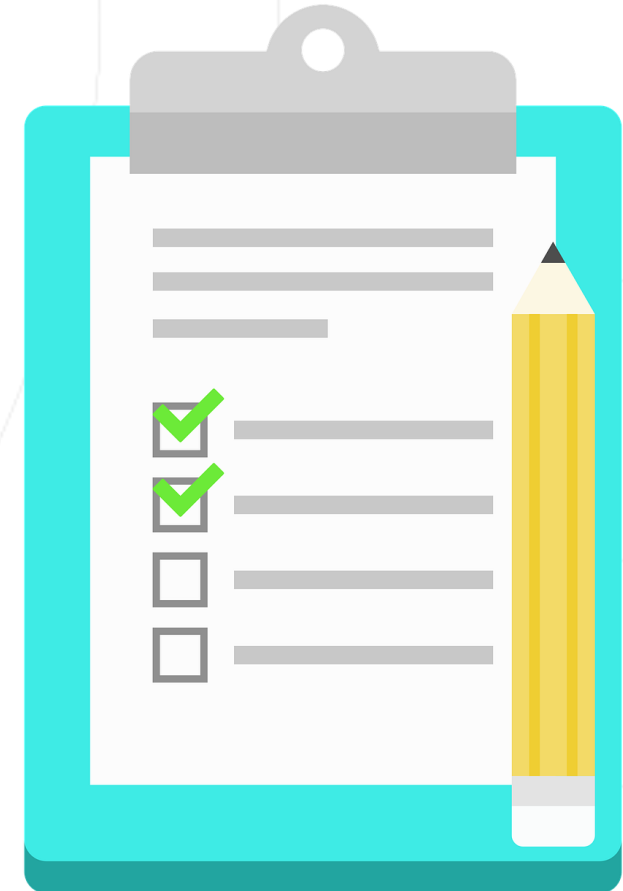


Tress, G., Tress, B., & Saunders, D. A. (2014). How to write a paper for successful publication in an international peer-reviewed journal. *Pacific Conservation Biology*, 20(1), 17-24. DOI: 10.1071/PC140017

Before you submit:

1. Decide on the type of manuscript I am writing
2. Figure out the requirements for your study/work
3. Choose a journal
4. Write the manuscript – see part II of this webinar 😊
5. Format the manuscript, add a cover letter, and so on

+ Getting an ORCID iD, ResearchGate profile, and so on



Requirements for your PhD or career

- Type of manuscript; language (do you need to publish in English?)
- Indexing – WoS, Scopus
- Impact factor, quartile, Open Access

Developmental and Cell Biology Study Programme, Faculty of Science, Charles University

Publication prerequisites:

The applicant must be an author/ co-author of at least two papers accepted in peer-reviewed journals indexed in the Web of Science (preferably with IF above the research field median) and should be a first author on at least one publication (shared first authorship should be communicated *ex ante* with the Board). In exceptional and warranted cases, the Board may decide otherwise; an example of such situation may be one excellent first author publication.

Faculty of Finance and Accounting, Prague University of Economics and Business

Primary obligations are set by the [Decree of the Dean](#) 1/2014 and the ISP:

1. Students are obliged to regularly publish in professional periodicals in which contributions are subject to a review procedure (hereinafter referred to as "professional peer-reviewed papers"). The minimum number of professional peer-reviewed papers for students is as follows:
2. a) one paper by the date of submission of the application for the state doctoral exam,
3. b) in total two papers from the beginning of the doctoral study to the date of submission of the application for the defence of the dissertation. The student must publish at least one paper in a journal registered with the Web of Science or Scopus database.

Choosing a journal

- Where do your supervisor or your peers publish?
- Which journals are you reading or citing in your work?
- Check databases such as Web of Science, Journal Citation Reports, Scopus
- Sample recommender services from individual publishers:
 - [Elsevier Journal Finder](#)
 - [WoS Manuscript Matcher](#)
 - [Taylor & Francis Journal Suggester](#)

Find the right journal for your research

Looking for the best journal match for your paper?
Search the world's leading source of academic journals using your abstract or your keywords and other details.

> More on how it works

☒ Match my abstract

☐ Search by keywords, aims & scope, journal title, etc...

Maximum 5,000 characters


[Find journals >](#)

[Check if you're eligible](#) for open access (OA) savings.


Choosing a journal


- Publication timeline


ACSACS PublicationsC&ENCASFind my institutionLog In

ACS Publications
Most Trusted. Most Cited. Most Read.

Search text, DOI, authors, etc.



My Activity

Publications

Peer Review Metrics*

All measurements are in Median Days

Search Table

Journal Title	Year Launched	Submission to First Editorial Decision	Submission to First Decision with Peer Review	Submission to Accept	Accept to ASAP Publication
Accounts of Chemical Research	1968	0.4	38.1	68.3	16
Accounts of Materials Research	2020	N/A	33.7	80.9	15.3
ACS Agricultural Science & Technology	2021	6.4	45.4	80.6	14.2
ACS Applied Bio Materials	2018	5.1	33.4	63.4	13.6

Note on timelines

- Each article is different: nobody can tell you in advance how long the publication process will take
- Check the instructions for authors, FAQs, and articles already published

ARTICLE

Open Access Journal 

Beyond Digital Literacy: Exploring Factors Affecting Digital Performance of University Staff

Carmen Koch  and Fiona Fehlmann 

IAM Institute of Applied Media Studies, Zurich University of Applied Sciences (ZHAW), Switzerland

Correspondence: Carmen Koch (carmen.koch@zhaw.ch)

Submitted: 8 July 2024 Accepted: 13 September 2024 Published: 23 January 2024

Source: Media and Communication (ISSN: 2183-2439)

Tips and tricks

- Follow instructions – correcting mistakes takes time
- Meet deadlines (or submit revisions early, if you can 😊)
- Check your spam folders from time to time – automatic emails from online submission systems are often marked as spam

Choosing a journal

- Does the journal require an article processing charge (APC)? Do you have funding?
- Open Access
 - Green – author puts the published article or pre-print in an openly accessible repository (institutional repository, arXiv – check the publisher's rules)
 - Gold – authors pay an APC, then an article is made freely available by the publisher (optional in some journals = hybrid journals)
 - Diamond – article is made freely available, authors do not have to pay APC (usually funded by external sources)
- Open Access Publishing course from Open Plato

Choosing a journal

- Tokens
 - An option for funding OA articles
 - See whether there are available tokens for your institution and selected journal on the Czech eLib website
 - For information about eligibility, contact your institution's OA administrator
- Selected contacts:
 - CTU: david.skorusa@cvut.cz
 - UCT Prague: openaccess@vscht.cz
 - CZU: openaccess@lib.czu.cz
 - CUNI: openaccess@cuni.cz

Choosing a journal – note on predatory journals

- Predatory journal = journal focused more on financial gain than on quality scientific communication
- Do not trust emails promising fast publication (within the matter of days)
- Check the quality of published content
- Find resources online (you can check out the NTK guide):

! Think

**Are you submitting your research to a trusted journal or publisher?
Is it the right journal or book for your work?**

✓ Check

Use our check list to assess the journal or publisher.

➤ Submit

Only if you can answer 'yes' to the questions on our check list.

Example of predatory journal emails

Journal of Veterinary Physiology and Pathology

ISSN: 2821-0328

DOI Prefix: 10.58803

Publish in less than one month

Dear Respected Colleague,

Hope this mail finds you well.

Journal of Veterinary Physiology and Pathology (JVPP) is a peer-reviewed journal dedicated to publishing and disseminating high-quality scientific research work in all fields of veterinary.

The scope of the journal contains *animal reproduction and production, parasitology, endocrinology, microbiology, immunology, pathology, physiology, pharmacology, epidemiology, molecular biology, immunogenetics, surgery, virology, physiology, vaccination, gynecology, exotic animals, animal diseases, radiology, ophthalmology, dermatology, oncology, chronic disease, non-surgical pathology issues of small to large animals, cardiology and oncology, anatomy, hematology, and zoonoses diseases.*

Knowing that your research interest falls under the scope of our Journal, we would like to welcome you as a prospective researcher to submit any of your recent work for publication in the upcoming issue release.

Reasons to publish with JVPP:

- Easy submission
- **Fast peer-review process (within 7 days)**
- Free and open-access publication
- Expert review from JVPP's team of editors, who strive to give authors fair decisions and advice
- Assign DOI number
- **Indexing and Archiving in EBSCO, GoogleScholar, Crossref, AGRIS, WorldCat, Dimensions, OpenAIRE, Portico and PKP (LOCKSS), J-Gate, and Copernicus**
- Increased visibility of the research work by uploading the published article on 6 web pages related to the journal.
- Providing timely updates of article status.

For further information about JVPP, please visit the following

link: <https://jvpp.rovedar.com/index.php/JVPP/About-Journal>

We admire you for joining our editorial team via the following

link: <https://jvpp.rovedar.com/index.php/JVPP/EditorialBoard>

We would appreciate it if you could share this information with your colleagues and associates.

[Submit Now](#)

Join JVPP Team

We are always striving to add diversity to our editorial board and operations staff. Please send us a copy of your resume (CV), your ORCID and briefly discuss any leadership positions and other experiences you have had that are relevant to applied animal and feed researches or publications. If you would like to represent the JVPP at your university, join our volunteer staff **today!** You can also, register as a member of JVPP for subsequent contacts by email and or invitation for an honorary reviewing articles.

With kind regards
Prof. Kai Huang
Editor-in-chief
Journal of Veterinary Physiology and Pathology

Target: researcher with a background in animal behavior, zoology, and (marginally) in psychology

Dear Dr. Vobrubova Barbora,

I hope this note finds you well.

I am writing to invite you to present your latest research at the **4th International Conference on Pediatrics and Neonatal Care** (In-person & Online) in **Paris, France, on July 23-24, 2025**. Your research is impressive, and we have reviewed your work titled **"On the ground and in the heights: Does exploratory activity differ in commensal and non-commensal spiny mice?"** which we believe would greatly interest our audience.

You will have **25 minutes** for your invited talk, including a **5-minute Q&A** session. Please submit your abstract to confirm your participation. You will be awarded CPD points and your abstract will be published with ISBN & DOI in the conference proceedings.

For additional information, please visit: <https://unitedresearchforum.com/pediatrics-conference-2025/>

Looking forward to your positive reply!

Best regards,
Ryan Cooper

Read instructions for authors!

The image shows two overlapping website screenshots. The top screenshot is from PLOS One, with a red box around the 'SUBMISSIONS' menu and 'Submission Guidelines' highlighted. The bottom screenshot is from Sage Journals, with a red box around the 'Guide for authors' link in the 'Publish' dropdown menu. Both screenshots also show navigation bars, search fields, and journal-specific information like 'Bioorganic Chemistry'.

PLOS One
plos.org Create account Sign in
Publish About Browse Search advanced search

SUBMISSIONS
Getting Started
Submission Guidelines
Figures
Tables
Supporting Information
LaTeX
What We Publish
Preprints
Revising Your Manuscript
Submit Now
Calls for Papers

POLICIES
Best Practices in Research Reporting
Human Subjects Research
Animal Research
Competing Interests
Disclosure of Funding Sources
Licenses and Copyright
Data Availability
Complementary Research
Materials, Software and Code Sharing
Ethical Publishing Practice
Authorship
Corrections, Expressions of Concern, and Retractions

MANUSCRIPT REVIEW AND PUBLICATION
Criteria for Publication
Editorial and Peer Review Process
Editor Center
Resources for Editors
Guidelines for Reviewers
Accepted Manuscripts
Comments

Bioorganic Chemistry
Supports open access

Sage Journals
Search this journal Enter search terms... Advanced search

Articles & Issues About Publish Order journal Search in this journal

Submit your article
Guide for authors

I have access via: **NTK**
Národní technická knihovna
National Library of Technology

Access/Profile Cart

Theory, Culture & Society

Impact Factor: 2.7 / 5-Year Impact Factor: 3.3

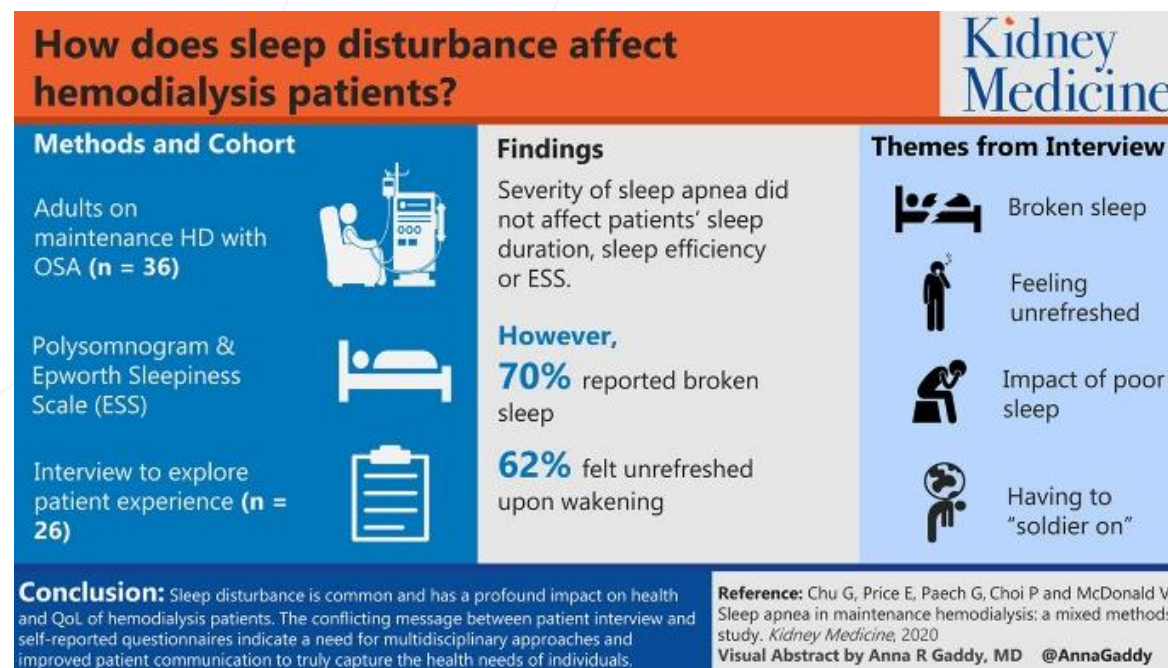
Journal Homepage

Submission Guidelines

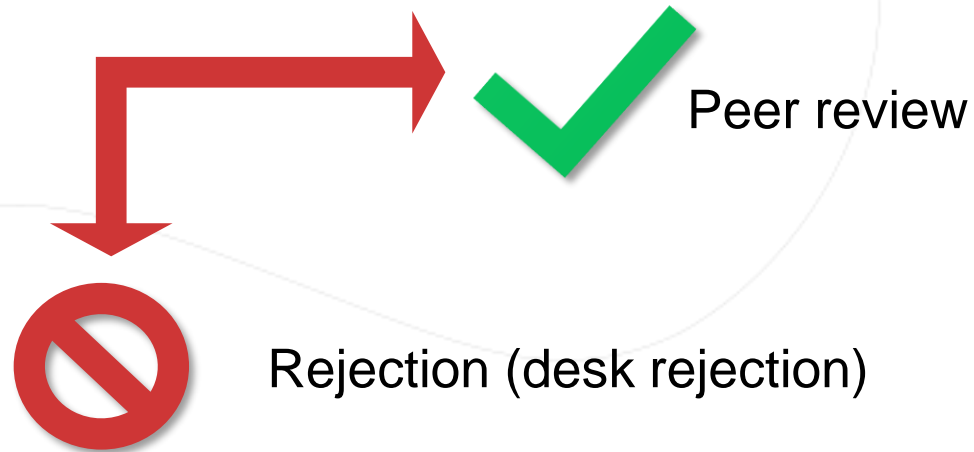
Preparing for submission

- Formatting
- Ethical notes, data availability, statements of AI use
- Cover letter
- Reviewer suggestions
- Highlights, graphical abstract
 - Requirements for some journals, help with gaining visibility for the article

Formal shortcomings can be corrected – but it can cost you time



Step 1: Editorial assessment



- Not within the scope of the journal
- Lacking novelty, contribution or potential impact
- Scientific flaws – e.g., wrong methods, conclusions that cannot be drawn from the presented results
- Poor quality of writing – an unclear message, numerous grammatical errors
- Ignoring the formal requirements – length, formatting, and so on
- Plagiarism (and self-plagiarism)



Journal of International Business Studies –
roughly 65% of papers rejected by editor

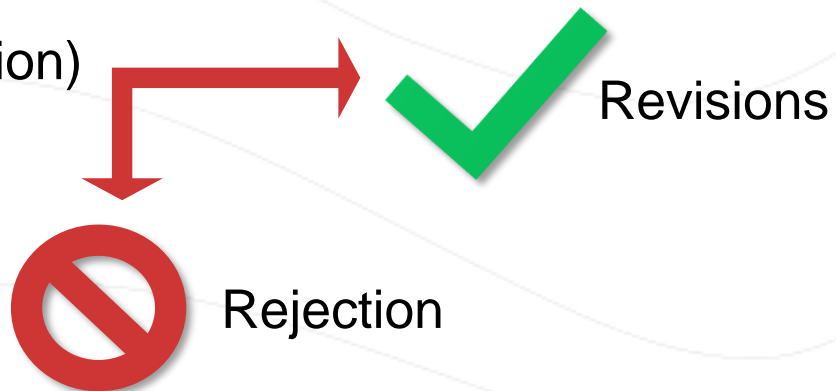
Some political science journals – up to 76% of
papers rejected by editor, average desk-rejection
rate is about 40%

Beugelsdijk, S., & Bird, A. (2024). How to avoid a desk reject: Do's and don'ts. *Journal of International Business Studies*. DOI: 10.1057/s41267-024-00712-8

Garand, J. C., & Harman, M. (2021). Journal Desk-Rejection Practices in Political Science: Bringing Data to Bear on What Journals Do. *PS: Political Science & Politics*, 54(4), 676–681. <https://doi.org/10.1017/S1049096521000573>

Step 2: Peer review

- At least 2 peer reviewers
- Recommendations:
 - Accept – without change
 - Minor revision – some non-essential issues need fixing
 - Major revision – the manuscript should not be published until these issues are fixed
 - Reject – the manuscript should not be published at all
- Editor makes a decision based on the reviews (or asks another reviewer for a third opinion)



Step 3: Revisions

- Be polite, grateful, and professional, even when you think a reviewer is wrong
 - Criticism can be painful but it is not the end of the world (nor your career)
- Never assume a reviewer is “stupid” or a non-expert
 - Consider language barriers or cultural differences, reviewer can have a slightly different specialization with different views, and so on
- Respond to ALL queries and ALL author instructions
 - If you did not comply with the reviewer’s request, you need to explain why
 - Copy the comment to the response letter + add your response

Step 3: Revisions

- Provide thorough responses – do not leave any stone unturned
 - If you are too brief in your responses, the reviewers might ask for further clarification – which means another rounds of reviews
 - “We corrected the mistake” is an acceptable response when the reviewer points out typos, not when they ask for clarification of missing methodology

Line 61-62: One physiological correlate wouldn't validate this view in my opinion, thus rather say 'strengthen'

Accepted

Step 3: Revisions

- Make it easy for the reviewer and editor to understand your response
 - Use line numbers, page numbers, tracking/highlighting changes, copy (small) parts of the revised text into the response letter
 - Do not be too verbose – nobody wants to read 50 pages of responses

*On which grounds the subspecies affiliation in the *M. m. domesticus* from Syria was made?*

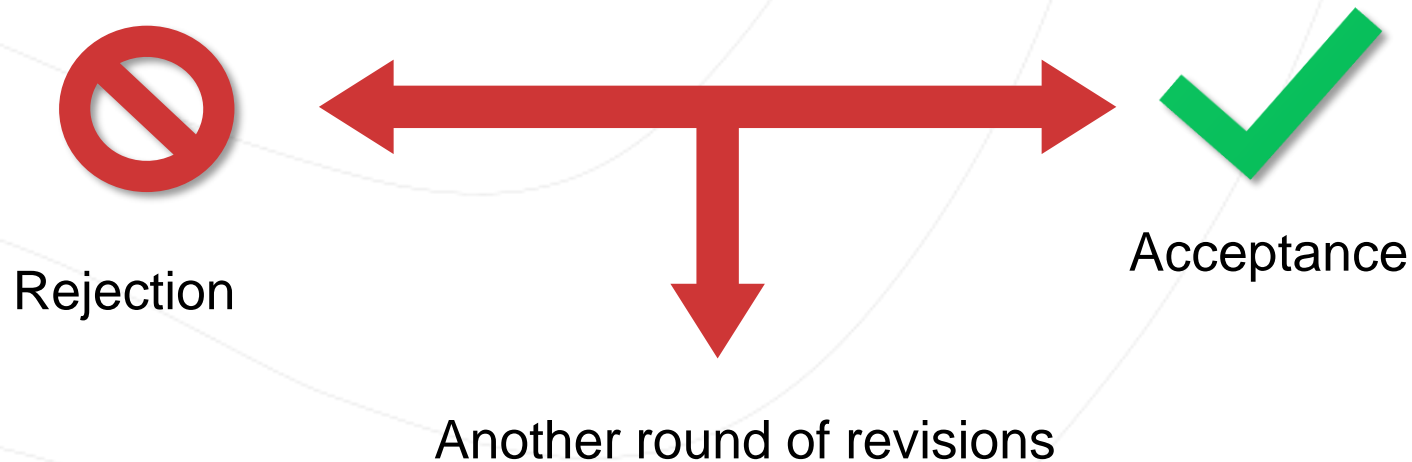
Accepted. See line 161: The affiliation of captured individuals to *M. m. musculus* population was genetically assessed using SINE B2 elements for determining the subspecies type.

160 outbred captive generation of the wild-caught individuals. The affiliation of captured
161 individuals to *M. m. musculus* population was genetically assessed using SINE B2 elements
162 for determinig the subspecies type by (Kubešová, 2008).

- If you do not understand a review comment, it is okay to admit it
 - But it is a good idea to show that you tried

Step 4: Rinse and repeat

- Editor might ask for a second round of reviews
 - Reviewers who have asked for major revisions usually want a second look at the revised manuscript
- Editor makes a decision based on the authors' responses and/or the second reviews



Step 5: Accepted article

- Proofreading of the final preview of the article
 - Small changes – formatting, missing details, e.g., in references
 - Usually with a short deadline (e.g., 48 hours)
- Are there any article processing charges?
 - Make sure the invoice is processed swiftly – article cannot be published without payment
- If you are in a hurry (your thesis defense is drawing near), you can ask for an acceptance letter – a written confirmation that your manuscript will be published.
- Online first/Early access publication

Step 6: You survived – what now?

- Make sure you have a copy safely stored or archived: see the NTK guide on Research Data Management; or the Open Policy finder (formerly Sherpa services)
- Put it on your CV/bibliography/Google Scholar profile
- Look out for reviews of it, responses to it, and similar

And start again...
...but it does get easier

Presence in the social sphere

- ORCID iD
 - Unique identifier (16 numbers)
 - Serves as an online CV, tracks publications even if you change your name
 - **Obligatory for some journals**
- ResearchGate
 - Social network for scientists
 - Pre-prints, finding other experts in your field, promotion of your work
- Google Scholar profile

See also: <https://guides.lib.berkeley.edu/publish/impact>

The screenshot shows the ORCID iD profile of Barbora Vobrůvová. The header includes the ORCID logo and the tagline "Connecting research and researchers". A search bar at the top right contains the text "Search the ORCID registry...". The profile header displays the name "Barbora Vobrůvová" and her email "Barbora Žampachová". Below this, the ORCID iD is shown as "https://orcid.org/0000-0002-6285-0495" with a link icon and a "Show record summary" button.

The profile is divided into two main sections: "Personal information" and "Activities".

Personal information

- Other IDs**:
 - ResearcherID: R-9320-2017
 - Scopus Author ID: 57193666602

Activities

- Employment (3)**: A green bar with a right arrow and a "Sort" button.
- Works (6)**: A green bar with a down arrow and a "Sort" button.

Two specific works are listed under the "Works" section:

- On the ground and in the heights: Does exploratory activity differ in commensal and non-commensal spiny mice?**
 - Behavioural Processes
 - 2020-11 | Journal article
 - DOI: [10.1016/j.beproc.2020.104252](https://doi.org/10.1016/j.beproc.2020.104252)
 - Part of ISSN: [0376-6357](https://www.elsevier.com/locate/0376-6357)
 - Source: Barbora Vobrůvová
- Venomous snakes elicit stronger fear than nonvenomous ones: Psychophysiological response to snake images**
 - PLOS ONE
 - 2020-08-19 | Journal article
 - DOI: [10.1371/journal.pone.0236999](https://doi.org/10.1371/journal.pone.0236999)
 - Part of ISSN: [1932-6203](https://www.elsevier.com/locate/1932-6203)
 - Source: Barbora Vobrůvová

More tips

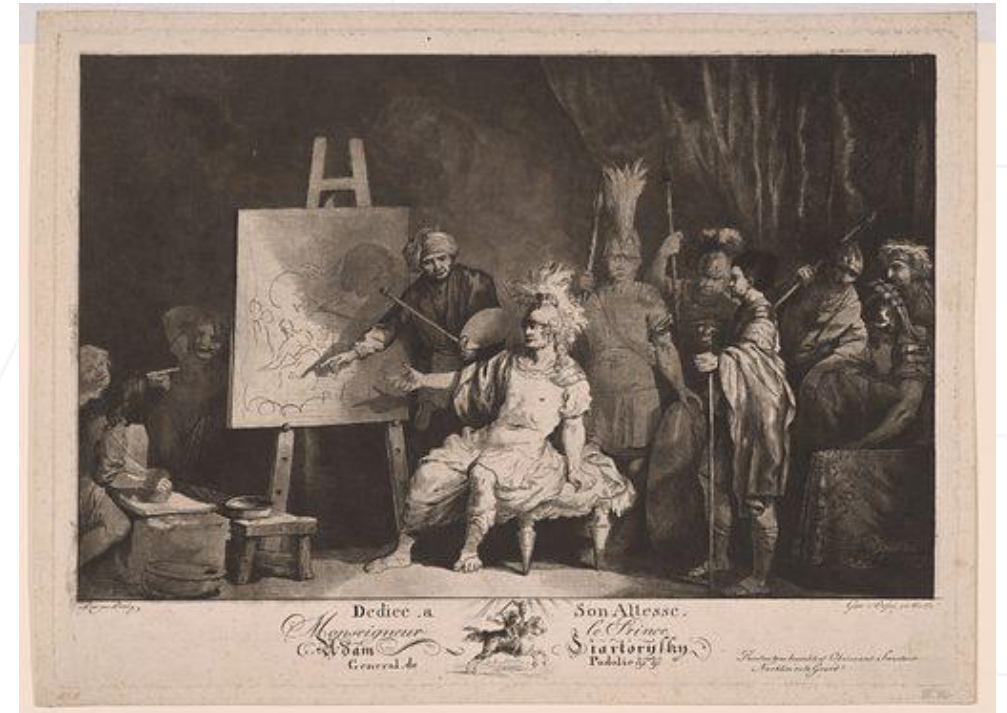
- <https://www.science.org/content/article/tips-publishing-scientific-journals>
- <https://www.aje.com/arc/12-tips-accelerating-manuscript-publication/>

Part II Writing to publish

Learning goals

- How to tailor your writing
- How to start and manage time
- What to check before submitting

Nulla dies sine linea.



C. W. E. Dietrich: *Alexander the Great in the studio of Apelles* (1774).
(National Museum in Krakow, CC0 1.0)

Alexander the Great (helmet): "That can't be right?"
Apelles (turban): "But I saw it in *Nature*!"

Serious about writing?

❑ Find a scientific/academic writing course at your institution, e.g.:

UCT: Effective Scientific Writing (Craig Riddell)

CTU: Scientific Writing in English (Prof. Milan Jirásek)

CAW: Writing for Publication and other courses

❑ Arrange a consultation at your own university library or writing center:
e.g., Academic writing support @ FF UK (Arts Faculty, Charles University).

❑ Get **discipline**-specific, **topic**-specific, or **document**-specific advice.

What it all comes down to

□ TEMPLATE

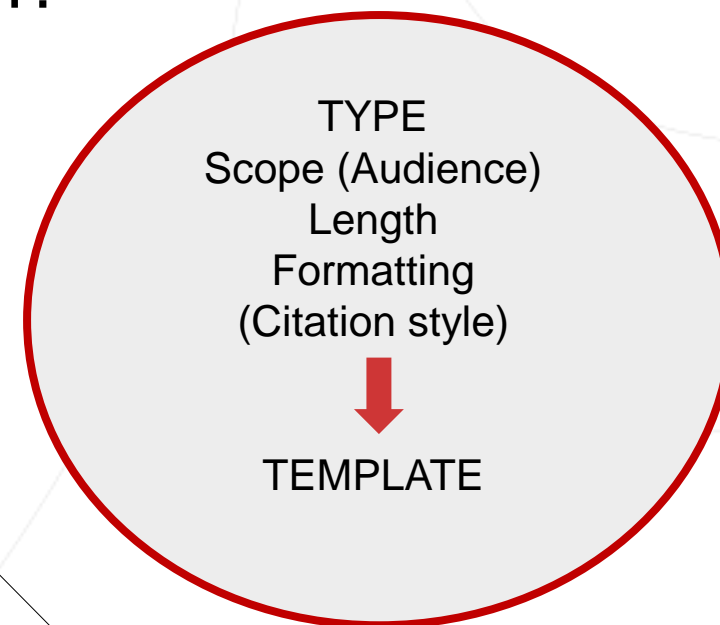
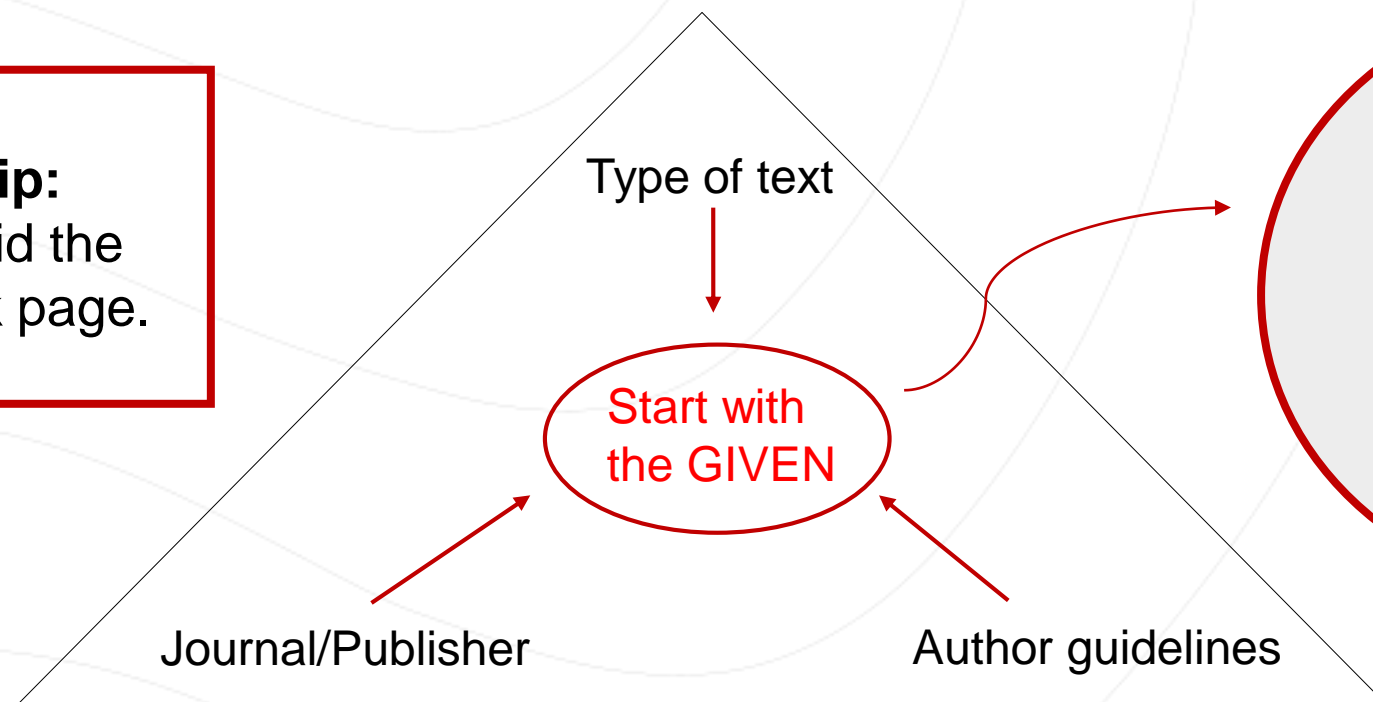
□ TIMELINE

□ TEAMWORK

Tailor your writing

What exactly do I aim to publish?

Tip:
Avoid the
blank page.



• **Where** best to publish it?

• **How** in practice?

Types of academic articles

☐ Original research papers/articles (also: primary research papers/articles)

- Most common; report the results of your experiments/present new arguments, ideas, readings

☐ Review articles (also: literature reviews)

- Summaries of already published literature on a particular topic

☐ Methodologies

- Research reports on methodological developments (new methods, modifications to current methods)

☐ Case studies

- Common in medicine, describe details of a specific interesting case

☐ Short communications

- Meant for quick publication of a novel idea, “marking research territory”
- Brief report on research findings

☐ Editorials, letters to editors, book reviews, commentaries, and others

Learn more: Article structure

□ TYPES OF ARTICLES

- Different types of academic articles (Taylor and Francis Author Services)
- How to distinguish between review and research articles (Concordia University, Montreal)
- Medical Subject Headings: Publication Types (National Library of Medicine, US)

□ **CHOOSE A JOURNAL EARLY** = check the journal webpage for samples or templates:

- APA annotated sample papers
- Different types of academic articles: Taylor and Francis Author Services = a detailed guide with templates

Learn more: Type to template

Different types of academic articles (Taylor and Francis Author Services)

= a detailed guide with templates

What are the benefits of publishing a method article?



- ✓ Maximize the potential of your research by increasing the transparency, accessibility and reproducibility of your research by sharing innovations and new ways of approaching research questions.
- ✓ Gain credit for your methodological innovations with a citable publication.
- ✓ You can upload your method steps to [protocols.io](https://www.protocols.io) to increase the findability of your research.

How do I write a method article?

Method articles are medium length (2500-4000 words) article types following the standard layout for research articles and should include:

- ① The abstract, introduction, method, results, and conclusions and/or discussion, within the main body of the article
- ② A [data availability statement](#)
- ③ Author contributions
- ④ Funding/grant information
- ⑤ Any supplementary materials and appendices

Authors submitting methodology articles have the option to share their method steps on [protocols.io](https://www.protocols.io). Please note, this is not required for submission but is encouraged.

Method article template

Here is a downloadable method article template to help you write and prepare your method article for submission:

[F1000Research method note template](#)



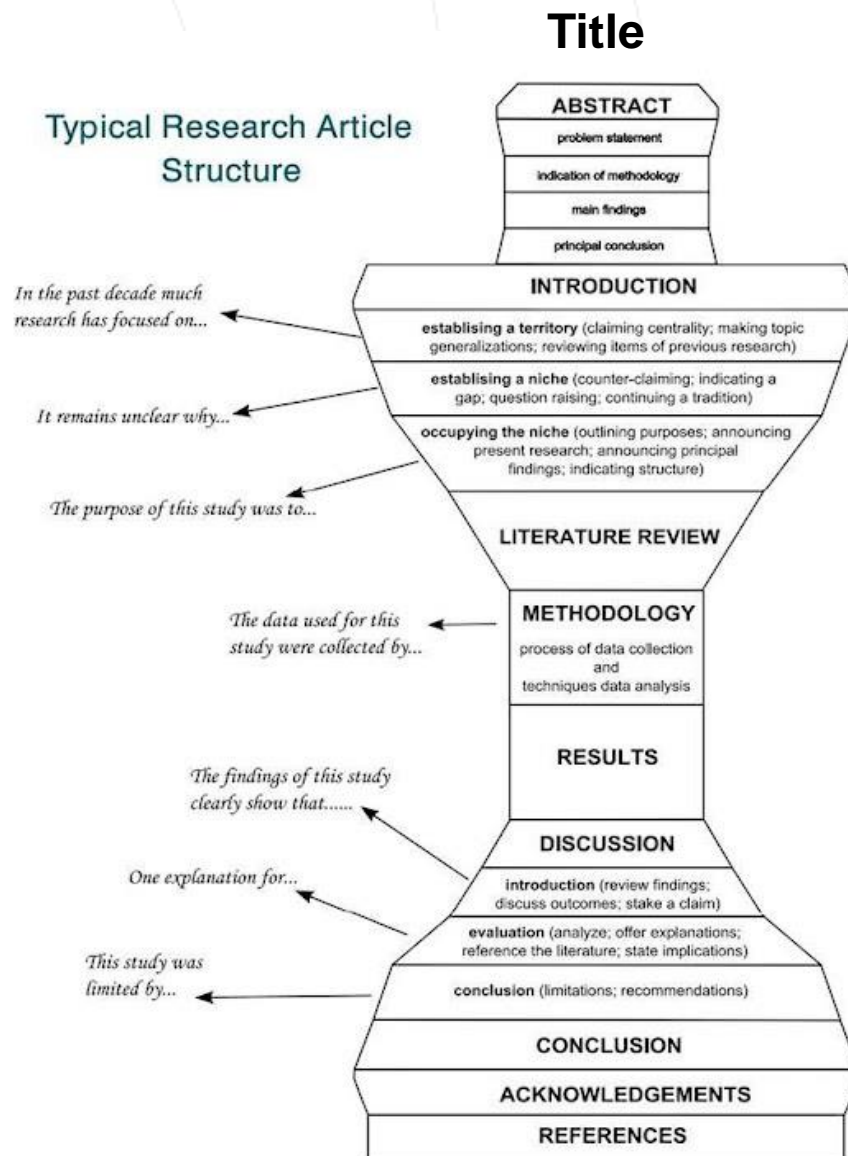
Original research article

IMRD IMRAD TAIMRAD

Tip:

Use a sample paper
from your research area
and reverse engineer it.

Typical Research Article Structure



For detailed instructions on
individual sections see, e.g.:

IMRD Cheatsheet (Carnegie
Mellon University)

<https://www.cmu.edu/student-success/other-resources/handouts/comm-supp-pdfs/imrd-examples.pdf>

History:

Sollaci LB, Pereira MG. The introduction, methods, results, and discussion (IMRAD) structure: a fifty-year survey. *J Med Libr Assoc.* 2004 Jul;92(3):364-7. PMID: 15243643; PMCID: PMC442179.

I have a template. Now what?

Order of writing

≠

Order of
presentation

- 1. YOU DID THIS

-

- 2. NOW YOU

- TELL US

- WHAT IT MEANS

-

- 3. THIS IS HOW

- IT'S BEEN

- SO FAR (until **you** came along)

- 4. SUM IT UP

– Methods

– Results

– Discussion

– Conclusion

– Introduction

– Abstract – Title – Keywords

PAST TENSE

PRESENT TENSE

PRESENT, FUTURE TENSES

PRESENT, PRESENT PERFECT

(PAST TENSE: past intentions, events)

Easiest to write

LEARN MORE: WEST, Stuart A. and Lindsay A. TURNBULL. *Scientific papers made easy: how to write with clarity and impact in the life sciences*. Oxford: Oxford University Press, [2023]. ISBN 978-0-19-286278-5.

Step-by-step resources: Scientific writing

- Baldwin, Ian T., undated. "The Baldwin Formula for Scientific Writing: Writing Papers and Reviews." Accessed 4. 10. 2024. Available from: https://people.clas.ufl.edu/jlichstein/files/Baldwin_Formula_for_writing_a_scientific_paper_and_reviewing_papers.pdf
- Gopen, George D., and Judith A. Swan, 1990. "The Science of Scientific Writing." *American Scientist* 78 (6): 550–58. Available from: https://www.usenix.org/sites/default/files/gopen_and_swan_science_of_scientific_writing.pdf
- Iskander, John K., Sara Beth Wolicki, Rebecca T. Leeb, and Paul Z. Siegel, 2018. "Successful Scientific Writing and Publishing: A Step-by-Step Approach." *Preventing Chronic Disease* 15 (June): E79. Available from: <https://doi.org/10.5888/pcd15.180085>
- O'Connor, Timothy R., and Gerald P. Holmquist, 2009. "Algorithm for Writing a Scientific Manuscript." *Biochemistry and Molecular Biology Education* 37 (6): 344–48. Available from: <https://doi.org/10.1002/bmb.20329>
- Singh, Vikash, and Philipp Mayer, 2014. "Scientific Writing: Strategies and Tools for Students and Advisors." *Biochemistry and Molecular Biology Education* 42 (5): 405–13. Available from: <https://doi.org/10.1002/bmb.20815>
- Turbek, Sheela P., Taylor M. Chock, Kyle Donahue, Caroline A. Havrilla, Angela M. Oliverio, Stephanie K. Polutchko, Lauren G. Shoemaker, and Lara Vimercati, 2016. "Scientific Writing Made Easy: A Step-by-Step Guide to Undergraduate Writing in the Biological Sciences." *The Bulletin of the Ecological Society of America* 97 (4): 417–26. Available from: <https://doi.org/10.1002/bes2.1258>

O'Connor and Holmquist (2009): "Algorithm for Writing a Scientific Manuscript"

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DETAILS

Biochemistry and Molecular Biology Education
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ARTICLE
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[View article page](#)

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CITE

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1. Figures/Tables
2. Summary Statements
3. Scientific Audience
4. Materials and Methods
5. Re-evaluate Data
6. Results
7. Discussion/Conclusions
8. References
9. Introduction
10. Title
11. Conclusion Paragraph

FIG. 1. Overview of the formulation of a scientific manuscript. The left arrow shows the linear progression of the process. The right arrows show natural points at which data should be re-evaluated to decide if the data, results, and discussion all point toward the conclusions. The gray arrow refers to the fact that the manuscript should be compared with the accuracy of the Summary Statements and how the other sections support those statements.

the variables compared. For example, for a hypothetical figure, "Figure 10. Exogenous [GTP] and aggregation in wild type *Paramecium*. Cells were grown in various GTP concentrations and aggregation was quantified."

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"take home" messages, the major points that readers should grasp when reading the paper. These statements are a proto-abstract that can evolve depending on the final versions of manuscript. With more experience in writing, formulation of these statements will occur even before making the figures or before designing the experiments.

Identify the Scientific Audience and Journals to Which the Manuscript Can Be Submitted

Once summary statements exist, identify an audience for the manuscript. With the audience identified, look for a journal that has published similar articles to identify a possible place to submit the manuscript. Read the instructions to authors to ensure that the manuscript would fit into the journal's scope. Identify three to five appropriate journals. List the journals along with the internet addresses for the author instructions to aid in making a final decision on the manuscript's destination.

Write the Materials and Methods Section to Supplement and Explain the Figure Legends

This section is generally the initial text in the manuscript. Include as many details as necessary to allow another researcher to duplicate the experiments that were used to generate the tables and figures. If another researcher has described the methods in detail, then reference the publication, but at least outline how the experiment was performed.

Eliminate Data, Tables, and Figures That Do Not

But Ian T. Baldwin would object:
You should have
Materials and Methods
written up while
experimenting...

Comprehensive guides to scientific writing

- Carter, Matt. *Designing Science Presentations: A Visual Guide to Figures, Papers, Slides, Posters, and More*, Elsevier Science & Technology, 2013.
- Foster, David H. *A concise guide to communication in science and engineering*. Oxford: Oxford University Press, 2017.
- Gastel, Barbara and Robert A. Day. *How to write and publish a scientific paper*. Ninth edition. Cambridge: Cambridge University Press, 2024.
- Glasman-Deal, Hilary. *Science research writing: for native and non-native speakers of English*. Second edition. New Jersey: World Scientific, 2021.
- Lebrun, Jean-Luc. *Scientific Writing 2.0: A Reader And Writer's Guide*, World Scientific Publishing Company, 2011.
- Schimel, Joshua. *Writing Science: How to Write Papers That Get Cited and Proposals That Get Funded*. Oxford: Oxford University Press, 2012.
- Turabian, Kate L. et al. *A manual for writers of research papers, theses, and dissertations: Chicago style for students and researchers*. 9th edition. Chicago guides to writing, editing, and publishing. Chicago: The University of Chicago Press, 2018.
- **Language resource:** Manchester Academic Phrasebank

How do I actually start?

1. Set up a **template (name the file)**: what exactly are you writing?

2. Write up **as you go** = write up *as you read & experiment*

Learn more from this Harvard Guide to summarizing, paraphrasing, and quoting

3. Use the **Pomodoro method** to schedule writing time



4. Always start with **what's easiest**: what have you got already?

- Type of paper = structure, **length**, language
- Story = what is it about & for whom? (layperson's terms x specialist terms)
- **Provisional title** = keeps you on the straight and narrow (esp. humanities)

What do I have already?

- Where am I?



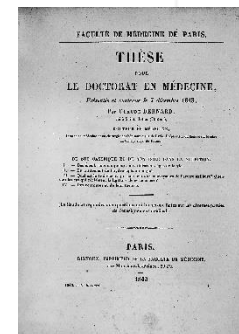
Poster
Conference paper
Research article



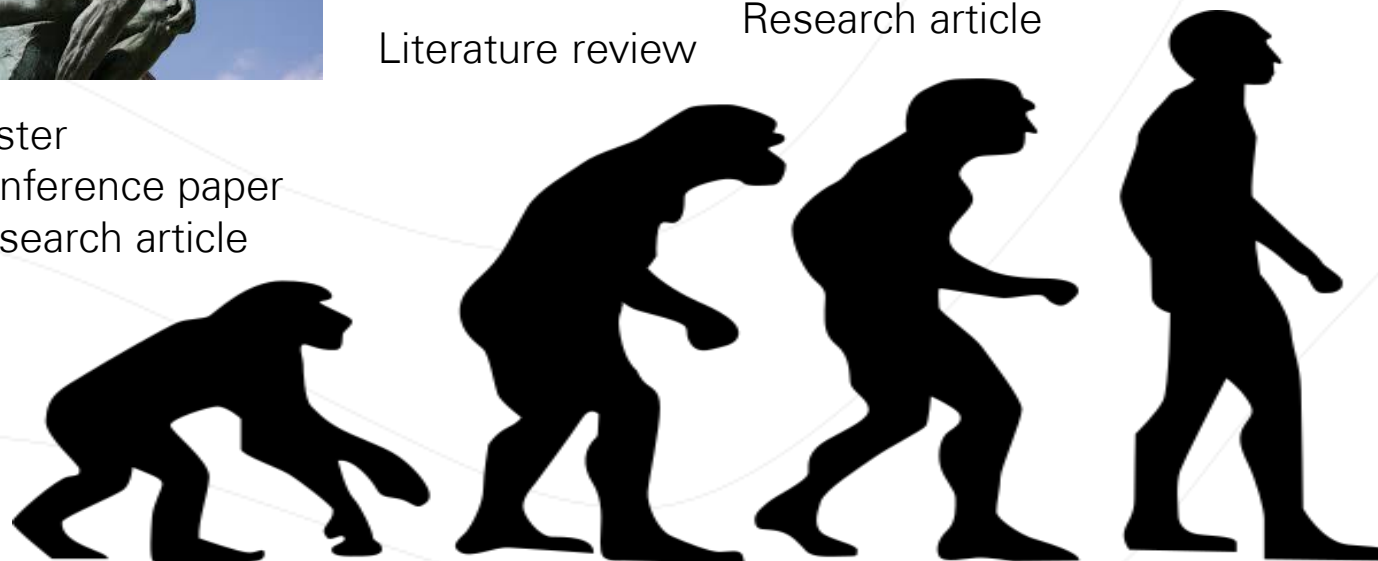
Literature review



New data
Poster
Conference paper
Research article



Literature review
Research article(s)
Monograph (book)



Start with what? Write anew, or convert?

I have

What's NEW
about it?
One idea.

Convert into

a conference paper/poster



research article
(journal or conference proceedings)

“state of the art” chapter



literature review

research thesis/dissertation



research article (or two, three)

doctoral dissertation



monograph (humanities)

How to convert what you have

❑ Further advice

- [Extracting a journal article from your thesis \(Taylor and Francis Author Services\)](#)
- [APA Guidelines](#)

❑ Peer-to-peer advice

- [From Masters thesis to a journal article in vet medicine \(University of Edinburgh\)](#)
- [From MSc dissertation to academic paper \(Centre for Evidence-Based Medicine, Oxford\)](#)

Converting (re-using): practical issues

☐ CAN I RE-USE

- A. an already published article/conference paper as part of my thesis/dissertation?
- B. my thesis/dissertation in a manuscript to be submitted for publication?

☐ YOU MUST COMPLY WITH

A.

- Your university/faculty rules
- Your copyright/licensing agreement with a publisher

B.

- The publisher's **author guidelines**. Re-using is often (usually) allowed – if in doubt, check directly with the journal editor/book publisher.

LEARN MORE: see this [table on the practice of re-using](#) for a variety of English and American academic publishers.

Use Generative AI ?

Authorship? = Check author guidelines first

AI Contributions to Research Content

- [AI use must be declared and clearly explained](#) in publications such as research papers, just as we expect scholars to do with other software, tools and methodologies.
- AI does not meet the Cambridge [requirements for authorship](#), given the need for accountability. AI and LLM tools may not be listed as an author on any scholarly work published by Cambridge
- [Authors are accountable](#) for the accuracy, integrity and originality of their research papers, including for any use of AI.
- Any use of AI must not breach Cambridge's [plagiarism policy](#). Scholarly works must be the author's own, and not present others' ideas, data, words or other material without adequate citation and transparent referencing.

Please note, individual journals may have more specific requirements or guidelines for upholding this policy.

Use of Gen AI: Stay in charge

Humanities

- ✓ Refine questions, keywords
- ✓ Language corrections
- X Re-styling
- X Writing

Sciences

- ✓ Refine questions, keywords
- ✓ Language corrections
- ? Re-styling: maybe...
- X Writing

Germannia Community College Libguide: The Other Side of AI: ChatGPT Explains Its Downsides.

ChatGPT explains why it shouldn't be used for first drafts:
<https://germanna.libguides.com/c.php?g=1407891&p=10423098>

Template to timeline

1. What exactly am I aiming to write? **What do I have already?**

Be crystal clear on the type of document you are writing. Starting from scratch or reusing/recycling?

2. Where am I going to publish it? **How?**

Choosing early: author guidelines (scope, length & formatting, use of AI/authorship, other requirements).

TEMPLATE

3. When does it have to be ready for submission?

- Publishing timeline  submission deadline 

WRITING TIMELINE

From final draft to submission

- ☐ Revising, formatting and proofreading before submission are essential.
- ☐ Multiple authors all need to agree on the final text (formal consent may be required).
- ☐ Schedule enough time to do all this.
(*formatting a paper = avg. 14 hours; multiple authors = more time required)
- ☐ Always use a final checklist before submission.



*LeBlanc AG, Barnes JD, Saunders TJ, Tremblay MS, Chaput J-P (2019) Scientific sinkhole: The pernicious price of formatting. PLoS ONE 14(9): e0223116.
<https://doi.org/10.1371/journal.pone.0223116>.

Revising and proofreading

- ❑ **Use AI tools for corrections** (but check author guidelines first!) – see NTK Tools to support writing
- ❑ **Change font** while revising and do at least **one round of proofs on paper**

Another set of eyes (and a brain 😊) are essential for spotting errors:

- Find a peer and ask them to proofread as a favour (to be returned);
- Find a native speaker, ideally a specialist;
- Pay for a professional service. Costly but might be required.

Pre-submission checklist

1. Have you followed the **author guidelines**? (Word count; prescribed formatting, citation method and style; keywords, title and abstract; presentation of data: figures and charts, and other.)
2. Have you written a **cover letter**?
3. Did you have another pair of eyes proofread your article? **Revise and proofread before submission.**
4. Do you need or want to **share research data** associated with your article?
5. Do you have **written permission for any third-party materials** you've included?
6. Have you included the name and affiliation of any **co-authors**?
7. Have you included a **disclosure statement** on funding and declared any **competing interests**?
8. Have you included your **ORCID**?
9. Do you have the correct **files ready to upload**? For double-blind review, an **anonymized version of your article** will be required.
10. Do you know which **submission system** the journal uses?

LEARN MORE: <https://authorservices.taylorandfrancis.com/publishing-your-research/making-your-submission/article-submission-checklist/>

Further resources on writing @ NTK

☐ NTK Guides to Writing

- Academic Writing & Publishing
- AI Tools to Support Writing

☐ NTK Academic Writing Q&A Series (short videos)

☐ Arrange an individual consultation @NTK in person or online.

Learning outcomes

- ❑ Understand where you are in the **publication process**
 - ✓ Submission-to-publication timeline

- ❑ Understand where you are in the **writing process**
 - ✓ Writing, converting into, or re-using *as what?* (Type to template.)
 - ✓ Draft-to-submission timeline

- ❑ Know **what you need** and **how to proceed** to get published
 - ✓ Further resources, guides & author guidelines, templates, checklists

Get Assistance

❑ Schedule a consultation

- LaTeX support, Bibliometric services

❑ Attend a webinar

- Kick Start Your Research Career with NTK: Webinars for Early Career Researchers

❑ Explore by yourself

- STEMskiller: comprehensive skills set map for early career researchers
- Tutorials: NTK instructional materials and recordings, further resources
- Subject guides

Stay ahead in your research journey! **Subscribe to our newsletter for updates** on academic resources, writing support, publishing, research evaluation, and training opportunities.



Thank you for your attention!

Questions?

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