

NTK

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

My First Scientific Article

Tips on writing an article for early career researchers

Barbora Šátková, Alena Dvořáková

25 March 2026



Learning objectives

- 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.

Barbora Šátková

- Ing. Analytical Chemistry, UCT Prague
- NTK Information Specialist

Alena Dvořáková

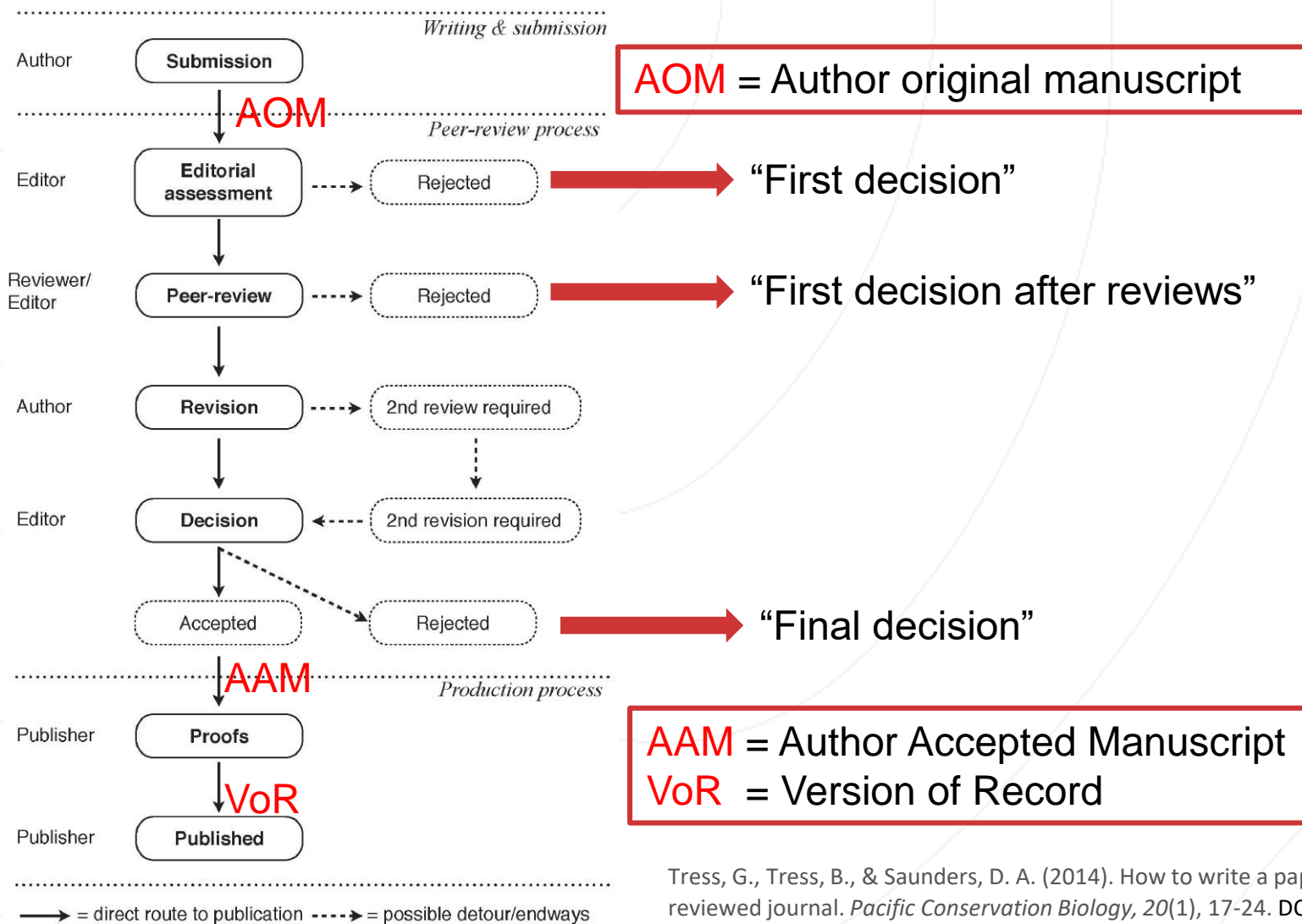
- Ing. Biochemistry, UCT Prague
- Ph.D. English Literature, Charles University
- Experience in academic teaching and publishing in Czech and English
- NTK Information Specialist

Part I: Publication process

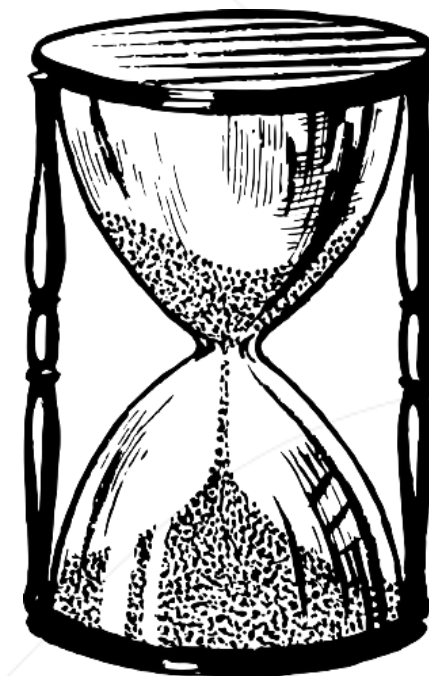
Learning objectives:

- 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!

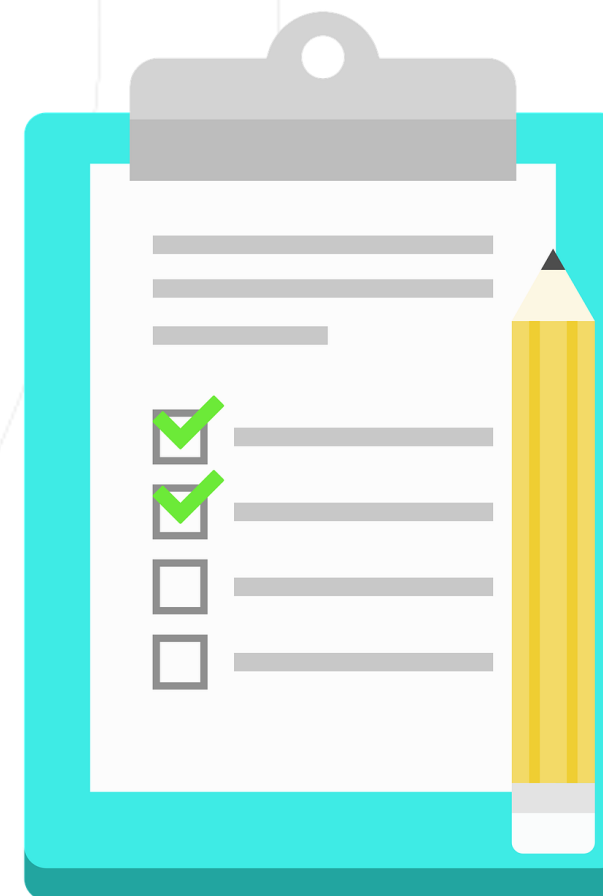


Tress, G., Tress, B., & Saunders, D. A. (2014). How to write a paper for successful publication in an international peer-reviewed journal. *Pacific Conservation Biology*, 20(1), 17-24. DOI: 10.1071/PC140017

Before you submit:

1. Figure out the requirements for your study/work.
2. Decide on the type of manuscript you're writing.
3. Choose a journal carefully: **you can only submit the same manuscript to ONE journal at a time.**
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



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? License?

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

- **Ideally before you even start writing.**
- 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](#)
 - [IEEE Publication Recommender](#)

Searching for and Evaluating Journals and Conferences

April 1



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...

Enter your abstract

Find journals >

Maximum 5,000 characters

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

Choosing a journal

- Example of publication timelines in chemistry. Timelines are highly discipline-specific!

ACS ACS Publications C&EN CAS Find my institution Log 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: OA and funding

- 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). **Always check your target journal/publisher's rules on "auto-archiving" AOM/AAM/VoR first!**
 - **Gold:** authors pay an APC, then an article is made freely available by the publisher (optional in some journals = hybrid journals)
 - **Diamond/Platinum:** article is made freely available, authors do not have to pay APC (usually funded by external sources)

Watch out for: clashes between multiple affiliations or funders (compatibility of requirements?)

Learn more: [Open Access Publishing course from Open Plato](#)

See also: [ACS Publications: A Step-by-Step Guide to OA](#), [Národní platforma Open Science](#)

Choosing a journal

- Tokens
 - An option for funding OA articles
 - See whether there are available tokens for your institution and selected journal on the CzechELib website
 - For information about eligibility, contact your institution's OA administrator
- Selected contacts:
 - CTU: david.skorusa@cvut.cz
 - CUNI: openaccess@cuni.cz
 - CZU: openaccess@lib.czu.cz
 - UCT Prague: openaccess@vscht.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 (check out our [NTK Guide to Predatory journals](#)):

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 screenshot shows the PLOS One website interface. At the top, there are links for 'plos.org', 'Create account', and 'Sign in'. The main navigation bar includes 'Publish', 'About', 'Browse', and a search bar. A dropdown menu is open under 'Publish', listing various categories: 'SUBMISSIONS' (with 'Submission Guidelines' circled in red), 'POLICIES', and 'MANUSCRIPT REVIEW AND PUBLICATION'. Below this, there is a banner for the journal 'Bioorganic Chemistry' with the text 'Supports open access'. A secondary navigation bar includes 'Articles & Issues', 'About', 'Publish', and 'Order journal'. A search bar is also present. At the bottom of the page, there is a 'Sage Journals' logo, a search bar, and a 'Guide for authors' link highlighted with a red box.

Theory, Culture & Society

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

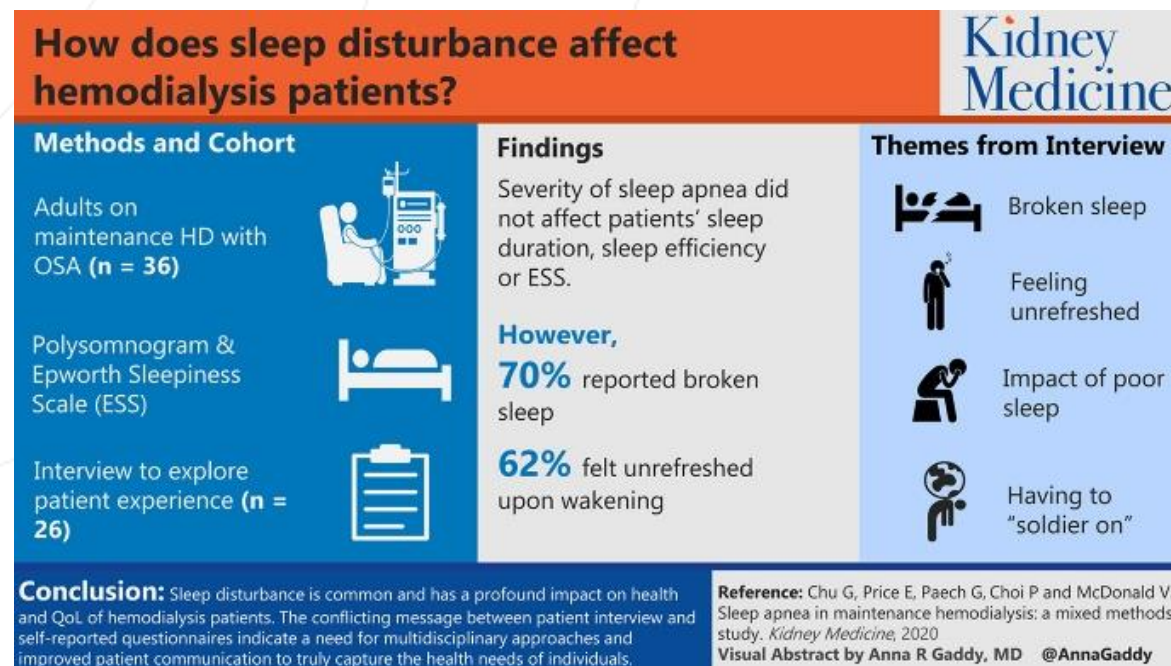
Journal Homepage

Submission Guidelines

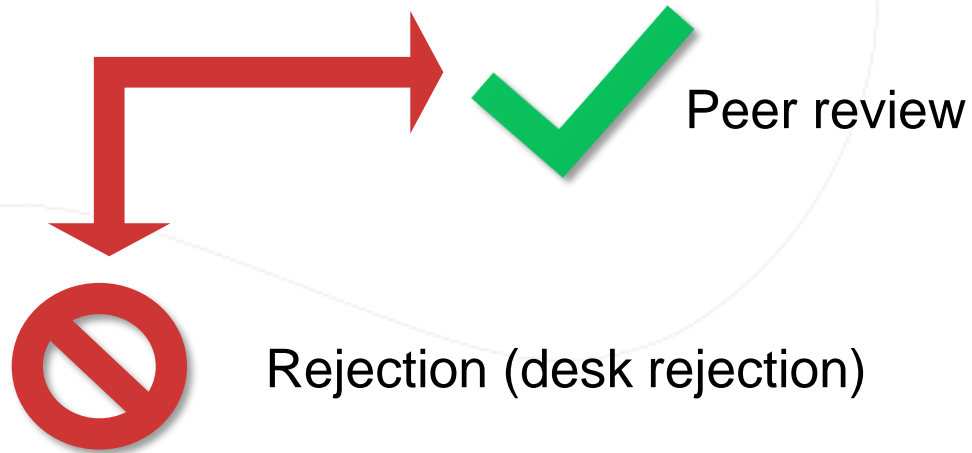
Preparing for submission

- Formatting
- Ethical notes, statements of data availability & AI use, conflict of interest declarations
- 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

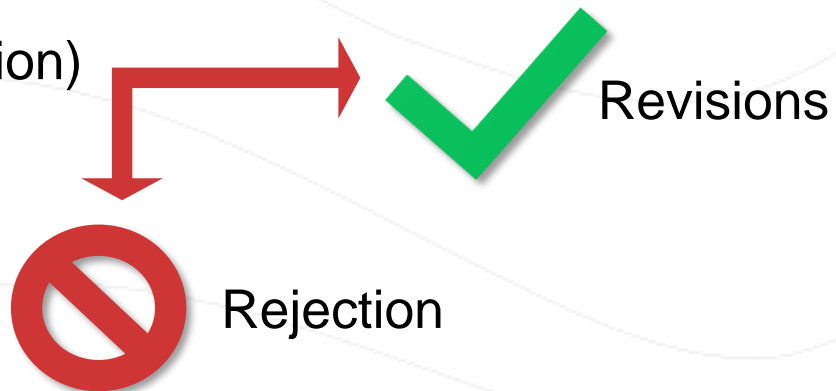
Some political science journals – up to 76% of papers rejected by editor, average desk-rejection rate is about 40%

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?*

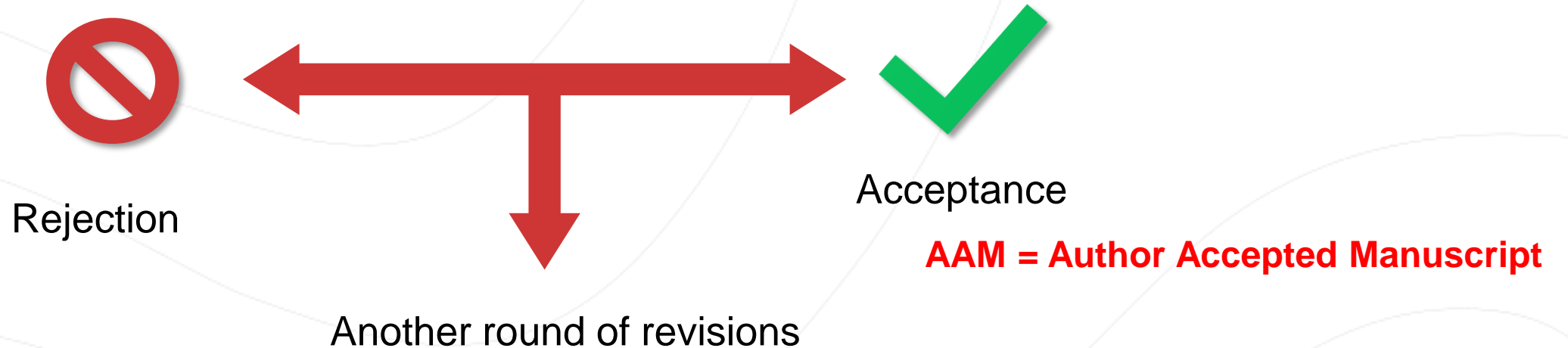
Accepted. See line 161: The affiliation of captured individuals to *M. m. musculus* population was genetically assessed using SINE B2 elements for determining the subspecies type.

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 determining 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 (AAM)

- 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 – the 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:

Published article = Version of Record (VoR)

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

The screenshot shows the ORCID iD profile for Alena Dvořáková. The header includes the ORCID logo, the name 'Alena Dvořáková', and a search bar. Below the header, the profile is divided into two main sections: 'Personal information' and 'Activities'. The 'Personal information' section includes 'Emails & domains', 'Verified email domains' (with a checkmark and 'techlib.cz'), and 'Other IDs' (with a link to 'Scopus Author ID: 57195218014'). The 'Activities' section lists 'Employment (2)', 'Education and qualifications (3)', 'Funding (2)', and 'Works (11)', each with a 'Sort' button. An 'Expand all' link is also present.

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

More tips

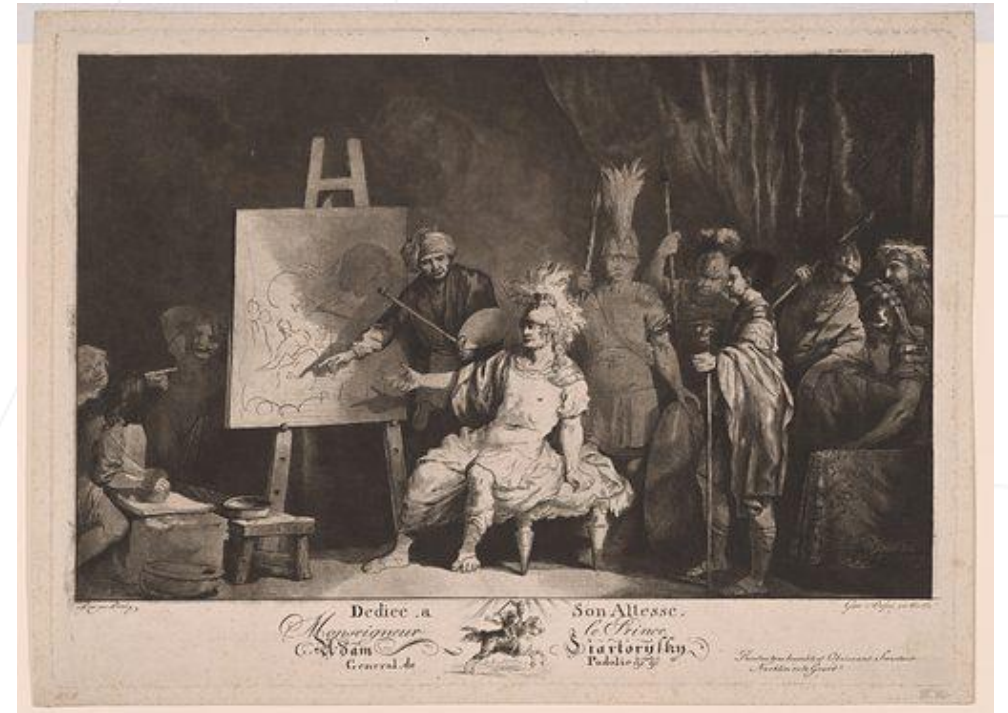
- <https://www.science.org/content/article/tips-publishing-scientific-journals>
- <https://www.aje.com/arc/12-tips-accelerating-manuscript-publication/>

Part II: Writing to publish

Learning objectives:

- 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 A. 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:

Example: Academic writing support @ FF UK (Arts Faculty, Charles University).

Set up your own peer review group or join an existing one at your institution.

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

What it comes down to:

- ❑ TYPE OF PUBLICATION & TEMPLATE
- ❑ TIMELINE
- ❑ TEAMWORK

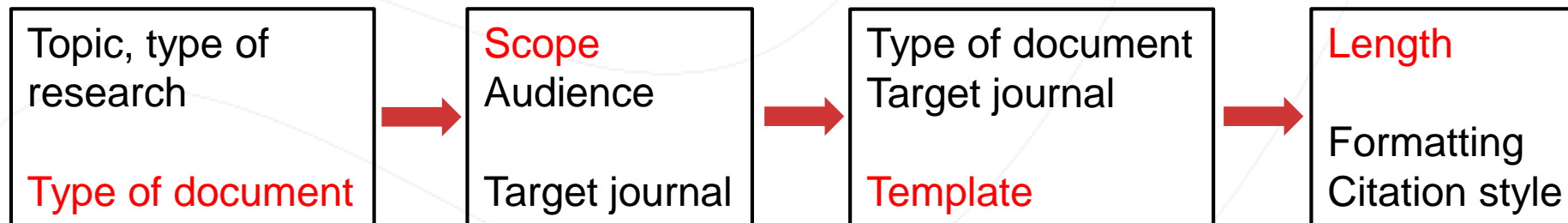
Tip:

- Lost? Learn to **seek help** from peers, mentors, supervisors, librarians.
- Arrange a free individual consultation with one of our specialists at NTK.

Tailor your writing

Avoid the blank page. Use a template.

1. **What** exactly do I aim to publish?
2. What have I got already? Can I convert it, or is it new?
3. What **type of document** is it good for?



Tips:

- Choose your target journal early: preferably before you start writing.
- Templates in Word or LaTeX on some journals' website **indicate length**.

What do I have already?

Where am I?



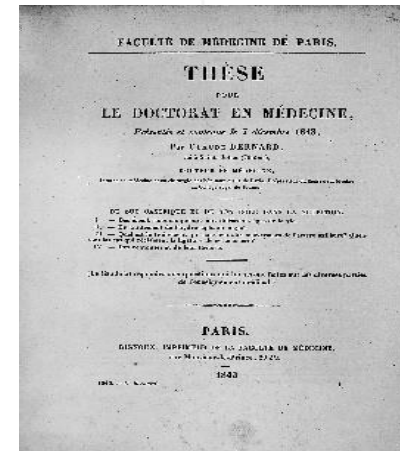
Poster
Conference paper



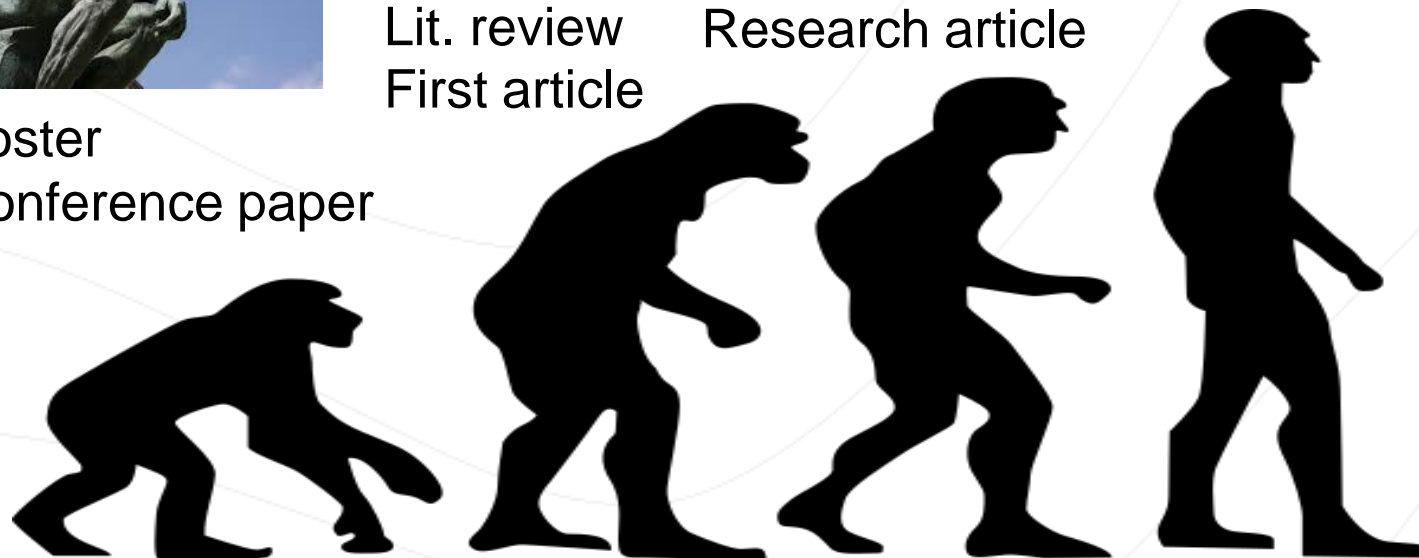
Lit. review
First article



New data
Poster
Conference
paper
Research article



Systematic literature review
Research article(s)
Monograph (book)



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 about 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)

Tips:

- Choose a journal early. Check the target journal website for templates.
- Trouble with the required format or citation style? Check out sample papers (e.g., APA annotated sample papers).

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](#)



Start with what? Convert, or write anew?

I have

What's NEW
about it?
One thing.

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 (reusing): practical issues

REUSING

- A **thesis/dissertation** in a manuscript to be published

YOU MUST COMPLY WITH

- The publisher's **author guidelines**.

Converting a thesis/dissertation is usually allowed – if in doubt, check with the journal editor or book publisher.

REUSING

- A **published article/conference paper** in a thesis/dissertation

YOU MUST COMPLY WITH

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

Watch out for: compatibility of articles reused in a thesis.

Learn more:

- See this **table on the practice of re-using** for a variety of English and American academic publishers.

Licensing agreement: permission to reuse

- d) The Licensee grants to Author the following non-exclusive rights to the Version of Record, provided that, when reproducing the Version of Record or extracts from it, the Author acknowledges and references first publication in the Volume according to current citation standards. As a minimum, the acknowledgement must state: "First published in [Volume, page number, year] by Springer Nature".
- i. to reuse graphic elements created by the Author and contained in the Contribution, in presentations and other works created by them;
 - ii. the Author and any academic institution where they work at the time may reproduce the Contribution for the purpose of course teaching (but not for inclusion in course pack material for onward sale by libraries and institutions);
 - iii. to reuse the Version of Record or any part in a thesis written by the same Author, and to make a copy of that thesis available in a repository of the Author(s)' awarding academic institution, or other repository required by the awarding academic institution. An acknowledgement should be included in the citation: "Reproduced with permission from Springer Nature";
 - iv. to reproduce, or to allow a third party to reproduce the Contribution, in whole or in part, in any other type of work (other than thesis) written by the Author for distribution by a publisher after an embargo period of 12 months; and
 - v. to publish an expanded version of their Contribution provided the expanded version (i) includes at least 30% new material (ii) includes an express statement specifying the incremental change in the expanded version (e.g., new results, better description of materials, etc.).

Permission to reuse the published article in a thesis



Excerpted from:
Springer Nature Switzerland
License to Publish Proceedings Paper

Is it new? Tell us explicitly. Be direct.

- ❑ **Fill a gap:** There's a clear **gap** in the existing research and my article is going to fill it.
- ❑ **Take it further:** My article builds on the existing state of knowledge, supporting it with **extra evidence** or **extending it** ("moving the edge").
- ❑ **Upend the status quo:** My article argues **against** the received wisdom and suggests a **new direction** is required. = **RISKY!**

Tip:

- Write a response to or a correction of an already published article on your topic. Submit it to the journal that published the original article.

Learn more:

Belcher, Wendy L. (c2009). *Writing your journal article in 12 weeks: a guide to academic publishing success*. SAGE Publications.

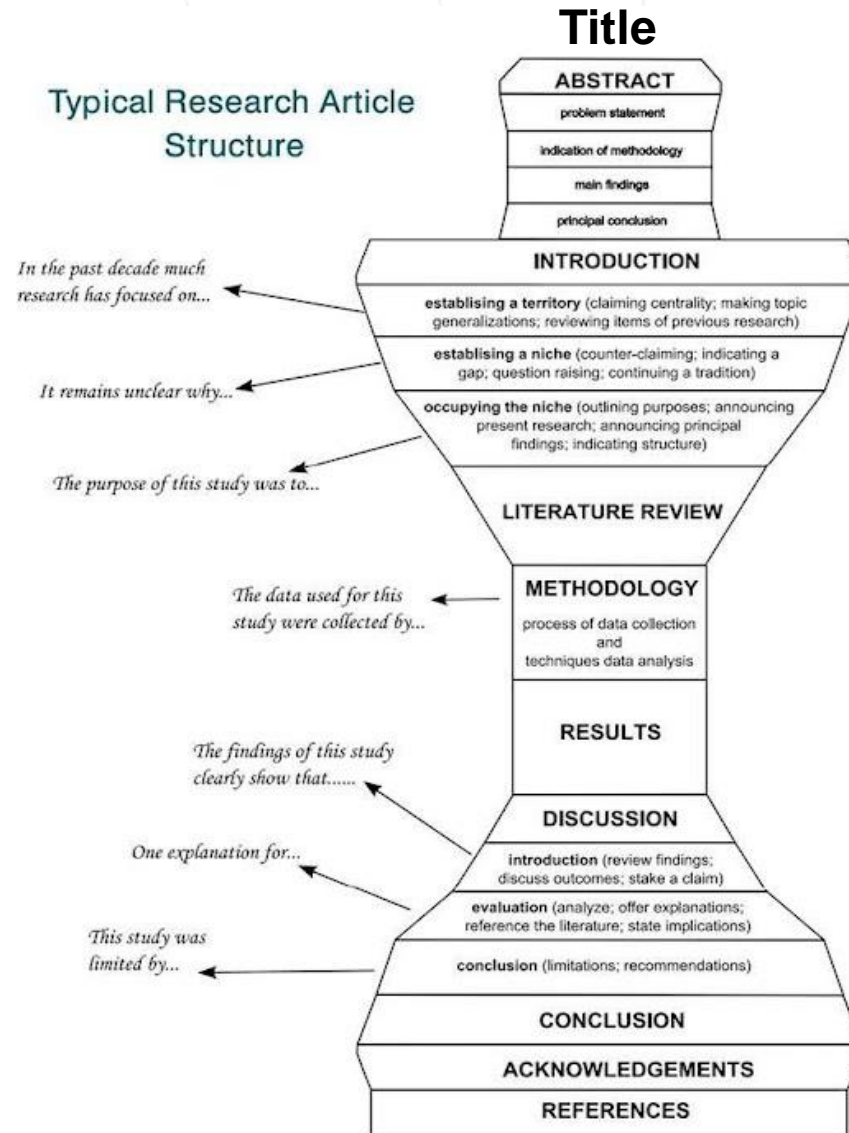
Original research article

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?

Easiest to write

Tip:
 Order of writing
 ≠
 Order of
 presentation

- 1. YOU DID THIS
 - Methods
 - Results
- 2. NOW TELL US WHAT IT MEANS
 - Discussion
 - Conclusion
- 3. THIS IS HOW IT'S BEEN SO FAR (until **you** came along)
 - Introduction
- 4. SUM IT UP
 - Abstract (Graphical) – Title – Keywords

PAST TENSE

PRESENT TENSE

PRESENT, FUTURE TENSES

PRESENT, PRESENT PERFECT

(PAST TENSE: past intentions, events)

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 | RELATIONS

Biochemistry and Molecular Biology Education
 Volume 37, Issue 6
 Nov 2009
 Pages 323-386

ARTICLE
Algorithm for writing a scientific manuscript
 View article page

Timothy R. O'Connor, Gerald P. Holmquist

CITE

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<https://doi.org/10.1002/bmb.20329>

ISSN 1470-8175
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 Online 24 November 2009
 Revised 13 August 2009
 Received 2 July 2009
 Pages 344 - 348

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

345

"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

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."

tract
 We present an algorithm for the construction of a strong

Sem zadejte hledaný výraz.

15:52
 05.02.2025

But Ian T. Baldwin would object:
 You should have
 Materials and Methods
 written up already 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 tip: Manchester Academic Phrasebank = a free “bank” of frequently used academic phrases.

How do I actually start?

1. **Set up a template and 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. **Schedule writing time.** (Use Pomodoro method?)



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

- Type of paper (“genre”): structure, **length**, language
- Story: what is it about & for whom? (audience)
- **Provisional title** (esp. in humanities)

Use Generative AI ?

Authorship? Check publisher's 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.

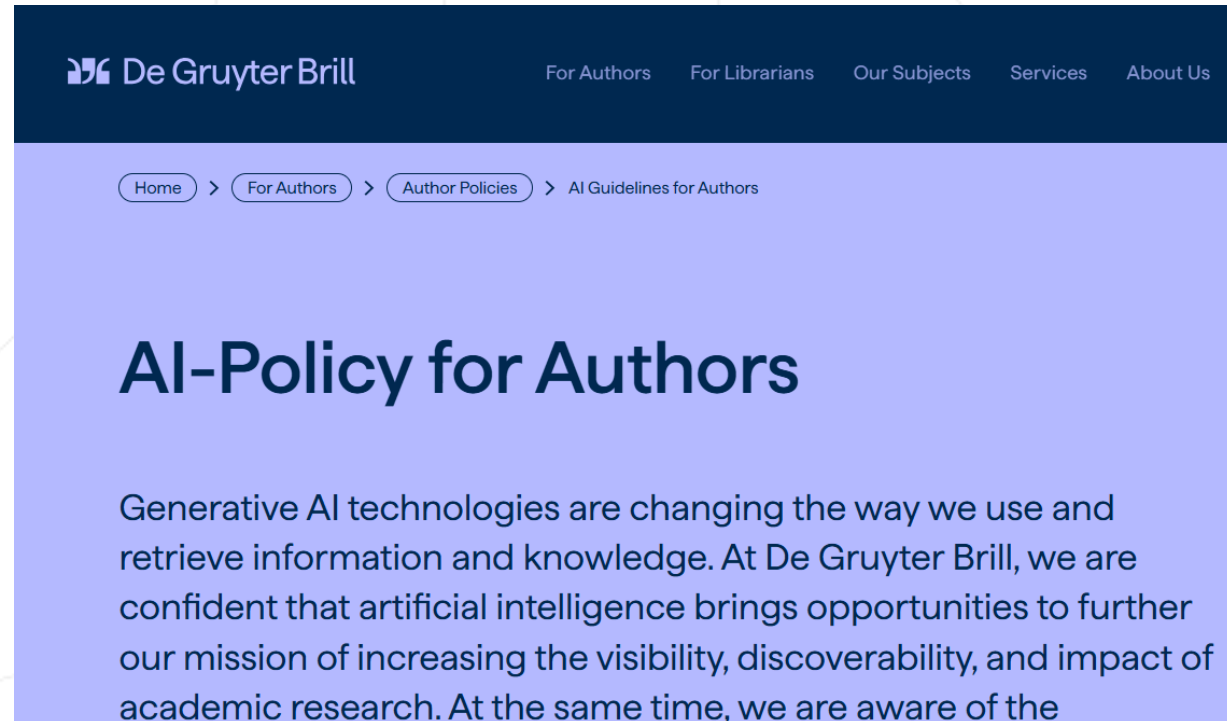
Please note individual journals may have more specific requirements or guidelines for upholding this policy.

- Current IEEE AI policy requires authors to acknowledge all use of generative AI to produce content.
- In case of editing, grammar enhancement, and spellchecks, disclosure is NOT required, but it is recommended.

Use Generative AI ? Cont.

DeGruyter Brill AI-Policy for Authors

- Authorship
- Disclosure
- AI generated images
- Rights, privacy, accuracy
- Peer review



The screenshot shows the De Gruyter Brill website. The header is dark blue with the logo and navigation links: "For Authors", "For Librarians", "Our Subjects", "Services", and "About Us". Below the header is a light blue breadcrumb trail: "Home > For Authors > Author Policies > AI Guidelines for Authors". The main content area has a light blue background and features the title "AI-Policy for Authors" in a large, bold, dark blue font. Below the title is a paragraph of text: "Generative AI technologies are changing the way we use and retrieve information and knowledge. At De Gruyter Brill, we are confident that artificial intelligence brings opportunities to further our mission of increasing the visibility, discoverability, and impact of academic research. At the same time, we are aware of the

Use of Gen AI: Stay in charge

Humanities

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

Sciences

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

Learn more:
AI Essentials for Academia
Webinar

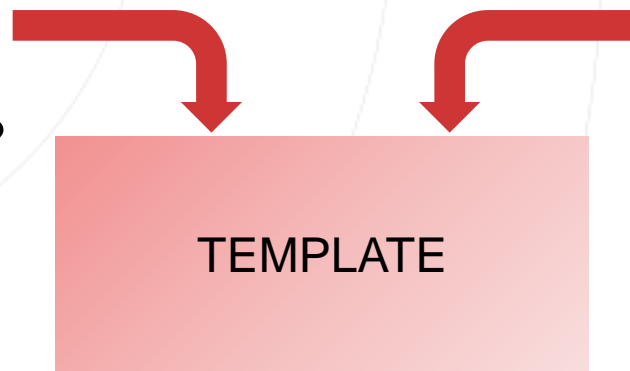
15 April 2026



Template to timeline: summary

1. WHAT: Type of document

- **What** do I aim to publish?
- **What** do I have already?
- **What's** new about it?



2. WHERE = HOW

- Choose a journal early => author guidelines => template:
- **SCOPE, LENGTH**, format, use of AI, and other requirements.

3. WHEN: Publication deadline

- Publishing timeline

When do you need to reach the stage of AAM or VoR?



Submission deadline

How long does editorial processing take, on average, **at your chosen journal?**



Set a deadline for:

- First draft,
- Submission-ready copy.

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. **No adding of authors later, esp. after acceptance.**
- ❑ Schedule enough time to do all this.

*Formatting a paper = avg. 14 hours; multiple authors = more time required.



*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 our guide [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 in your area;
- Pay for a professional service. Costly but might be required.

After revisions and proofreading

Always use a final checklist before submission.

For **publishers' checklists** check out their websites.

Example: Article Submission Checklist (Taylor and Francis)

Download **NTK pre-submission checklists**:

Contents: for authors and peer-to-peer reviewers

Admin

Pre-submission checklist 1: Contents

For authors:

Research Article Self-Check
Questions

DOI 10.48813/3933-3c82



For peer reviewers:

Research Article Peer Review
Questions

DOI 10.48813/9a2y-1v87



Both are also available on NTK Moodle: [My First Scientific Article](#)

Pre-submission checklist 2: Admin

1. Have you followed the relevant **author guidelines**? (Word count; prescribed formatting, citation method and style; keywords, title and abstract; presentation of data: figures and charts, and other.) Have you written a **cover letter**?
2. Did you have another pair of eyes proofread your article? **Revise and proofread before submission.**
3. Are you clear on the required **publishing model** (e.g., OA) and/or **license**? Can you **fund** it?
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 you article** will be required.
10. Do you know which **submission system** the journal uses?

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 a free individual consultation in person or online.

Learning outcomes

- ❑ Understand where you are in the **publication process**:
 - ✓ Submission-to-publication timeline: stages of a peer review.

- ❑ Understand where you are in the **writing process**:
 - ✓ Writing, converting into, or re-using *as what?* From type to template.
 - ✓ Draft-to-submission timeline: draw up a schedule.

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



Get Assistance

- ❑ Schedule a consultation
- ❑ 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

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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alena.dvorakova@techlib.cz