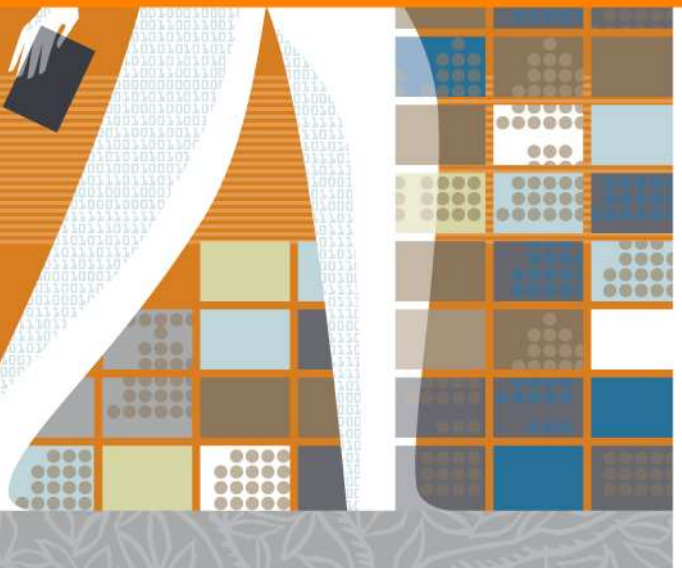
ELSEVIER

How to write great papers and get published

Understanding and benefiting from the publishing process

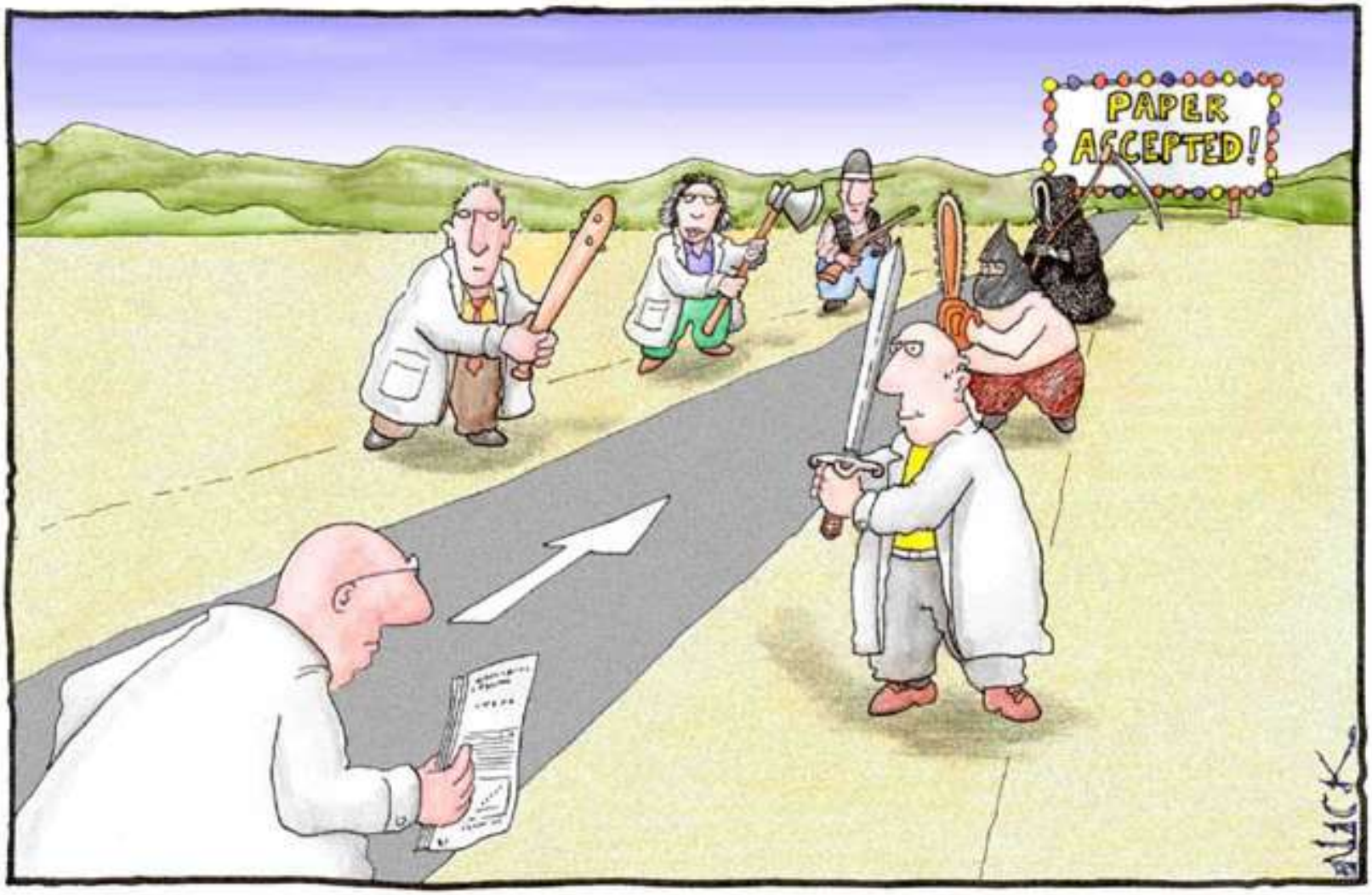


Ben-Gurion University of the Negev

Presented by: Anthony Newman, Senior Publisher
Max Bearzot, Customer Consultant

Location/Date: Israel, December 2019

Why are you here?



Workshop Outline

- How to get Published
  - Scholarly publishing overview
  - What to publish
  - Select your journal/readers/audience carefully
  - Articles types and options
  - Typical article structure
- Surviving Peer Review/Social Media/OA/Ethics
  - The review and editorial process and your response
  - Open Access options
  - Promoting your research using social media
  - Publishing ethics
- Questions and Answers

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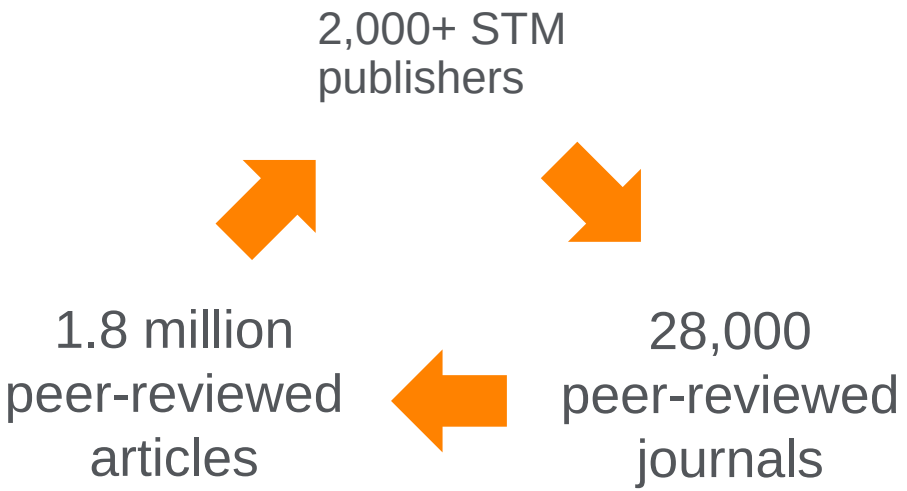
Scholarly Publishing Overview

Peer-reviewed journal growth 1990-2013

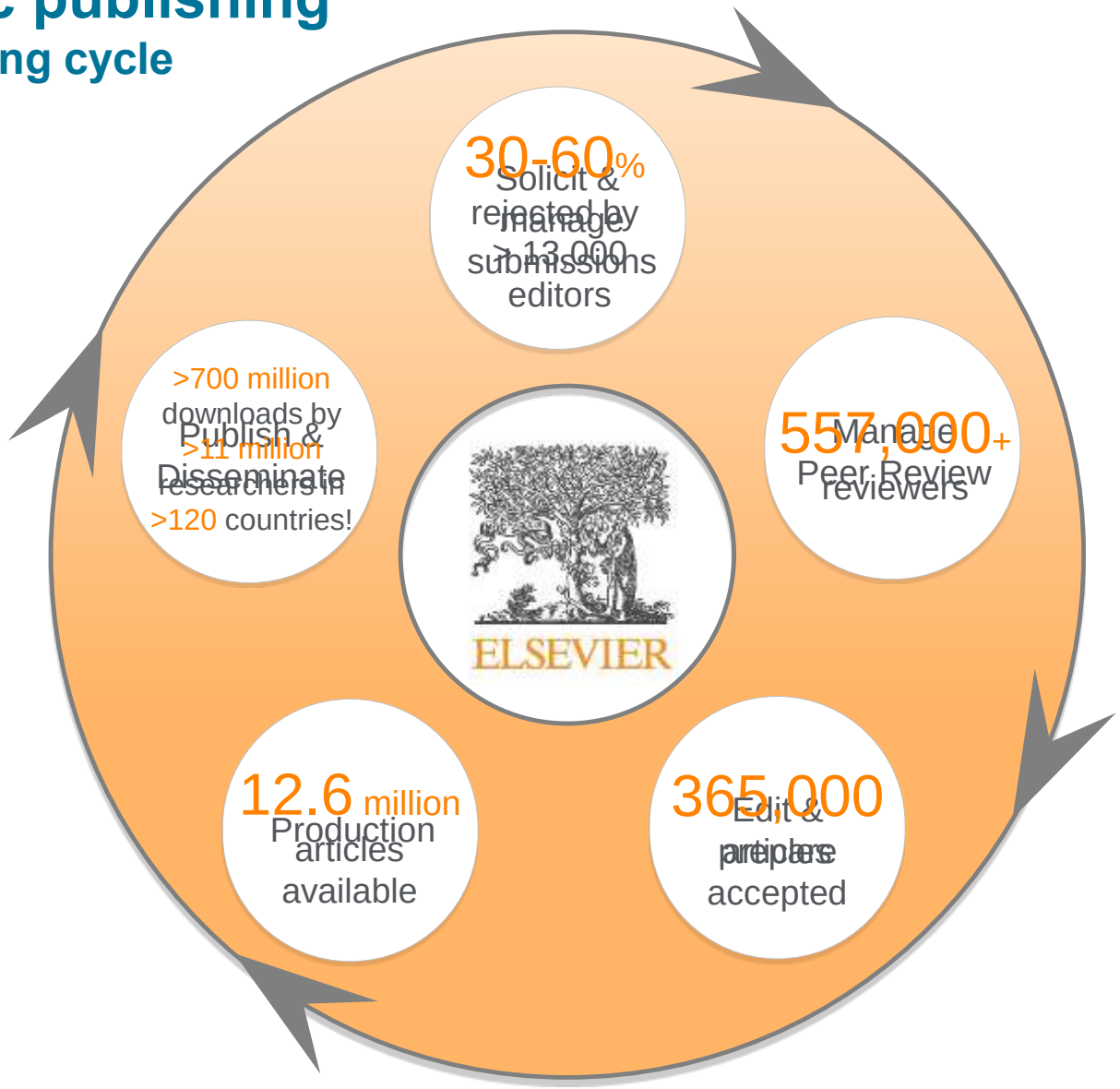
Scholarly publishing today

Scientific, technical and medical (STM) publishing



Academic publishing

The publishing cycle



Trends in publishing

- **Rapid conversion from "print" to "electronic"**
  - 1997: print only
  - 2009: 55% e-only (mostly e-collections)
25% print only
20% print-plus-electronic
  - 2014: 95+% e-only (in life sciences field over 99%)
  - 2025: ???
- **Changing role of "journals" due to e-access**
- **Increased usage of articles (more downloads), but less in-depth use**
  - at lower cost per article
- **Electronic submission**
  - Increased manuscript inflow
- **Experimentation with new publishing models**
  - "author pays" models – Open Access, "delayed open access" – Open Archiving.
- **Experimentation with new publication types and innovations**
  - More exposure, more data reuse, more flexibility

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Why to publish
and
What to publish

Your personal reason for publishing

However, editors, reviewers, and the research community don't consider these reasons when assessing your work – the content counts!

Why publish?

Publishing is one of the necessary steps embedded in the scientific research process. It is also necessary for graduation and career progression.

What to publish:

- ✓ New and original results or methods
- ✓ Reviews or summaries of particular subject
- ✓ Manuscripts that advance the knowledge and understanding in a certain scientific field

What NOT to publish:

- ✗ Reports of no scientific interest
- ✗ Out of date work
- ✗ **Duplications** of previously published work
- ✗ Incorrect/unacceptable conclusions

You need a STRONG, EFFECTIVE manuscript to present your contributions to the scientific community.

A good manuscript has ……..

- good CONTENT
  - ✓ **useful and exciting**

  and has

- a good PRESENTATION of the data
  - ✓ **clear and logically constructed**

What is a strong manuscript?

- ✓ Has a novel, clear, useful, and exciting message
- ✓ Presented and constructed in a logical manner
- ✓ Reviewers and editors can grasp the scientific significance easily

Editors and reviewers are all busy scientists.
Make things easy to save their time.

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How to get your article published

Before you start writing

Refine your searching – be strategic!

Too many researchers have abandoned all the value of libraries when they stopped going there physically!

There is more than Google

Learn what online resources are available at your institute, and learn to search in a clever way.
Ask your library experts for help.

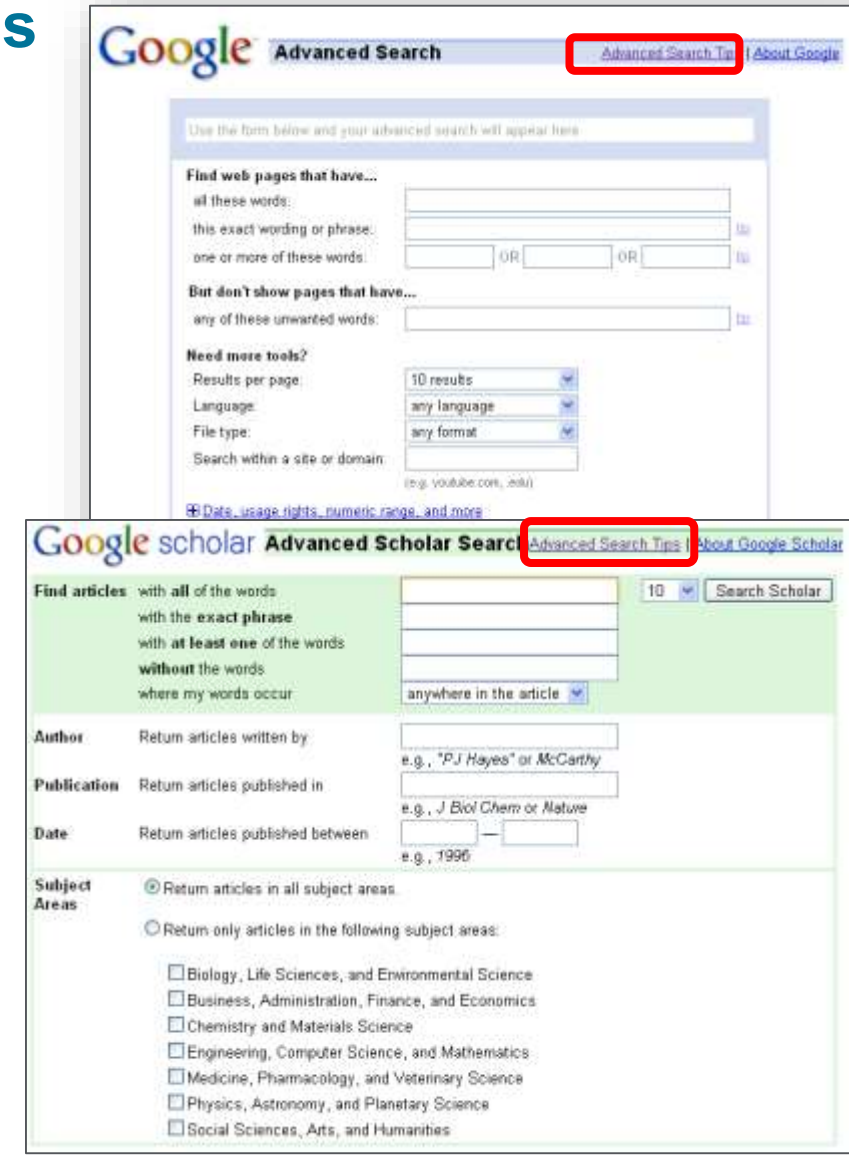
Haglund and Olson, 2008:
"… researchers have difficulties in identifying correct search terms. Searches are often unsuccessful."

Use the advanced search options

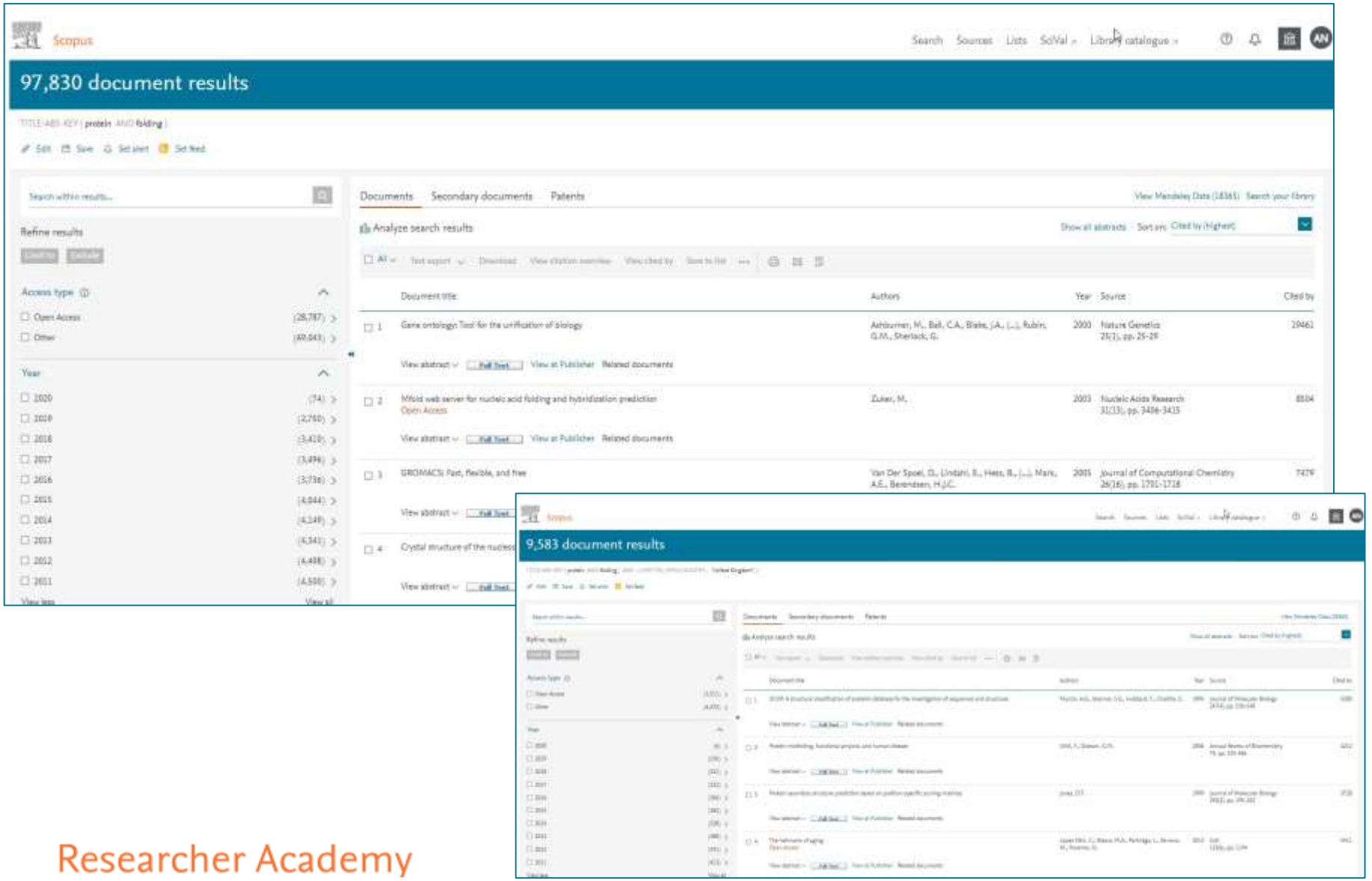
- Within Google and Google Scholar use the advanced searches and check out the Search Tips.

- In ScienceDirect, Scopus, WoS, PubMed and other databases use proximity operators:
  - w/n ← Within - (non order specific)
  - pre/n ← Precedes - (order specific)

E.g. wind w/3 energy



Find out what is being cited and from where



Find out who is being cited

Author details

Bax, Jeroen J.J.

View potential author matches

Author ID: 55429494700

Affiliation(s):

Leiden University Medical Center - LUMC, Leiden, Netherlands View more

Other name formats: Bax, Jereon J. | Bax, J. H. | Bax, J. | Bax, Jeroen | Bax, Jeroen J. | Bax, J. J. | Bax, Jeroen I.

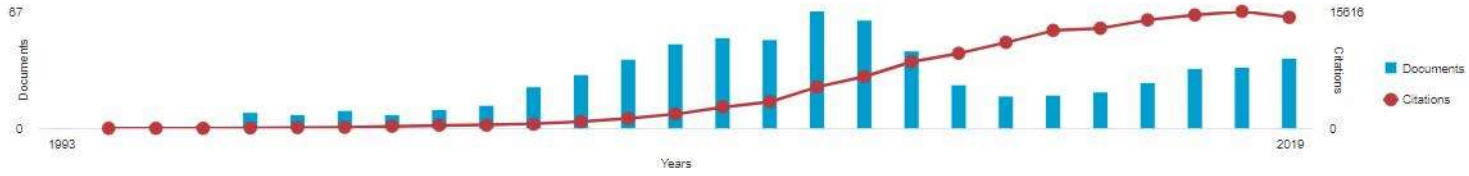
Subject area: Medicine | Health Professions | Biochemistry, Genetics and Molecular Biology | Nursing | Immunology and Microbiology | Pharmacology, Toxicology and Pharmaceutics | Computer Science | Agricultural and Biological Sciences | Mathematics | Engineering | Neuroscience | Decision Sciences | Dentistry | Social Sciences

Documents by author
1771
Analyze author output

Total citations
141956 by 95291 documents
View citation overview

h-index:
145
View *h*-graph

Document and citation trends:



1771 Documents | Cited by 95291 documents | 4005 co-authors | Topics

Strategic Information gathering

- Make sure your idea/concept is original at the beginning of your research, not at the time of writing! (Checklist!)
- There are many tools available such as SCOPUS, WoS, Google Scholar, PubMed.
- Use what you have available. Become skilled in using these effectively…..
- Referees of papers in Elsevier journals get 1 month personal free access to Scopus.

Questions to answer before you write

Think about WHY you want to publish your work.

- ✓ Is it **new and interesting**?
- ✓ Is it a current **hot topic**?
- ✓ Have you **provided solutions** to some difficult problems?
- ✓ Are you **ready** to publish at this point?

If all answers are "yes", then start preparations for your manuscript

What type of manuscript?

- Full articles/Original articles;
- Letters/Rapid Communications/Short communications/Case reports;
- Review papers/perspectives
- New manuscript types (research elements): e.g. Micro Articles, Data in Brief, MethodsX, Software, Graphical Reviews……..

Self-evaluate your work: Is it sufficient for a full article? Or are your results so thrilling that they need to be shown as soon as possible?

Do you want to experiment with the new articles types?

Ask your supervisor and colleagues for advice on manuscript type. Sometimes outsiders see things more clearly than you.

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Identifying the right journal

And writing for it

Select the best journal for submission

- Look at **your references –** these should help you narrow your choices.

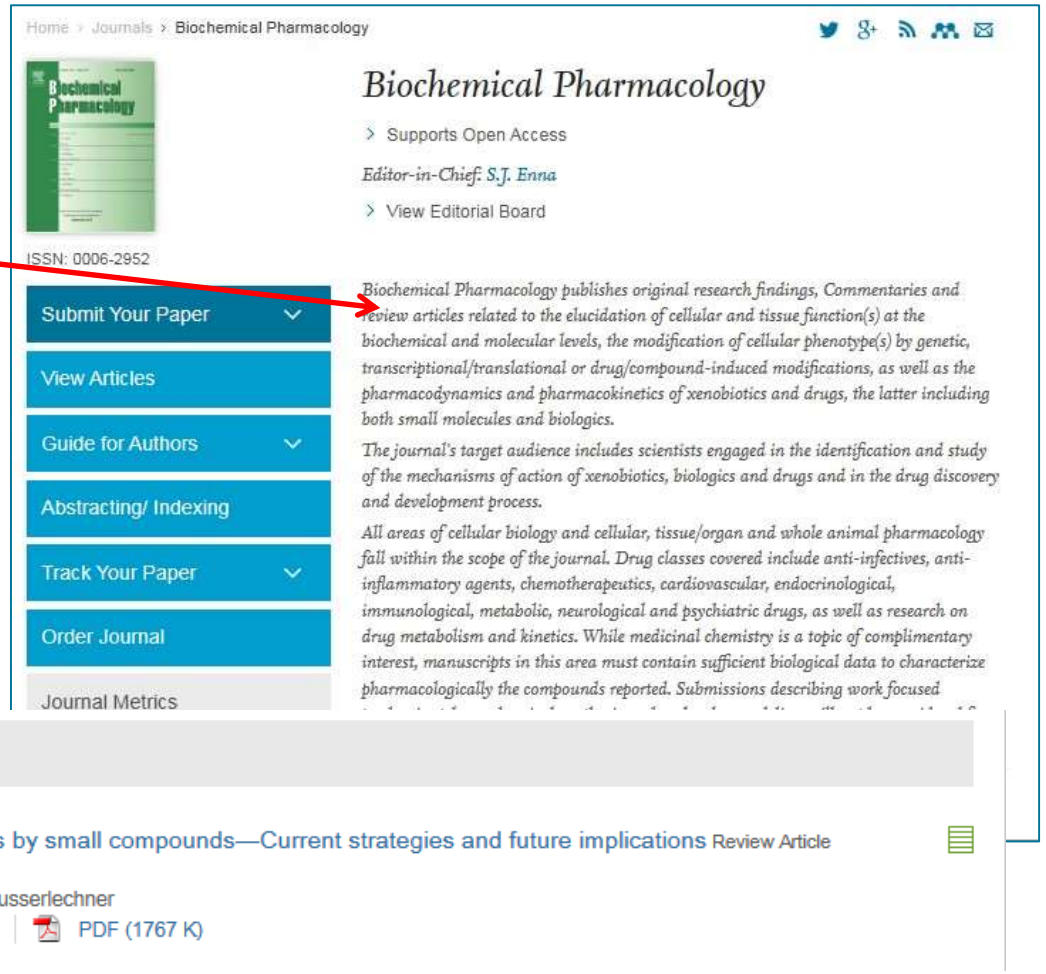
- **Review** recent publications in **each "candidate journal"**. Find out the hot topics, the accepted types of articles, etc.

- Ask yourself the following questions:
  - ✓ Is the journal **peer-reviewed** to the right level?
  - ✓ Who is this journal's **audience**?
  - ✓ How **fast** does it make a decision or publish your paper?
  - ✓ What are the various **Impact metrics** for the journal?
  - ✓ Do you want/need to publish Open Access?
  - ✓ Does it really exist or is **dubious**? (check for example archived version of Beall's List of Predatory Open Access Publishers)

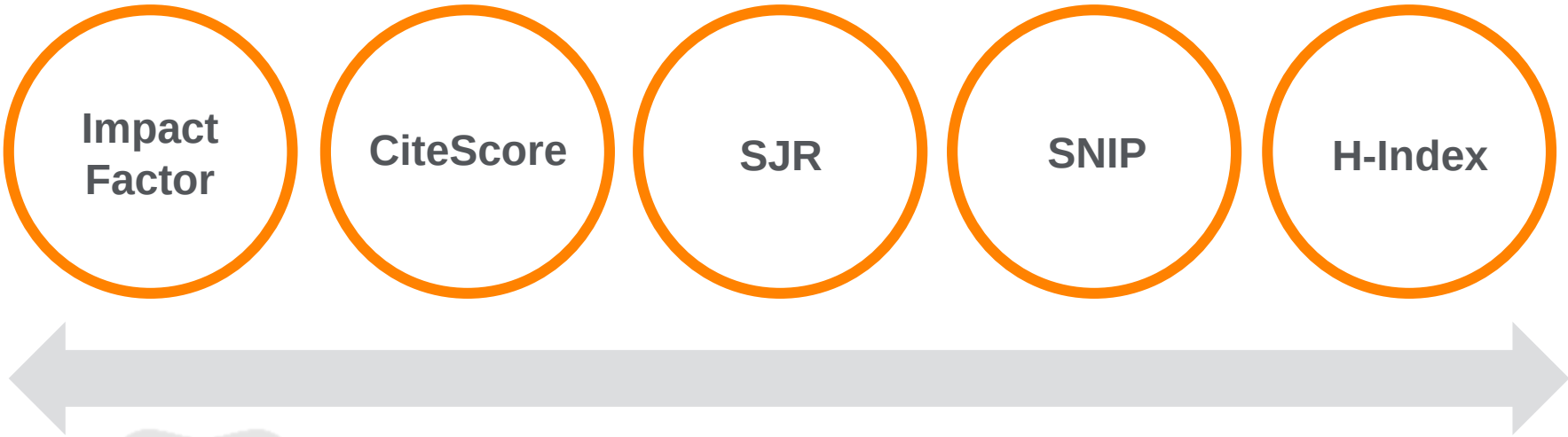
Choose the right journal

Investigate all candidate journals to find out

- Aims and scope
- Accepted types of articles
- Readership
- New paper types
  - go through the abstracts of recent publications)



Bibliometric indicators

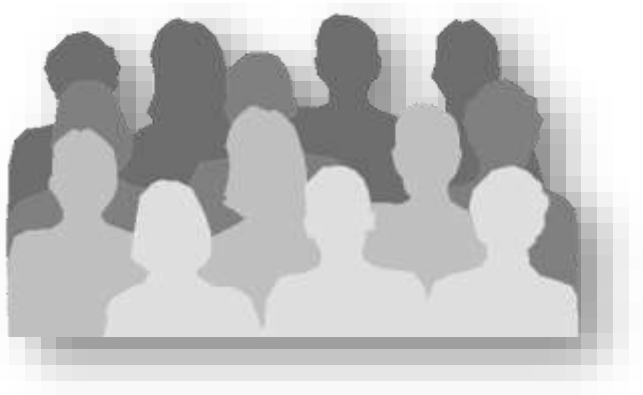


Identify the right audience for your paper

- ✓ Identify the sector of readership/community for which a paper is meant
- ✓ Identify the interest of your audience
- ✓ Get advice from your university library team on where to publish
- ✓ Ask your supervisor or colleagues for recommendations

Just launched in August 2019:

Now there is another option for finding your ideal journal using AI technology and your abstract:
The Elsevier Journal Finder
https://journalfinder.elsevier.com/about



Your Journals list for this manuscript

So you now have a list of candidate journals for your manuscript……

✓ All authors of the submission agree to this list and the sequence of journals

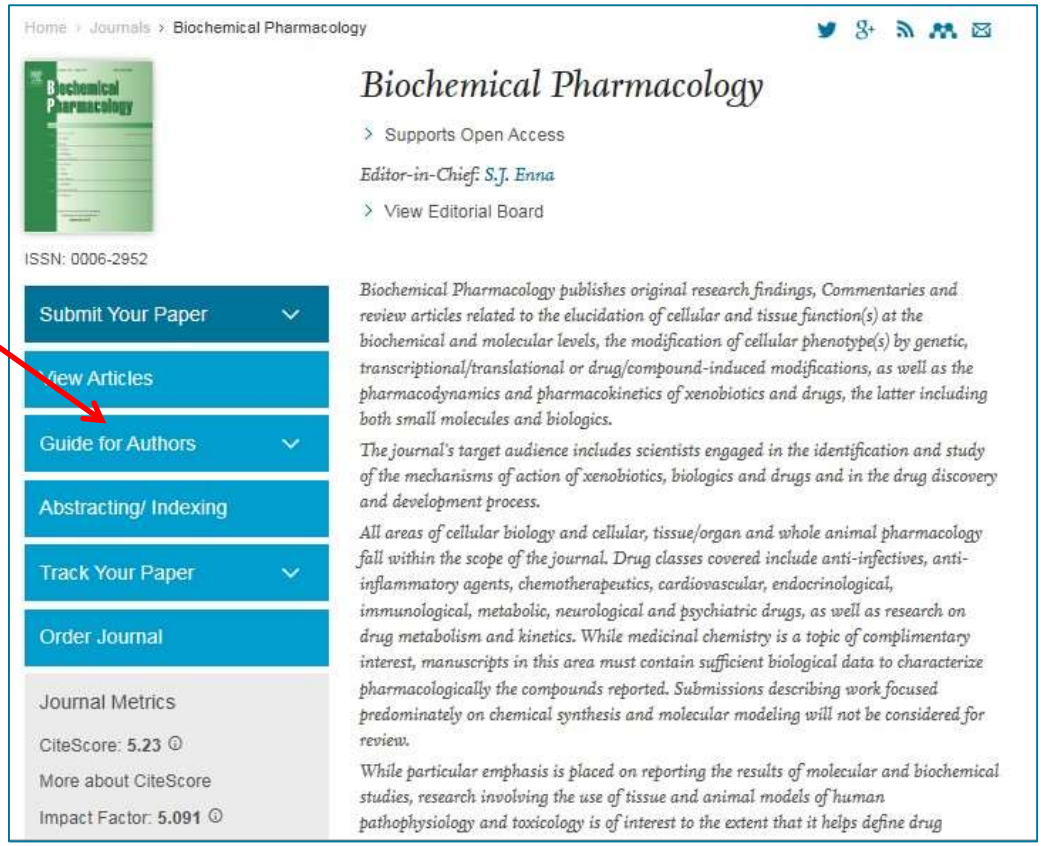
✓ Write your draft as if you are going to submit to the first journal on your list. Use its Guide for Authors - these differ per journal

✗ **DO NOT gamble by submitting your manuscript to more than one journal at a time.**

International ethics standards prohibit multiple/simultaneous submissions, and editors DO find out! (Trust us, they DO!)

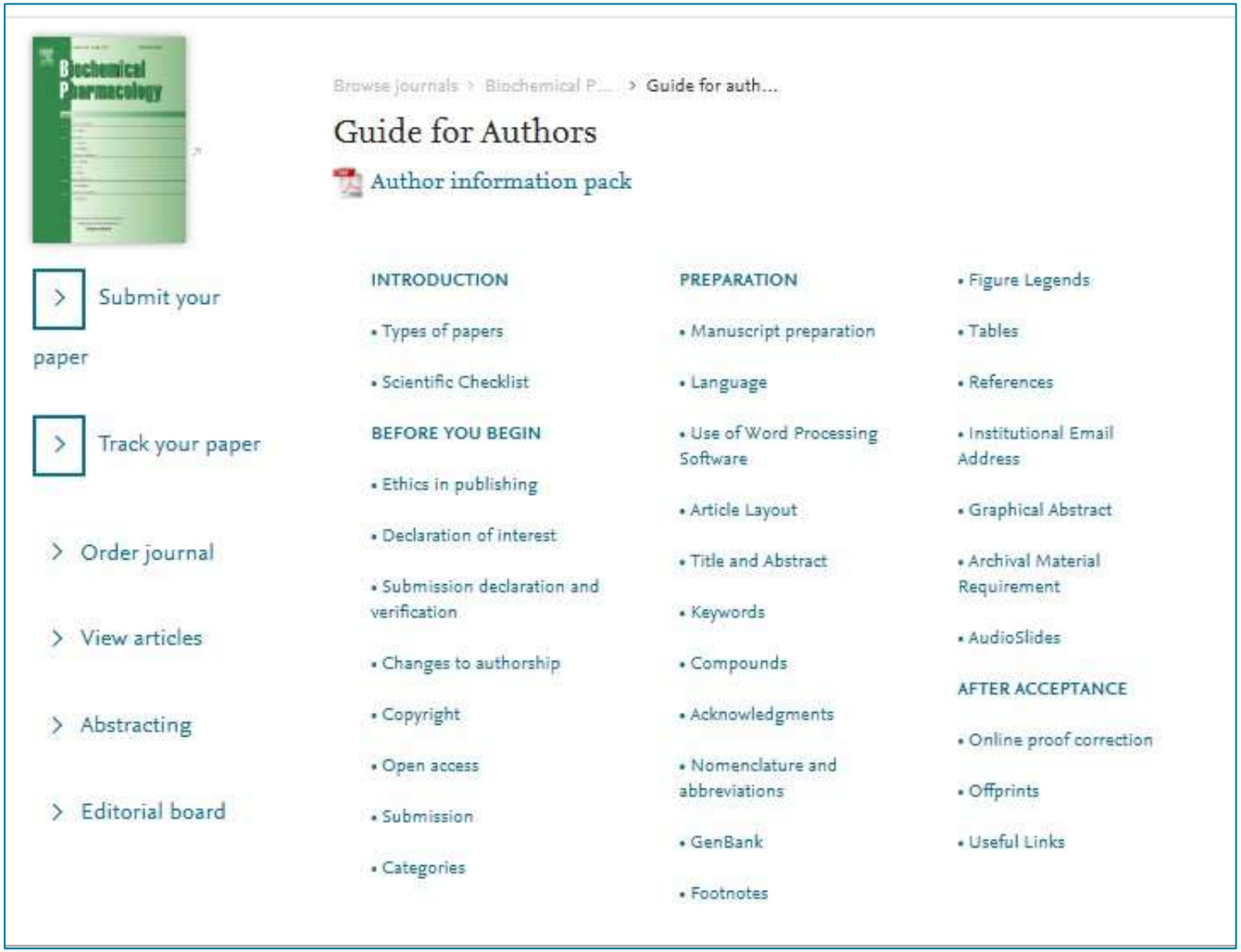
Read the ‘Guide to Authors’- Again and again!

- Stick to the Guide for Authors in your manuscript, even in the first draft (text layout, nomenclature, figures & tables, references etc.). In the end it will save you time, and also the editor’s.



- Editors (and reviewers) do not like wasting time on poorly prepared manuscripts. It is a sign of disrespect.

Read the ‘Guide to Authors’- Again and again!



Common problems with submissions:

An international editor says…

"*The following problems appear much too frequently*"

- *Submission of papers which are clearly out of scope*
- *Failure to format the paper according to the Guide for Authors*
- *Inappropriate (or no) suggested reviewers*
- *Inadequate response to reviewers*
- *Inadequate standard of English*
- *Resubmission of rejected manuscripts without revision*

– Paul Haddad, Editor, *Journal of Chromatography A*

Why is language important?

Save your editor and reviewers the trouble of guessing what you mean…..

Complaint from an editor:

"[This] paper fell well below my threshold. I refuse to spend time trying to understand what the author is trying to say. Besides, I really want to send a message that they can't submit garbage to us and expect us to fix it.

My rule of thumb is that if there are *more than 6 grammatical errors* in the abstract, then I don't waste my time carefully reading the rest."

Scientific Language – Overview

Write with clarity, objectivity, accuracy, and brevity.

Key to successful scientific writing is to be alert for common errors:

- ✗ Sentence construction
- ✗ Incorrect tenses
- ✗ Inaccurate grammar
- ✗ Not using English

Check the Guide for Authors of the target journal for language specifications

Scientific Language – Sentences

- ✓ Write direct and short sentences – more professional looking.
- ✓ One idea or piece of information per sentence is sufficient.
- ✗ Avoid multiple statements in one sentence – they are confusing to the reader.

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Authorship

Authorship: Who is allowed to be an Author?

- Policies regarding authorship can vary
- Most common example: the International Committee of Medical Journal Editors ("Vancouver Group") declared that an author must:
  1. **substantially contribute** to conception and design, or acquisition of data, or analysis and interpretation of data;
  2. **draft** the article or **revise** it critically for important intellectual content; and
  3. **give their approval** of the final full version to be published.
  4. agreement to be **accountable for all aspects of the work** in ensuring that questions related to accuracy or integrity of any part of the work are appropriately investigated and resolved.

ALL four conditions must be fulfilled to be an author!

All others would qualify as "Acknowledged Individuals"

Authorship - Sequence & Abuses

- General principles for who is listed first:
  - First Author
    - Conducts and/or supervises the data generation and analysis and the proper presentation and interpretation of the results
    - Puts paper together and submits the paper to journal
  - Corresponding or Senior author
    - The first author or a senior author from the institution.
    - Particularly when the first author is a PhD student or postdoc, and may move to another institution soon.

- Abuses to be avoided:
  - ✗ Ghost Authorship: leaving out authors who should be included
  - ✗ Gift Authorship: including authors who did not contribute significantly

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Analyzing trends & Journal quality indicators

Overview of publications at Ben-Gurion University 2016-2018

Ben-Gurion University of the Negev

BGU · אוניברסיטת בן-גוריון בנגב · جامعة بن غوريون في النقب

419th (QS ת) · 401-500 (ARWU ת) | Israel | More details on this Institution

2016 to 2018 | no subject area filter selected | ASJC

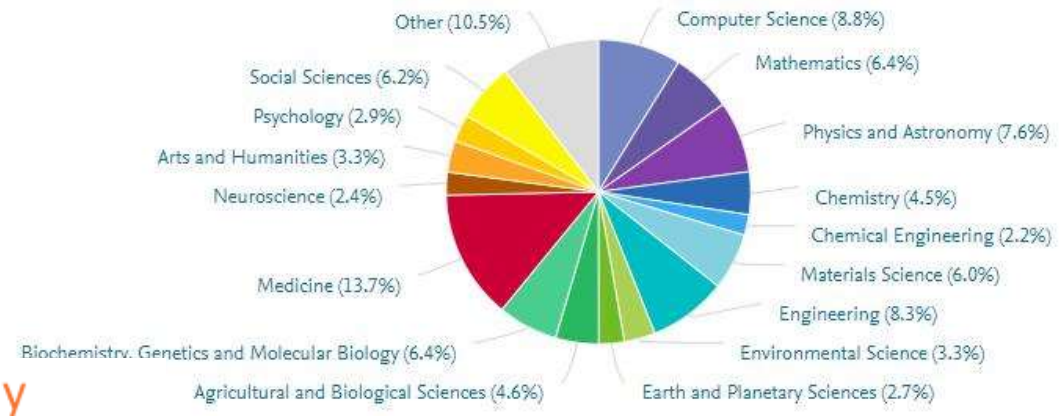
Summary | Topics & Topic Clusters | Collaboration | Published | Viewed | Cited | Authors | Economic Impact | Societal Impact | Awarded Grants

Overall research performance

Scholarly Output	Authors	Field-Weighted Citation Impact
8,602 ▲	5,650 ▲	1.21
View list of publications		

Citation Count	Citations per Publication	h5-index
51,357	6.0	74

Pie Chart



Performance indicators – Ben-Gurion University 2016-2018

Performance indicators

Outputs in Top Citation Percentiles

+ Add to Reporting

Publications in top 10% most cited worldwide

Ben-Gurion University of the Negev:
12.6%

Israel:
15.2%

> Analyze in more detail

Publications in Top Journal Percentiles

+ Add to Reporting

Publications in top 10% journals by CiteScore Percentile

Ben-Gurion University of the Negev:
36.4%

Israel:
36.5%

> Analyze in more detail

International Collaboration

+ Add to Reporting

Publications co-authored with Institutions in other countries

Ben-Gurion University of the Negev:
44.7%

Israel:
47.9%

> Analyze in more detail

Academic-Corporate Collaboration

+ Add to Reporting

Publications with both academic and corporate affiliations

Ben-Gurion University of the Negev:
2.5%

Israel:
3.9%

> Analyze in more detail

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Impact of collaborations by Ben-Gurion University 2016-2018

Ben-Gurion University of the Negev

Report from template

BGU · אוניברסיטת בן-גוריון בנגב · جامعة بن غوريون في النقب

419th (QS) · 401-500 (ARWU) | Israel | More details on this Institution

2016 to 2018 | no subject area filter selected | ASJC | Data sources

Summary | Topics & Topic Clusters | Collaboration | Published | Viewed | Cited | Authors | Economic Impact | Societal Impact | Awarded Grants

Overall | Top collaborating Institutions

Collaboration

+ Add to Reporting | Shortcuts

Scholarly Output at the Ben-Gurion University of the Negev, by amount of international, national and institutional collaboration

Metric		Scholarly Output	Citations	Citations per Publication	Field-Weighted Citation Impact
International collaboration	44.7%	3,845	32,419	8.4	1.53
Only national collaboration	23.3%	2,001	8,263	4.1	0.93
Only institutional collaboration	22.2%	1,914	8,539	4.5	0.92
Single authorship (no collaboration)	9.8%	842	2,136	2.5	1.02

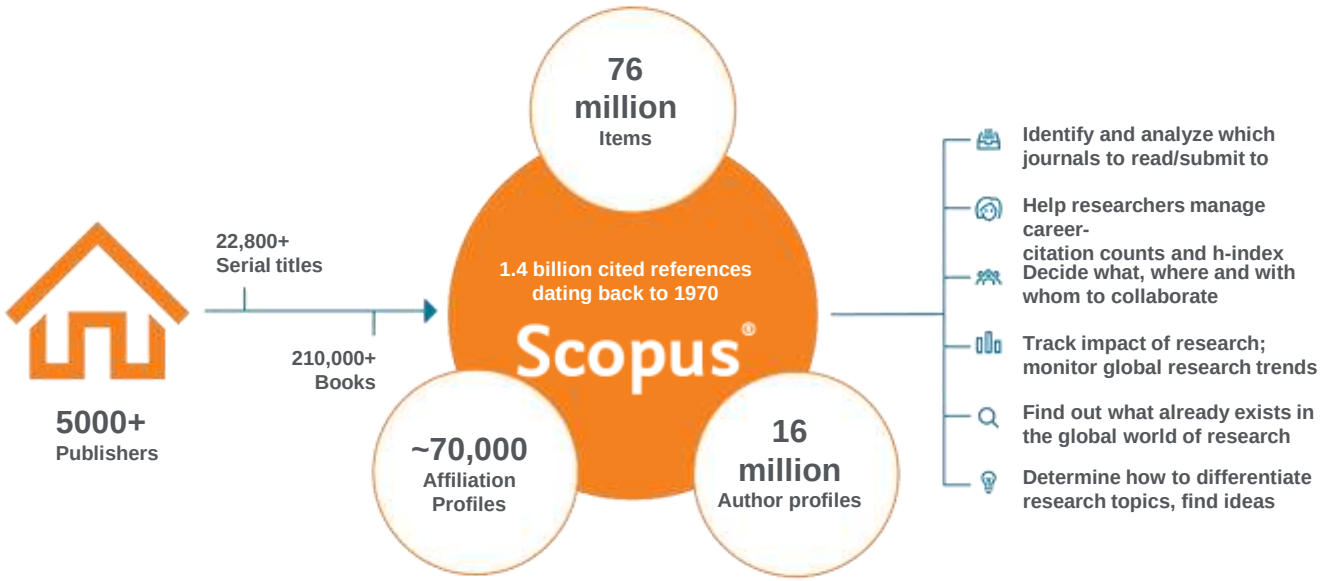
Academic-Corporate Collaboration

+ Add to Reporting | Shortcuts

Scholarly Output at the Ben-Gurion University of the Negev with both academic and corporate author affiliations

Metric		Scholarly Output	Citations	Citations per Publication	Field-Weighted Citation Impact
Academic-corporate collaboration	2.5%	213	5,030	23.6	2.71
No academic-corporate collaboration	97.5%	8,389	46,327	5.5	1.17

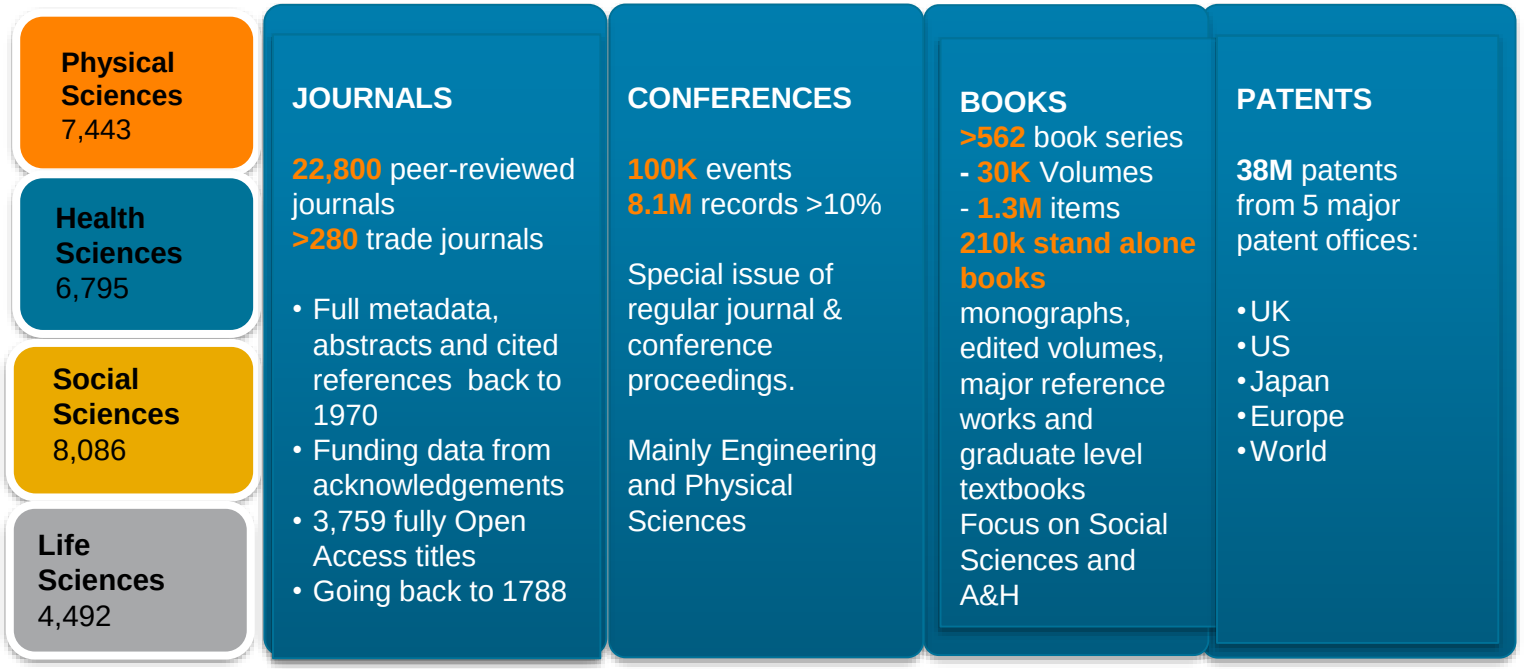
Scopus is one the largest abstract and citation database of peer-reviewed literature, and features smart tools that allow you to track, analyze and visualize scholarly research.



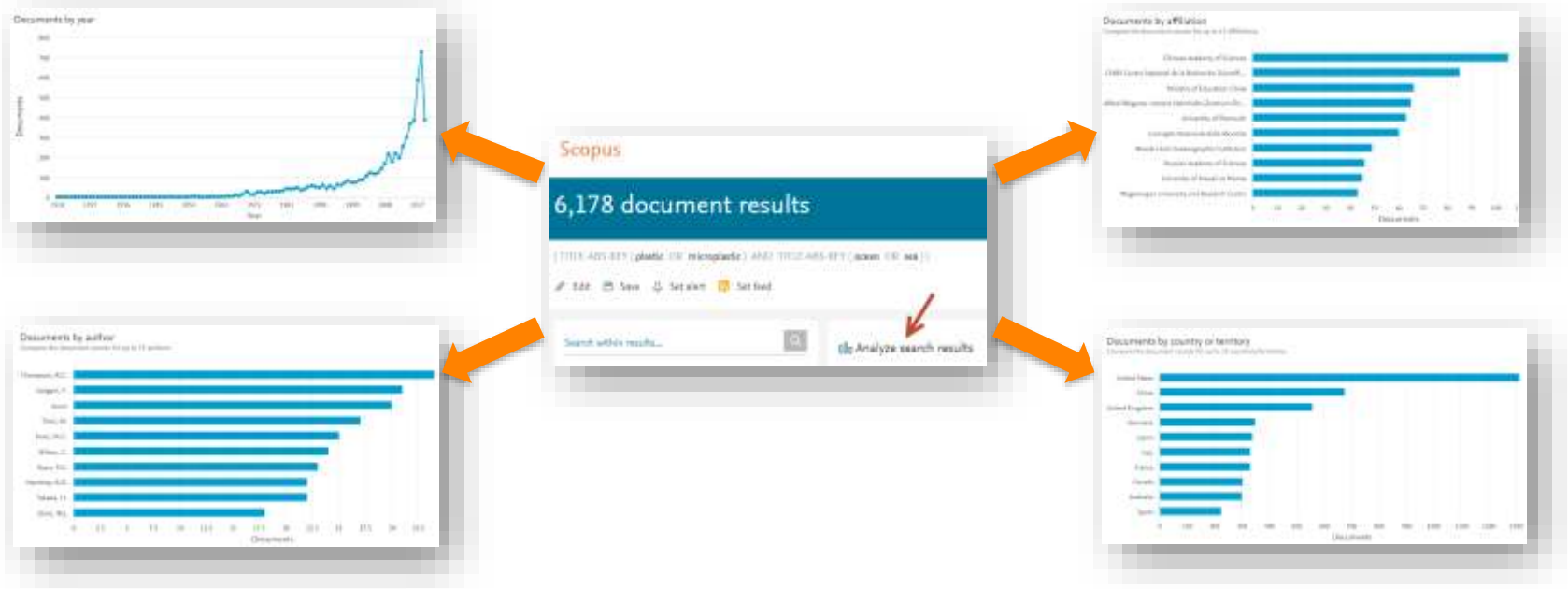
Scopus delivers a comprehensive view on the world of research.
No packages, no add-ons. One all-inclusive subscription.

What content does Scopus include?

- Updated daily
- “Articles in Press” from > 3,750 titles
- 40 different languages covered



Analyze searches: a graphic overview of macro-trends

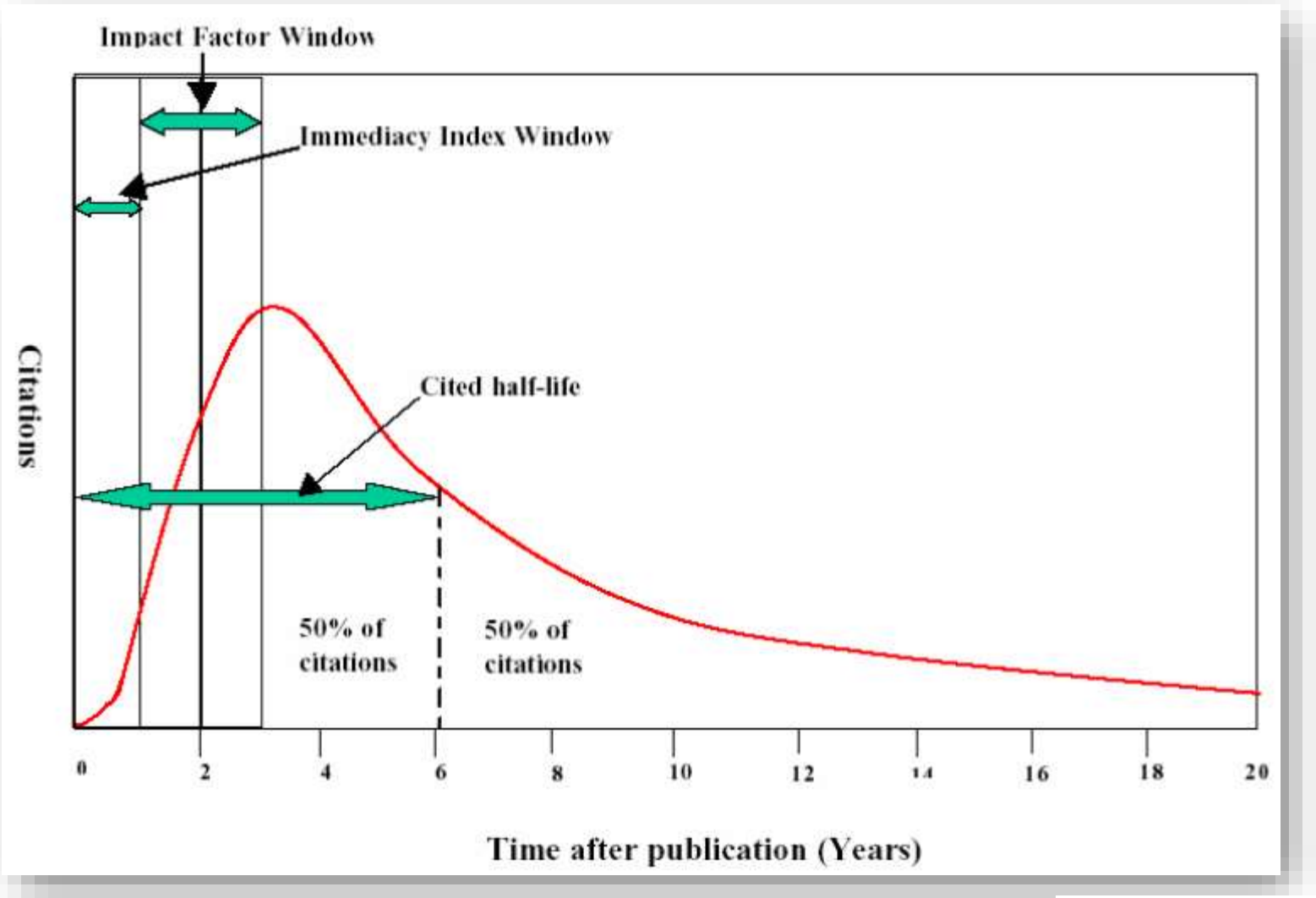


Topic of prominence on Scopus: find out what topics are getting increasing attention

These are clusters of publications that cite each other.
You can see it like a large network of publications

https://www.elsevier.com/connect/the-dawn-of-predictive-analytics-to-measure-research-performance-scivals-topic-prominence

Impact Factor and other bibliometric parameters



Impact Factor™

- The average annual number of citations per article published

the number of times articles published in 2015 and 2016 were cited in indexed journals during 2017

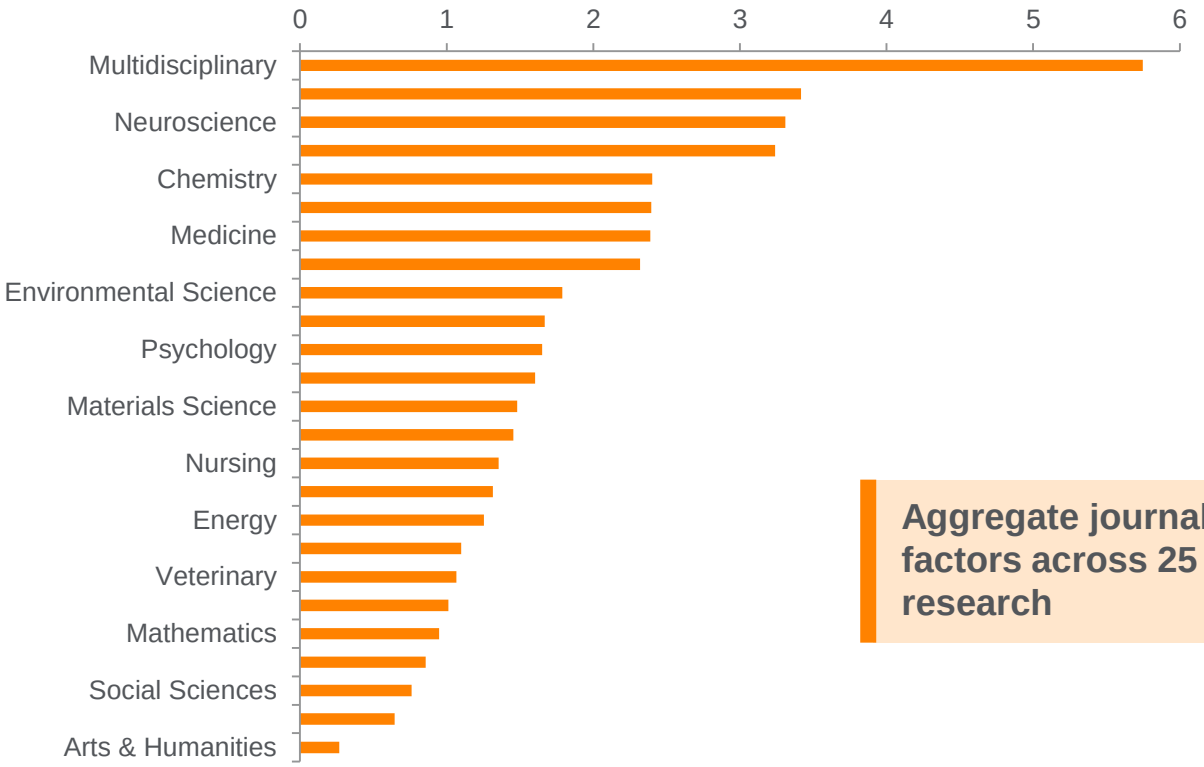
Peer-reviewed documents +

$$= IF^{TM} = \frac{600}{150+150}$$

the number of "citable items" (usually articles, reviews, proceedings or notes; not editorials and letters-to-the-Editor) published in 2015 and 2016

Influences on Impact Factors: Subject Area Differences

- **Citation/rate**



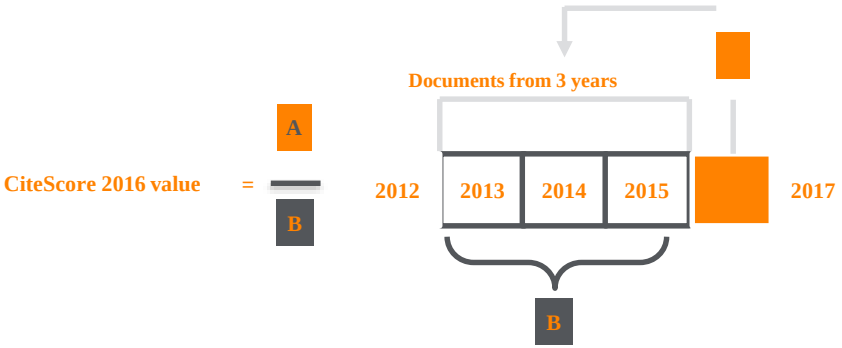
Aggregate journal impact factors across 25 fields of research

Beyond the IF – What are the relevant indicators for journals?

Powered by Scopus

CiteScore™

- **Comprehensive, Transparent, Current and free metrics** for helping to analyze where research outputs are published.
- Calculated using data from Scopus, CiteScore metrics **help validate citations received by journals and proceedings**



More information: www.elsevier.com/scopus and https://journalmetrics.scopus.com/

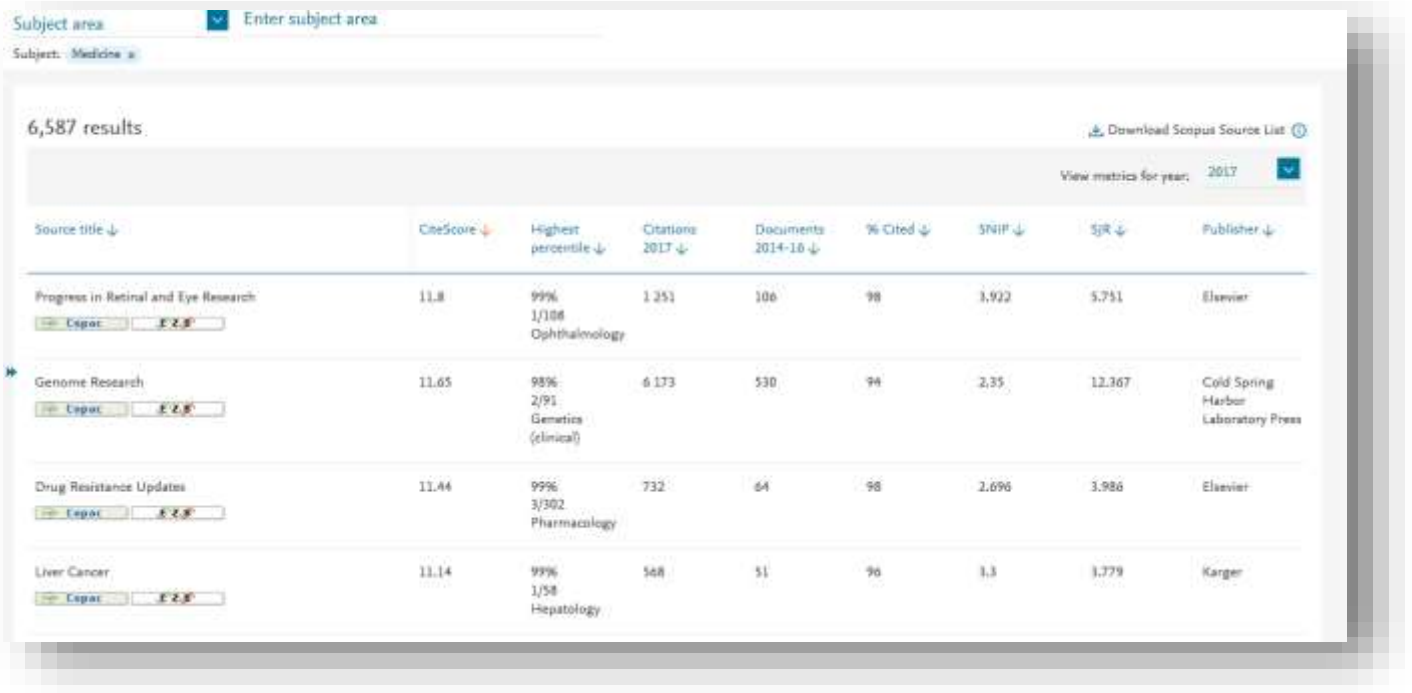
Source-Normalized Impact per Paper (SNIP)

- Developed by CWTS, University of Leiden Netherlands.
- Measures contextual citation impact by **weighting citations based on the total number of citations in a subject field**.
- The impact of a single citation is given higher value in subject areas where citations are less likely, and vice versa.

SCImago Journal Rank (SJR)

- Developed by SCImago, Spain.
- **A prestige metric** that can be applied to journals, book series and conference proceedings.
- With SJR, the subject field, quality and reputation of the journal have a direct effect on the value of a citation.

Free Journal Metrics for +25 000 sources on Scopus



Journal comparator on Scopus

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Research integrity and reproducibility when publishing

Research integrity and reproducibility

NATURE | NEWS FEATURE

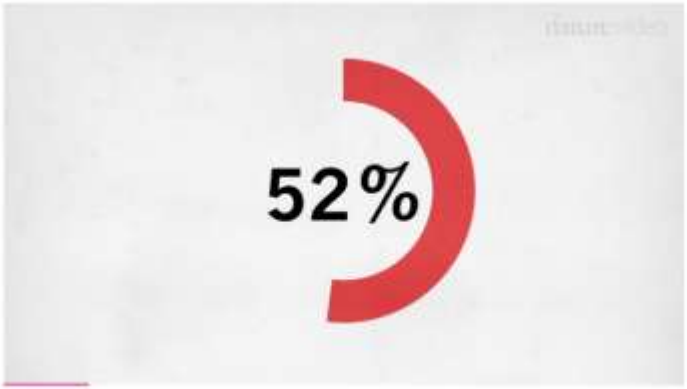
1,500 scientists lift the lid on reproducibility

Survey sheds light on the 'crisis' rocking research.

Monya Baker

25 May 2016 | Corrected: 28 July 2016

PDF | Rights & Permissions



PLoS ONE Open Access
Volume 10, Issue 6, 24 June 2015, Article number e0129506

Biomedical data sharing and reuse: Attitudes and practices of clinical and scientific research staff (Article) (Open Access)

Federer, L.M., Lu, Y.-L., Joubert, D.J., Welsh, J., Brandys, B.

Office of Research Services, Division of Library Services, National Institutes of Health, NIH Library, Bethesda, MD, United States

Reproducibility: Principles, Problems, Practices, and Prospects
1 January 2015, Pages 1-574

Reproducibility: Principles, Problems, Practices, and Prospects

(Book)

Atmanspacher, H.[a], Maasen, S.[b]

[a]Collegium Helveticum, University and ETH Zurich, Zurich, Switzerland
[b]Munich Center for Technology in Society, Technical University, Munich, Germany

Perspective | OPEN | Published: 10 January 2017

A manifesto for reproducible science

Marcus R. Munafò, Brian A. Nosek, Dorothy V. M. Bishop, Katherine S. Button, Christopher D. Chambers, Nathalie Percie du Sert, Uri Simonsohn, Eric-Jan Wagenmakers, Jennifer J. Ware & John P. A. Ioannidis

Nature Human Behaviour **1**, Article number: 0021 (2017) | Download Citation

What is Mendeley

Reference Manager and a workflow tool supporting researcher needs…

Reference management

Collect, read, organize and cite all of your research from one library

Research network

Promote your work. Connect and collaborate with millions of researches worldwide

Datasets

Store, share and cite datasets with one secure online repository

Careers

Search for science and technology jobs in institutions worldwide

Funding

Find the best funding for your research, bookmark your favorites and stay up to date

Data

Mendeley Data is a certified, free-to-use repository that hosts open data from all disciplines, whatever its format (e.g. raw and processed data, tables, codes and software).

Your data will receive a DOI, making it independently citable and it can be linked to any associated article on ScienceDirect, making it easy for readers to find and reuse.

Make research data citable

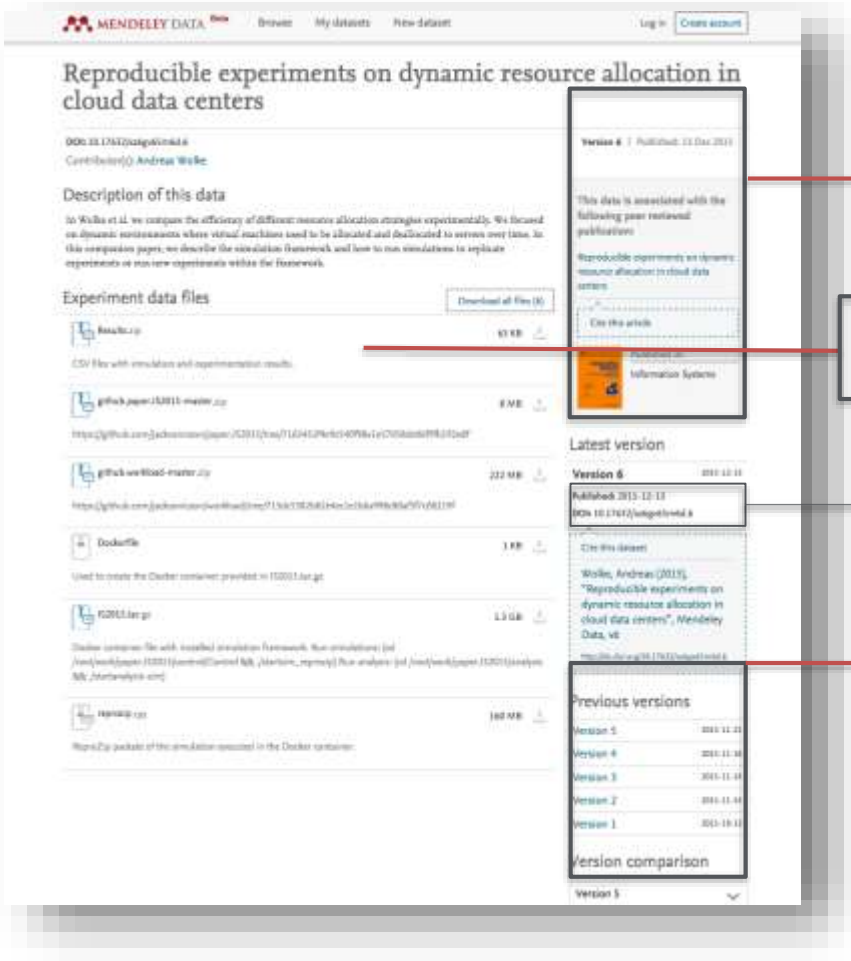
Link articles to data with DOIs

Share data privately or publicly

Ensure long-term data storage

Complies with funders' requirements

Data sharing with Mendeley



2017 DSA 2019

Linked to published papers

Linked to other datasets/software

DOI, citable

Versioning and provenance

https://data.mendeley.com/datasets/xz6gv65m6d/6

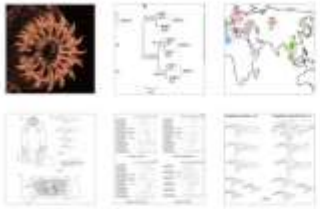
ELSEVIER

Outline

Highlights
Abstract
Graphical abstract
Keywords
1. Introduction
2. Materials and methods
3. Results
4. Discussion
Acknowledgements
Appendix A. Supplementary data
Research Data
References

Show full outline

Figures (8)



Show all figures

Tables (6)

Table 1
Table 2
Table 3

International Journal for Parasitology
Volume 46, Issues 5–6, May 2016, Pages 361-374

Reappraisal of *Hydatigera taeniaeformis* (Batsch, 1786) (Cestoda: Taeniidae) sensu lato with description of *Hydatigera kamiyai* n. sp. ☆

Antti Lavikainen [a, 1], Takashi Iwaki [b, 1], Voitto Haukisalmi [c], Sergey V. Konyaev [d], Maurizio Casiraghi [e], Nikolai E. Dokuchaev [f], Andrea Galimberti [e], Ali Halajian [g], Heikki Henttonen [h], Madoka Ichikawa-Seki [i], Tadashi Itagaki [i], Anton V. Krivopalov [d], Seppo Meri [a], Serge Morand [j], Anu Näreaho [k], Gert E. Olsson [l], Alexis Ribas [m, n], Yitagele Terefe [o], Minoru Nakao [p]

Show more

https://doi.org/10.1016/j.ijpara.2016.01.009

Get rights and content

Highlights

- *Hydatigera taeniaeformis* sensu lato is a complex of three cryptic entities (clades).
- Divergence is consistent across multiple genetic markers.
- Clades differ in geography and intermediate host associations.
- The Cosmopolitan clade in rats and mice is assigned to *H. taeniaeformis* sensu stricto.
- The North-Eurasian clade in voles and *Apodemus* is described as *Hydatigera kamiyai* n. sp.

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Show more

https://doi.org/10.1016/j.ijpara.2016.01.009

Highlights

- *Hydatigera taeniaeformis* sensu... (clades).
- Divergence is consistent across...
- Clades differ in geography and...
- The Cosmopolitan clade in rats... sensu stricto.
- The North-Eurasian clade in vo... *Hydatigera kamiyai* n. sp.

3. Results

Original data of this study including nucleotide sequence alignments, numerical morphological data and a drawing (atypical proglottid from a lynx) are available at Mendeley Data (http://dx.doi.org/10.17632/f34pw8mf4y.1).

3.1. DNA barcoding and phylogenetic relationships

A total of 52 *cox1* haplotypes (sequence types), of which 48 were new, were identified among the 150 specimens of *H. taeniaeformis* s.l. Taking into account previously published data, the complete *cox1* data set included 80 haplotypes. Three main clades A, B and C, corresponding to the previously identified genetic entities of *H. taeniaeformis* s.l. (Okamoto et al., 1995a, Galimberti et al., 2012a), were detected (see the phenogram in Supplementary Fig. S1). Bootstrap supports for the clades were: A, 99%; B, 52%; and C, 99% (B + C, 97%). Clade A consisted of 36 haplotypes (designated as A1–A36), whereas clades B and C included 22 haplotypes each (B1–B22 and C1–C22, respectively).

Genetic divergence was estimated by comparing K2P distances of the partial *cox1* sequences within and between the three clades (Table 3). Pairwise divergence values were low (<1.4%) within clade C, but higher within clades A and B, reaching up to 5.1% and 3.5%, respectively. Within a single definitive host individual, distances among the haplotypes of clade B reached 2.2%. In the phylogenetic analysis, clade A was divided into two subclades with bootstrap supports of 61% and 84% (ML tree in Supplementary Fig. S2A). Pairwise divergence values within these subclades (0.3–3.5%) overlapped with values between them (1.6–5.1%). Clade A diverged from the other clades with distance values comparable with the distances between *H. taeniaeformis* s.l. and *H. krepkogorski*, i.e. the distances ranged at the interspecific level as was also observed in previous studies (e.g. Lavikainen et al., 2008, Galimberti et al., 2012a; Nakao et al., 2013a). Between clades B and C, divergence values were lower, but equal to or slightly higher than values between the subclades of clade A. Phylogenetic relationships of the haplotypes within the clades remained mostly uncertain due to low bootstrap values (for most nodes <50%; Supplementary Fig. S2).

ELSEVIER

Research data for this article

Mendeley

for download under the CC BY 4.0 licence

Hydatigera

Revision of Hydatigera taeniaeformis species complex with a description of a new species (Lavikainen et al., IJP 2016):
1. Morphological data.
A drawing (atypical segment). Morphological matrix.
2. DNA data.
Nucleotide sequence alignments (18S rDNA; pold & pepck; mitochondrial protein-coding...

Dataset

lynx_segment.jpg	467KB
morphological matrix.xls	69KB
Hyd_18S.phy	22KB

Show all 6 files on Mendeley Data

Why should I share my research data?

How you benefit

- You get credit for the work you've done
- Leads to more citations! *
- Can boost your number of publications
- Increases your exposure and may lead to new collaborations

What it means for the research community

- It's easy to reuse and reinterpret your data
- Duplication of experiments can be avoided
- New insights can be gained, sparking new lines of inquiry
- Empowers replication

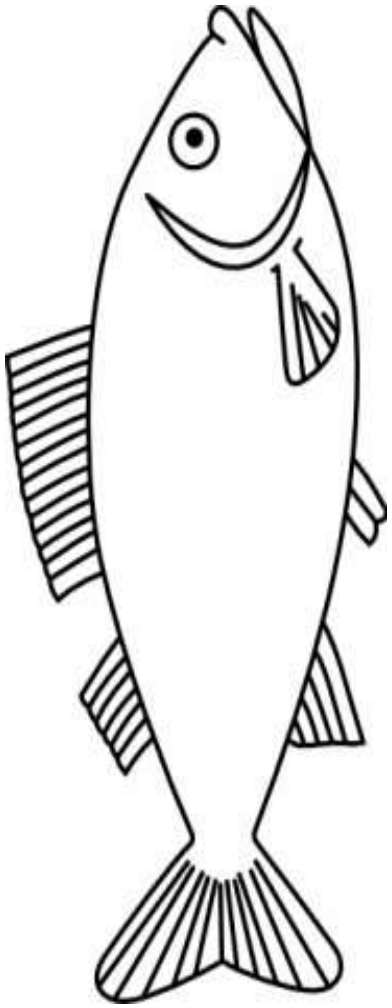
And society at large...

- Greater transparency boosts public faith in research
- Can play a role in guiding government policy
- Improves access to research for those outside health and academia
- Benefits the public purse as funding of repeat work is reduced

Researcher Academy

Typical article structure

Typical Structure of a Research Article



- Title
- Abstract
- Keywords

Make them easy for indexing and searching! (informative, attractive, effective)

- Main text (IMRAD)
  - Introduction
  - Methods
  - Results
  - And
  - Discussions

Journal space is not unlimited.

Your reader's time is scarce.

Make your article as concise as possible - more difficult than you imagine!

- Conclusion
- Acknowledgement
- References
- Supplementary Data
  - Reviews, Micro Articles etc different layout.
  - Social sciences more discussion and less data.

The process of writing – building the article

Title

A good title should contain the fewest possible words that adequately describe the contents of a paper.

Effective titles

- ✓ Identify the **main** issue of the paper
- ✓ **Begin** with the subject of the paper
- ✓ Are accurate, unambiguous, specific, and complete
- ✓ Are as **short** as possible
  - ✓ Articles with **short, catchy titles** are often better cited
- ✗ Do not contain rarely-used abbreviations
- ✓ Attract readers - Remember: readers are the potential authors who will cite your article

Keywords

In an "electronic world", keywords determine whether your article is found or not!

Avoid making them

- ✗ too general ("drug delivery", "mouse", "disease", etc.)
- ✗ too narrow (so that nobody will ever search for it)

Effective approach:

Look at the keywords of articles relevant to your manuscript

Play with these keywords, and see whether they return relevant papers, neither too many nor too few – a good guideline.

Abstract

Tell readers what you did and the important findings

- One paragraph (between 50-250 words) often, plus Highlight bullet points (and Graphical Abstracts if allowed)
- **Advertisement for your article**, and should encourage reading the entire paper
- A clear abstract will strongly influence if your work is considered further

Graphite intercalation compounds (GICs) of composition C*x*N(SO2CF3)2 · *δ*F are prepared under ambient conditions in 48% hydrofluoric acid, using K2MnF6 as an oxidizing reagent. The stage 2 GIC product structures are determined using powder XRD and modeled by fitting one dimensional electron density profiles.

A new digestion method followed by selective fluoride electrode elemental analyses allows the determination of free fluoride within products, and the compositional *x* and *δ* parameters are determined for reaction times from 0.25 to 500 h.

What has been done

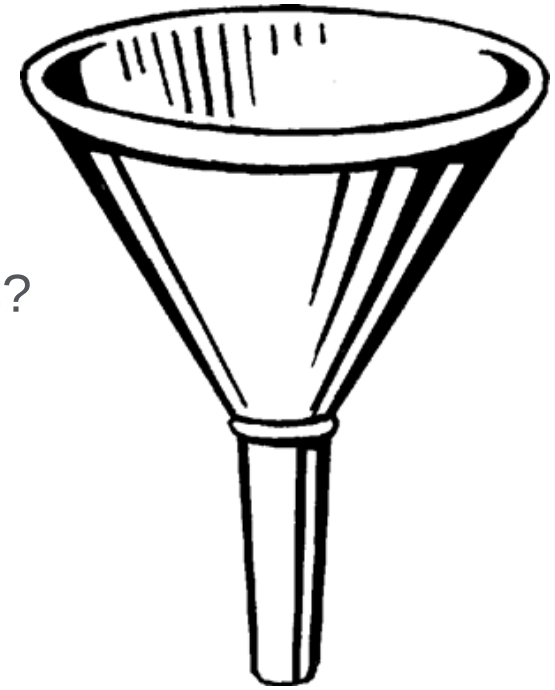
What are the main findings

Introduction

The place to convince readers that you know why your work is relevant, also for them.

Answer a series of questions:

- What is the problem?
- Are there any existing solutions?
- Which one is the best?
- What is its main limitation?
- What do you hope to achieve?



Pay attention to the following

- ✓ Before you present your new data, put them into perspective first
- ✓ Be brief, it is not a history lesson
- ✗ Do not mix introduction, results, discussion and conclusions. Keep them separate
- ✗ Do not overuse expressions such as “novel”, “first time”, “first ever”, “paradigm shift”, etc.
- ✓ Cite only relevant references
  - Otherwise the editor and the reviewer may think you don’t have a clue what you are writing about!

Methods / Experimental

- ✓ Include all important details so that the reader can repeat the work.
  - Details that were previously published can be omitted but a general summary of those experiments should be included
- ✓ Give vendor names (and addresses) of equipment etc. used
- ✓ All chemicals must be identified
- ✗ Do not use proprietary, unidentifiable compounds without description. State purity and/or supplier if it is important.
- ✓ Present proper control experiments
- ✗ Avoid adding comments and discussion
- ✓ Write in the past tense
  - Most journals prefer the passive voice, some the active.
- ✓ Consider use of Supplementary Materials
  - Documents, spreadsheets, audio, video, ...

Reviewers will criticise incomplete or incorrect method descriptions, and may even recommend rejection

Results – what have you found?

The following should be included

✓ the **main findings**

- Thus not *all* findings. Decide what to share.
- Findings from experiments described in the Methods section

✓ Highlight findings that **differ** from findings in previous publications, and **unexpected** findings

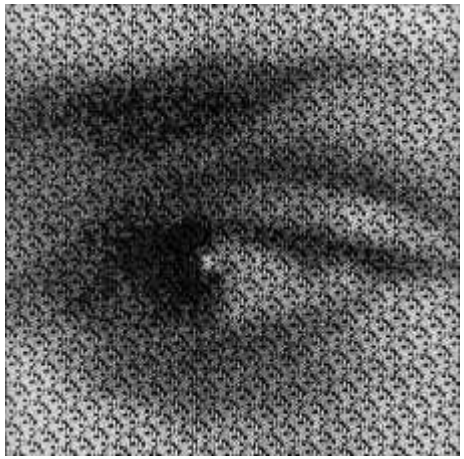
✓ Results of the **statistical analysis**

Results – Figures and tables

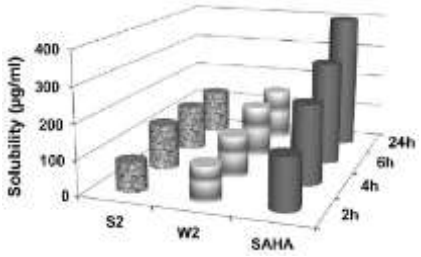
Illustrations are critical, because:

- Figures and tables are the most efficient way to present results
- Results are the driving force of the publication
- Captions and legends must be detailed enough to make figures and tables self-explanatory
- Figures and tables should not need further explanation or description in text. Less writing and less reading. Let your figures do the work instead of words.

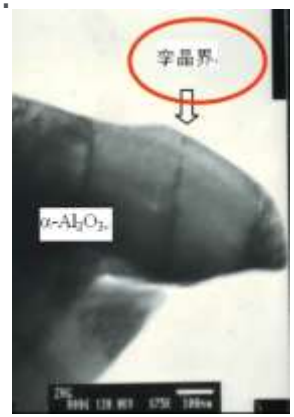
"One Picture is Worth a Thousand Words"
Sue Hanauer (1968)

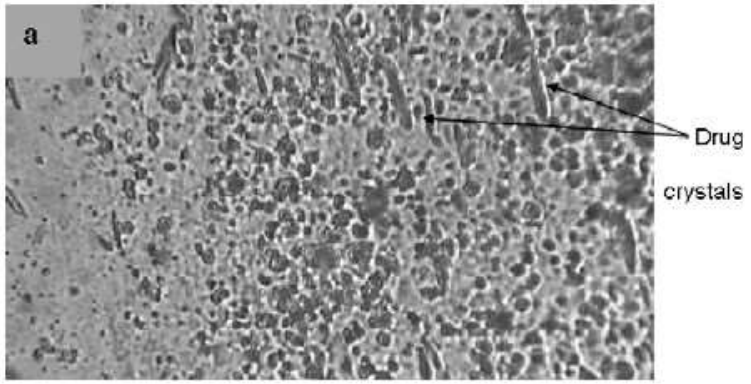


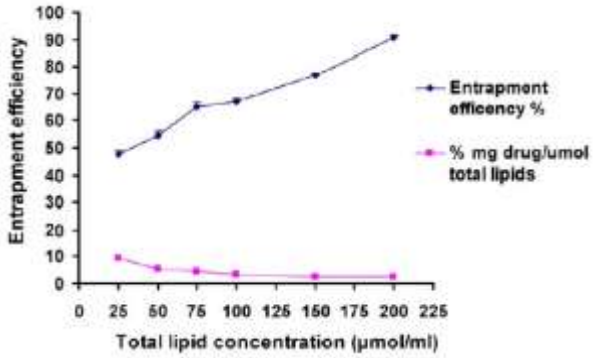
Results – appearance counts!



- ✓ Un-crowded plots
  - ✓ 3 or 4 data sets per figure; well-selected scales; appropriate axis label size; symbols clear to read; data sets easily distinguishable.
- ✓ Each photograph must have a scale marker of professional quality in a corner.
- ✓ Text in photos / figures in English
  - ✗ Not in French, German, Chinese, Korean, ...
- ✓ Use colour ONLY when necessary.
  - ✗ If different line styles can clarify the meaning, then do not use colours or other thrilling effects.
- ✓ If used, colour must be visible/distinguishable when printed in black & white.
- ✗ Do not include long boring tables!







Discussion – what do your results mean?

- It is the most important section of your article. Here you get the chance to SELL your data! Many manuscripts are rejected because the Discussion is weak.

- **Check for the following:**
  - ✓ Do your results relate to the original question or objectives outlined in the Introduction section?
  - ✓ Do you provide interpretation for each of your results presented?
  - ✓ Are your results consistent with what other investigators have reported? Or are there any differences? Why?
  - ✓ Are there any limitations?
  - ✓ Does the discussion logically lead to your conclusion?

- **Do not:**
  - ✗ Make statements that go beyond what the results can support
  - ✗ Suddenly introduce new terms or ideas

Conclusions

- ✓ Present global and specific conclusions
- ✓ Indicate uses and extensions if appropriate
- ✓ Suggest future experiments and indicate whether they are underway
- ✗ Do not summarise the paper
  - The abstract is for that purpose
- ✗ Avoid judgments about impact
  - Others can comment, you should not.

References: get them right!

- ✓ Please **adhere to the Guide for Authors** of the journal
- ✓ It is your responsibility, not of the Editor's, to format references correctly!
- ✓ Get help, save time - use Reference management software
- ✓ Check
  - Referencing style of the journal
  - The spelling of author names, the year of publication
  - Punctuation use
- ✗ Avoid citing the following if possible:
  - Personal communications, unpublished observations, manuscripts not yet accepted for publication
  - Articles published only in the local language, which are difficult for international readers to find and understand

Reference Management Software helps

- Many journals are helpful in formatting the journal reference style for you (e.g. Elsevier's Your Paper Your Way service).
- If the publisher is not offering this service it is your responsibility to format references correctly!

MENDELEY

BibSonomy

THOMSON REUTERS ENDNOTE

zotero

Reference Manager 12

en.wikipedia.org/wiki/Comparison_of_reference_management_software

Supplementary Material

- Data of secondary importance for the main scientific thrust of the article
  - e.g. individual curves, when a representative curve or a mean curve is given in the article itself
- Or data that do not fit into the main body of the article
  - e.g. audio, video, ...
- Original figure before color correction or trimming for clarity
- Not part of the printed article
  - Will be available online with the published paper
- Must relate to, and support, the article
- But also consider publishing your data in an easier to discover format – ***Data In Brief*** or ***Mendeley Data*** for example

Cover Letter

Your chance to speak to the editor directly

- Submitted along with your manuscript
- Mention what would make your manuscript special to the journal
- Note special requirements (suggest reviewers, conflicts of interest)

Professor H. D. Schmidt
School of Science and Engineering
Northeast State University
College Park, MI 10000
USA

January

Dear Professor Schmidt,

Enclosed with this letter you will find en electronic submission of a manu
entitled "Mechano-sorptive creep under compressive loading – a microm ical
model" by John Smith and myself. This is an original paper which has neither
previously nor simultaneously in whole or in part been submitted anywhere else.
Both authors have read and approved the final version submitted.

Mechano-sorptive is sometimes denoted as accelerated creep. It has been
experimentally observed that the creep of paper accelerates if it is subjected to a
cyclic moisture content. This is of large practical importance for the paper industry.
The present manuscript describes a micromechanical model on the fibre networ
level that is able to capture the experimentally observed behaviour. In particular, th
difference between mechano-sorptive creep in tension and compression is analyse
John Smith is a PhD-student who within a year will present his doctoral thesis. T
present paper will be a part of that thesis.

Three potential independent reviewers who have excellent expertise in the
this paper are:

Dr. Fernandez, Tennessee Tech, email1@university.com
Dr. Chen, University of Maine, email2@university.com
Dr. Singh, Colorado School of Mines, email3@university.com

I would very much appreciate if you would consider the manuscript for publication in
the *International Journal of Science*.

erely yours,

A. Professor

Final approval from all authors

Explanation of importance of research

Suggested reviewers

Researcher Ac

Suggest potential reviewers

- Your suggestions will help the Editor to move your manuscript to the review stage more efficiently.
- You can easily find potential reviewers and their contact details from articles in your specific subject area (e.g., your references).
- The reviewers should represent at least two regions of the world. And they should not be your supervisor or close friends.
- Be prepared to suggest 3-6 potential reviewers, based on the Guide to Authors.

Do everything to make your submission a success

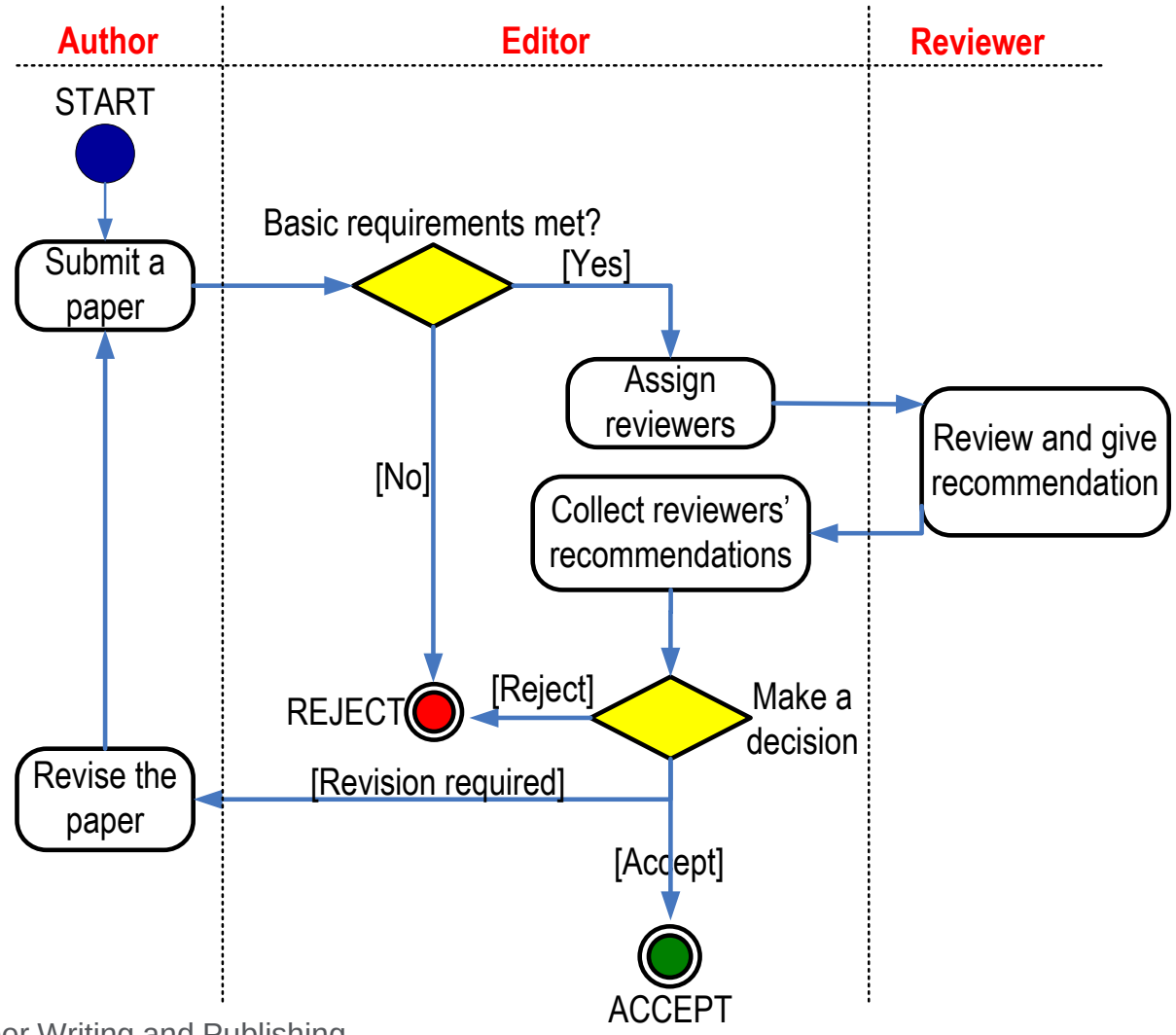
- **No one gets it right the first time!**
  - ✓ **Write, and re-write ….**
- Suggestions
  - ✓ After writing a first version, take several days of rest. Come back with a critical, fresh, view.
  - ✓ Ask colleagues and supervisor to review your manuscript. Ask them to be highly critical, and ***be open to their suggestions***.
  - ✓ Make changes to incorporate comments and suggestions. Get all co-authors to approve the version to submit.

Then it is the point in time to submit your article!

Researcher Academy

The peer review process

The Peer Review Process is not a black hole!



Michael Derntl. Basics of Research Paper Writing and Publishing.
http://dbis.rwth-aachen.de/~derntl/papers/misc/paperwriting.pdf

First Decision: “Accepted” or “Rejected”

Accepted

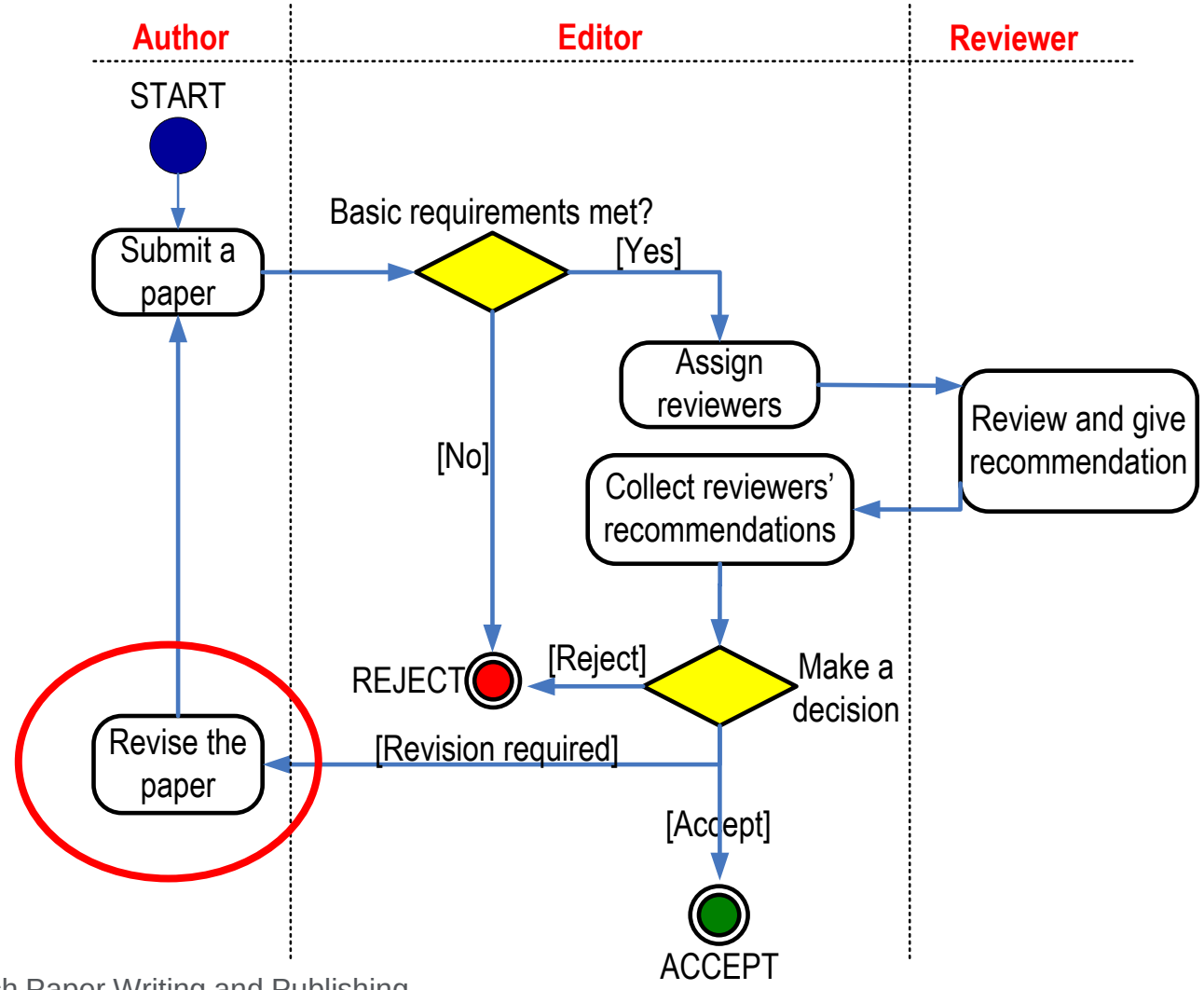
- Very rare, but it happens

- Congratulations!
  - Cake for the department
  - Now wait for page proofs and then for your article to be online and in print

Rejected

- Probability 40-90% ...
- Do not despair
  - It happens to everybody
- Try to understand WHY
  - Consider reviewers’ advice
  - Be self-critical
- If you submit to another journal, begin as if it were a new manuscript
  - Take advantage of the reviewers’ comments and revise accordingly
  - They may review your manuscript for the next journal too!
  - Read the Guide for Authors of the new journal, again and again.

The Peer Review Process – revisions



Michael Derntl. Basics of Research Paper Writing and Publishing.
http://dbis.rwth-aachen.de/~derntl/papers/misc/paperwriting.pdf

First Decision: “Major” or “Minor” Revision

- Major revision
  - The manuscript may finally be published in the journal
  - Significant deficiencies must be corrected before acceptance
  - Usually involves (significant) textual modifications and/or additional experiments
- Minor revision
  - Basically, the manuscript is worth being published
  - Some elements in the manuscript must be clarified, restructured, shortened (often) or expanded (rarely)
  - Textual adaptations
  - “Minor revision” does NOT guarantee acceptance after revision, but often it is accepted if all points are addressed!

Manuscript Revision

- Prepare a detailed Response Letter
  - ✓ Copy-paste each reviewer comment, and type your response below it – consider colour coding
  - ✓ State specifically which changes you have made to the manuscript
    - ✓ Include page/line numbers
    - ✗ No general statements like “Comment accepted, and Discussion changed accordingly.”
  - ✓ Provide a *scientific* response to comments to accept, ...
  - ✓ ..... or a convincing, solid and polite rebuttal when you feel the reviewer was wrong.
  - ✓ Write in such a manner, that your response can be forwarded to the reviewer without prior editing
- Do not do yourself a disfavour, but cherish your work
  - You spent ***weeks*** and ***months*** in the lab or the library to do the research
  - It took you ***weeks*** to write the manuscript.....

.....Why then run the risk of avoidable rejection by not taking manuscript revision seriously?

Increasing the likelihood of acceptance

All these various steps are not difficult.

- ✓ You have to be consistent.
- ✓ You have to check and recheck before submitting.
- ✓ Make sure you tell a logical, clear, story about your findings.
- ✓ Especially, take note of referees' comments. They improve your paper.

This should increase the likelihood of your paper being accepted, and being in the 30% (accepted) not the 70% (rejected) group!

What leads to acceptance ?

- ✓ **A**ttention to details
- ✓ **C**heck and double check your work
- ✓ **C**onsider the reviewers' comments
- ✓ **E**nglish must be as good as possible
- ✓ **P**resentation is important
- ✓ **T**ake your time with revision
- ✓ **A**cknowledge those who have helped you
- ✓ **N**ew, original and previously unpublished
- ✓ **C**ritically evaluate your own manuscript
- ✓ **E**thical rules must be obeyed

– Nigel John Cook
Editor-in-Chief, *Ore Geology Reviews*

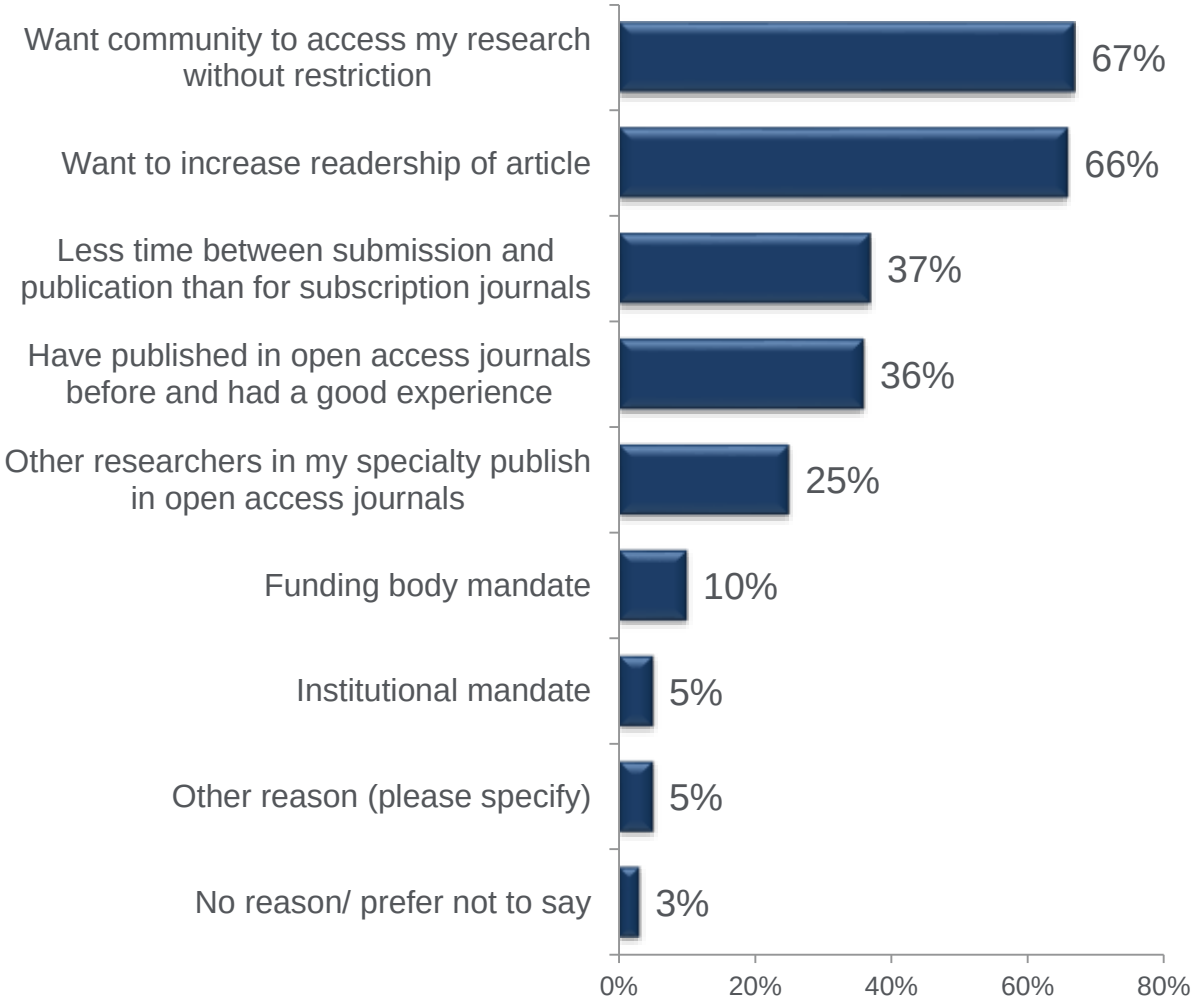
Researcher Academy

Open access publishing

What is the difference?

	Gold Open Access		Green Open Access
Access	▪ Free public access to the final published article ▪ Access is immediate and permanent		▪ Free public access to a version of your article ▪ Time delay may apply (embargo period)
Fee	▪ Open access fee is paid by the author, or on their behalf (for example by a funding body)		▪ No fee is payable by the author, as costs are covered by library subscriptions
Use	▪ Determined by your user licence		▪ Authors retain the right to use their articles for a wide range of purposes ▪ Open versions of your article should have a user license attached
Options	▪ Publish in an open access journal	▪ Publish in a journal that supports open access (also known as a hybrid journal)	▪ Link to your article. ▪ Selected journals feature open archives ▪ Self-archive a version of your article

Why publish in an open access journal?



14%

have been asked by their departmental head or funding organization to publish open access

Tips for publishing gold open access

Find the right journal: Look for reputable journals

Collect key info: Check your funding body and institution's policies

Make your article OA: Select a license and pay an OA fee

Publish OA: Share the final version of your article!

Much more information may be found online at ResearcherAcademy.com

OPEN ACCESS is here to stay – learn about the many options and possibilities!

***Transformative agreements* between Publishers including Elsevier, and the NL Funding bodies are taking place**

Researcher Academy

Promoting your article

Your Paper is Published – What now?

- Your paper becomes visible online in the journal website, such as ScienceDirect, Springer Link etc. and in databases as SCOPUS, PubMed, etc.

- There are many things you can also do yourself to draw attention to your great research that was just published online…

- Think Social Media! Check out the Researcher Academy for suggestions.

More information

- www.elsevier.com/promote-your-work

Animation video (YouTube)
https://www.youtube.com/watch?v=zRXnbKtHkHM

- www.researcheracademy.com: College of Networking / Getting Noticed

Brochure

Factsheet

Online lectures and interactive courses

Researcher Academy

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Publication Ethics

Author Responsibilities

As authors we have lots of rights and privileges, but also we have the responsibility to be ethical.

Ethics Issues in Publishing

Scientific misconduct

- Falsification of results or images

Publication misconduct

- Plagiarism
  - Different forms / severities
  - The paper must be original to the authors
- Duplicate publication
- Duplicate submission
- Appropriate acknowledgement of prior research and researchers
- Appropriate identification of all co-authors
- Conflict of interest

Plagiarism

- A short-cut to long-term consequences!
- Plagiarism is considered a serious offense by your institute, by journal editors, and by the scientific community as a whole.
- Plagiarism may result in academic charges, but will certainly cause rejection of your paper.
- Plagiarism will hurt your reputation in the scientific community.

Duplicate Publication

- Duplicate Publication is also called Redundant Publication, or Self Plagiarism
- Definition: Two or more papers, without full cross reference, share the same hypotheses, data, discussion points, or conclusions

✗ An author should not submit for consideration to another journal a previously published paper.

- ✓ Published studies do not need to be repeated unless further confirmation is required.
- ✓ Previous publication of an abstract during the proceedings of conferences does not preclude subsequent submission for publication, but full disclosure should be made at the time of submission.
- ✓ Re-publication of a paper in another language is acceptable, provided that there is full and prominent disclosure of its original source at the time of submission.
- ✓ At the time of submission, authors should disclose details of related papers, even if in a different language, and similar papers in press.
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- Editors and reviewers
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Publication ethics – Self-plagiarism

2003

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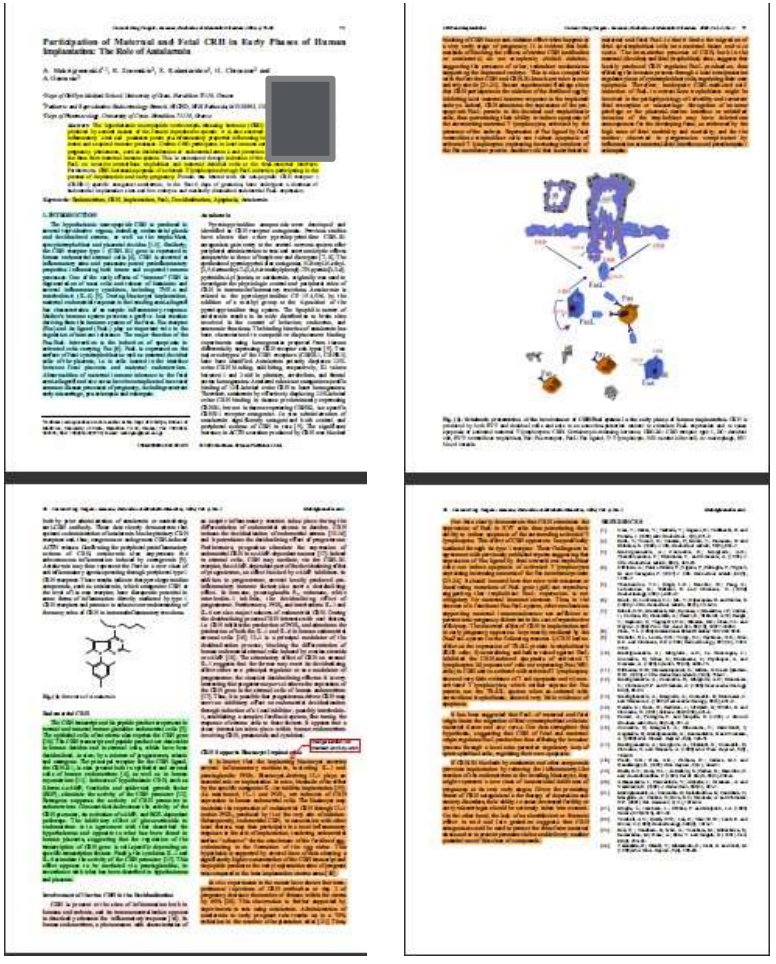
2004



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RETRACTED: Matching pursuit-based approach f

Available online 24 August 2005.

This article has been retracted at the request of the Editor-in-Chief and P
http://www.elsevier.com/locate/withdrawalpolicy.

Reason: This article is virtually identical to the previously published articl
algorithm for SNR improvement in ultrasonic NDT" , *Independent Nonde*
International, volume 38 (2005) 453 – 458 authored by N. Ruiz Reyes, P.

Signal Processing
Volume 86, Issue 5, May 2006, Pages 962-970

the echoes issuing from the flaws to be detected. Therefore, it cannot be cancelled by classical time averaging or matched band-pass filtering techniques.

Many signal processing techniques have been utilized for signal-to-noise ratio (SNR) improvement in ultrasonic NDT of highly scattering materials. The most popular one is the split spectrum processing (SSP) [1–3], because it makes possible real-time ultrasonic test for industrial applications, providing quite good results. Alternatively to SSP, wavelet transform (WT) based denoising/detection methods have been proposed during recent years [4–8], yielding usually to higher improvements of SNR at the expense of an increase in complexity. Adaptive time-frequency analysis by basis pursuit (BP) [9,10] is a recent technique for decomposing a signal into an optimal superposition of elements in an over-complete waveform dictionary. This technique and some other related techniques have been successfully applied to denoising ultrasonic signals contaminated with grain noise in highly scattering materials [11,12], as an alternative to the WT technique, the computational cost of the BP algorithm being the main drawback.

In this paper, we propose a novel matching pursuit-based signal processing method for improving SNR in ultrasonic NDT of highly scattering materials, such as steel and composites. Matching pursuit is used instead of BP to reduce the complexity. Despite its iterative nature, the method is fast enough to be real-time implemented. The performance of the proposed method has been evaluated using both computer simulation and experimental results, even when the input SNR (SNRin) is lower than 0dB (the level of echoes scattered by microstructures is above the level of the echoes).

2. Matching pursuit

Matching pursuit was introduced by Mallat and Zhang [13]. Let us suppose an approximation of the ultrasonic backscattered signals $x[n]$ as a linear expansion in terms of functions $g_i[n]$ chosen from an over-complete dictionary. Let H be a Hilbert space. We define the over-complete dictionary as a family $D = \{g_i;\ i = 0, 1, \ldots, L\}$ of vectors in H, such as $\|g_i\| = 1$.

The problem of choosing functions $g_i[n]$ that best approximate the analysed signal $x[n]$ is computationally very complex. Matching pursuit is an iterative algorithm that offers sub-optimal solutions for decomposing signals in terms of expansion functions chosen from a dictionary, where l^2 norm is used as the approximation metric because of its mathematical convenience. When a well-designed dictionary is used in matching pursuit, the non-linear nature of the algorithm leads to compact adaptive signal models.

In each step of the iterative procedure, vector $g_i[n]$ which gives the largest inner product with the analysed signal is chosen. The contribution of this vector is then subtracted from the signal and the process is repeated on the residual. At the mth iteration the residue is

$$r^m[n] = \begin{cases} x[n], & m = 0, \\ r^{m+1}[n] + \alpha_{i(m)} g_{i(m)}[n], & m \neq 0, \end{cases} \quad (1)$$

where $\alpha_{i(m)}$ is the weight associated to optimum atom $g_{i(m)}[n]$ at the mth iteration.

The weight α_i^m associated to each atom $g_i[n] \in D$ at the mth iteration is introduced to compute all the inner products with the residual $r^m[n]$:

$$\alpha_i^m = \frac{\langle r^m[n], g_i[n]\rangle}{\langle g_i[n], g_i[n]\rangle} = \frac{\langle r^m[n], g_i[n]\rangle}{\|g_i[n]\|^2} = \langle r^m[n], g_i[n]\rangle. \quad (2)$$

The optimum atom $g_{i(m)}[n]$ (and its weight $\alpha_{i(m)}$) at the mth iteration are obtained as follows:

$$g_{i(m)}[n] = \underset{g_i \in D}{\operatorname{argmin}} \|r^{m+1}[n]\|^2 = \underset{g_i \in D}{\operatorname{argmax}} |\alpha_i^m|^2 = \underset{g_i \in D}{\operatorname{argmax}} |\alpha_i^m|. \quad (3)$$

The computation of correlations $\langle r^m[n], g_i[n]\rangle$ for all vectors $g_i[n]$ at each iteration implies a high computational effort, which can be substantially reduced using an updating procedure derived from Eq. (1). The correlation updating procedure [13] is performed as follows:

$$\langle r^{m+1}[n], g_i[n]\rangle = \langle r^m[n], g_i[n]\rangle - \alpha_{i(m)} \langle g_{i(m)}[n], g_i[n]\rangle. \quad (4)$$

RETRACTED

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Researcher Academy

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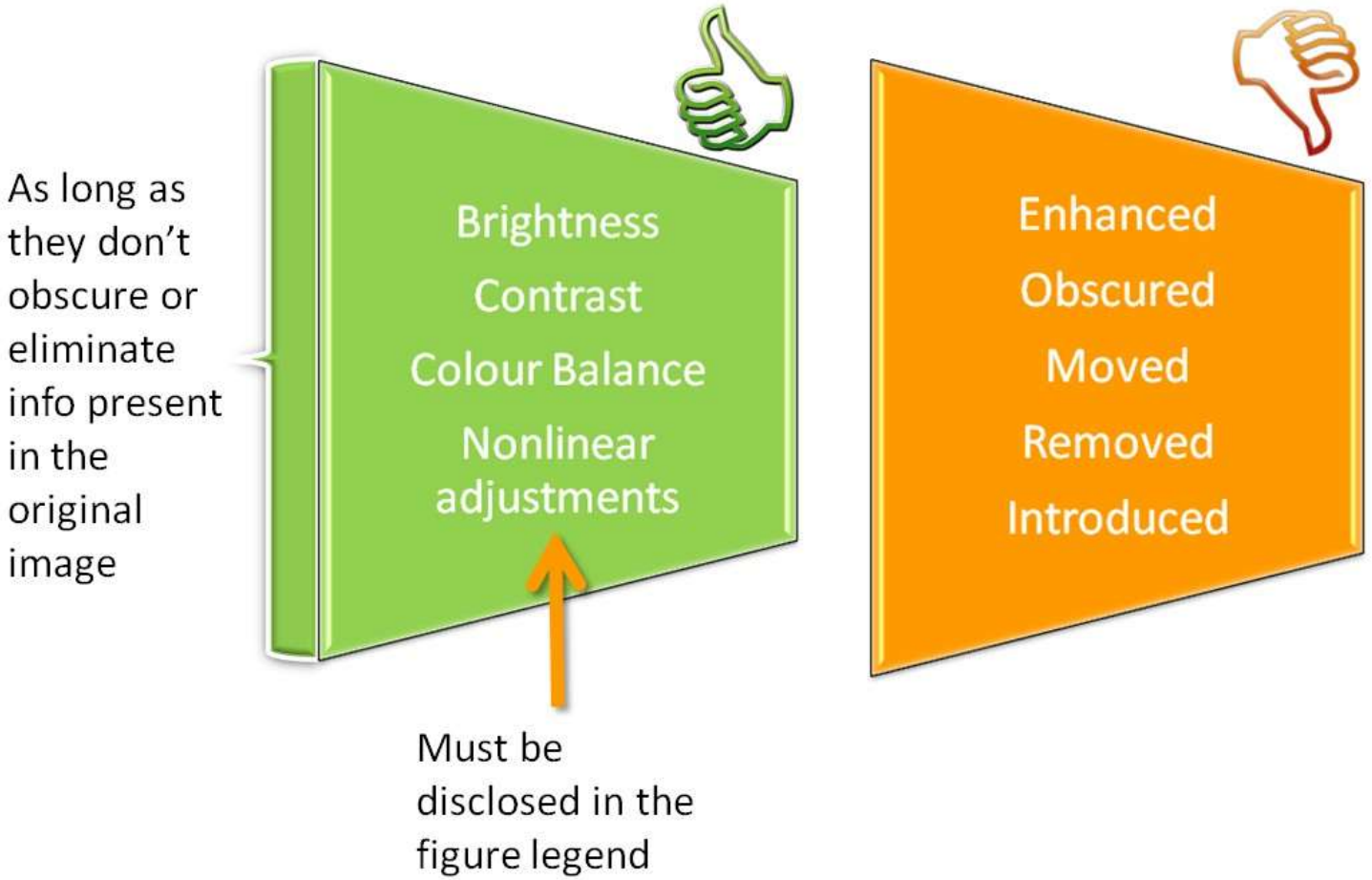
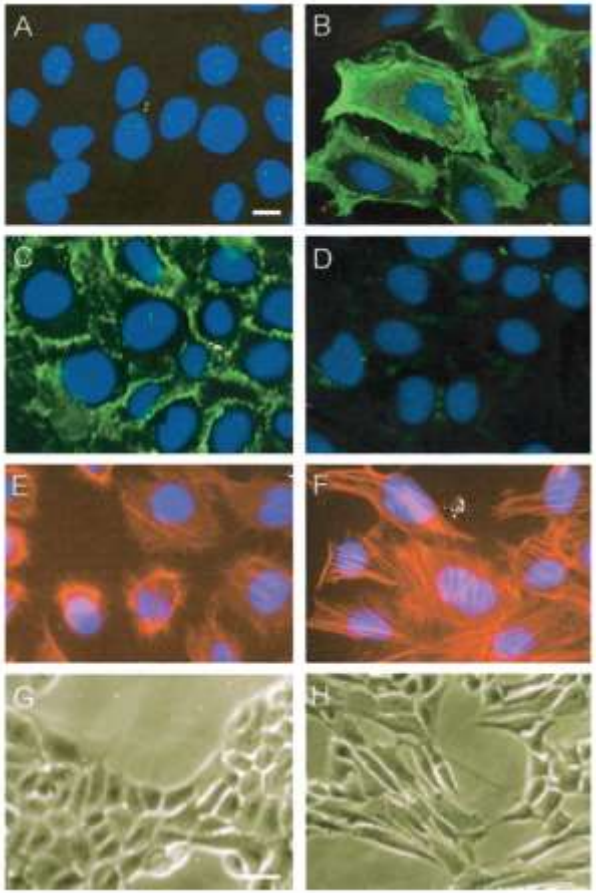


Figure Manipulation:
Example - Different authors and reported experiments

Am J Pathol, 2001



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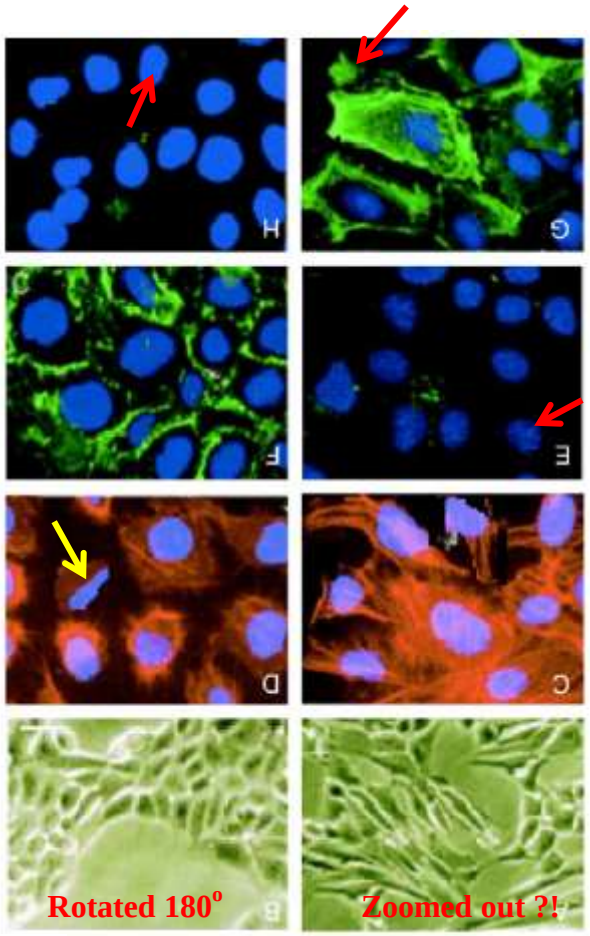

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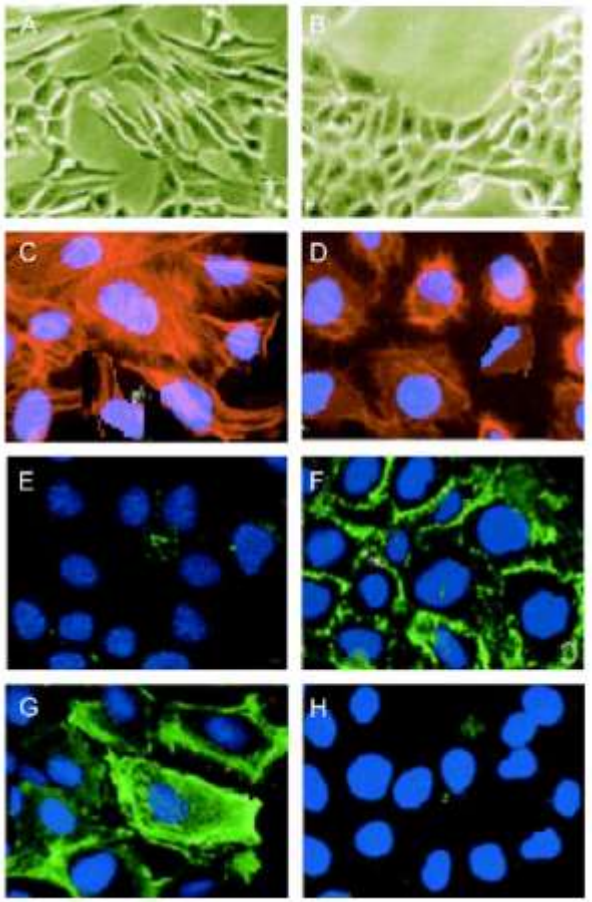

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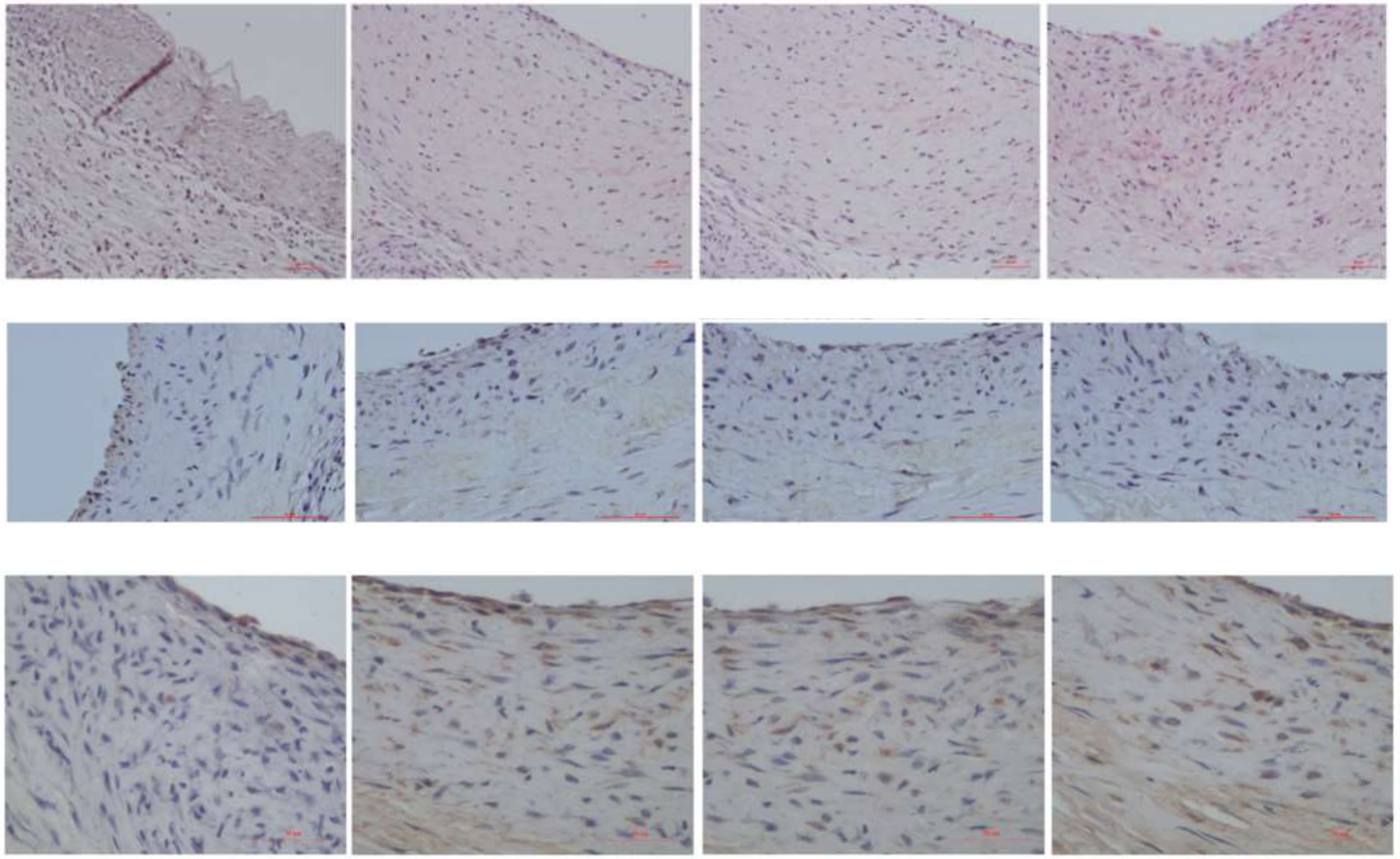

Control Condition Condition 2 Condition 3

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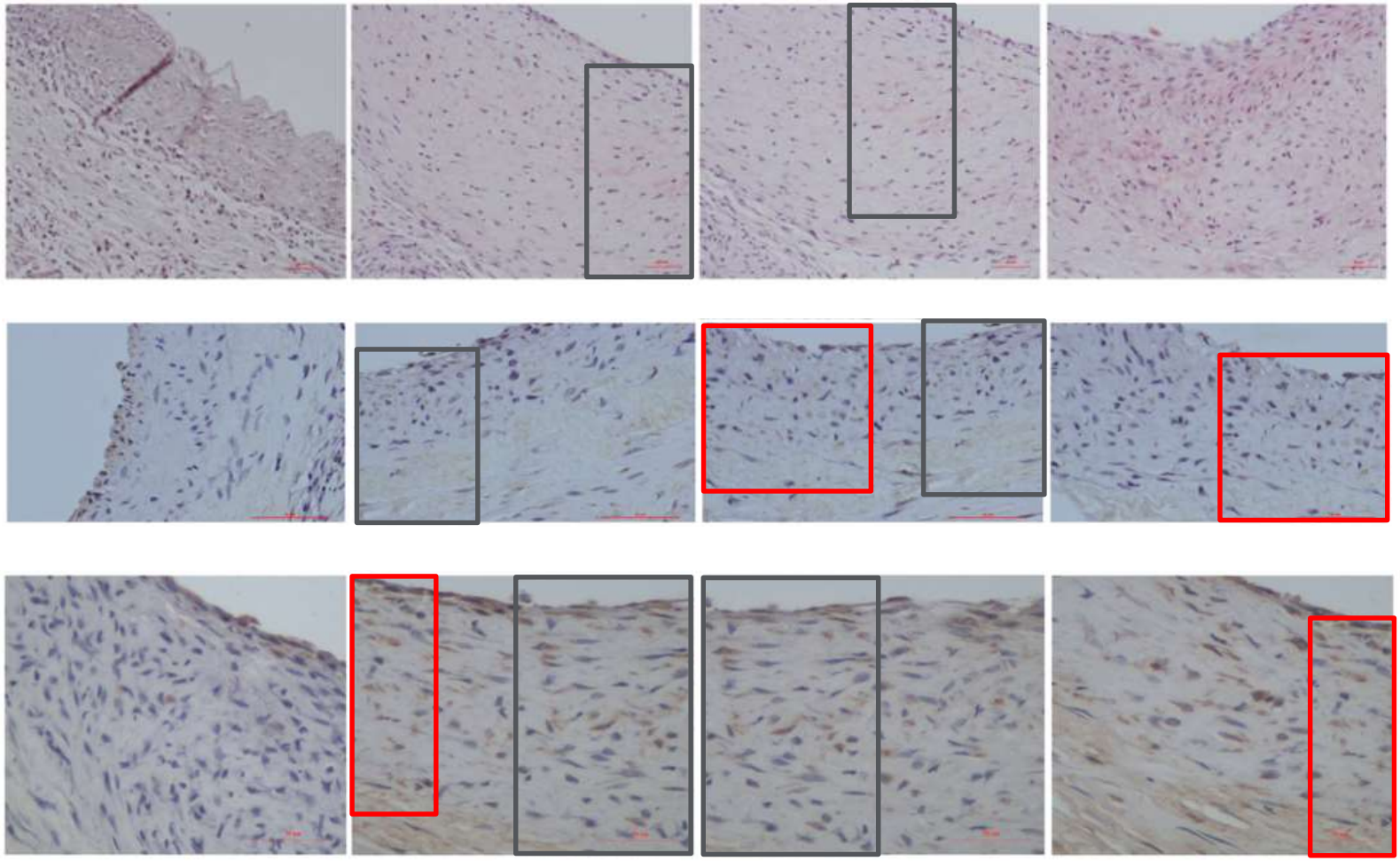

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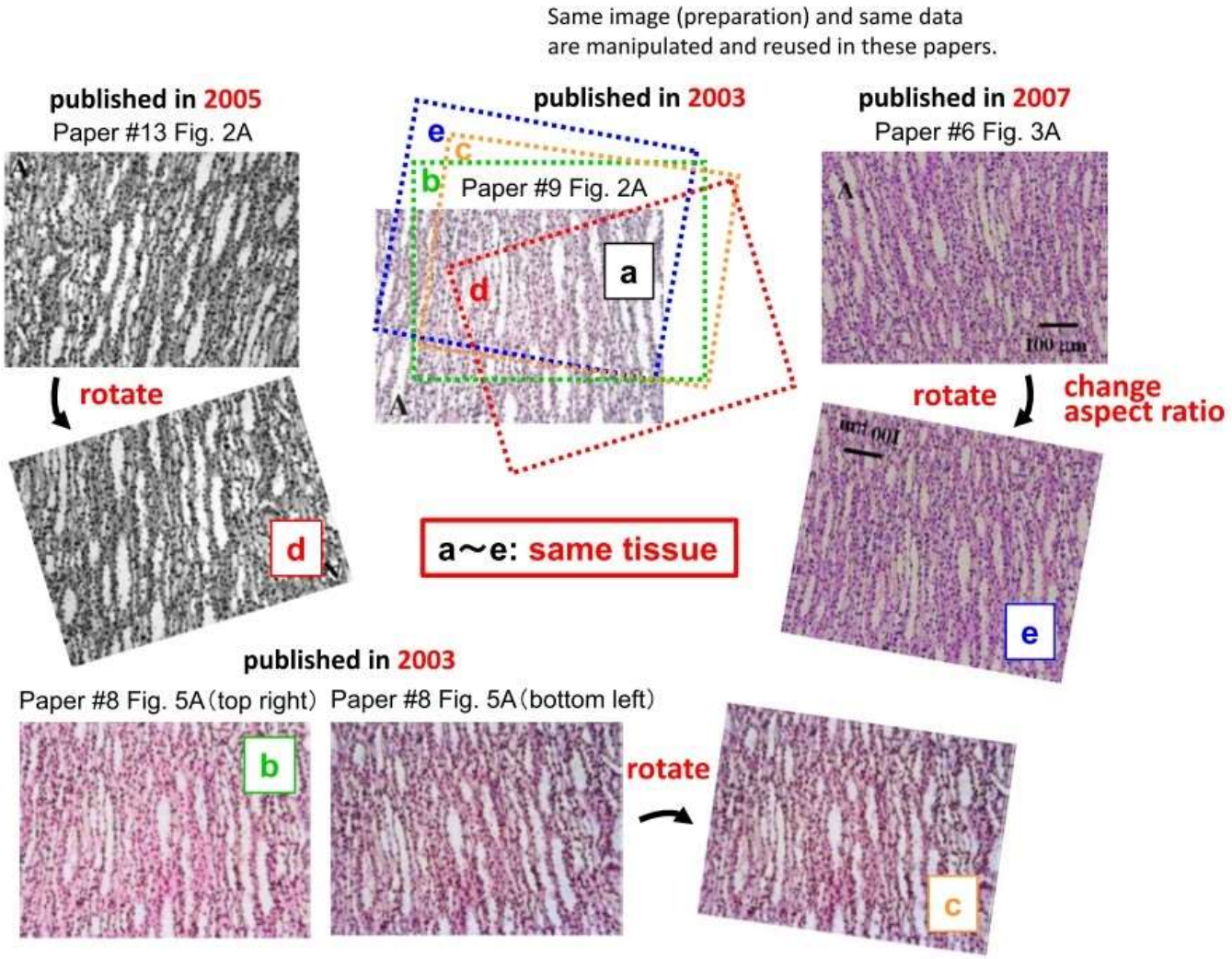
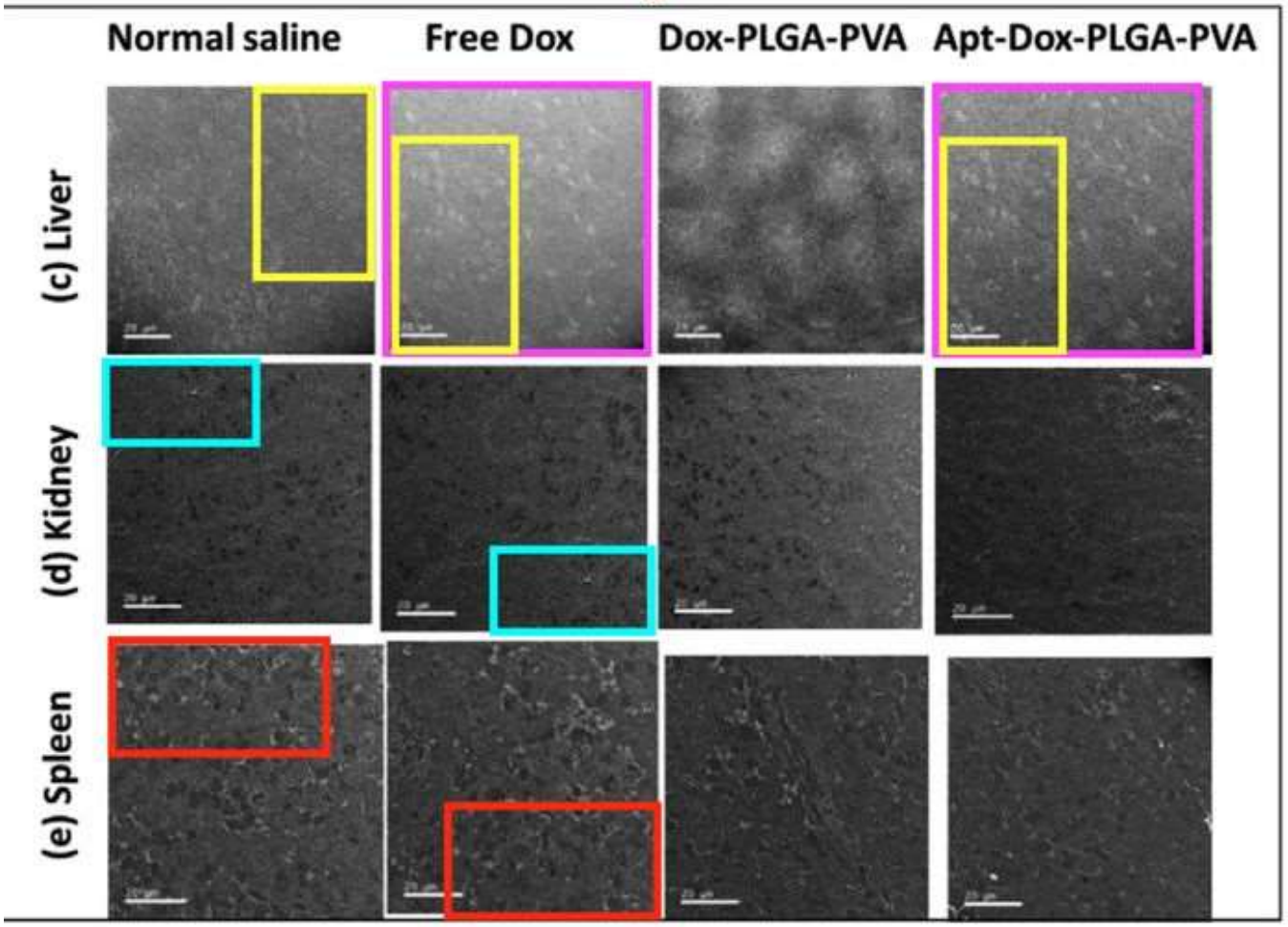


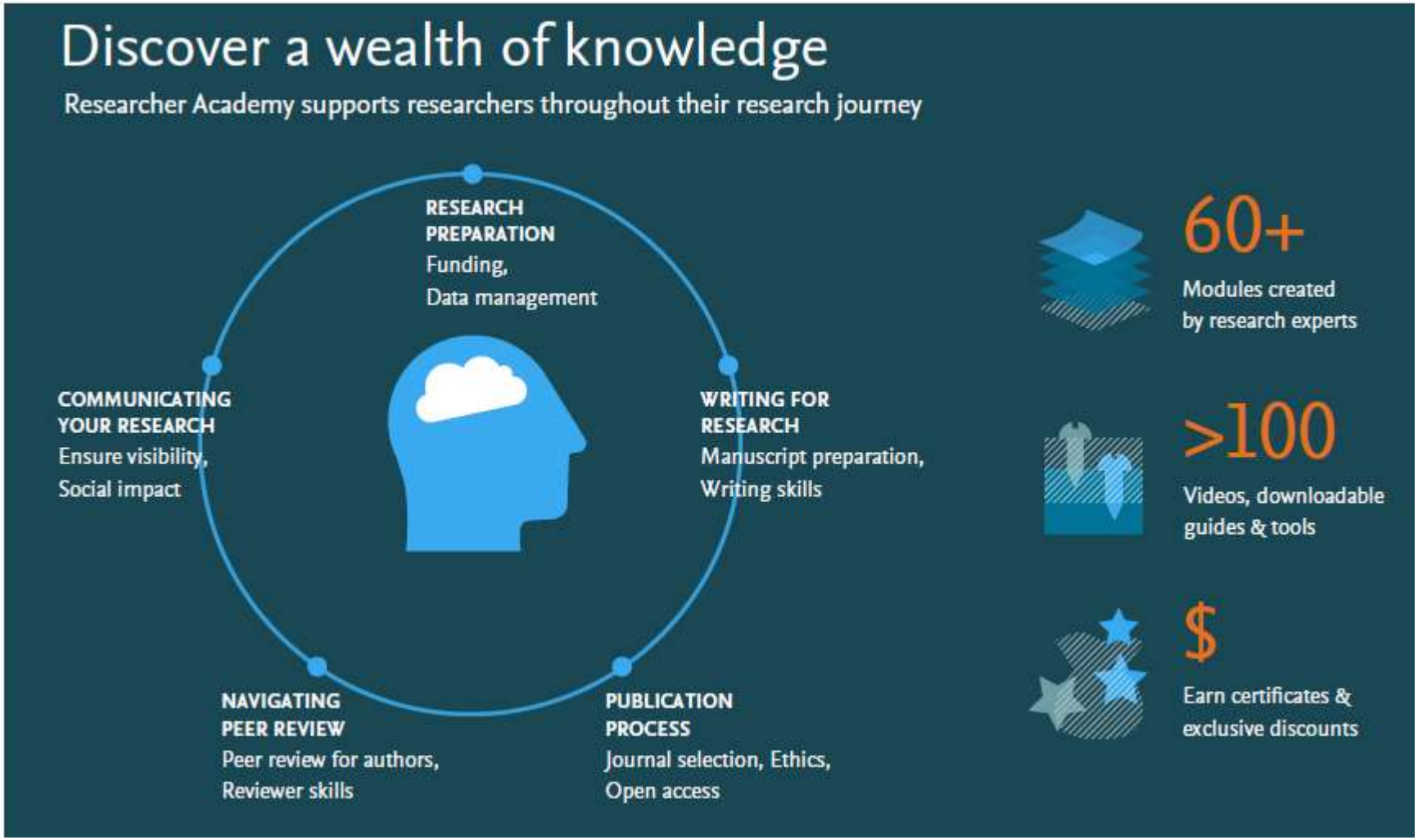
Figure Manipulation – Example 3 – September 2019

Figure 5



This figure is representing different treatments on different tissue types. However, some of the panels appear to show overlapping areas!

Online Resources



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Questions?

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