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Writing Research Manuscripts That Have Impact

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Your goal is not only to **publish**, but also to be **widely read and highly cited**

Maximize the impact of your research

- ✓ Plan well for academic publishing
- ✓ Understand IMRaD manuscript writing
- ✓ Maximize your chances of acceptance
- ✓ Edanz–FTM, Mahidol University collaboration: services available to you




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Section 1

Plan well for academic publishing



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Researchers need continued help on the path to publication success



- Preparation**
 - Training in reading papers, ethics, writing, presenting
 - Expert Scientific Review
- Journal Selection**
 - Expert Scientific Review
 - Journal Selection & submission strategy
- Writing**
 - Training in ethics, writing, presenting
 - Revising
 - Editing
 - Reformatting
- Submission**
 - Training in ethics, writing
 - Editing
 - Abstract Development
 - Cover Letter Development
 - Reviewer Recommendation
- Peer Review**
 - Training in navigating peer review
 - Review Editing
 - Point-by-point checking
 - Response Letter Development
 - Reformatting
- Publication Success**
 - Press release, news writing
 - Media & presentation training
 - Training for early and mid career researchers
 - Training in writing grant proposals
 - Grant proposal editing

Patenting Engagement



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Publishing plan (1)

- Identify trends:** *reviews, editorials, theme issues, featured web articles, Calls for papers, "most read"...organize journal clubs*
- Read the *primary literature***
- Identify an important question, or incorrect or incomplete knowledge/evidence**
 - Do you have the *expertise/resources*?
 - Is the question *focused*?
 - What is *new*? How is the study *useful*?
 - What is the best/most practical *study design*?

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Impact and study design

Secondary research

Primary research

Experimental (exposure assigned)*

Non-experimental

Register clinical trials in advance!
Use international reporting guidelines!

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Types of study/articles

❖ Research Article	Most common; full-length paper (Original Article, Original Paper, Research Report...)
❖ Short Communication	Brief report about a specific finding (Brief, Note, Communication, Brief Communication...)
❖ Technical Note	Brief report about a new methodology
❖ Review Article	Summary of recent advances in a field
❖ Case Report	Clinical observations of 1 or 2 cases
❖ Editorial	Brief discussion about an interesting topic
❖ Letter to the Editor	Brief discussion about a previously published article; in some journals, can also be a "Research Letter" containing original research

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Publishing plan (2)

Trial registries/databases

Medical & general online searches

Medical forums, websites

Is my study novel?

Use ICD codes from WHO or MeSH keywords for consistency, but also try synonyms

Sign up for eTOCs and eAlerts

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Publishing plan (3)

Get feedback at conferences

- Check novelty, relevance, interest level
- Check methods, data, illustrations, conclusions

Pre-submission “publication” OK if:

- Abstracts in conference proceedings
- Clinical trial summaries in online registers
- Own web? Preprint servers (bioRxiv)? Dissertation/thesis? **Check the target journal!**

- Organize pre-submission peer review
- Know what editors are looking for; adhere to guidelines

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What editors are looking for (1)

Safety	Ethics board approval; for humans: signed consent, data privacy; animal & environmental safety
Submissions	Submit to only one journal ; do not republish an article; no salami; do not manipulate peer review
No plagiarism	Paraphrase/summarize/synthesize & cite all sources
No data manipulation	Do not fabricate or falsify data Do not manipulate parts of images
Authorship	(1) Study design or data acquisition/analysis; (2) Writing/revising; (3) Approval; (4) Accountability
Conflicts of interest	State funding source and any financial/personal relationships that could bias the work

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What editors are looking for (2)



Committee on Publication Ethics, **COPE**

Good Publication Practice 3, **GPP3**

International Committee of Medical Journal Editors, **ICMJE**

Always follow ethics guidelines

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What editors are looking for (3)

Original and unpublished

Not submitted to other journals

All authors agree and contributed

Declare in your cover letter...

Funding & potential conflicts of interest

Research ethics

Recommend/oppose reviewers

Clinical journals: authorship, COI, ethics approval & consent, ©

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What editors are looking for (4)

- 1 Original and novel research ("journalism" aspect)**
News, importance, innovation, timeliness
- 2 Well-designed, well-reported, transparent study**
High scientific & technical quality, sound research & publication ethics
- 3 Logical, engaging contents; correct English & formatting**
High readability & interest, informative
- 4 Useful message**
Clear, real-world relevance, influence

"Journal **Impact Factor**" =

$$\frac{\text{No. citations in indexed journals}}{\text{No. articles, past 2 years}}$$


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Selecting a journal

Which factor is most important to you?

Aims & scope, Readership <i>Topic area, Audience type and location</i>	Article type/length, evidence level <i>Clinical/Basic, Surgical/Medical, Theory/Practice</i>	Publication speed/frequency <i>Review quality, Cascading review, Fast track</i>
Indexing, Rank, Impact factor <i>Reputation, Experience, Relevance (recent papers cited in your manuscript?)</i>	Print/Online, Open access <i>Circulation/reach, Cost, Production quality, Copyright, Services</i>	Acceptance rate/criteria <i>"Luxury" / Traditional / Megajournal</i>

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Cascading review

Nature (IF, 38.138)	<ul style="list-style-type: none"> Subscription-based Groundbreaking, <u>all</u> disciplines
Nature Medicine (IF, 30.357)	<ul style="list-style-type: none"> Subscription-based Basic to clinical <u>medicine</u>, "latest advances"
Nature Communications (IF, 11.329)	<ul style="list-style-type: none"> Open access (Multi-)Disciplinary not covered by others, lower "scientific reach"
Scientific Reports (5.228)	<ul style="list-style-type: none"> Open access Natural/clinical sciences, "scientifically valid <u>primary research</u>"

Also: Nature Methods (25.328); Nature Protocols (9.646); Scientific Data
 Sources: www.nature.com/ngg/_company_info/journal_metrics.html; and homepages of each journal

@edanz *Save time with a pre-submission cover letter* 15

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Types of peer review

Blinded/masked?

- Single-blind:** Reviewers' names not revealed to authors
- Double-/Triple-blind:** Anonymous
- Open:** All names revealed
- Transparent:** Reviews published with paper

Fast Track: Expedited if public emergency

Other models

- Transferable/Cascading:** First journal passes manuscript (+/- reviews) to next one
- Portable:** You submit manuscript & past reviews to next journal
- Collaborative:** Reviewers (& authors) engage with each other
- Post-publication:** Online public review
- Pre-submission:** Reviews obtained first

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Publication models

Subscription-based	<ul style="list-style-type: none"> Mostly free for the author Reader has to pay
Open access	<ul style="list-style-type: none"> Free for the reader Author usually has to pay
Hybrid	<ul style="list-style-type: none"> Subscription-based journal Has open access options

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Open access (OA) models

Green <i>May be mandated by funder</i>	<ul style="list-style-type: none"> Self-archive accepted version in personal, university, or repository website (e.g., PubMed Central) Subscription journal may <ul style="list-style-type: none"> have embargo period before self-archiving is allowed allow final pdf to be archived
Gold	<ul style="list-style-type: none"> Free for public on publication Author might keep © but may pay (e.g., US\$1000–5000)

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Questionable journals (1)

Some OA journals/publishers are not good!

Easy way to cheat authors!

- Promise quick and easy publication; “submission/handling” fee
- May copy name of real journal; fake website; fake impact factor
- May not exist, or may be of very low quality
- Beware of spam e-mails!

Watch List: <i>Beall’s List</i> https://scholarlyoa.com/2016/03/05/beall-s-list-of-predatory-publishers-2016/	Safe List: <i>Directory of Open Access Journals (DOAJ)</i> https://doaj.org/
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@edanz Check spammers at: www.scientificspam.net 19

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Questionable journals (2)

Website	Unprofessional, language errors, adverts, false contacts, predatory conferences
Editorial board	Unknown, non-existent, false, says “Coming soon” or “international” but not really
Indexed	Not indexed by common databases, or false claims of indexing
Articles	No articles or “Articles soon”, they contain obvious errors or are unrelated to journal scope, they are not archived well
Fees	Charged on submission

!!! Fake IF, Spam emails, Not published on time or regularly, Pretends to be American/international, Launches 100s of new “journals” at the same time...

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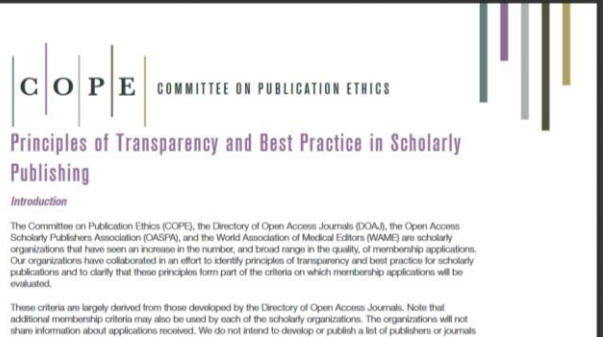
Trustworthy journals

Reputable publisher	Springer, Elsevier, Wiley, PLoS, etc.
Editorial board	International and familiar
Indexed	Indexed by common databases
Your peers	Do you recognize the authors? Do your peers read it?
Article Processing Charge	Paid <i>after</i> acceptance; clearly listed

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COPE/DOAJ/OASPA/WAME guidelines



Principles of Transparency and Best Practice in Scholarly Publishing

Introduction

The Committee on Publication Ethics (COPE), the Directory of Open Access Journals (DOAJ), the Open Access Scholarly Publishers Association (OASPA), and the World Association of Medical Editors (WAME) are scholarly organizations that have seen an increase in the number, and broad range in the quality, of membership applications. Our organizations have collaborated in an effort to identify principles of transparency and best practice for scholarly publications and to clarify that these principles form part of the criteria on which membership applications will be evaluated.

These criteria are largely derived from those developed by the Directory of Open Access Journals. Note that additional membership criteria may also be used by each of the scholarly organizations. The organizations will not share information about applications received. We do not intend to develop or publish a list of publishers or journals.

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Journal Selector

www.edanzediting.com/journal_selector

Edanz Journal Selector

Search over 28,000 journals and 7.5 million abstracts to find the journal that's right for you

Abstract/Keywords: directionality of lumen elongation, we used an original minimal organ approach comprising of hepatocyte doublets cultured in artificial micro-niches to precisely control the 3D spatial organization of cellular adhesions to the extracellular matrix. During de novo lumenogenesis, we unraveled a mechanical crosstalk that couples the basal adhesions, the intercellular mechanical stress and the osmotically driven apical elongation. This process is mediated by α -catenin and accounts for the microenvironmental anisotropic guidance of canaliculi development along the direction of the lowest tension across cell-cell contacts.

Go

Insert your proposed abstract or keywords

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Journal Selector

www.edanzediting.com/journal_selector

Edanz Journal Selector

Search over 28,000 journals and 7.5 million abstracts to find the journal that's right for you

Abstract/Keywords: novel information secretory lumenogenesis. Lumenogenesis concurrently affects basal polarity elongation luminal cavities cell-cell contacts molecular environmental cell polarization heavily scrutinized, extra cellular (ECM) essential polarity cues guiding anisotropic growth lumen intercellular tension control directionality lumen elongation, comprising hepatocyte doublets cultured in artificial micro-

Journal Matching Options

- Only journals with
- Field of Study
- With an Impact Factor Range
- 0 to 100
- Indexed in SCIE
- Indexed in SICI
- With Open Access options
- Frequency

Matching journals

Journal's aims & scope, IF, and publication frequency

Filter/Sort by:

- Field of study
- Impact factor, SICI
- Open access
- Publishing frequency

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Journal Selector

www.edanzediting.com/journal_selector

- Author guidelines
- Journal website

(Check requirements)

Similar published articles

- ✓ Are they **currently** publishing similar articles?
- ✓ Have you **cited** any of these articles?
- ✓ Check **novelty, importance & usefulness**

Author submission URL >
Submission platform URL >
Society name and URL, Currently Not Available

Similar articles from this journal

[1] **Blood vessel tubulogenesis requires Rasip1 regulation of GTPase signaling.**
Published 2012 - Apr
Cardiovascular function depends on patent blood vessel formation by endothelial cells (ECs). However, the mechanisms underlying vascular "tubulogenesis" are only beginning to be unraveled. We show that endothelial tubulogenesis requires the Ras-interacting protein 1, Rasip1, and its binding partner, the RhoGAP Arhgap29. Mice lacking Rasip1 fail to form patent lumens in all blood vessels, including the early endocardial tube. Rasip1 null angioblasts fail to properly localize the polarity determinant Par3 and display defective cell polarity, resulting in miscolocalized junctional complexes and loss of adhesion to extracellular matrix (ECM). Similarly, depletion of either Rasip1 or Arhgap29 in cultured ECs blocks in vitro lumen formation, fundamentally alters the cytoskeleton, and reduces integrin-dependent adhesion to ECM. These defects result from increased RhoA/ROCK1-mediated Rho activity and blockade of Cdc42 and Rac1 signaling. This study identifies Rasip1 as a unique, endothelial-specific regulator of Rho GTPase signaling, which is essential for blood vessel morphogenesis.

[2] **A mechanoresponsive cadherin-keratin complex directs polarized protrusive behavior and collective cell migration.**
Published 2012 - Jan

[3] **Canonical Wnt signaling and its antagonist regulate anterior-posterior axis polarization by guiding cell migration in mouse visceral endoderm.**
Published 2008 - Nov

[4] **Cadherin adhesion, tissue tension, and noncanonical Wnt signaling regulate fibronectin matrix organization.**
Published 2009 - Mar

[5] **Beta1 integrin establishes endothelial cell polarity and arteriolar lumen formation via a Par3-dependent mechanism.**
Published 2009 - Jan

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Rankings: general medical (SJR, Q1)

1. Nature Reviews Immunology
2. Vital & health statistics. Series 3
3. Lancet
4. New England Journal of Medicine
5. Nature Medicine
6. Annual Review of Pathology: Mechanisms of Disease
7. Rhinology. Supplement
8. Journal of Experimental Medicine
9. MMWR (OA)
10. Journal of Clinical Oncology
11. Science Translational Medicine
12. Molecular Systems Biology (OA)
13. Journal of Clinical Investigation
14. NIH consensus and state-of-the-science statements
15. Journal of Cell Biology

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<http://www.scimagojr.com/journalrank.php?category=2701>

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Rankings: parasitology (SJR, Q1)

1. PLoS Pathogens (OA)
2. Trends in Parasitology
3. Advances in Parasitology
4. Infection and Immunity
5. Malaria Journal (OA)
6. International Journal for Parasitology
7. Emerging Microbes and Infections (OA)
8. Parasites and Vectors (OA)
9. Virulence
10. Tropical Medicine and International Health
11. American Journal of Tropical Medicine and Hygiene
12. Parasitology
13. Molecular and Biochemical Parasitology
14. Epidemics (OA)
15. Ticks and Tick-borne Diseases

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<http://www.scimagojr.com/journalrank.php?category=2405>

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Rankings: infectious diseases (SJR, Q1)

1. Immunity
2. Lancet Infectious Diseases
3. Clinical Microbiology Reviews
4. FEMS Microbiology Reviews
5. Trends in Microbiology
6. The Lancet HIV
7. Clinical Infectious Diseases
8. Current Opinion in Microbiology
9. Journal of Infectious Diseases (OA)
10. Drug Resistance Updates (OA)
11. Trends in Parasitology
12. AIDS
13. Emerging Infectious Diseases (OA)
14. Frontiers in cellular and infection microbiology (OA)
15. Current Opinion in HIV and AIDS

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<http://www.scimagojr.com/journalrank.php?category=2725>

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Rankings: tropical medicine (TR)

1. PLoS Neglect Trop D	13. J Vector Dis
2. Malaria J	14. Asian Pac J Trop Med
3. Trop Med Int Health	15. Leprosy Rev
4. Am J Trop Med Hyg	16. SE Asian J Trop Med
5. Acta Trop	17. Trop Biomed
6. Mem I Oswaldo Cruz	18. Biomedica
7. T Roy Soc Trop Med H	19. Trop Doct
8. J Venom Anim Toxins	
9. Pathog Glob Health	
10. Rev Inst Med Trop Sp	
11. J Trop Pediatrics	
12. Rev Soc Bras Med Trop	

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Activity 1

*Please see Activity 1 in
your workbook*

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Section 2

*Understand IMRaD
manuscript writing*

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IMRaD
Manuscripts

IMRaD

Title/Abstract <i>Introduction</i> <i>Methods</i> <i>Results</i> <i>and</i> <i>Discussion</i>	Why did you do the study?
	What did you do?
	What did you find?
	How does your study contribute to your field?

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IMRaD Manuscripts

Introduction

Previous studies **General**

Current study **Specific**

Aim

Background information
Worldwide relevance?
Broad/specialized?

Current state of the field
Recent, International
Not too many self-cites

Problem in the field

**Importance, Research Q/
hypothesis, variables**

Specific aim/approach

Why is your study needed?

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IMRaD Manuscripts

Methods

Who/what was studied

- Design rationale; “power”, N
- Participants, controls; sampling
- Materials, surveys, ethics

How the study was done

- Processes, treatments, measurements
- Variables (direct/proxy)
- Outcome/endpoints (1°, 2°)

Data analysis

- Data conversions
- Statistical tests (& P level)
- Consult a statistician

Describe all aspects of the design

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IMRaD Manuscripts

Methods

Organization

- Arrange in (titled) subsections
- Keep parallel to the display items
- Use topic sentences (Aim-Method)

Established techniques

- Cite previously published studies
- Briefly state modifications
- Use flow chart/table* if needed

*Summary of study settings, flow of participants, data/text selection, variables, chronology of analyses...

New techniques

- Give rationale; systematically evaluate
- Give enough detail for reproducibility
- Use Supplementary Information

Present results logically and factually

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IMRaD Manuscripts

Results

Logical presentation

- Efficacy/safety
- Group/subgroups
- Uni-/bi-/multivariable

Subsections

- Each (titled) subsection relates to *one* figure/ method
- 1°, 2°; check figure Nos.

Factual description

- What you found, *not* what it means
- Upload as Supplementary Materials
- Data accessibility

Present results logically and factually

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IMRaD Manuscripts

Discussion

Current study (Specific) → **Summary of findings**

Previous studies (General) → **Summary of findings**

Summary of findings → **Relevance, importance**
 Similarities/differences
 Unexpected/negative results
 Limitations; unanswered/new Q

Relevance, importance → **Conclusion**
 Implications
 Future studies

How do you advance your field?

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IMRaD Manuscripts

Link your ideas logically

Title & Abstract

Introduction (2-4 para)*

Methods (5-10 para)*

Results (5-10 para)

Discussion (8-12 para)**

End matter

General background
 Current state of the field
 Problem in the field
 Aims
 Methodology
 Results and figures
 Summary of findings
 Evaluation of findings
 Final solution & Implications
 References, Acknowledgments, Funding, Conflicts of interest, Previous publication/presentation, Ethics/Data sharing

*10 Refs

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IMRaD Manuscripts

What reviewers are looking for

The science

- ✓ Relevant hypothesis
- ✓ Good experimental design
- ✓ Appropriate methodology
- ✓ Good data analysis
- ✓ Valid conclusions

The manuscript

- ✓ Logical flow of information
- ✓ Manuscript structure and formatting
- ✓ Appropriate references
- ✓ High readability
- ✓ Peer review is a positive process!

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IMRaD Manuscripts

Drafting process

Where to start?

❖ Your *findings* form the basis of your manuscript

❖ First organize your findings

❖ Logic, then English language

Figure 1

Table 1

Figure 2

Figure 3

Logical flow

- Time order
- Most ⇔ least important
- General ⇔ specific
- Simple ⇔ complex
- Whole ⇔ parts

Is anything missing?
 Additional analyses?

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IMRaD Manuscripts

Writing 1st outline

1. Important reason for study
2. Research Q / Hypothesis
3. Aim & approach
4. Main methods
5. Display items & key findings
6. Major conclusion

- ❖ Write down key ideas in bullet points (topic sentences)
- ❖ Then, draft a very rough title/abstract
- ❖ Use the Edanz Journal Selector to find similar articles

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Writing 2nd outline

1. Introduction
 - A. General background
 - B. Related studies
 - C. Problems in the field
 - D. Aim & approach
2. Methods
 - A. Subjects/Samples/Materials
 - B. General & specific methods
 - C. Statistical analyses
3. Results
 - A. Key points about Figure 1
 - B. Key points about Table 1
 - C. Key points about Figure 2
4. Discussion
 - A. Major conclusion
 - B. Key supporting findings
 - C. Relevance to published studies
 - D. Limitations; unexpected results
 - E. Implications
 - F. Future directions

- ❖ Expand on ideas, as bullets
- ❖ Draft article using **IMRaD** (Introduction, Methods, Results and Discussion)
- ❖ Get feedback & revise each section
- ❖ Revise content/logic before language

List information from your reading in the appropriate section: Paraphrase with citations!

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IMRaD Manuscripts

The “write” order

Title/Abstract

Introduction

Methods
(can be at end or mostly online or in legends)

Results

Discussion (=IMRaD)

write

Title/Abstract

Methods

Results

Discussion

Introduction

Abstract /Title

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IMRaD Manuscripts

International reporting guidelines

PRISMA	→	Systematic reviews & Meta-analyses
CONSORT	→	Randomized controlled trials
Register trials in advance, at: clinicaltrials.gov ; who.int/ictcp/network/en ; controlled-trials.com ; www.clinicaltrials.in.th		
STROBE	→	Observational studies
QOREC	→	Qualitative studies
CARE	→	Case reports
ARRIVE	→	Animal studies

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IMRaD Manuscripts

International reporting guidelines

CONSORT

Introduction

2a Background – Scientific background and explanation of rationale
2b Objectives – Specific objectives or hypothesis

Methods

3a Trial design – Description of trial design (such as parallel, factorial)
3b Changes to trial design – Important changes to methods after trial
4a Participants – Eligibility criteria for participants
4b Study settings – Settings and locations where the data were collected
5 Interventions – The interventions for each group with sufficient detail administered
6a Outcomes – Completely defined pre-specified primary and secondary
6b Changes to outcomes – Any changes to trial outcomes after the trial
7a Sample size – How sample size was determined
7b Interim analyses and stopping guidelines – When applicable, explain
8a Randomisation: sequence generation – Method used to generate trial
8b Randomisation: type – Type of randomisation; details of any restrictions
9 Randomisation: allocation concealment mechanism – Mechanism used sequentially numbered containers, describing any steps taken to conceal
10 Randomisation: implementation – Who generated the allocation sequence
11a Blinding – If done, who was blinded after assignment to intervention
11b Similarity of interventions – If relevant, description of the similarity
12a Statistical methods – Statistical methods used to compare groups for
12b Additional analyses – Methods for additional analyses, such as subgroup analyses and adjusted analyses

- Trial design
- Participant eligibility
- Setting
- Interventions
- Outcomes
- Sample size
- Randomization
- Blinding
- Statistics

<http://www.equator-network.org/>

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IMRaD Manuscripts

Evaluating impact

Assess your findings objectively

Novelty

How new/important are your findings?
How strong is the evidence?
How large is your scientific advancement?
Low or high impact journal

Relevance/ Application

How broadly relevant are your findings?
International or regional journal
General or specialized journal

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IMRaD Manuscripts

Evaluating journals

Journal indicators

IF (Thomson Reuters)	Impact factor = No. of citations to "items" published in past 2 years ÷ No. of "articles"
IPP* (CWTS, Leiden Uni)	Impact per publication = No. of citations to articles in past 3 years ÷ No. of articles
SNIP* (CWTS, Leiden Uni)	Source-normalized impact per paper = IPP corrected for discipline
Eigenvalue* & SJR* (SCImago)	Eigenvalue (Eigenvalue.org) and SCImago journal rank <u>adjust IF for citing journals</u>
Hirsch (h-) index	h = No. of articles with at least that No. of citations

@edanz *Uses SCOPUS index; IF uses WoS; h-index can use WoS, SCOPUS, or Google Scholar 47

IMRaD Manuscripts

Evaluating articles

Article/researcher indicators

Hirsch (h-) index	h = No. of articles with at least that No. of citations (depends on database)
Altmetric (Altmetric.com)	How often articles are viewed/saved/cited/discussed/recommended
Quartile scores	e.g., Q1/2/3/4 proportions for rank of target journal in different disciplines
Post-publication peer review	e.g., F1000Prime recommendations; UK institution-level assessment
Impact case studies	e.g., institution-level: 2014 UK Research Excellence Framework

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2014 UK REF Quality scores

Outputs (65%), Impact (20%), Research Environment (15%)

Four-star	World-leading in originality, significance, and rigor
Three-star	Internationally excellent...but falls short of highest standards of excellence
Two-star	Recognized internationally
One-star	Recognized nationally
Unclassified	Quality falls below standard of nationally recognized work / not "research"

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2014 UK REF Quality scores

- 1. Scientific rigor** and excellence regarding design, method, execution and analysis
- 2. Significant addition** to knowledge and to the conceptual framework of the field
- 3. Potential and actual significance** of the research
- 4. Scale, challenge and logistical difficulty** posed by the research
- 5. Logical coherence** of argument
- 6. Contribution** to theory-building
- 7. Significance to advance** knowledge, skills, understanding and scholarship in theory, practice, education, management and/or policy
- 8. Applicability** and significance to the relevant service/research users
- 9. Potential applicability** for policy in, for example, health, healthcare, public health, animal health or welfare

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IMRaD Manuscripts

Nature publication criteria

- 1. Provides strong evidence for its conclusions.**
- 2. Novel.**
- 3. Of extreme importance to scientists in the specific field.**
- 4. Ideally, interesting to researchers in other related disciplines.**

In general, to be acceptable, a paper should represent an **advance in understanding likely to influence thinking in the field.**

There should be a discernible reason **why the work deserves** the visibility of publication in a *Nature* journal rather than the best of the specialist journals.

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IMRaD Manuscripts

Nature peer review questions (1)

- **Who will be interested** in reading the paper, and why?
- **What are the main claims** of the paper and how significant are they?
- Is the paper likely to be one of the **five most significant** papers published in the discipline this year?
- How does the paper **stand out from others** in its field?
- Are the claims **novel**? If not, which published papers compromise novelty?
- Are the claims **convincing**? If not, what further evidence is needed?
- Are there **other experiments** or work that would strengthen the paper further?

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Nature peer review questions (2)

- How much would **further work** improve it, and how difficult would this be?
Would it take a long time?
- Are the claims appropriately discussed in the **context of previous literature**?
- If the manuscript is unacceptable, is the study sufficiently **promising** to encourage the authors to resubmit?
- If the manuscript is unacceptable but promising, what **specific work** is needed to make it acceptable?

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IMRaD Manuscripts

Evaluating your study

1. **Novelty/originality?**
2. Real-world significance and importance/interest?
3. How soon can the findings be applied?
4. Is the study discussed in the context of what is known?
5. Potential for changing international practice/policy?
6. Potential for changing thinking in the field?
7. Potential for changing thinking in other fields?
8. Are implications short term or long term?
9. Methodological quality (study design type, analyses)?
10. Study quality (sample/controls, size, duration, variables)?
11. Are biases minimized so as not to affect validity/reliability?
12. Compliance with (a) research, trial, publishing ethics?
13. (b) relevant reporting and data accessibility guidelines?
14. Writing is high quality and suitable for non-specialists?

©edanz ...Be clear on topic/focus, report type, readers, urgency, reach, cost 54

IMRaD Manuscripts

“Journalism” aspects

- ❖ **Newsworthiness: why care? PITCH**
 - Proximity
 - Impact
 - Timeliness
 - Conflict
 - Human interest (e.g., unexpectedness)

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IMRaD Manuscripts

Social media

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Activity 2

Please see Activity 2 in
your workbook

Download at: edanzediting.com/FTM2016

Section 3

**Maximize your chances of
acceptance**

Maximize chances
of acceptance

Importance of high-quality research

**Avoidable waste in the production and reporting of
research evidence**

Iain Chalmers, Paul Glasziou

Lancet 2009; 374: 86–89

~85% of biomedical research is waste

- Not addressing relevant questions
- Incomplete literature review to justify study
- Inappropriate methodology (low validity/reliability)
- Incomplete reporting to allow replication

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of acceptance

Editors look for complete reporting

Introduction

Why did you do the study?

Do a thorough literature review; justify the need for your study

Methods

What did you do?

Participants/materials, appropriate techniques, appropriate analyses (full protocol online), ethics

Results

What did you find?

Include unexpected/negative results; data availability/accessibility

Discussion

How does your study contribute to your field?

Include similarities and differences, limitations

Maximize chances of acceptance

Cover letter

[Insert your name and address here]
[Insert Journal Editor's name here]
Editor-in-Chief
[Insert journal name here]
[Insert date here - Day Month Year]
Dear Dr [Insert editor's surname here],

Please find enclosed our manuscript titled "[insert title of your manuscript here]", which we would like to submit for publication as an [insert article type here] in [insert journal name here].

[Insert a sentence or the focus topic of the study and its importance. Then, insert 2-3 sentences explaining what is known on your subject and the relevant knowledge gaps you are filling. In the final sentence, explain the objectives of the study and its novel aspect.]

[Insert about 3 sentences briefly describing the methods of the study and the main findings.]

[State the implications or potential applications of the findings. Explain who will be interested in the findings and why they should care about them. Explain how this is appropriate for the readership of the journal.]

We confirm that this manuscript has not been published elsewhere and is not under consideration by another journal. All authors have approved the manuscript and agree with submission to [insert journal name here]. The study was supported by a grant from the [insert funding body here]. The authors have no conflicts of interest to declare.

We would like to recommend the following researchers as potential reviewers for this paper:

1. [Reviewer 1 name plus contact information]
 2. [Reviewer 2 name plus contact information]
 3. [Reviewer 3 name plus contact information]

We ask that the following researchers are excluded as reviewers because of potential conflict of interest:

1. [Reviewer 1 name plus contact information]
 2. [Reviewer 2 name plus contact information]

Please address all correspondence to:
[Insert contact address, telephone and fax numbers, and e-mail address.]

We look forward to hearing from you at your earliest convenience.

Yours sincerely,
[Insert name], [Insert title]

©edanz **Highlight your study quality & impact in your cover letter** 61

Maximize chances of acceptance

Journal decision letter

Respond to **every** reviewer comment

- Revise if you can; keep to the deadline; be polite!
- Restate reviewer's comment; refer to line and page numbers

(Minor revisions in presentation or major revisions via new work)

Easy for editor & reviewers to see changes

- Use a different color font
- Highlight the text
- Strikethrough font for deletions

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Maximize chances of acceptance

Journal decision letter

Common reviewer complaints

- Ideas are not logically organized; poor presentation
- Purpose and relevance are unclear
- Topics in the Results/Discussion are not in the Introduction
- Methods are unclear or inappropriate; ethics problems
- Wrong statistical tests; incomplete reporting of results
- Confusion between statistical and clinical significance, or between association and cause
- Negative results, limitations, implications **not discussed**
- Results **repeated** in Discussion; Conclusions too general
- Cited studies are not up-to-date; key references missing

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Common mistakes in the Introduction

- Ideas are not logically organized **Why study needs to be done?**
- Too long, like a literature review; aim is unclear **Keep focused**
- Topics in the Introduction do not match topics in the Results/Discussion **Write last**
- Cited studies are not up-to-date **<5 years**
- Cited studies are geographically biased **International**

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Use appropriate tests

Wrong statistical tests


Distribution of data affects analysis and presentation

- Parametric tests (e.g., *t* test and ANOVA) can be used only with continuous & normally distributed data with a large enough sample size
- Use the mean \pm SD only for normally distributed data

Simple guide:

- If SD is \geq mean, most likely not normally distributed
- If SD is $> 0.5 \times$ mean, may not be normally distributed

Use Shapiro-Wilk's *W* test for normality



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Use appropriate tests

2 categorical endpoints

Paired (within sample)	Unpaired (between sample)
McNemar's test	Fisher's exact test 2 treatment groups
	Chi-square test >2 treatment groups

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du Prel et al. Dtsch Arztebl Int 2010; 107: 343-8.

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Use appropriate tests

Continuous endpoints

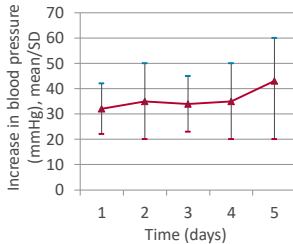
Parametric		Nonparametric	
Paired	Unpaired	Paired	Unpaired
2 groups: Paired <i>t</i> test	2 groups: Unpaired <i>t</i> test	2 groups: Wilcoxon signed-rank test	2 groups: Mann-Whitney <i>U</i> test (Wilcoxon rank-sum test)
>2 groups: Repeated-measures ANOVA	>2 groups: ANOVA (<i>F</i> test)	>2 groups: Friedman one-way ANOVA	>2 groups: Kruskal-Wallis test

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Lang and Secic 1997; 71.

Maximize chances of acceptance

Common mistakes in the Results

Do you agree with this interpretation?



Over 5 days of blood pressure monitoring during the new diet, the daily rise in resting blood pressure increased from 32 ± 10 mmHg to 43 ± 17 mmHg (Figure 2). This rise in blood pressure may be explained by...

Is this real?

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Common mistakes in the Results

Statistical significance does *not* equal clinical significance!

“Drug A significantly reduced LDL cholesterol by 28% ($p < 0.05$). Therefore, Drug A is effective in reducing cholesterol levels...”

- How much is 28%? Is this clinically relevant?

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Common mistakes in the Results

“Drug A significantly reduced LDL cholesterol levels from 4.7 ± 0.3 mmol/L to 3.4 ± 0.6 mmol/L ($p = 0.02$, 95% CI: 0.8–1.8). Because a minimal reduction of 1.4 mmol/L is required to be clinically effective, the efficacy of Drug A is still unclear.”

- Use absolute values
- State exact P -value
- State 95% CI and minimal clinically relevant difference

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Common mistakes in the Discussion

Do not overgeneralize your findings

Result: Drug A reduced breast cancer cell growth *in vitro*

~~✗~~ In this study, we demonstrated that Drug A effectively reduced tumor growth. Therefore, this drug should have therapeutic applications in breast cancer treatment.

In this study, we demonstrated that Drug A effectively reduced the growth of various breast cancer cell lines. Our findings **suggest** that this drug **may** have therapeutic applications in breast cancer treatment.

Use appropriate “hedging” words

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Ensure high readability

Use short sentences
15–20 words
One idea per sentence; use short words

Use active voice
Simpler, more direct, and easier to read

Recommended by most writing style guides and journals!
“Nature journals prefer authors to write in the active voice”
(http://www.nature.com/authors/author_resources/how_write.html)

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Prefer active voice and shorter words/sentences

To **ascertain** the **efficaciousness** of the program, all of the program participants were **interrogated** upon participant program completion.

↓

To **determine** the **efficacy** of the program, we interviewed all participants.

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Maximize chances of acceptance

Revising & Editing

- ❖ Write your manuscript **section-by-section**
 - Get feedback after each section; set deadlines
 - Easier for your colleagues to review
 - Less stressful for everyone
- ❖ **Revise** for content & overall **logic** (reporting guidelines)
- ❖ **Revise** for journal style (see guidelines/past papers)
- ❖ **Edit** for conciseness, clarity, consistency & accuracy: read aloud / print out / search for common errors
- ❖ **Get feedback from pre-submission peer review**
- ❖ **Get language assistance**

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Tips for editing

- ❖ Edit in multiple rounds
- ❖ Macro-edit
 - Variables are consistent; check overall logic
 - Paragraph messages are clear; sentences flow
 - Data match between text and figures
 - Abstract matches main text (without copying)
- ❖ Micro-edit
 - Spelling, punctuation, grammar, sentence logic (“it”)
 - Journal style; formality; no jargon or clichés; no repetition
 - Headings, legends, references
- ❖ **Have a rest**, then read the manuscript as a fresh reader: check readability, validity/reliability, certainty

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Tips for editing

Be aware: language has different levels of meaning

- ❖ **Syntax and structure**
 At day end, we can't rely on his study, Author1 et al (2015) **was** careless and forgot to include controls. =>
At the end of the day, Author1 et al (2015) were careless and forgot to include controls, so we can't rely on their study.
- ❖ **Sentence meaning**
Ultimately, Author1 et al (2015) failed to include controls, so the research community cannot rely on that study.
- ❖ **Social meaning (appropriate among researchers)**
There is only one published study on this topic (Author1 et al, 2015), but the lack of controls reduces the validity of that study's conclusions.


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Improve readability

Readers expect...

- ❖ **verbs** to closely follow their **subjects**
- ❖ **Bottom heavy** (not top heavy) sentences



Subject Verb

✗ The viral **infection** that was caught by the patient on a trip to an outbreak-prone area in Africa **spread** among the hospital staff quickly.

The **patient** **caught** a viral infection on a trip to an outbreak-prone area in Africa. This **infection** **spread** quickly among the hospital staff.

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Improve readability

Which sentence suggests that you **will** get funding?

1. You deserve the funding, but the study design is not perfect.
2. The study design is not perfect, but you deserve the funding.

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Improve readability

Readers focus at the end of the sentence for what is important. Information in this **stress position** can also introduce the **topic** of the next sentence (useful for explanations and processes).

Stress position

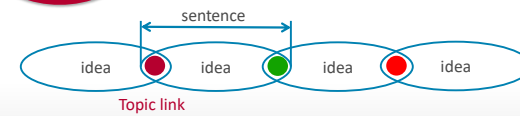
The study design is not perfect, but you deserve the **funding**. The grant will be awarded in two stages.

Topic position

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Maximize chances of acceptance

Improve flow (1)



idea idea idea idea

Topic link

The local government has been striving to introduce **Information and Communication Technology (ICT) in education**. In **medical education**, technology was introduced through **the ICT-Connect-TED project**. **The program** aimed at improving the quality of lecturers through **the use of ICT**. **ICT-Connect-TED** recently provided computers and a networking infrastructure to all medical colleges.

©edanz Adapted from: Kafyullo et al. Educ Inf Technol. 5 May 2015; DOI 10.1007/s10639-015-9398-0 80

Maximize chances of acceptance

Improve flow (2)

Information in the **topic position** can introduce the **topic** of the next few sentences (useful for definitions, descriptions, and narratives).

idea idea idea idea

Topic link

Lecturers were positive about the effectiveness of technology in teaching. They reported the effectiveness of technology on students' learning, and on simplifying their teaching process. Most of the lecturers reported to be comfortable and satisfied with the outcomes of the technology-integrated lessons they had developed and taught during the professional development program. One of the lecturers from College A said,...

©edanz Adapted from: Kafyullilo et al. Educ Inf Technol. 5 May 2015; DOI 10.1007/s10639-015-9398-0 81

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Improve flow (3)

Information in the **stress position** can introduce the **topic** of the next few sentences (useful for lists and describing whole/parts).

idea idea idea idea

Topic link

Findings in this study are presented in four sections. The first section presents the continuation of technology use in teaching. The second section presents the factors affecting the continuation of use of technology in teaching among lecturers who participated in the study. The third section presents the college management view on the impact of the professional development program and the institutional challenges on using technology in teaching. Finally, the enabling and hindering factors affecting the continuation of technology are summarized.

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Improve flow (4)

Logical connectors

Addition	Furthermore..., In addition..., Additionally..., Moreover
Sequence	Until, After, Before, While, Since, When, Then, Next, First/Second/Third, Finally,...
Cause-Effect	Because (of), To (+verb), Owing to, So that, Therefore, Thus, Hence, Consequently,...
Contrast	Although, Even though, Whereas, However, In contrast, Despite (+noun or verb -ing),...
Condition	If, Even if, Unless, Whether (or not), Except, Provided that, Until, Without, Otherwise,...

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Activity 3

Please see **Activity 3** in your workbook

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*Your goal is not only to **publish**, but also to be **widely read and highly cited***

Maximize the impact of your research

- ✓ Plan well for academic publishing
- ✓ Understand IMRaD manuscript writing
- ✓ Maximize your chances of acceptance
- ✓ **Edanz–FTM, Mahidol University collaboration: services available to you**

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Any questions?

Thank you!

Trevor Lane: tlane@edanzgroup.com

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