



Good and Bad Published Paper

By:

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What is 'Quality' (Journal)?

The term 'Quality' is often relative, e.g:

- **Muslim**: Who states shahadah by heart and mouth, and does the minimum Islamic duties.
- **Mu'min**: A Muslim with Imaan. This person does some extra things.
- **Muhsin**: A Mu'min with Ihsan which is the highest level.

Almost same rule applies in case of Journals!!

Can I have good published paper?



Definitely
YES



How

CONTINUE....

- ✓ Read many papers, and learn from good ones & bad ones
- ✓ Write frequently: quality is everything
- ✓ Review frequently
- ✓ Learn to be objective about your work
- ✓ Believe that editors/reviewers are likely trying to be objective about your work
- ✓ Learn to expect and accept rejection

Ingredients of good science

- ✓ Novelty of idea
- ✓ Comprehensive review of literature
- ✓ Strong data; strong statistical analysis
- ✓ Strong and precise discussion

Ingredients of good writing

- ✓ Good organization
- ✓ Appropriate use of tables & figures
- ✓ Right length
- ✓ Right audience

Why write and publish research papers?

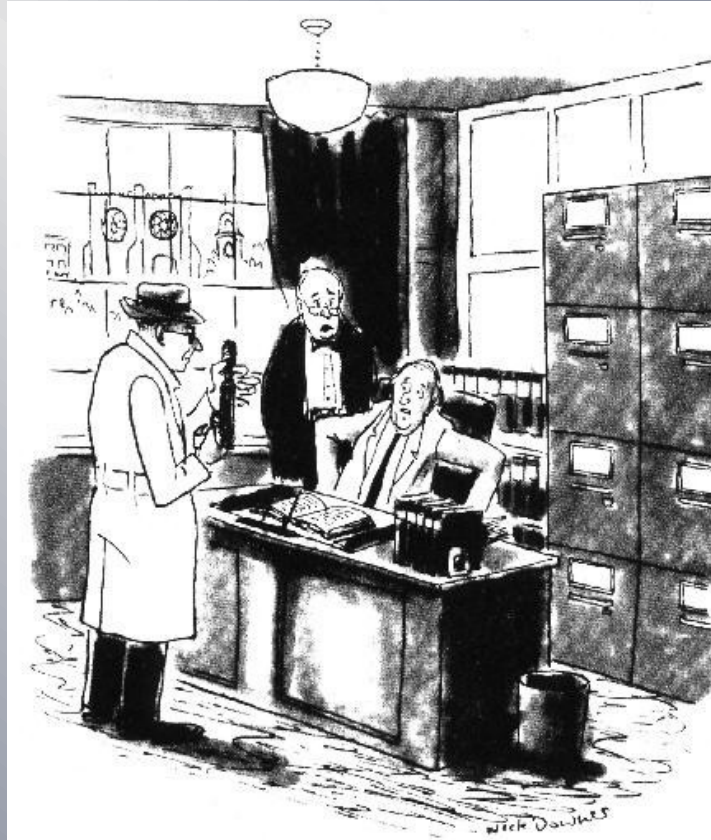
- **Ideally:**

- ✓ to share research findings and discoveries with the hope of improving healthcare.

- **Practically:**

- ✓ to get funding
 - ✓ to get promoted
 - ✓ to get a job
 - ✓ to keep your job!

“Scientists are rated by what they finish, not by what they attempt”



“Surely you were aware when you accepted the position, Professor, that it was publish or perish.”

First Impressions

➤ It is vital to understand that the journal editor and reviewers probably do not know the article authors..... **thus;**

The submission of the manuscript will provide them with their first impressions' of authors which is critical to success in the peer review process.

Simple writing

“Those who have the most to say usually say it with the fewest words”



Sentence structure

- ✓ Write short sentence not long ones.
- ✓ Put parallel idea.
- ✓ Simplify by using active voice.
- ✓ Use strong verbs not nouns.
- ✓ Tighten your writing.

CONTINUE....

- ✓ Use Common words
- ✓ Define technical expression early in the abstract or introduction
- ✓ Never assume that your reader will understand
- ✓ Don't trust spell check
- ✓ Proofread... proofread



Ethical responsibilities of the author

Authors must be knowledgeable about:

- ✓ Conflict of interest.
- ✓ Duplicate publication or falsification.
- ✓ Ethics in experiment involving humans or animals.

Ethics in publishing

Conflict of interest:

- **Definition:** Real conflict due to employment, consulting or investment in entities with an interest in the outcome of the research.
- **How to avoid:** Disclose all the potential interests to the editor of the Journal and within the manuscript itself.

Ethics in publishing



■ **Plagiarism:**

- ✓ Taking the work of another.
- ✓ Copying a figure, table, data or even wording from a published or unpublished paper without attribution.

■ **How to avoid**

- ✓ Provide citations to the work of others.
- ✓ Obtain copyright permission if needed.
- ✓ Do not copy exact wording from another papers to yours even if referenced unless in quotes.

What constitute a good journal?

✓ **Impact factor:**

Average number of times published papers are cited up to two years after publication.

✓ **Immediacy index:**

Average number of times published papers are cited during year of publication.

Impact factors

Rank	Journal	Impact Factor
1	NEW ENGL J MED	47.05
2	LANCET	30.758
3	JAMA-J AM MED ASSOC	28.899
4	ANN INTERN MED	16.225
5	BRIT MED J	13.66
6	PLOS MED	13.05
7	ANNU REV MED	9.94
8	ARCH INTERN MED	9.813
9	CAN MED ASSOC J	7.271
10	J INTERN MED	5.942
11	COCHRANE DB SYST REV	5.653
12	MEDICINE	5.054
13	MAYO CLIN PROC	4.973
14	AM J MED	4.466
15	ANN MED	4.246
16	AM J PREV MED	4.235
17	ANN FAM MED	4.13
18	BMC MED	3.985
19	PREV MED	3.172
20	BRIT MED BULL	2.9
21	MED J AUSTRALIA	2.894
22	AM J MANAG CARE	2.737
23	J GEN INTERN MED	2.654
24	EUR J CLIN INVEST	2.643
25	QJM-INT J MED	2.627
26	CURR MED RES OPIN	2.498
27	BRIT J GEN PRACT	2.442
28	J PAIN SYMPTOM MANAG	2.423
29	PAIN MED	2.393
30	INTERN EMERG MED	2.371
31	INT J CLIN PRACT	2.245
32	J URBAN HEALTH	2.205
33	SCAND J PRIM HEALTH	2.205
34	MED CLIN N AM	2.183

Rank	Journal	Impact Factor
1	CIRCULATION	14.816
2	J AM COLL CARDIOL	12.64
3	EUR HEART J	9.8
4	CIRC RES	9.214
5	BASIC RES CARDIOL	5.973
6	NAT CLIN PRACT CARD	5.902
7	HEART FAIL REV	5.865
8	CARDIOVASC RES	5.801
9	HEART	5.385
10	CARDIOVASC DRUG REV	5.208
11	J MOL CELL CARDIOL	4.965
12	HEART RHYTHM	4.559
13	TRENDS CARDIOVAS MED	4.367
14	AM HEART J	4.357
15	PROG CARDIOVASC DIS	4.246
16	CURR PROB CARDIOLOGY	3.957
17	AM J PHYSIOL-HEART C	3.712
18	EUR J HEART FAIL	3.706
19	J CARDIOVASC ELECTR	3.703
20	ANN THORAC SURG	3.644
21	AM J CARDIOL	3.575
22	J HEART LUNG TRANSPL	3.541
23	NUTR METAB CARDIOVAS	3.517
24	INT J CARDIOL	3.469
25	CIRC-HEART FAIL	3.433
26	CIRC-ARRHYTHMIA ELEC	3.4
27	J CARD FAIL	3.254
28	J THORAC CARDIOV SUR	3.063
29	J AM SOC ECHOCARDIOG	2.981
30	CLIN RES CARDIOL	2.958
31	J CARDIOVASC PHARM	2.826
32	J NUCL CARDIOL	2.777
33	CARDIOVASC DIABETOL	2.77
34	REV ESP CARDIOL	2.746
35	CARDIOVASC THER	2.741
36	CIRC J	2.692

Rank	Journal	Impact Factor
1	NAT REV NEUROSCI	26.483
2	ANNU REV NEUROSCI	24.822
3	BEHAV BRAIN SCI	19.045
4	MOL PSYCHIATR	15.049
5	NAT NEUROSCI	14.345
6	NEURON	13.26
7	TRENDS NEUROSCI	12.794
8	FRONT NEUROENDOCRIN	12.048
9	TRENDS COGN SCI	11.664
10	BRAIN	9.49
11	ANN NEUROL	9.317
12	PROG NEUROBIOL	9.14
13	BIOL PSYCHIAT	8.926
14	NEUROSCI BIOBEHAV R	7.791
15	BRAIN RES REV	7.39
16	CURR OPIN NEUROBIOL	7.211
17	J NEUROSCI	7.178
18	NEUROPSYCHOPHARMACOL	6.993
19	CEREB CORTEX	6.979
20	ACTA NEUROPATHOL	6.397
21	HUM BRAIN MAPP	6.256
22	NEUROSCIENTIST	6.079
23	SLEEP MED REV	5.967
24	NEUROBIOL AGING	5.937
25	BRAIN PATHOL	5.903
26	NEURO SIGNALS	5.75
27	NEUROIMAGE	5.739
28	BIPOLAR DISORD	5.502
29	J CEREBR BLOOD F MET	5.457
30	CURR OPIN NEUROL	5.43
31	SLEEP	5.402
32	J COGNITIVE NEUROSCI	5.382
33	NEURO THERAPEUTICS	5.381
34	PAIN	5.371
35	NEUROPSYCHOL REV	5.231
36	J PINEAL RES	5.209
37	MOL NEURODEGENER	5.091

Examples of writing simply & clearly

Use the word that conveys your meaning most accurately. When deciding between two such words, choose the shorter word:

Approximately

About

Commence

Begin

Finalize

Finish

Prioritize

Rank

Terminate

End

Utilize

Use

CONTINUE....

Make an adjustment

Adjust

Make a judgment

Judge

Make a decision

Decide

Perform an investigation

Investigate

Make a referral

Refer

Reach a conclusion

Conclude

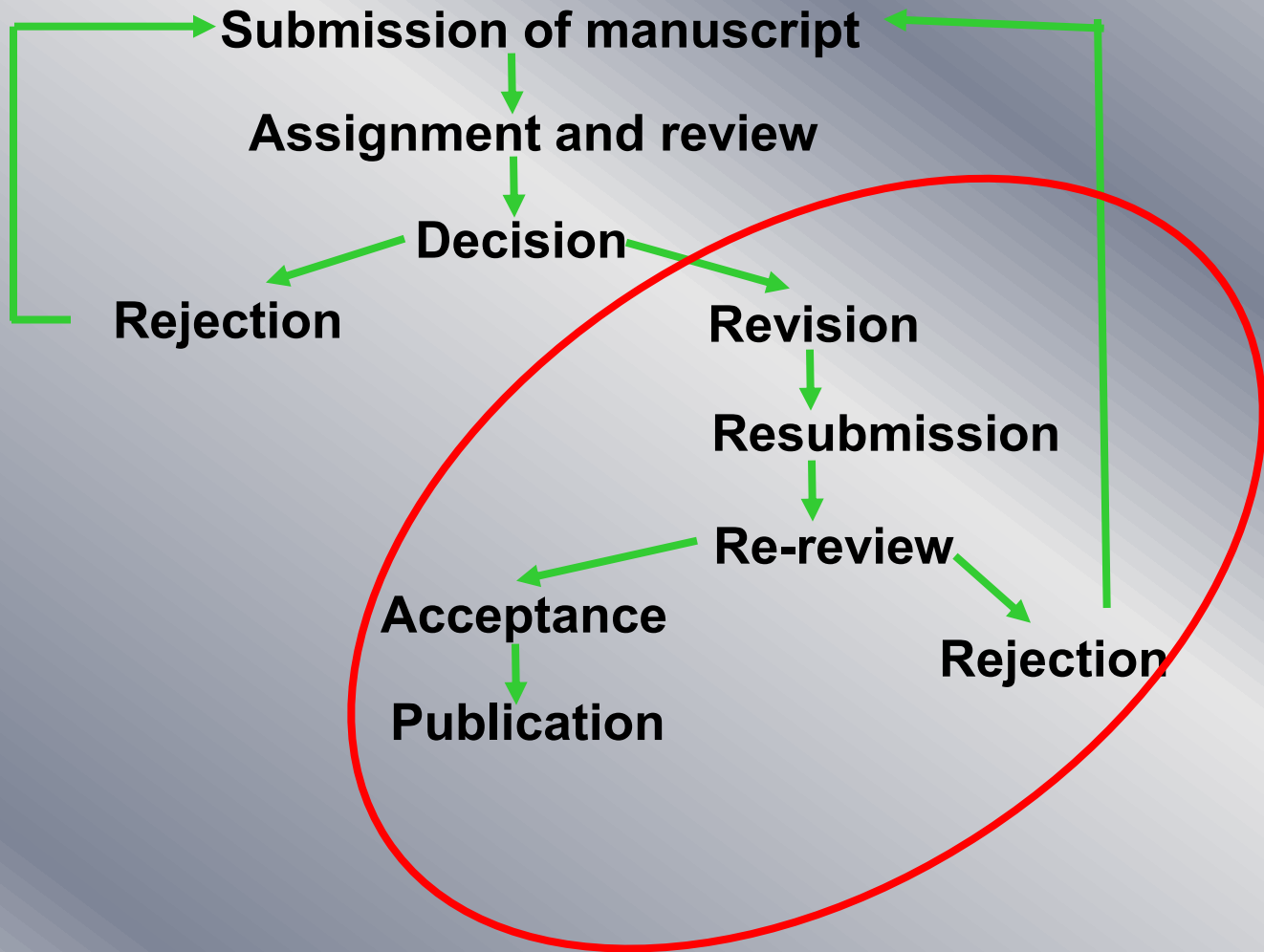
CONTINUE....

“The new drug **caused** a decrease in heart rate.”

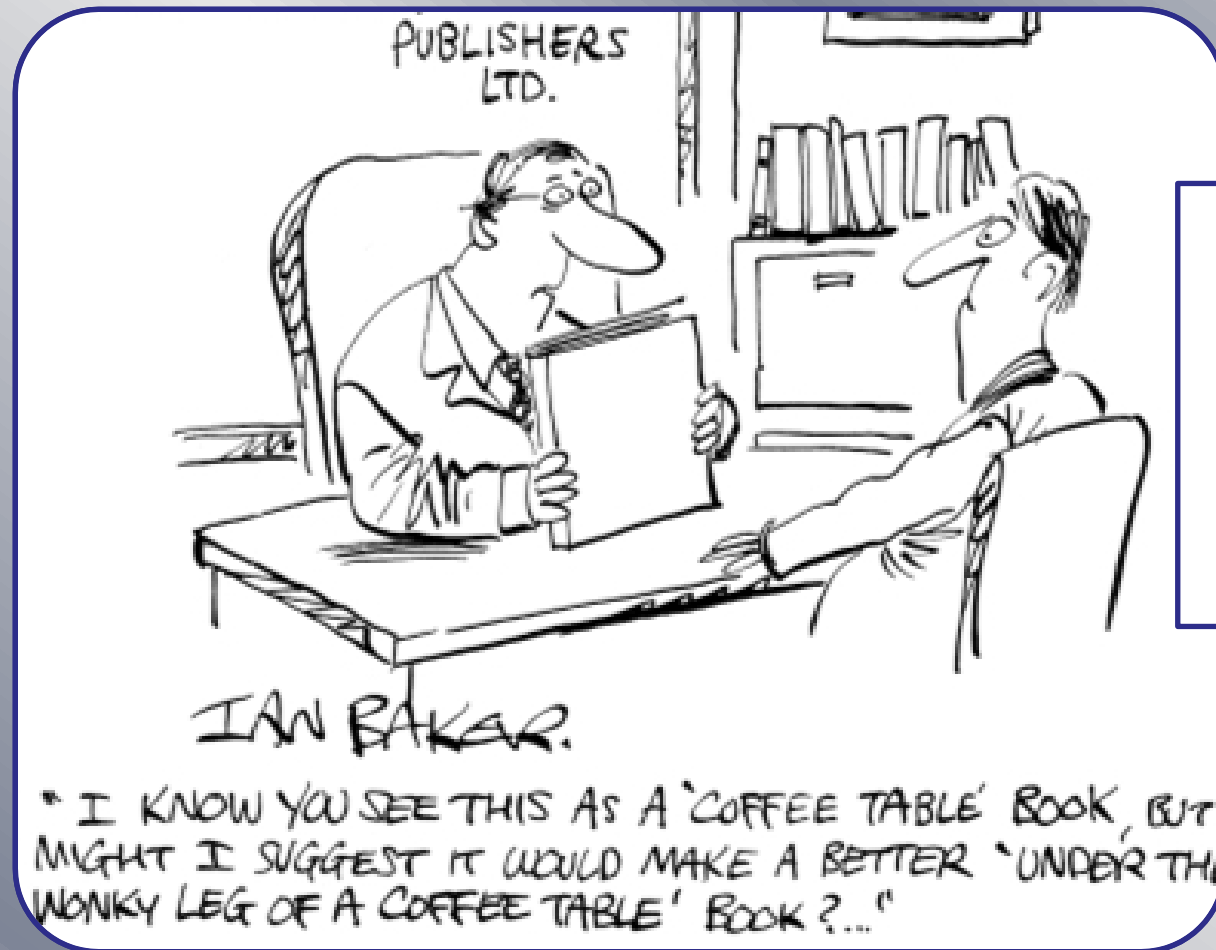
Revised:

“The new drug **decreased** heart rate.”

Process of Publication



Choosing the Right Journal

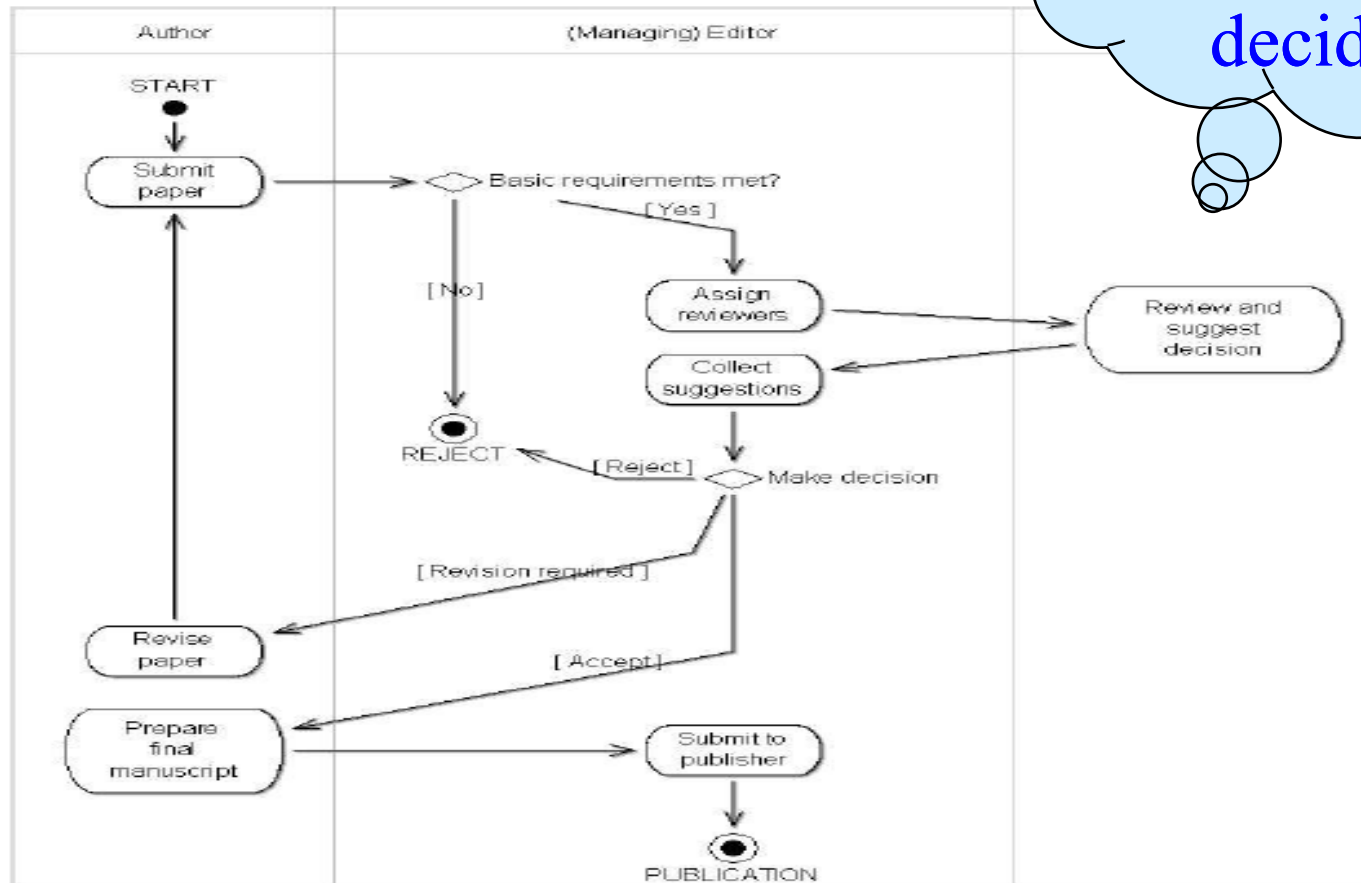


Choosing the right journal

selecting a proper journal for publication. Issues to consider include the “level” or “tier” of the journal, the scope and readership of the journal, and whether the journal has published similar studies in the past. If the author selects a journal characterized by extremely stringent peer review and the study is not of sufficient quality and impact, a rejection may end the motivation for resubmission and effectively kill the project or, at the least, it will delay publication in an appropriate venue. Conversely, if the manuscript is submitted to an “easy” journal (a journal that has a reputation for a low rejection rate) and is accepted rapidly, the article may not reach the widest and most appropriate readership, or it may not be published in the highest-quality journal possible, reducing its impact.

The Editorial Process

“Reviewers
Revise,
editors
decide”



What constitutes good science?

- ✓ **Novel:** new and not resembling something formerly known or used (can be novel but not important)
- ✓ **Mechanistic:** testing a hypothesis-determining the fundamental processes involved in or responsible for an action, reaction, or other natural phenomenon.
- ✓ **Descriptive:** describes how are things are but does not test how things work – hypotheses are not tested.

Novelty is most critical !



"Larry? Remember how we were criticizing the Journal for publishing such obscure cases as 'Congenital Generalized Alopecia in the Raccoon'?"

Erratic Editors



"Like it? I LOVED it! The narrative gripped me from the first sentence and didn't let go until the final, heart-stopping page! And the CHARACTERS! What can I say? I WEPT! Without question, Harris, this is the finest year-end financial report you've ever written!"

The Editor may be on your side !

- ✓ Editors work hard & tend to be pro-authors.
- ✓ Editors respect the peer review system.
- ✓ Editors struggle with difficult decisions & are also ‘pained’ by decisions (as authors).
- ✓ Editors have broader perspective.
- ✓ Editors don’t like involvement in authorship disputes.
- ✓ Editors don’t mind rebuttals.

A request for revision ?!

- ✓ If your paper is returned for revision, you are in good company.
- ✓ It's ok to get mad, but don't act on it.
- ✓ Try to understand what the reviewers are really saying.
- ✓ look for clues from the editor (the final arbiter) as to the extent of revision needed.

A request for revision ?!

- ✓ Complete additional experiments if needed.
- ✓ Address all comments in a point-by-point fashion:
 - Resist the temptation to prepare an impassioned response to points with which you disagree.
 - Stand firm (diplomatically) if that is truly the right things to do.
- ✓ Sincerely thank the editor and reviewers for helping you to improve your work, they have invested a lot of time.
- ✓ Ask a neutral colleague to review you response.

Comment. 3. The selection of variables associated with non-cardiac dysfunction is good (especially the selection of FEV1/FVC to characterize COPD), but the choice of WBC count to characterize systemic inflammation though referenced has not established a following among other population scientists. The Framingham database is replete with other measures of systemic inflammation, e.g. CRP, hs-CRP, ESR, measures of cytokines and other humoral measures. I would have cast a broader net in area. In fact, I suggest that the investigators should have selected more than one variable for each organ system in question, in order to establish in a more rigorous manner noncardiac organ dysfunction as an antecedent associated with development of HF. This suggestion is even more important since a major point of this paper concerns non-cardiac dysfunction.

Response. We thank the reviewer for these important comments. Indeed, we agree that hs-CRP may have been a preferred marker of systemic inflammation. However, given that the CRP measurements in our cohort were made at a time when the traditional assays (not high sensitivity CRP) were used, we found that the large majority of results in our community-based sample fell in the large bin of "undetectable CRP", making this an unsuitable variable for the current analysis. The variables for the other non-cardiac organ systems (renal, hepatic, hematologic/ oxygen carrying capacity) were selected a priori based on prior literature, widespread availability and ease of measurement, both in the Framingham Heart Study and likely in other populations (creatinine, albumin, hemoglobin).

Nonetheless in agreement with the Reviewer we performed secondary analyses using other potential variables as listed in the following Reviewer table 2:

Organ system	Continuous variable	Hazards ratio	P value
1. Renal	BUN per 1 unit increase	1.02 (0.99-1.05)	0.291
	eGFR per 1 unit decrease	1.24 (1.03-1.50)	0.026
2. Hepatic	Total bilirubin per 1 unit increase	1.42 (0.79-2.56)	0.244
	ALT per 1 unit increase	1.00 (0.99-1.01)	0.642
	AST per 1 unit increase	1.00 (0.99-1.02)	0.762
3. Pulmonary	FEV1 per 1 unit decrease	1.02 (0.70-1.47)	0.932
	FVC per 1 unit decrease	1.05 (0.81-1.36)	0.734
4. Hematologic	Hct per 1 unit decrease	1.03 (0.87-1.22)	0.761
5. Systemic inflammation/ oxidative stress	CRP* per 1 unit increase	1.01 (0.98-1.04)	0.538
	Uric acid per 1 unit increase	1.07 (0.94-1.22)	0.286

BUN, blood urea nitrogen; eGFR, estimated glomerular filtration rate by MDRD equation; ALT, alanine transaminase; AST, aspartate aminotransferase; FEV1, forced expiratory volume in 1 second; FVC, forced vital capacity; Hb, hemoglobin; Hct, hematocrit; WBC, white blood cell count; CRP, C-reactive protein
*Traditional CRP assay (high-sensitivity CRP assay not available)

As shown, these secondary analyses provided further support for our original selection of the simple, convenient and widely available variables creatinine, albumin, FEV1:FVC ratio and hemoglobin. The table has been added as a Supplementary Table (page 30) and the following statements included in the revised manuscript (Page 11, paragraph 1, line 4):

"Other biomarkers of non-cardiac dysfunction (blood urea nitrogen, total bilirubin, transaminases, hematocrit, C-reactive protein measured by traditional assays [high sensitivity assays unavailable], uric acid) were also tested for their associations with incident HF in secondary analyses, and results are shown in Supplementary Table 1. These

**Be responsive
to reviewers**

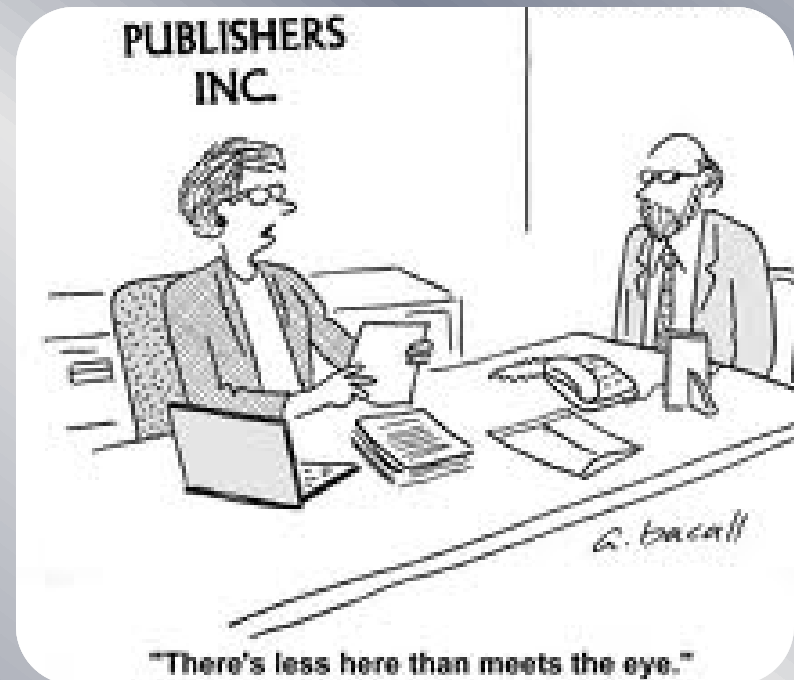
**Make it easy
for them to re-
review the MS**

Major Reasons for rejection

- ✓ Inappropriate for the journal.
- Do Your Homework.
- ✓ Merely confirmatory/ incremental.
- Avoid Least Publishable units (LPUs).
- ✓ Describes poorly-designed or inconclusive studies.
- Focus on your hypothesis.
- ✓ Poorly written.
- Great science in an ugly package can still be rejected.

Miscellaneous Reasons for Rejection

- Are similar manuscripts already accepted and awaiting publication?
 - Are similar manuscripts in the pipeline of The Journal's review process?
 - Does The Journal have sufficient space available to accommodate the article?
 - Is the article timely and right for The Journal's readership?
-
- Have the authors published similar articles in other journals?
 - Have related journals recently covered the topic?



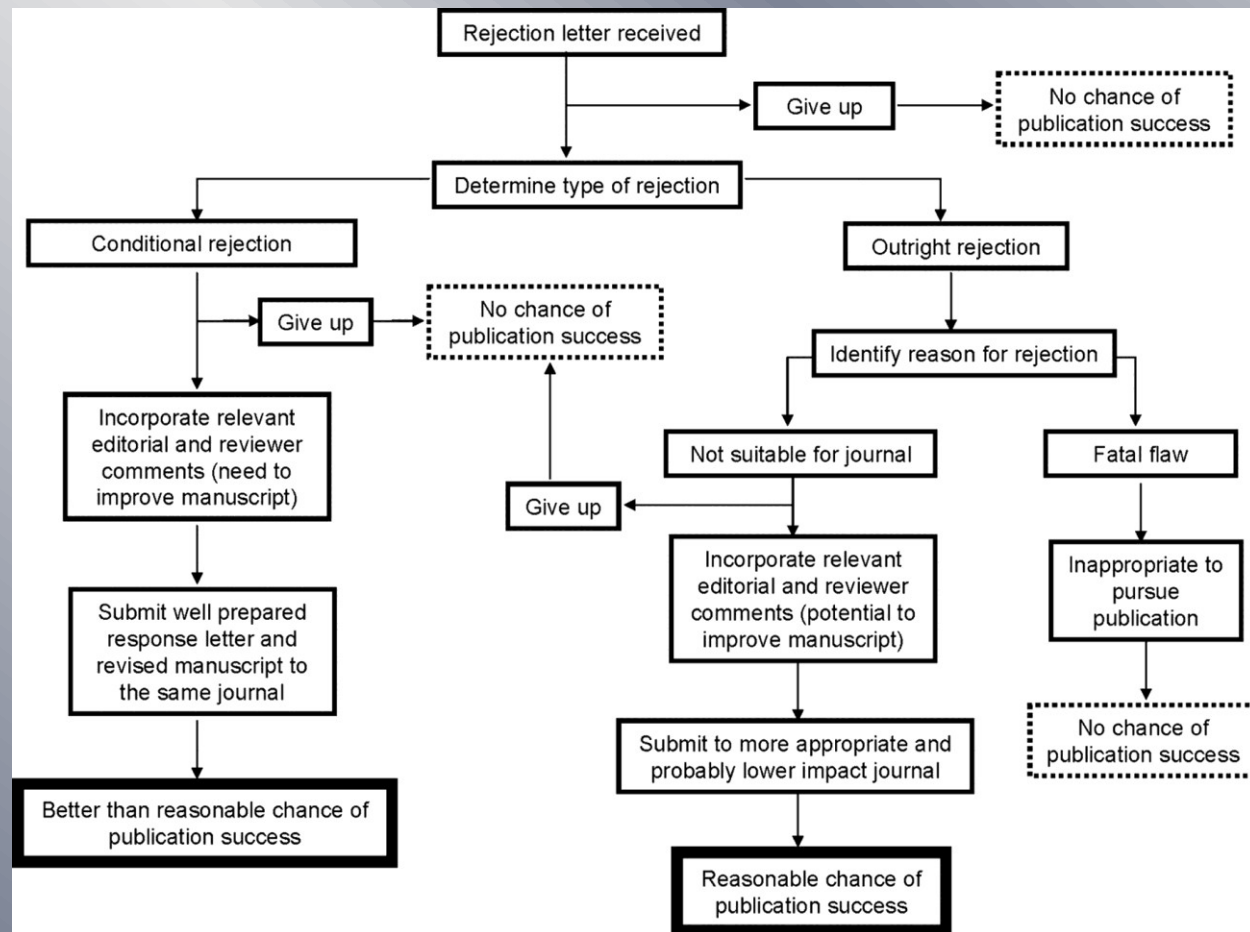
Interpreting Wording of Rejection

Common Wording Used in Outright or Conditional Rejection Letters

Outright Rejection	Conditional Rejection
Submit to another journal	Unacceptable in its current form
Unsuitable for our readership	Will require major revisions
Insufficient priority at this time	Would be more suitable as a brief report
Relevant to a more specialized audience	This paper, while of interest, needs to be completely restructured
Although of interest to our readers, fundamental flaws in the study design preclude publication	The reviewers have raised serious concerns that need to be addressed
We do not accept unsolicited review articles	Manuscript would need to be revised to comply with the requirements of our journal

- ✓ Rejection with referral to another journal in family

Flow diagram illustrating the choices authors can make after receiving a manuscript rejection letter from the editor of their first-choice journal.



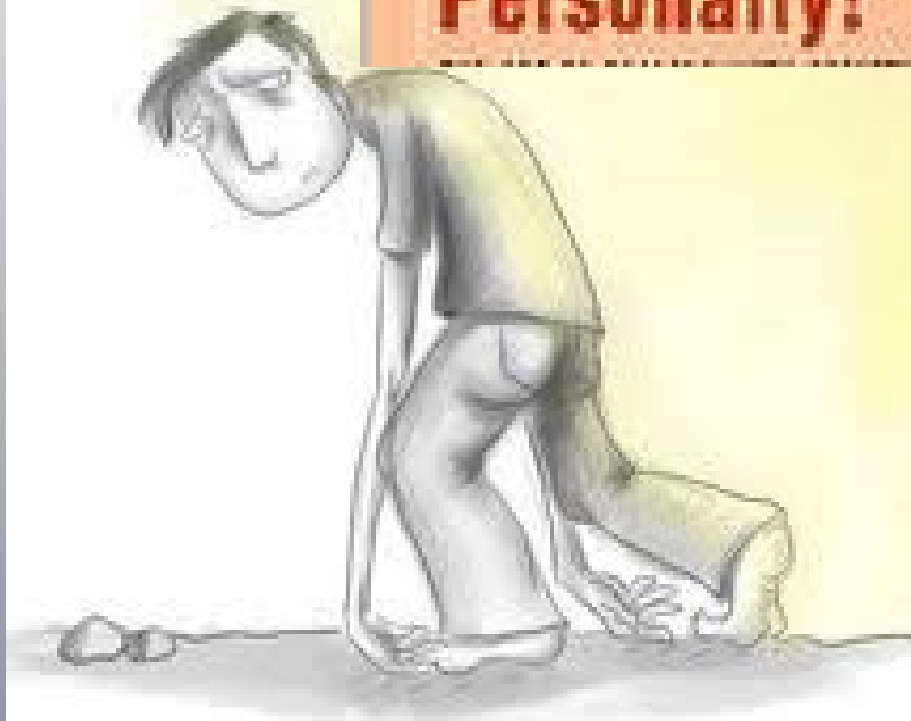
Dealing with rejection

- ✓ Rejection is upsetting.
- ✓ If you feel that it is unfair to reject your article do not get angry.
- ✓ Reassess quickly the choice of Journal.
- ✓ Fix any weakness that was pointed out by review process.
- ✓ Reformat the paper for your second choice Journal and send it.

**About 70% of papers rejected by
Science are eventually published
elsewhere**



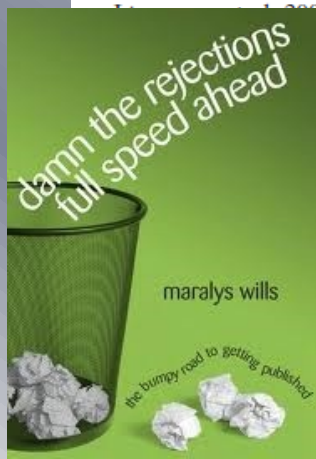
**Don't Take It
Personally!**



Rejection Fraction !

*Publication Success Rates for Previously Rejected Manuscripts**

Study†	Therapeutic Area	Rejected Manuscripts, No.	Rejected Manuscripts Subsequently Published in Other Journals, No. (%)	Publication Delay
Hall and Wilcox, 2007 ³	Epidemiology	155	116 (75)	Most published within 19 mo
Mundy, 1984 ¹⁸	General medicine	113	82 (73)	Most published within 23 mo
Koch-Weser and Yankauer, 1993 ¹⁹	Public health	83	60 (72)	Most published within 30 mo
Ray et al, 2000 ²⁰	General medicine	350	240 (69)	Mean time from rejection to publication elsewhere was 18 mo (minimum, 4 mo; maximum, 60 mo)
Chew, 1991 ¹	Diagnostic radiology	254	162 (64)	Mean time from rejection to publication elsewhere was 15 mo (minimum, 2 mo; maximum, 38 mo)
McDonald et al, 2007 ⁸	Radiology	554	304 (55)	Mean time from rejection to publication elsewhere was 16 mo (minimum, 1 mo; maximum, 37 mo)
Nemery, 2001 ¹²	Occupational and environmental medicine	405	218 (54)	Most published within 24 mo
Levy et al, 2007 ⁷	Ophthalmology	1344	686 (51)	Most published within 24 mo (median, 15 mo; minimum, 0.4 mo; maximum, 39 mo)
Levy et al, 2008 ¹¹	Cardiovascular	644	301 (47)	Most published within 36 mo
	Dermatology	489	201 (41)	Most published within 28 mo
	General medicine	11	3 (27)	Not reported



Some new challenges

✓ Open Access journals.

✓ Social media & Open peer review.

✓ “joint’ online authorship

EDITORIALS

ASBESTOS No excuse for countries failing to ban this killer mineral **p.868**

WORLD VIEW Clinical pharmacology is dead. Long live TMAP **p.869**

SHAKE UP Southpaw snails prove hard to swallow **p.870**



Response required

Blogs and online comments can provide valuable feedback on newly published research. Scientists need to adjust their mindsets to embrace and respond to these new forums for debate.

You may have seen claims that scientists at NASA have discovered a bacterium that can replace the phosphorus in its DNA with arsenic. You may have heard that this could help the hunt for aliens. You may even have heard that the ‘arsenic bacterium’ is itself an alien. What you will not have seen or heard is a detailed response from NASA and the scientists involved to online criticism of their work. In the face of worldwide attention on their paper (E. Wolfe-Simon *et al.* *Science* doi:10.1126/science.1197258; 2010), which NASA and the team deliberately courted, the researchers have stuck their heads in the digital sand.

In response to the arsenic bacterium claims, bloggers and researchers raised serious and thoughtful reservations about the paper’s methodology and findings. But the authors say that they will not engage with these critics, or with science journalists drawn to the controversy, because such discussion should be moderated in the peer-reviewed literature. Meanwhile, they are urging other scientists to work to replicate their results — a process that will take many months. “We are not going to engage in this sort of discussion,” Felisa Wolfe-Simon, the paper’s lead author and a NASA astrobiology research fellow at the US Geological Survey in Menlo Park, California, told one *Nature* reporter, “Any discourse will have to be peer-reviewed in the same manner as our paper was, and go through a vetting process so that all discussion is properly moderated.”

Purists who hold peer review as the casting vote in such debates will read her words with approval. But the problem is that Wolfe-Simon’s reticence is the polar opposite of the fanfare with which NASA trailed her discovery to the public. In an advance press advisory on 29 November, NASA trumpeted an ‘astrobiology finding that will impact the search for evidence of extraterrestrial life’. At a press conference to coincide with the paper’s publication, the authors reported a more down-to-Earth, but nonetheless radical, discovery, claiming that an arsenic-tolerant bacterium had rewritten the rules of life as we know them.

Such claims were always likely to bring intensive scrutiny, especially as many scientists think that NASA has form for making extravagant claims in the field of astrobiology. Within two days of the paper appearing, Rosie Redfield, a microbial geneticist at the University of British Columbia in Vancouver, Canada, published a long and detailed critique of what she described as the paper’s methodological shortcomings on her blog (go.nature.com/ddeejw). She was one of several researchers who used their blogs to question whether the paper’s data supported its claims. It was at this point that the authors, previously happy to promote their findings, refused to answer further questions and retreated behind the walls of peer review.

Formal peer review does give criticized authors time to think critically and carefully, and it is a good way to filter out rubbish. But in this case, much of the criticism was already coming from the researchers’ peers. And it should be remembered that peer review as conducted by journals

is itself full of differing opinions, and is not the only way to crystallize truth from such disputes. In this instance, a prompt and explicitly provisional response from the authors would have been a better approach, particularly given the way they encouraged the original attention.

Nature strongly encourages post-publication discussion on blogs and online commenting facilities as a complement to — but not a substitute for — conventional peer review. Yet it is true that so far

online commenting and blogs have generally contributed little. Of the thousands of papers published every year, only a few attract substantive comments. And, regrettably, it seems that even those meagre comments rarely spark debate: a study of medical articles in the *BMJ* last August found that few authors bothered to respond to online criticisms of their papers (P. C. Gotzsche *et al.* *Br. Med. J.* 341, c3926; 2010).

Bloggers and online commentators have an important part to play in the assessment of research findings, and many researchers’ blogs, in particular, contain better analyses of the true significance of a scientific finding or debate than is seen in much of the mainstream media. Science journalists who repeated NASA’s claims on the arsenic bacterium and did not tap into the widespread criticisms, did little to defend themselves from claims of reporting by press release. Blogging scientists, meanwhile, should remember that such informal forums do not excuse insults and casual discourtesy towards colleagues — especially those being urged to respond.

In the end, the scientific truth will prevail, as it usually does. In the meantime, researchers must accept some harsh truths about the speed and spread of digital criticism. ■

Great expectations

If Europe’s new states are to follow the research roadmap, capacity is as essential as funding.

To win a national bid to host a new European research facility is, for academics, akin to being chosen to hold the Olympic Games. The warm glow of prestige is matched by the flow of hard cash to regenerate land and communities, while the rush of the best scientific minds to the new equipment can give a major boost to national research performance.

So the Czech Republic, Hungary and Romania are rightly proud to have beaten France and the United Kingdom to jointly host the €800-million (US\$1-billion) Extreme Light Infrastructure (ELI), a

Some Key Tips

- ✓ Read many papers, and learn from good ones & bad ones.
- ✓ Write frequently: quality is everything.
- ✓ Review frequently.
- ✓ Learn to be objective about your work.
- ✓ Believe that editors/reviewers are likely trying to be objective about your work.
- ✓ Learn to expect and accept rejection.

**“There is no way to get
experience except
through experience.”**

References

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