HOW TO PUBLISH A WORLD-CLASS PAPER IN SCIENCE AND MEDICINE?

Publishing from a reviewer’s perspective

Jolanda van der Velde
Hoogleraar Cellulaire pathofysiologie van cardiomyopathieën, VUmc
Re-read your own stuff
Take time to:
carefully read background papers
write your own paper
design your Tables & Figures
& References
References

Make sure you refer accurately & to the original paper (try not to forget a major ground-braking paper)

In other words, put efforts in writing and pay attention to ‘details’
Pressure (to publish) increased during past years

H-index (Hirsch index)
Dear Dr. Jolanda van der Velden,

Warm Greetings!

International Journal of Cardiac and Pulmonary Rehabilitation which is newly started and mainly focused on publishing quality research from an eminent scholar to serve for the betterment of Scientific Community.

Now we are in the process of release inaugural issue of the journal it highly obliged if you could submit your valuable manuscript to include in this issue.

We hope you will accept our invite and support with your contribution. If you have any manuscript please kindly submit your manuscript on or before 25th May, 2018. Due date will be extended as per your feasibility.

If you are interested to join in our Editorial Board/Reviewer Board Member kindly forward you’re CV, Research interest and recent photograph.

Net Journal of Agricultural Science

Dear Colleague,

You are invited to send your paper(s) for possible publication in Net Journal of Agricultural Science (NJAS).

NJAS is a peer-reviewed open access journal which publishes high-quality articles in areas of Agriculture.

Send manuscript(s) as MS word attachment to this email. For more information, do send us a mail.
Age-dependent changes in myosin composition correlate with enhanced economy of contraction in guinea-pig hearts

J. van der Velden, A. F. M. Moorman* and G. J. M. Stienen

“...far from becoming increasingly short and trivial, published studies are **getting longer, more complex, and richer in data.**”

Fanelli. PNAS 2018

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Perturbed Length-Dependent Activation in Human Hypertrophic Cardiomyopathy with Missense Sarcomeric Gene Mutations

Vasco Sequeira¹, Paul J.M. Wijnker¹, Louise L.A.M. Nijenkamp¹, Diederik W.D. Kuster¹,³, Aref Najafi¹, E. Rosalie Witjas-Paalberends¹, Jessica A. Regan¹,⁴, Nicky Boontje¹, Folkert J. ten Cate⁵, Tjeerd Germans², Lucie Carrier⁶-⁸, Sakthivel Sadayappan³, Marjon A. van Slegtenhorst⁵, Ruud Zaremba¹, D. Brian Foster⁹, Anne M. Murphy ¹⁰, Corrado Poggesi¹¹, Cris dos Remedios¹², Ger J.M. Stienen¹,¹³, Carolyn Y. Ho¹⁴, Michelle Michels⁵, Jolanda van der Velden¹,¹⁵
Good Connections & network
Cash incentives for papers go global

China’s rewards are richest, but many nations offer bonuses for publishing in top journals

By Alison Abritis and Alison McCook, Retraction Watch
A surge of $p$-values between 0.041 and 0.049 in recent decades
Dutch thesis with 4-6 chapters

Old fashioned?
HOW TO PUBLISH A WORLD-CLASS PAPER IN SCIENCE AND MEDICINE

WHAT IS A WORLD-CLASS PAPER IN SCIENCE AND MEDICINE?

HIGHEST IMPACT FACTOR
HIGHEST IMPACT
HIGHEST (PERSONAL) INTEREST
WHAT DO YOU PREFER?

A. HIGHEST IMPACT FACTOR

B. HIGHEST IMPACT

C. HIGHEST (PERSONAL) INTEREST

WHY?
The Nobel Prize in Chemistry 2004 was awarded jointly to Aaron Ciechanover, Avram Hershko and Irwin Rose "for the discovery of ubiquitin-mediated protein degradation".
Avram Hershko
Aaron Ciechanover
Irwin Rose
What’s the basis of your paper?
#1. Clear & concise message

1. Why?
2. Why now?
3. Why you?
#1. Clear & concise message

1. Why?

.....because it has never been done before.
Harking
Hypothesis after the facts are known

Distinction
“exploratory, hypothesis-generating”

&

“confirmatory, hypothesis-testing”
Sydney Ringer

1882: Only NaCl required for heart to beat
What is striking about this publication?

discovered, that the saline solution which I had used had not been prepared with distilled water, but with pipe water supplied by the New River Water Company.
Example of “confirmatory, hypothesis-testing”

Hypotheses must be defined **before** the study begins and details of the trial registered.
Raise standards for preclinical cancer research

C. Glenn Begley and Lee M. Ellis propose how methods, publications and incentives must change if patients are to benefit.

<table>
<thead>
<tr>
<th>Journal impact factor</th>
<th>Number of articles</th>
<th>Mean number of citations of non-reproduced articles</th>
<th>Mean number of citations of reproduced articles</th>
</tr>
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<tbody>
<tr>
<td>&gt;20</td>
<td>21</td>
<td>248 (range 3–800)</td>
<td>231 (range 82–519)</td>
</tr>
<tr>
<td>5–19</td>
<td>32</td>
<td>169 (range 6–1,909)</td>
<td>13 (range 3–24)</td>
</tr>
</tbody>
</table>

Nature 2012
Believe it or not: how much can we rely on published data on potential drug targets?

Florian Prinz, Thomas Schlange and Khusru Asadullah

Nature reviews/drug discovery 2011
Is science really facing a reproducibility crisis, and do we need it to?

Daniele Fanelli

Edited by David B. Allison, Indiana University Bloomington, Bloomington, IN, and accepted by Editorial Board Member Susan T. Fiske
November 3, 2017 (received for review June 30, 2017)
EDITORIAL
Retracted Science and the Retraction Index

Infection & immunity 2011
#1. Clear & concise message

1. Why?
2. Why now?
3. Why you?
Discuss your data and communicate

Is your study truly important?
Check it with the audience (= editors/reviewers)!
Free feedback before submission

Does the audience understand your study?
Are you able to properly explain it?
Ben L. Feringa
Year of birth: 1951
Since 2003, Feringa has been Jacobus H. van ’t Hoff Distinguished Professor in Molecular Sciences at the University of Groningen (NL)
In 2008, Ben Feringa was awarded the Paracelsus Prize of the Swiss Chemical Society.
Cash incentives for papers go global

China’s rewards are richest, but many nations offer bonuses for publishing in top journals

By Alison Abdritis and Alison McCook, Retraction Watch

Publish and prosper
Authors who publish peer-reviewed papers in top-flight journals can receive hefty cash payments, depending on where they live. An informal survey—by no means comprehensive—turned up lucrative incentives paid by institutions or government agencies around the globe. For more details about each listed maximum payment, see the online version of the story: http://scim.ag/publishingrewards.

Maximum award given by institutions by country

- China: 165,000 USD
- Saudi Arabia: 19,999 USD
- Qatar: 13,733 USD
- Malaysia: 11,672 USD
- Taiwan: 9926 USD
- United Kingdom: 6447 USD
- United States: 6000 USD
- Oman: 5195 USD
- Australia: 5136 USD
- Pakistan: 4745 USD
- India: 1175 USD
- Philippines: 992 USD
- South Africa: 754 USD
“Why most research findings are false”

Fraud?
Fraud?
0.5 – 10%
“Why most research findings are false”

It seems that there are two major factors.
(1) Uncontrolled factors in the experiments
(2) Poor design and/or statistical analysis

Eisner. JMCC 2018
1. Clear & concise message

1. Why?
2. Why now?
3. Why you?
Proven expertise/methodology, which is reproducible.

Key for the methods & materials section

$100 million of research funding spent on misidentified cell line

Statistical reviewers

Be clear about n numbers

Pseudoreplication: technical replicates are confused with biological ones.
Check on materials
Submit all images
Provide extensive methods & materials section

(supplemental files)

FAIR

https://www.dtls.nl/fair-data/fair-data/
**Findable:** easy to find for both humans and computers, with metadata that facilitate searching for specific datasets,

**Accessible:** stored for long term so that they can easily be accessed and/or downloaded with well-defined license and access conditions (open access *when possible*), whether at the level of metadata, or at the level of the actual data,

**Interoperable:** ready to be combined with other datasets by humans or computers,

**Reusable:** ready to be used for future research and to be further processed using computational methods.
LOCATION, LOCATION, LOCATION → IDENTIFY THE RIGHT SPOT TO SUBMIT

HIGHEST IMPACT FACTOR

HIGHEST IMPACT

HIGHEST (PERSONAL) INTEREST
Journal scope & policies

Influence / impact / novelty / innovation
Reply to Reviewer #1

The authors greatly appreciated the thoughtful comments of the reviewer and changed the manuscript accordingly.

The authors shared the reviewer’s concern that inclusion of transplant recipients into the diastolic heart failure (DHF) group could influence the study results. The reason to include them was the frequent occurrence of DHF in transplant recipients and the easy availability of biopsy material in transplant recipients. When the DHF patients were split up into a transplant recipient group and a non-transplant recipient group there were no differences in force measurements of isolated cardiomyocytes, in extent of interstitial fibrosis or in sarcomeric protein composition. The authors therefore decided to present the DHF patients as a single group. In the revised manuscript, the inclusion of transplant recipients in the DHF group is discussed at length in a Study Limitations section of the Discussion (Page 18). Moreover, the passive cardiomyocyte force data and the collagen volume fractions of the DHF patients, who were transplant recipients, and the other DHF patients are now separately mentioned in the results section of the revised manuscript (Page 11, Line 13; Page 11, Last Line).

The authors agree with the reviewer that use of endomyocardial biopsies carries a risk of sampling error as it could potentially overlook myocardial tissue heterogeneity. The authors added a paragraph to the Discussion (Study Limitations section) considering this issue (Page 18 – Line 17). In our previous studies[Ref 14,15,42] this issue was thoroughly investigated using explanted hearts or surgical biopsies. In these studies, variability of force measurements of isolated cardiomyocytes was always less than 5% when cardiomyocytes isolated from different locations in the heart were compared with one another. This information was also added to the revised manuscript (Page 18 – Lines 17-22).

As suggested by the reviewer, all values are expressed in the revised manuscript as mean ± standard deviation.

The authors sincerely thank the reviewer for his interest in our manuscript.

Reply to Reviewer #2

The authors thank the reviewer for his appreciation of our study and implemented his suggestions in the revised manuscript.

1. As suggested by the reviewer, the authors addressed the issue of inclusion of transplant recipients in the revised manuscript. The passive cardiomyocyte force data and the collagen volume fractions of the DHF patients, who were transplant recipients, and the other DHF patients are now separately mentioned in the results section of the revised manuscript (Page 11, Line 13; Page 11, Last Line). There were no differences between both subgroups. The inclusion of transplant recipients is further discussed in a Study Limitations Section (Page 18).

2. As proposed by the reviewer, the revised manuscript refers to our previously reported values (Ref 14,15) of passive force observed in control cardiomyocytes isolated from non-failing donor hearts (Results, Page 11, Line 18). The range of passive forces (2.3 kN/m²) observed in these studies is comparable to the passive force value reported in the control group of the present study (3.5±1.7 kN/m²).

3. Standard morphological measurements of the isolated cardiomyocytes (length, width and depth) have been added to the revised manuscript (Page 7, Line 21).

4. The authors added a paragraph in the discussion section on the use of defrosted biopsies (Page 18, Last sentence – Page 19, First sentence): “To validate the use of defrosted biopsy samples, force recordings of cardiomyocytes isolated from a defrosted sample immediately after procurement were compared to force recordings of cardiomyocytes isolated from a defrosted biopsy of the same patient. These force recordings yielded identical results.”

5. As suggested by the reviewer, LV mass data of the DHF patients were included in the revised manuscript (Page 6, Line 14): “LV muscle mass (119±16 g/m²) was larger than the normal reference value (92±10 gram/m²; p=0.05) and 5 patients had evidence of significant LV hypertrophy (LV muscle mass > 125 g/m²).”

6. The authors changed the manuscript title to “Cardiomyocyte Stiffness in Diastolic Heart Failure.”

The authors greatly appreciated the constructive and encouraging comments of the reviewer.
Take home messages

✓ Be creative
✓ Be FAIR (be organized)
✓ Be patient
Dutch thesis with 4-6 chapters

Old fashioned?