**RETRACTIONS AND CORRECTIONS:**

**AUTHORS, INSTITUTIONS AND FUNDING AGENCIES - DUTIES AND RESPONSIBILITIES**

**Charlotte Haug**, MD, PhD, MSc
Editor-in-Chief, The Journal of The Norwegian Medical Association
Vice-chair of COPE (Committee of Publication Ethics)
Member of ICMJE (International Committee of Medical Journal Editors)
COPE – COMMITTEE ON PUBLICATION ETHICS

• established in 1997 by a small group of medical journal editors in the UK but now has over 9000 members worldwide from all academic fields.

• Membership is open to editors of academic journals and others interested in publication ethics.

• Several major publishers (including Elsevier, Wiley–Blackwell, Springer, Taylor & Francis, Palgrave Macmillan and Wolters Kluwer) have signed up some, if not all, of their journals as COPE members.
COPE – COMMITTEE ON PUBLICATION ETHICS

• provides advice to editors and publishers on all aspects of publication ethics and, in particular, how to handle cases of research and publication misconduct.

• provides a forum for its members to discuss individual cases. COPE does not investigate

• All COPE members are expected to follow the Code of Conduct for Journal Editors.
COPE – COMMITTEE ON PUBLICATION ETHICS

- Recommendations
- Guidelines
- Education
- Advice
COPE – COMMUNITY ON PUBLICATION ETHICS

- Recommendations
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RETRACTIONS AND CORRECTIONS

• Why?
• When?
• How?
THE BRAINMAKER

By David Cyranoski

With his knack for knowing what stem cells want, Yoshiki Sasai has grown an eye and parts of a brain in a dish.

In December 2010, Robin Ali became suddenly excited by the usually mundane task of reviewing a scientific paper. “I was running around my room, waving the manuscript,” he recalls. The paper described how a clump of embryonic stem cells had grown into a rounded goblet of retinal tissue. The structure, called an optic cup, forms the back of the eye in a growing embryo. But this one was in a dish, and videos accompanying the paper showed the structure slowly spreading and blossoming. For Ali, an ophthalmologist at University College London who has devoted two decades to repairing vision, the implications were immediate. “It was clear to me it was a landmark paper,” he says. “He has transformed the field.”

He is Yoshiki Sasai, a stem-cell biologist at the RIKEN Center for Developmental Biology in Kobe, Japan. Sasai has impressed many researchers with his green-fingered talent for coaxing neural stem cells to grow into elaborate structures. As well as the optic cup, he has cultivated the delicate tissue layers of the cerebral cortex and a rudimentary, hormone-makingminiature gland. “He is now well on the way to growing a cerebellum”—the brain structure that coordinates movement and balance. “These papers make for the most additive series of stem-cell papers in recent years,” says Luc Leyns, a stem-cell scientist at the Free University of Brussels.

Sasai’s work is more than tissue engineering; it tackles questions that have puzzled developmental biologists for decades. How do the proliferating stem cells of an embryo organize themselves seamlessly into the complex structures of the body and brain? And is tissue formation driven by a genetic program intrinsic to cells, or shaped by external cues from neighbouring tissues? By combining intuition with patient trial and error, Sasai has found that it takes a delicate
Stimulus-triggered fate conversion of somatic cells into pluri potency

Haruko Obokata, Teruhiko Wakayama, Yoshiki Sasai, Koji Kojima, Martin P. Vacanti, Hitoshi Niwa, Masayuki Yamato & Charles A. Vacanti

Nature 505, 641–647 (30 January 2014) | doi:10.1038/nature12968
Received 10 March 2013; Accepted 20 December 2013; Published online 29 January 2014

Acid bath offers easy path to stem cells

Just squeezing or bathing cells in acidic conditions can readily reprogram them into an embryonic state.

By David Strathclyde

In 2006, Japanese researchers reported a technique for creating cells that have the potential to turn into any kind of tissue. However, this method required a complicated process that involved culturing cells for weeks and growing them in special conditions. Now, researchers have developed a simpler, faster method for reprogramming cells.

The researchers used an acid bath to reprogram cells. They found that cells exposed to acidic conditions for just a few hours could be reprogrammed into an embryonic state. This is a major breakthrough in the field of stem cell research, as it could lead to new treatments for a wide range of diseases.

The researchers suggest that the acid bath method could be used to reprogram cells from patients with diseases such as diabetes or Parkinson's disease. This could lead to the development of new therapies that are specifically tailored to individual patients.

The researchers are now working to understand the molecular mechanisms behind the acid bath method. They hope to develop a more detailed understanding of how the acidic conditions reprogram cells. This could lead to the development of more effective treatments for a wide range of diseases.
Retraction: Bidirectional developmental potential in reprogrammed cells with acquired pluripotency

Haruko Obokata, Yoshiki Sasai, Hitoshi Niwa, Mitsutaka Kadota, Munazah Andrab, Nozomu Takata, Mikiko Tokoro, Yukari Terasita, Shigenobu Yonemura, Charles A. Vacanti & Teruhiko Wakayama

Nature 511, 112 (03 July 2014) | doi:10.1038/nature13599
Published online 02 July 2014 | Corrected online 23 July 2014

Papers on ‘stress-induced’ stem cells are retracted

High-profile reports claiming an easy way to create pluripotent cells were flawed, Nature announces.

David Cyranowski
02 July 2014
Stem cell tragedy: Yoshiki Sasai commits suicide

Posted on August 4, 2014

Dr. Yoshiki Sasai, former Deputy Director of the RIKEN CDB and a senior author on the STAP papers, has reportedly died from suicide.

Update: The Japan Times writes on this situation that Sasai was found hanging at RIKEN and there may have been a suicide note.

Dr. Sasai was a top scholar in the stem cell field. He published dozens of high-impact publications and was widely respected.
“SCIENCE DOES NOT EXIST UNTIL IT IS PUBLISHED”

Drummond Rennie, Deputy Editor, JAMA, in:
“The present state of Medical journals”. Lancet 1998
PUBLICATION IS INTEGRAL TO RESEARCH

Introduction to Philosophical Transactions of the Royal Society (UK), first published in 1665:

“There is nothing more necessary for promoting the improvement of science than the communication to those who apply their studies so that things are discovered or put into practice by others. It is proper to employ this Journal to gratify those whose engagement in such studies entitles them to the knowledge of science”
THE PRINCIPLES OF SCIENTIFIC COMMUNICATION

• To communicate observations to others

• To conduct further research based on those observations

• To create a scientific record
“IF I HAVE SEEN FURTHER IT IS ONLY BY STANDING ON THE SHOULDERS OF GIANTS”

Sir Isaac Newton in letter to Robert Hooke (February 15, 1676)

Researchers are individuals, but science is a collective effort
ADVANCES IN SCIENCE

• seldom made by single researcher or scientific paper

• made by many scientists reviewing and discussing the scientific findings and the scientific literature
ONE BAD APPLE....
QUALITY AND INTEGRITY OF THE SCIENTIFIC LITERATURE
QUALITY AND INTEGRITY OF THE SCIENTIFIC LITERATURE

... is dependent on high-quality research and of honest, high-quality reporting of the results.
QUALITY AND INTEGRITY OF THE SCIENTIFIC LITERATURE

- ... is equally dependent on corrections being made when necessary

New Research → Interpretation and publication

COPE COMMITTEE ON PUBLICATION ETHICS
Promoting integrity in research publication
QUALITY AND INTEGRITY OF THE SCIENTIFIC LITERATURE

• ... is equally dependent on corrections being made when necessary

New Research

New interpretation and publication

COPE
COMMITTEE ON PUBLICATION ETHICS
Promoting integrity in research publication
CVI. A Retraction, by Mr. Benjamin Wilson, F.R.S. of his former Opinion, concerning the Explication of the Leyden Experiment.

To the Royal Society.

Gentlemen,

Read June 24, 1756.

I think it necessary to retract an opinion concerning the explication of the Leyden experiment, which I troubled this Society

THE FIRST RETRACTION, JUNE 24, 1756
Gentlemen,

I think it necessary to retract an opinion concerning the explication of the Leyden experiment, which I troubled this Society with in the year 1746, and afterwards published more at large in a Treatise upon Electricity, in the year 1750; as I have lately made some farther discoveries relative to that experiment, and the minus electricity of Mr. Franklin, which shew I was then mistaken in my notions about it.

What I mean by the minus electricity of Mr. Franklin, regards the minus electricity of the Leyden experiment only, which that gentleman discovered.

I shall be very glad to have this acknowledgment made public, and to answer that end the effectually, I wish that it may have a place in the Transactions of the Royal Society.
PUBLICATIONS AND RETRACTIONS BY YEAR FROM 1977
RETRACTIONS BY JOURNAL FROM 1977 TO DATE

FROM PUBMED
GUIDELINES DEVELOPED AT THE 2ND WORLD CONFERENCE ON RESEARCH INTEGRITY IN SINGAPORE, JULY 2010:

• "Editors are accountable and should take responsibility for everything they publish”

• "Editors should guard the integrity of the published record by issuing corrections and retractions when needed and pursuing suspected or alleged research and publication misconduct”
EDITORS SHOULD RETRACT WHEN:

• they have clear evidence that the findings are unreliable, either as a result of misconduct (e.g. data fabrication) or honest error (e.g. miscalculation or experimental error)

• the findings have previously been published elsewhere without proper cross-referencing, permission or justification (i.e. cases of redundant publication)

• it constitutes plagiarism

• it reports unethical research
EDITORS SHOULD NOT RETRACT:

- to punish authors that misbehave
- if only a small part of an article reports flawed data
- when a change of authorship is required but there is no reason to doubt the validity of the findings
EXPRESSION OF CONCERN

- inconclusive evidence of research or publication misconduct by the authors
- evidence that the findings are unreliable but the authors’ institution will not investigate the case
- editors believe that an investigation related to the publication either has not been, or would not be, fair and impartial or conclusive
- an investigation is underway but a judgment will not be available for a considerable time
CORRECTIONS

• when a small portion of an otherwise reliable publication proves to be misleading (especially because of honest error)

• when the author / contributor list is incorrect (i.e. a deserving author has been omitted or somebody who does not meet authorship criteria has been included)
A NOTICE OF RETRACTION SHOULD

• be linked to the retracted article wherever possible (i.e. in all electronic versions)

• clearly identify the retracted article (e.g. by including the title and authors in the retraction heading)

• be clearly identified as a retraction (i.e. distinct from other types of correction or comment)
Retraction:

Pediatrics. 2007 Sep;120(3):698.
P less than .05: what does it really mean?
Kain ZN, MacLaren J.
Retraction of:
PMID: 17766554 [PubMed - indexed for MEDLINE]

Retracted article:

P less than .05: what does it really mean?
Kain ZN, MacLaren J.
Center for the Advancement of Perioperative Health and Department of Anesthesiology, Yale New Haven Hospital, New Haven, CT 06510, USA. zeev.kain@yale.edu
Retraction in:
PMID: 17332213 [PubMed - indexed for MEDLINE]
Corrected and republished article:


Formation of cadherin-expressing brain nuclei in diencephalic alar plate divisions.

Yoon MS, Puelles L, Redies C.

Institute of Anatomy, University Hospital Essen, Germany

Corrected and republished from:


PMID: 11183875 [PubMed - indexed for MEDLINE]

Publication Types:
Corrected and Republished Article
Research Support, Non-U.S. Gov't

Original article:


Formation of cadherin-expressing brain nuclei in diencephalic alar plate divisions.

Yoon MS, Puelles L, Redies C.

Institute of Anatomy, University Hospital Essen, Germany.

Corrected and republished in:


PMID: 10842209 [PubMed - indexed for MEDLINE]

Publication Types:
Research Support, Non-U.S. Gov't
Retraction—Non-steroidal anti-inflammatory drugs and the risk of oral cancer: a nested case-control study

We have received confirmation from Prof Anders Ekbom, who chairs the investigating commission appointed by the University of Oslo and Rikshospitalet, that the paper published by Jon Sudbo and colleagues in The Lancet contains fabricated data. This information supersedes our earlier expression of concern¹ and we now retract this article in full.


Richard Horton
The Lancet, London NW1 2BY, UK

Introduction
RETRACTIONS SHOWS UP IN PUBMED

• Search for Job Sudbø:


RESPONSIBILITIES

• Authors, editors, institutions and funders are all responsible for the integrity of scientific record

• Those who are willing to take credit when research goes well, must correct the scientific record when things go wrong
AUTHORSHIP-CRITERIA, ICMJE

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND

2. Drafting the work or revising it critically for important intellectual content; AND

3. Final approval of the version to be published; AND

4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

COPE COMMITTEE ON PUBLICATION ETHICS
Promoting integrity in research publication
AUTHORSHIP, ICMJE

• Authorship confers credit and has important academic, social, and financial implications. Authorship also implies responsibility and accountability for published work.

• The recommendations are intended to ensure that contributors who have made substantive intellectual contributions to a paper are given credit as authors, but also that contributors credited as authors understand their role in taking responsibility and being accountable for what is published.
Cooperation between research institutions and journals on research integrity cases: guidance from the Committee on Publication Ethics (COPE)

Summary

Institutions and journals both have important duties relating to research and publication misconduct. Institutions are responsible for the conduct of their researchers and for encouraging a healthy research environment. Journals are responsible for the conduct of their editors, for safeguarding the research record, and for ensuring the reliability of everything they publish. It is therefore important for institutions and journals to communicate and collaborate effectively on cases relating to research integrity. To achieve this, we make the following recommendations.
RESEARCH INSTITUTIONS SHOULD

• have a research integrity officer (or office) and publish their contact details prominently;

• inform journals about cases of proven misconduct that affect the reliability or attribution of work that they have published;

• respond to journals if they request information about issues, such as disputed authorship, misleading reporting, competing interests, or other factors, including honest errors, that could affect the reliability of published work;
RESEARCH INSTITUTIONS SHOULD

• initiate inquiries into allegations of research misconduct or unacceptable publication practice raised by journals;

• have policies supporting responsible research conduct and systems in place for investigating suspected research misconduct.
JOURNALS SHOULD

• publish the contact details of their editor-in-chief who should act as the point of contact for questions relating to research and publication integrity;

• inform institutions if they suspect misconduct by their researchers, and provide evidence to support these concerns;

• cooperate with investigations and respond to institutions’ questions about misconduct allegations;

• be prepared to issue retractions or corrections (according to the COPE guidelines on retractions) when provided with findings of misconduct arising from investigations;

• have policies for responding to institutions and other organizations that investigate cases of research misconduct.
FUNDING AGENCIES

• In a unique position – “money talks”
• Have standards
• Can withdraw funding
TO ACCEPT, REJECT, CORRECT, AND RETRACT...

• the way an editor takes responsibility for the scientific record

• retraction of published articles is the responsibility of the editor/journal who published the article

• others (authors, institutions, etc.) can ask for a retraction, but the final responsibility lies with the editor
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CVI. A Retraction, by Mr. Benjamin Wilson, F. R. S. of his former Opinion, concerning the Explication of the Leyden Experiment.

To the Royal Society.

Gentlemen,

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RETRACTIONS – 
IN PRINCIPLE AND IN PRACTICE

• important to agree on principles, but:
• cases are rarely clear-cut
• rarely agreement with and among authors, often conflict
• procrastination
• treats, lawyers
• total silence
OTHER CHALLENGES

• publishers who want to retract to avoid lawsuits

• publications without editors, article repositories etc.: who will go to the trouble to retract and correct the literature?

• many versions published: who makes sure that everything is corrected?
Liz Wager, BMJ Blog, August 11, 2014:

….However, I did praise the institution’s prompt and apparently thorough investigations. I also said that I thought it was a good thing the case was getting so much media attention, but now I am not so sure.

I remain convinced that secrecy is unhelpful, and that institutions should be open about cases of suspected and proved misconduct. Too many cases have been ignored or covered up, with fraudsters encouraged to leave quietly and seek another job, while whistleblowers are silenced.

I also believe that public debate is important, and that society needs to understand the pressures placed on researchers and the problems that occasionally arise. Serious misconduct is—fortunately—rare, but denying its existence is both naïve and unhelpful.
There has been much comment on the tragedy of his suicide; but I believe above all it should be a reminder of how important it is to handle these issues sensitively, carefully and consistently.