First They Giveth, Then They Taketh Away

The Covert World of Retracted Articles and How to Incorporate Them into Information Literacy Instruction

Joanna Thielen | Research Data and Science Librarian
Shawn McCann | Business and Informatics Librarian

Outline

1. What are retracted articles?
2. Top 5 ‘Hall of Shame’ Retracted Articles
3. Additional information about retracted articles
4. Incorporating retracted articles into information literacy sessions

What are retracted articles?

A retracted article violates a professional code of ethics

It's the 'self-correction' method of scholarly publishing

Examples of retracted articles

EARLY REPORT

Early report

Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

A J Wakefield, S H Murch, A Anthony, J Linnell, D M Casson, M Malik, M Berelowitz, A P Dhillon, M A Thomson, P Harvey, A Valentine, S E Davies, J A Walker-Smith

Summary

Background We investigated a consecutive series of children with chronic enterocolitis and regressive developmental disorder.

Methods 12 children (mean age 6 years [range 3–10], 11 boys) were referred to a paediatric gastroenterology unit with a history of normal development followed by loss of acquired skills, including language, together with diarrhoea and abdominal pain. Children underwent gastroenterological, neurological, and developmental assessment and review of developmental records. Ileocolonoscopy and biopsy sampling, magnetic-resonance imaging (MRI), electroencephalography (EEG), and lumbar puncture were done under sedation. Barium follow-through radiography was done where possible. Biochemical, haematological, and immunological profiles were examined.

Findings Onset of behavioural symptoms was associated by the parents, with measles, mumps, and rubella vaccination in eight of the 12 children, with measles infection in one child, and otitis media in another. All 12 children had intestinal abnormalities, ranging from lymphoid nodular hyperplasia to aphthoid ulceration. Histology showed patchy chronic inflammation in 11 children and reactive ileal lymphoid hyperplasia in seven, but no granulomas. Behavioural disorders included autism (nine), disintegrative psychosis (one), and possible postviral or vaccinal encephalitis (one). There were no focal neurological abnormalities and cranial and EEG tests were normal. Abnormal laboratory results were significantly raised urinary methylmalonic acid compared with age-matched controls (p=0·003), low haemoglobin in four children, and low serum IgA in four children.

Interpretation We identified associated gastrointestinal disease and developmental regression in a group of previously normal children, which was generally associated in time with possible environmental triggers.

Lancet 1998; 351: 637–41
See Commentary page

Inflammatory Bowel Disease Study Group, University Departments of Medicine and Histopathology (A J Wakefield FRCS, A Anthony MB, J Linnell PhD, A P Dhillon MRCPath, S E Davies MRCPath) **and the University Departments of Paediatric Gastroenterology** (S H Murch MB, D M Casson MRCP, M Malik MRCP, M A Thomson FRCP, J A Walker-Smith FRCP), **Child and Adolescent Psychiatry** (M Berelowitz FRCPsych), **Neurology** (P Harvey FRCP), **and Radiology** (A Valentine FRCR), **Royal Free Hospital and School of Medicine, London NW3 2QG, UK**

Correspondence to: Dr A J Wakefield

Introduction

We saw several children who, after a period of apparent normality, lost acquired skills, including communication. They all had gastrointestinal symptoms, including abdominal pain, diarrhoea, and vomiting and, in some cases, food intolerance. We describe the clinical findings, and gastrointestinal features of these children.

Patients and methods

12 children, consecutively referred to the department of paediatric gastroenterology with a history of a pervasive developmental disorder with loss of acquired skills and intestinal symptoms (chronic abdominal pain, bloating and food intolerance), were investigated. All children were admitted to the ward for a week, accompanied by their parents.

Clinical investigations

We took history, including details of immunisations and exposure to infectious diseases, and assessed the children. In 11 cases the history was obtained by the senior clinician (JW-S). Neurological and psychiatric assessments were done by consultant staff (PH, MB) with HMS-4 criteria.[4] Developmental assessments included a review of prospective developmental records from parents, health visitors, and general practitioners. Four children did not undergo psychiatric assessment in hospital; all had been assessed professionally elsewhere, so these assessments were used as the basis for their behavioural diagnosis.

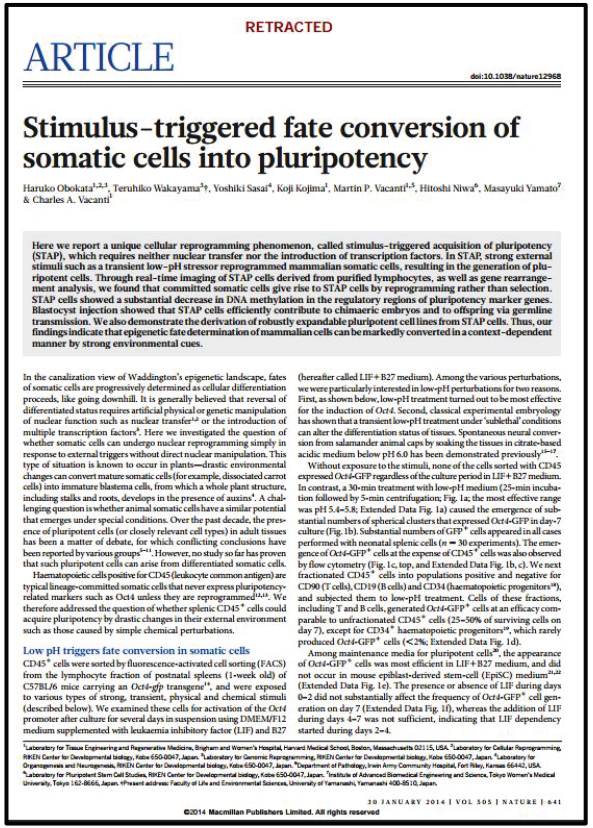
After bowel preparation, ileocolonoscopy was performed by SHM or MAT under sedation with midazolam and pethidine. Paired frozen and formalin-fixed mucosal biopsy samples were taken from the terminal ileum; ascending, transverse, descending, and sigmoid colons, and from the rectum. The procedure was recorded by video or still images, and were compared with images of the previous seven consecutive paediatric colonoscopes (four normal colonoscopes and three on children with ulcerative colitis), in which the physician reported normal appearances in the terminal ileum. Barium follow-through radiography was possible in some cases.

Also under sedation, cerebral magnetic-resonance imaging (MRI), electroencephalography (EEG) including visual, brain stem auditory, and sensory evoked potentials (where compliance made these possible), and lumbar puncture were done.

Laboratory investigations

Thyroid function, serum long-chain fatty acids, and cerebrospinal-fluid lactate were measured to exclude known causes of childhood neurodegenerative disease. Urinary methylmalonic acid was measured in random urine samples from eight of the 12 children and 14 age-matched and sex-matched normal controls, by a modification of a technique described previously.[5] Chromatograms were scanned digitally on computer, to analyse the methylmalonic-acid zones from cases and controls. Urinary methylmalonic-acid concentrations in patients and controls were compared by a two-sample *t* test. Urinary creatinine was estimated by routine spectrophotometric assay.

Children were screened for antiendomysseal antibodies and boys were screened for fragile-X if this had not been done



RETRACTED

ARTICLE

doi:10.1038/nature12968

Stimulus-triggered fate conversion of somatic cells into pluripotency

Haruko Obokata[1,2,3], Teruhiko Wakayama[3,4], Yoshiki Sasai[4], Koji Kojima[1], Martin P. Vacanti[1,5], Hitoshi Niwa[6], Masayuki Yamato[7] & Charles A. Vacanti[1]

Here we report a unique cellular reprogramming phenomenon, called stimulus-triggered acquisition of pluripotency (STAP), which requires neither nuclear transfer nor the introduction of transcription factors. In STAP, strong external stimuli such as a transient low-pH stressor reprogrammed mammalian somatic cells, resulting in the generation of pluripotent cells. Through real-time imaging of STAP cells derived from purified lymphocytes, as well as gene rearrangement analysis, we found that committed somatic cells give rise to STAP cells by reprogramming rather than selection. STAP cells showed a substantial decrease in DNA methylation in the regulatory regions of pluripotency marker genes. Blastocyst injection showed that STAP cells efficiently contribute to chimaeric embryos and to offspring via germline transmission. We also demonstrate the derivation of robustly expandable pluripotent cell lines from STAP cells. Thus, our findings indicate that epigenetic fate determination of mammalian cells can be markedly converted in a context-dependent manner by strong environmental cues.

In the canalization view of Waddington's epigenetic landscape, fates of somatic cells are progressively determined as cellular differentiation proceeds, like going downhill. It is generally believed that reversal of differentiated status requires artificial physical or genetic manipulation of nuclear function such as nuclear transfer[1,2] or the introduction of multiple transcription factors[3]. Here we investigated the question of whether somatic cells can undergo nuclear reprogramming simply in response to external triggers without direct nuclear manipulation. This type of situation is known to occur in plants—drastic environmental changes can convert mature somatic cells (for example, dissociated carrot cells) into immature blastema cells, from which a whole plant structure, including stalks and roots, develops in the presence of auxins[4]. A challenging question is whether animal somatic cells have a similar potential that emerges under special conditions. Over the past decade, the presence of pluripotent cells (or closely relevant cell types) in adult tissues has been a matter of debate, for which conflicting conclusions have been reported by various groups[5–11]. However, no study so far has proven that such pluripotent cells can arise from differentiated somatic cells.

Haematopoietic cells positive for CD45 (leukocyte common antigen) are typical lineage-committed somatic cells that never express pluripotency-related markers such as Oct4 unless they are reprogrammed[12,13]. We therefore addressed the question of whether splenic CD45$^+$ cells could acquire pluripotency by drastic changes in their external environment such as those caused by simple chemical perturbations.

Low pH triggers fate conversion in somatic cells

CD45$^+$ cells were sorted by fluorescence-activated cell sorting (FACS) from the lymphocyte fraction of postnatal spleens (1-week old) of C57BL/6 mice carrying an *Oct4-gfp* transgene[14], and were exposed to various types of strong, transient, physical and chemical stimuli (described below). We examined these cells for activation of the *Oct4* promoter after culture for several days in suspension using DMEM/F12 medium supplemented with leukaemia inhibitory factor (LIF) and B27 (hereafter called LIF+B27 medium). Among the various perturbations, we were particularly interested in low-pH perturbations for two reasons. First, as shown below, low-pH treatment turned out to be most effective for the induction of *Oct4*. Second, classical experimental embryology has shown that a transient low-pH treatment under 'sublethal' conditions can alter the differentiation status of tissues. Spontaneous neural conversion from salamander animal caps by soaking the tissues in citrate-based acidic medium below pH 6.0 has been demonstrated previously[15–17].

Without exposure to the stimuli, none of the cells sorted with CD45 expressed *Oct4*-GFP regardless of the culture period in LIF+B27 medium. In contrast, a 30-min treatment with low-pH medium (25-min incubation followed by 5-min centrifugation; Fig. 1a; the most effective range was pH 5.4–5.8; Extended Data Fig. 1a) caused the emergence of substantial numbers of spherical clusters that expressed *Oct4*-GFP in day-7 culture (Fig. 1b). Substantial numbers of GFP$^+$ cells appeared in all cases performed with neonatal splenic cells ($n = 30$ experiments). The emergence of *Oct4*-GFP$^+$ cells at the expense of CD45$^+$ cells was also observed by flow cytometry (Fig. 1c, top, and Extended Data Fig. 1b, c). We next fractionated CD45$^+$ cells into populations positive and negative for CD90 (T cells), CD19 (B cells) and CD34 (haematopoietic progenitors[18]), and subjected them to low-pH treatment. Cells of these fractions, including T and B cells, generated *Oct4*-GFP$^+$ cells at an efficacy comparable to unfractionated CD45$^+$ cells (25–50% of surviving cells on day 7), except for CD34$^+$ haematopoietic progenitors[18], which rarely produced *Oct4*-GFP$^+$ cells (<2%; Extended Data Fig. 1d).

Among maintenance media for pluripotent cells[20], the appearance of *Oct4*-GFP$^+$ cells was most efficient in LIF+B27 medium, and did not occur in mouse epiblast-derived stem-cell (EpiSC) medium[21,22] (Extended Data Fig. 1e). The presence or absence of LIF during days 0–2 did not substantially affect the frequency of *Oct4*-GFP$^+$ cell generation on day 7 (Extended Data Fig. 1f), whereas the addition of LIF during days 4–7 was not sufficient, indicating that LIF dependency started during days 2–4.

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Wakefield, Murch, et al. (1998) *The Lance*t, 351(103), 637-641; Obokata, Sasai, et al. (2014) *Nature*, 505(7485), 676-680.

Process for article retractions

More info: Committee on Publication Ethics (COPE) Retraction Guidelines

Retracted article vs. retraction notice

RETRACTED 28 MAY 2015;
EDITORIAL EXPRESSION OF CONCERN 20 MAY 2015; SEE LAST PAGES

In addition to the C1/C2 polymorphism in human transferrin, position 589 to … exclusively between … and serine across the primate … (Fig. 2E and fig. S13), a potential signature of antagonistic pleiotropy at a largely constrained position, as observed for other host-pathogen interfaces (7). Previous work has also implicated the C2 transferrin variant as a risk factor for disorders involving iron metabolism, including Alzheimer's disease; however, these associations remain controversial and appear dependent on the populations tested and interactions with other susceptibility loci (25, 26). Our findings provide a functional basis for human transferrin variation and establish an important role for nutritional immunity in recent human evolution.

Although canonical innate immunity factors have been appreciated as nodes of host-virus evolution, our work demonstrates that nutritional immunity has played a fundamental role in the survival of primate populations challenged by bacterial pathogens. *H. influenzae* and *N. meningitidis* remain a major source of morbidity and mortality in regions where vaccine coverage is poor (27, 28) and drug-resistant *N. gonorrhoeae* is developing into an urgent public health threat (29). By illuminating the battle for iron as a major driving force of host-pathogen evolution, from 40 million years of primate divergence to emerging human epidemics today, our studies reveal new reservoirs of genetic resistance to infectious diseases.

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SUPPLEMENTARY MATERIALS

www.sciencemag.org/content/346/6215/1362/suppl/DC1
Materials and Methods
Figs. S1 to S13
Tables S1 to S18
Movie S1
References (30–36)

29 July 2014; accepted 14 November 2014
10.1126/science.1259329

POLITICAL SCIENCE

When contact changes minds: An experiment on transmission of support for gay equality

Michael J. LaCour[1] and Donald P. Green[2]

Can a single conversation change minds on divisive social issues, such as same-sex marriage? A randomized placebo-controlled trial assessed whether gay ($n = 22$) or straight ($n = 19$) messengers were effective at encouraging voters ($n = 972$) to support same-sex marriage and whether attitude change persisted and spread to others in voters' social networks. The results, measured by an unrelated panel survey, show that both gay and straight canvassers produced large effects initially, but only gay canvassers' effects persisted in 3-week, 6-week, and 9-month follow-ups. We also find strong evidence of within-household transmission of opinion change, but only in the wake of conversations with gay canvassers. Contact with gay canvassers further caused substantial change in the ratings of gay men and lesbians more generally. These large, persistent, and contagious effects were confirmed by a follow-up experiment. Contact with minorities coupled with discussion of issues pertinent to them is capable of producing a cascade of opinion change.

Foremost among theories of prejudice reduction (1) is the contact hypothesis (2), which contends that outgroup hostility diminishes when people from different groups interact with one another. Although contact is credited with reducing prejudice toward a wide array of outgroups (3), in practice it is often difficult to facilitate intergroup contact of sufficient duration to dispel negative stereotypes and build empathy. For this reason, research attention has recently focused on alternative interventions that may be deployed in a more compressed time frame. Examples include brief personal contact with outgroup members during the course of a conversation (4) and the "extended contact" that occurs when one learns that a close friend has experienced positive contact with an outgroup (5). The question is whether brief or indirect contact is sufficient to produce meaningful and enduring attitude change. Recent literature reviews have been tentative on this point, noting the lack of randomized experiments that track attitudes months after the intervention (6).

Our theoretical contribution is to introduce the distinction between active and passive contact, which are posited to produce different effects in the context of a brief intergroup encounter. Whereas passive contact involves personal exposure to an outgroup member (e.g., through collaborative activity), active contact involves, in addition, communication about an issue that divides the two groups (e.g., discussion of recent communal violence). The effects of active contact doubtless depend on whether the conversation is respectful or accusatory, but in principle, active contact has the potential to both reduce hostility toward outgroups and to change attitudes on divisive issues. Our empirical contribution is the first field-based experimental demonstration of persistent attitude change in the wake of active

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LETTERS

Edited by Jennifer Sills

Editor's note

ON 20 MAY, in response to questions about the validity of the methods and data in the 2014 Report by M. J. LaCour and D. P. Green, *Science* published online an Editorial Expression of Concern on the Report. On 28 May, *Science* released online an Editorial Retraction of the paper. Articles first published online are typically published in print a few weeks after online posting. Because of the rapid chain of events in this case, both the Editorial Retraction and the Editorial Expression of Concern are printed here. The Editorial Retraction is *Science*'s final decision on this paper and supersedes the earlier Editorial Expression of Concern.

Marcia McNutt
Editor-in-Chief

Editorial retraction

SCIENCE, WITH THE concurrence of author Donald P. Green, is retracting the 12 December 2014 Report "When contact changes minds: An experiment on transmission of support for gay equality" by LaCour and Green (1).

The reasons for retracting the paper are as follows: (i) Survey incentives were misrepresented. To encourage participation in the survey, respondents were claimed to have been given cash payments to enroll, to refer family and friends, and to complete multiple surveys. In correspondence received from Michael J. LaCour's attorney, he confirmed that no such payments were made. (ii) The statement on sponsorship was false. In the Report, LaCour acknowledged funding from the Williams Institute, the Ford Foundation, and the Evelyn and Walter Haas Jr. Fund. Per correspondence from LaCour's attorney, this statement was not true.

In addition to these known problems, independent researchers have noted certain statistical irregularities in the responses (2). LaCour has not produced the original survey data from which someone else could independently confirm the validity of the reported findings.

Michael J. LaCour does not agree to this Retraction.

Marcia McNutt
Editor-in-Chief

Antibiotics have been found in pork in China.

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Published online 28 May 2015
DOI: 10.1126/science.aac6638

Editorial expression of concern

IN THE 12 December 2014 issue, *Science* published the Report "When contact changes minds: An experiment on transmission of support for gay equality" by Michael J. LaCour and Donald P. Green (1). On 19 May 2015, author Green requested that *Science* retract the paper because of the unavailability of raw data and other irregularities that have emerged in the published paper. *Science* is urgently working toward the appropriate resolution, while ensuring that a fair process is followed. In the meantime, *Science* is publishing this Editorial Expression of Concern to alert our readers to the fact that serious questions have been raised about the validity of findings in the LaCour and Green paper.

Marcia McNutt
Editor-in-Chief

REFERENCE

1. M. J. LaCour, D. P. Green, *Science* 346, 1366 (2014).

Published online 20 May 2015
DOI: 10.1126/science.aac6184

Antibiotics crisis in China

THE EMERGENCE OF antibiotic-resistant pathogens has become a global public health crisis. A new and serious crisis is emerging in China: Antibiotics have polluted the food and drinking water supply. Antibiotics are detectable in the residential tap water of Chinese homes (1). Urban water supplies present multiclass antibiotic residues, including those of fluoroquinolones (broad-spectrum antibiotics whose use is discouraged except in treating serious bacterial infections). Antibiotic residues have been found in foods, including pork (2), aquatic products (3), vegetables (4), and milk (5). For instance, the Shanghai Food and Drug Administration found 7.7% of aquatic products to be unacceptable for human consumption because of antibiotic residues (6). Antibiotic residues are also found in vegetable samples, especially those grown in manure-amended soil (7). In one study, 47% of raw milk samples from 10 provinces of China were found positive for antibiotic residues (5).

At least three factors are responsible for this new antibiotic-related crisis in China. First, the country is the largest producer and consumer of antibiotics, reaching about 210,000 tons of antibiotics annually (8). Antibiotics are misused and discharged into the environment, where they pollute crop-producing soil and groundwater and rivers that are sources of drinking water, such as the Yangtze River (7). Second, an important source of antibiotics in food is antibiotic residues present in the agricultural and livestock industries (9). In China, about 97,000 tons of antibiotics [46% of all antibiotics used in the country (8)] are used in its livestock to prevent disease and improve production (8). In addition to residues present in livestock food products, misuse of antibiotics results in 29,000 to 87,000 tons of antibiotic residues annually in livestock waste, which is used as manure soil amendment for crop production, thereby causing contamination of agricultural products with antibiotics (10). Third, a main reason for this emerging crisis is the lack of effective supervision over the production, use, and disposal of antibiotics. For instance, one of

M. J. LaCour, D. P. Green (2014), *Science* 346(6215), 1366-1369; M. McNutt (2015), Science 348(6239), 1100.

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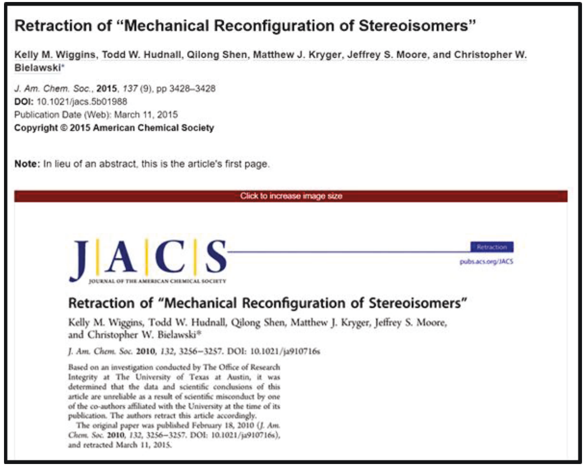

Retraction of "Mechanical Reconfiguration of Stereoisomers"

Kelly M. Wiggins, Todd W. Hudnall, Qilong Shen, Matthew J. Kryger, Jeffrey S. Moore, and Christopher W. Bielawski*

J. Am. Chem. Soc., **2015**, *137* (9), pp 3428–3428
DOI: 10.1021/jacs.5b01988
Publication Date (Web): March 11, 2015
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Retraction
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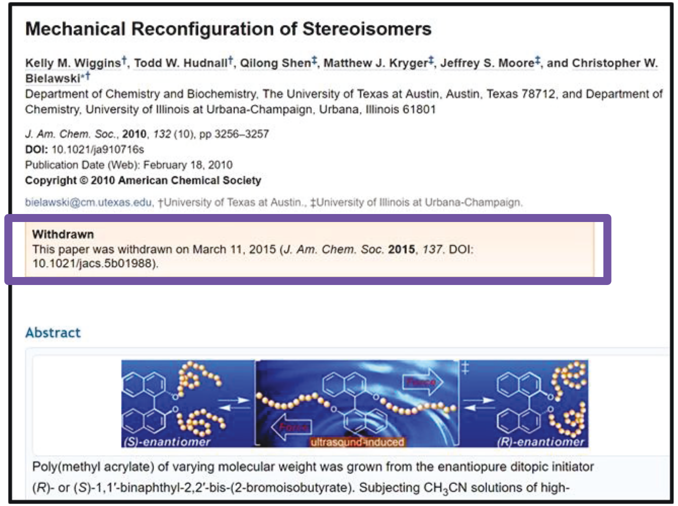
Retraction of "Mechanical Reconfiguration of Stereoisomers"

Kelly M. Wiggins, Todd W. Hudnall, Qilong Shen, Matthew J. Kryger, Jeffrey S. Moore, and Christopher W. Bielawski*

J. Am. Chem. Soc. **2010**, *132*, 3256–3257. DOI: 10.1021/ja910716s

Based on an investigation conducted by The Office of Research Integrity at The University of Texas at Austin, it was determined that the data and scientific conclusions of this article are unreliable as a result of scientific misconduct by one of the co-authors affiliated with the University at the time of its publication. The authors retract this article accordingly.
The original paper was published February 18, 2010 (*J. Am. Chem. Soc.* **2010**, *132*, 3256–3257. DOI: 10.1021/ja910716s), and retracted March 11, 2015.

Retraction notice



Mechanical Reconfiguration of Stereoisomers

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Withdrawn
This paper was withdrawn on March 11, 2015 (*J. Am. Chem. Soc.* **2015**, *137*. DOI: 10.1021/jacs.5b01988).

Abstract

(S)-enantiomer
ultrasound-induced
(R)-enantiomer
Force

Poly(methyl acrylate) of varying molecular weight was grown from the enantiopure ditopic initiator (*R*)- or (*S*)-1,1′-binaphthyl-2,2′-bis-(2-bromoisobutyrate). Subjecting CH_3CN solutions of high-

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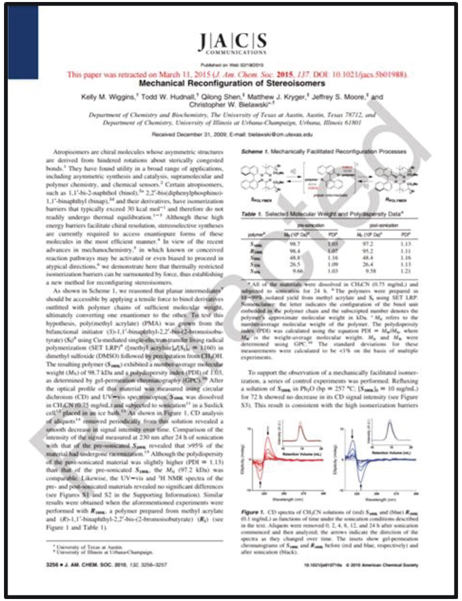


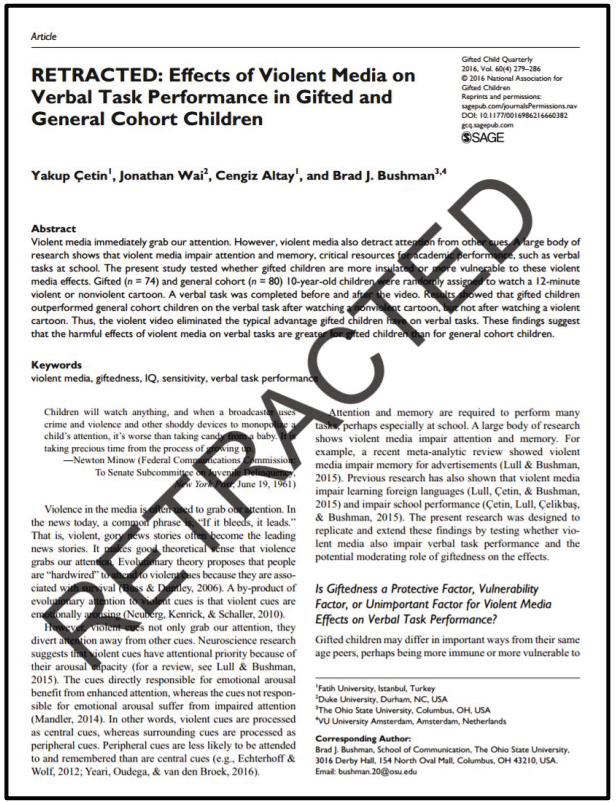
Full text of retracted article

Now it's your turn!

What are some reasons you think would cause an article to be retracted?

Top 5 ‘Hall of Shame’ Retracted Articles

5. Can’t contact author who collected the data



Article

RETRACTED: Effects of Violent Media on Verbal Task Performance in Gifted and General Cohort Children

Gifted Child Quarterly
2016, Vol. 60(4) 279–286

DOI: 10.1177/0016986216660382
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Yakup Çetin[1], Jonathan Wai[2], Cengiz Altay[1], and Brad J. Bushman[3,4]

Abstract
Violent media immediately grab our attention. However, violent media also detract attention from other cues. A large body of research shows that violent media impair attention and memory, critical resources for academic performance, such as verbal tasks at school. The present study tested whether gifted children are more insulated or more vulnerable to these violent media effects. Gifted (n = 74) and general cohort (n = 80) 10-year-old children were randomly assigned to watch a 12-minute violent or nonviolent cartoon. A verbal task was completed before and after the video. Results showed that gifted children outperformed general cohort children on the verbal task after watching a nonviolent cartoon, but not after watching a violent cartoon. Thus, the violent video eliminated the typical advantage gifted children have on verbal tasks. These findings suggest that the harmful effects of violent media on verbal tasks are greater for gifted children than for general cohort children.

Keywords
violent media, giftedness, IQ, sensitivity, verbal task performance

RETRACTED

Children will watch anything, and when a broadcaster uses crime and violence and other shoddy devices to monopolize a child's attention, it's worse than taking candy from a baby. It's taking precious time from the process of growing up.
—Newton Minow (Federal Communications Commission) To Senate Subcommittee on Juvenile Delinquency, *New York Times*, June 19, 1961)

Violence in the media is often said to grab our attention. In the news today, a common phrase is "If it bleeds, it leads." That is, violent, gory news stories often become the leading news stories. It makes good theoretical sense that violence grabs our attention. Evolutionary theory proposes that people are "hardwired" to attend to violent cues because they are associated with survival (Buss & Duntley, 2006). A by-product of evolutionary attention to violent cues is that violent cues are emotionally arousing (Neuberg, Kenrick, & Schaller, 2010).

However, violent cues not only grab our attention, they divert attention away from other cues. Neuroscience research suggests that violent cues have attentional priority because of their arousal capacity (for a review, see Lull & Bushman, 2015). The cues directly responsible for emotional arousal benefit from enhanced attention, whereas the cues not responsible for emotional arousal suffer from impaired attention (Mandler, 2014). In other words, violent cues are processed as central cues, whereas surrounding cues are processed as peripheral cues. Peripheral cues are less likely to be attended to and remembered than are central cues (e.g., Echterhoff & Wolf, 2012; Yeari, Oudega, & van den Broek, 2016).

Attention and memory are required to perform many tasks, perhaps especially at school. A large body of research shows violent media impair attention and memory. For example, a recent meta-analytic review showed violent media impair memory for advertisements (Lull & Bushman, 2015). Previous research has also shown that violent media impair learning foreign languages (Lull, Çetin, & Bushman, 2015) and impair school performance (Çetin, Lull, Çelikbaş, & Bushman, 2015). The present research was designed to replicate and extend these findings by testing whether violent media also impair verbal task performance and the potential moderating role of giftedness on the effects.

Is Giftedness a Protective Factor, Vulnerability Factor, or Unimportant Factor for Violent Media Effects on Verbal Task Performance?

Gifted children may differ in important ways from their same age peers, perhaps being more immune or more vulnerable to

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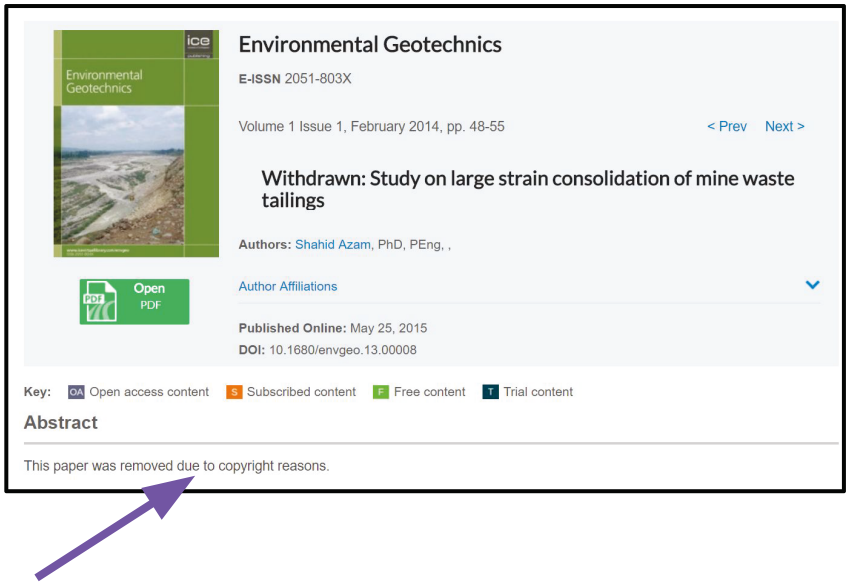
Email: bushman.20@osu.edu

Retraction notice: “Unfortunately, the data collection procedures could not be verified because the **author who collected the data (Cengiz Altay) could not be contacted following the attempted coup in Turkey.”**

Çetin, Y., Wai, J., et al. (2016). *Gifted Child Quarterly*, *60*(4), 279-287.

4. Professor plagiarizes his student's thesis

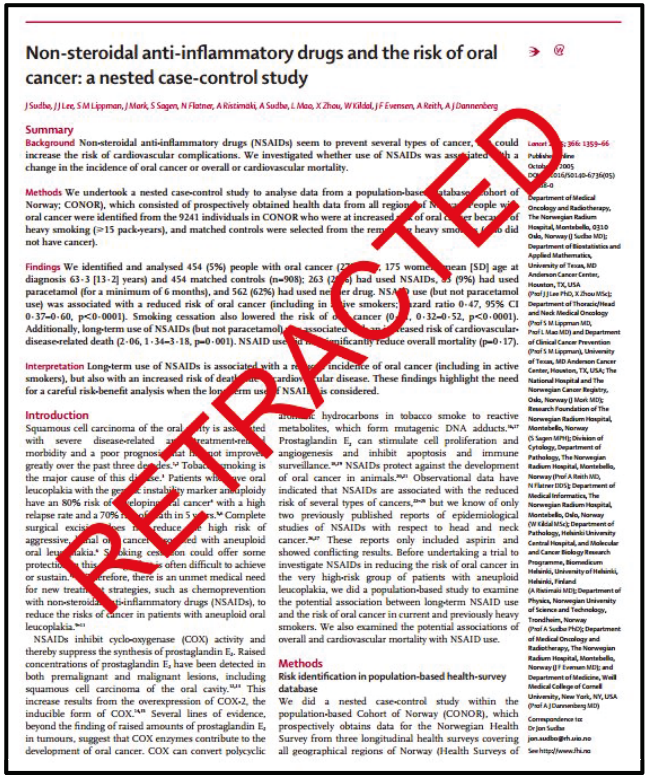
- **Professional organization's report:** Professor "failed to acknowledge the contribution of [co-author and student] to the submitted academic paper."
- **Professor's defense:** I wrote part of the student's thesis



Azam. (2014) *Environmental Geotechnics*, 1(1), 48-55.
News article: http://www.cbc.ca/news/canada/saskatchewan/u-of-r-engineering-professor-found-guilty-of-plagiarizing-student-s-work-1.4033447

3. First author fabricated data from 900+ patients

- First author “faked everything: names, diagnosis, gender, weight, age, drug use.”
- All co-authors were completely unaware
- Ultimately, first author had several articles retracted and his doctorate in medicine revoked



Non-steroidal anti-inflammatory drugs and the risk of oral cancer: a nested case-control study

J Sudbo, J J Lee, S M Lippman, J Mork, S Sagen, N Flatner, A Kristiansen, A Sudbo, L Mao, X Zhou, W Kildal, J F Evensen, A Reith, A J Dannenberg

Summary

Background Non-steroidal anti-inflammatory drugs (NSAIDs) seem to prevent several types of cancer, but could increase the risk of cardiovascular complications. We investigated whether use of NSAIDs was associated with a change in the incidence of oral cancer or overall or cardiovascular mortality.

Methods We undertook a nested case-control study to analyse data from a population-based database (cohort of Norway; CONOR), which consisted of prospectively obtained health data from all regions of Norway. People with oral cancer were identified from the 9241 individuals in CONOR who were at increased risk of oral cancer because of heavy smoking (≥15 pack-years), and matched controls were selected from the remainder of the heavy smokers who did not have cancer).

Findings We identified and analysed 454 (5%) people with oral cancer (279 men, 175 women; mean [SD] age at diagnosis 63·3 [13·2] years) and 454 matched controls (n=908); 263 (29%) had used NSAIDs, 85 (9%) had used paracetamol (for a minimum of 6 months), and 562 (62%) had used neither drug. NSAID use (but not paracetamol use) was associated with a reduced risk of oral cancer (including in active smokers; hazard ratio 0·47, 95% CI 0·37–0·60, p<0·0001). Smoking cessation also lowered the risk of oral cancer (0·61, 0·32–0·52, p<0·0001). Additionally, long-term use of NSAIDs (but not paracetamol) was associated with decreased risk of cardiovascular-disease-related death (2·06, 1·34–3·18, p=0·001). NSAID use did not significantly reduce overall mortality (p=0·17).

Interpretation Long-term use of NSAIDs is associated with a reduced incidence of oral cancer (including in active smokers), but also with an increased risk of death from cardiovascular disease. These findings highlight the need for a careful risk-benefit analysis when the long-term use of NSAIDs is considered.

Introduction

Squamous cell carcinoma of the oral cavity is associated with severe disease-related and treatment-related morbidity and a poor prognosis that has not improved greatly over the past three decades.[1,2] Tobacco smoking is the major cause of this disease.[3] Patients with severe oral leucoplakia with the greatest genetic instability marker aneuploidy have an 80% risk of developing oral cancer[4] with a high relapse rate and a 70% risk of death in 5 years.[5,6] Complete surgical excision does not reduce the high risk of aggressive clonal oral cancer associated with aneuploid oral leucoplakia.[4] Smoking cessation could offer some protection but this is often difficult to achieve or sustain.[7] Therefore, there is an unmet medical need for new treatment strategies, such as chemoprevention with non-steroidal anti-inflammatory drugs (NSAIDs), to reduce the risks of cancer in patients with aneuploid oral leucoplakia.[8–11]

NSAIDs inhibit cyclo-oxygenase (COX) activity and thereby suppress the synthesis of prostaglandin E_2. Raised concentrations of prostaglandin E_2 have been detected in both premalignant and malignant lesions, including squamous cell carcinoma of the oral cavity.[12,13] This increase results from the overexpression of COX-2, the inducible form of COX.[14,15] Several lines of evidence, beyond the finding of raised amounts of prostaglandin E_2 in tumours, suggest that COX enzymes contribute to the development of oral cancer. COX can convert polycyclic aromatic hydrocarbons in tobacco smoke to reactive metabolites, which form mutagenic DNA adducts.[16,17] Prostaglandin E_2 can stimulate cell proliferation and angiogenesis and inhibit apoptosis and immune surveillance.[18,19] NSAIDs protect against the development of oral cancer in animals.[20,21] Observational data have indicated that NSAIDs are associated with the reduced risk of several types of cancers,[22–26] but we know of only two previously published reports of epidemiological studies of NSAIDs with respect to head and neck cancer.[8,27] These reports only included aspirin and showed conflicting results. Before undertaking a trial to investigate NSAIDs in reducing the risk of oral cancer in the very high-risk group of patients with aneuploid leucoplakia, we did a population-based study to examine the potential association between long-term NSAID use and the risk of oral cancer in current and previously heavy smokers. We also examined the potential associations of overall and cardiovascular mortality with NSAID use.

Methods

Risk identification in population-based health-survey database

We did a nested case-control study within the population-based Cohort of Norway (CONOR), which prospectively obtains data for the Norwegian Health Survey from three longitudinal health surveys covering all geographical regions of Norway (Health Surveys of

RETRACTED

Sudbo, Lee, et al. (2005) *The Lancet*, 366(9494), 1359-1366-1366

News article: http://www.the-scientist.com/?articles.view/articleNo/23607/title/Lancet-study-faked/

2. Article contains personally identifiable info

PDF

Text size Share Go To

BJP British Journal of Psychotherapy
From Freud's legacy to psychoanalytic and Jungian practice today

Explore this journal >

Retraction

RETRACTION: Mitrani, J., On Separating One from the Other: Images of a Developing Self

First published: 21 November 2016 Full publication history

DOI: 10.1111/bjp.12278 View/save citation

Cited by (CrossRef): 0 articles Check for updates Citation tools

Am score 10

View issue TOC
Volume 33, Issue 1
February 2017
Page 141

This article corrects:

Retracted: On Separating One from the Other: Images of a Developing Self
Volume 32, Issue 3, 321–337, Article first published online: 15 July 2016

Abstract

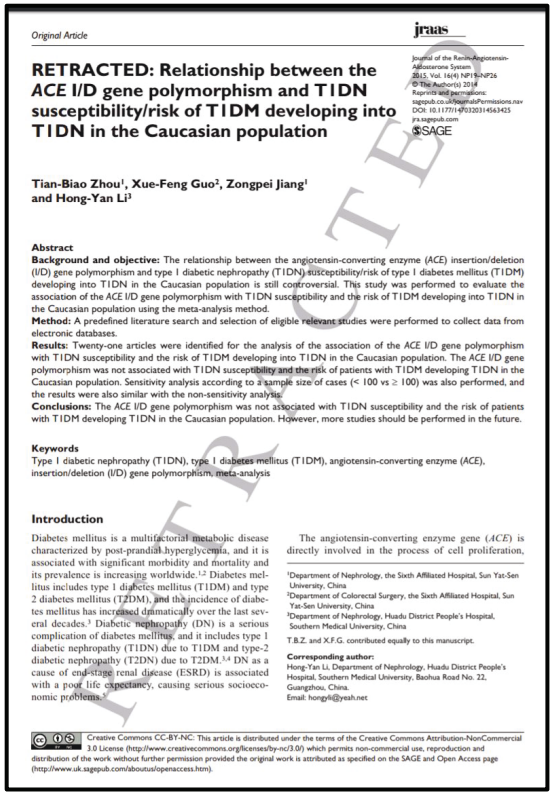
The above article, published in the *British Journal of Psychotherapy* online on the 15th July, and in print on 22nd July, 2016 on Wiley Online Library, has been withdrawn by agreement between the journal's Editor-in-Chief, Ann Scott, and Wiley. This action has been agreed upon by the author, the editor and the publisher in response to their joint concern that certain sensitive clinical material regarding the patient discussed in the article may inadvertently result in the compromise of the patient's privacy.

REFERENCE

Mitrani, J. (2016) On separating one from the other: Images of a developing self. *British Journal of Psychotherapy* **32**(3). DOI: 10.1111/bjp.12227.

Retraction notice: "...certain sensitive clinical material regarding the patient discussed in the article may **inadvertently result in the compromise of the patient's privacy**."

1. Fake reviewer contact information



Original Article

jraas

Journal of the Renin-Angiotensin-Aldosterone System
2015, Vol. 16(4) NP19–NP26
© The Author(s) 2014
Reprints and permissions:
sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/1470320314563425
jra.sagepub.com
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RETRACTED: Relationship between the *ACE* I/D gene polymorphism and T1DN susceptibility/risk of T1DM developing into T1DN in the Caucasian population

Tian-Biao Zhou[1], Xue-Feng Guo[2], Zongpei Jiang[1] and Hong-Yan Li[3]

Abstract

Background and objective: The relationship between the angiotensin-converting enzyme (*ACE*) insertion/deletion (I/D) gene polymorphism and type 1 diabetic nephropathy (T1DN) susceptibility/risk of type 1 diabetes mellitus (T1DM) developing into T1DN in the Caucasian population is still controversial. This study was performed to evaluate the association of the *ACE* I/D gene polymorphism with T1DN susceptibility and the risk of T1DM developing into T1DN in the Caucasian population using the meta-analysis method.

Method: A predefined literature search and selection of eligible relevant studies were performed to collect data from electronic databases.

Results: Twenty-one articles were identified for the analysis of the association of the *ACE* I/D gene polymorphism with T1DN susceptibility and the risk of T1DM developing into T1DN in the Caucasian population. The *ACE* I/D gene polymorphism was not associated with T1DN susceptibility and the risk of patients with T1DM developing T1DN in the Caucasian population. Sensitivity analysis according to a sample size of cases (< 100 vs ≥ 100) was also performed, and the results were also similar with the non-sensitivity analysis.

Conclusions: The *ACE* I/D gene polymorphism was not associated with T1DN susceptibility and the risk of patients with T1DM developing T1DN in the Caucasian population. However, more studies should be performed in the future.

Keywords

Type 1 diabetic nephropathy (T1DN), type 1 diabetes mellitus (T1DM), angiotensin-converting enzyme (*ACE*), insertion/deletion (I/D) gene polymorphism, meta-analysis

Introduction

Diabetes mellitus is a multifactorial metabolic disease characterized by post-prandial hyperglycemia, and it is associated with significant morbidity and mortality and its prevalence is increasing worldwide.[1,2] Diabetes mellitus includes type 1 diabetes mellitus (T1DM) and type 2 diabetes mellitus (T2DM), and the incidence of diabetes mellitus has increased dramatically over the last several decades.[3] Diabetic nephropathy (DN) is a serious complication of diabetes mellitus, and it includes type 1 diabetic nephropathy (T1DN) due to T1DM and type-2 diabetic nephropathy (T2DN) due to T2DM.[3,4] DN as a cause of end-stage renal disease (ESRD) is associated with a poor life expectancy, causing serious socioeconomic problems.[5]

The angiotensin-converting enzyme gene (*ACE*) is directly involved in the process of cell proliferation,

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T.B.Z. and X.F.G. contributed equally to this manuscript.

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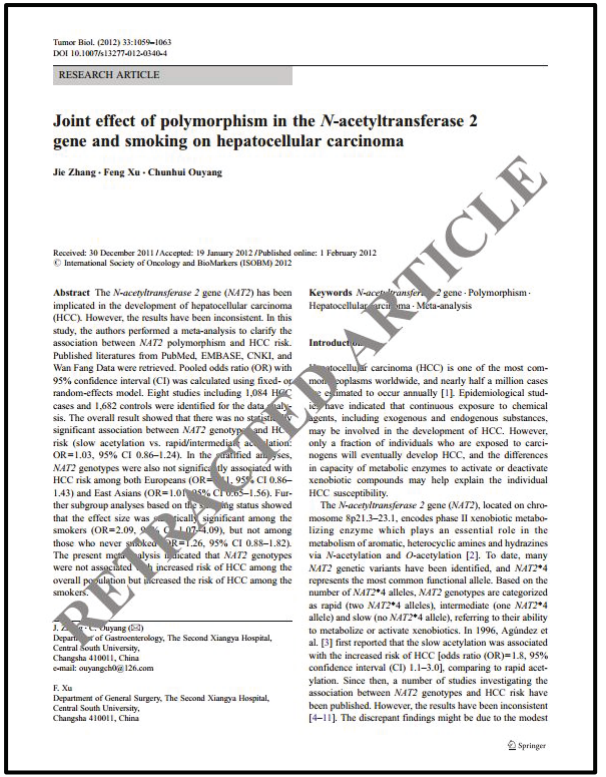
Hong-Yan Li, Department of Nephrology, Huadu District People's Hospital, Southern Medical University, Baohua Road No. 22, Guangzhou, China.
Email: hongyli@yeah.net

- Retraction notice: “submitting authors... had supplied **fabricated contact details for their nominated reviewers**”
- Total of 6 articles were retracted

Zhou, Guo, Jiang and Li. (2015). *Journal of Renin-Angiotensin-Aldosterone System*, 16(4), NP19-NP26.

And it gets worse….

- Fake reviewer contact info. caused **107** articles to be retracted in *Tumor Biology* (April 2017)
- In the past year, this journal has **retracted a total of 132 articles**
- An estimated **15%** of all article retractions between 2012-15 were caused by fake peer reviews



Tumor Biol. (2012) 33:1059–1063
DOI 10.1007/s13277-012-0340-4

RESEARCH ARTICLE

Joint effect of polymorphism in the *N*-acetyltransferase 2 gene and smoking on hepatocellular carcinoma

Jie Zhang · Feng Xu · Chunhui Ouyang

Received: 30 December 2011 / Accepted: 19 January 2012 / Published online: 1 February 2012
© International Society of Oncology and BioMarkers (ISOBM) 2012

Abstract The *N-acetyltransferase 2* gene (*NAT2*) has been implicated in the development of hepatocellular carcinoma (HCC). However, the results have been inconsistent. In this study, the authors performed a meta-analysis to clarify the association between *NAT2* polymorphism and HCC risk. Published literatures from PubMed, EMBASE, CNKI, and Wan Fang Data were retrieved. Pooled odds ratio (OR) with 95% confidence interval (CI) was calculated using fixed- or random-effects model. Eight studies including 1,084 HCC cases and 1,682 controls were identified for the data analysis. The overall result showed that there was no statistically significant association between *NAT2* genotypes and HCC risk (slow acetylation vs. rapid/intermediate acetylation: OR=1.03, 95% CI 0.86–1.24). In the stratified analyses, *NAT2* genotypes were also not significantly associated with HCC risk among both Europeans (OR=1.11, 95% CI 0.86–1.43) and East Asians (OR=1.01, 95% CI 0.65–1.56). Further subgroup analyses based on the smoking status showed that the effect size was statistically significant among the smokers (OR=2.09, 95% CI 1.07–4.09), but not among those who never smoked (OR=1.26, 95% CI 0.88–1.82). The present meta-analysis indicated that *NAT2* genotypes were not associated with increased risk of HCC among the overall population but increased the risk of HCC among the smokers.

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Keywords *N-acetyltransferase 2* gene · Polymorphism · Hepatocellular carcinoma · Meta-analysis

Introduction

Hepatocellular carcinoma (HCC) is one of the most common neoplasms worldwide, and nearly half a million cases are estimated to occur annually [1]. Epidemiological studies have indicated that continuous exposure to chemical agents, including exogenous and endogenous substances, may be involved in the development of HCC. However, only a fraction of individuals who are exposed to carcinogens will eventually develop HCC, and the differences in capacity of metabolic enzymes to activate or deactivate xenobiotic compounds may help explain the individual HCC susceptibility.

The *N-acetyltransferase 2* gene (*NAT2*), located on chromosome 8p21.3–23.1, encodes phase II xenobiotic metabolizing enzyme which plays an essential role in the metabolism of aromatic, heterocyclic amines and hydrazines via *N*-acetylation and *O*-acetylation [2]. To date, many *NAT2* genetic variants have been identified, and *NAT2**4 represents the most common functional allele. Based on the number of *NAT2**4 alleles, *NAT2* genotypes are categorized as rapid (two *NAT2**4 alleles), intermediate (one *NAT2**4 allele) and slow (no *NAT2**4 allele), referring to their ability to metabolize or activate xenobiotics. In 1996, Agúndez et al. [3] first reported that the slow acetylation was associated with the increased risk of HCC [odds ratio (OR)=1.8, 95% confidence interval (CI) 1.1–3.0], comparing to rapid acetylation. Since then, a number of studies investigating the association between *NAT2* genotypes and HCC risk have been published. However, the results have been inconsistent [4–11]. The discrepant findings might be due to the modest

Springer

Retraction Watch Articles: Retraction of 107 articles in *Tumor Biology* (2017); Retraction of 25 articles in *Tumor Biology* (2016)

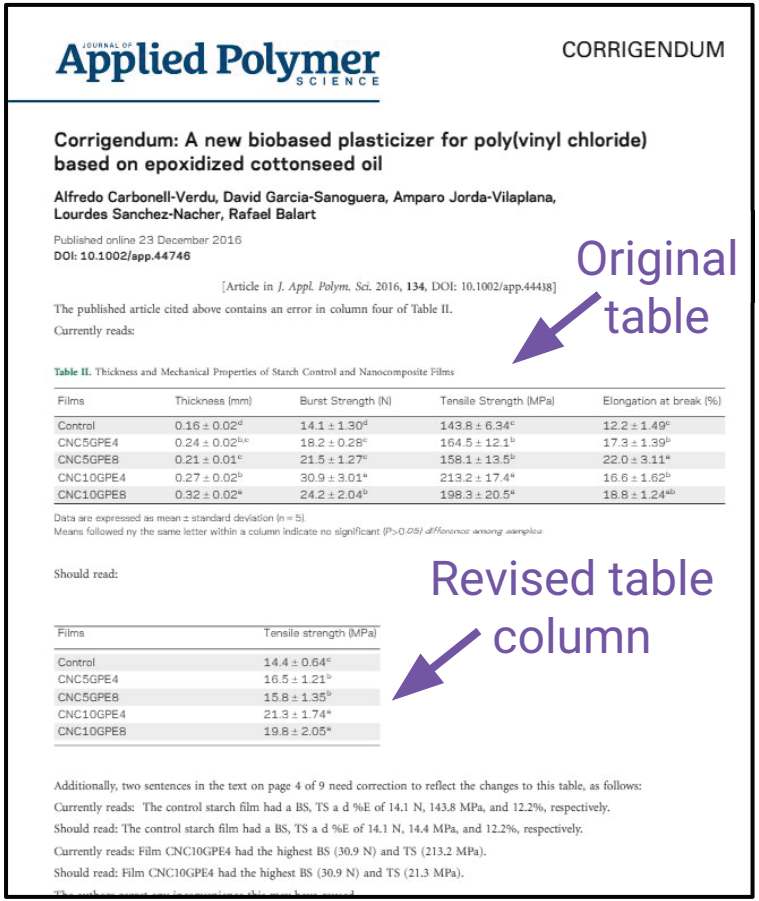
Retraction Watch (retractionwatch.com)

- Independent blog started by two medical journal journalists
  - “Tracking retractions and related issues in scholarly publications”
- Analysis, commentary, etc.
  - Updated daily
  - Great links to other resources!
- Search by author, country, journal, institution, publisher, discipline, and reason for retraction

Additional interesting information about retracted articles

Other types of notifications

- **Correction:** *small* part of article is flawed, usually due to author error
  - Also called Corrigendum
  - Example: Small numerical error in table
- **Erratum:** production error (publisher error)
  - Example: Author's name is misspelled
- **Removal:** legal reasons for removal



Journal of Applied Polymer Science

CORRIGENDUM

Corrigendum: A new biobased plasticizer for poly(vinyl chloride) based on epoxidized cottonseed oil

Alfredo Carbonell-Verdu, David Garcia-Sanoguera, Amparo Jorda-Vilaplana, Lourdes Sanchez-Nacher, Rafael Balart

Published online 23 December 2016
DOI: 10.1002/app.44746

[Article in *J. Appl. Polym. Sci.* 2016, **134**, DOI: 10.1002/app.44438]

The published article cited above contains an error in column four of Table II.

Currently reads:

Original table

Table II. Thickness and Mechanical Properties of Starch Control and Nanocomposite Films

Films	Thickness (mm)	Burst Strength (N)	Tensile Strength (MPa)	Elongation at break (%)
Control	0.16 ± 0.02^{d}	14.1 ± 1.30^{d}	143.8 ± 6.34^{c}	12.2 ± 1.49^{c}
CNC5GPE4	$0.24 \pm 0.02^{b,c}$	18.2 ± 0.28^{c}	164.5 ± 12.1^{b}	17.3 ± 1.39^{b}
CNC5GPE8	0.21 ± 0.01^{c}	21.5 ± 1.27^{c}	158.1 ± 13.5^{b}	22.0 ± 3.11^{a}
CNC10GPE4	0.27 ± 0.02^{b}	30.9 ± 3.01^{a}	213.2 ± 17.4^{a}	16.6 ± 1.62^{b}
CNC10GPE8	0.32 ± 0.02^{a}	24.2 ± 2.04^{b}	198.3 ± 20.5^{a}	18.8 ± 1.24^{ab}

Data are expressed as mean ± standard deviation ($n = 5$).
Means followed ny the same letter within a column indicate no significant ($P > 0.05$) difference among samples.

Should read:

Revised table column

Films	Tensile strength (MPa)
Control	14.4 ± 0.64^{c}
CNC5GPE4	16.5 ± 1.21^{b}
CNC5GPE8	15.8 ± 1.35^{b}
CNC10GPE4	21.3 ± 1.74^{a}
CNC10GPE8	19.8 ± 2.05^{a}

Additionally, two sentences in the text on page 4 of 9 need correction to reflect the changes to this table, as follows:

Currently reads: The control starch film had a BS, TS a d %E of 14.1 N, 143.8 MPa, and 12.2%, respectively.

Should read: The control starch film had a BS, TS a d %E of 14.1 N, 14.4 MPa, and 12.2%, respectively.

Currently reads: Film CNC10GPE4 had the highest BS (30.9 N) and TS (213.2 MPa).

Should read: Film CNC10GPE4 had the highest BS (30.9 N) and TS (21.3 MPa).

Carbonell-Verdu, Garcia-Sanoguera, et al. (2016) *Journal of Applied Polymer Science* 133(34) 43924.
Committee on Publication Ethics Retraction Guidelines http://publicationethics.org/files/retraction%20guidelines.pdf

Journals with higher impact factors (IF) have higher numbers of retracted articles

Why?

1. Articles published in these journals receive **more scrutiny**
2. High IF journals are more likely to have **clear policies about misconduct**
3. Publishing in a higher IF journal provides **more incentives** to ‘cut corners’

Fanielli, D. (2013) *PLos Medicine,* 10(12), e1001563.

The social sciences are not immune to article retractions

Diederick Stapel

- Dutch social psychologist
- Fabricated data throughout research career
- Co-authors unaware of misconduct
- 50+ articles retracted and surrendered his doctorate

http://www.chronicle.com/article/can-a-longtime-fraud-help-fix/231061

The humanities are not immune to article retractions

Mustapha Marrouchi

- English literature professor
- 20+ articles retracted due to significant plagiarism
- Fired from University of Nevada - Las Vegas

http://www.chronicle.com/article/Anatomy-of-a-Serial-Plagiarism/148437

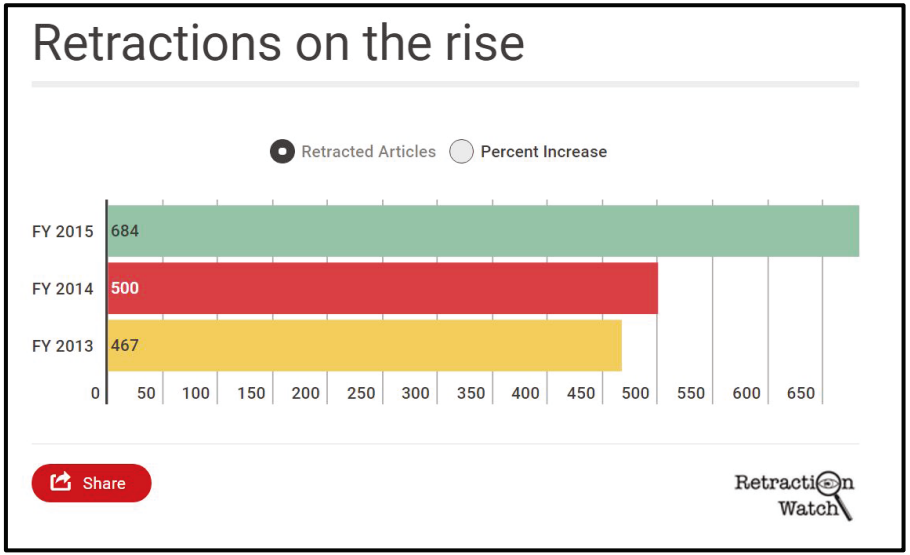
Each publisher/journal has different retraction policies and procedures

Publisher policies:

- Elsevier
- Wiley
- Springer
- Taylor & Francis

Article retractions are on the rise but still relatively rare

- ~ 2 million articles published annually
- At least 1 article retracted every day
- Estimate: > 0.1% of articles are retracted every year



Data from: [MEDLINE Key Indicators]

Marcus and Oransky. (2015) *NY Times* What's Behind Big Science Frauds?

Locating retracted articles in scholarly databases

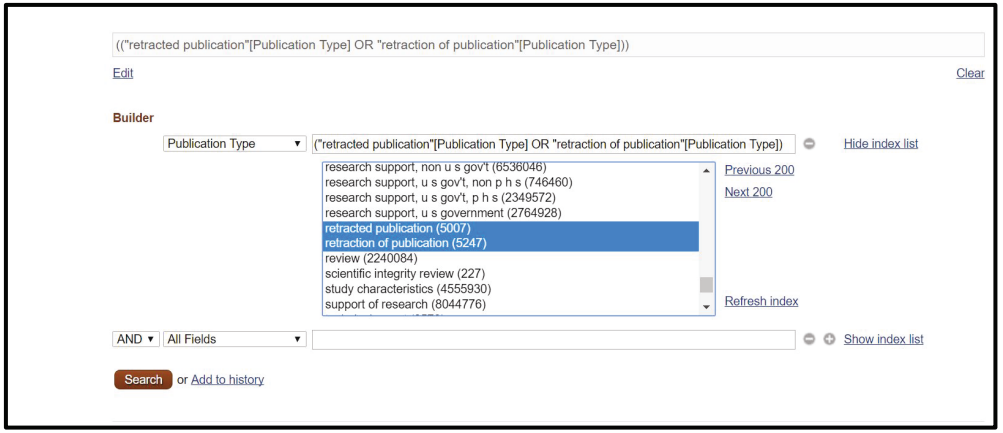
Suggested search terms

- “Retracted article”
- Retraction
- “Expression of concern”

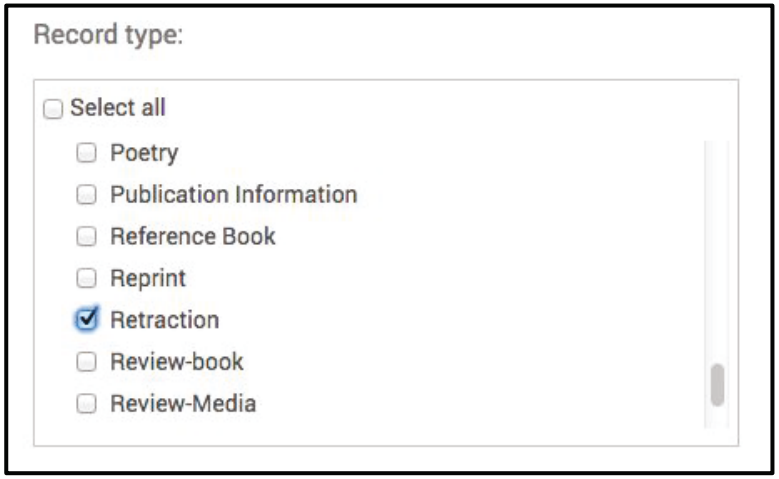
- Web of Science
- PubMed
- PsycINFO
- Scopus
- JSTOR
- Google Scholar
- CINAHL
- Etc.

Search for retracted articles by Document Type

PubMed (Advanced Search)

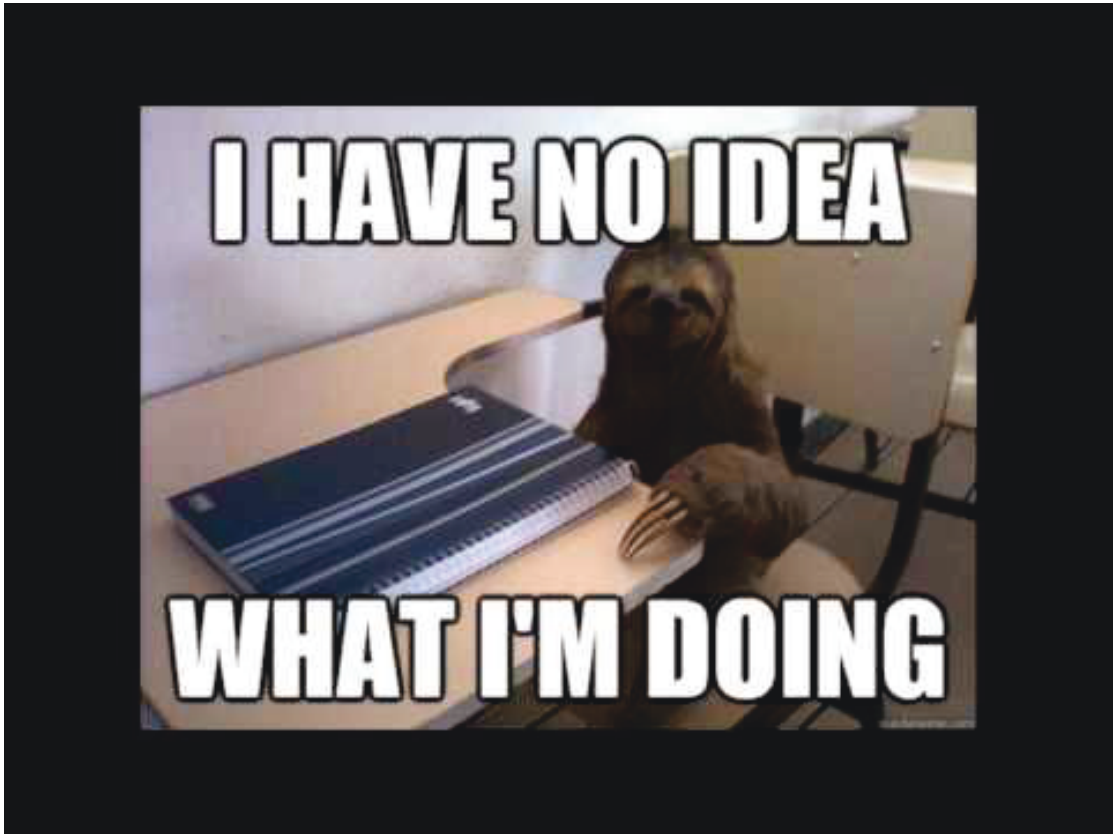


PsycINFO



Web of Science

Incorporating retracted articles into information literacy sessions



Incorporating Retracted Articles into LIB 250 and Library Instruction

Conclusion

Retracted articles: ‘self-correction’ method of scholarly publishing

- Article violates a professional code of ethics
- Wide variety of reasons for articles to be retracted
- BUT… retracted articles account for a small % of scholarly articles

Each publisher/journal handles retractions differently

- Retraction notices give varying levels of detail about the reason for the retraction
  - Retraction Watch tries to provide transparency
- Additional sources of information
  - Institution/governmental investigations
  - News source (example: *The Chronicle of Higher Education*)
- COPE Retraction Guidelines

Retracted articles and information literacy

- Unique way to get students to explore different databases
  - LIB 250 students really like searching for retracted articles!
- Not meant for students to distrust scholarly publishing
  - Rather gives them a healthy dose of skepticism
  - ACRL *Framework*: Scholarship as Conversation, Authority is Constructed and Contextual, Information Creation as Process

Questions?

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