

# 논문작성에서 꼭 알아야 할 출판 윤리

연세의대 미생물학교실  
Yonsei Medical Journal 전편집장

최인홍



# 어느 단계에서 문제가 생길 수 있나?

- 논문 작성하는 동안: 표절, 변조, 날조  
중복출판  
부적절한 인용  
저자됨  
IRB 승인  
이해관계 선언
- 논문 투고할 때: 중복 투고  
저자 추천 심사자





- 중복출판 사례집 (의편협, 2011)
- 의학논문 출판윤리 가이드라인 (의편협, 2판, 2013)
- 출판윤리 가이드라인 Q&A 사례분석 (의편협, 2014)

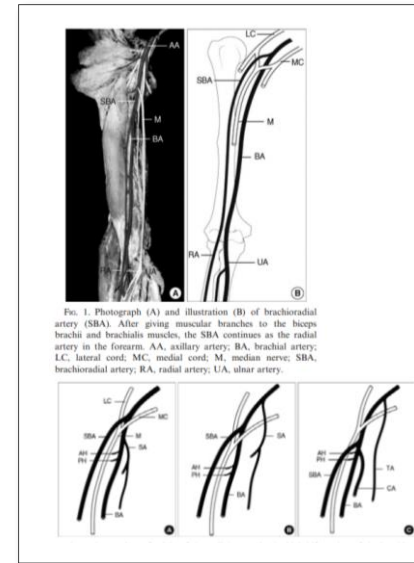


# 논문 작성하는 동안

- 표절 *plagiarism*
- 변조 *falsification*
- 날조 *fabrication*
- 중복출판 *duplicate (redundant) publication*
- 부적절한 인용
- 저자됨 *authorship*
- IRB 승인
- 이해관계 *conflict of interest* 선언

# 표절: J Korean Med Sci 사례

JKMS 논문 (2008)의 **사진과 그림**을  
저자 허락 없이 Seminar in Dialysis에  
**출판** (2011)



Tumor Biology 논문 (2013)을  
**조금 수정**하여 JKMS에 **투고**, **심사 과정에서 발견** (2015)

JKMS 논문 (2014)을 **거의 그대로** International Journal of  
Clinical and Experimental Medicine에 **출판** (2015)

# 표절: 의편협 사례집

영문 종설을 작성하면서 이미 출판되어 있는 **종설과 차례나 내용을 유사하게 작성**하였지만 동일한 문장과 단어를 자제하여 **Similarity Check 유사도가 4%** 밖에 되지 않은 경우는 표절에 해당하는가?

- 원저자의 주관적 표현을 인용 없이 그대로 사용하고  
논문의 다른 부분에는 원본에 없는 내용을 첨가한 경우이다
- Paraphrasing 유형의 표절이다

# 표절

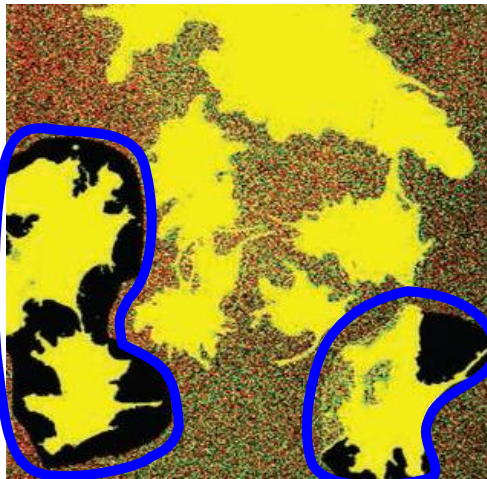
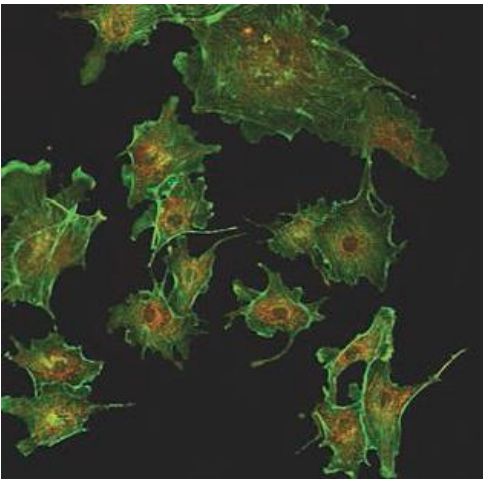
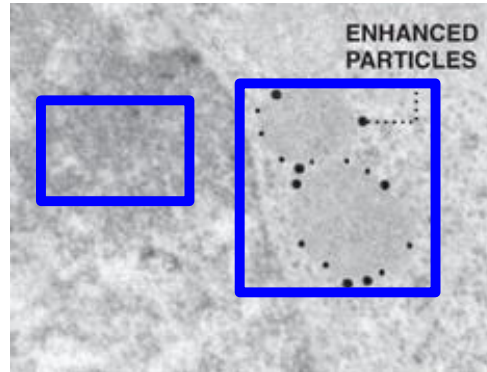
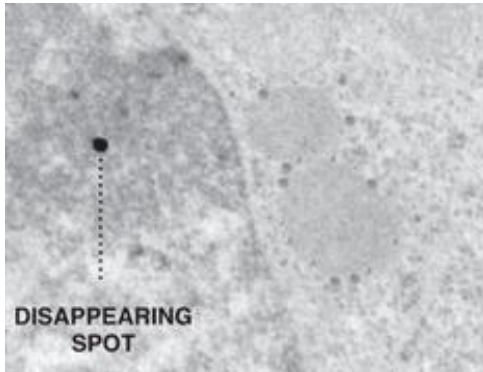
- 멋진 영어 문장



- Similarity Check (Crossref)으로 방지
- Turnitin 등

# 변조

- Data 수정



수정  
detection  
프로그램  
사용

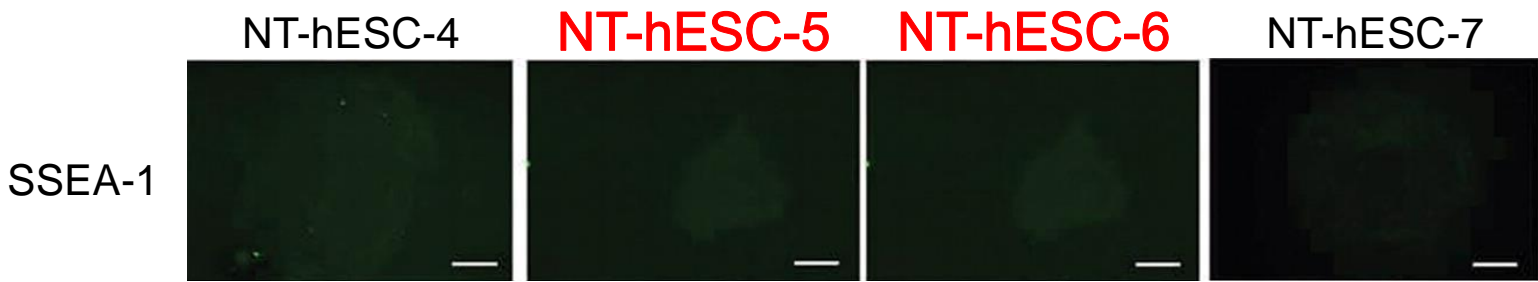




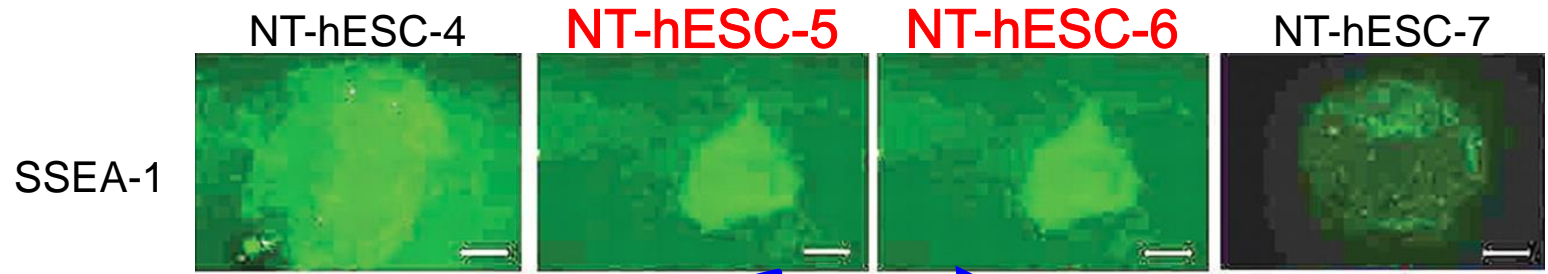
# 변조

- Control 재사용

Original



Adjusted Tonal Range



같은 사진

# 변조

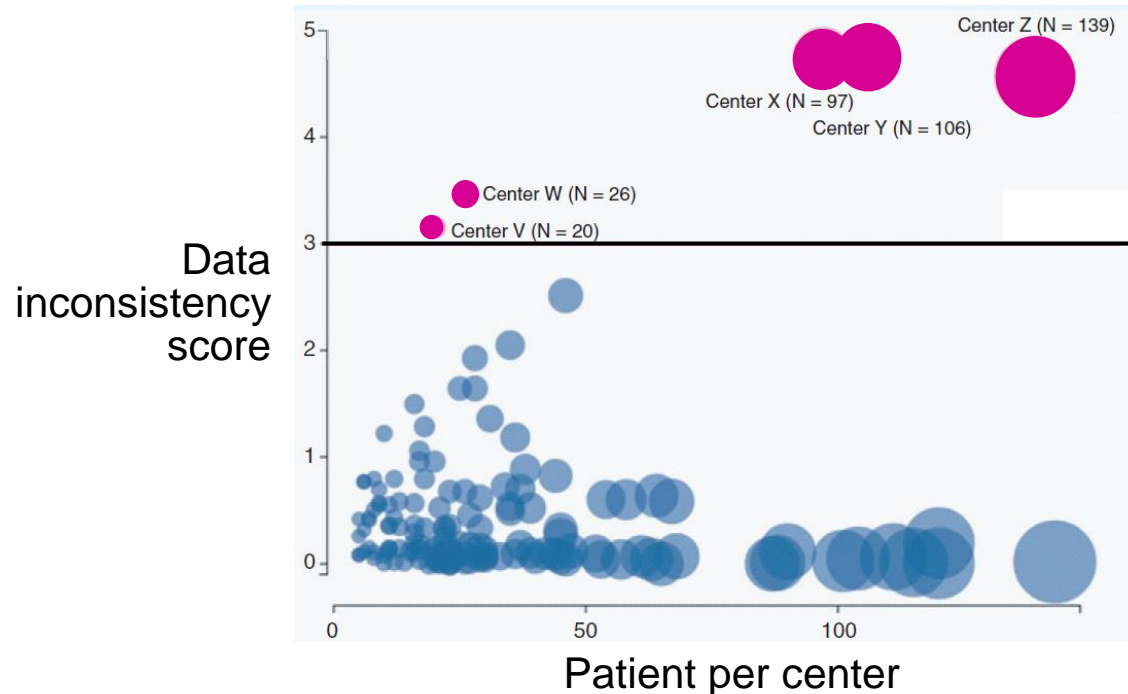
- Data deletion

- Gregor Mendel: Outlying results 일부 제거

QJM (2012), doi: 10.1093/qjmed/hcr195

- Randomized clinical trial: 4,500 patients in 160 centers

Clin Invest (2015), doi: 10.4155/CLI.14.116



False discovery rate  
= 3% (388명)

# 날조

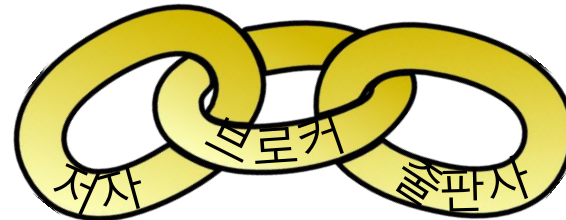
- 허구

- Manuscript 거래

“Publish SCI Paper?”

“Transfer co-first author and co-corresponding author?”

- International Journal of Biochemistry & Cell Biology
- Chinese Medical Journal



# 중복출판: 자기표절 *self-plagiarism, text recycling, redundancy*

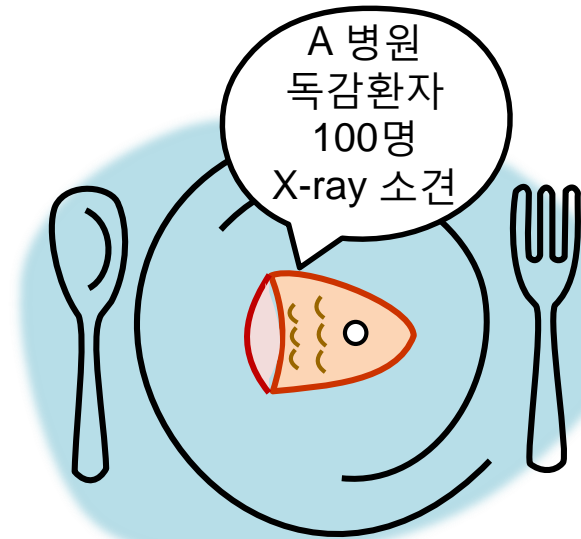
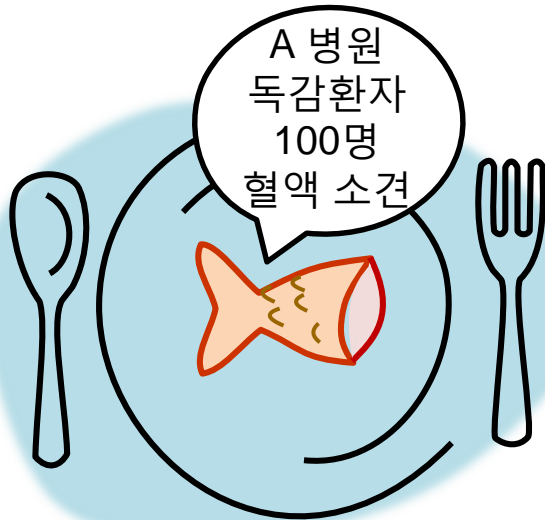
결과가  
두배로  
평가

- 이전 출판한 자기 논문의 일부를 사용한다
- 출판 논문의 저작권은 출판사/학회에 있다
- Introduction 또는 결과의 서술 양식이 동일한 것도 허용되지 않는다
- 실험방법은 일부 허용된다

가능하면  
다른 문장

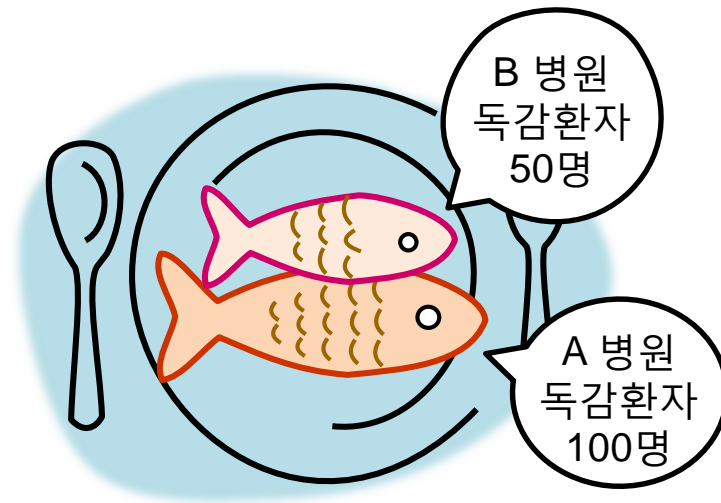
# 중복출판: 분할출판 *salami publication*

- 결과를 나누어 출판한다



# 중복출판: 덧붙이기 *overlapping publication, imalas publication*

- 이전 출판한 자기 논문 data에 새 결과를 첨가한다



- 이미 발표한 논문과 결론이 동일하다
- 저작권 침해이다

결과가  
두배로  
평가

# 중복출판: 의편협 사례집

두 논문(A, B)은 요로감염 진료지침 작성을 위하여 **급성 방광염과 급성 신우염 환자**를 대상으로 조사한 것이다.

A, B 논문에서 급성 신우염 환자는 **동일 대상이며 모집방법, 참여병원 및 연구기간이 같다. 저자도 동일**하다.

A 논문은 **방광염과 신우염을 비교**하고, B 논문은 **신우염의 항균제 내성만**을 언급하여 두 논문의 가설과 목적은 다르고, B 논문은 A 논문과는 다른 새로운 정보를 제공한다.

그러나 B 논문에서 A 논문의 일부 결과 (**신우염 환자의 기본 자료**)를 A 논문 **인용 없이 제시**하고 있다.

- Text recycling 가능성 있다
- 중복출판 피하기 위하여 A 잡지의 허락을 받는다

# 중복출판

- 가설이 유사하다
- 표본 수가 유사하다
- 방법이 유사하거나 동일하다
- 결과가 유사하다
- 새로운 정보가 거의 없다
- 최소한 1 명의 저자는 동일하다



# 중복출판: 국내 의학학술지 조사



**ORIGINAL ARTICLE**  
Editing, Writing, & Publishing

**JKMS**

<http://dx.doi.org/10.3346/jkms.2014.29.2.172> • *J Korean Med Sci* 2014; 29: 172-175

## Duplicate Publication Rate Decline in Korean Medical Journals

**Soo Young Kim,<sup>1,\*</sup> Chong-Woo Bae,<sup>2,\*</sup>  
Chang Kok Hahm,<sup>3,\*</sup> and Hye Min Cho<sup>4</sup>**

<sup>1</sup>Department of Family Medicine, Kandong Sacred Hospital, Hallym University College of Medicine, Seoul; <sup>2</sup>Department of Pediatrics, Kyung Hee University School of Medicine, Seoul; <sup>3</sup>Health Promotion Center, Chung-Ang University Hospital, Seoul; <sup>4</sup>Infolumi Co., Seongnam; \*Committee for Publication Ethics, the Korean Association of Medical Journal Editors, Seoul, Korea

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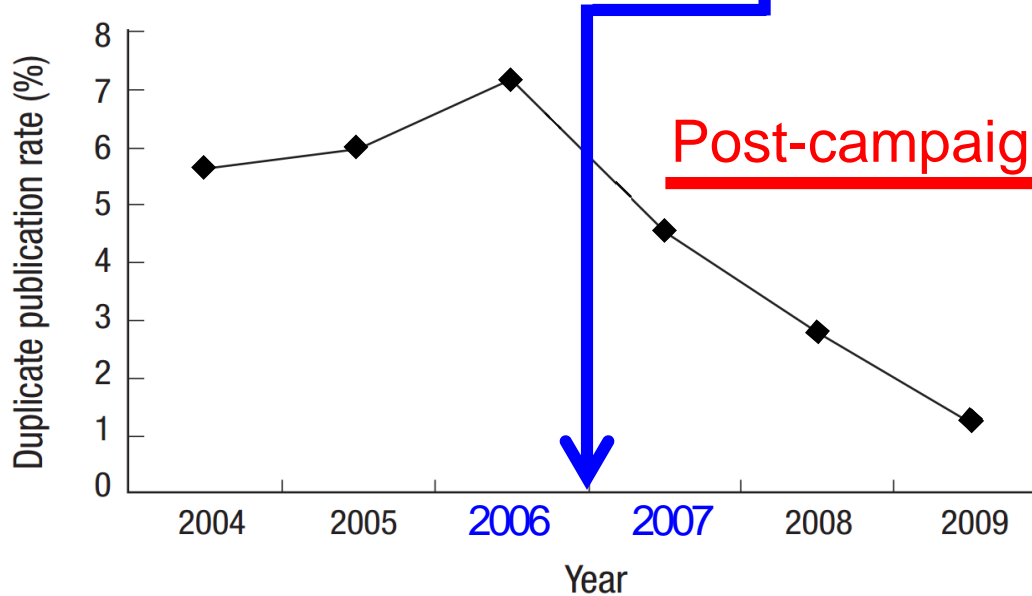
The purpose of this study was to examine trends in duplicate publication in Korean medical articles indexed in the KoreaMed database from 2004 to 2009, before and after a campaign against scientific misconduct launched by the Korean Association of Medical Journal Editors in 2006. The study covered period from 2007 to 2012; and 5% of the articles indexed in KoreaMed were retrieved by random sampling. Three authors reviewed full texts of the retrieved articles. The pattern of duplicate publication, such as copy, salami slicing (fragmentation), and aggregation (imalas), was also determined. Before the launching ethics campaign, the national duplication rate in medical journals was relatively high: 5.9% in 2004, 6.0% in 2005, and 7.2% in 2006. However, duplication rate steadily declined to 4.5% in 2007, 2.8% in 2008, and 1.2 % in 2009. Of all duplicated articles, 53.4% were classified as copies, 27.8% as salami slicing, and 18.8% as aggregation (imalas). The decline in duplicate publication rate took place as a result of nationwide campaigns and monitoring by KoreaMed and KoreaMed Synapse, starting from 2006.

**Keywords:** Publishing Ethics; Duplicate Publication as Topic; Periodicals as Topic; Trends; Korea

# 중복출판

**Table 2.** Duplicate publication rates in Korean medical journals (2004-2009)

Parameters	Screened articles by year						Total
	2004	2005	2006	2007	2008	2009	
Screened articles*	455	467	460	462	466	505	2,815
Suspicious articles <sup>†</sup>	49	46	43	38	19	23	218
Duplicate articles <sup>‡</sup>	27	28	33	21	13	6	128
Duplicate publication rates (%)	5.9	6.0	7.2	4.5	2.8	1.2	4.5



Committee for Publication Ethics (2006), campaign against duplicate publication (2006) and KoreaMed Synapse (2007) by KAMJE started.

# 중복출판

**Table 3.** Patterns of duplicate publication in Korean medical journals (2004-2009)

Patterns of duplicate	No. (%) of articles by year						
	2004	2005	2006	2007	2008	2009	Total
Copy	19 (65.5)	18 (64.2)	13 (37.1)	10 (47.6)	6 (42.9)	5 (83.3)	71 (53.4)
Salami	4 (13.8)	5 (17.9)	12 (34.3)	9 (42.9)	6 (42.9)	1 (16.7)	37 (27.8)
Imalas	6 (20.7)	5 (17.9)	10 (28.6)	2 (9.5)	2 (14.2)	0 (0)	25 (18.8)
Total	29 (100)	28 (100)	35 (100)	21 (100)	14 (100)	6 (100)	133 (100)

자기 표절

분할출판

덧붙이기

국문 → 영문

**Table 5.** Directional patterns of the primary to duplicate publication in Korean medical journals (2004-2009)

Directions	No. (%) of articles by year						
	2004	2005	2006	2007	2008	2009	Total
Local→international	13 (44.8)	16 (57.2)	19 (55.3)	11 (52.4)	10 (71.4)	3 (50.0)	72 (54.1)
Local→local	14 (48.3)	6 (21.4)	12 (34.3)	6 (28.6)	2 (14.3)	2 (33.3)	42 (31.6)
International→local	2 (6.9)	6 (21.4)	4 (11.4)	4 (19.0)	2 (14.3)	1 (16.4)	19 (14.3)
Total	29 (100)	28 (100)	35 (100)	21 (100)	14 (100)	6 (100)	133 (100)



# 중복출판?

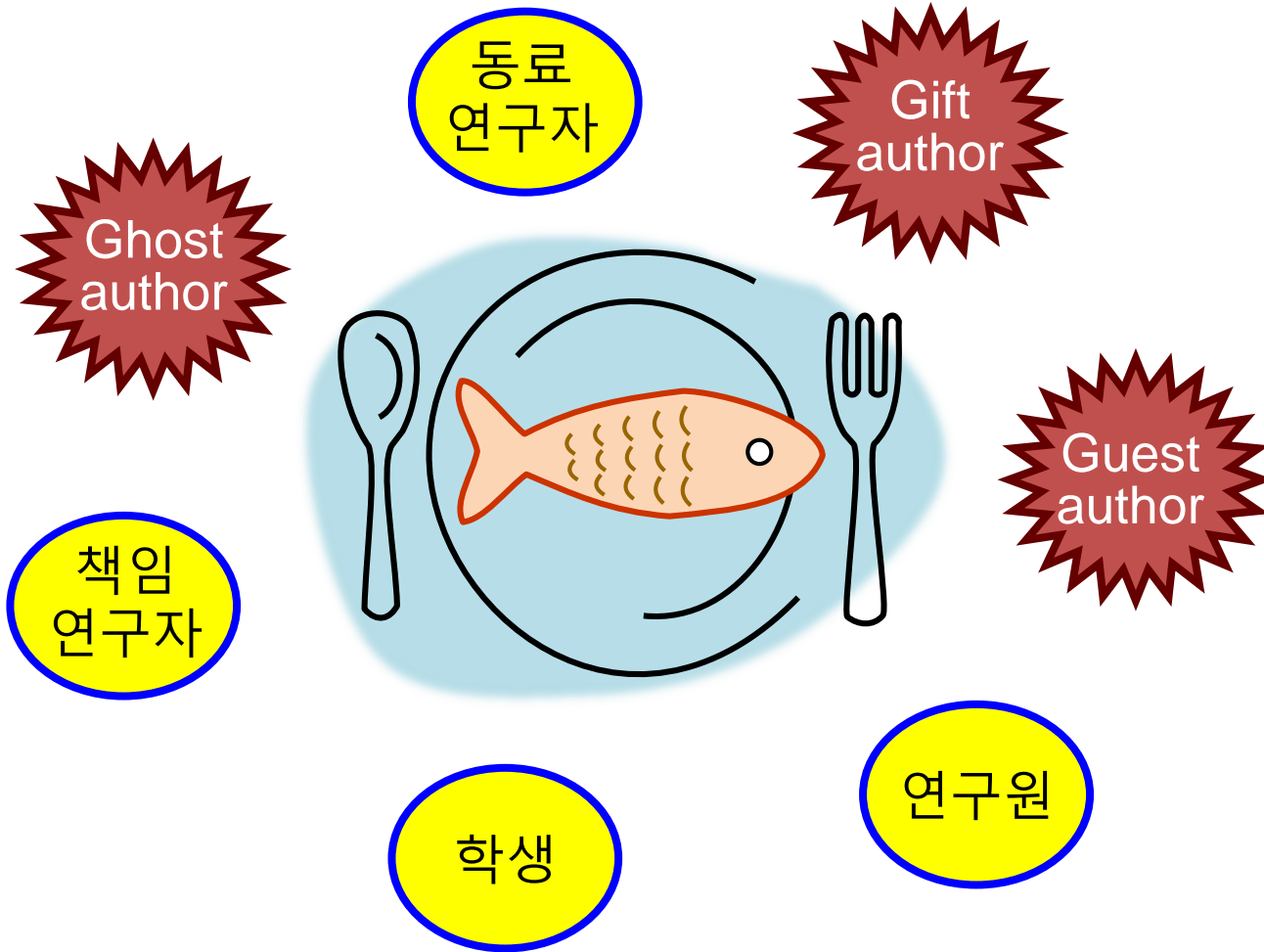


# 부적절한 인용

맨 처음 보고된  
논문을 인용

- 이차인용: 논문을 직접 읽지 않고 인용
- 묶음 인용 IL-8의 중요성이 보고되었다(1-6).

# 저자됨



# Ghost Author: 의편협 사례집

A는 레지던트 과정 중 박사학위를 받고 학위논문을 국문으로 국내학술지에 발표하고 직장을 옮겼다.

이후 자신의 논문이 영어로 국제학술지에 게재되면서 제1 저자인 자신의 이름이 제외된 것을 발견하였다. 지도교수는 두 논문 모두 저자로 포함되었다.

- Ghost author
- 중복출판 (자기표절)

## Recommendation (2016)

- Substantial contributions to the **conception** or **design** of the work; or the **acquisition**, **analysis**, or **interpretation** of data
- **Drafting** the work or **revising** it critically for important intellectual content
- **Final approval** of the version to be published
- 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
- An author should be able to identify **which co-authors are responsible for specific other parts** of the work and have confidence in the **integrity of the contributions of their co-authors**



**CRedit** *Contributor Roles Taxonomy*

# 14 Contributor Roles

Author + Contributor + Acknowledgement

# 다기관 연구의 저자됨: 의편협 사례집

다기관 연구인데 투고하려는 학술지가 **저자 수를 제한**하고 있다.

- ICMJE 규정에 따라 저자를 정하고 기여도 순에 따라 순서를 정한다
- 나머지 사람은 contributor 또는 acknowledgement에 포함한다
- 연구 시작 시기에 미리 저자 역할 및 순서를 확인한다

# 저자 순서: 의편협 사례집

모든 저자가  
확인하지  
않았음

A는 B 지도 아래 학위논문을 완성하고 다른 기관으로 이직하였다.  
B도 A 학위지도 수년 후 사직하였다.

이후 A 는 자신의 학위논문이 **자신의 허락없이**, 학위를 받은 기관의 **C가 제 1저자, 원로교수인 D가 책임저자**로 출간된 사실을 알았다.  
**A, B는 공동저자**로 포함되어 있었다.

책임저자 **D**는 해당 논문을 연구비 업적보고를 위하여 해당 논문에 **연구비 사사** 표기를 하였다.

- 학위수여자가 제1저자가 되는 것이 일반적이지만 모든 저자가 동의하여 순서를 정한다면 가능하다
- D가 연구비 사사를 위하여 수년전 학위논문을 그대로 제출하면 연구윤리 위반이지만 기여도, 내용 포함 정도에 따라 다르다

# 저자 순서



Regional ileitis: a pathologic and clinical entity. (1932)

Crohn BB Ginzburg L, Oppenheimer GD

Leśniowski-  
Crohn's disease  
(폴란드)

# John Kappler가 제 1 저자일 수 있는가?

*Proc. Natl. Acad. Sci. USA*  
Vol. 91, pp. 8462–8466, August 1994  
Immunology

## Binding of a soluble $\alpha\beta$ T-cell receptor to superantigen/major histocompatibility complex ligands

(baculovirus/enterotoxin)

JOHN KAPPLER<sup>†</sup>, JANICE WHITE\*, HAURO KOZONO\*, JANICE CLEMENTS\*, AND PHILIPPA MARRACK<sup>†\*§</sup>

\*Howard Hughes Medical Institute, Basic Immunology Division, Department of Medicine, National Jewish Center for Immunology and Respiratory Medicine, Denver, CO 80206; and Departments of <sup>†</sup>Immunology, <sup>‡</sup>Medicine, and <sup>§</sup>Biochemistry, Biophysics, and Genetics, University of Colorado Medical School, Denver, CO 80206

*Contributed by John Kappler, May 31, 1994*

**ABSTRACT** The genes for the  $\alpha$  and  $\beta$  chains of a murine T-cell receptor were truncated just prior to the portions encoding the transmembrane regions and introduced into baculovirus by recombination. Insect cells infected with the virus secreted a soluble form of the receptor that could be purified to homogeneity. This soluble receptor reacted with a set of six monoclonal antibodies originally raised to different epitopes on the natural transmembrane-region-containing receptor and bound with appropriate specificity to a cell surface complex of the human major histocompatibility complex class II molecule DR1 with the bacterial superantigen staphylococcal enterotoxin B.

paper we show that this principle extends to the expression of a soluble functional  $\alpha\beta$ TCR.

### MATERIALS AND METHODS

**Receptor Origin.** The  $\alpha\beta$ TCR used in these experiments was that of a T-cell hybridoma, DO-11.10( $\Delta$ 1,3), that had well-defined antigen reactivities. This cell line began as a T-cell hybridoma of BALB/c origin, DO-11.10 (16), bearing a V $\alpha$ 13.1/V $\beta$ 8.2 receptor (17, 18) (where V is variable region) specific for a peptide of chicken ovalbumin presented by I-A<sup>d</sup> (19). The V $\beta$ 8.2 portion of this receptor gave it a strong

# Garadriel Mirkwood는 누구인가?

JEM Home » 1978 Archive » 1 July » 148 (1): 84

## Article

### In a fully H-2 incompatible chimera, T cells of donor origin can respond to minor histocompatibility antigens in association with either donor or host H-2 type.

P Matzinger, **G Mirkwood**

DOI: 10.1084/jem.148.1.84 | Published July 1, 1978

[Article](#)[Info](#)[Metrics](#)

## Abstract

Fully H-2 incompatible radiation chimeras were prepared using BALB congenic mice. Such chimeric mice were immunized *in vivo* against histocompatibility antigens of the C57BL/10Sn (B10) background in association with either of the parental H-2 haplotypes, and their spleen cells subsequently boosted *in vitro* with the same minor antigens. Strong H-2-restricted cytotoxic activity against minor antigens was detected, and the specificity of the restriction could be to the H-2 haplotype of the donor or the host depending on the cells used for priming or boosting. Cross priming could also be demonstrated in these mice. The results show that fully allogenic radiation chimeras can produce H-2-restricted T-cell responses to minor histocompatibility (H) antigens, and are discussed in relation to contrasting results recently obtained against viral antigens.



# IRB 승인

- Randomized controlled trial, 임상시험, 동물시험
- 학술지는 IRB 언급 없으면 바로 rejection하거나 수정 후 재접수 요청한다

# 이해관계 *Conflict of Interest* 선언

- 경제적 이익: 주식, 직위, 자문료, 강의료
- 가족, 친구, 권력, 환자 치료 등



# 논문 투고할 때

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- 중복 투고 *duplicate submission*
- 저자추천 심사자 *author recommended reviewer*

# 중복투고: Yonsei Med J 사례

I am facing an unusual problem with the manuscript you sent me to review. **A few days before** you sent me this manuscript, a manuscript with the **same title** and very similar abstract and content containing almost the **same data** was sent to me for reviewing from a different journal (Journal of Renin Angiotensin Aldosterone System). Please advice me how do deal with this **serious ethical issue**.

- 중복출판

독자

심사자

# 저자 추천 심사자

- 추천 심사자: 특수 분야 전문가  
편집인의 수월성  
학술지 증가로 인한 심사자 부족
- 제외 심사자

# Peer Review Fraud

- 저자추천 심사자로 유명 연구자 with 본인 또는 친구 이메일 제출하여 30편 논문을 출판 (The Journal of Enzyme Inhibition and Medicinal Chemistry, 2013)
- 해당 기관에 재직하지 않는 저자추천 심사자가 밝혀져서 심사 중단 (Yonsei Medical Journal, 2013)



# 학술지의 심사 Guideline에서



*RSC Advances* is an international, peer-reviewed, online journal covering all of the chemical sciences, including interdisciplinary fields.

The **criteria for publication** are that the experimental and/or theoretical work must be **high quality, well conducted** and **demonstrates a significant advance by adding to the development of the field**.

Thank you for your assistance in evaluating this manuscript.

## Guidelines to the referees

*Please inform the Editor if:*

- There is a conflict of interest
- There is a significant part of the work which you are not able to referee with confidence
- The work, or a significant part of the work, has been **previously been published**
- You believe the work, or a significant part of the work, **is currently submitted elsewhere**
- The work represents part of an **unduly fragmented investigation**

출판윤리에 의문이 있을 때

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- 중복출판 사례집 (의편협, 2011)
  - 의학논문 출판윤리 가이드라인 (의편협, 2판, 2013)
  - 출판윤리 가이드라인 Q&A 사례분석 (의편협, 2014)
  - 연구윤리 확보를 위한 지침 개정안 (교육부, 2015)
- 
- Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals (ICMJE, 2013)
  - COPE *Committee on Publication Ethics*
  - WAME *World Association of Medical Editors*, CSE *Council of Science Editors*

- 저자와 학술지는,  
의편협 홈페이지 ([www.kamje.or.kr](http://www.kamje.or.kr))의  
“출판윤리 가이드라인” & “사례집”을 참고한다
- Misconduct를 발견한 학술지는,  
COPE flowchart를 따른다





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**Redundancy** (i.e. copying from author's own work)- see flowcharts on redundancy

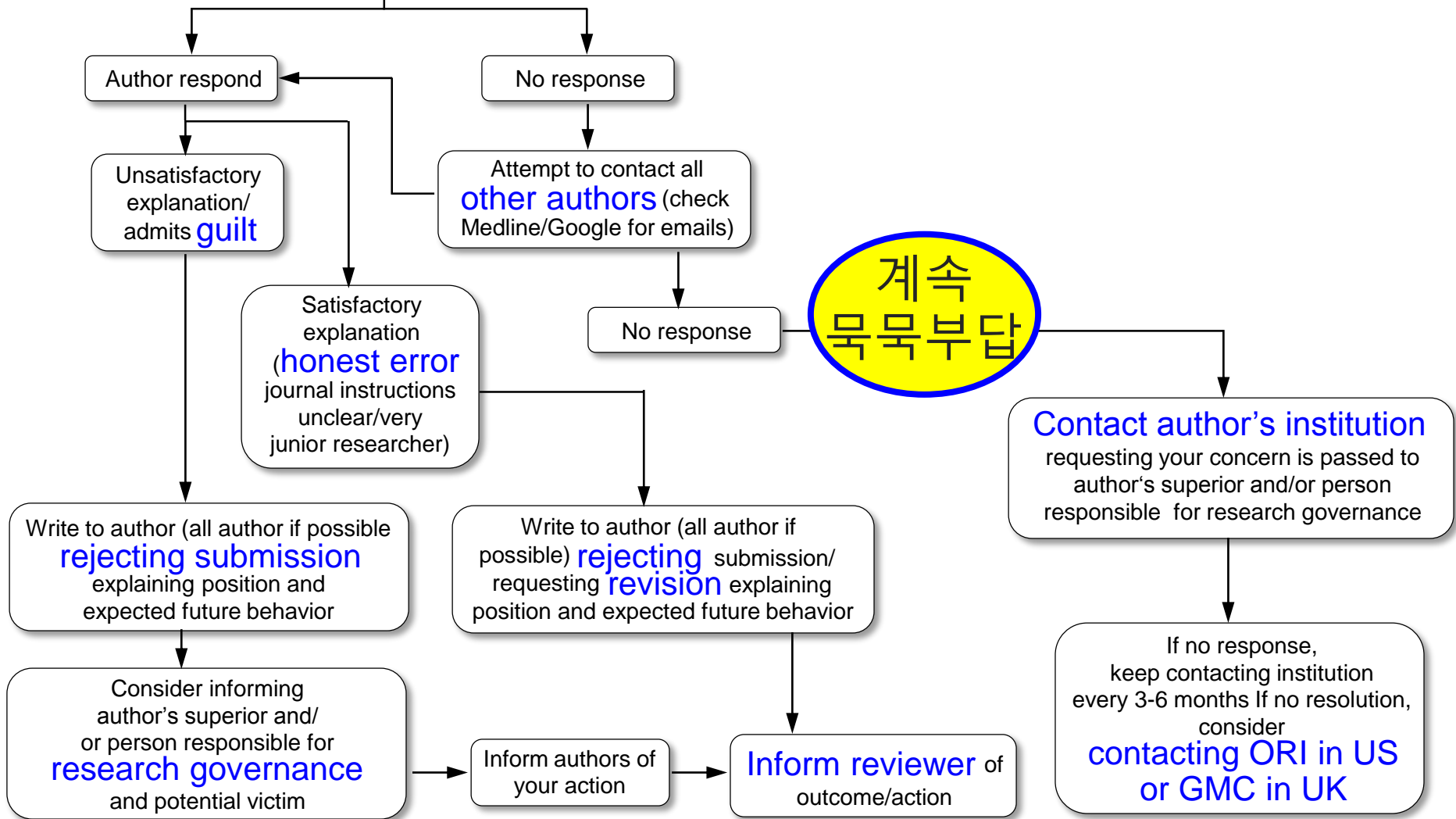
**No problem**

Discuss with reviewer

# COPE Committee on Publication Ethics Flowchart

학술지는

Clear plagiarism



# 연구 및 출판윤리를 지키려면

- 실제 수행한 연구결과를
- 직접 논문을 써서
- 합리적인 저자 명단을 포함하여
- IRB 승인과 이해관계를 밝히고
- 공동저자 모두에게 확인 받은 후
- 한 학술지에만 투고한다



# 멋진 논문 쓰십시오

