

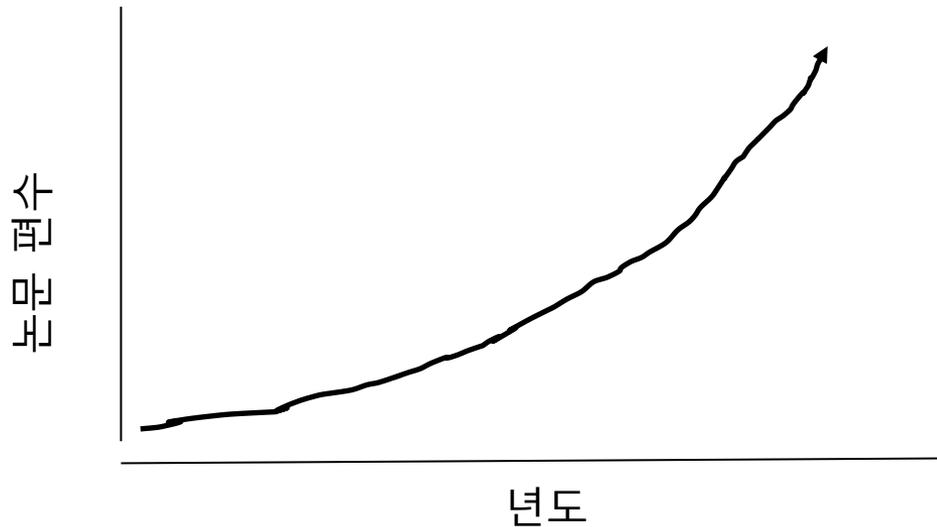
Peer Review의 원칙

연세의대 내과학교실

박 중 원

Published Medical Manuscripts

Reproducible Crisis



Who's Afraid of Peer Review?

A spoof paper concocted by Science reveals little or no scrutiny at many open-access journals

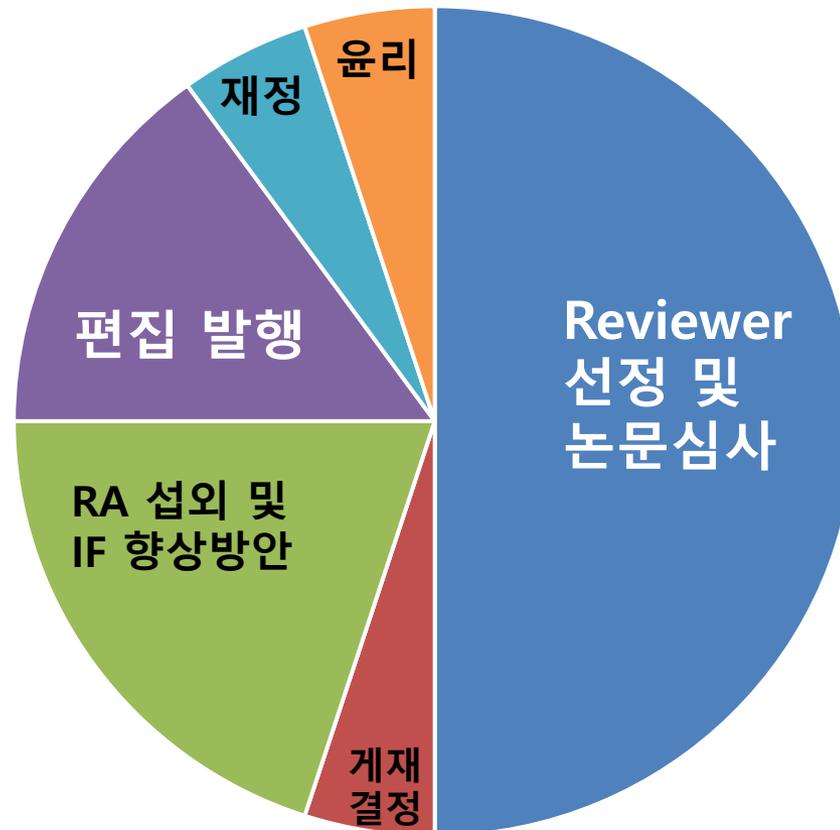
(Science 345:60-65, 2013)

논문 심사의 목적

- **Irreproducible 논문의 배제**
 - Reducing mis-information, confusion, bias
 - Prevent the waste of time, research resources!
 - Reduce the risk to the human health!
- **가치 있는 논문의 선택:** noble finding?
- **연구-출판 윤리 감시:** Transparency?
- **논문의 완성도 향상**
 - 오류 수정, 논리의 흐름 유지, 전달 효과의 향상
- ∴ **학술지의 영향력 향상**

Peer review: main cause for delayed publication

편집장의 Work Load



Peer-reviewer 선정

- ❖ 논문의 strong, weak points를 구분할 수 있는 그 분야의 연구자!
- ❖ & Good authors!

저자 추천

- 최대 3~5명 reviewer candidates 추천
- Usually optional, sometimes mandatory

편집위원 분야별 검색

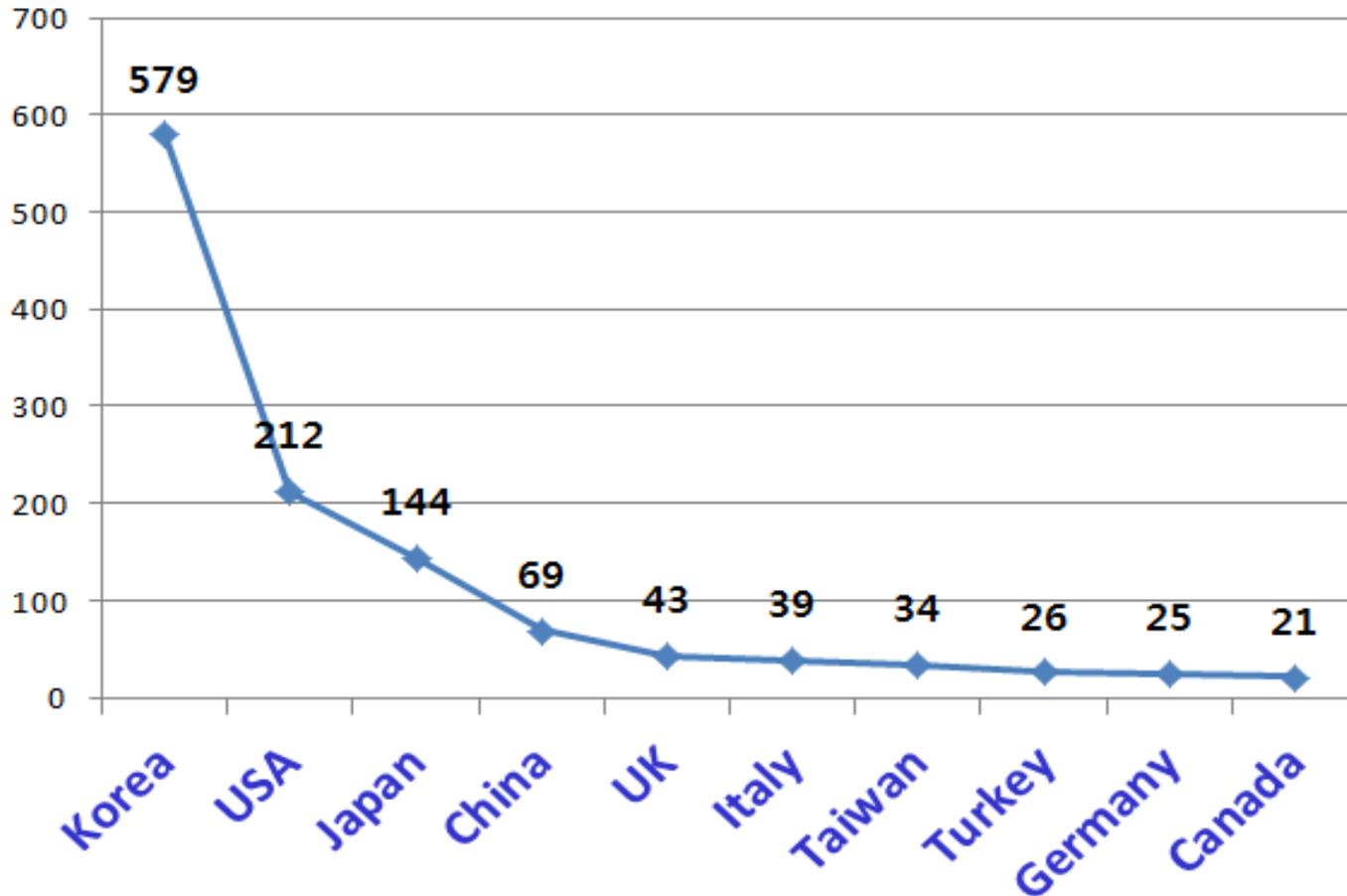
- PubMed search
관련 국내외 연구자 약 10명 선정,
- 심사수락 없을 시, 2차 재검색

dBASE

- 편집위원, editorial board members
- 해당 학술지에 게재한 저자
- 학술지의 reviewer pool
- 해당 논문의 참고문헌 저자

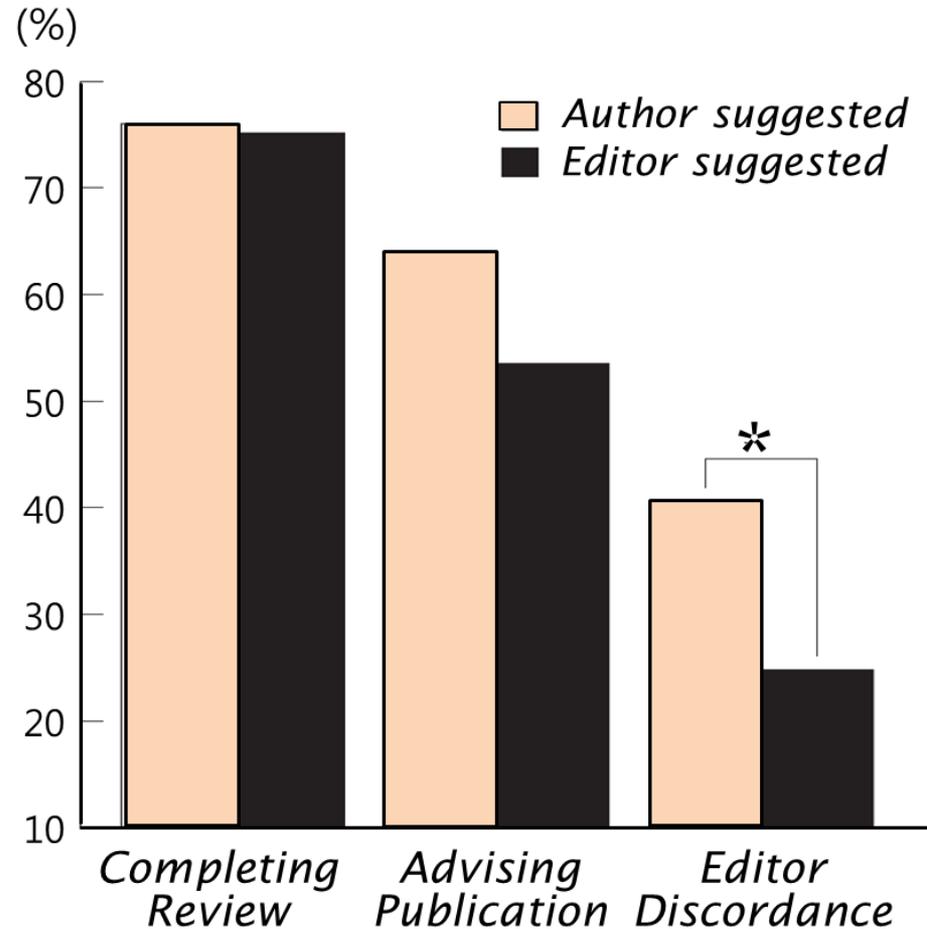
Reviewers of Yonsei Med J

(in 1,341 Reviewers, 2015)



저자 추천 심사자

- 심사태도는 차이 없음
- *Accept* 높은 경향
- 편집인 최종 결정과의 일치도는 낮음



BMC Med, 4:13, 2006 (100 papers)

JAMA, 295:314, 2006 (329 papers)

Thorax, 60:799, 2005 (229 papers), doi.10.1136/thx.2005.051870

Retraction Watch

Tracking retractions as a window into the scientific process

Archive for the [REDACTED] Category

Retraction count grows to 35 for scientist who faked emails to do his own peer review

with 9 comments

[REDACTED] the South Korean plant compound researcher who [made up email addresses so he could do his own peer review](#), is now up to 35 retractions.

The four new retractions are of the papers in the *Journal of Enzyme Inhibition and Medicinal Chemistry* that initially led to suspicions when all the reviews came back within 24 hours. Here's the [notice](#), which includes the same language as Moon's 24 other retractions of studies published in Informa Healthcare journals: [Read the rest of this entry >](#)



Written by ivanoransky
September 17, 2012 at 8:30 am

Posted in [cell biology](#), [faked emails](#), [freely available](#), [hyung-in moon](#), [informa healthcare](#), [j enzyme inh med chem](#), [korea retractions](#)

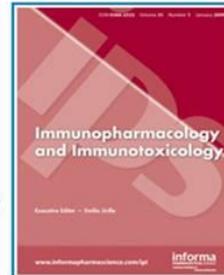
Journal editor resigned in wake of retractions for fake email addresses that enabled self-peer review

with 16 comments

The case of [REDACTED] — the researcher who [faked email addresses for potential peer reviewers so he could do his own peer review](#) — has already led to one resignation.

[Emilio Iirillo](#), the editor of *Immunopharmacology and Immunotoxicology*, which [retracted 20 of Moon's papers](#), stepped down earlier this year in the wake of the case, [Retraction Watch has learned](#).

Here's a [note the publisher posted on the journal's site on June 15](#): [Read the rest of this entry >](#)



Written by ivanoransky
August 31, 2012 at 12:04 pm

Posted in [hyung-in moon](#), [immunopharmacology and immunotoxicology](#), [informa healthcare](#), [korea retractions](#)

20 more retractions for scientist who made up email addresses so he could review his own papers

with 10 comments

Update: In Moon, the South Korean plant compound researcher, came up with

Pages

- [About Adam Marcus](#)
- [About Ivan Oransky](#)
- [The Retraction Watch FAQ, including comments policy](#)
- [The Retraction Watch Store](#)
- [The Retraction Watch Transparency Index](#)
- [Upcoming Retraction Watch appearances](#)
- [What people are saying about Retraction Watch](#)

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-  Neuroskeptic (@Neuro...) on [No, math prof, Google isn...](#)
-  Scrutineer on [He said, she said: Journal of...](#)

Retraction posts by author, country, journal, subject, and type

hyung-in moon (4)

Fake Reviewer 관련 (2013년)



시행결과



저자통보

- 더 이상 심사진행 불가능

YMJ YONSEI
MEDICAL
JOURNAL

YMJ
Open Access, Bimonthly ISSN 0513-5196 Print
ISSN 1976-2437 Online

December 18, 2013

Dear Dr. TanQi Lou:

Greetings from the Yonsei Medical Journal.

Title: "Advanced glycation end products induce glomerular endothelial cell hyperpermeability by upregulating matrix metalloproteinase activity"

For the above manuscript, we received from you recommendations from a group of researchers. However, after inquiring with the relevant institutions, we confirmed that among the four researchers the following two researchers have never worked at their respective institutions. At the present, we are still waiting for confirmation from the others.

Peer review is an important extension of the scientific process, and therefore, in light of the present situation, our editorial committee has decided not to proceed any further with considering your manuscript for publication.

- ▶ name : **Leonardi A, MD**
- ▶ affiliation : Centre for Kidney Research and Cochrane Renal Group, The Children's Hospital at Westmead, Australia
- ▶ name : **Kolandaivelu S, PhD, MD**
- ▶ affiliation : Division of Nephrology, Department of Medicine, School of Medicine, University of California, USA

The confirmations of each institute are as follows:

From: Gail Higgins (SCHN) [mailto:gail.higgins@health.nsw.gov.au]
Subject: RE: Greetings from the Yonsei Medical Journal (Korea)

Dear Dr Choi

Thank you for your email. Upon investigating and checking, we are convinced that the person as described below – Leonardi A – has never worked at our institution i.e. the Centre for Kidney Research at The Children's Hospital at Westmead. The email address is not valid or in the correct format for our institution & we have no records indicating that Leonardi A has worked or is now working at our institution.

- Name: **Leonardi A, MD**
- Affiliation: Centre for Kidney Research and Cochrane Renal Group, Children's Hospital at Westmead, Australia
- Institution email address: leonardis@chw.edu.au

Thank you for checking with us.

Best wishes
Gail Higgins | Trial Search Co-ordinator | Centre for Kidney Research Clinical
t: (02) 61 2 9645 1484 | f: (02) 61 2 9645 14 | e: gail.higgins@health.nsw.gov.au | w: www.kidney-research.org | skype: gailyh2

편집인은 저자 추천 reviewers에 주의!

- ❖ Avoid automated peer-review process
- ❖ Cautious to free email address reviewer: gmail, naver,,,,
- ❖ Cautious to too rapid reply of review
- ❖ Avoid suspicious reviewer with COI
- ❖ Editors should never use authors' preferred reviewers **Only**
- ❖ Some editors use the preferred reviewers list to **Rule Out**.

Transparent & Ethical Review process

❖ Avoid COI for reviewers

- 동일한 소속 기관의 연구자
- 저자와 공동 연구가 활발한 연구자
- 저자와 학문적으로 경쟁하는 연구자
- 저자와 사이가 안좋은 연구자
- 해당 연구와 financial interest가 있는 연구자

Reviewer의 역할

- Confidential comments to Editors

- 논문의 학문적 의미 (novelty) 평가와 limitation 지적
- 논문의 전체적 Quality 평가
- 연구 출판 윤리의 적절성

→ 채택 여부 조언: accept pending revision, Revision, Rejection

- Comments to Editors: constructive criticism

- 연구 design, 방법론, 통계, 결과 해석의 오류 지적
- 논리 전개 of 일관성, Concise, 전달력 향상을 위한 조언
- Well balanced article: **strong/weak point** 보완 요청
- Copy editor의 역할: typo-errors, Figure 및 Table의 완성도,,,,

→ 논문의 quality 향상

Peer Review Process

❖ 동료 연구자와의 토론, 비판적으로 본다

- Reviewer도 연구자: Reviewer 평가를 받는 경험, rejection된 경험 多
- 논문을 현재의 form 보다 향상시켜야 된다는 부담감
- 다른 관점, 경험, 지식 수준에서 문제를 본다

❖ 토론을 통해 견해차이를 해소할 수 있음

❖ 저자 - 새로운 연구 아이디어를 얻을 수 있다

→ 연구자의 성장, 성숙에 크게 기여

Peer Review Bias

❖ Content based bias

- Reviewer의 연구를 인용, 지지하는 연구
- 동문이나 견해가 같은 연구자에게 우호적인 경향

❖ Confirmation bias, conservatism

- 기존의 개념을 지지하는 연구에 우호적이며 혁신적인 연구에 대한 거부감

❖ Publication bias at submission & publication

- Positive 결과의 논문을 선호하는 경향

❖ Conflicts of interest bias

Peer-review 연구윤리관련

사례 1

이중게재 - reject 처리

- * 투고일시: 2010. 3.
- * 소속: Department of Endocrinology, China
- * 제목: "Effects of Alendronate and Strontium ranelate on Cancellous and Cortical Bone Mass in Glucocorticoid-Treated Adult Rats"
- * **Reject 사유: 기계재 논문과 동일 논문 및 동일한 저자 - 이중게재**
- * 기계재논문: Calcif Tissue Int. 2010 Apr 14. [Epub ahead of print]
"Effects of Alendronate and Strontium Ranelate on Cancellous and Cortical Bone Mass in Glucocorticoid-Treated Adult Rats"

Reject 처리

Peer-review 연구윤리관련

사례 2

중복투고 - reject 처리

- * 투고일시: 2010. 3.
- * 소속: Korea
- * 제목: "Neurological manifestations and management using IV immunoglobulin in patients with enterovirus 71 infection"
- * **Reject 사유:** 심사위원이 재심사중 이중투고 발견 (타 잡지에서 동일논문 심사의뢰)

- Reviewer's comments

I will not review the responses of the authors and revised manuscript, because the authors also submit the same article to Pediatrics International.

Reject 처리

Retracted Article



Retraction

Yonsei Med J 2019 Jan;60(1):117-117
<https://doi.org/10.3349/ymj.2019.60.1.117>



pISSN: 0513-5796 • eISSN: 1976-2437

Paper “Comparison of Effect of Treatment with Etidronate and Alendronate on Lumbar Bone Mineral Density in Elderly Women with Osteoporosis” by Iwamoto J, et al. [Yonsei Med J 2005;46(6):750-758]

We decided to retract the paper entitled ‘Comparison of Effect of Treatment with Etidronate and Alendronate on Lumbar Bone Mineral Density in Elderly Women with Osteoporosis’ [Yonsei Med J 2005;46(6):750-758] by Iwamoto J, Takeda T, Sato Y, et al. Based on information that were discovered after publication, we have recently become aware of a number of issues related to data duplication and scientific misconduct.

Jung-Won Park, M.D., Ph.D., Editor-in-Chief
Yonsei Medical Journal



eymj.org

pISSN 0513-5796 • eISSN 1976-2437

Open Access, Peer-reviewed, Monthly



| | | | |
|-------|----------------|------------------|--------|
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Archive > v.45(2); Apr 2004 > 10.3349/ymj.2004.45.2.314

Original Article

ABSTRACT | CITATION | PDF | PUBMED | CROSSREF

This article has been retracted.
Retraction in: Yonsei Med J. 2019 January; 60(1): 116

Yonsei Med J. 2004 Apr;45(2):314-324. English.
Published online Feb 17, 2009. <https://doi.org/10.3349/ymj.2004.45.2.314>
Copyright © 2004 The Yonsei University College of Medicine

Differential Effect of Vitamin K and Vitamin D Supplementation on Bone Mass in Young Rats Fed Normal or Low Calcium Diet

Jun Iwamoto,¹ Tsuyoshi Takeda,¹ Shoichi Ichimura,² Yoshihiro Sato,³ and James K. Yeh⁴

¹Department of Sports Medicine, Keio University School of Medicine, 35 Shinanomachi, Shinjuku-ku, Tokyo 160-8582, Japan.

²Department of Orthopaedic Surgery, Kyorin University School of Medicine, Tokyo, Japan.

³Department of Neurology, Mitate Hospital, Fukuoka, Japan.

⁴Metabolism Laboratory, Department of Medicine, Winthrop-University Hospital, NY, USA.

Reprint address: requests to Dr. Jun Iwamoto, Department of Sports Medicine, Keio University School of Medicine, 35 Shinanomachi, Shinjuku-ku, Tokyo 160-8582, Japan. Tel: 81-3-3353-1211, Fax: 81-3-3352-9467, Email: iwamoto@sc.itc.keio.ac.jp

Received August 06, 2003; Accepted January 26, 2004.

This article has been retracted. See Yonsei Med J. 2019 January; 60(1); 116.

- This article has been cited by 5 articles in Crossref
- This article has been cited by Google Scholar.
- This article has been cited by 1 article in PubMed Central.

Check for updates

Formats

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|-----------|----------|
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| Article | PDF |
| PubReader | ePub |

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| | | |
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| 5 Crossref | Google Scholar | 1 PubMed Central |
| 6 Scopus | 5 Web of Science | |

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Reviewer 가 하지 말아야 할 것

- ❖ 저자가 정한 연구의 scope를 넘어서는 추가 실험, 연구
 - Redirect the research
- ❖ Un-polite expression to the authors
 - Reviewer comment 수정이 필요
 - Exclusion from the Journal's Reviewer pool.
- ❖ Coercive citation request for their own publication

편집인의 Reviewers' Comment 평가

❖ Accept/Revision

- 높은 quality의 심사평 & 좋은 논문 → OK
- 실망스러운 reviewers' comment : value?
- 높은 quality의 심사평, 그러나 예의상 revision

❖ Reject/Revision

- Reviewer comment가 타당한지 검토
- 논문의 주제가 Interesting?
- Editor, Associate Editor가 결정

❖ Reject/Reject

- Reject

심사자의 판정과 최종판정 일치도는?

| 2015년 | 논문 (%) | 최종 rejection |
|----------------------------------|--------|--------------|
| Complete agreement not to reject | 47.5 | 0.0 |
| Any level of disagreement | 37.1 | 27.9 |
| Complete agreement to reject | 15.4 | 100.0 |
| Total | 100.0 | |

좋은 심사를 유도하기 위하여

❖ Reviewer Pool 구축

- 학술지에 유사 주제로 발표한 연구자
- Review history database 化
- Exclude superficial, biased, rude reviewers

❖ Workshops or Training programs for good review

- A few good reviewers

Training and experiences are required to be a good reviewers!

Effect of Reviewer Training Program: RCT Study

| | Control (n=173) | Self taught group (n=166) | Face to face group (n=183) | P value |
|-----------------------------------|--------------------|------------------------------|-------------------------------|---------|
| Review quality Score | 2.56 | 2.85 | 2.72 | 0.003 |
| No. major error Identification | 2.13 | 3.14 | 2.96 | <0.001 |
| Time taken to review (min) | 127.9 | 144.4 | 123.9 | 0.024 |
| Recommend to reject (%) | 76 | 92 | 84 | 0.002 |

However, the effect did not appear at 6 months after training

| | Control (n=156) | Self taught group (n=111) | Face to face group (n=151) | P value |
|-----------------------------------|--------------------|------------------------------|-------------------------------|---------|
| Review quality Score | 2.74 | 2.89 | 2.76 | 0.204 |
| No. major error identification | 2.71 | 3.37 | 3.18 | 0.125 |
| Time taken to review (min) | 108.5 | 122.5 | 112.7 | 0.376 |
| Recommend to reject (%) | 74 | 91 | 83 | 0.004 |

Peer review 심사 체계

- 저자 공개 / 심사자 익명 -

❖ 장점

- 솔직하고, 비판적인 심사

❖ 단점

- 극히 일부 reviewer: 저자에 대한 선입감, 비하하는 표현
- Superficial, biased review

Transparent of Peer Review: open review

- ❖ Some journal publish reviewers' comments and authors' rebuttals
- ❖ Background for open review process
 - Superficial, biased, or rude reviewer
 - Predator journals - poor review process

Advantages

- ❖ Good quality, constructive comments
- ❖ Build trust on quality of article
- ❖ Scientific community learn from the Communication btw reviewers and authors
- ❖ Could be significant reward to Reviewers

Reviewer의 헌신

Reviewer의 노고에 대해서 인정받지 못함

- ❖ Repetitive review invitations
- ❖ Dedicated reviewer: Editorial board
- ❖ Transparent Peer Review system: open review 도입
- ❖ Inform editorial decisions, send the comments of other reviewers
- ❖ Review fee: 3 hrs per one manuscript
- ❖ Recognition of Gratitude 전달: “Outstanding contribution to Journal”
- ❖ 감사 편지, 연하장 전달
- ❖ Free access to the journals, discount for publication fee,,,,

Take Home Message

- ❖ Peer review 는 의학의 엄밀성을 지키는 수호자
- ❖ Good reviewer가 되기 위해서는 경험과 training이 필요
- ❖ 우수한 peer reviewer pool 확보가 중요
 - Risk of automated review process
- ❖ Peer review process의 transparency, ethics가 강조됨