



과편협 출판윤리 워크숍(2019-E02)

Nov. 22, 2019

한국과학기술회관 지하 1층 중회의실2

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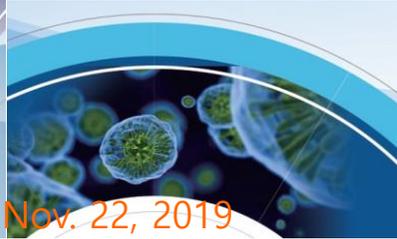
연구자의 사회적 책무와 연구 · 출판윤리

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No Conflict of Interest Statement
I, Cheol-Heui YUN, serve in the following roles, but, no potential Col to disclose

편집인을 위한 연구 · 출판 윤리



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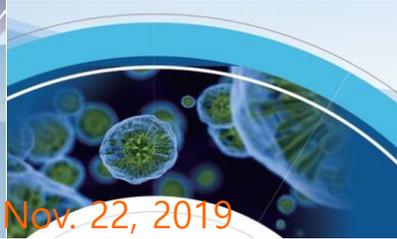
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한국과학기술회관 지하 1층 중회의실2

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편집인을 위한 연구 · 출판 윤리



과편협 출판윤리 워크숍(2019-E02)

Nov. 22, 2019

한국과학기술회관 지하 1층 중회의실2

연구자의 사회적 책임



연구윤리(Research Ethics)

연구윤리 란?

연구의 전 과정(연구의 계획, 수행, 보고)에서 바람직한 연구 수행에 필요한 윤리적 원칙 또는 행위 규범들의 체계; 따라서 모든 학문분야의 연구자들은 연구윤리에 대해 올바르게 이해하고 연구활동을 실천해야 함.

연구활동의 스펙트럼

- 좋은 연구수행(Good Research Practice, GRP)
- 책임 있는 연구수행(Responsible Conduct of Research, RCR)
- 의심스런 연구수행(Questionable Research Practice, QRP)
- 연구부정행위 (Research Misconducts)

연구윤리(Research Ethics)

사회윤리규범 vs. 내부윤리규범

구분	사회윤리규범		내부윤리규범	
진행과정	연구주제선정	연구수행	결과보고	성과활용
주요이슈	<ul style="list-style-type: none"> 대량살상무기 인간복제 Genome editing (GMO/LMO), Gene cloning, Stem cell research, Transplantation, Xenograft research 	<ul style="list-style-type: none"> 생명의 존엄성 훼손 실험실 안전 관리소홀 	<ul style="list-style-type: none"> 위조 변조 표절 이미지조작 	<ul style="list-style-type: none"> 불공정 성과배분 (부당한 저자표기) 성과 과장(중복게재)



연구자의 사회적 책임

연구·출판 부정 행위

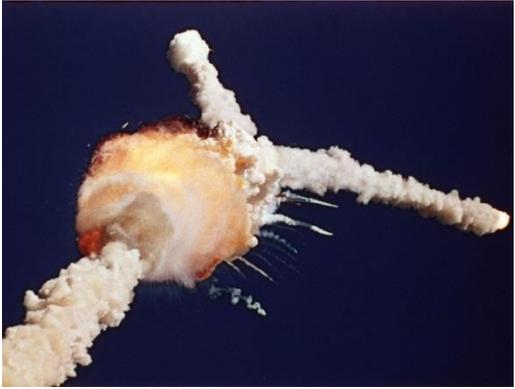
Historical trace

The Helsinki Declaration, a declaration that formally formulated the ethics of protecting the participants, arranged the institutional procedures for adherence to principles, such as the fundamental distinction

헬싱키 선언: 인간을 대상으로 연구할 때의 연구 윤리 원칙으로 세계의사협회(World Medical Association)에서 제정



1964
Declaration of Helsinki



1986
Space shuttle Challenger

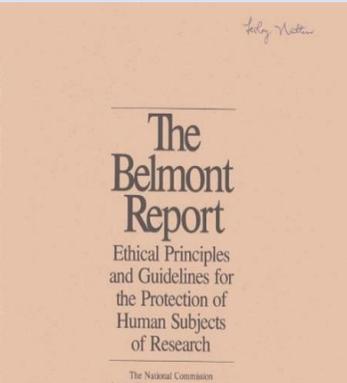
1947
Nuremberg Code



뉘른베르크 강령 제1조: 인간의 자발적인 동의는 절대적으로 중요하다

The Nuremberg Code presented 10 principles for research on human subjects. Any test is only permitted if the subject agrees to participate in it with his or her free will.

1979
Belmont Report



벨몬트 보고서: 윤리적인 연구는 인간 존중, 선의(선행), 정의(형평성)라는 3가지 원칙이 필요하다.

2011
Fukushima Daiichi nuclear disaster



연구자의 사회적 책임



1918년
노벨화학상 수상자

- 비료와 폭발물의 주원료인 암모니아 합성법을 개발
- 제1차 세계대전 중 클로린을 비롯한 여러 독가스를 개발했던 일로 인해 "화학 무기의 아버지"라 불림

연구자의 사회적 책임과 의무

1. 인류의 지식 증진과 복지에 기여
2. 진리를 탐구하는 **연구를 수행함에 있어서** 학자들은 모든 압력과 편견으로부터 **자유**로운 상태에서 본인연구의 객관성과 진실성 담보(**책임**)

Fritz Haber (1868-1934)

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nature
International journal of science



NOV 26-28, 2018

NEWS · 28 NOVEMBER 2018

CRISPR-baby scientist fails to satisfy critics

He Jiankui gives talk about controversial genome-edited baby claim, but ethical questions remain.

NEWS: A Chinese scientist claims that **twin girls have been born whose genomes' were edited** (CCR5, father with HIV) as embryos.

Southern University of Science and Technology said in a statement on 26 November that it was **unaware** of his experiment.

Legal issue: Making gene-edited babies goes against guidelines released by China's health ministry in 2003, but **does not break any laws**.

Ethical argument: Author claimed that the embryo was just a single cell when CCR5 was edited.

RELATED ARTICLES

- How the genome-edited babies revelation will affect research on baby cry

Genome-edited baby claim provokes





EDITORIAL · 05 DECEMBER 2018

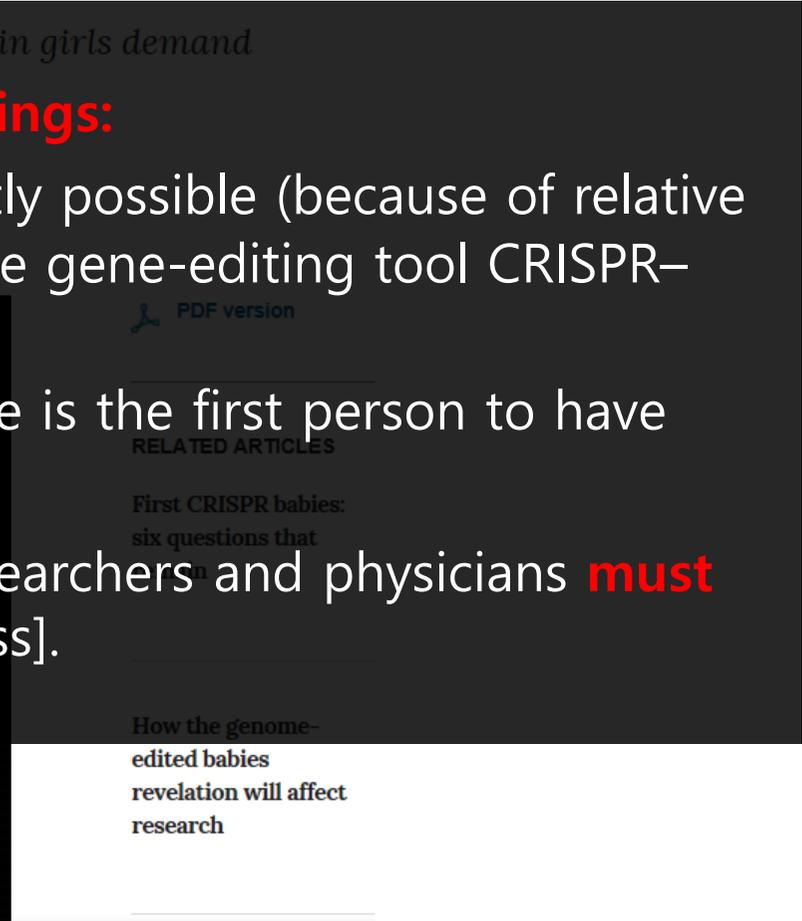
How to respond to CRISPR babies

The claims from He Jiankui that he has used gene editing to produce twin girls demand action. A new scientific paradigm is a good start.

Many scientists in the field agree on two things:

- 1.** **W**hat He claims to have done is eminently possible (because of relative simplicity and widespread availability of the gene-editing tool CRISPR–Cas9).
- 2.** **H**e will not be the last (whether or not he is the first person to have genetically edited a baby).

[is a **question for society**, not scientists]; [Researchers and physicians **must ask permission** rather than beg for forgiveness].





NEWS · 12 DECEMBER 2018

Baby gene edits could affect a range of traits

Gene targeted for its role in HIV is linked to increased severity of other infectious diseases – and has implications for learning in mice

Scientific points, intermingled with Ethical issues:

1. In 1996, scientists identified a CCR5-Δ32 mutation that makes carriers highly resistant to HIV.
2. Dr. He produced three mutations; one copy left in one girl.
3. **N**egative impact of CCR5⁻: susceptible to tick-borne viruses, dengue and yellow fever and West Nile viruses, and yellow fever vaccination.
4. **P**ositive (yet to be seen) effect: memory enhancement?

[Philip Murphy (NIAID, NIH): "CCR5 deficiency is not benign"; "What we know may be the tip of the iceberg".



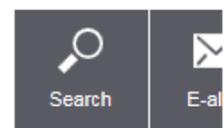
RELATED ARTICLES

remain

How the genome-edited babies revelation will affect research

Genome-edited baby claim provokes international outcry

SUBJECTS



NEWS · 14 DECEMBER 2018

China introduces 'social' punishments for scientific misconduct

Offending researchers could face restrictions on jobs, loans and business opportunities

under a system that...

David Cy...

- S**ocial punishment: lose trust in one area of society, face restrictions in other areas (Xi Jinping, 2016).
- E**xtension of '**social credit system**' (2014): failure to comply with the rules of one government agency can mean facing restrictions or penalties from other agencies.

Chinese president Xi Jinping has said people who lose trust in one area of society should face restrictions in other areas.
Credit: Mark R. Cristino/AFP/Getty





NEWS · 22 JANUARY 2019

CRISPR-baby scientist **fired by university**

Investigation by Chinese authorities finds He Jiankui broke national regulations in his controversial work on gene-edited babies.

Removal of He's references from **government websites**
 Censorship on social-media platforms such as **WeChat**

China says scientist He JianKui acted illegally and in pursuit of fame and fortune (Jan 21, 2019)



He Jiankui claimed last November that he had helped to produce the world's first gene-edited babies. Credit: Anthony Kwan/Bloomberg/Getty

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nature
International journal of science

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Biophysicist He Jiankui helped to create the world's first gene-edited babies. Credit: Mark Schiefelbein/AP/Shutterstock

NEWS · 03 JUNE 2019

Gene edits to 'CRISPR babies' might have shortened their life expectancy

Study of almost half a million people links mutation that protects against HIV infection to an earlier death.

nature
medicine

Sara Reardon

News & Views | Published

nature
medicine

HIV INFECTIONS

The hidden HIV-1

Jeremy Luban

Nature Medicine (2019)

Brief Communication | Published

CCR5-Δ32 is deleterious in the homozygous state in humans

Xinzhu Wei & Rasmus Nielsen

Nature Medicine (2019) | Download Citation

21% increase in the all-cause mortality rate in individuals who are homozygous for the CCR5-Δ32 allele

NEWS · 14 JUNE 2019

China announces hefty fines for unauthorized collection of DNA

A new law formalizes restrictions on the collection and use of people's genetic data

David Cyranoski

The government publicized three cases involving five companies and one Chinese hospital that had **broken the rules by transferring samples or publishing sequence data without government permission.**

- The **FINE** for unauthorized collection of genetic resources or data can be up to **USD 1.4 million.**
- be **BLACKLISTED** from any research involving genetic resources for up to **five years or, in extreme cases, permanently.**



NEWS · 10 JUNE 2019

Russian biologist plans more CRISPR-edited babies

Target the same gene (CCR5); rationale: embryos that will be implanted into HIV-positive mothers, reducing the risk of them passing on the virus to the baby *in utero*



Molecular biologist Denis Rebrikov is planning controversial gene-editing experiments in HIV-positive women.

THE DAILY NEWSLETTER

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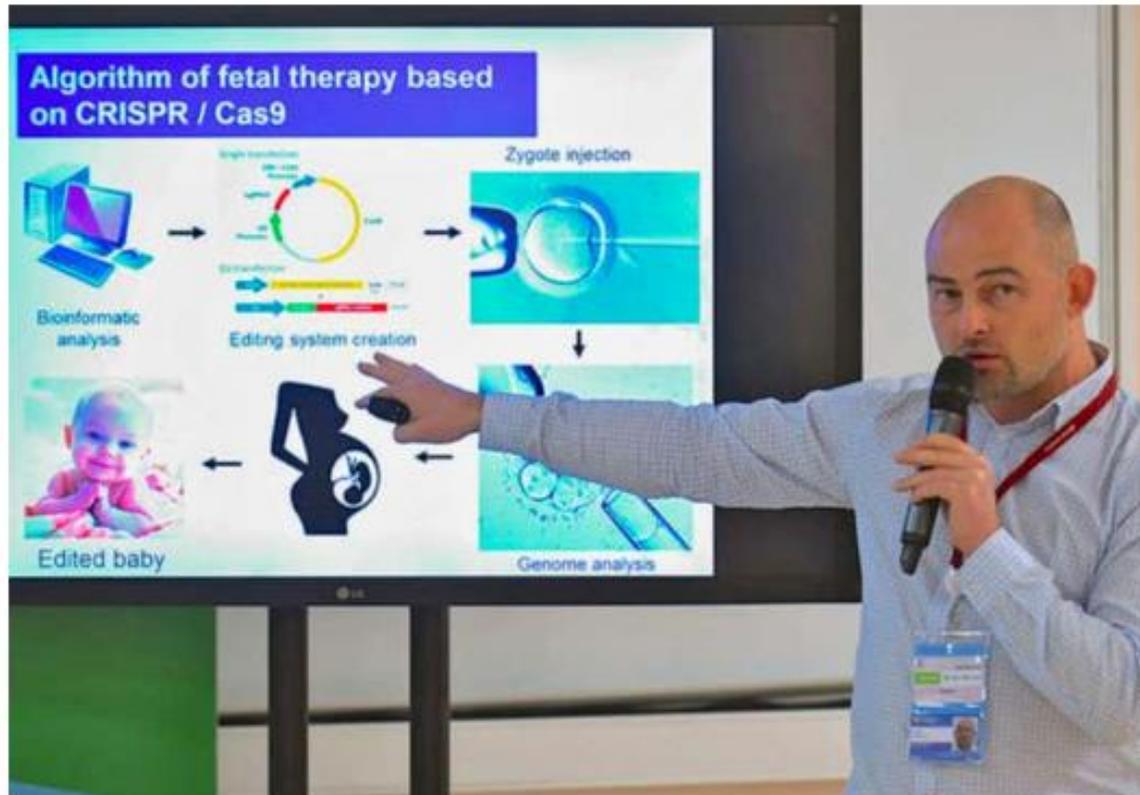
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Exclusive: Five couples lined up for CRISPR babies to avoid deafness



HEALTH 4 July 2019



Denis Rebrikov wants to use CRISPR gene editing to prevent children inheriting a form of deafness

Target the *GJB2* gene (rationale): to prevent children inheriting a form of deafness caused by mutations in *GJB2* gene. In western Siberia, many people have a missing DNA of this gene.



The 'gene-edited' monkeys: genetically identical primates offer the best models of human disease, but raise ethical issues .. .

NEWS • 29 JANUARY 2019

Chinese effort to clone gene-edited monkeys kicks off

Genetically identical primates could provide improved animal models of human disease, but some researchers raise ethical issues.

David Cyranoski



These cloned macaque monkeys are almost genetically identical, and share a mutation that disrupts their sleep cycle. Credit: Institute of Neuroscience, Chinese Academy of Sciences

연구자의 사회적 책임 vs. 연구의 자유

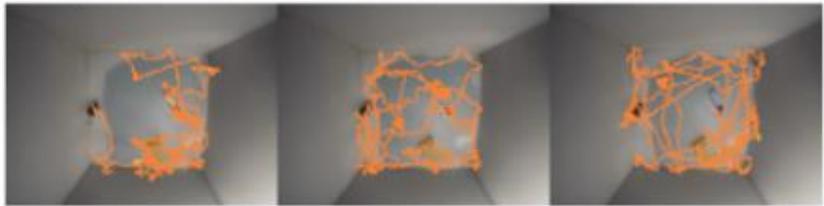
a Untreated *rd1* control



b Rhodopsin *rd1*



c MW-Opsin *rd1*



d Wildtype



Cal (UC-Berkeley) researchers use gene therapy to help blind mice gain sight.

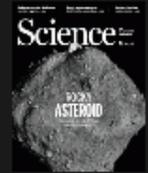
- SFGATE; Published 9:28 am PDT, Sunday, March 17, 2019

[Nature Communications, March 2019]

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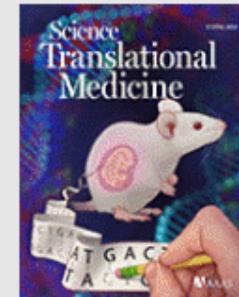


In utero gene editing for monogenic lung disease

Deepthi Alapati^{1,2,3,4,5}, William J. Zacharias^{3,4,5,6}, Heather A. Hartman⁷, Avery C. Rossidis⁷, John D. Stratigis⁷, Nicholas J Ahn...

+ See all authors and affiliations

Science Translational Medicine 17 Apr 2019:
Vol. 11, Issue 488, eaav8375
DOI: 10.1126/scitranslmed.aav8375



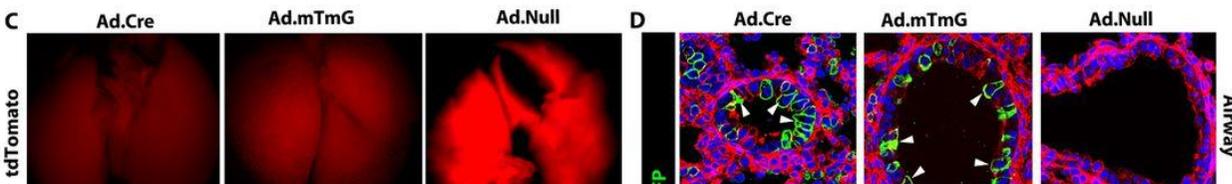
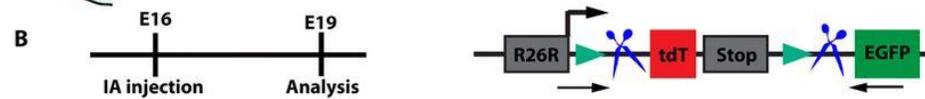
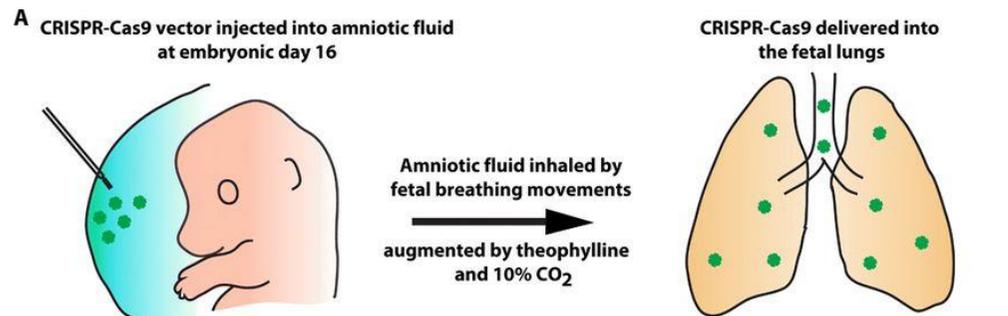
Science Translational Medicine

Vol 11, Issue 488
17 April 2019

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[CRISPR-Cas9 vector delivery *in utero*]

[Science Translational Medicine, Apr 2019]



연구자의 사회적 책임 vs. 연구의 자유

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16K



1K



A boy with X-linked myotubular myopathy. Gene therapy is helping some patients breathe without a ventilator.

AUDENTES THERAPEUTICS

Boys with a rare muscle disease are breathing on their own, thanks to gene therapy

By [Jocelyn Kaiser](#) | May. 2, 2019, 5:20 PM



[Science, May 2019]

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BY CASSANDRA WILLYARD DECEMBER 07, 2018

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BY LAUREL HAMERS DECEMBER 06, 2018

NEWS HEALTH

In a first, a woman with a uterus transplanted from a deceased donor gives birth

The healthy baby girl celebrates her first birthday this month

BY AIMEE CUNNINGHAM 6:30PM, DECEMBER 4, 2018



D. Ejzenberg et al. Livebirth after uterus transplantation from a deceased donor in a recipient with uterine infertility. *Lancet*. Published online December 4, 2018. doi:10.1016/S0140-6736(18)31766-5.

Gene-edited CRISPR mushroom escapes US regulation



Problem:

Highlight: USDA will not regulate a mushroom genetically modified with the gene-editing tool, CRISPR-Cas9

- 1. [gene-editing] alterations are small enough and indistinguishable from naturally occurring organisms**
- 2. How one can detect the differences?**
- 3. International conflict (regulation)**

Highlight: European court ruling that gene-edited crops are not allowed as other GMOs

NEWS · 23 JULY 2019

Scientists struggle to detect the unauthorized sale of mimic natural mutations.

Heidi Ledford



KCSE Gene-edited lettuce developed by the biotechnology firm Intrexon resists browning. Credit: Intrexon

To feed its 1.4 billion, China bets big on genome editing of crops



By Jon Cohen | Jul. 29, 2019, 8:00 AM

Main issues in plant (crop) science with CRISP-CAS9
Different views on GMO crop bet. Europe vs. USA (Brazil, Argentina and Australia)
Now in China and other countries

What then (for us)?

Our own stance what to do with the regulation
International regulation for imports and exports
Who does what?

Thinking points:

1. **G**enome editing vs. **G**ene cloning vs. **S**tem cell research vs. **T**ransplantation
2. **S**cience and/or **E**thics?
3. **C**lear cut: How much is too much?
4. **R**egulation: okay, but in what and how?



과편협 출판윤리 워크숍(2019-E02)

Nov. 22, 2019

한국과학기술회관 지하 1층 중회의실2

연구·출판 부정행위

연구자의 사회적 책임
국가경쟁력



연구 · 출판 부정행위

연구 부정행위

- ✓ Fabrication(위조)
- ✓ Falsification(변조)
- ✓ Unethical research
 - IRB/IACUC

출판 부정행위

- ✓ (Self)Plagiarism(자기표절)
- ✓ Biased/selective report
- ✓ Redundant publication
- ✓ Undeclared Col
- ✓ Authorship
- ✓ Reviewer misconduct
- ✓ Abuse of position
- ✓ Systematic manipulation of the publication process

연구부정행위: 언론보도사례

1. 서로 다른 듯 보이는 두개의 세포.. 논문에 실린 그대로의 이미지입니다.

2. 좌측의 세포를 포토샵으로 세로비율을 조절합니다.. 예라.. 언뜻 같아보이네요?

3. 두 이미지를 반 투명하게 조절하여 겹쳐봅니다.

4. 원래 하나였던 남이 분명하네요.

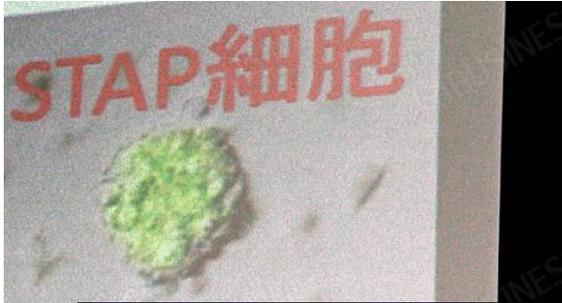
5. 이런 식으로 겹쳐지는 것이 3쌍이 더 있군요

유일하게
있는 부분
이 표시
이것이 의



줄기세포사건, 2005 (황우석)

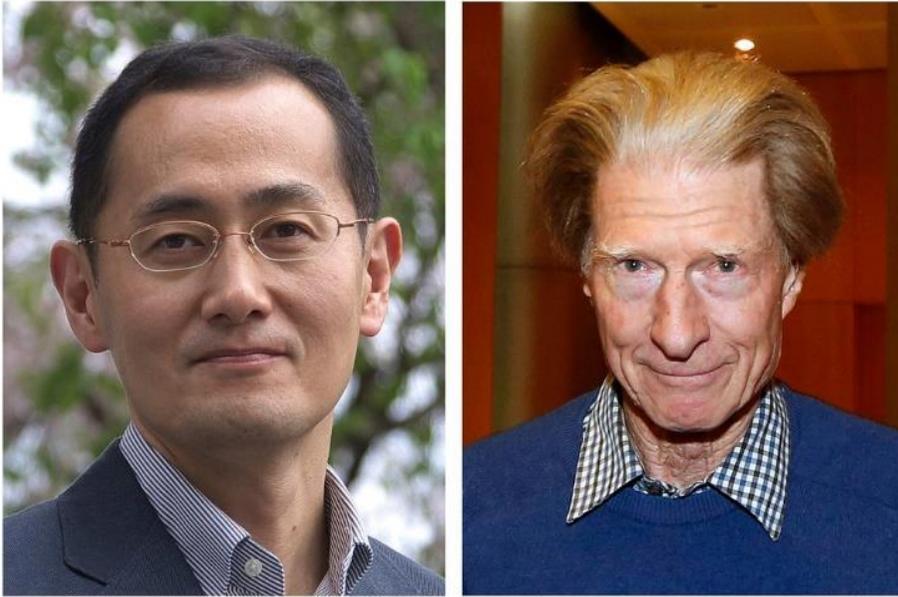
연구부정행위: 언론보도사례



만능세포(STAP 세포), 2014
오보카타 하루코(와세다대 출신 이화학연구소)



노벨상 .. 그리고 ..



Nobel Prize in Physiology or Medicine (2012)
Shinya Yamanaka (Kyoto University, Japan)
John B. Gurdon (University of Cambridge, England)



Director of Kyoto University's Center for iPS Cell Research and Application (CiRA), and others are seen bowing to apologize for **research misconduct** (data falsification and fabrication) by a CiRA researcher because of poor management (Jan. 22-23, 2018, Mainichi)

nature > news > article

a natureresearch journal

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NEWS · 22 FEBRUARY 2019

Approval of 'reprogrammed' stem cells to treat spinal-cord injuries for the first time

Approval from Japanese regulators means that trials of induced pluripotent stem cells can begin later this year.

David Cyranoski



RELATED ARTICLES

'Reprogrammed' stem cells implanted into patient with Parkinson's disease

How iPS cells changed the world



A Japanese scientist plans to insert human cells into rat embryos (pictured). Credit: Science Pictures Ltd/SPL

NEWS · 26 JULY 2019

Japan approves first human-animal embryo experiments

The research could eventually lead to new sources of organs for transplant, but ethical and technical hurdles need to be overcome.

David Cyranoski

[Ethical concerns] human cells in brain for cognition

[reply by Hiromitsu Nakauchi] In targeted organ generation, the cells go only to the pancreas

[Scientific challenge] the human cells will be eliminated from host embryos in evolutionarily distant species such as pigs and sheep

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NEWS FEATURE · 25 SEPTEMBER 2019

The potent effects of Japan's stem-cell policies

A five-year regulatory free-for-all in regenerative medicine has given the industry a boost. But patients might be paying the price.

[Support by government] Shinzo Abe promised to invest US\$ 1 billion over the next decade into regenerative medicine. ...

[Ethical concerns] "If we're left with very different global regulatory standards, it's going to be a really big problem," says Peter Marks, director of the Center for Biologics Evaluation and Research at the US Food and Drug Administration (FDA).

[Challenge] Safety, not efficacy



NEWS · 07 OCTOBER 2019

Scientists concerned over US plans to collect DNA data from immigrants

[Issue] US government plan to routinely collect DNA data from immigrants (at detention center) .. .

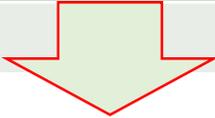
[Scientific point] Markers are specific short tandem repeats (STR); repeating regions of DNA that vary in length from person to person

[Ethical concerns] "this is equivalent of a collection from an entire apartment complex where there's been a murder or where there might be crime," says Sara Katsanis, a bioethicist.

[Challenge] Ethical issue, false positive

소 결론: 연구윤리(Research Ethics)

연구윤리의 시작 = 올바른 교육; 예방 > 치료

구분	사회윤리규범		내부윤리규범	
진행과정	연구주제선정	연구수행	결과보고	성과활용
				

1. Experimental design (Statistics)
2. IACUC, IRB (consent form)
3. Research (Lab) note
4. 공동연구(저자 됨, 저자 순서)
5. CoI (이해상충)

학술지/출판사 관련 윤리문제

- 투고된 원고 또는 출판 후 **중복출판** 의혹
- 투고된 원고의 **표절** 의혹
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- **Col**: 출판된 논문 원고에서 밝히지 않은 이해관계가 의심될 때
 - ✓ 미성년자녀저자
 - ✓ Academic capitalism (인공지능, big data, material science, medical science, clone technique, 유전자가위, 4차 산업혁명)
- 투고된 원고의 **윤리적 문제** 의심
- **전문 심사자**에 의해 저자의 아이디어나 자료 도용 의심

Ethical issues during/after the publication process



COPE (Committee on Publication Ethics) flowcharts

COPE is committed to educate and support editors, publishers and those involved in publication ethics with the aim of moving the culture of publishing towards one where ethical practices becomes the norm, part of the publishing culture.



Promoting integrity in research and its publication

COPE provides leadership in thinking on publication ethics, practical resources to educate and support members, and offers a professional voice in current debates.

[Read more about COPE...](#)

Tweet

Recommend 191 people recommend this. Be the first of your friends.



Latest from COPE



RESOURCE

Post-publication discussions and corrections

New resources including what to do if you suspect image manipulation or systematic manipulation of the publishing process and recognising

RESOURCE

Request to retract article

Case with advice from COPE
Forum on request for retraction and expression of...

NEWS

In the news

Read the latest publication ethics news

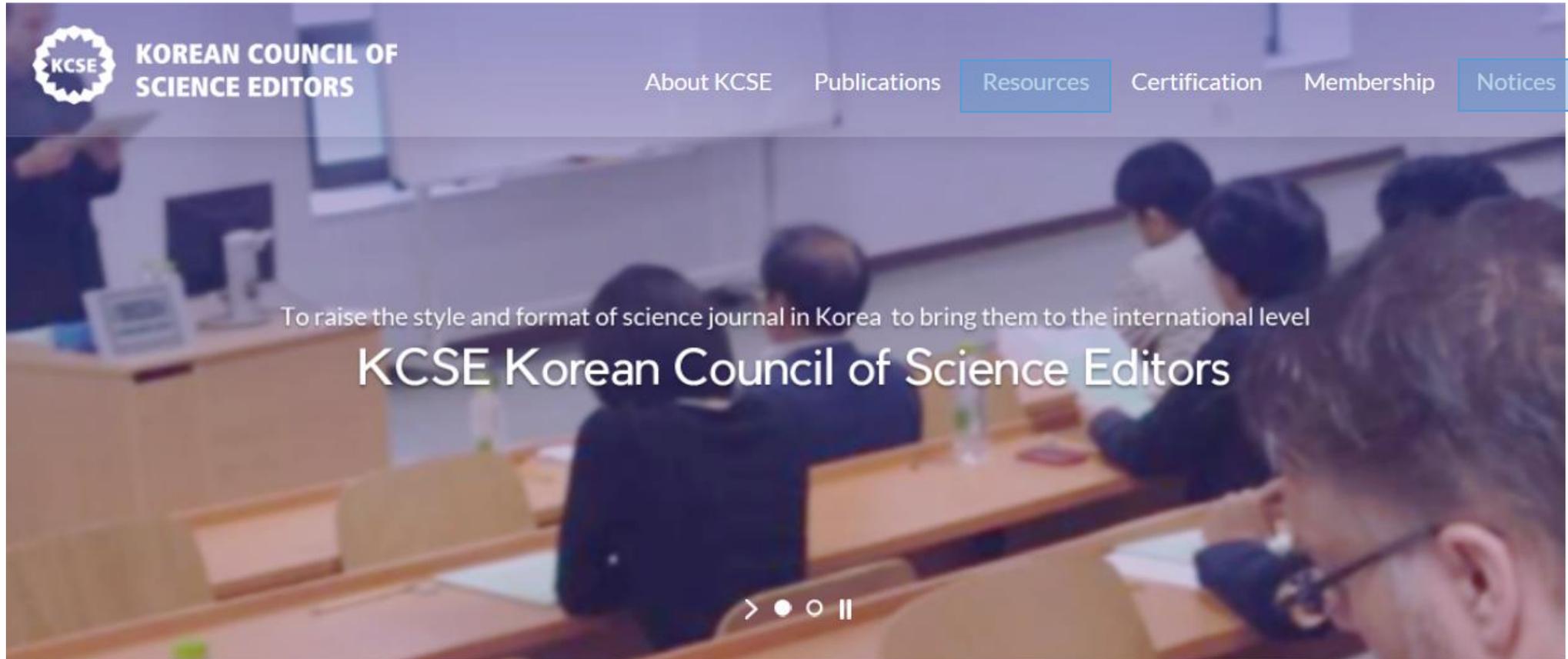
NEWS

November letter from the co-Chair

NEWS

Predatory Publishing: your comments

Resources -> Others -> 3. COPE flowcharts (국문번역판) -> cope_flowchart_2018_9_4.pdf
Notices -> Q&A



Events



편집인 워크숍(2018-A06)
2018. 11. 30

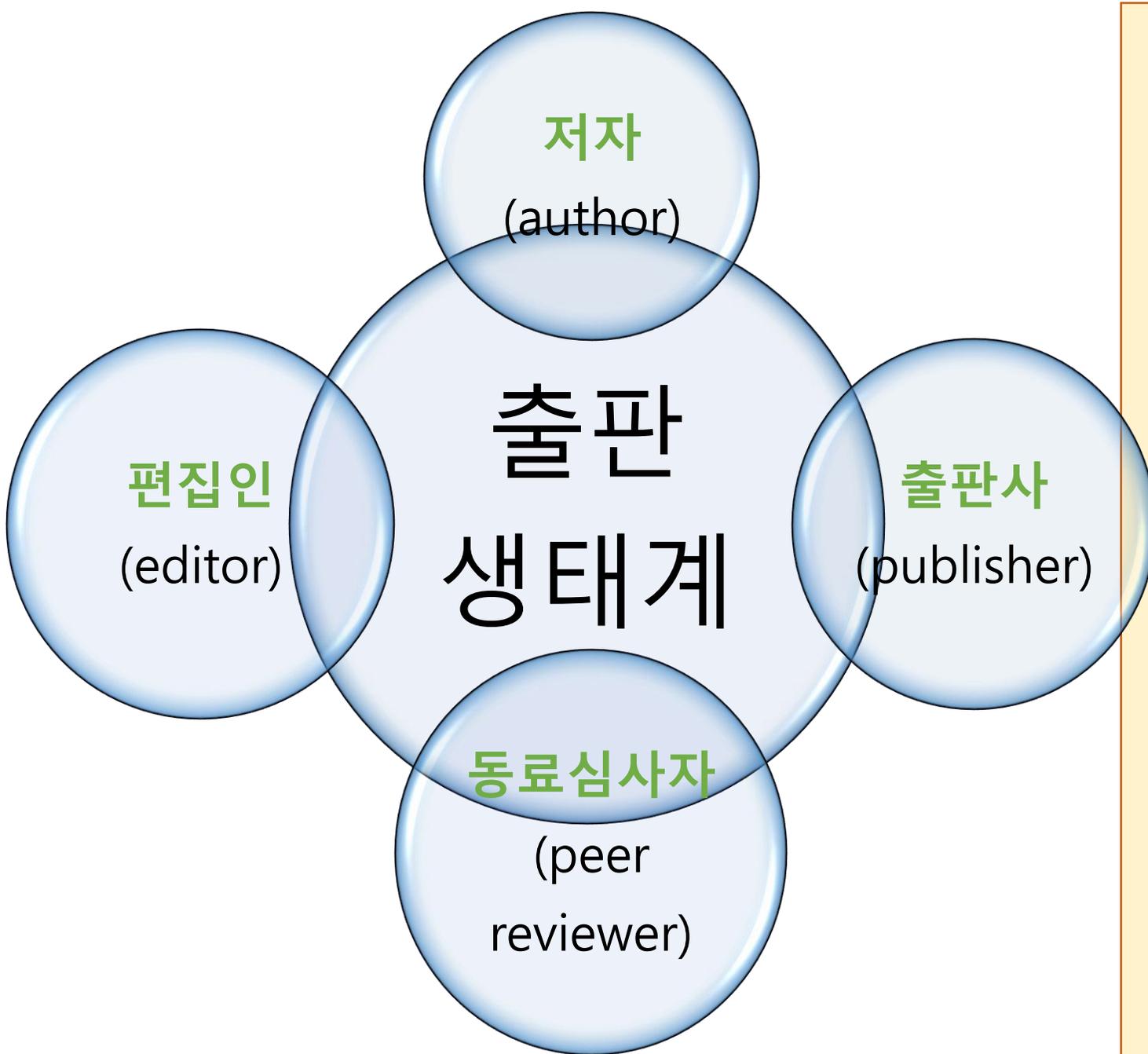
News

2018 BELS Certification Examination (Seoul)
2018-09-18

Science Editing



소결론: 출판생태계의 주체 및 핵심가치



- 진실성
(Integrity)
- 신뢰
(Trust)
- 투명성
(Transparency)

소결문: 출판윤리 주체의 책임

YES

NO

연구자
저자

- ✓ 연구노트작성 및 데이터 보관
- ✓ 인용
- ✓ 투고 규정 준수
- ✓ 저자 권한 이해
- ✓ 연구노트 작성 충실
- ✓ 이해상충 표명

- ✓ 데이터 위조/변조
- ✓ 표절
- ✓ 중복게재, 동시 투고
- ✓ 부당한 저자 표시
- ✓ 저작권 침해
- ✓ 이해상충 힌피/은폐

동료
심사자

- ✓ 공정하고 객관적인 논문 심사
- ✓ 성실하고 책임있는 심사
- ✓ 심사 관련 비밀 엄수
- ✓ 심사 기간 엄수
- ✓ 이해상충 표명

- ✓ 불공정한 논문 심사
- ✓ 불성실 심사
- ✓ 심사 기밀 누설
- ✓ 심사 기간 불이행
- ✓ 이해상충 힌피/은폐

학술지
(편집인)

- ✓ 공정한 동료심사자 배정
- ✓ 부당한 영향력 행사 금지
- ✓ 지위나 권한의 남용 배제
- ✓ 공평한 출판윤리 적용
- ✓ 가이드라인 활용

- ✓ 공정한 동료심사자 배정
- ✓ 부당한 영향력 행사
- ✓ 지위나 권한의 남용
- ✓ 출판윤리 불이행
- ✓ 가이드라인 비활용/배제



과편협 출판윤리 워크숍(2019-E02)

Nov. 22, 2019

한국과학기술회관 지하 1층 중회의실2

최근 이슈 따라잡기



Open Science

- ✓ Open access
- ✓ Predatory journal
- ✓ Preprint (MediArXive)
- ✓ Repository
- ✓ General data protection regulation
- ✓ Negative (results) journals
- ✓ Manuscript exchange common approach
- ✓ Transparency

OA journals vs. Subscription journals

Item	OA journals	Subscription journals
▪ 출판 비용(개인)	• YES	• (거의 대부분) NO
▪ 저작권(소유)	• 저자	• 출판사/학술지
▪ 배포, 복사, 번역, 재출판	• 가능(소스명기)	• Reprints 추가비용 발생
▪ 무료이용	• 가능(논문노출 증가)	• 학술지 구독자만 가능



Publishing models for scholarly journals

- **Traditional** (subscription) model.

- **Fee-based (gold) open access (OA)**: financed by submitting authors (typically through their institution or funding agency).

APC = money (profit to whom?)

- **No-fee (platinum or diamond) OA**: funded by an academic institution, learned society or a government information center.

- **Delayed OA**: subscription model but OA after some time.

- **Hybrid OA**: a subscription journal in which some of the articles are OA.

OA journals (Gold OA)

- 2009: about 4,800 active OA journals, publishing around 190,000 articles.
OA \neq Predatory journal
- 2015.10: over 10,000 OA journals listed in the Directory of Open Access Journals (DOAJ).
OA = One of the business models
- 2018.02.16: 11,169; peer-reviewed OA journals listed in the DOAJ.
- 2018.02.16: 59,692; Full-text "free e-journals" (**not all peer-reviewed**) listed in Electronic Journal Library.

OA journals: U of California



NEWS • 28 FEBRUARY 2019 • UPDATE 01 MARCH 2019

Huge US university cancels subscription with Elsevier

University of California and Dutch publisher fail to strike deal that would allow researchers to publish under open-access terms.

Nisha Gaiind

On Feb. 28, 2019

UC publishes nearly 10% of US research papers.
About \$11 million a year to Elsevier in subscription fees.



doi: 10.1038/d41586-019-00758-x

RELATED ARTICLES

Thousands of scientists run up against Elsevier's paywall

Scientists in Germany, Peru and Taiwan to lose access to Elsevier journals



과편협 출판윤리 워크숍(2019-E02)

Nov. 22, 2019

한국과학기술회관 지하 1층 중회의실2

Authorship issue

Authorship issue

Academic **authorship** of journal articles, books, and other original works

As results of academics' communicate and their scholarly work ..

1. To establish priority for their discoveries
2. To build their reputation among their peers

Authorship is a primary basis that employers use to evaluate academic personnel for employment, promotion, and tenure.

In academic publishing, authorship of a work is claimed by those making intellectual contributions to the completion of the research described in the work.

Work alone vs. collaboration : authorship can encompass activities other than writing the article

YES: A researcher who comes up with an experimental design and analyzes the data may be considered an author, even if she or he had little role in composing the text describing the results.

NO: According to some standards, even writing the entire article would not constitute authorship unless the writer was also involved in at least one other phase of the project.

Authorship issue

Authorship in the Natural Sciences

PNAS: "authorship should be limited to those who have contributed substantially to the work" and "authors are strongly encouraged to indicate their specific contributions"

American Chemical Society: authors are those who also "share responsibility and accountability for the results".

U.S. National Academies: "an author who is willing to take credit for a paper must also bear responsibility for its contents. Thus, unless a footnote or the text of the paper explicitly assigns responsibility for different parts of the paper to different authors, the authors whose names appear on a paper must share responsibility for all of it."

1. Editors of the Publications Division of the American Chemical Society. 2006. Ethical Guidelines to Publication of Chemical Research.
2. Committee on Science, Engineering and Public Policy, National Academy of Sciences. 1995. On Being A Scientist: Responsible Conduct In Research. National Academies Press, Washington DC.

Authorship issue

Authorship in **M**athematics, **T**heoretical computer science and **H**igh energy physics

In mathematics, the authors are usually listed in alphabetical order (this is the so-called Hardy-Littlewood Rule). This usage is described in the "Information Statements on the Culture of Research and Scholarship in Mathematics" section of the American Mathematical Society website, specifically the 2004 statement: Joint Research and Its Publication.

In other branches of knowledge such as economics, business, finance or particle physics, it is also usual to sort the authors alphabetically.

1. "Information Statements". Committee on the Profession. American Mathematical Society.
2. Waltman, L (2012). "An empirical analysis of the use of alphabetical authorship in scientific publishing". Journal of Informetrics. 4 (6): 700–711. arXiv:1206.4863.

Authorship issue

Authorship in Medicine (ICMJE)

1. Conception and design
or acquisition of data
or analysis and interpretation

2. Drafting **or** revising

3. Final approval

1 + 2 + 3

NO: Acquisition of funding, general supervision of the research group alone

THUS, Many authors - especially those in the middle of the byline - do not fulfill these authorship criteria.

Some medical journals have abandoned the strict notion of author, with the flexible notion of contributor.

Between about 1980-2010, average number of authors in medical papers increased, and perhaps tripled.

1. Sauermann et al. (2017). Authorship and contribution disclosures. *Science Advances*. 3 (11): e1700404.
2. Rennie et al. (1997). When authorship fails. A proposal to make contributors accountable. *JAMA* 278 (7): 579.
3. Tsao et al. (2009). Authorship in scholarly manuscripts: practical considerations for resident and early career physicians. *Academic Psychiatry*. 33 (1): 76–9.

Minor modification from ICMJE recommendation

<http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html>

Authorship issue

Authorship in Social sciences

American Psychological Association (APA): similar guidelines as medicine for authorship.

Authorship is not limited to the writing of manuscripts, but must include those who have made substantial contributions to a study such as "formulating the problem or hypothesis, structuring the experimental design, organizing and conducting the statistical analysis, interpreting the results, or writing a major portion of the paper".

While the APA guidelines list many other forms of contributions to a study that do not constitute authorship, it does state that combinations of these and other tasks may justify authorship. Like medicine, the APA considers institutional position, such as Department Chair, insufficient for attributing authorship.

1. American Psychological Association. (2001). Publication manual of the American Psychological Association (5th ed.). Washington, DC: American Psychological Association. p. 350.

Authorship issue

Authorship in Humanities

Neither the **Modern Languages Association** **nor** the **Chicago Manual of Style** define requirements for authorship (because usually humanities works are single-authored and the author **is responsible for the entire work**).

1. "Information Statements". Committee on the Profession. American Mathematical Society.
2. Waltman, L (2012). "An empirical analysis of the use of alphabetical authorship in scientific publishing". Journal of Informetrics. 4 (6): 700–711. arXiv:1206.4863.

Authorship issue

nature

Subscribe

Nature 575, 267-268 (2019)
doi: 10.1038/d41586-019-03371-0

NEWS • 12 NOVEMBER 2019

More South Korean academics caught naming kids as co-authors

The practice was probably used to improve the children's chances of securing a university place.

Mark Zastrow



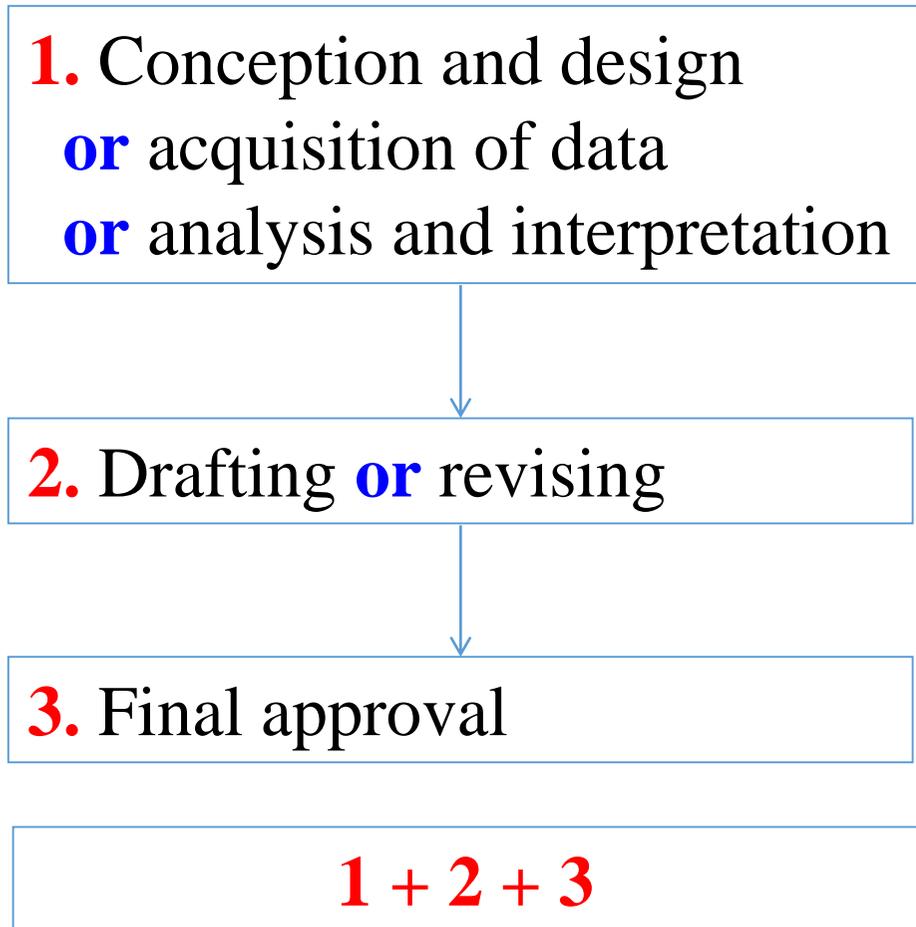
South Korea's education ministry has been investigating papers that have high-school students named as co-authors. Credit: Kim Hong-Ji AUNI/REUTERS

Unjustified authorship is considered **research misconduct** in South Korea.

The ministry and universities have now **identified a total of 794 publications** with child co-authors, of which 549 have been reviewed, the education minister Yoo Eun-hae said in a statement on 17 October. Of those, the ministry found that 24 papers had unjustified authorship.

Authorship issue

Who are the authors (ICMJE)



Q: What if

- A. A person who designed a study (criterion 1) but not draft or revise the manuscript (criterion 2)
- B. A researcher or medical writer (who provided intellectual input) may fulfill criterion 1 or 2 or both, but not among those who approved the final version (criterion 3).

Minor modification from ICMJE recommendation

<http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html>

Authorship issue

In need of .. .

- Reliability (신뢰)
- Honesty (정직)
- Respect (존중)
- Accountability (책임)

What to do .. .

No absolute rules.

Design carefully (in advance).

Immediate action on (un)expected.

Talk/discuss/decide the authorship in an early possible time among authors and confirm later as well.

Consideration .. .

Academic author(s)

Industry author(s)

Academic + industry authors

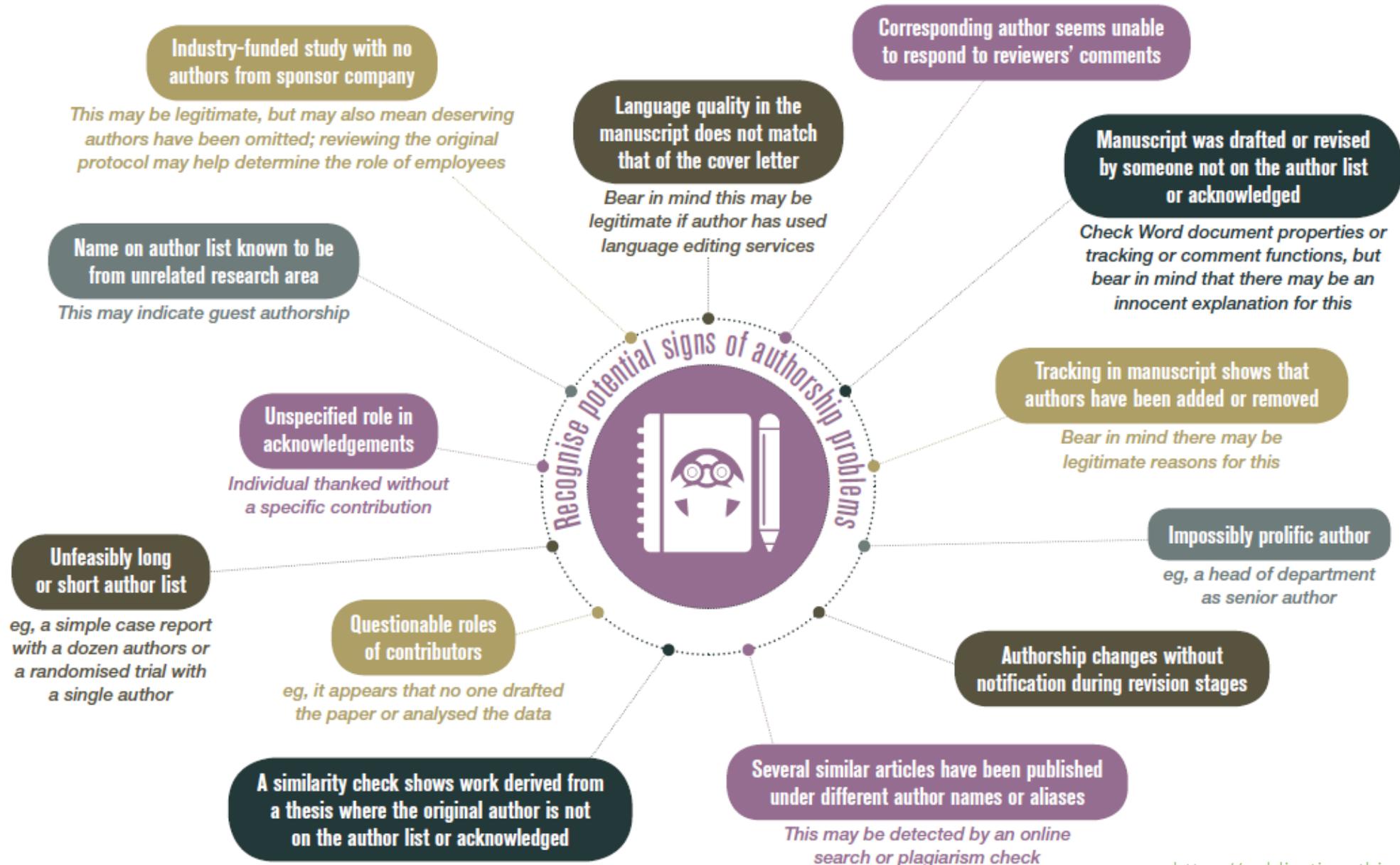
Role of academia and industry

Academic capitalism

Article is not equal to patent

How to recognize potential authorship problems

Signs that Might Indicate Authorship Problems



How to recognize potential authorship problems

Best Practice to Minimise Authorship Problems



Adopt policies that allow for transparency around who contributed to the submitted work and in what capacity

SUBMIT

1



Facilitate awareness of emerging standards eg, ORCID and CRediT

ENCOURAGE

2



Check for unusual patterns of behaviour which may suggest authorship problems

BEHAVIOUR

3

What to do as a Journal Editor and Manager

Nature Research: Scientific and Medical Journals, Products and Services

SCIENTIFIC
REPORTS



Dear Cheol-Heui Yun,

We are launching a post-publication article metrics service for all our authors in the form of an email update.

As you published your article on Tuesday, June 05, 2018 we did not want you to miss out, so have provided an overview of the number of times your article was viewed and its online attention using the Altmetric score*.

Regulation of CD4+CD8-CD25+ and CD4+CD8+CD25+ T cells by gut microbiota in chicken

Website page views	Altmetric score
914	1

- Service vs. Return
- Author
- Editor





What to do as a Journal Editor and Manager

Welcome Cheol-Heui YUN

We thank you for your contributions to the peer review process.

- Service vs. Return
- Author
- Editor

My review history

	<input type="radio"/> Recognized reviewer status achieved <i>November 2010</i> Download your certificate	1 Total reviews
	<input type="radio"/> Recognized reviewer status achieved <i>November 2010</i> Download your certificate	11 Total reviews
	<input type="radio"/> Recognized reviewer status achieved <i>December 2010</i> Download your certificate	3 Total reviews
	<input type="radio"/> Recognized reviewer status achieved <i>February 2012</i> Download your certificate	1 Total reviews
	<input type="radio"/> Recognized reviewer status achieved <i>October 2015</i> Download your certificate	2 Total reviews



2019 대한수면연구학회 Nov. 22, 2019
삼성생명빌딩 B동 9층 세미나실1

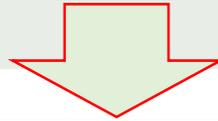
결론



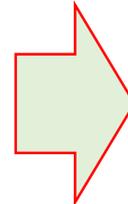
연구윤리 (Research Ethics)

연구윤리의 시작 = 올바른 교육 예방 > 치료

구분	사회윤리규범		내부윤리규범	
진행과정	주제선정	연구수행	결과보고	성과활용



1. Experimental design (Statistics)
2. IACUC, IRB (consent form)
3. Research (Lab) note
4. 공동연구(저자 됨, 저자 순서)
5. Col



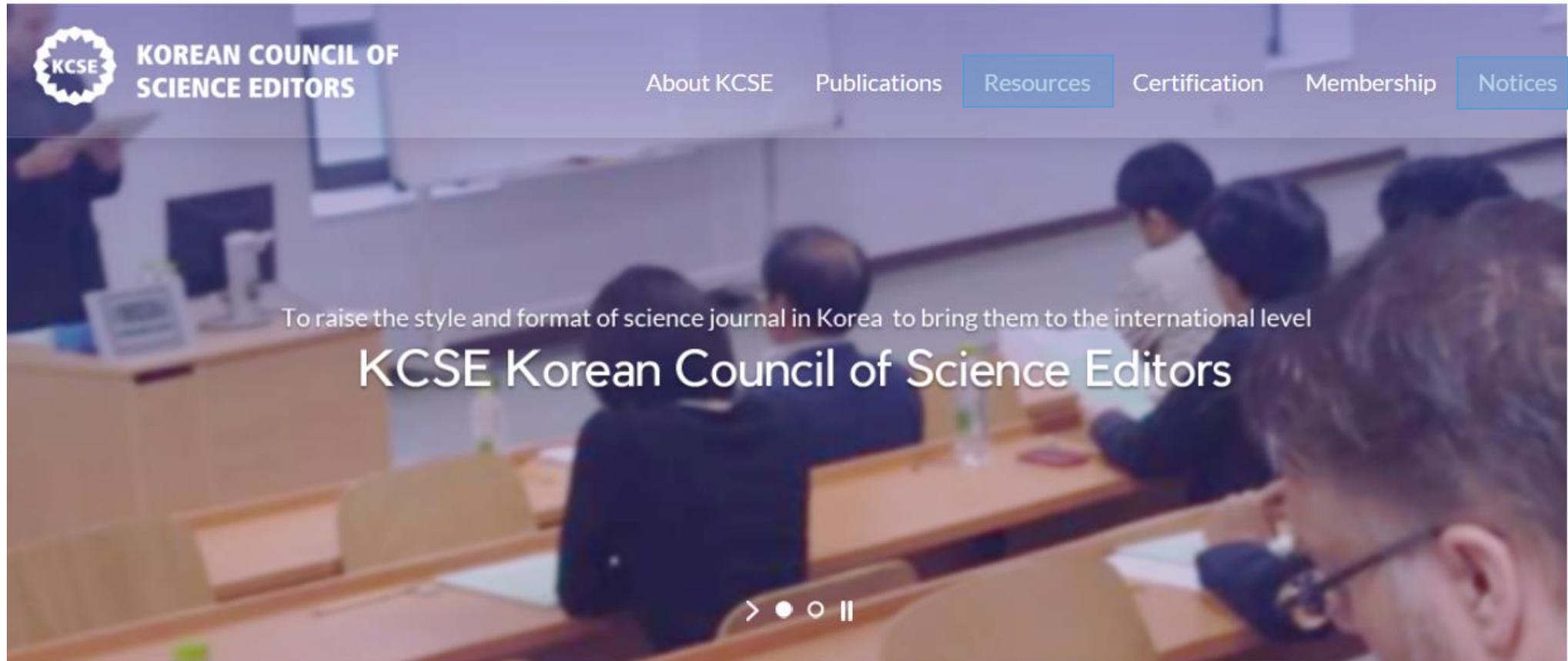
연구/출판 윤리 문제

- ✓ (Self) Plagiarism (자기표절)
- ✓ 위조 / 변조
- ✓ Biased/selective report
- ✓ 정보 은폐 (출판)
- ✓ Undeclared Col
- ✓ Reviewer misconduct
- ✓ Abuse of position
- ✓ Systematic manipulation

Resources -> Others -> 3. COPE flow chart (국문번역판) -> cope_flowchart_2018_9_4.pdf

Notices -> Q&A

윤철희: cyun@snu.ac.kr



Events



News



Science Editing



편집인 워크숍(2018-A06)

2018 BELS Certification Examination (Seoul)

