Authorship

김기홍
(과편협, 아주대)

Contents

- Authorship의 정의
- 저자의 권리와 책임
- Contributorship
- Guest author, ghost author, 기타
- Hyperauthorship: extremely large number of co-authors
- Summary

ICMJE (International Committee of Medical Journal Editors)

Authorship criteria

Credit, Responsibility, Transparency

- All persons designated as authors should qualify for authorship, and all those who qualify should be listed.
- Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.

ICMJE criteria

- Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; **AND**
- Drafting the work or revising it critically for important intellectual content; **AND**
- Final approval of the version to be published; **AND**
- Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

➢ **Acquisition of funding, the collection of data, or general supervision of the research group, by themselves, do not justify authorship.**

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

Other criteria

- **American Physical society**

"Authorship should be limited to those who have made a significant contribution to the concept, design, execution or interpretation of the research study. All those who have made significant contributions should be offered the opportunity to be listed as authors. Other individuals who have contributed to the study should be acknowledged, but not identified as authors."

➢ 논문 작성에 직접 기여하지 않아도 저자가 될 수 있음

- **American Chemical Society**

"To protect the integrity of authorship, only persons who have significantly contributed to the research or project and manuscript preparation shall be listed as co-authors.

The corresponding author attests to the fact that any others named as co-authors have seen the final version of the manuscript and have agreed to its submission for publication. Deceased persons who meet the criterion for co-authorship shall be included, with a footnote reporting date of death.

No fictitious name shall be given as an author or co-author. An author who submits a manuscript for publication accepts responsibility for having properly included all, and only, qualified co-authors."

➢ **대다수의 연구자들은 ICMJE 기준을 모르거나, 너무 강한 기준으로 생각하고 동의하지 않음**

Credit, responsibility, transparency

- **Credit**: research productivity의 척도, 연구비, 채용, 각종 reward
- **Responsibility**: error, misconduct에 대한 책임, criticism에 대한 response
- **Transparency**: 누가 어디서 어떻게 연구를 수행했는가가 분명해야 함, conflict of interest에 대한 명확한 설명

[E. Wager, *Maturitas* 2008;**62**:109-12]

Co-author들의 책임

- 제1저자, 교신저자가 아닌 공동저자들은 어느 정도의 책임을 져야 하는가?
- Schön scandal (2002): *Science* 9편, *Nature* 7편 포함 총 28편 철회, 8편 의심스러운 논문으로 공표됨
- Kloc: 36편중 29편의 공저자, Batlogg: 24편의 공저자

- 공동저자들은 대부분 연구 부정의 책임에서 면제되는 경우가 많음

- Kloc: 2007 Professor, Nanyang Technological University, Singapore
  1998 - 2007, Member of Technical Staff, Bell Laboratories
- Batlogg: Full Professor for Physics of Condensed Matter at the ETH Zurich since September 2000

Ambipolar Pentacene Field-Effect Transistors and Inverters

J. H. Schön,* S. Berg, Ch. Kloc, B. Batlogg

11 FEBRUARY 2000 VOL 287 SCIENCE www.sciencemag.org

Contributorship

- Proposed by Rennie, Yank, Emanuel
  [JAMA **278**, 579 (1997)]
- Adopted by some medical journals
- Contributor list

➢ **Guarantor**: one or more authors who take responsibility for the integrity of the work as a whole

Contributor list (Examples)

- *Nature*

Author Contributions A.O. carried out all cellular experiments. S.M.N. carried out *in vitro* ubiquitin-related experiments and mass spectrometry. M.D.W. produced recombinant KEAP1, USP11 and chemically ubiquitylated PALB2. S.L. produced the *53BP1*Δ cells. R.I.E. produced neddylated CUL3–RBX1. A.S. and M.M. helped A.O. B.X. contributed PALB2 reagents and advice. J.P., J.S. and G.D. provided reagents and advice for the gene-targeting assay. M.P. supervised R.I.E. D.D. supervised the project and wrote the manuscript with A.O. and S.M.N., with input from the other authors.

- *BMJ*

Contributors: ShT performed statistical analysis and had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. MS, HT, and KK contributed to the design and conduct of the study. SK and SaT contributed to the writing of the manuscript. KK is the principal investigator and the guarantor of the study. The sponsor of the study had no role in the study design, data collection, data analysis, data interpretation, or writing of the report.

BMJ

- “We list contributors in two ways. Firstly, we publish a list of authors' names at the beginning of the paper and, secondly, we list contributors **(some of whom may not be included as authors)** at the end of the paper, giving details of who did what in planning, conducting, and reporting the work.”

JAMA

- For reports of original data and systematic reviews, authors' specific contributions will be published in the Acknowledgment section. All other persons who have made substantial contributions to the work reported in this manuscript (eg, data collection, analysis, or writing or editing assistance) but who do not fulfill the authorship criteria should be named with their specific contributions and affiliations in an Acknowledgment in the manuscript. Written permission to include the names of individuals in the Acknowledgment section must be obtained.

Neurology

- *Neurology* defines an author as a person who has made a substantive **intellectual contribution** to the submitted manuscript. A substantive contribution includes **one or more** of the following: Design or conceptualization of the study **OR** analysis or interpretation of the data **OR** drafting or revising the manuscript for intellectual content
- Professional writers employed by pharmaceutical companies or other academic, governmental, or commercial entities who have drafted or revised the intellectual content of the paper **must** be included as authors. [No ghost writing allowed]

Guest/honorary/gift author
Ghost author

- Wislar *et al BMJ* 2011;**343**:d6128
- Survey of 545 corresponding authors of papers published in 6 top medical journals in 2008
- 96/545 (17.6%) of papers had guest authors
- 49/622 (7.9%) of papers had ghost authors

연구 논문의 guest author 수 증가

	1996	2008
Research articles	16.3%	25.0%
Review articles	25.5%	15.0%
Editorials	20.8%	11.2%

- 연구 논문들의 평균 저자수가 증가하면서 guest author 수도 증가하고 있음
- 다른 연구 논문들에서는 훨씬 더 많은 수의 guest author가 보고되었음 (26%, 39%)

Table 1| **Prevalence of honorary and ghost authors in a sample of 630 research, review, and editorial articles published in six general medical journals with high impact factors in 2008, by journal and article type**

	Total*		Research		Reviews		Editorials	
Journal	No of articles	% (95% CI) of articles	No of articles	% (95% CI) of articles	No of articles	% (95% CI) of articles	No of articles	% (95% CI) of articles
Honorary author		(n=545)		(n=220)		(n=120)		(n=205)
Ann Intern Med	9/58	15.5 (8.2 to 27.2)	6/26	23.1 (10.7 to 42.4)	2/23	8.7 (1.3 to 28.0)	1/9	11.1 (0 to 45.7)
JAMA	20/120	16.7 (11.0 to 24.4)	13/54	24.1 (14.5 to 37.1)	5/20	25.0 (10.8 to 47.3)	2/46	4.3 (0.4 to 15.3)
Lancet	24/122	19.7 (13.5 to 27.7)	5/30	16.7 (6.9 to 34.0)	4/24	16.7 (6.1 to 36.5)	15/68	22.1 (13.7 to 33.4)
Nature Med†	12/41	29.3 (17.5 to 44.6)	11/27	40.7 (24.5 to 59.3)		NA	1/14	7.1 (0 to 33.5)
N Engl J Med	18/147	12.2 7.8 to 18.6)	13/58	24.1 (13.5 to 34.8)	3/36	8.3 (2.1 to 22.6)	2/53	3.8 (0.3 to 13.5)
PLoS Med	13/57	22.8 (13.7 to 35.3)	7/25	32.0 (17.1 to 51.7)	4/17	23.5 (9.1 to 47.8)	2/15	13.3 (2.5 to 39.1)
Total	96/545	17.6 (14.6 to 21.0)	55/220	25.0 (19.7 to 31.1)	18/120	15.0 (9.6 to 22.6)	23/205	11.2 (7.5 to 16.3)
Ghost author		(n=622)		(n=226)		(n=134)		(n=262)
Ann Intern Med	3/61	4.9 (1.1 to 14.0)	2/26	7.7 (1.0 to 25.3)	1/25	4.0 (0 to 21.1)	0/10	0 (0 to 24.9)
JAMA	11/140	7.9 (4.3 to 13.7)	8/56	14.3 (7.2 to 26.0)	1/24	4.2 (0 to 21.9)	2/60	3.3 (0.3 to 12.0)
Lancet	11/145	7.6 (4.2 to 13.2)	4/30	13.3 (4.7 to 30.3)	1/28	3.6 (0 to 19.2)	6/87	6.9 (2.9 to 14.5)
Nature Med	1/48	2.1 (0 to 11.9)	1/26	3.8 (0 to 20.5)	0/1	0	0/21	0 (0 to 13.5)
N Engl J Med	18/163	11.0 (7.0 to 16.9)	9/60	15.0 (7.9 to 26.3)	5/39	12.8 (5.1 to 27.2)	4/64	6.3 (2.0 to 15.4)
PLoS Med	5/65	7.7 (3.0 to 17.2)	3/28	10.7 (2.9 to 28.0)	0/17	0 (0 to 16.2)	2/20	10.0 (1.6 to 31.3)
Total	49/622	7.9 (6.0 to 10.3)	27/226	11.9 (8.3 to 16.9)	8/134	6.0 (2.9 to 11.5)	14/262	5.3 (3.1 to 8.8)

*Honorary author analyses are based on 545 articles with usable data; ghost author analyses are based on 622 articles with usable data.

†No review articles were eligible for honorary author analyses in *Nature Medicine*.

Guest Authorship and Ghostwriting

- 1960년대 담배 해악 관련 연구에 대한 담배 회사의 대응으로부터 시작됨
- 거대 제약회사, 농화학회사들이 주도
- 학술지뿐 아니라 언론사 사설 등에도 사례 발견

EDITORIAL

Ghostwriting: The Dirty Little Secret of Medical Publishing That Just Got Bigger

The PLoS Medicine Editors

Published: September 8, 2009 • https://doi.org/10.1371/journal.pmed.1000156

The Haunting of Medical Journals: How Ghostwriting Sold "HRT"

Adriane J. Fugh-Berman

Published: September 7, 2010 • https://doi.org/10.1371/journal.pmed.1000335

Ghostwriting 사례

Guest Authorship and Ghostwriting in Publications Related to Rofecoxib

A Case Study of Industry Documents From Rofecoxib Litigation

Joseph S. Ross, MD, MHS; Kevin P. Hill, MD, MHS; David S. Egilman, MD, MPH; et al

» Author Affiliations

JAMA. 2008;299(15):1800-1812. doi:10.1001/jama.299.15.1800

New York Times 기사

Monsanto Weed Killer Roundup Faces New Doubts on Safety in Unsealed Documents

By DANNY HAKIM MARCH 14, 2017

Ghostwriting 사례

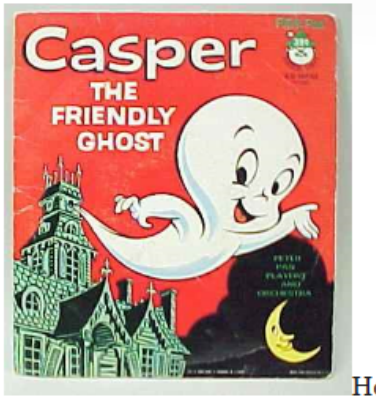
CBS News

By JIM EDWARDS / MONEYWATCH / *April 16, 2010, 12:30 PM*

Inside Pfizer's Ghostwriting Shop: Friendly Drug Studies for Just $1,000

Comments / Share / Tweet / Stumble / Email

Last Updated Apr 16, 2010 12:30 PM EDT



How much does it cost to hire a respected academic to slap his name on a friendly drug-study report? At **Parke-Davis**, later acquired by **Pfizer** (PFE), managers paid academics $1,000 per paper, according to a document released in litigation over the company's **Neurontin** anticonvulsant.

MEDICAL EXAMINER | HEALTH AND MEDICINE EXPLAINED. | SEPT. 11 2017 4:34 PM

Big Pharma's Attempt to Ghostwrite for *Stat* Ended Badly—but Not Badly Enough

Stat retracted the story, but for the wrong reasons and without addressing the real problem.

By Charles Seife

"Independent" experts have been drafted into becoming sock puppets for Big Pharma.

Co-first author
Co-corresponding author

LETTER

doi:10.1038/nature16142

A mechanism for the suppression of homologous recombination in G1 cells

Alexandre Orthwein[1]*, Sylvie M. Noordermeer[1]*, Marcus D. Wilson[1], Sébastien Landry[1], Radoslav I. Enchev[2], Alana Sherker[1,3], Meagan Munro[1], Jordan Pinder[4], Jayme Salsman[4], Graham Dellaire[4], Bing Xia[5], Matthias Peter[2] & Daniel Durocher[1,3]

*These authors contributed equally to this work.

Synthesis of borophenes: Anisotropic, two-dimensional boron polymorphs

Andrew J. Mannix,[1,2] Xiang-Feng Zhou,[3,4] Brian Kiraly,[1,2] Joshua D. Wood,[2] Diego Alducin,[5] Benjamin D. Myers,[2,6] Xiaolong Liu,[7] Brandon L. Fisher,[1] Ulises Santiago,[5] Jeffrey R. Guest,[1] Miguel Jose Yacaman,[5] Arturo Ponce,[5] Artem R. Oganov,[8,9,3]* Mark C. Hersam,[2,7,10]* Nathan P. Guisinger[1]*

*Corresponding author. E-mail: nguisinger@anl.gov (N.P.G.); m-hersam@northwestern.edu (M.C.H.); artem.oganov@stonybrook.edu (A.R.O.)

Paper with the largest number of authors

- 5,154 authors
- 총 33 페이지에서 저자 리스트가 24 페이지
- 저자명 알파벳순/기관별 알파벳순 혼용
- 교신저자가 표시되어 있지 않음

PRL 114, 191803 (2015) Selected for a Viewpoint in *Physics* PHYSICAL REVIEW LETTERS week ending 15 MAY 2015

Combined Measurement of the Higgs Boson Mass in *pp* Collisions at $\sqrt{s} = 7$ and 8 TeV with the ATLAS and CMS Experiments

G. Aad *et al.*[*]

(ATLAS Collaboration)[†]
(CMS Collaboration)[‡]

(Received 25 March 2015; published 14 May 2015)

저자명

G. Aad,[85,†] B. Abbott,[113,†] J. Abdallah,[151,†] O. Abdinov,[11,†] R. Aben,[107,†] M. Abolins,[90,†] O. S. AbouZeid,[158,†] H. Abramowicz,[153,†] H. Abreu,[152,†] R. Abreu,[30,†] Y. Abulaiti,[146a,146b,†] B. S. Acharya,[164a,164b,b,†] L. Adamczyk,[38a,†] D. L. Adams,[25,†] J. Adelman,[108,†] S. Adomeit,[100,†] T. Adye,[131,†] A. A. Affolder,[74,†] T. Agatonovic-Jovin,[13,†] J. A. Aguilar-Saavedra,[126a,126f,†] S. P. Ahlen,[22,†] F. Ahmadov,[65,c,†] G. Aielli,[133a,133b,†] H. Akerstedt,[146a,146b,†]

L. Zwalinski,[30,†] V. Khachatryan,[179,‡] A. M. Sirunyan,[179,‡] A. Tumasyan,[179,‡] W. Adam,[180,‡] E. Asilar,[180,‡] T. Bergauer,[180,‡] J. Brandstetter,[180,‡] E. Brondolin,[180,‡] M. Dragicevic,[180,‡] J. Erö,[180,‡] M. Flechl,[180,‡] M. Friedl,[180,‡] R. Frühwirth,[180,nn,‡] V. M. Ghete,[180,‡] C. Hartl,[180,‡] N. Hörmann,[180,‡] J. Hrubec,[180,‡] M. Jeitler,[180,nn,‡] V. Knünz,[180,‡] A. König,[180,‡]

기관명

(ATLAS Collaboration)†
(CMS Collaboration)‡

[1]*Department of Physics, University of Adelaide, Adelaide, Australia*
[2]*Physics Department, SUNY Albany, Albany, New York, USA*
[3]*Department of Physics, University of Alberta, Edmonton, Alberta, Canada*
[4a]*Department of Physics, Ankara University, Ankara, Turkey*
[4b]*Istanbul Aydin University, Istanbul, Turkey*
[4c]*Division of Physics, TOBB University of Economics and Technology, Ankara, Turkey*

[247a]*INFN Sezione di Trieste, Trieste, Italy*
[247b]*Università di Trieste, Trieste, Italy*
[248]*Kangwon National University, Chunchon, Korea*
[249]*Kyungpook National University, Daegu, Korea*
[250]*Chonbuk National University, Jeonju, Korea*
[251]*Chonnam National University, Institute for Universe and Elementary Particles, Kwangju, Korea*
[252]*Korea University, Seoul, Korea*
[253]*Seoul National University, Seoul, Korea*
[254]*University of Seoul, Seoul, Korea*
[255]*Sungkyunkwan University, Suwon, Korea*
[256]*Vilnius University, Vilnius, Lithuania*

Other examples

- Nature (2015)
- 저자수 > 2700, 저자 리스트 5 페이지

LETTER

OPEN

doi:10.1038/nature14474

Observation of the rare $B_s^0 \to \mu^+\mu^-$ decay from the combined analysis of CMS and LHCb data

The CMS and LHCb collaborations*

Author Contributions All authors have contributed to the publication, being variously involved in the design and the construction of the detectors, in writing software, calibrating sub-systems, operating the detectors and acquiring data and finally analysing the processed data.

RESEARCH LETTER

CMS Collaboration

V. Khachatryan[1], A.M. Sirunyan[1], A. Tumasyan[1], W. Adam[2], T. Bergauer[2], M. Dragicevic[2], J. Erö[2], M. Friedl[2], R. Frühwirth[2,204], V.M. Ghete[2], C. Hartl[2], N. Hörmann[2], J. Hrubec[2], M. Jeitler[2,204], W. Kiesenhofer[2], V. Knünz[2], M. Krammer[2,204], I. Krätschmer[2], D. Liko[2], I. Mikulec[2], D. Rabady[2,205], B. Rahbaran[2], H. Rohringer[2], R. Schöfbeck[2], J. Strauss[2], W. Treberer-Treberspurg[2], W. Waltenberger[2], C.-E. Wulz[2,204], V. Mossolov[3], H. Schettler[40], P. Schleper[40], E. Schlieckau[40], A. Schmidt[40], M. Seidel[40], V. Sola[40], H. Stadie[40], G. Steinbrück[40], D. Troendle[40], E. Usai[40], L. Vanelderen[40], A. Vanhoefer[40], C. Barth[41], C. Baus[41], J. Berger[41], C. Böser[41], E. Butz[41], T. Chwalek[41], W. De Boer[41], A. Descroix[41], A. Dierlamm[41], M. Feindt[41], F. Frensch[41], M. Giffels[41], A. Gilbert[41], F. Hartmann[41,205], T. Hauth[41], U. Husemann[41], I. Katkov[41,208], A. Kornmayer[41,205], E. Kuznetsova[41], P. Lobelle Pardo[41], M.U. Mozer[41], T. Müller[41], Th. Müller[41], A. Nürnberg[41], G. Quast[41], K. Rabbertz[41], S. Röcker[41], H.J. Simonis[41], F.M. Stober[41], R. Ulrich[41], J. Wagner-Kuhr[41], S. Wayand[41], T. Weiler[41], R. Wolf[41], G. Anagnostou[42],

Other examples

- Higgs 입자 관찰 논문 (노벨물리학상 수상) (2012)
- 2,932 authors (21 deceased)

Physics Letters B 716 (2012) 1–29

Contents lists available at SciVerse ScienceDirect

Physics Letters B

www.elsevier.com/locate/physletb

Observation of a new particle in the search for the Standard Model Higgs boson with the ATLAS detector at the LHC ☆

ATLAS Collaboration *

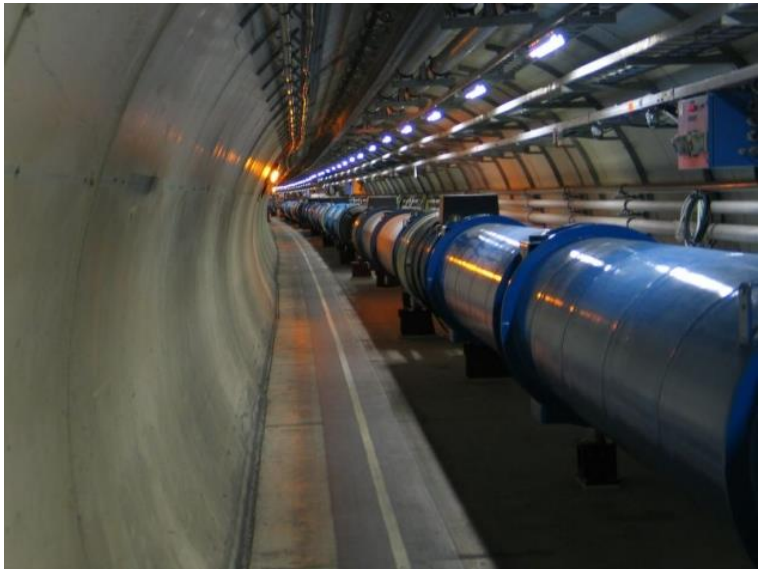
This paper is dedicated to the memory of our ATLAS colleagues who did not live to see the full impact and significance of their contributions to the experiment.

High citation rate

- 대규모 collaboration들에 의한 입자물리학 실험 논문들은 매우 많은 수가 출판되며 논문당 인용수도 매우 많음 (수백 – 수천번)
- 이 논문들을 다른 분야 논문들과 비교 평가하는 것은 매우 어려움

입자물리학 실험

- Collaboration들은 매우 조직화되어 있으며 기업과 유사하게 운영됨



- “We have a long tradition of long author lists, and we all know how to interpret them.”
- “In particle physics, the experiments are very large, and people work on many different tasks.”

Genomics example

- G3: Genes Genomes Genetics (2015)
- 1,014 authors, over 900 undergraduates
- 제1저자, 교신저자 표시됨
- 대부분의 저자는 기관별 알파벳순

Drosophila Muller F Elements Maintain a Distinct Set of Genomic Properties Over 40 Million Years of Evolution

Wilson Leung and Participating Students and Faculty of the Genomics Education Partnership[1]

Corresponding author: Sarah C. R. Elgin, Washington University in St. Louis, Campus Box 1137, One Brookings Drive, St. Louis, MO 63130-4899. E-mail: selgin@wustl.edu

Wilson Leung[a], Christopher D. Shaffer[a], Laura K. Reed[b], Sheryl T. Smith[c], William Barshop[a], William Dirkes[a], Matthew Dothager[a], Paul Lee[a], Jeannette Wong[a], David Xiong[a], Han Yuan[a], James E. J. Bedard[d,1], Joshua F. Machone[d], Seantay D. Patterson[d], Amber L. Price[d], Bryce A. Turner[d], Srebrenka Robic[e], Erin K. Luippold[e], Shannon R. McCartha[e], Tezin A. Walji[e], Chelsea A. Walker[e], Kenneth Saville[f], Marita K. Abrams[f], Andrew R. Armstrong[f], William Armstrong[f], Robert J. Bailey[f], Chelsea R. Barberi[f], Lauren R. Beck[f], Amanda L. Blaker[f], Christopher E. Blunden[f], Jordan P. Brand[f], Ethan J. Brock[f], Dana W. Brooks[f], Marie Brown[f], Sarah C. Butzler[f], Eric M. Clark[f], Nicole B. Clark[f], Ashley A. Collins[f],

Daron C. Barnard[ooo], Isaac Appiah[ooo], Michelle M. Giddens[ooo], Gerard P. McNeil[ppp], Adeola Adebayo[ppp], Kate Bagaeva[ppp], Justina Chinwong[ppp], Chrystel Dol[ppp], Eunice George[ppp], Kirk Haltaufderhyde[ppp], Joanna Haye[ppp], Manpreet Kaur[ppp], Max Semon[ppp], Dmitri Serjanov[ppp], Anika Toorie[ppp], Christopher Wilson[ppp], Nicole C. Riddle[a,9], Jeremy Buhler[qqq], Elaine R. Mardis[rrr], and Sarah C. R. Elgin[a]

[a]Department of Biology, Washington University in St. Louis, St. Louis, MO 63130, [b]Department of Biological Sciences, University of Alabama,

Responses

- "Using the power of 900 undergrads to edit highly repetitive DNA sequences – a unique blend of science & education"
- Elgin "All of the students read, critiqued and approved the manuscript, but did not write or revise it" "One of our big goals was to publish a paper with the students as co-authors. We wanted them to be able to look themselves up on PubMed!"
- "I think it is all perfectly fine, as long as the paper counts as a 1/1000 of a paper for each author, and if it gets cited, each citation counts as 1/1000 of a citation for each author."
- "Papers like this render the concept of 'authorship' of a scientific paper meaningless."
- "As a coauthor on the paper, I would have felt fine with either coauthorship or an acknowledgment in the supplementary however there was much more incentive to do more work when coauthorship was presented."

Medicine example

- 1993 Ig Nobel Prize in Literature "for publishing a medical research paper which has one hundred times as many authors as pages"
- 972 authors (1,081 hospitals, 15 countries, 40,121 patients)

The New England
Journal of Medicine

Volume 329 SEPTEMBER 2, 1993 Number 10

AN INTERNATIONAL RANDOMIZED TRIAL COMPARING FOUR THROMBOLYTIC STRATEGIES FOR ACUTE MYOCARDIAL INFARCTION

THE GUSTO INVESTIGATORS*

APPENDIX

The following investigators collaborated on the GUSTO study. The numbers shown are the numbers of patients enrolled from each area or country.

Steering Committee: E. Topol (Study Chairman), *United States;* R. Califf (Clinical Director, Coordinating Center), *United States;* F. Van de Werf (Director, Intermediate Coordinating Center), *Belgium;* P.W. Armstrong, *Canada;* P. Aylward, *Australia;* G. Barbash, Givens, K. Dunkelberg, K. Schneider, M. Clark, F. Lenz, M. Whisenant, M. Lopez, S. Schnider, J. Strickland, R. Palaniyandi, R. Stack, A. Bartel, T. Long, E. Hawkins, R. Everhart, R. Goulah, R. Lewis, R. Thigpen, S. West, J. Anderson, M. Hajisheik, and D. Privette.

Great Lakes (3155) (Indiana, Kentucky, Michigan, and Ohio): R. Josephson, R. Schumacher, K. Mohan, G. Litman, J. Formolo, D. Besley, A. Klaus, L. Calli, Jr., W. Duvernoy, J. Heinsimer, J. Schaeffer, R. Miller, R. Stomel, E. Papasifakis, M. Zande, J. Jacobs, J. Kazmierski, K. Holland, F. Griff, W. Whitaker, S.

Hyperauthorship

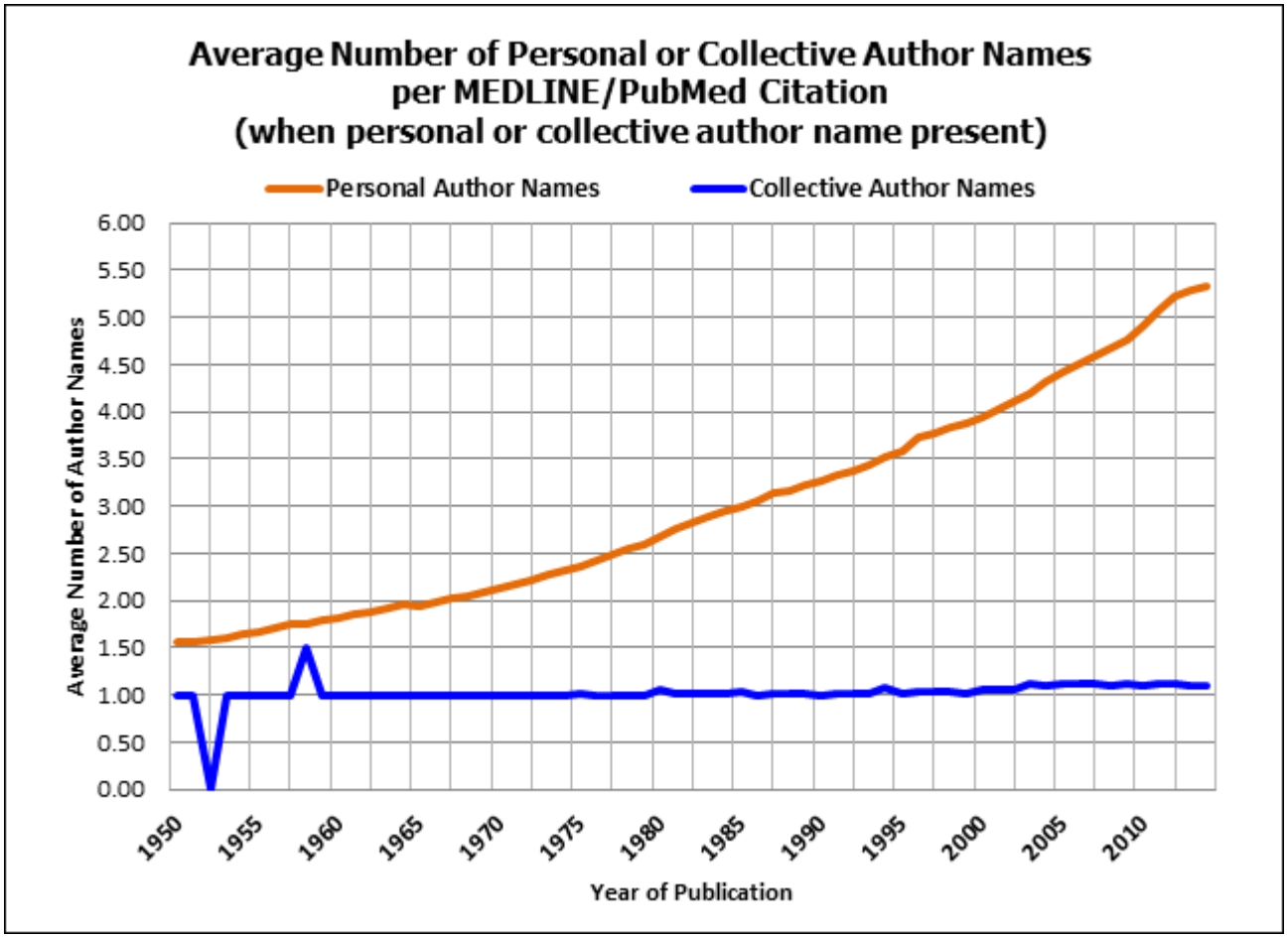
- Extremely large number of co-authors
- Most co-authors are not writers.
- Fundamental changes in the concept of author
- "I think scientific papers are meant to be read not just by professionals in the same field but also by those in other fields and the intelligent general public. They also serve as historical records of important scientific discoveries. What kind of information does an alphabetical list of several thousand names provide to those readers? I would say, almost none." (Science Editing **2**, 53)

Hyperauthorship: A Postmodern Perversion or Evidence of a Structural Shift in Scholarly Communication Practices?

Blaise Cronin
School of Library and Information Science, Indiana University, Bloomington, IN 47405-1901. E-mail: bcronin@indiana.edu

JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND TECHNOLOGY, 52(7):558–569, 2001

논문당 평균 저자수의 증가



https://www.nlm.nih.gov/bsd/authors1.html

한국 발행 논문의 저자수 증가

science editing
pISSN 2288-8063
eISSN 2288-7474

Sci Ed 2016;3(2):80-89
http://dx.doi.org/10.6087/kcse.70

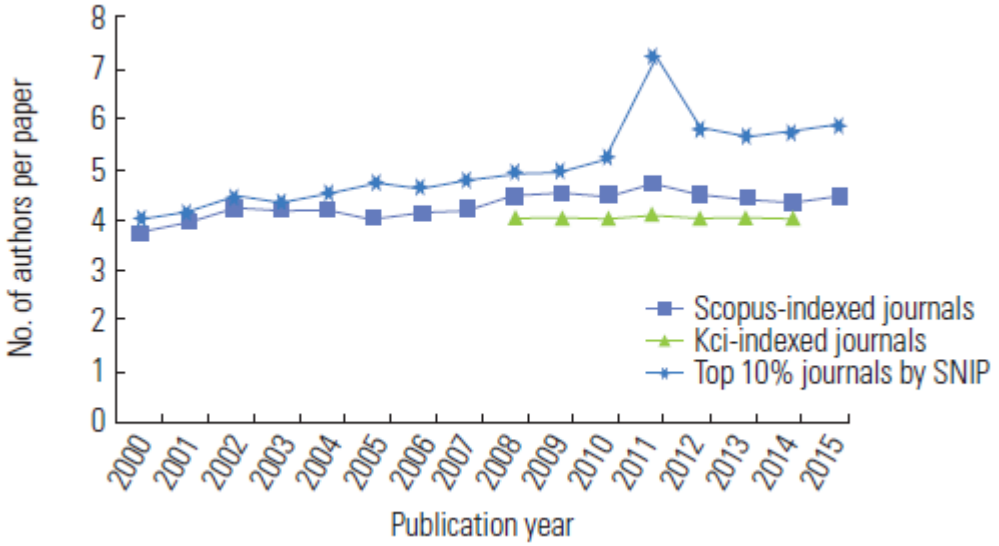
Original Article

Science Editing 3(2), 80 (2016)

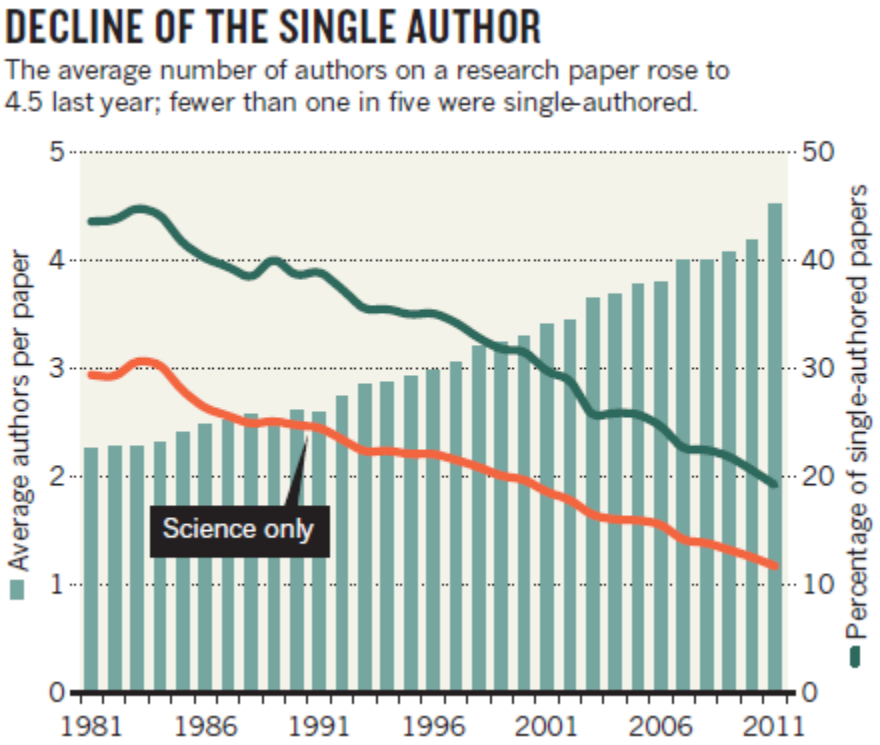
Increasing number of authors per paper in Korean science and technology papers

Hyunju Jang[1], Kihong Kim[2], Sun Huh[3], Hyungsun Kim[4]

[1]Elsevier Korea, Seoul; [2]Department of Physics, College of Natural Science, Ajou University, Suwon; [3]Department of Parasitology and Institute of Medical Education, College of Medicine, Hallym University, Chuncheon; [4]Department of Materials Science & Engineering, College of Engineering, Inha University, Incheon, Korea

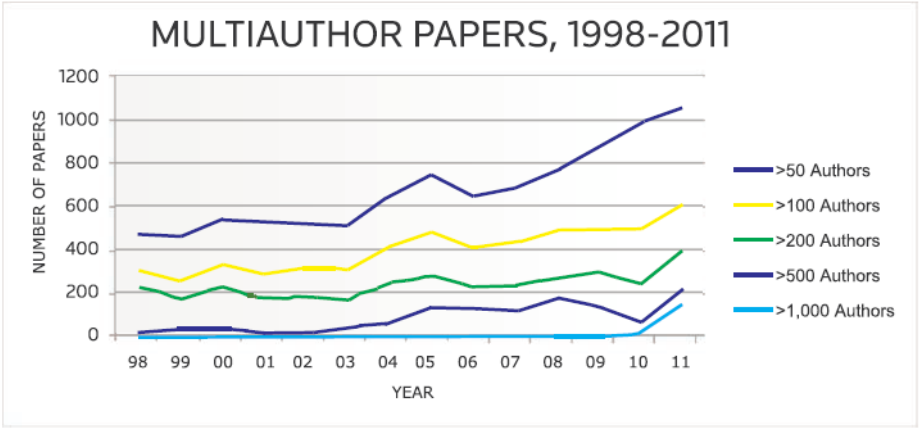


단독 저자 논문의 감소

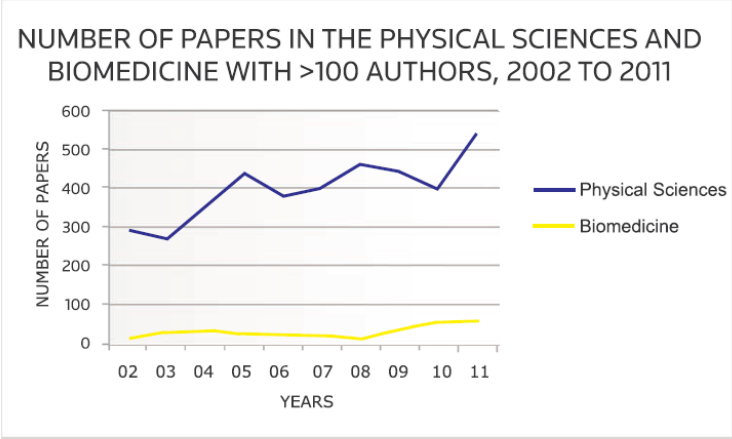


Nature Volume:488, Pages:134–135 Date published:(09 August 2012)
DOI:doi:10.1038/488134a

다저자 논문의 증가



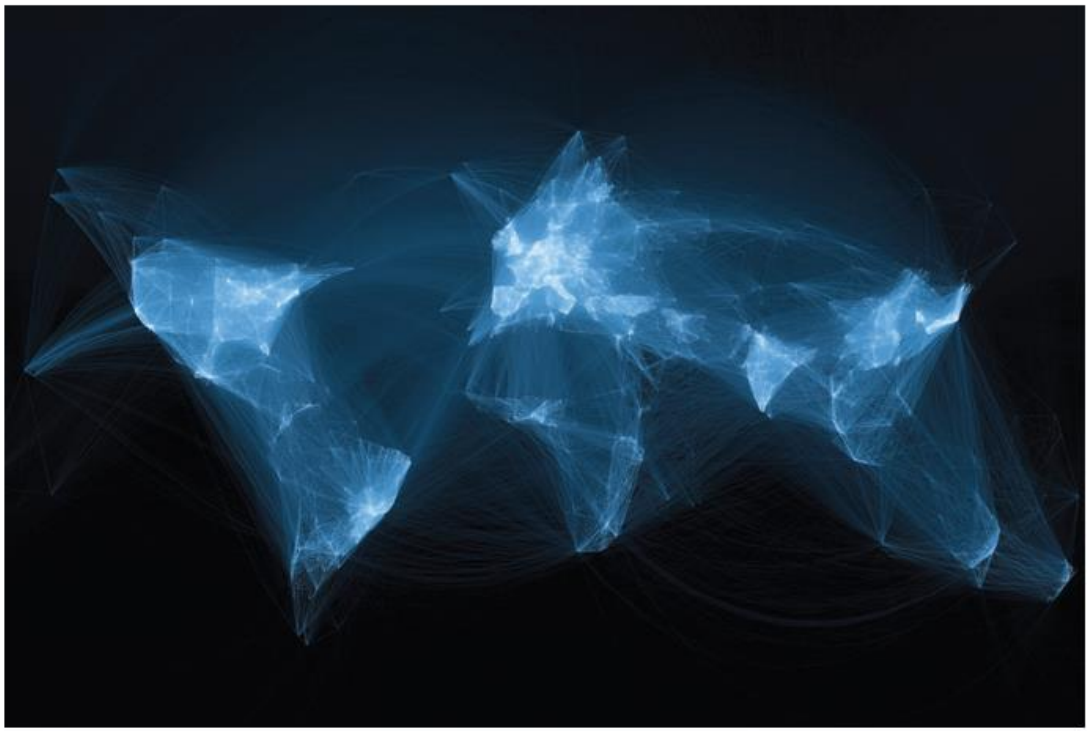
GRAPH 1 — PAPERS INDEXED BY THOMSON REUTERS



GRAPH 2 — BROAD BREAKDOWN OF PAPERS

http://archive.sciencewatch.com/newsletter/2012/201207/multiauthor_papers/

국제 공동 논문의 증가



Bright lines in this map of scientific collaborations between 2005 and 2009 show many joint publications.

인터넷의 보급이 공동연구를 매우 활성화시키고 있음

http://olihb.com/2014/08/11/map-of-scientific-collaboration-redux/

‘Superauthor’

- Extremely prolific author whose name appears on unfeasibly large number of papers (as a co-author)
- Should we reward or punish them?

Summary

- Authorship에 대한 universal definition은 없음
- 저자 이름 순서에 대한 보편적 규칙 없음
- 논문당 평균 저자수는 계속 증가 추세
- Contributorship 개념이 확산되어 가는 추세임
- 저자에 대한 현재의 evaluation/credit/reward 체계의 수정이 필요함
- Ghost-authorship은 심각한 윤리적 문제가 있음