

# 저자의 자격 (Who should be an author)

이화의대 내과

이순남

# Author

- *Auctor*
- Authority-----authorship
- : Responsibility and reward
- (Sheikh A. J Med Ethics 2000;26:422-426)
  - Accountability, responsibility, credit

# Scientific research

- Should be dependent on personal *trust*
- Violations are not common
- Whatever the frequency, reason for serious concern and soul searching because they threaten the very foundation of research
- *Trust* has its *risks* but they are far exceeded by *benefits*

# Misconduct in publication

- Fraud, deception, fabrication,
- cheat, chicanery
- Various kinds of authorship
  - Honorary, Guest, Gift, Courtesy
  - Ghost
  - Irresponsible
  - Swap

# Factors for multi-author

- Multicenter trials
- Complexity of research work
- Honorary or guest author
- Swap

# ICMJE( Vancouver group) 1985

- To remind authors' responsibilities
- To attempt to eliminate other
- problems— honorary, frivolous,
- irresponsible authorship
- ( 10 editors : NEJM, Lancet, Ann Int Med, JAMA,

# Authorship: time for a paradigm shift

- Authorship system is broken and need radical solution
- 1. Publicize the existing criteria and work
  - harder to enforce them
- 2. Make the criteria clearer and more or less restrictive
- 3. Scrap the concept of authorship,
  - descriptive system, contributors rather than authors--radical

# Authorship is dying; long live contributorship

- Too much space
- Undermine systems of academic credit-citation indices
- At least one person—the guarantor—needs to accept accountability of whole work



# Guarantors

- Are those people who have contributed substantially, but who have also made added efforts to *ensure* the integrity of the entire project.
- They *organise*, *oversee*, and *double check* and must be prepared to be accountable for all parts of the completed manuscript, *before* and *after* publication.
- (Rennie D et al. JAMA 1997;278:579–85)

# Three categories of contributions list

To qualify for authorship, you must check at least 1 box for each of the 3 categories of contributions list below.

I have made substantial contributions to the intellectual content of the paper as described below.

1. (check at least 1 of the 3 below)

conception and design

acquisition of data

analysis and interpretation of data

2. (check at least 1 of 2 below)

drafting of the manuscript

critical revision of the manuscript for important  
intellectual content

3. (check at least 1 below)

statistical expertise

obtaining funding

administrative, technical, or material support  
supervision

no additional contributions

other(specify) \_\_\_\_\_

signature \_\_\_\_\_ date \_\_\_\_\_

(JAMA)

# Author contribution category

- Guarantor of integrity of entire study
  - Study concepts\*
  - Study design\*
  - Literature research
  - Clinical studies
  - Experimental studies
  - Data acquisition\*
  - Data analysis/interpretation\*
  - Statistical analysis
  - Manuscript preparation\*
  - Manuscript definition of intellectual content\*
  - Manuscript editing
  - Manuscript revision/review\*
  - Manuscript final version approval\*
- ( : Radiology )

# Authors' contributions and signature

“ I declare that I participated in the (here list contributions made to the study) and that I have seen and approved the final version”.

These signatures need not be dated; when provided on separate sheet these statements will be returned if the paper is rejected.

( Lancet )

## An example of contributorship

**Byline:** A, B, C, D, E, F, G, H

**Contributors:** A carried out the trial, helped in data analysis, and wrote the paper. B was involved in design, implementation, and data analysis and contributed the writing of the paper. C was involved in execution of the trial, data management and analysis, and quality assurance of the turnip assay. D was involved in trial execution and data entry,

anagement

analysis, and quality assurance. E was involved in trial execution and data management with emphasis on

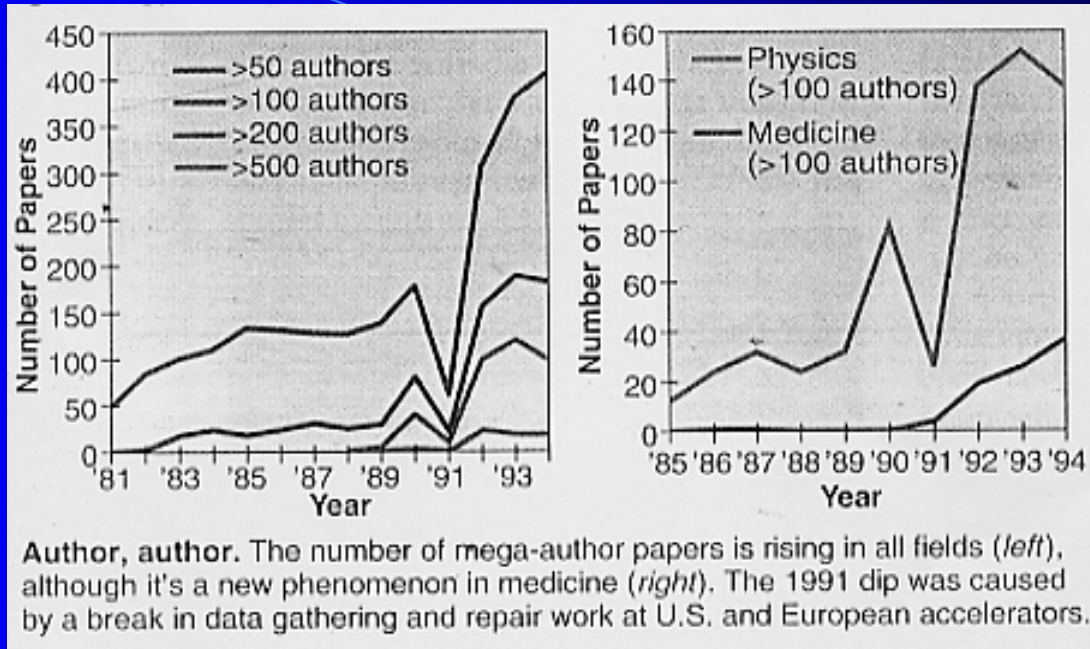
analysis.

F and G were involved in the design and contributed to writing of the paper. H was involved in the design, implementation, analysis, and biochemical interpretation, and contributed to the writing of the paper.

[Guarantors: A and H]

# Impact of the research assessment exercise on authorship

- Pressure to publish increased
- Relative quality ratings awarded
  - to vie for first and last positions
  - to limit the number of authors



Regalado A. Science 1995;268:25



## J Korean Med Sci (1993-2002)

Year	No. of articles	No. of authors	Mean	SD
93	67	315	4.7	2.2
94	63	309	4.9	2.1
95	59	276	4.7	3.7
96	54	245	4.6	2.9
97	57	268	4.7	2.4
98	69	381	5.5	2.8
99	77	358	4.6	2.3
00	84	468	5.5	2.7
01	104	622	5.9	3.6
02	102	590	5.8*	2.9

## Korean J Hematol (1993-2002)

Year	No. of articles	No. of authors	Mean	SD
93	19	119	6.3	2.4
94	18	113	5.9	2.9
95	29	175	6.0	3.0
96	27	206	7.4	3.2
97	25	148	5.9	2.7
98	26	189	7.3	2.8
99	51	419	7.9	4.9
00	25	174	7.0	5.0
01	35	263	7.5	3.4
02	21	186	8.9*	3.0

## Rev Med Chile(2002)

Year	Mean	SD	<i>P</i> value
1969	3.9	1.6	
1989	4.9	2.0	
1994	5.7	2.5	0.05
1999	5.2	2.6	0.05
2000*	5.4	2.2	0.05

**TABLE 2**  
**Fulfillment of ICMJE Authorship Conditions**

Article Characteristics	ICMJE Conditions*				P Value‡
	First	Second	Third (%)†	All	
Author position in byline					<.001
First ( <i>n</i> = 1,068)	1,065 (99.7)	1,058 (99.1)	100	1,056 (98.9)	
Second ( <i>n</i> = 1,068)	1,043 (97.7)	934 (87.5)	100	911 (85.3)	
Last ( <i>n</i> = 1,068)	858 (80.3)	907 (84.9)	100	710 (66.5)	
Middle ( <i>n</i> = 3,482)	3,149 (90.4)	2,160 (62.0)	100	1,837 (52.8)	
Author nationality					<.001
American ( <i>n</i> = 3,364)	3,185 (94.7)	2,809 (83.5)	100	2,631 (78.2)	
International ( <i>n</i> = 3,322)	2,930 (88.2)	2,250 (67.7)	100	1,883 (56.7)	
Year of publication					.18
1998 ( <i>n</i> = 2,152)	1,985 (92.2)	1,586 (73.7)	100	1,426 (66.3)	
1999 ( <i>n</i> = 2,176)	2,002 (92.0)	1,667 (76.6)	100	1,499 (68.9)	
2000 ( <i>n</i> = 2,358)	2,128 (90.2)	1,806 (76.6)	100	1,589 (67.4)	
No. of authors per article					<.001
3 ( <i>n</i> = 312)	299 (95.8)	289 (92.6)	100	276 (88.5)	
4 ( <i>n</i> = 532)	509 (95.7)	464 (87.2)	100	441 (82.9)	
5 ( <i>n</i> = 925)	852 (92.1)	787 (85.1)	100	717 (77.5)	
6 ( <i>n</i> = 1,266)	1,156 (91.3)	1,004 (79.3)	100	898 (70.9)	
7 ( <i>n</i> = 1,029)	939 (91.3)	748 (72.7)	100	661 (64.2)	
8 ( <i>n</i> = 1,024)	919 (89.7)	697 (68.1)	100	595 (58.1)	
9 ( <i>n</i> = 684)	611 (89.3)	456 (66.7)	100	390 (57.0)	
10 ( <i>n</i> = 400)	368 (92.0)	256 (64.0)	100	225 (56.3)	
>10 ( <i>n</i> = 514)	462 (89.9)	358 (69.6)	100	311 (60.5)	
Total ( <i>n</i> = 6,686)	6,115 (91.5)	5,059 (75.7)	100	4,514 (67.5)	

Note.—Numbers in parentheses are percentages.

\* First condition includes contributions to conception and design, acquisition of data, and analysis and interpretation of data; second condition includes contributions to drafting the article and revising it critically for important intellectual content; third condition includes contributions to final approval of the version to be published.

† It was assumed that the third condition was fulfilled on the basis of its inclusion on the copyright transfer form all authors must sign.

‡ P values obtained by performing the  $\chi^2$  test.

# Rate of unfulfillment of ICMJE authorship conditions

Study	Rate
Goodman BMJ 1994	33%
Shapiro 10 journals 1994	26%
Hoehn Dutch 1998	36%
Yank & Rennie	44%
Lancet 1999	
Jacard Chile 2002	48.8%
Mowatt Cochrane 2002	39%(honorary) 9%(ghost)
Hwang Radiology 2003	32.5%

# “Copenhagen Compromise”

Council of Science Editors :

편집자, 저명한 과학자, 대학 행정가, 여러 분야의  
관련자

98년 2월 , 99년 5월 Workshop 개최 후

ICMJE 수정안 발표

# Authorship

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. One or more authors should take responsibility for the integrity of the work as a whole, from inception to published article.

Authorship credit should be based only on 1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; and 3) final approval of the version to be published. Conditions 1, 2, and 3 must all be met. Acquisition of funding, the collection of data, or general supervision of the research group, by themselves, do not justify authorship. Authors should provide a description of what each contributed, and editors should publish that information. All others who contributed to the work who are not authors should be named in the Acknowledgments, and what they did should be described (see [Acknowledgments](#)).

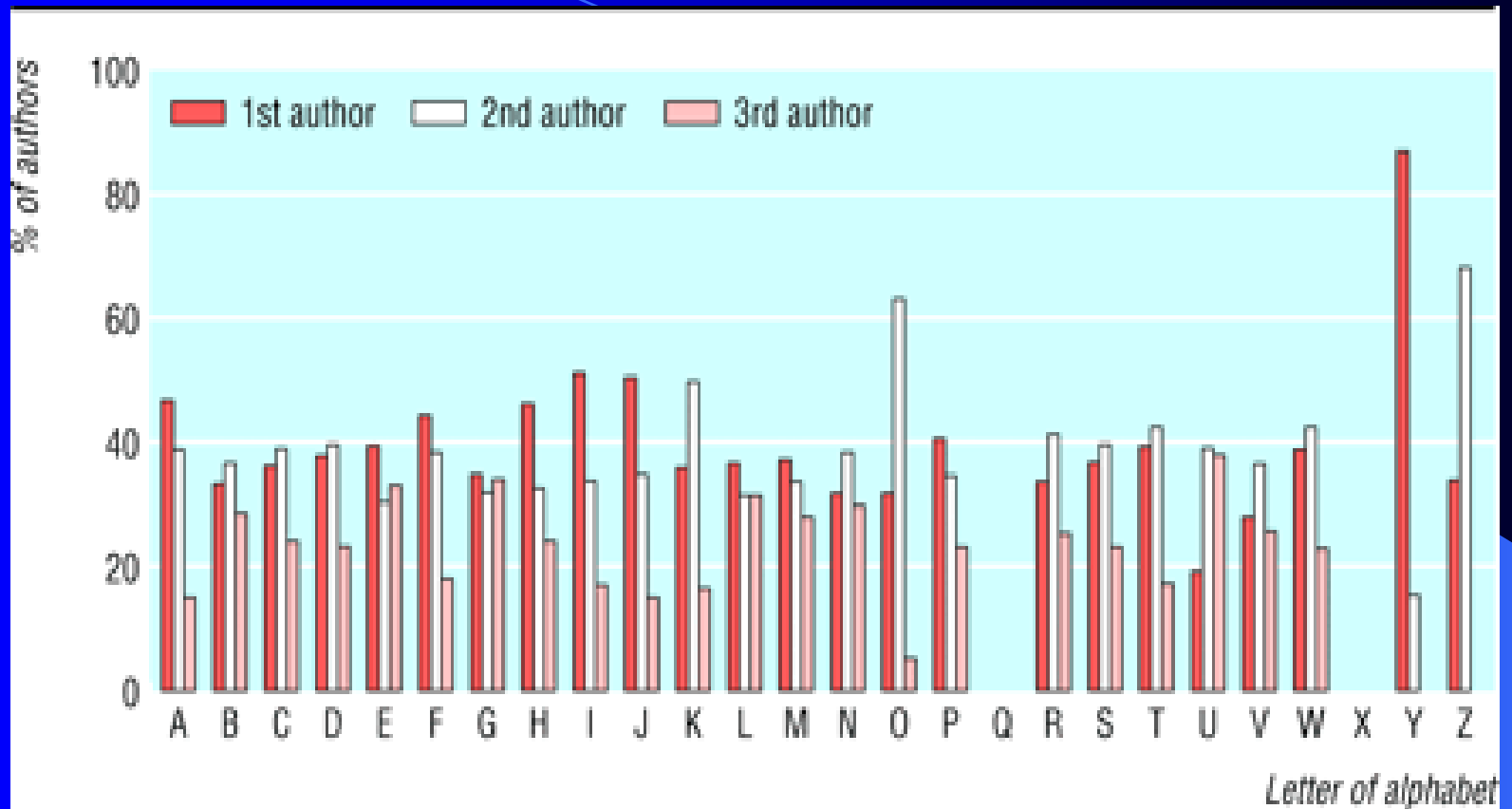
Increasingly, authorship of multicenter trials is attributed to a group. All members of the group who are named as authors should fully meet the above criteria for authorship. Group members who do not meet these criteria should be listed, with their permission, in the Acknowledgments or in an appendix (see Acknowledgments).

The order of authorship on the byline should be a joint decision of the coauthors. Authors should be prepared to explain the order in which authors are listed.

# 저자의 순서

- 공헌도에 따라 : Those who
- contributed most will come first
- 알파벳 순
- 책임자가 정하는대로
- : 공정하고 정확하게 기록





Chambers R et al. Br Med J 2001;323:1460-1461



Publish or perish!  
If your name begins with Z  
You'll perish for sure

Chambers R et al. Br Med J 2001; 323:1460

Zelakovitch---- Adler, Larry

# Conflict of Interest Disclosure Form

NO YES

- |                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. Own stock (not including shares held through a public mutual fund)                |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. Acted as a consultant within the past two years                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. Performed contract work within the past two years                                 |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Served as an officer or member of the board of a company                          |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Received more than \$2,000 a year from a company for either of the past two years |

Please include the appropriate names of the author or authors on the numbered lines that correspond to each yes response.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

( J Clin Oncol )

# 감사의 글

- 저자자격을 갖추지 못한 공헌자
- 공동으로 결정
- 반드시 서면동의 취득

## Acknowledgments

List all contributors who do not meet the criteria for authorship, such as a person who provided purely technical help, writing assistance, or a department chair who provided only general support. Financial and material support should also be acknowledged.

Groups of persons who have contributed materially to the paper but whose contributions do not justify authorship may be listed under a heading such as "clinical investigators" or "participating investigators," and their function or contribution should be described— for example, "served as scientific advisors," "critically reviewed the study proposal," "collected data," or "provided and cared for study patients."

Because readers may infer their endorsement of the data and conclusions, all persons must have given written permission to be acknowledged.

# System of scientific authorship

- Science is a human effort and is thus inevitably contaminated with all human weakness
- –those who lie can lie at any time
- Lack of an Inherent control mechanism
- Independent of outside control( eg. editorial or guarantor)
- Even an imperfect solution is better than a lasting dilemma
- ( Marusic A et al Lancet 1999; 353:1713–1714)

# 서양

- 1989- JAMA 모든 저자 서명
- 1997-Lancet contributorship 도입
- 1998- BMJ, Radiology, Am J Pub  
Health
- 1999- Cochrane library, Ann Intern  
Med
- Nature



# 우리나라의 현황

- 총 85종 koreamed 등재지(94종 중 중복제외)
- 저자의 자격 명시: 예방의학회, 가정의학회
- 대장항문, 간학회지
- 포괄적이거나 저작권
- 이양동의서에 포함
- 저자의 순서 : 감염.화학요법학회지
- Contributor list 사용 없음
- 저자 전원 서명 : 평가 항목으로 개선 중
- 책임저자 서명

# 해결방안

- 예방이 최선: author, contributor, guarantor, acknowledgee 는 연구시작 전에 미리 결정
- Contributor list
- Partial authorship 부여
- 저자의 자격기준을 명확히 하고 저자 교육

## 맺음말

- 우리나라에서도 신뢰할 수 있고 책임있는 학문과 사회에 공헌할 수 있는 연구를 발표하고 그 업적을 정당하게 인정받을 수 있도록 저자와 편집자가 모두 역할을 다하고 끊임없이 노력하여 큰 발전을 이루기를 기대한다.