

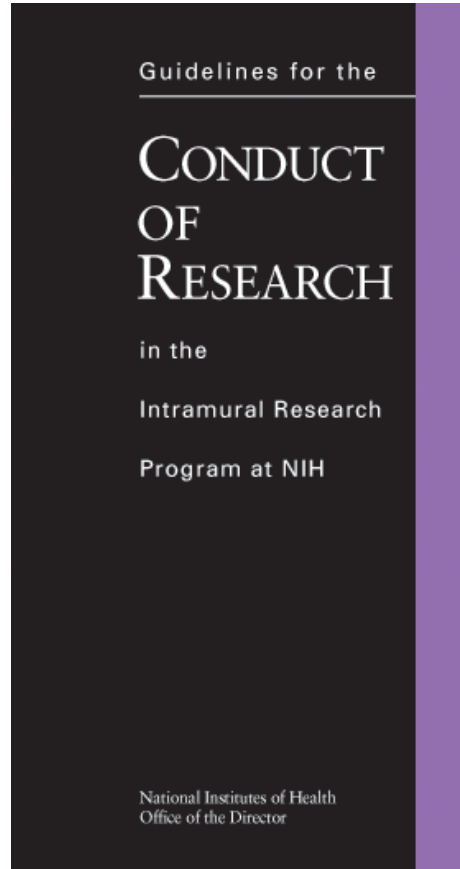
The cover of the journal Science, featuring a green plant with large leaves.The cover of the journal Nature, featuring a DNA double helix and the text "the human genome".

Authorship: why not just toss a coin?

- Benefits and responsibilities of authorship
- Tactics of authorship abuse
- Authorship policies and requirements
- Examples of authorship disputes
- How to avoid problems



Why is authorship important?



Authorship refers to the listing of names of participants in all communications, both oral and written, of experimental results and their interpretation to scientific colleagues. Authorship is the fulfillment of the responsibility to communicate research results to the scientific community for external evaluation. Authorship is also the primary mechanism for determining the allocation of credit for scientific advances and thus the primary basis for assessing a scientist's contributions to developing new knowledge. As such, it potentially conveys great benefit, as well as responsibility.

Authorship

“conveys great benefit, as well as responsibility”



Tactics of authorship abuse

Coercion authorship

- Use of intimidation tactics to gain authorship
- Typically involves threat of seniority over subordinates or junior investigators to gain authorship
- “White Bull Effect” (Kwok, *J. Med Ethics*, 2005)
- Not limited to senior vs. junior investigators



Tactics of authorship abuse

Honorary, guest or gift authorship

- Authorship awarded out of respect or friendship, to curry favor, and/or to give paper “legitimacy”



Tactics of authorship abuse

Mutual support authorship

- Agreement by multiple investigators to place their names on each other's papers
- Used to give false sense of higher productivity



Tactics of authorship abuse

Duplication authorship

- Publication of same work in multiple journals



Tactics of authorship abuse

Ghost authorship

- Papers written by individuals who are not included as authors or acknowledged
- Serious problem in pharmaceutical industry
- Papers favorable to product written by industry and “authored” by academics (e.g., VIOXX)

JAMA[®]

Guest Authorship and Ghostwriting in Publications
Related to Rofecoxib: A Case Study of Industry
Documents From Rofecoxib Litigation

Joseph S. Ross; Kevin P. Hill; David S. Egilman; et al.

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

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Tactics of authorship abuse

"Ghost journal"??



Merck published fake journal

The drug company paid Elsevier to produce several volumes of a publication made to look like a peer-reviewed medical journal, with no disclosure of company sponsorship

By Bob Grant

- Contained only reprinted or summarized articles
- Most presented data favorable to Merck products



Tactics of authorship abuse

"Ghost journal"??

TheScientist.com
MAGAZINE OF THE LIFE SCIENCES EVERY DAY, ONLINE

Elsevier published 6 fake journals

Scientific publishing giant Elsevier put out a total of six publications between 2000 and 2005 that were sponsored by unnamed pharmaceutical companies and looked like peer reviewed medical journals, but did not disclose sponsorship, the company has admitted.

By Bob Grant



Tactics of authorship abuse

Denial of authorship

- Publication of work carried out by others without providing credit with authorship or acknowledgment
- Plagiarism and serious scientific misconduct



Authorship policies and requirements

International Committee of Medical Journal Editors (ICMJE)

- Established in 1978; produced first set of authorship standards in 1979
- Uniform Requirements for Manuscripts Submitted to Biomedical Journals
- Similar standards developed by NIH, The Council of Science Editors, etc.



Authorship policies and requirements

Uniform Requirements

“Authorship credit should be based 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 for important intellectual content; and
- 3) final approval of the version to be published.

Authors should meet conditions 1,2 and 3.”

“Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.”

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Authorship policies and requirements

Uniform Requirements: what doesn't count

- Providing funding, technical advice, reagents, samples, or patient data
- Providing students or technical personnel who perform studies
- Routine data collection
- General supervision of research group



Authorship policies and requirements

Uniform Requirements: coping with the gray areas

- All authors must participate in drafting or revising of paper for **important intellectual content**
- Each author must be able to **take public responsibility** for their **important intellectual contribution**



Authorship definitions

- **Author:** fulfills ICMJE requirements
- **First author:** performs bulk of work
- **Senior author:** takes responsibility for accuracy of entire publication
- **Corresponding author:** communicates with editors, reviewers, readers and authors
- **Middle/contributing:** contributions do not rise to those of first or senior author



Who's right?

- Prof A at UA asks Prof B at UB to review a multi-author manuscript from his lab
- Prof B corrects language and suggests organizational changes to improve clarity
- Prof A offers Prof B senior authorship, which is accepted
- Paper is published in *Nature* and is ultimately shown to be fraudulent with inappropriate assignment of authorship
- Should Prof B be held accountable?



Who's right?

- A postdoc in Prof A's lab carried out a series of studies
- Some of the data are used in a manuscript for which the postdoc declines co-authorship
- The other data are published without the postdoc's knowledge and without acknowledging her contribution
- Is there a problem? If so, who should be held accountable?
- If there is a problem, how can it be corrected?



Who's right?

- Student in Prof B's lab asks Prof A for advice on setting up a widely used method developed by others
- Prof A demands co-authorship on paper in which method was used



Who's right?

- Prof A's postdoc asks Prof B for advice on numerous technical matters and in setting up a complicated piece of equipment
- Postdoc is unable to set up equipment in Prof A's lab
- Prof B allows postdoc to use equipment in his lab
- Postdoc carries out ~80% of research in Prof B's lab
- Should Prof B be a co-author?



Who's right?

- Prof A sends a student to work with Prof B
- Student works full-time in Prof B's lab for 3 years
- Student and Prof B meet with Prof A 6-8 times over 3 year period to discuss progress
- Upon completion of student's thesis work, Prof A demands to be senior author on publications



Who's right?

- A technician in Prof B's lab demands to know why he was not listed as a co-author on an abstract
- Prof B asks him what his contribution was
- Technician states that he performed a chemical assay using a kit and methodology established by others
- Should the technician be a co-author?



Who's right?

- A technician in Prof A's lab independently develops a new and demanding assay, gathers data using the assay, analyzes the data and modifies the protocol
- Technician was not listed as a co-author or acknowledged
- Was the technician treated fairly?



Avoiding problems

“Ten simple rules for a successful collaboration.” *PLoS Comp Biol* 3:e44, 2007

- “Rule 1: Do not be lured into just any collaboration.”
- “Rule 2: Decide at the beginning who will work on what tasks.” **Get it and keep it in writing.**
- “Rule 5: Feel respect, get respect.”
- “Rule 6: Communicate, communicate and communicate.”



Avoiding problems

Publish who did what

Experiments described in this paper were proposed and designed by R.A. Falin, R. Morrison, A.-J.L. Ham, and K. Strange. Experimental procedures were carried out by R.A. Falin, R. Morrison, and A.-J.L. Ham. All authors participated in the analysis and interpretation of data, in the writing of the manuscript, and in the approval of the final version of the manuscript for publication.



Closing thoughts

"Ethics and Fraud." *Nature* 439:117, 2006

"... no one should argue ever again that ... promiscuous authorship on scientific papers ... can be tolerated ... Research ethics matter immensely to the health of the scientific enterprise. Anyone who thinks differently should seek employment in another sphere."