Authorship, Plagiarism, and Intellectual Contribution

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Learning Goals:
Participants will be able to give appropriate credit for intellectual contributions to scientific work and teach students to do so.

Learning Objectives:
Participants will be able to articulate:

- Why scientists publish
- Who can be an author
- How to acknowledge others’ contributions
- Professional standards of plagiarism
- How to avoid plagiarism
Teaching Methods

• Interactive lecture
• Small group discussion of a common question
• Clicker questions
• Case study with shout-out
ACTIVITY 1 (10 minutes)

Why do scientists publish?

In your groups, identify as many reasons as possible for scientists to publish their work.

Write your list of reasons on the big pad at your table.

Identify the top 3 reasons for publishing.

Select a member to read the top 3 topics aloud to the larger group.
Scientists publish expected and unexpected results.
The Korean Stem Cell Case: Authorship and Accountability

- Both papers in *Science* used fabricated and falsified data.
- Reviewers had rejected Dr. Hwang’s first paper. Dr. Hwang then asked Dr. Schatten for advice. Dr. Schatten convinced the editor of *Science* to accept a revised version of the article.
- Dr. Schatten was listed as the senior author of the 2nd paper. When fabricated and falsified data were discovered, Dr. Schatten insisted that he had never seen the original data.
Dr. Schatten stated that he never saw the original data from the study on patient-specific embryonic stem cells. Should he have been named as an author on the paper in Science?

A. Yes  
B. No

**Authors:** **Woo Suk Hwang,** Sung Il Roh, Byeong Chun Lee, Sung Keun Kang, Dae Kee Kwon, Sue Kim, Sun Jong Kim, Sun Woo Park, Hee Sun Kwon, Chang Kyu Lee, Jung Bok Lee, JinMee Kim, Curie Ahn, Sun Ha Paek, Sang Sik Chang, Jung Jin Koo, Hyun Soo Yoon, Jung Hye Hwang, Youn Young Hwang, Ye Soo Park, Sun Kyung Oh, Hee Sun Kim, Jong Hyuk Park, ShinYong Moon, & **Gerald Schatten**

*Drs. Hwang and Schatten had 23 co-authors, including at least one trainee who provided oocytes for the research.*
At least one of Dr. Hwang’s trainees provided oocytes to make embryos for the team’s stem cell research. Should she have been an author on the 2\textsuperscript{nd} paper?

A. Yes
B. No
ACTIVITY 2 (10 minutes)
Qualifications for authorship can be complicated.

In your groups, discuss questions or problems with authorship that you have encountered in your work. For example:

• What do you have to do on a research project to be an author on the paper?
• What does it mean to be 1st author? Last author? Fifteenth in a list of 52 authors?
• Should the deceased scientist in the cartoon be named as an author on his colleagues’ paper?
• Do group members agree on all answers?
Authoritative Standards for Scientific Publishing

International Committee of Medical Journal Editors, Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals
www.icmje.org

World Association of Medical Editors, Editorial Policy Committee. Policy Statements
http://www.wame.org/resources/policies

Committee on Publication Ethics, Code of Conduct and Guidelines http://publicationethics.org/

American Chemical Society, Ethical Guidelines to Publication of Chemical Research
http://pubs.acs.org/userimages/ContentEditor/1218054468605/ethics.pdf
ICMJE Criteria for Authorship

1. Substantial contributions to conception or design of the work; or the acquisition, analysis or interpretation of data for the work;

2. Drafting the work or revising it critically for important intellectual content;

3. Final approval of the version to be published;

4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part … are appropriately investigated and resolved.

All authors should meet conditions 1, 2, 3, and 4.

Contributors who meet fewer than all 4 of the above criteria for authorship should not be listed as authors, but they should be acknowledged.

International Committee of Medical Journal Editors

NOT SUFFICIENT FOR AUTHORSHIP:

- Acquisition of funding
- General supervision (such as department head)
- General administrative support
- Writing assistance, technical or language editing
- Care of patients or research participants

These specific contributions should be identified, and those who are acknowledged should agree.
Should Dr. Schatten have been listed as an author on the 2\textsuperscript{nd} paper in \textit{Science}?

A. Yes

B. No
Should the trainee who provided oocytes to make embryos for the team’s stem cell research have been listed as an author on the 2nd paper in *Science*?

A. Yes
B. No
PLAGIARISM

“Using another person's words or ideas without giving credit to that person”

Merriam-Webster Dictionary
http://www.merriam-webster.com/dictionary/plagiarism

“(T)he theft or misappropriation of intellectual property and the substantial unattributed textual copying of another's work.”

US Office of Research Integrity
Newsletter, Vol. 3, No. 1, December 1994
https://ori.hhs.gov/ori-policy-plagiarism
Accidental and intentional plagiarism are both misleading. Intentional plagiarism is *misconduct*.

- Forgetting to list a reference.
- Assuming that something is “common knowledge” just because you know it.
- Repeating another person’s method’s section when the methods are the same.
- Restating an idea, argument or conclusion that you read some where without finding and citing the source.
- Copying and pasting text from a published source because those authors “say it better”.
- “Patchwork” writing, taking text from many papers without attribution.
- Re-writing a student’s thesis for publication without the student
- Submitting a published paper to a new journal with your name.
When in doubt, include the reference.

- Citation identifies the source and authority of the material, and gives credit and responsibility for the work.
- Direct quotes *always* need a citation, even quotes from a textbook, but direct quotes should be used only when the specific language is essential.
- “Common knowledge” and specialized terms may still need a citation.
- Formats vary by field and journal – check the Instructions to Contributors.
- *Citation also shows that YOU know the literature.*
ACTIVITY 3 - Discussion

Self-Plagiarism?

Two chemistry researchers are ready to write a paper on their recent work. One researcher has published many articles on work using a similar method. He provides several paragraphs of the methods section from an older paper. The second researcher objects to using that text. She says it would be “self-plagiarism.”

Discuss this situation and identify 2 ways for the new methods section to meet standards of ethical authorship and accountability.