

Citations and References

The appropriate acknowledgement of sources is crucial in all academic and career pursuits. Proper citations and references:

1. Allow readers to delve more deeply into ideas presented in a paper or presentation.
2. Give credit to the people who designed, performed, and interpreted experiments or who first synthesized ideas.

Sources

We will be reading articles throughout the semester for class discussion and you will be using different sources when working on your final projects. I hope the explanations below will: 1. help you write **discussion preparations** and 2. reinforce concepts of scientific and general referencing that will be useful later in your career (academic and beyond).

In Bio067, we will start **building a scientific vocabulary** to help you **understand** and **interpret sources of information** about infectious diseases. Many readings for the class are review or news articles from scientific journals that target a general audience (such as *Scientific American*, *Science*, and *Nature*). For your final projects, you will find these sources, books and web-based sources particularly useful. When you use any source of information, but especially when you use web-based sources, it is **critical to evaluate the source to determine whether you trust the information** it contains. The Bowdoin library site has **links to criteria for evaluating WWW sources** (see below) that will be useful when you are asked to **justify the sources** you are planning to use in your projects. Verifiable scientific web sources can include reputable journals, scientific organizations or academic institutions, *not student web pages*. You will also **use at least one article from the primary scientific literature** for the project.

When scientists publish their work, they need to **cite the ORIGINAL source** of any information that is not being presented for the first time in their paper. These sources are referred to as the "primary scientific literature" (research articles), and do not include review articles, textbooks, or web pages. Review articles (and to a more limited extent textbooks and web pages) are helpful in explaining ideas and can point one toward useful articles in the primary literature. There are some journals one can access on-line (especially back issues), which are cited as journal articles, but in general it is best to **avoid using web pages** as major sources of information. Reading the primary scientific literature is not an inborn talent. Each of us needs to develop an understanding of biological questions and approaches, as well as analytical skills, to evaluate the work of others. I will help you choose a paper from the primary scientific literature to use in your project and you will have a chance to discuss the paper with the Bio367 students and me in early November.

Citations

In-text citations are critical to allow one's reader to follow which references were used for which pieces of information. Any information that is not cited is assumed to be either one's original idea/data or common knowledge. It is difficult to define what exactly is meant by common knowledge. For the purpose of this course, we will define common knowledge as everything your parents know (unless they are biologists). As Sources: Their Use and Acknowledgement states: "**If in doubt about whether or not to cite a source, cite.**"¹

For Bio067, **in-text citations** will be given as (author 1 and author 2 last names, year). For sources with more than two authors, use (first author last name *et al.*, year). For web pages with no obvious author, list the institution and year, as found in the reference list (see below).

Citations are placed at **the end of a section** that is **derived from a single source**. The section may be a phrase, a sentence, or a paragraph. Try to use your **own words and phrasing** as much as possible; **always use your own structure and organization of ideas**. Any text that is used **verbatim** (i.e. word-for-word phrases) from a source should be placed in **quotations marks**. For articles, the citations following quotations should include a page number whereas citations following information that you have paraphrased do not

¹Committee on Sources (1998) Sources: Their Use and Acknowledgement. (Hanover, NH: Dartmouth College) p. 12.

require a page number. For books, the numbers of the pages you used should be included in the reference list, whether you quoted directly from the text **or** used your own words. Make sure when you are taking **notes** from a source to put **verbatim phrases** in **quotation marks**, so that, once you start writing, you can distinguish your words from those of the source.

References

There are as many formats for referencing and citing sources as there are journals. For Bio067, references will be listed **alphabetically**, by last name of the first author, at the **end of the paper**. The formats for the reference list will be as follows:

Reference formats:

Journal article

Last name author #1, initial(s), last name author #2, initial(s), ... and last name, initial(s) (year) Title.
Journal name or abbreviation, **Vol. #**: pages.

Book

Authors as for articles (year) Title. (City: publisher) pages.

Webpage

Authors as for articles (year last modified) Title of web page. URL [date accessed].

If you can't find an author of the web page, use the name of the institution and the group within the institution. Cite the **exact** page used (NOT the home page of the website).

Example

In the early 1880s, Robert Koch devised a method to stain bacteria in lung samples from tuberculosis patients. This method relied on treatment with methylene blue in a basic solution, followed by staining with vesuvin and rinsing with distilled water; this process results in blue staining of tuberculosis bacteria and brown staining of surrounding tissues (Koch, 1882). Later, this method was replaced with the Ziehl-Nielsen procedure for staining *Mycobacterium tuberculosis* and other acid-fast bacteria (Madigan *et al.*, 2000). Tuberculosis is diagnosed if acid-fast bacilli are present in a "culture of sputum, bronchoalveolar lavage, or lung biopsy specimen" (ECHT Center, 1998).

Reference list

ECHT Center, College of Human Medicine, Michigan State University (1998) Tuberculosis--Acid Fast Stain.
http://www.echt.chm.msu.edu/courseware/blockII/Pathology/Lung-Tuberculosis_1f.html [Jan. 24, 2002].

²Koch, R. (1882) Die Ätiologie der Tuberkulose. *Berliner Klinischen Wochenschrift* **15**: 221-230.

Madigan, M.T., Martinko, J.M. and Parker, J. (2000) Brock Biology of Microorganisms, 9th ed. (Upper Saddle River, NJ: Prentice Hall) p. 23.

For more information on acknowledgement of sources:

Bowdoin library website: "Using and Citing Information" <http://library.bowdoin.edu/1st/citation.shtml>
"Style manuals" <http://library.bowdoin.edu/eref/write.shtml>

Dartmouth College website

"Sources: Their Use and Acknowledgement" <http://www.dartmouth.edu/~sources>

For more information on evaluating web sources:

CBB website: "Evaluating WWW Sources" <http://www.cbbnet.org/teaching/evaluation.html>

UCLA websites:

Grassian, E. "Thinking Critically about World Wide Web Resources"
<http://www.library.ucla.edu/libraries/college/help/critical>

Grassian, E. "Thinking Critically about Discipline-based World Wide Web Resources"
<http://www.library.ucla.edu/libraries/college/help/critical/discipline.htm>

² This reference suggests that the original paper was the source used (the optimal scenario). In our case, the following reference would be more appropriate: Koch, R. "The etiology of tuberculosis" (1882, 1884) in Milestones in Microbiology, ed. T. Brock (1961), pp. 109-118.