

**Bio 100W**  
**Spring 2002**

**Literature Review**

The purpose of a literature review, or review article, is to provide a comprehensive summary and analysis of primary research on a specific topic in biology. It gives readers an overview of what is known about the topic. To do so, a literature review organizes, summarizes, integrates, and evaluates previously published material.

To write your literature review, you will need to become an expert on a specific research topic in biology. For this course, your literature review should be at least 5 double-spaced pages, excluding the title page, abstract, and references. You will need to review at least 10 primary research articles on your topic. Make sure to strictly follow the formatting guidelines described in the greensheet. There are more tips for writing a literature review in Chapter 5 of *Writing papers in the biological sciences*.

**Paper Format**

- 1) The first page should be your title page, which includes the title of your paper, your name, and your affiliation (Department of Biological Sciences, San Jose State University). Although this is technically the first page of your paper, you should not number this page.
- 2) The second page is your abstract. Put a page number in the top right hand corner or centered at the bottom of this and subsequent pages. This first page of text (containing only your abstract) is page 2.
- 3) The body of your literature review starts on the third page. Make sure to put the title (the one that appears on your title page) at the top of this page. Continue numbering your pages. (Notice that this format differs slightly from your handout entitled "Writing a Review Paper.")
- 4) Start your literature review with a general paragraph describing the topic that you are writing about and the *goal(s) of your review*.
- 5) The rest of the literature review should describe and critically evaluate primary research that has been done on this topic. In other words, tell the reader what experiments have been done and what the results tell us about the topic. It should be organized into sections that pertain to specific subtopics. Different sections can have their own subheadings to improve organization and ease of reading. To review an article, one strategy is to devote one paragraph or so to each primary research article that you read. In this paragraph, you could talk about what the scientists were trying to test, how they did it, what they found, and what you see as the problems (or advantages) of their study. Make sure to include citations whenever you are paraphrasing or quoting a published item.

- 6) In your paper, you will also need to describe any controversies or disagreements that exist on your topic. Point out any gaps in our knowledge of the topic and include any unanswered questions. Keep in mind that you will eventually write a hypothesis-driven research article (i.e. will design an experiment) on this topic.
- 7) The last section of your paper is the References, where you list all of the published items that you cited in your paper.

To locate primary research articles for your literature review, you will have to do an electronic literature search of Medline, Biological Abstracts or another database. Remember that a primary research article reports original, empirical research (experiments) and is written by the scientists who did the research. It is OK to become familiar with your topic by reading review articles, books, and textbooks and it is acceptable to cite those types of sources, but *you will need to review at least 10 primary research articles in your paper*. In addition to these 10 articles, you can cite review articles, books, and textbooks.

#### Some Tips

- Because it is often difficult to locate the journals that you need at SJSU, you should start NOW so that you can use interlibrary loan to order the articles that you need (it takes at least 2 weeks to get the articles). Also keep in mind that you may want to order more articles if the ones you receive are inappropriate.
- Most databases are good at providing the names of recent articles (e.g. within the last 5 years), but you may need to review older research as well. A good way to find older articles is to look at the reference sections of the recent articles that you read. Keep in mind that you may have to order some of these articles as well.
- Either photocopy the articles that you have found in the library or take good notes while reading them in the library. Make sure to record all information needed for your reference section (authors' last names and initials, title of article, title of journal, date of publication, volume number, page numbers of the article). There are tips for such reading and note taking in both of your textbooks.
- Before writing the paper, read all of the articles critically and then try to synthesize them in your mind. What are the articles telling you about the topic? Decide on your thesis/main argument. What are the different categories of information about this topic? How can you organize those categories into sections? What remains to be researched?
- Write an outline to organize your paper.
- Make sure to use subheadings to separate different sections of your review.

#### Due Dates

- April 3:** First Draft Due (bring 2 copies to class)  
Your instructor and one other student will critique the first draft.
- April 17:** Final Draft Due  
Turn in both copies of first draft and one copy of the final draft.