



Types of Scientific Articles

There are number of different types of publications available to biologists. The type of publication you need may depend on where you are with your research or what the requirements of your particular assignment are. The following list highlights some of the characteristics of each type.

News Articles

- Provide a brief overview of scientific findings for a general audience
- Useful when you are searching for the latest scientific research

Meeting Abstracts, Papers, and Proceedings

- Provide brief descriptions of original research presented at conferences
- Useful when you are looking for recent research in the scientific literature

Research Articles

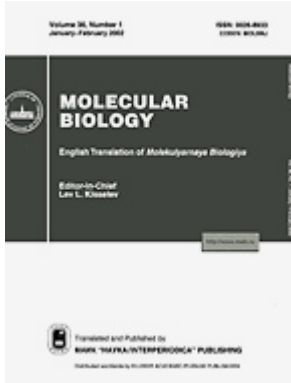
- Present new and original scientific findings
- Explain research methodology and provide data
- Useful when you need primary sources (primary articles will be discussed in detail later)

Review Articles

- Provide an overview of a field or subject
- Synthesize previous research
- Useful when you need background information and additional references

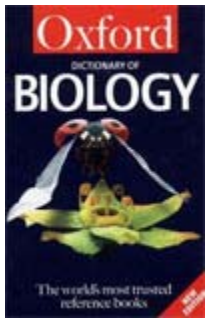


Primary Literature



When biologists talk about “searching the literature, in the sciences” they are generally referring to primary literature. Primary literature contains the original research results reported by scientists. It includes conference proceedings, dissertations, journal articles, and patents. Before research results are published in a scientific journal, they must pass a rigorous review process by other scientists; a process called “peer review.”

Secondary Literature



In addition to journal articles, information sources like textbooks, encyclopedias and other reference-type materials can be valuable in providing background information on a subject, identifying key ideas and defining important terminology. These types of sources are considered the “secondary literature” of the sciences because rather than presenting new research, they provide a compilation, evaluation and/or synthesis of previously published research. It is important not to overlook these resources as they are good aids for understanding biological literature.



Distinguishing Between Peer-Reviewed and Popular Scientific Journal Articles

Many search engines and databases include both peer reviewed and news articles from the more popular science magazines. Since many assignments require the selective use of peer reviewed articles, it is important for you to be able to distinguish between the two types.

Peer-Reviewed Articles

- Are written by scholars and researchers (look for a university or laboratory affiliation in the article)
- Include an abstract and a bibliography or cited list of references
- Have a specialized format (this will be discussed later under “Dissecting an Article”)
- Use discipline-specific language
- Many of the Library article databases allow you to limit your search to “peer reviewed” articles.

Popular/News Articles

- Are written by journalists or writers who may or may not have expertise on the article’s subject.
- Rarely have an abstract or bibliography
- Do not follow a specialized format
- Use language understandable by the general public
- Undergo a limited editorial review

While popular magazines can be a good source for general information on topics, they may not be the most appropriate source for your research.