

## Reference Books

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Editor

***Biotechnology: Changing Life through Science.*** Ed. by K. Lerner and Brenda W. Lerner. Detroit: Thomson Gale, 2007. 3 vols. alkaline \$181 (ISBN 978-1-4144-0151-5).

This work is an introductory overview of current issues in biotechnology for a lay audience, particularly young students. The three volumes are arranged into the categories of medicine (health applications), agriculture (food, nature, and the environment), and industry (industrial uses). Each volume begins with the same historical timeline chart starting at 1947 and the same long glossary titled “Words to Know.” The alphabetical index has extensive cross-references for all three volumes and also appears in each volume.

This work is intended to motivate students toward the study of science, to enhance their thinking skills, and to assist them in their ability to evaluate news and issues in biotechnology and ethics. For those purposes, the definitions of complex issues in genetics and advanced scientific principles have been simplified into everyday language, with an emphasis on real-world applications of biotechnology. There are numerous illustrations and photographs, all in color. The text is in large print and easy to read.

Entries average four to five pages in length. Each topical entry contains a highlighted blue box with an extra vignette of related subject trivia or a historical tidbit meant to pique the curiosity of the younger reader. For example, the topical entry for “Genetic Discrimination” includes a brief commentary on “China’s Eugenics Law,” and the entry for “Soap-Making” contains a factoid that “People in the late Middle Ages did not bathe with soap.” Each entry then presents “Words to Know” for that specific topic; references to additional resources, including Internet sites; and related topics. Also included are biographies of prominent scientists in the field of biotechnology. As this work is intended for a younger audience, the single WorldCat record classifies this set for juveniles. However, this work does an excellent job of presenting a clear overview of current biotechnology for both the adolescent and the uninformed adult reader.

Biotechnology before the 1970s was primarily used in the food industry and can be dated back to the Mesopotamians brewing beer. Since the 1970s, the term has become more encompassing. The United Nations defines biotechnology as “covering applications of indigenous and/or scientific knowledge to the management of microorganisms, or of cells and tissues of higher organisms, so that these supply goods and services of use to human beings” ([www.biodiv.org/convention/convention.shtml](http://www.biodiv.org/convention/convention.shtml); Article 2. Use of Terms, 2006). At the time of this review, a search in WorldCat for biotechnology works retrieved 13,097 cataloging records. Of those, 74 were popular works cataloged for “biotechnology,” and 103 were

popular works on “genetic engineering.” Most of these related works are not intended for the lay audience. In addition, this area of research is evolving so quickly that publications even five years old are out of date.

Isolating some up-to-date, related works, Sharon Walker’s *Biotechnology Demystified* (McGraw-Hill, 2007) is a self-teaching guide to basic concepts and fundamentals of all major topics of biotechnology, including the basics of molecular and cellular biology, DNA, reproductive cloning, experimental procedures, infectious diseases, drugs, and genetic disorders. At the end of the book you can take an exam and grade yourself. Eric S. Grace’s *Biotechnology Unzipped: Promises and Realities* (rev. 2d ed., Joseph Henry Pr., 2006) is for the lay audience and contains overview chapters covering health, environmental concerns, biotech applications, and the latest studies and issues in biotechnology. Grace discusses ethical repercussions and public concerns to show the tradeoffs between the biotech industry and the public good. Michael Fumento’s *B I O Evolution: How Biotechnology Is Changing Our World* (Encounter Books, 2003) fills in the gaps for a lay audience incapable of keeping up with the rapidly expanding areas of biotechnology. Fumento’s work is criticized both for not being scientific enough and for not citing primary scientific literature. It also is criticized as being overly optimistic that biotechnology will solve the world’s problems and ignoring the potential for disaster. Last, Aluizio Borem’s *Understanding Biotechnology* (Prentice Hall, 2003) is the oldest publication discussed. Much like *Biotechnology: Changing Life through Science*, Borem presents the increasingly profound impact biotechnology is having on human health, agriculture, the environment, and society. It’s an introductory work balanced between nonspecialists and professionals. Unfortunately, it uses technical language that the lay audience won’t understand.

As an entry-level work, *Biotechnology: Changing Life through Science* is highly recommended for high school and public libraries. As long as it is understood that this work is intended for a non-science audience, this work could find a home in academic libraries for the non-science majors as well.—David M. Fagerstrom, Faculty Director, Science Library, University of Colorado, Boulder

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***Civil Wars of the World: Major Conflicts Since World War II.*** By Karl Jr. DeRouen and Uk Heo. Denver: ABC-Clio, 2007. 2 vols. alkaline \$195 (ISBN 978-1-85109-919-1).

Written for the academic specialist and the general reader alike, *Civil Wars of the World* analyzes forty-one major intra-state conflicts that took place between 1946 and 2001 and that conform to the definition of civil war advanced by Yale political scientist Nicholas Sambanis in the December 2004 issue of the *Journal of Conflict Resolution* (“What Is Civil War? Conceptual and Empirical Complexities of an Operational Definition”). Arranged in alphabetical order from “Afghanistan (1978–1992)” to “Zimbabwe (1972–1979),” the analytical essays, averaging twenty pages, form the work’s core section, “Civil Wars of the World.”