Further Readings for Ch. 16

Ezzell, C. December 2001. Stem cell showstoppers. *Scientific American* 286(5):27. Article discusses problems that have risen in stem cell research.

Ezzell, C. July 2000. Beyond the human genome. *Scientific American* 283(1):64. A new field called proteonomics will try to make use of the information learned from the Human Genome Project.

Friedmann, T. et. al. June 1997. Making Gene Therapy Work. *Scientific American* 276(6):95.Article discusses the obstacles that must still be overcome before gene therapy is ready for widespread use.

Friend, S. and Stoughton R. February 2002. The magic of microarrays. *Scientific American* 286(2):44. DNA microarray tools are clarifying the molecular roots of health and disease and speeding drug discovery.

Garnick, M. B., and Fair, W. R. December 1998. Combating prostate cancer. *Scientific American* 279(6):74. Article details the recent developments in diagnosis and treatment of prostate cancer.

Gibbs, W. W. February 2001. Biological alchemy. *Scientific American* 284(2):16. The discovery that skin and bone marrow cells can transform into neurons raises hopes as well as many questions.

Gibbs, W. W. June 1999. A diabetes switch? *Scientific American* 280(6):16. Turning off a single gene protects mice against obesity. This research could lead to a pill to control type II diabetes and obesity.

Martidale, D. December 2000. Muscling DNA. *Scientific American* 283(6):34. A muscle inside the cell nucleus is responsible for moving long stretches of DNA through enzymes that translate the genetic code into RNA.

Miller, R. V. January 1998. Bacterial gene swapping in nature. *Scientific American* 278(1):66. The study of the process of DNA exchange between bacteria can help limit the risks of releasing genetically engineered microbes into the environment.

Mirsky, S. Sticky situation. August 2001. *Scientific American* 285(2):22. The great hope for curing sickle-cell disease continues to be gene therapy. Another important aspect of the disease has been found—a protein is largely responsible for the cellular stickiness.

Mooney, D. , et. al. April 1999. The promise of tissue engineering. *Scientific American* 280(4):59. Several articles discuss stem cell research, growing new organs, and related challenges.

O'Brochta, D. A., and Atkinson, P. W. December 1998. Building a better bug. *Scientific American* 279(6):90. Transgenic insect technology could decrease pesticide use, and prevent certain infectious diseases. Article discusses the production of a transgenic insect.

Scientific American editors. April 1999. 280(4):59–89. The promise of tissue engineering. Much of the issue examines the hopes and challenges of tissue engineering for use in gene therapy and for the growth of new organs.

Scientific American editors. June 1997. 276(6):95. Special report: Making gene therapy work. Obstacles must be overcome before gene therapy is ready for widespread use.

Scott, J. D., and Pawson, T. June 2000. Cell communication: The inside story. *Scientific American* 282(6):72. Understanding how cells communicate may help in the development of new therapies to treat serious disorders.

Stix, G. October 1997. Growing a new field. *Scientific American* 277(4):15. Tissue engineers try to grow organs in the laboratory.

Velander, W. H., et al. January 1997. Transgenic livestock as drug factories. *Scientific American* 276(1):70. Farm animals can be bred to produce quantities of medicinal proteins in their milk.

Wallace, D. August 1997. Mitochondrial DNA in aging and disease. *Scientific American* 277(2):40. Some human genes are found in mitochondria, and these have been linked to dozens of diseases. They could prove important in age-related disorders, such as Alzheimer's.

Weiner, D. B. and Kennedy R. C. July 1999. Genetic vaccines. *Scientific American* 281(1):50. Bits of DNA or RNA, if introduced into cells, can stimulate powerful immune responses against viruses, bacteria, and some cancers. These techniques could be used as genetic vaccines.

Wilmut, I. December 1998. Cloning for medicine. *Scientific American* 279(6):58. Cloning holds many benefits for the advancement of medical science and animal husbandry.