
Further Readings for Ch. 14

- 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.
- Gerstein, M. and Levitt M. November 1998. Simulating water and the molecules of life. *Scientific American* 279(5):100. The water inside cells helps to shape cells and joins in their chemistry. Using computers, chemists can simulate how water influences the dynamics of biological molecules.
- 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.
- Glausiusz, J. May 1998. The great gene escape. *Discover* 19(5):90. Genes from genetically engineered plants can escape from crops into the wild, causing resistance in the wild plant.
- Hopkin, K. March 1999. Death to sperm mitochondria. *Scientific American* 280(3):21. Article discusses why mitochondrial DNA only comes from the mother.
- Jordan, V. C. October 1998. Designer estrogens. *Scientific American* 279(4):60. Selective estrogen receptor modulators may protect against breast and endometrial cancers, osteoporosis, and heart disease.
- Martindale, 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.
- Martindale, D. October 2001. Genes are not enough. *Scientific American* 285(4):22. Switching genes on and off sometimes depends on the addition of methyl groups to DNA.
- 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.
- Moxon, E. R., and Wills, C. January 1999. DNA microsatellites: Agents of evolution? *Scientific American* 280(1):94. Repetitive DNA sequences may determine how an organism, such as a bacterium, adapts to its environment.
- Nemecek, S. October 1997. Gotta know when to fold 'em. *Scientific American* 277(4):28. Details about how proteins fold are discussed.
- Plomerin, R., and DeFries, J. C. May 1998. The genetics of cognitive abilities and disabilities. *Scientific American* 278(5):62. The search is underway for the genes involved in cognitive abilities and disabilities, including dyslexia.
- 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.